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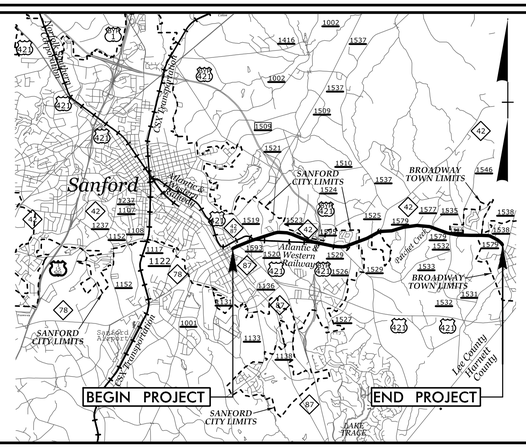
TIP PROJECT: R-3830



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
LEE COUNTY

LOCATION: NC 42 FROM US 421 TO SR 1579 (MAIN STREET) IN SANFORD AND ALONG SR 1579 FROM NC 42 TO SR 1538 (E. HARRINGTON AVE) IN BROADWAY

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS

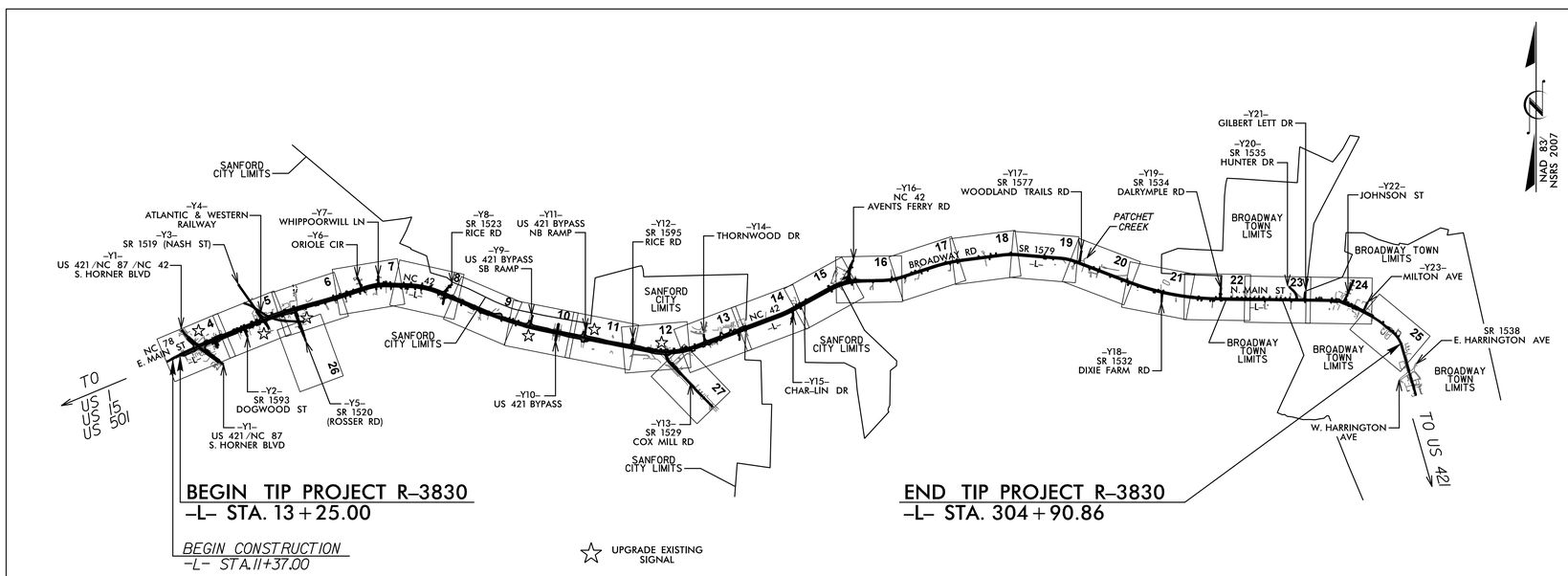
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3830	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38887.1.1	STP-0042(49)	PE
38887.2.3	N/A	R/W
38887.3.2	N/A	CONST.

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	SW CFW
	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

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

TGS ENGINEERS

Prepared In the Office of:

TGS ENGINEERS

804-C N. LAFAYETTE ST.
SHELBY, NC 28150

Designed by:

Andrew H. Cochrane, PE ***3015***

NAME *LEVEL III CERTIFICATION NO.*

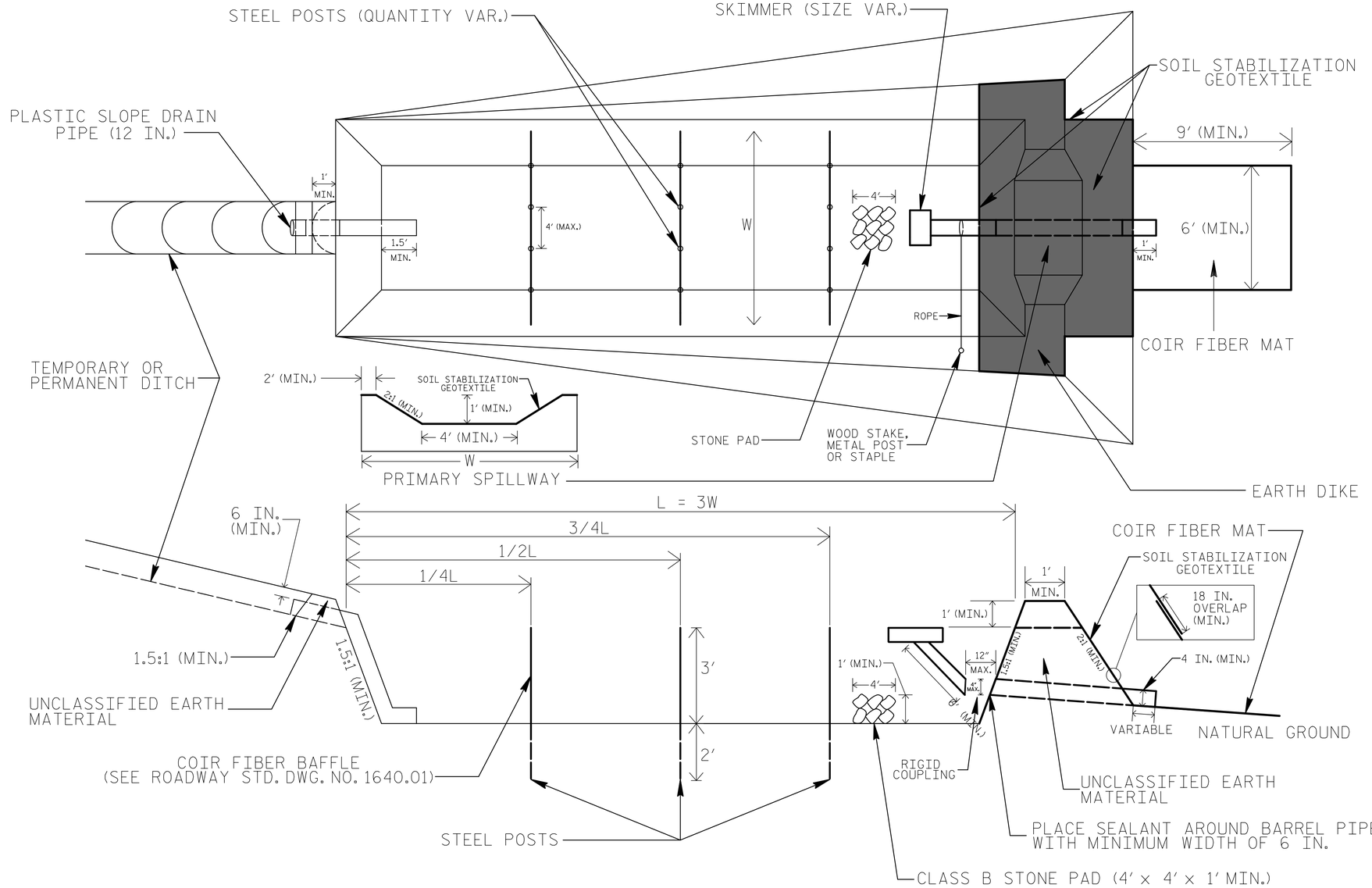
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

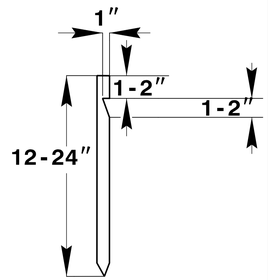
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

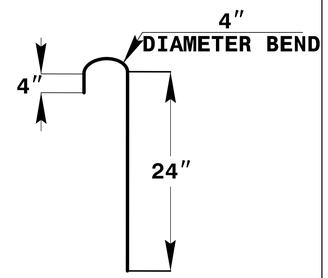
SKIMMER BASIN WITH BAFFLES DETAIL



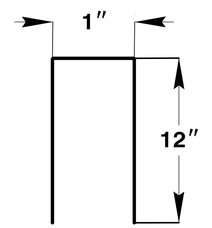
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

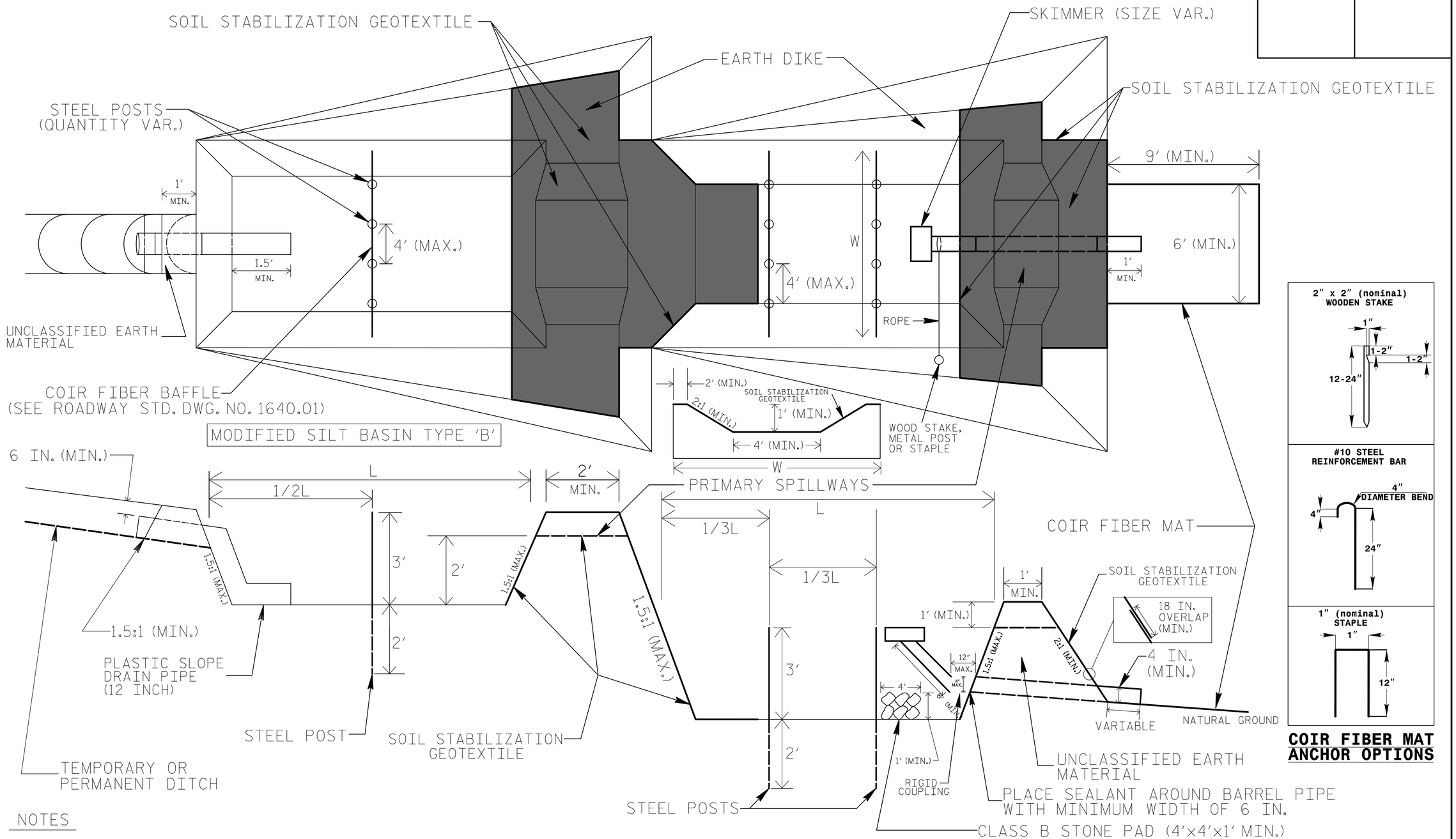
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR 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 FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL



COIR FIBER MAT ANCHOR OPTIONS

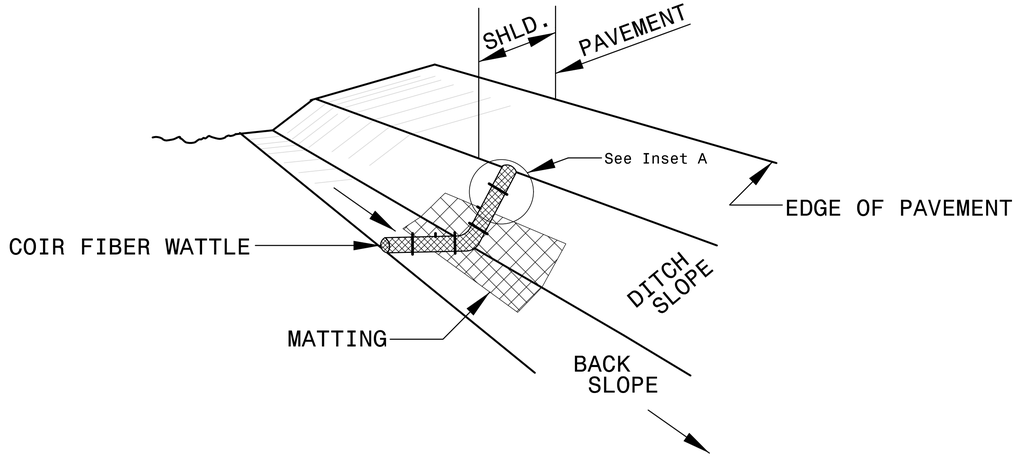
NOTES

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 PRIMARY SPILLWAY WEIR LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

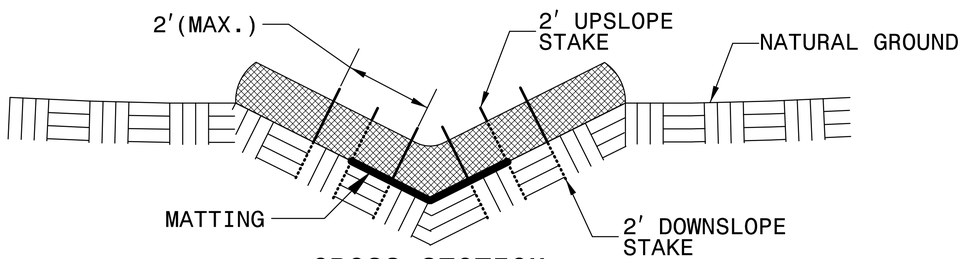
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

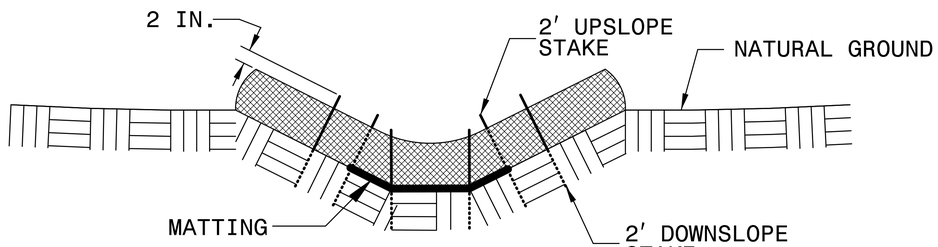
COIR FIBER WATTLE DETAIL



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.

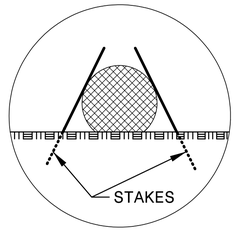
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

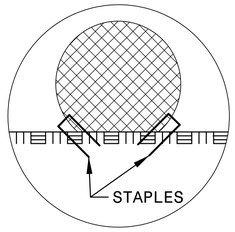
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

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

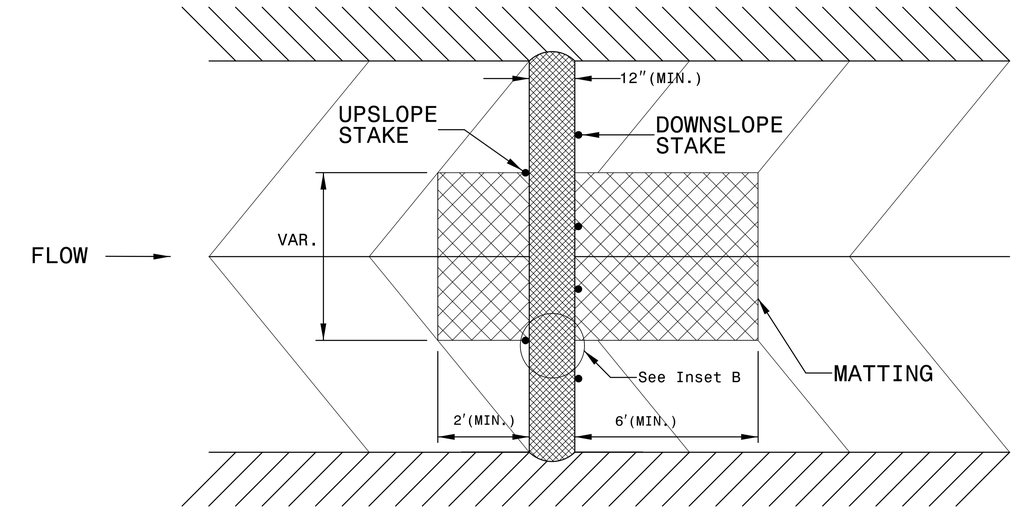
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



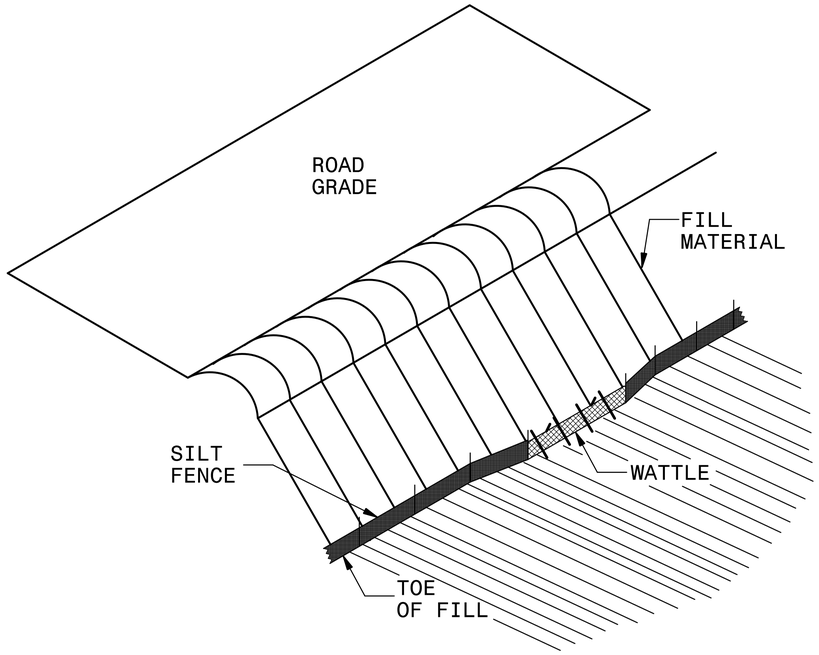
INSET B



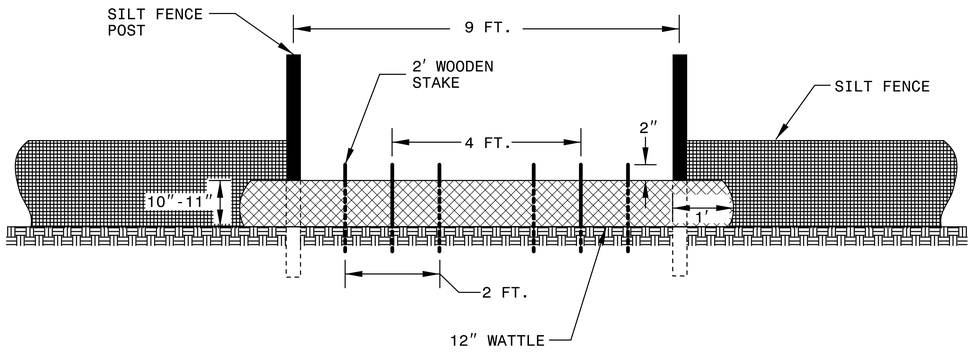
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

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

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

DO NOT PLACE WATTLE ON TOE OF SLOPE.

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

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

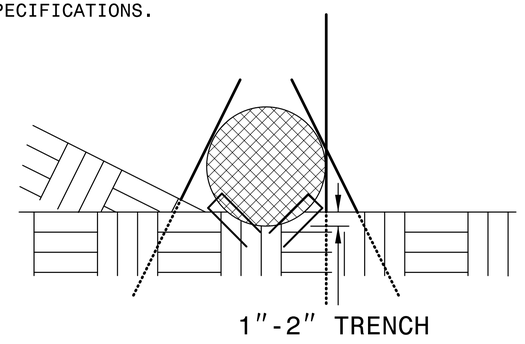
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

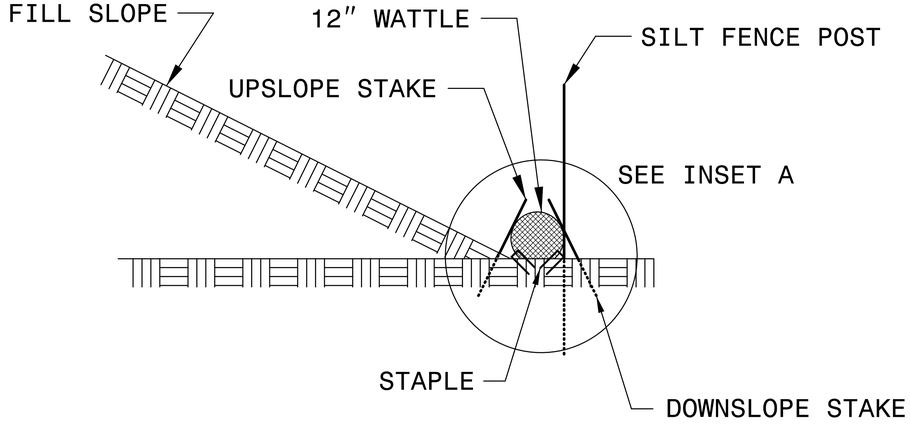
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

INSET A

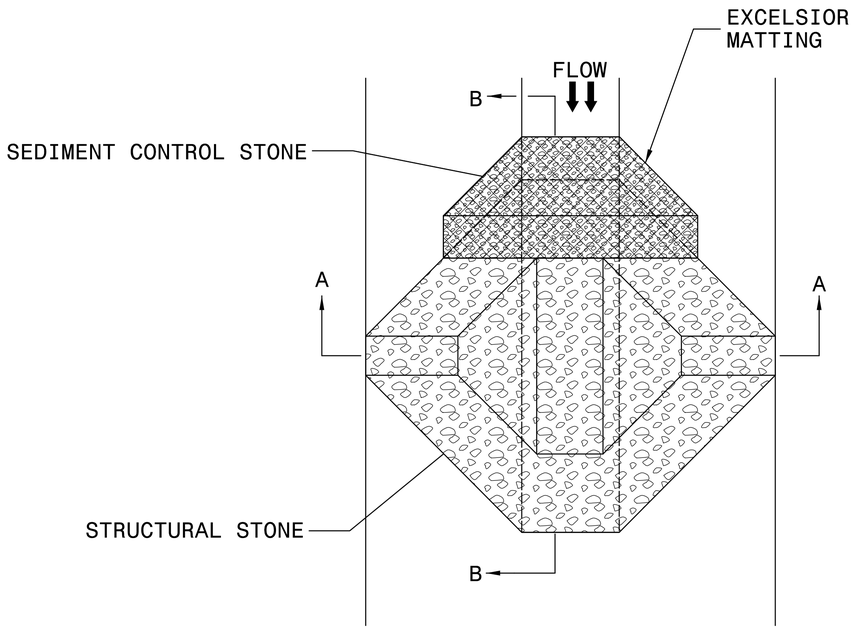




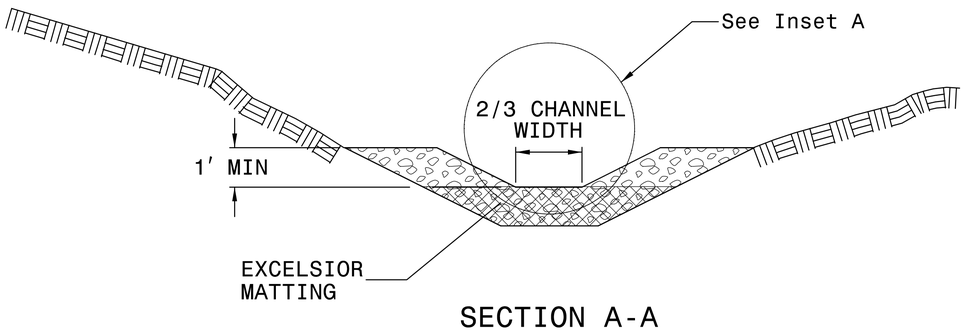
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

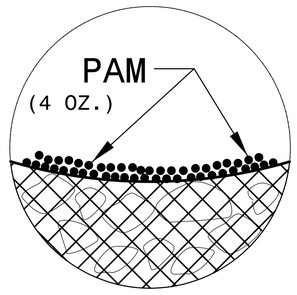
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

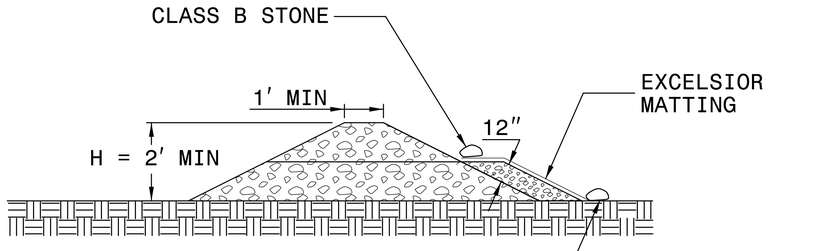
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



INSET A



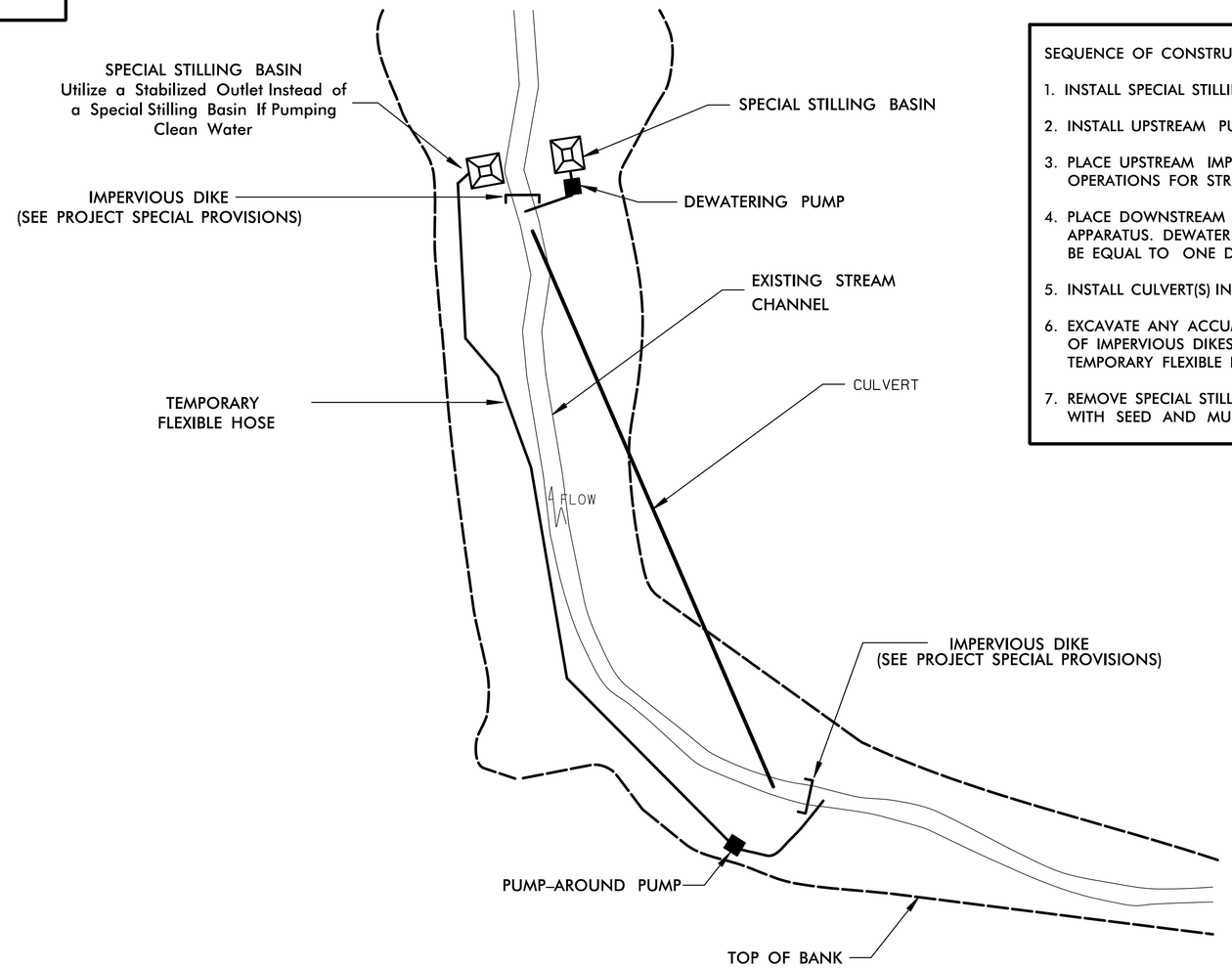
SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP–AROUND OPERATION

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



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

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

PROJECT REFERENCE NO.	SHEET NO.
R-3830	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	-Y3-	17+20	18+00	RT	95
7	-L-	62+95	62+95	RT	75
8	-Y8-	10+84	11+50	LT	55
9	-L-	88+10	88+10	LT	35
11	-L-	110+50	111+00	RT	130
14	-Y15-	11+75	12+00	RT	45
16	-Y16-	11+00	11+25	LT	65
16	-L-	176+00	178+00	LT	140
16	-L-	179+50	183+00	LT	940
16	-L-	184+00	185+00	LT	185
17	-L-	185+00	187+50	LT	405
17	-L-	194+00	196+00	LT	540
17	-L-	192+50	198+00	RT	1235
18	-L-	199+50	203+00	RT	790
18	-L-	203+00	205+50	RT	205
18	-L-	199+50	204+50	LT	1125
18	-L-	206+00	211+00	LT	405
19	-L-	212+00	224+00	LT	2695
19	-L-	212+50	223+00	RT	845
19	-L-	224+00	225+50	LT	275
20	-L-	225+50	226+50	LT	185
20	-L-	228+50	236+00	RT	1370
20	-L-	236+00	239+50	RT	565
20	-L-	238+50	239+50	LT	85
21	-L-	239+50	246+00	LT	525
21	-L-	250+00	253+00	LT	485
21	-L-	242+50	244+50	RT	450
21	-L-	245+50	246+50	RT	225
21	-L-	248+00	250+00	RT	165
21	-Y18-	10+50	11+10	LT	100

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
22	-L-	253+00	254+00	LT	85
22	-L-	253+00	254+00	RT	270
			SUBTOTAL		14,795
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					69,565
				TOTAL	84,360
				SAY	84,360

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMNT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-Y3-	18+00	18+25	RT	25
16	-L-	174+37	175+14	LT	55
17	-L-	192+50	194+00	LT	245
18	-L-	205+50	209+50	RT	645
21	-L-	239+50	242+50	RT	485
21	-L-	251+00	253+00	RT	325
21	-Y18-	10+50	11+00	RT	85
23	-Y20	11+00	11+50	LT	85
23	-Y20	11+00	11+25	RT	45
			SUBTOTAL		1,995
		ADDITIONAL PSRM TO BE INSTALLED			0
				TOTAL	1,995
				SAY	1,995

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.	SHEET NO.
R-3830	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.
R-3830	EC-04/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-L-

PI Sta 13+48.92
Δ = 6° 35' 54.9" (RT)
D = 0° 56' 47.9"
L = 697.06'
T = 348.92'
R = 6,052.59'
SE = EXIST.

PI Sta 22+87.42
Δ = 0° 53' 42.5" (RT)
D = 0° 42' 58.3"
L = 124.99'
T = 62.49'
R = 8,000.00'
SE = NC

-Y1-

PI Sta 12+54.69
Δ = 18° 01' 10.9" (LT)
D = 3° 34' 01.4"
L = 505.17'
T = 254.69'
R = 1,606.25'
SE = EXIST.

① = -L- POT STA 17+83.13= -Y1- POT STA 15+26.37

② = -L- POT STA 21+80.28= -DRWI- POT STA 10+00.00

NAD 83 / NSRS 2007
BEGIN T.I.P. PROJECT R-3830
-L- POC 13+25.00
BEGIN CONSTRUCTION -L- POC 11+37.00
BEGIN CONSTRUCTION -Y1- POC 12+20.00
-Y1- PC Sta. 10+00.00
-Y1- PT Sta. 15+05.17
-L- PT Sta. 16+97.06
-L- PC Sta. 10+00.00
-L- PT Sta. 23+49.92
-L- PC Sta. 22+24.93
END CONSTRUCTION -Y1- POT 20+95.00
END CONSTRUCTION -DRWI- POT 11+62.00
-DRWI- POT Sta. 11+87.20
MATCHLINE -L- STA. 24+00.00 SEE SHEET 5
THE CAMERON COMPANY
LARRY S. O'CONNELL
THREE REALTIES, LLC
RUBBER SOLE PROPERTIES, LLC
EARL GREEN HARBOUR AND JUANITA HARRELL HARBOUR
AOM INVESTMENTS LLC. DB 664 PG 585
PRESSLEY ALEXANDER WICKER, et als
AUTOZONE INC.
J.R. SIMPSON AND DONALD R. SIMPSON
SIMPSON & SIMPSON II
MICHAEL W. BARBOUR &WIFE, JAN M. BARBOUR
WAREHOUSE HOME FURNISHINGS DISTRIBUTORS, INC.
PJH PROPERTIES, LLC.
2515 HORNER, LLC.
NOTE: QWEST REP. ON SITE DURING EXCAVATION OPERATIONS
150' MEDIAN TRANSITION
103' TAPER
PROP. MONO. CONC ISLAND
RETAIN
REMOVE

UPGRADE EXISTING SIGNAL

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.

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-05/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-Y4-
PI Sta 10+48.40
Δ = 8° 35' 19.1" (RT)
D = 8° 53' 21.4"
L = 96.62'
T = 48.40'
R = 644.55'

PI Sta 11+81.35
Δ = 11° 20' 51.2" (RT)
D = 6° 43' 06.6"
L = 168.90'
T = 84.73'
R = 852.81'

PI Sta 15+82.05
Δ = 8° 52' 42.5" (LT)
D = 5° 20' 35.7"
L = 166.16'
T = 83.25'
R = 1,072.30'

PI Sta 18+43.53
Δ = 21° 44' 18.7" (LT)
D = 6° 09' 39.0"
L = 352.85'
T = 178.57'
R = 930.00'

-L-
PI Sta 34+90.71
Δ = 3° 54' 18.9" (RT)
D = 0° 42' 58.3"
L = 545.28'
T = 272.74'
R = 8,000.00'
SE = SEE PLANS

-DRW4-
PI Sta 11+64.41
Δ = 17° 15' 58.5" (RT)
D = 47° 44' 47.3"
L = 36.16'
T = 18.22'
R = 120.00'
SE = SEE PLANS
① -L- POC Sta.33+77.99=
-Y3- POT Sta. 19+75.09
② -L- POC Sta.33+84.18=
-DRW4- POT Sta.10+00.00

-Y4- PC Sta. 10+00.00
-Y4- PCC Sta. 10+96.62
-Y3- POT Sta.16+38.19=
-Y4- POC Sta.12+59.93
-Y4- PT Sta. 12+65.52
-L- POT STA 28+99.54=
-Y2- POT ST A 10+00.00
-Y4- PC Sta. 14+98.80
-Y4- PCC Sta. 16+64.96
-L- POC Sta. 35+49.39=
-Y4- POC Sta.16+76.20
-L- PC Sta. 32+17.97
-DRW4- PC Sta. 11+46.19
END CONSTRUCTION
-Y2- POT 11+70.00
-Y2- POT Sta. 12+09.01
END CONSTRUCTION
-DRW4- PT Sta. 11+82.35
-DRW4- POT Sta. 12+29.80
BEGIN CONSTRUCTION
-Y3- POT 15+15.00
S35°14'09.4"E
-Y3-

MATCHLINE -L- STA. 24+00.00
SEE SHEET 4

MATCHLINE -L- STA. 38+00.00
SEE SHEET 6

10 HAROLD W. WEATHERS, AND WIFE HELEN W. WEATHERS
12 MAI VAN HO AND WIFE, KIM THI HO
13 JEFFREY A. JONES AND WIFE, ANGELA R. JONES
16 EARLINE BEASLEY PEELE
18 18Z J.C. PEELE AND WIFE, EARLINE BEASLEY PEELE
20 HARVEY GLENN LEE, III AND WIFE, RITA DIANNE LEE
MR. JAMES L. DOSS AND WIFE SELVIA M. DOSS
DOSTER, POST, SILVERMAN, FOUSHEE & POST
19 SPECIAL CUT DITCH SEE DETAIL 2
23 HARRINGTON COMPANIES, LLC,
8 2515 HORNER, LLC,
15 FRANKLIN BAKING CO., INC.
17 PER TOMMY THYSTRUP
21 PER TOMMY THYSTRUP AND WIFE, DONNA COE MADDOX
22 TYSON FOODS, INC.
24 RICHARD W. NOEL AND WIFE EDIE N. NOEL
11 C.W. WOMACK, LLC, A NORTH CAROLINA LIMITED LIABILITY COMANY
14 C.W. WOMACK, LLC

STANDARD BASE DITCH
SEE DETAIL 11
S=3.4%
L=125'
EXT. 70 CY DDE
CLASS 'B' RIP-RAP
EST. 90 TONS
GEOTEXTILE
EST. 225 SY

CLASS 'B' RIP-RAP
EST. 4 TONS
GEOTEXTILE
EST. 12 SY

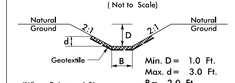
RAIL TO BE REMOVED BY OTHERS

RAIL TO BE REMOVED BY OTHERS

REMOVE C&G
END BARRIER +37.63
END PROP. RET. WALL 2 +70.00 56.50'RT

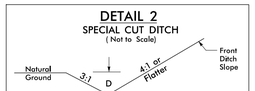
UPGRADE EXISTING SIGNAL

DETAIL 11
STANDARD BASE DITCH
(Not to Scale)



Type of Liner = Class 'B' Rip-Rap
FROM -Y4- STA. 11+40 TO STA. 12+50 RT

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y3- STA. 17+25 TO STA. 18+35 RT

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

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

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-06/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 42+84.18
△ = 3° 08' 15.6" (RT)
D = 0° 42' 58.3"
L = 438.10'
T = 219.11'
R = 8,000.00'
SE = NC

PI Sta 49+69.18
△ = 3° 08' 15.6" (LT)
D = 0° 42' 58.3"
L = 438.10'
T = 219.11'
R = 8,000.00'
SE = NC

-Y4-
PI Sta 18+43.53
△ = 21° 44' 18.7" (LT)
D = 6° 09' 39.0"
L = 352.85'
T = 178.57'
R = 930.00'

PI Sta 23+13.81
△ = 0° 19' 07.1" (RT)
D = 0° 09' 59.9"
L = 191.22'
T = 95.61'
R = 34,384.60'

-Y5-
PI Sta 11+11.37
△ = 2° 11' 26.8" (LT)
D = 2° 17' 30.6"
L = 95.59'
T = 47.80'
R = 2,500.00'
SE = SEE PLANS

Ⓘ = -Y5- PC Sta. 10+63.57

-L- POC Sta. 41+26.08=
-Y5- POT 10+00.00
-L- PC Sta. 40+65.07

-L- PC Sta. 47+50.07
-L- PT Sta. 45+03.17
-L- PT Sta. 51+88.18

MATCHLINE -L- STA. 38+00.00
SEE SHEET 5

MATCHLINE -L- STA. 52+00.00
SEE SHEET 7

MATCHLINE -Y5- STA.13+50.00
SEE SHEET 26

-Y5- PT Sta. 11+59.16
-Y5- POT STA 12+90.58=
-Y4- POC STA 23+31.50
-Y4- PT Sta. 24+09.42
-Y4- PT Sta. 20+17.81
-Y4- PC Sta. 22+18.21

CLASS 'I' RIP-RAP
EST. 7 TONS
GEOTEXTILE
EST. 15 SY

CLASS 'B' RIP-RAP
EST. 8 TONS
GEOTEXTILE
EST. 21 SY

FLOWABLE FILL

RAIL TO BE REMOVED BY OTHERS

GRADE TO DRAIN

DO NOT DISTURB CANOPY OR SIGN

23 HARRINGTON COMPANIES, LLC,

28 MAGNETI MARELLI, U.S.A., INC.

33 THANH D. VO, UNMARRIED, AND BACH-YEN T. VO, UNMARRIED

37 SAMUEL BENTON FARRAR AND WIFE, MYRTLE L. FARRAR

22 TYSON FOODS, INC.

D. DURAN JOHNSON AND WIFE, SHARON A. JOHNSON

24 DWIGHT LEON MINTER AND WIFE, TINA COTTEN MINTER

RICHARD W. NOEL AND WIFE EDIE N. NOEL

29 VASK, LLC

26

27

32 KEEPSAFE MINI-STORAGE, LLC

34 BRITNEY A. ELLIS AND HUSBAND, TRAVIS ELLIS

35 M & H PROPERTIES, INC.

36 M & H PROPERTIES, INC.

38 JULIAN C. SUGGS AND HIS WIFE, JUDITH B. SUGGS

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.

-L-	-Y6-
PI Sta 60+78.95	PI Sta 10+67.81
△ = 20° 06' 09.9" (RT)	△ = 15° 26' 45.5" (RT)
D = 4° 05' 33.2"	D = 11° 27' 33.0"
L = 491.20'	L = 134.79'
T = 248.15'	T = 67.81'
R = 1,400.00'	R = 500.00'
SE = 0.04	SE = SEE PLANS
Lr = 200'	
NON-STANDARD	

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 7

NAD 83 /NSRS 2007

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-07/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-Y6- PC Sta. 10+00.00
-Y6- PT Sta. 11+34.79
BEGIN CONSTRUCTION
-Y6- POT 11+55.00
-Y7- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y7- POC 10+50.00
-L- POC Sta.61+19.92=
-Y7- POT Sta. 11+97.59
-L- POT Sta.57+28.91=
-Y6- POT Sta. 12+77.77
-L- PC Sta. 58+30.80
-L- PT Sta. 63+22.00

MATCHLINE -L- STA. 52+00.00
SEE SHEET 6

MATCHLINE -L- STA. 65+50.00
SEE SHEET 8

CRISPIN V. POPOCA AND WIFE, MARICRUZ M. POPOCA
MAURICE WILSON AND WIFE, MARY D. WILSON
WATSON P. KELLY
WICKER-BATCHELOR RENTAL CO.
JESSIE B. NORRIS AND HIS WIFE BARBARA T. NORRIS
SHIRLEY H. HARRINGTON
FORREST E. WATSON
BERTICE D. McDONALD AND WIFE, SHARON W. McDONALD
STEVEN JOLLEY, AND WIFE, TEENA A. JOLLEY
MARTIN RUIZ LEZAMA AND WIFE, MARIA G. LEZAMA
PAMELA M. BRADFORD
WAYNE A. HARGROVE
M & H PROPERTIES, INC.
DEBRA S. DUNN AND DAVID JAMES OQUINN
IGLESIA DE DIOS GETSEMANI
KIMCUC THI MICHAEL
LINH D. PHAN AND WIFE HUONG T. NGUYEN
TABOYS CORPORATION, A NORTH CAROLINA CORPORATION

TRANSITION 1'-6" C&G TO 2'-9" C&G
-L- STA.56+47.47 TO 56+97.47
SEE DETAIL SHEET 2C-2

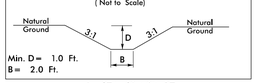
CLASS 'B' RIP-RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

STANDARD BASE DITCH
SEE DETAIL 17
S=0.9%
L=80'
EST. 80 CY DDE

STANDARD BASE DITCH
SEE DETAIL 14
S=4.0%
L=160'
EST. 30 CY DDE
CLASS 'B' RIP-RAP
EST. 90 TONS
GEOTEXTILE
EST. 240 SY

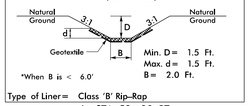
85 x 40 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
13 ft. weir
ID 7.1

DETAIL 17
STANDARD BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
B= 2.0 Ft.
-L- STA. 62+95 RT

DETAIL 14
STANDARD BASE DITCH
(Not to Scale)



*When B is < 6.0'
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
Type of Liner= Class 'B' Rip-Rap
-L- STA. 58+20 RT

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-08/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-L-
PI Sta 71+86.25
△ = 21° 05' 12.3" (RT)
D = 2° 51' 53.2"
L = 736.07'
T = 372.24'
R = 2,000.00'
SE = 0.04
Lr = 200'
NON-STANDARD

-Y8-
PI Sta 11+82.30
△ = 38° 19' 04.6" (LT)
D = 22° 55' 05.9"
L = 167.19'
T = 86.86'
R = 250.00'
SE = SEE PLANS

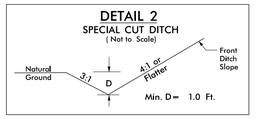
① = -Y8- PT Sta. 12+62.64

② = -L- POT Sta.76+58.63=
-Y8- POT Sta. 12+87.00=
-DRW2- POT Sta.10+00.00

70 = BELINDA GAIL DICKENS

72 = JOSE SOCORRO PEREZ AND WIFE, MARIA VERONICA RAMIREZ DE PEREZ

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y8- STA. 10+84 TO STA. 11+50 LT

NAD 83 /NSRS 2007

MATCHLINE -L- STA. 65+50.00
SEE SHEET 7

MATCHLINE -L- STA. 79+00.00
SEE SHEET 9

56 THOMAS B. KELLY

57 EASTSIDE PENTECOSTAL HOLINESS CHURCH, INC.

58 FRANK A. MEASAMER, JR. AND WIFE, LINDA C. MEASAMER

60 FRANKLIN A. MEASAMER AND WIFE, ANN H. MEASAMER

62 CLARENCE P. ROSSER JESSICA BRIDGES JENNIFER RUBINOSKY

63 MYRTLE MATTHEWS POE

MARY ANNE KELLY

68

70

72

73

TERRY LEWIS NORRIS

55 TABOYS CORPORATION, A NORTH CAROLINA CORPORATION

59 JANET BROWN WARNER

61

64 JANET BROWN WARNER AND PRESTON D. WARNER II

66 TWG PROPERTIES

69 BROADWAY ROAD, LLC

-L- PC Sta. 68+14.00

-L- PT Sta. 75+50.07

-Y8- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y8- POT 10+46.00

-Y8- PC Sta. 10+95.44

END CONSTRUCTION
-DRW2- POT 12+05.00

-DRW2- POT Sta. 12+19.57

S 10° 36' 01.2" W

S 10° 36' 01.2" W -DRW2-

S 66° 52' 34.6" E

SPECIAL CUT DITCH SEE DETAIL 2

GRADE TO DRAIN

REMOVE

REMOVE FLOWABLE FILL

CLASS 'B' RIP-RAP EST. 5 TONS GEOTEXTILE EST. 14 SY

150' TAPER
150' UNIFORM MEDIAN TRANSITION

110 x 50 x 3
2.0 inch Skimmer
with 2.0 inch
Orifice Diameter
21 ft. weir
ID 8.1

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

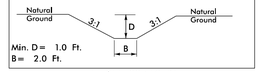
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-09/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

-L-
PI Sta 92+54.12
△ = 10° 41' 27.5" (LT)
D = 0° 44' 59.8"
L = 1,425.57'
T = 714.86'
R = 7,640.00'
SE = SEE PLANS

DETAIL 17
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 88+10 RT

NAD 83 /NSRS 2007

MATCHLINE -L- STA. 79+00.00
SEE SHEET 8

MATCHLINE -L- STA. 93+00.00
SEE SHEET 10

STANDARD BASE DITCH
SEE DETAIL 17
S=2.0%
L=35'
EST. 15 CY DDE

CLASS 'B' RIP-RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

-L- PC Sta. 85+39.26

DO NOT DISTURB FLAG POLE

DO NOT DISTURB SHRUBBERY IN FRONT OF HOUSE

KAY K. KELLY

FRANKLIN A. MEASAMER AND WIFE, ANN H. MEASAMER

TERRY LEWIS NORRIS

SHALLOW WELL UNITED CHURCH OF CHRIST, INC.

6' MEDIAN PED. CROSSING (SEE DETAIL 2C-4)

PROP. CURB CUT FOR FUTURE 16' DRIVE (NO DRIVE)

JACK W. CAMPBELL, JR. AND WIFE, LOIS BERYL CAMPBELL

PROP. CURB CUT FOR 20' DRIVE TURNOUT

JACK W. CAMPBELL, JR. AND WIFE, LOIS BERYL CAMPBELL

JACK W. CAMPBELL, III

PROP. 20' CURB CUT

5' BIKE LANE

PROP. MONO. CONC. ISLAND

RAISED MEDIAN

GRADE TO DRAIN

ON THE FLY, LLC

SHALLOW WELL UNITED CHURCH OF CHRIST, INC.

MYRTLE RAY MATTHEWS

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-10/CONSTJO
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

NOTE: PROVIDE A CONCRETE 'V' DITCH BEHIND THE RETAINING WALL

-L-
PI Sta 92+54.12
Δ = 10° 41' 27.5" (LT)
D = 0° 44' 59.8"
L = 1,425.57'
T = 714.86'
R = 7,640.00'
SE = SEE PLANS

PIs Sta 100+81.50
Θs = 1° 18' 44.7"
Ls = 350.00'
LT = 233.34'
ST = 116.67'

MATCHLINE -L- STA. 93+00.00
SEE SHEET 9

MATCHLINE -L- STA. 107+00.00
SEE SHEET 11

TERRY LEIGH STEWART AND WIFE, SANDRA HOLT STEWART; PATRICK KEITH STEWART, SHAUN DELANEY STEWART BETHEA AND HUSBAND, JOHN PHILLIP BETHEA

KELLER INVESTMENTS, LLC

SHALLOW WELL UNITED CHURCH OF CHRIST, INC.

WESARA ASSOCIATES, LLC

WESARA ASSOCIATES, LLC

COTY INC.

-Y9- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y9- POT 11+20.00

-L- CS Sta. 99+64.83

-L- ST Sta. 103+14.83

-Y10- POT Sta. 10+00.00

-L- POT Sta. 103+64.15=
-Y10- POT Sta. 11+90.66

-L- POC Sta. 97+28.88=
-Y9- POT Sta. 12+46.63

-Y10- POT Sta. 13+82.89

S 14° 12' 07.8" W

S 78° 52' 46.7" E

S 9° 54' 20.4" W

REMOVE

RETAIN

18" RCP-IV

15" RCP-IV

2'-6" C&G

5' SIDEWALK

5' BIKE LANE

PROP. MONO CONC ISLAND

TB2GI

DI

CB

1001 1002 1003 1004 1005 1006 1007 1008 1010 1011 1014 1015 1016 1017 1018 1019 1020 1021

COLLAR & EXTEND W/ 15" RCP-IV

CLEAN-OUT PIPE OUTLET

100' TAPER

150' TAPER

BEGIN PROP. RET. WALL 3
-L- STA 102+14.88
OFF 50.59'LT

RET. WALL 3
-L- STA 102+40.36
OFF 46.97'LT

END PROP. RET. WALL 3
-L- STA 105+03.34
OFF 47.44'LT

RET. WALL 3
-L- STA 104+69.98
OFF 47.00'LT

+66.27
TIE TO EXIST.

+64.73
TIE TO EXIST.

CLASS 'I' RIP-RAP
EST. 7 TONS
GEOTEXTILE
EST. 15 SY

RETAIN (SEE NOTE)

TSD TSD

45 x 15 x 3
ID 10.1

MODIFY ROCK INLET SEDIMENT TRAP – TYPE C AS DIRECTED TO ENCAPSULATE DI AND TRENCH DRAIN.

NOTE: THE EXISTING SHOULDER AND TRENCH DRAIN SHALL NOT BE DISTURBED FROM -L- STA. 102+66.27 TO 104+64.73 (RT.)

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

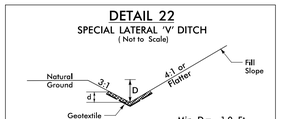
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

UPGRADE EXISTING SIGNAL

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-11/CONST J1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

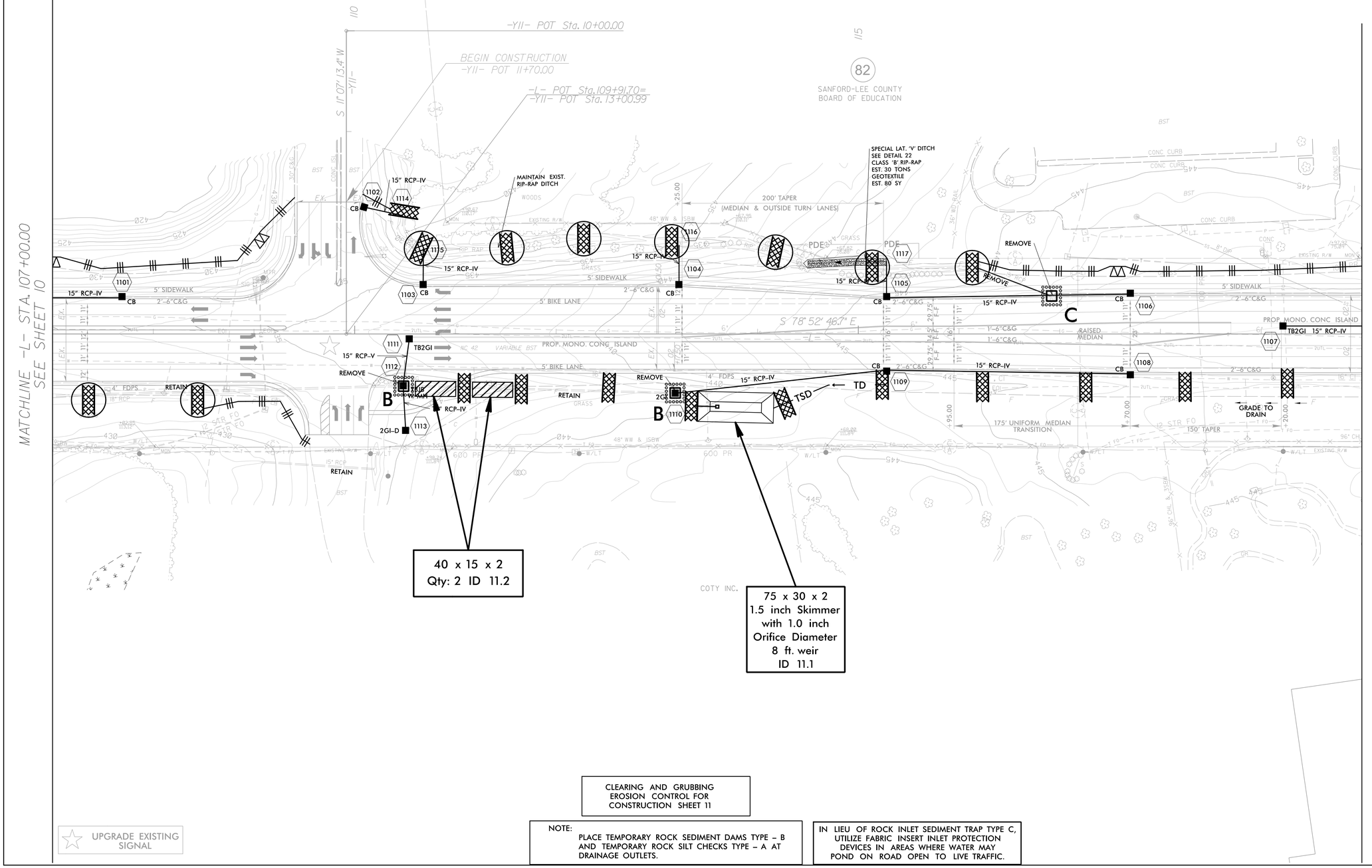
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

DETAIL 22
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM -L- STA. 114+50 TO STA. 115+28 LT

NAD 83 /NSRS 2007



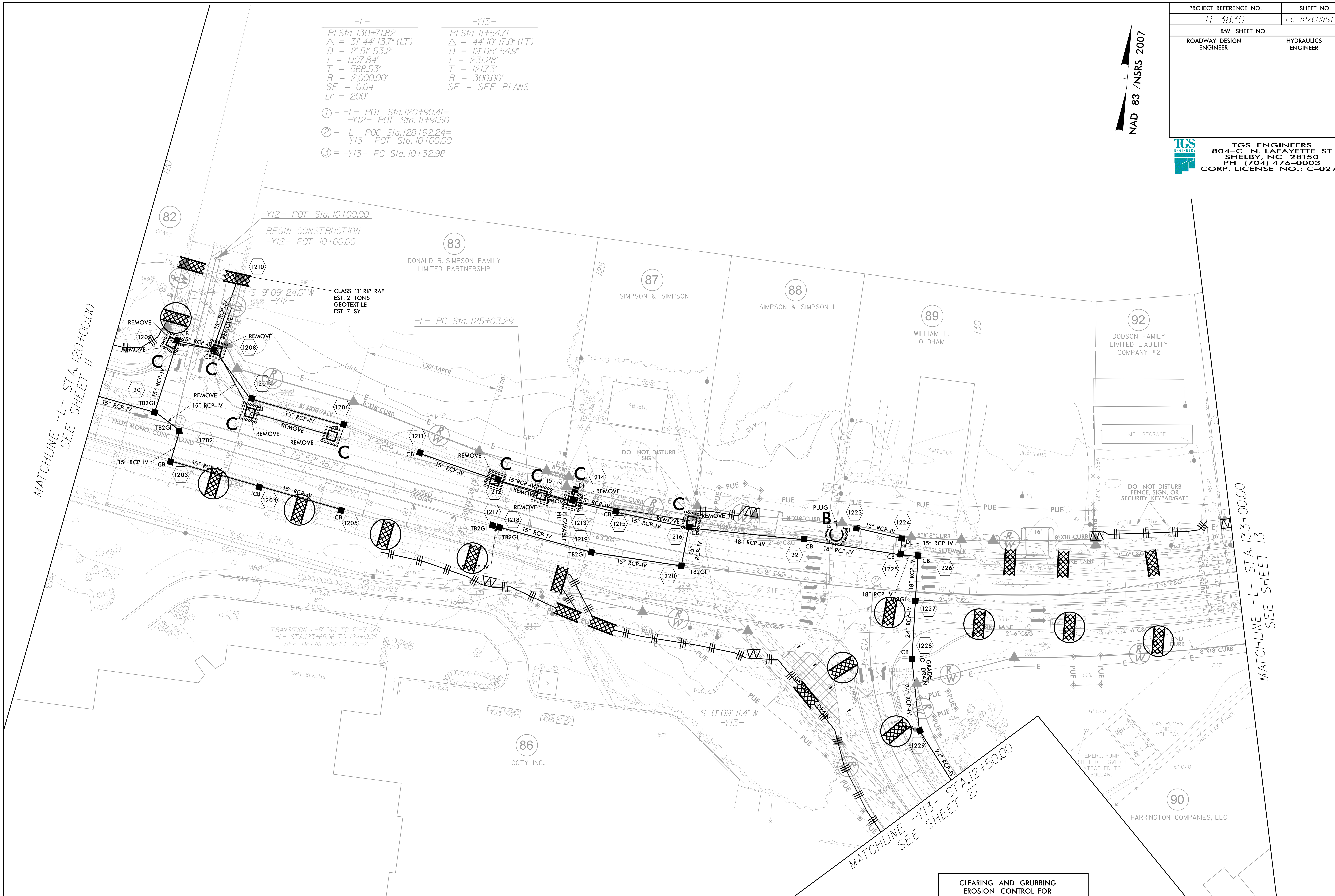
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-12/CONSTJ2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



-L-
PI Sta 130+71.82
△ = 31° 44' 13.7" (LT)
D = 2° 51' 53.2"
L = 1,107.84'
T = 568.53'
R = 2,000.00'
SE = 0.04
Lr = 200'
-Y13-
PI Sta 11+54.71
△ = 44° 10' 17.0" (LT)
D = 19° 05' 54.9"
L = 231.28'
T = 121.73'
R = 300.00'
SE = SEE PLANS
① = -L- POT Sta.120+90.41= -Y12- POT Sta. 11+91.50
② = -L- POC Sta.128+92.24= -Y13- POT Sta. 10+00.00
③ = -Y13- PC Sta. 10+32.98
NAD 83 /NSRS 2007
-Y12- POT Sta. 10+00.00
BEGIN CONSTRUCTION -Y12- POT 10+00.00
CLASS 'B' RIP-RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY
-L- PC Sta. 125+03.29
DONALD R. SIMPSON FAMILY LIMITED PARTNERSHIP
SIMPSON & SIMPSON
SIMPSON & SIMPSON II
WILLIAM L. OLDHAM
DODSON FAMILY LIMITED LIABILITY COMPANY #2
COTY INC.
HARRINGTON COMPANIES, LLC
DO NOT DISTURB SIGN
DO NOT DISTURB FENCE, SIGN, OR SECURITY KEYPAD GATE
MATCHLINE -L- STA. 120+00.00 SEE SHEET 11
MATCHLINE -L- STA. 133+00.00 SEE SHEET 13
MATCHLINE -Y13- STA.12+50.00 SEE SHEET 27
S 78° 52' 46.7" E
S 9° 09' 24.0" W -Y12-
S 0° 09' 11.4" W -Y13-
150' TAPER
TRANSITION 1'-6" C&G TO 2'-9" C&G -L- STA.123+69.96 TO 124+19.96 SEE DETAIL SHEET 2C-2

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

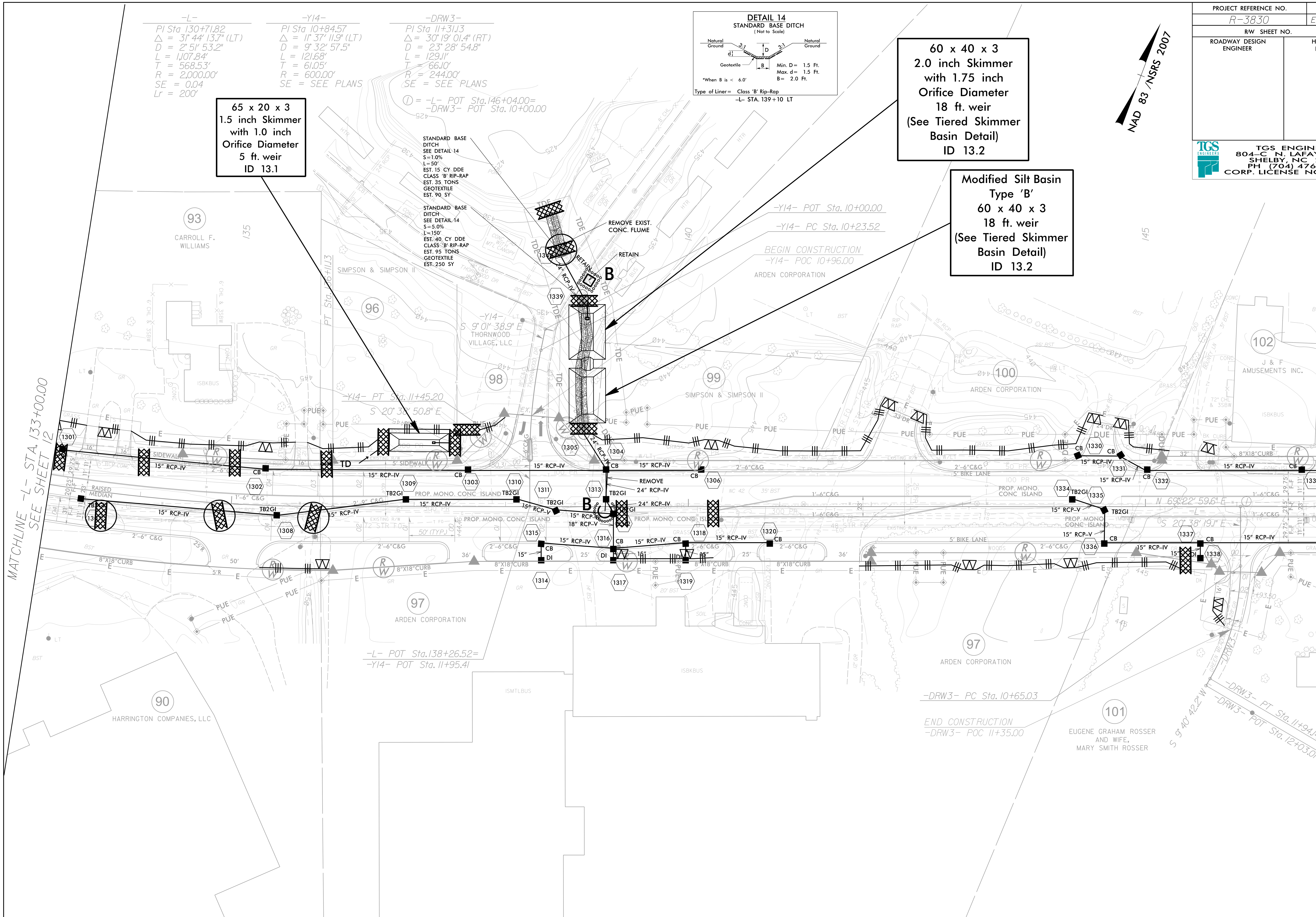
IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

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

☆ UPGRADE EXISTING SIGNAL

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-13/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275


NAD 83 /NSRS 2007
-L-
PI Sta 130+71.82
△ = 31° 44' 13.7" (LT)
D = 2° 51' 53.2"
L = 1,107.84'
T = 568.53'
R = 2,000.00'
SE = 0.04
Lr = 200'
-Y14-
PI Sta 10+84.57
△ = 11° 37' 11.9" (LT)
D = 9° 32' 57.5"
L = 121.68'
T = 61.05'
R = 600.00'
SE = SEE PLANS
-DRW3-
PI Sta 11+31.13
△ = 30° 19' 01.4" (RT)
D = 23° 28' 54.8"
L = 129.11'
T = 66.10'
R = 244.00'
SE = SEE PLANS
DETAIL 14
STANDARD BASE DITCH
(Not to Scale)
Natural Ground
3:1
D
d
Geotextile
B
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
*When B is < 6.0'
Type of Liner = Class 'B' Rip-Rap
-L- STA. 139+10 LT
65 x 20 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 13.1
60 x 40 x 3
2.0 inch Skimmer
with 1.75 inch
Orifice Diameter
18 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 13.2
Modified Silt Basin
Type 'B'
60 x 40 x 3
18 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 13.2
REMOVE EXIST. CONC. FLUME
RETAIN
MATCHLINE -L- STA. 133+00.00 SEE SHEET 12
MATCHLINE -L- STA. 147+00.00 SEE SHEET 14
-L- POT Sta.138+26.52=
-Y14- POT Sta. 11+95.41
-DRW3- PC Sta. 10+65.03
END CONSTRUCTION
-DRW3- POC 11+35.00
BEGIN CONSTRUCTION
-Y14- POC 10+96.00
CARROLL F. WILLIAMS
SIMPSON & SIMPSON II
THORNWOOD VILLAGE, LLC
ARDEN CORPORATION
J & F AMUSEMENTS INC.
HARRINGTON COMPANIES, LLC
EUGENE GRAHAM ROSSER AND WIFE, MARY SMITH ROSSER

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

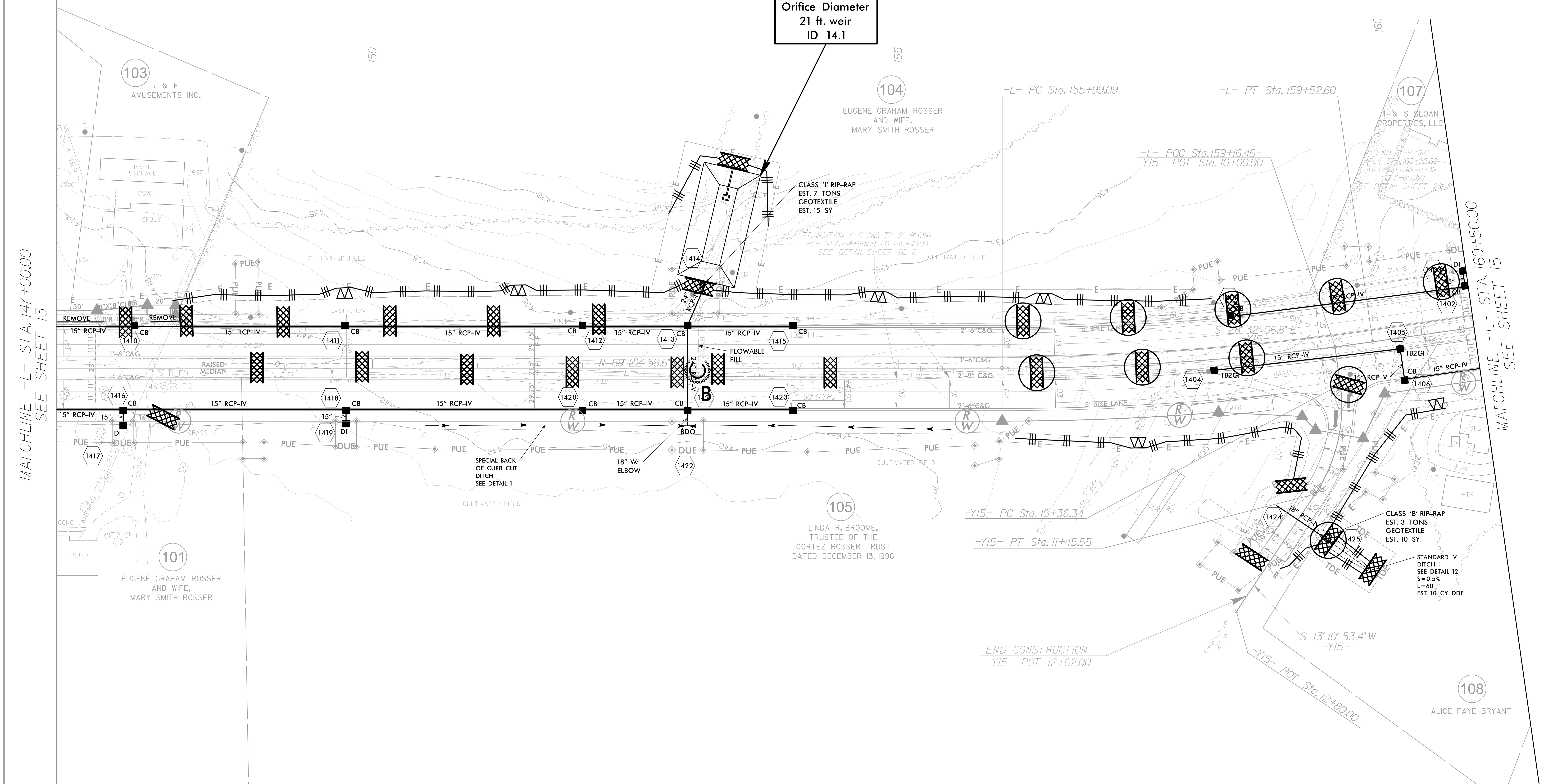
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-14/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-	-Y15-
PI Sta 157+76.14	PI Sta 10+93.49
△ = 8° 06' 07.1" (LT)	△ = 41° 43' 00.3" (RT)
D = 2° 17' 30.6"	D = 38° 11' 49.9"
L = 353.51'	L = 109.21'
T = 177.05'	T = 57.15'
R = 2,500.00'	R = 150.00'
SE = 0.03	SE = SEE PLANS
Lr = 150'	

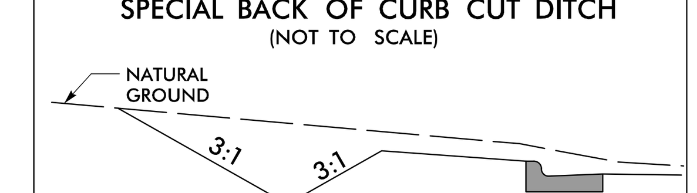


110 x 55 x 3
2.5 inch Skimmer
with 2.125 inch
Orifice Diameter
21 ft. weir
ID 14.1
MATCHLINE -L- STA. 147+00.00
SEE SHEET 13
MATCHLINE -L- STA. 160+50.00
SEE SHEET 15
103
J & F AMUSEMENTS INC.
104
EUGENE GRAHAM ROSSER AND WIFE, MARY SMITH ROSSER
107
T & S SLOAN PROPERTIES, LLC
101
EUGENE GRAHAM ROSSER AND WIFE, MARY SMITH ROSSER
105
LINDA R. BROOME, TRUSTEE OF THE CORTEZ ROSSER TRUST DATED DECEMBER 13, 1996
108
ALICE FAYE BRYANT
CLASS 'I' RIP-RAP
EST. 7 TONS
GEOTEXTILE
EST. 15 SY
-L- PC Sta. 155+99.09
-L- PT Sta. 159+52.60
-L- POC Sta. 159+16.46=
-Y15- POT Sta. 10+00.00
-Y15- PC Sta. 10+36.34
-Y15- PT Sta. 11+45.55
END CONSTRUCTION
-Y15- POT 12+62.00
-Y15- POT Sta. 12+80.00
S 13° 10' 53.4" W
N 69° 22' 59.6" W
S 28° 32' 06.8" E
CLASS 'B' RIP-RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY
STANDARD V DITCH
SEE DETAIL 12
S=0.5%
L=60'
EST. 10 CY DDE
SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 1
18" W/ ELBOW
FLOWABLE FILL
15" RCP-IV
CB
DI
TB2GI
PUE
DUE
CULTIVATED FIELD
RAISED MEDIAN
5' BIKE LANE
2'-6" C&G
REMOVE

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

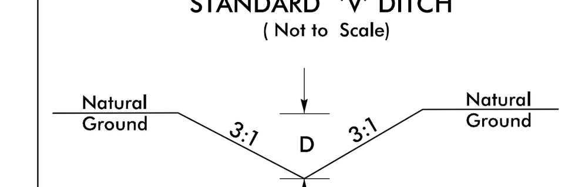
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

DETAIL 1
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)



FROM -L- STA. 150+50 TO STA. 155+50 RT

DETAIL 12
STANDARD 'V' DITCH
(Not to Scale)



FROM -Y15- STA. 11+75 LT

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-15/CONSTJ5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 172+79.26
Δ = 27° 37' 35.0" (RT)
D = 3° 49' 11.0"
L = 723.26'
T = 368.80'
R = 1,500.00'
SE = 0.04
Lr = 200'

MATCHLINE -L- STA. 160+50.00 SEE SHEET 14

MATCHLINE -L- STA. 172+00.00 SEE SHEET 16

104 — 107 T & S SLOAN PROPERTIES, LLC — 109 BELINDA GAIL DICKENS — 111 DONALD G. THOMAS AND WIFE, MARIE B. THOMAS — 112 DONALD GENE THOMAS — 113 A.K. GRIFFIN, JR. AND WIFE, MARY K. GRIFFIN — 114 EDNA M. DICKENS — 108 ALICE FAYE BRYANT — 110 ROUTE 2, BOX 236, LLC

75 x 45 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
14 ft. weir
ID 15.1

64 x 32 x 2
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
7 ft. weir
ID 15.2

STANDARD V DITCH
SEE DETAIL 12
S=0.5%
L=60'
EST. 10 CY DDE

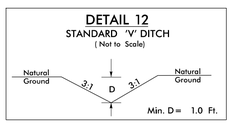
TOE PROTECTION
SEE DETAIL 26
CLASS I RIP RAP
EST. 35 TON
GEOTEXTILE
EST. 70 SY

PIPE OUTLET CHANNEL
SEE DETAIL 15
CLASS 'I' RIP RAP
(NOT TO BE PLACED
IN BOTTOM OF
STREAM BED)
EST. 20 TONS

1501 CB 15" RCP-IV
1502 2GI 15" RCP-IV
1503 CB 18" RCP-IV
1504 2GI 24" RCP-IV
1505 2GI 24" RCP-IV
1506 CB 24" RCP-IV
1507 2GI 30" RCP-V
1508 TB2GI 15" RCP-IV
1509 TB2GI 15" RCP-IV
1510 TB2GI-A 42" RCP-IV
1511 MH 42" RCP-IV
1512 CB 15" RCP-IV
1513 CB 15" RCP-IV
1514 CB 30" RCP-IV
1515 CB 42" RCP-IV
1516 PDE 24" RCP-IV
1517 REMOVE

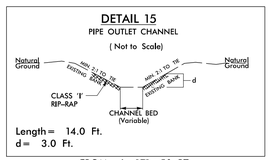
REMOVE · RETAIN · 5' BIKE LANE · SANFORD CITY LIMITS · TRANSITION 1'-6" C&G TO 2'-9" C&G -L- STA. 167+77.43 TO 168+27.43 SEE DETAIL SHEET 2C-2 · -L- PC Sta. 169+10.46 · 250' UNIFORM POINT TRANSITION

DETAIL 12
STANDARD 'V' DITCH
(Not to Scale)



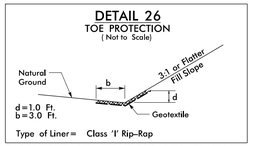
FROM -L- STA. 162+50 LT

DETAIL 15
PIPE OUTLET CHANNEL
(Not to Scale)



FROM -L- STA. 171+50 RT

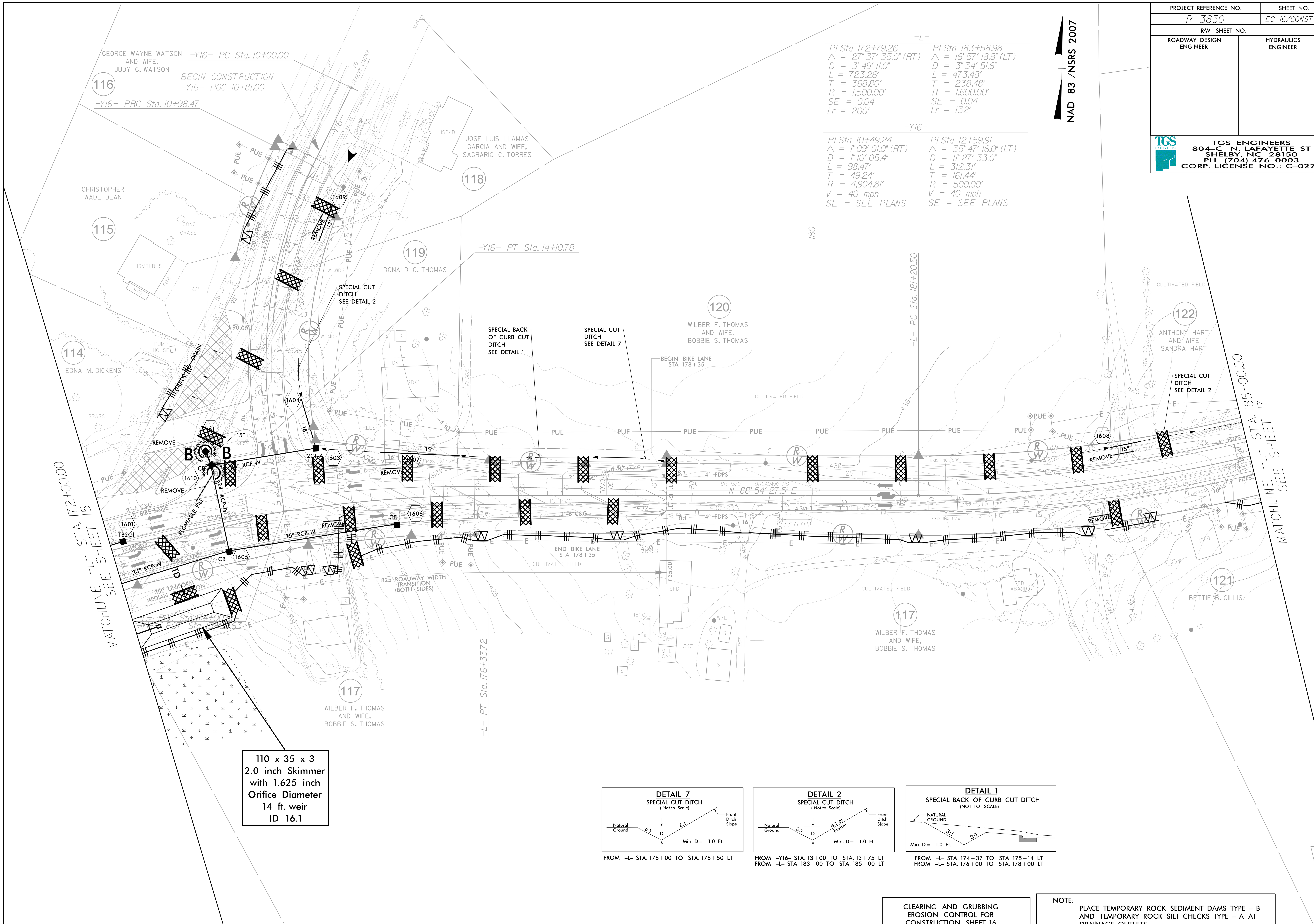
DETAIL 26
TOE PROTECTION
(Not to Scale)



FROM -L- STA. 171+20 TO STA. 171+75 RT

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.



PROJECT REFERENCE NO. R-3830
SHEET NO. EC-16/CONSTJ6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275
NAD 83 /NSRS 2007
-L-
PI Sta 172+79.26
Δ = 27° 37' 35.0" (RT)
D = 3° 49' 11.0"
L = 723.26'
T = 368.80'
R = 1,500.00'
SE = 0.04
Lr = 200'
PI Sta 183+58.98
Δ = 16° 57' 18.8" (LT)
D = 3° 34' 51.6"
L = 473.48'
T = 238.48'
R = 1,600.00'
SE = 0.04
Lr = 132'
-Y16-
PI Sta 10+49.24
Δ = 1° 09' 01.0" (RT)
D = 1° 10' 05.4"
L = 98.47'
T = 49.24'
R = 4,904.81'
V = 40 mph
SE = SEE PLANS
PI Sta 12+59.91
Δ = 35° 47' 16.0" (LT)
D = 11° 27' 33.0"
L = 312.31'
T = 161.44'
R = 500.00'
V = 40 mph
SE = SEE PLANS
-Y16- PC Sta. 10+00.00
BEGIN CONSTRUCTION -Y16- POC 10+81.00
-Y16- PRC Sta. 10+98.47
-Y16- PT Sta. 14+10.78
-L- PC Sta. 181+20.50
-L- PT Sta. 176+33.72
GEORGE WAYNE WATSON AND WIFE, JUDY G. WATSON
JOSE LUIS LLAMAS GARCIA AND WIFE, SAGRARIO C. TORRES
CHRISTOPHER WADE DEAN
DONALD G. THOMAS
EDNA M. DICKENS
WILBER F. THOMAS AND WIFE, BOBBIE S. THOMAS
ANTHONY HART AND WIFE SANDRA HART
BETTIE B. GILLIS
SPECIAL CUT DITCH SEE DETAIL 2
SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 1
SPECIAL CUT DITCH SEE DETAIL 7
BEGIN BIKE LANE STA 178+35
END BIKE LANE STA 178+35
N 88° 54' 27.5" E
825' ROADWAY WIDTH TRANSITION (BOTH SIDES)
MATCHLINE -L- STA. 172+00.00 SEE SHEET 15
MATCHLINE -L- STA. 185+00.00 SEE SHEET 17
110 x 35 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
14 ft. weir
ID 16.1
DETAIL 7
SPECIAL CUT DITCH (Not to Scale)
Min. D= 1.0 Ft.
FROM -L- STA. 178+00 TO STA. 178+50 LT
DETAIL 2
SPECIAL CUT DITCH (Not to Scale)
Min. D= 1.0 Ft.
FROM -Y16- STA. 13+00 TO STA. 13+75 LT
FROM -L- STA. 183+00 TO STA. 185+00 LT
DETAIL 1
SPECIAL BACK OF CURB CUT DITCH (NOT TO SCALE)
Min. D= 1.0 Ft.
FROM -L- STA. 174+37 TO STA. 175+14 LT
FROM -L- STA. 176+00 TO STA. 178+00 LT
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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-17/CONST17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

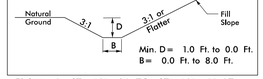
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 183+58.98
△ = 16° 57' 18.8" (LT)
D = 3° 34' 51.6"
L = 473.48'
T = 238.48'
R = 1,600.00'
SE = 0.04
Lr = 132'

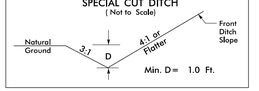
PI Sta 196+95.94
△ = 10° 40' 14.3" (RT)
D = 1° 35' 29.6"
L = 670.46'
T = 336.20'
R = 3,600.00'
SE = 0.03
Lr = 99'

DETAIL 8
VAR. WIDTH SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft. to 0.0 Ft.
B = 0.0 Ft. to 8.0 Ft.
FROM -L- STA. 191+20 TO STA. 191+50 LT

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 1.0 Ft.
FROM -L- STA. 191+50 TO STA. 194+00 LT
FROM -L- STA. 185+00 TO STA. 187+50 LT

80 x 40 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 17.3

40 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 17.1

80 x 40 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
11 ft. weir
ID 17.2

-L- PT Sta. 185+93.98

-L- PC Sta. 193+59.73

INSTALL DRAINAGE SYSTEM DURING CLEARING & GRUBBING PHASE

BURY INVERT 1.0 FT BELOW STREAM BED

VAR. WIDTH SPECIAL LATERAL BASE DITCH SEE DETAIL 8

LATERAL BASE DITCH SEE DETAIL 5 EST. 190 CY DDE

SPECIAL CUT DITCH SEE DETAIL 2

SPECIAL CUT DITCH SEE DETAIL 2

TOE PROTECTION SEE DETAIL 26 CLASS I RIP RAP EST. 55 TON GEOTEXTILE EST. 110 SY

TOE PROTECTION SEE DETAIL 26 CLASS I RIP RAP EST. 20 TON GEOTEXTILE EST. 40 SY

BURY INVERT 1.0 FT BELOW STREAM BED

PIPE OUTLET CHANNEL SEE DETAIL 13 CLASS 'I' RIP RAP (NOT TO BE PLACED IN BOTTOM OF STREAM BED) EST. 33 TONS

LATERAL BASE DITCH SEE DETAIL 5 CLASS 'B' RIP RAP EST. 20 TON GEOTEXTILE EST. 48 SY EST. 25 CY DDE

INSTALL DRIVEWAY PIPE DURING CLEARING & GRUBBING PHASE

SPECIAL CUT BASE DITCH SEE DETAIL 25 CLASS 'B' RIP RAP EST. 45 TON GEOTEXTILE EST. 114 SY

123 CLAYTON THOMAS HEIRS

128 O.T. THOMAS AND WIFE VERLIE P. THOMAS, AS TENANTS BY THE ENTIRETY OF A LIFE ESTATE, AND MABEL THOMAS LOYD & HUSBAND W.H. LOYD IN REMAINDER

124 MITCHELL L. PATTERSON

126 CLAYTON THOMAS AND WIFE, LAURA K. THOMAS

127 L.W. PATTERSON HEIRS

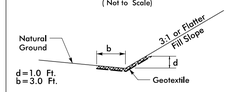
129 C. JOYCE THOMAS

130 CLARA JOYCE PATTERSON

MATCHLINE -L- STA. 185+00.00 SEE SHEET 16

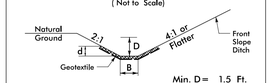
MATCHLINE -L- STA. 198+50.00 SEE SHEET 18

DETAIL 26
TOE PROTECTION
(Not to Scale)



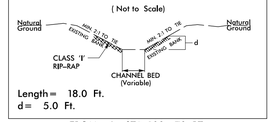
d=1.0 Ft.
b=3.0 Ft.
Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 190+00 TO STA. 191+00 LT

DETAIL 25
SPECIAL CUT BASE DITCH
(Not to Scale)



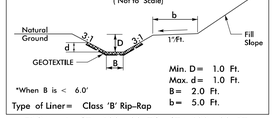
Min. D = 1.5 Ft.
Max. d = 1.5 Ft.
B = 2.0 Ft.
Type of Liner = Class 'B' Rip-Rap
FROM STA. 190+65 TO STA. 191+64 RT

DETAIL 13
PIPE OUTLET CHANNEL
(Not to Scale)



Length = 18.0 Ft.
d = 5.0 Ft.
FROM -L- STA. 189+79 RT

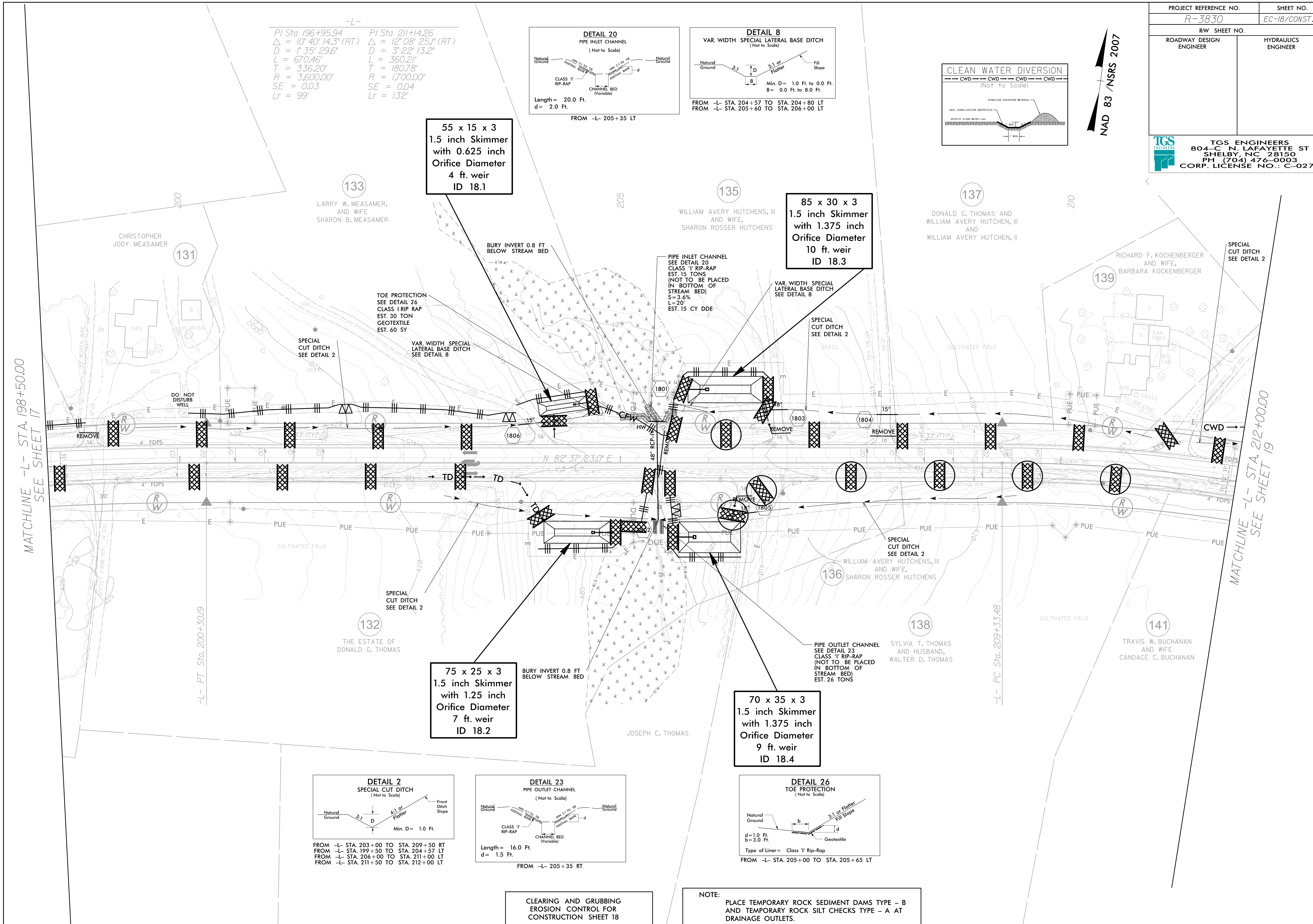
DETAIL 5
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
Type of Liner = Class 'B' Rip-Rap
FROM -L- STA. 189+83 TO STA. 190+22 RT
FROM -L- STA. 191+50 TO STA. 192+50 LT

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 17

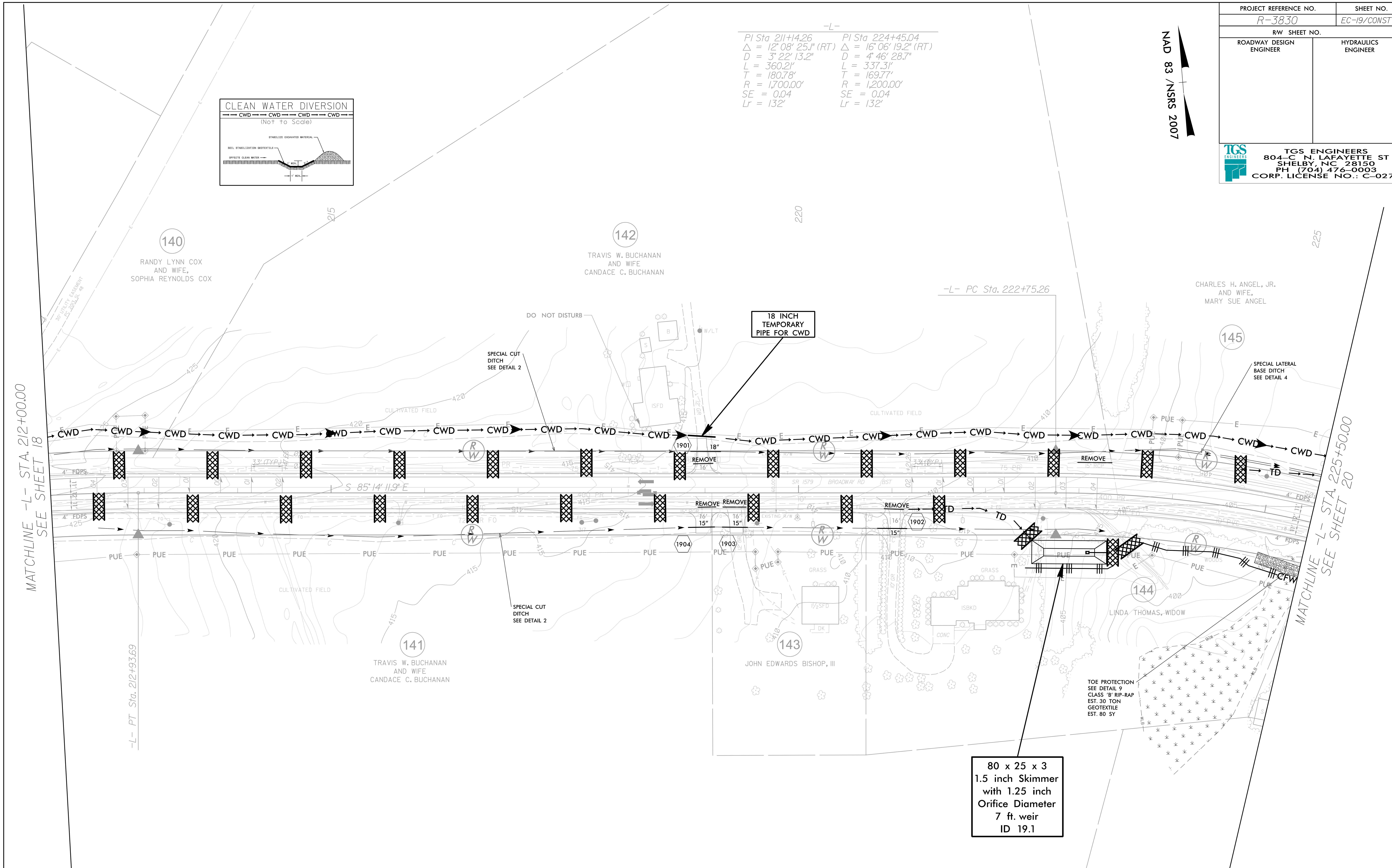
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



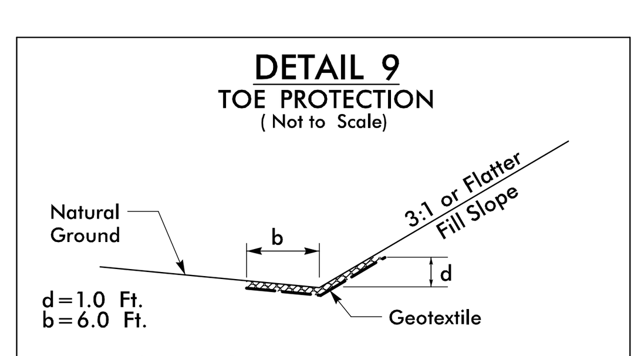
PROJECT REFERENCE NO. R-3830
SHEET NO. EC-18/CONSTJ8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275
NAD 83 /NSRS 2007
-L-
PI Sta 196+95.94
△ = 10° 40' 14.3" (RT)
D = 1° 35' 29.6"
L = 670.46'
T = 336.20'
R = 3,600.00'
SE = 0.03
Lr = 99'
PI Sta 211+14.26
△ = 12° 08' 25.1" (RT)
D = 3° 22' 13.2"
L = 360.21'
T = 180.78'
R = 1,700.00'
SE = 0.04
Lr = 132'
DETAIL 20
PIPE INLET CHANNEL
(Not to Scale)
Natural Ground
CLASS 'I' RIP-RAP
CHANNEL BED (Variable)
Length = 20.0 Ft.
d = 2.0 Ft.
FROM -L- 205+35 LT
DETAIL 8
VAR. WIDTH SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground
3:1 or Flatter
Fill Slope
Min. D = 1.0 Ft. to 0.0 Ft.
B = 0.0 Ft. to 8.0 Ft.
FROM -L- STA. 204+57 TO STA. 204+80 LT
FROM -L- STA. 205+60 TO STA. 206+00 LT
CLEAN WATER DIVERSION
(Not to Scale)
55 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 18.1
85 x 30 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 18.3
75 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
7 ft. weir
ID 18.2
70 x 35 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9 ft. weir
ID 18.4
133 LARRY W. MEASAMER, AND WIFE SHARON B. MEASAMER
131 CHRISTOPHER JODY MEASAMER
135 WILLIAM AVERY HUTCHENS, III AND WIFE, SHARON ROSSER HUTCHENS
137 DONALD G. THOMAS AND WILLIAM AVERY HUTCHEN, III AND WILLIAM AVERY HUTCHEN, II
139 RICHARD F. KOCHENBERGER AND WIFE, BARBARA KOCKENBERGER
132 THE ESTATE OF DONALD G. THOMAS
136 WILLIAM AVERY HUTCHENS, III AND WIFE, SHARON ROSSER HUTCHENS
138 SYLVIA T. THOMAS AND HUSBAND, WALTER D. THOMAS
141 TRAVIS W. BUCHANAN AND WIFE CANDACE C. BUCHANAN
JOSEPH C. THOMAS
BURY INVERT 0.8 FT BELOW STREAM BED
TOE PROTECTION SEE DETAIL 26 CLASS I RIP RAP EST. 30 TON GEOTEXTILE EST. 60 SY
VAR. WIDTH SPECIAL LATERAL BASE DITCH SEE DETAIL 8
SPECIAL CUT DITCH SEE DETAIL 2
PIPE INLET CHANNEL SEE DETAIL 20 CLASS 'I' RIP-RAP EST. 15 TONS (NOT TO BE PLACED IN BOTTOM OF STREAM BED) S = 3.6% L = 20' EST. 15 CY DDE
PIPE OUTLET CHANNEL SEE DETAIL 23 CLASS 'I' RIP-RAP (NOT TO BE PLACED IN BOTTOM OF STREAM BED) EST. 26 TONS
DO NOT DISTURB WELL
REMOVE
CWD
N 82° 37' 23.0" E
48" RCP
MATCHLINE -L- STA. 198+50.00 SEE SHEET 17
MATCHLINE -L- STA. 212+00.00 SEE SHEET 19
-L- PT Sta. 200+30.19
-L- PC Sta. 209+33.48
DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
4:1 or Flatter
Min. D = 1.0 Ft.
FROM -L- STA. 203+00 TO STA. 209+50 RT
FROM -L- STA. 199+50 TO STA. 204+57 LT
FROM -L- STA. 206+00 TO STA. 211+00 LT
FROM -L- STA. 211+50 TO STA. 212+00 LT
DETAIL 23
PIPE OUTLET CHANNEL
(Not to Scale)
CLASS 'I' RIP-RAP
CHANNEL BED (Variable)
Length = 16.0 Ft.
d = 1.5 Ft.
FROM -L- 205+35 RT
DETAIL 26
TOE PROTECTION
(Not to Scale)
Natural Ground
3:1 or Flatter Fill Slope
Geotextile
d = 1.0 Ft.
b = 3.0 Ft.
Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 205+00 TO STA. 205+65 LT
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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-19/CONST19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

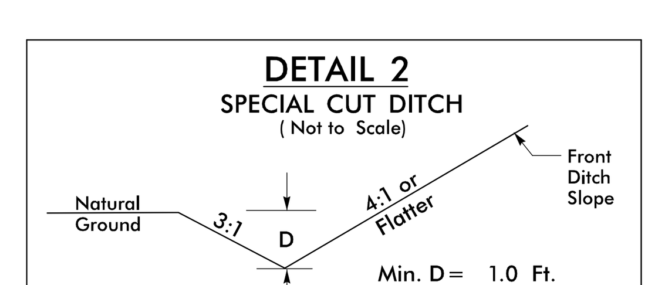
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



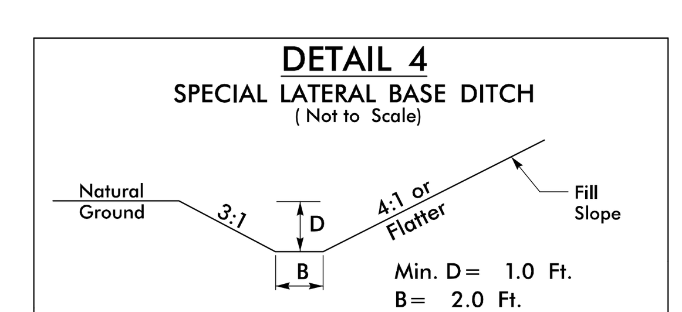
-L-
PI Sta 211+14.26
Δ = 12° 08' 25.1" (RT)
D = 3° 22' 13.2"
L = 360.21'
T = 180.78'
R = 1,700.00'
SE = 0.04
Lr = 132'
PI Sta 224+45.04
Δ = 16° 06' 19.2" (RT)
D = 4° 46' 28.7"
L = 337.31'
T = 169.77'
R = 1,200.00'
SE = 0.04
Lr = 132'
NAD 83 /NSRS 2007
MATCHLINE -L- STA. 212+00.00 SEE SHEET 18
MATCHLINE -L- STA. 225+50.00 SEE SHEET 20
-L- PT Sta. 212+93.69
-L- PC Sta. 222+75.26
140
RANDY LYNN COX AND WIFE, SOPHIA REYNOLDS COX
141
TRAVIS W. BUCHANAN AND WIFE CANDACE C. BUCHANAN
142
TRAVIS W. BUCHANAN AND WIFE CANDACE C. BUCHANAN
143
JOHN EDWARDS BISHOP, III
144
LINDA THOMAS, WIDOW
145
CHARLES H. ANGEL, JR. AND WIFE, MARY SUE ANGEL
DO NOT DISTURB
SPECIAL CUT DITCH SEE DETAIL 2
18 INCH TEMPORARY PIPE FOR CWD
SPECIAL LATERAL BASE DITCH SEE DETAIL 4
TOE PROTECTION SEE DETAIL 9 CLASS 'B' RIP-RAP EST. 30 TON GEOTEXTILE EST. 80 SY
80 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
7 ft. weir
ID 19.1
S 85° 14' 11.9" E
CWD
TD
CFW
PUE
REMOVE
CULTIVATED FIELD
GRASS
1901
1902
1903
1904
215
220
225
CLEAN WATER DIVERSION
CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER



FROM -L- STA. 225+00 TO STA. 225+50 RT



FROM -L- STA. 212+00 TO STA. 223+50 LT
FROM -L- STA. 212+50 TO STA. 223+40 RT



FROM L STA. 224+00 TO STA. 225+50 LT

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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-20/CONST.20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 224+45.04
Δ = 16° 06' 19.2" (RT)
D = 4° 46' 28.7"
L = 337.31'
T = 169.77'
R = 1,200.00'
SE = 0.04
Lr = 132'
NON-STANDARD

PI Sta 249+46.76
Δ = 20° 02' 09.1" (LT)
D = 0° 59' 16.3"
L = 2,028.21'
T = 1,024.57'
R = 5,800.00'
SE = 0.02
Lr = 66'

-Y17-
PI Sta 12+08.98
Δ = 12° 03' 37.4" (RT)
D = 19° 05' 54.9"
L = 63.15'
T = 31.69'
R = 300.00'
SE = SEE PLANS
① = -Y17- PT Sta. 12+40.43
② = -L- POT Sta. 227+01.53= -Y17- POT Sta. 12+72.74

-Y17- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y17- POT 11+60.00
-Y17- PC Sta. 11+77.28

90 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
7 ft. weir
ID 20.1

50 x 25 x 3
1.5 inch Skimmer
with 1.00 inch
Orifice Diameter
4 ft. weir
ID 20.4

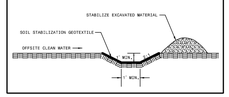
75 x 30 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
9 ft. weir
ID 20.2

90 x 60 x 3
2.0 inch Skimmer
with 2.0 inch
Orifice Diameter
17 ft. weir
ID 20.3

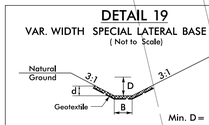
18 INCH TEMPORARY PIPE FOR CWD

18 INCH TEMPORARY PIPE FOR CWD

CLEAN WATER DIVERSION
(Not To Scale)

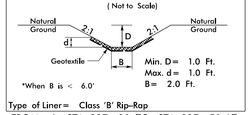


DETAIL 19
VAR. WIDTH SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft. to 0.0 Ft.
B = 0.0 Ft. to 8.0 Ft.
Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 238+00 TO STA. 238+50 LT

DETAIL 11
STANDARD BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
*When B is < 6.0'
Type of Liner = Class 'B' Rip-Rap
FROM -L- STA. 227+30 TO STA. 227+50 LT

2' STD. BASE DITCH
SEE DETAIL 11
S = 0.5%
L = 20'
EST. 5 CY DDE
CLASS B RIP RAP
EST. 15 TON
GEOTEXTILE
EST. 38 SY

PIPE INLET CHANNEL
SEE DETAIL 27
CLASS 'I' RIP RAP
EST. 15 TONS
S = 1.5%
L = 24'
EST. 20 CY DDE

BURY INVERT 1.0 FT BELOW STREAM BED

LATERAL BASE DITCH
SEE DETAIL 5
CLASS 'B' RIP-RAP
EST. 75 TONS
GEOTEXTILE
EST. 205 SY
EST. 85 CY DDE

SPECIAL LATERAL BASE DITCH SEE DETAIL 4

SPECIAL CUT DITCH SEE DETAIL 2

TOE PROTECTION
SEE DETAIL 18
CLASS I RIP RAP
EST. 335 TON
GEOTEXTILE
EST. 589 SY

VAR. WIDTH SPECIAL LATERAL BASE DITCH
SEE DETAIL 19
CLASS I RIP RAP
EST. 38 TON
GEOTEXTILE
EST. 70 SY

SPECIAL CUT DITCH
SEE DETAIL 2

SPECIAL LATERAL BASE DITCH
SEE DETAIL 4

SPECIAL LATERAL BASE DITCH
SEE DETAIL 4

SPECIAL CUT DITCH
SEE DETAIL 2

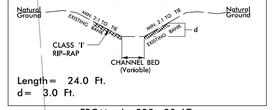
TOE PROTECTION
SEE DETAIL 9
CLASS 'B' RIP-RAP
EST. 30 TON
GEOTEXTILE
EST. 80 SY

PIPE OUTLET CHANNEL
SEE DETAIL 16
CLASS 'I' RIP RAP
EST. 65 TONS
S = 1.5%
L = 38'
EST. 20 CY DDE

RIP RAP AT EMBANKMENT
SEE DETAIL 10
CLASS 'I' RIP RAP
EST. 20 TONS

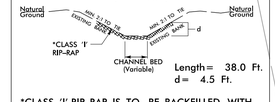
BURY INVERT 1.0 FT BELOW STREAM BED

DETAIL 27
PIPE INLET CHANNEL
(Not to Scale)



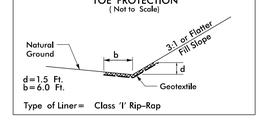
Length = 24.0 Ft.
d = 3.0 Ft.
FROM -L- 228+20 LT

DETAIL 16
PIPE OUTLET CHANNEL
(Not to Scale)



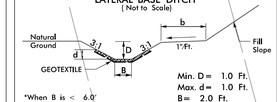
Length = 38.0 Ft.
d = 4.5 Ft.
*CLASS 'I' RIP-RAP IS TO BE BACKFILLED WITH NATIVE MATERIAL TO REMOVE VOIDS.
FROM -L- 228+30 RT

DETAIL 18
TOE PROTECTION
(Not to Scale)



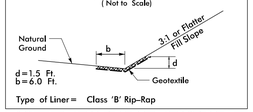
d = 1.5 Ft.
b = 6.0 Ft.
Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 234+50 TO STA. 238+00 LT

DETAIL 5
LATERAL BASE DITCH
(Not to Scale)



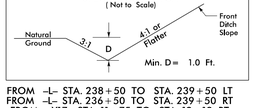
*When B is < 6.0'
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
Type of Liner = Class 'B' Rip-Rap
FROM -L- STA. 228+21 TO STA. 230+00 LT

DETAIL 9
TOE PROTECTION
(Not to Scale)



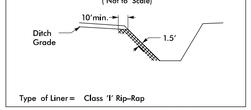
d = 1.5 Ft.
b = 6.0 Ft.
Type of Liner = Class 'B' Rip-Rap
FROM -L- STA. 225+50 TO STA. 226+00 RT

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



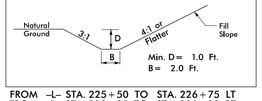
Min. D = 1.0 Ft.
FROM -L- STA. 238+50 TO STA. 239+50 LT
FROM -L- STA. 236+50 TO STA. 239+50 RT
FROM -Y17- STA. 11+75 TO STA. 12+19 RT

DETAIL 10
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 228+32 RT

DETAIL 4
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft.
B = 2.0 Ft.
FROM -L- STA. 225+50 TO STA. 226+75 LT
FROM -L- STA. 228+35 TO STA. 236+00 RT

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.

MATCHLINE -L- STA. 225+50.00 SEE SHEET 19

MATCHLINE -L- STA. 239+50.00 SEE SHEET 21

-L- PT Sta. 226+12.57

-L- PC Sta. 239+22.19

145 CHARLES H. ANGEL, JR. AND WIFE, MARY SUE ANGEL

146 CHARLES H. ANGEL, JR. AND WIFE, MARY SUE ANGEL

147 ROBERT ROBICHAUD

148 PEGGY B. NORRIS

149 PEGGY B. NORRIS

150 JANICE S. JONES AND HUSBAND, JAY LYNN JONES

151 JANICE S. JONES AND HUSBAND, JAY LYNN JONES

152 JOSEPH M. SLOAN

153 DAVID BODENHAMER AND WIFE DONNA BODENHAMER

154 SUSAN VIRGIN, TRUSTEE SUSAN VIRGIN TRUST

155 ALFRED BENNY SLOAN, JR.

156 LOUIS M. SLOAN AND WIFE, GAIL P. SLOAN

ROBERT ROBICHAUD

S 8°48'29.9" W

S 20°52'07.2" W

S 69°07'52.8" E

SR 1579 WOODLAND TRACE RD

SR 1579 BROADWAY RD

CWD REMOVE 30" RCP-IV 2002 2003 2004 2006 2007 2008 2009 2010 2011 HW W/ 1.0' SILL CAT-1 72" RCP-III 24" 18" 16' 4' FDPS 24' BST 50' PR 400' PR 12" STR

PUE WOODS GRASS FALLOW ISBKD CAR-PORT HTR MTL CAN ISFD BK SOIL GREU, TL-3

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-21/CONST.19&20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

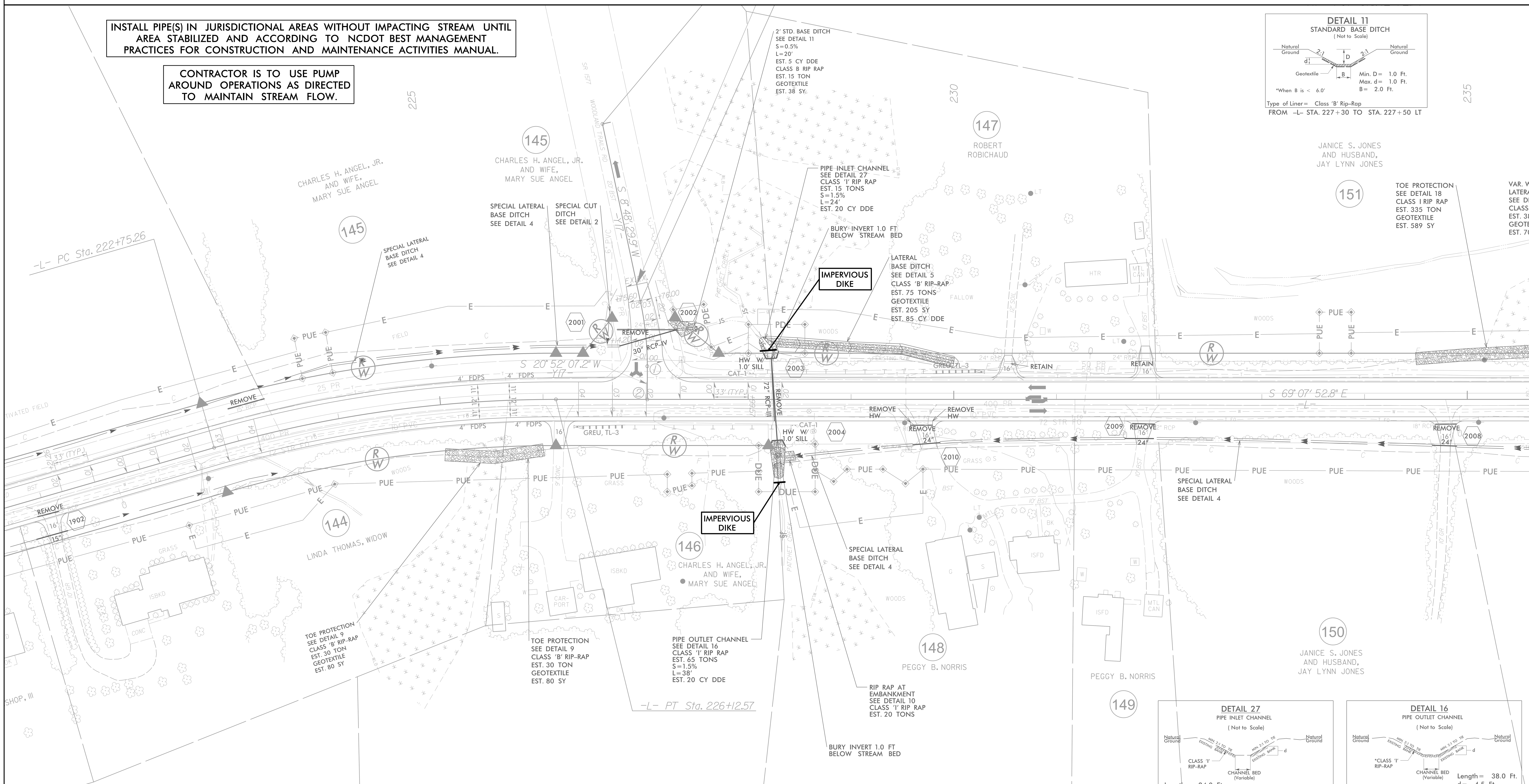
PIPE CONSTRUCTION SEQUENCE STA. 228+25 –L–

1. INSTALL IMPERVIOUS DIKES AS SHOWN ON PLANS.
2. BEGIN PUMP AROUND OPERATION BY PUMPING THROUGH EXISTING PIPE.
3. DEWATER WORK SITE AS NEEDED INTO SPECIAL STILLING BASIN.
4. CONSTRUCT 72" RCP–III PIPE.
5. UPON COMPLETION OF PIPE, REMOVE IMPERVIOUS DIKES AND REESTABLISH STREAM ACCORDING TO CONST. PLANS.

NAD 83/NSRS 2007

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

CONTRACTOR IS TO USE PUMP AROUND OPERATIONS AS DIRECTED TO MAINTAIN STREAM FLOW.



PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-22/CONST.21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

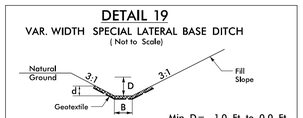
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 249+46.76
△ = 20° 02' 09.1" (LT)
D = 0° 59' 16.3"
L = 2,028.21'
T = 1,024.57'
R = 5,800.00'
SE = 0.02
Lr = 66'

-Y18-
PI Sta 10+55.00
△ = 10° 17' 42.2" (LT)
D = 19° 05' 54.9"
L = 53.90'
T = 27.03'
R = 300.00'
SE = SEE PLANS

DETAIL 19
VAR. WIDTH SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft. to 0.0 Ft.
B = 0.0 Ft. to 8.0 Ft.
Type of Liner = Class 'I' Rip-Rap
FROM -L- STA. 249+53 TO STA. 250+00 LT

MATCHLINE -L- STA. 239+50.00
SEE SHEET 20

MATCHLINE -L- STA. 253+00.00
SEE SHEET 22

ALFRED BENNY SLOAN, JR.

155 SPECIAL CUT DITCH SEE DETAIL 2

158 ALFRED BENNY SLOAN

CLASS 'B' RIP-RAP
EST. 3 TON
GEOTEXTILE
EST. 10 SY

STANDARD BASE DITCH
SEE DETAIL 17
S=1.4%
L=50'
EST. 15 CY DDE

VAR. WIDTH SPECIAL LATERAL BASE DITCH
SEE DETAIL 19
CLASS 'I' RIP RAP
EST. 45 TON
GEOTEXTILE
EST. 79 CY

80 x 35 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
10 ft. weir
ID 21.3

159 JEANNE MCNEILL ELLINGTON AND CHRISTIE MCNEILL LAWLOR

SPECIAL CUT DITCH SEE DETAIL 2

-L- POC Sta.247+20.45=
-Y18- POT Sta. 10+00.00

S 12° 58' 59.0" W
-Y18- PC Sta. 10+27.91

REMOVE 18" RCP (2103)
REMOVE 18" RCP (2104)
REMOVE (2102)

TOWN OF BROADWAY SIGN TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION

SPECIAL CUT DITCH SEE DETAIL 2

SPECIAL CUT DITCH SEE DETAIL 2

SPECIAL CUT DITCH SEE DETAIL 2

SPECIAL CUT DITCH SEE DETAIL 2

SPECIAL CUT DITCH SEE DETAIL 2

DO NOT DISTURB DOGWOOD TREE & FLOWERING SHRUBS

DAYLILIES & YELLOW BELLS (FORSYTHIA SHRUB) TO BE TRANSPLANTED

DO NOT DISTURB FAMILY PINE TREE & FLOWERING SHRUBS

LOIS M. SLOAN AND WIFE, GAIL P. SLOAN
156

TOWN OF BROADWAY
215

157 BENDTSEN VOSS AND WIFE, CARRIE VOSS

-Y18- PT Sta. 10+81.88
END CONSTRUCTION
-Y18- POT 11+25.00

S 2° 41' 16.8" W
-Y18-

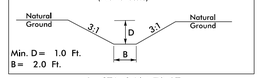
-Y18- POT Sta. 12+19.46

160 JEANNE MCNEILL ELLINGTON AND CHRISTIE MCNEILL LAWLOR

40 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 21.1

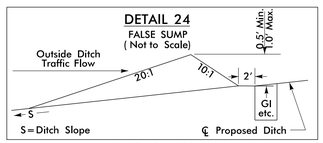
50 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 21.2

DETAIL 17
STANDARD BASE DITCH
(Not to Scale)



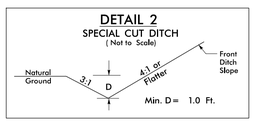
Min. D = 1.0 Ft.
B = 2.0 Ft.
-L- STA. 246+70 LT

DETAIL 24
FALSE SUMP
(Not to Scale)



-L- STA. 246+50 RT

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



Min. D = 1.0 Ft.

FROM -Y18- STA. 10+36 TO STA. 11+10 RT
FROM -Y18- STA. 10+41 TO STA. 11+25 LT
FROM -L- STA. 247+52 TO STA. 253+00 RT
FROM -L- STA. 239+50 TO STA. 242+50 RT
FROM -L- STA. 250+00 TO STA. 253+00 LT
FROM -L- STA. 239+50 TO STA. 246+00 LT

SAFETY FENCE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 21

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

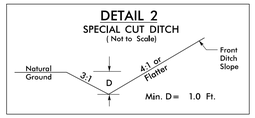
PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-23/CONST.22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 249+46.76
△ = 20° 02' 09.1" (LT)
D = 0° 59' 16.3"
L = 2,028.21'
T = 1,024.57'
R = 5,800.00'
SE = 0.02
Lr = 66'

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



FROM -L- STA. 253+00 TO STA. 254+00 LT

-Y19- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y19- POT 11+11.00

MATCHLINE -L- STA. 253+00.00
SEE SHEET 21

MATCHLINE -L- STA. 266+50.00
SEE SHEET 23

JEANNE MCNEILL ELLINGTON AND CHRISTIE MCNEILL LAWLOR

RONALD S. BROWN III

KAREN T. THOMAS

SYLVIA T. LESLIE

CLIFTON H. PARKER AND HIS WIFE KATIE LUCILLE PARKER

WILSON MITCHELL MYERS AND WIFE, CYNTHIA DIANNE MYERS

DEBORAH A. KINDLE

JOSE ANTONIO CORNEJO

ANTHONY V. KEEN AND WIFE, SHARRI A. KEEN

HENRY DONNELL COORE AND WIFE DEBRA B. COORE

JUAN VIVAS

LONNIE HOWELL FREEMAN

MARGARET T. JONES AND HUSBAND, BOBBY R. JONES

EUGENE DAVIS THOMAS

MICHAEL STEVE THOMAS

-L- PT Sta. 259+50.41

S 2° 33' 06.8" W

S 89° 10' 01.9" E

SPECIAL CUT DITCH SEE DETAIL 2

CLASS 'B' RIP-RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

CLASS 'B' RIP-RAP EST. 3 TONS GEOTEXTILE EST. 10 SY

100' LANE TRANSITION

BEGIN 2'-6"C&G 26.96 25.00 LT

BEGIN 2'-6"C&G 27.04 25.00 RT

REMOVE

REMOVABLE

15" RCP-IV

18" RCP-V

2'-6"C&G

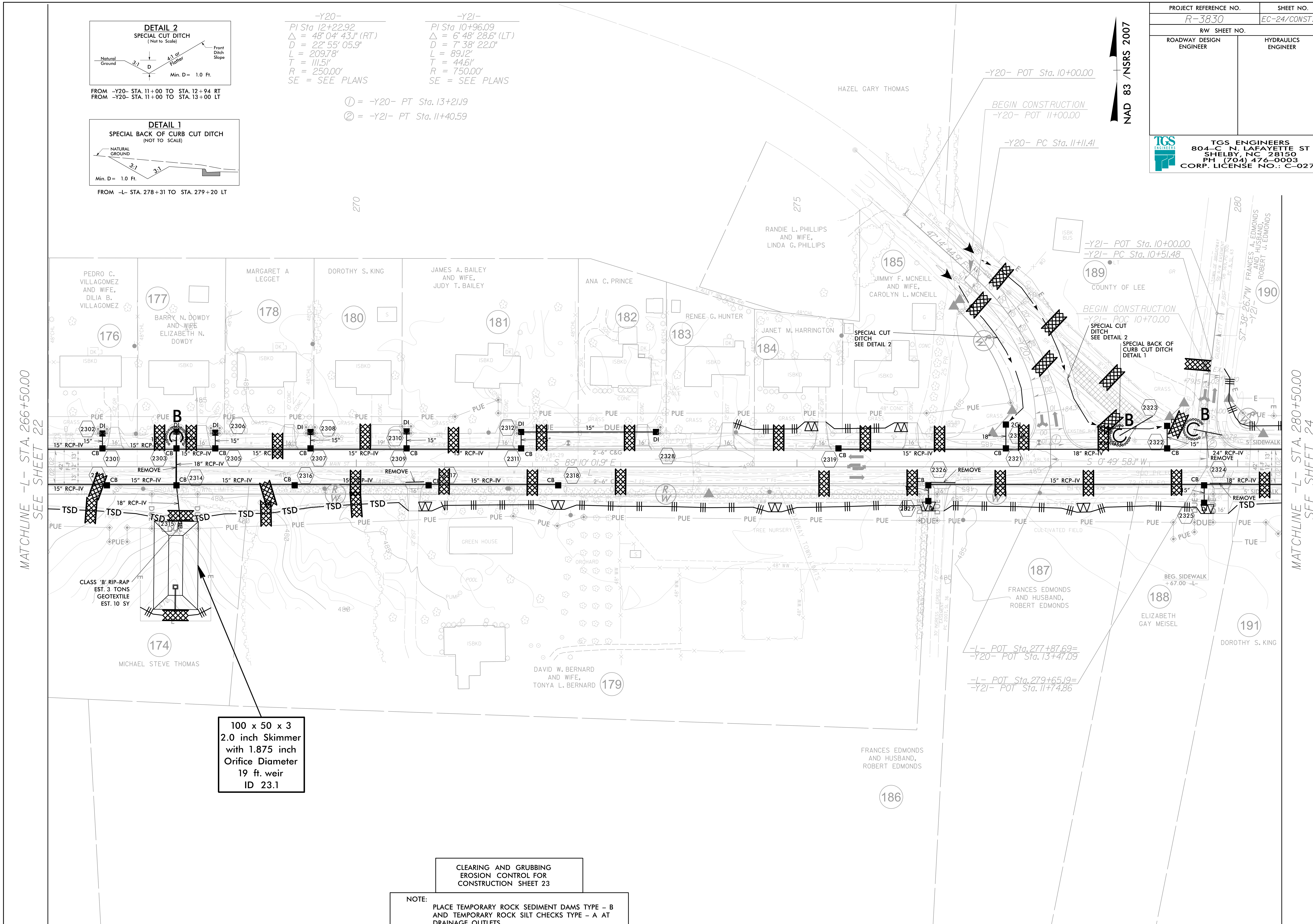
TSD

DO NOT DISTURB SEPTIC AREA

-L- POT Sta. 260+46.64=
-Y19- POT Sta. 12+39.43

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.


PROJECT REFERENCE NO.
R-3830
SHEET NO.
EC-24/CONST.23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275
NAD 83 /NSRS 2007
DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
Min. D = 1.0 Ft.
FROM -Y20- STA. 11+00 TO STA. 12+94 RT
FROM -Y20- STA. 11+00 TO STA. 13+00 LT
DETAIL 1
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)
NATURAL GROUND
Min. D = 1.0 Ft.
FROM -L- STA. 278+31 TO STA. 279+20 LT
-Y20-
PI Sta 12+22.92
△ = 48° 04' 43.1" (RT)
D = 22° 55' 05.9"
L = 209.78'
T = 111.51'
R = 250.00'
SE = SEE PLANS
-Y21-
PI Sta 10+96.09
△ = 6° 48' 28.6" (LT)
D = 7° 38' 22.0"
L = 89.12'
T = 44.61'
R = 750.00'
SE = SEE PLANS
① = -Y20- PT Sta. 13+21.19
② = -Y21- PT Sta. 11+40.59
-Y20- POT Sta. 10+00.00
BEGIN CONSTRUCTION -Y20- POT 11+00.00
-Y20- PC Sta. 11+11.41
-Y21- POT Sta. 10+00.00
-Y21- PC Sta. 10+51.48
BEGIN CONSTRUCTION -Y21- POC 10+70.00
SPECIAL CUT DITCH SEE DETAIL 2
SPECIAL BACK OF CURB CUT DITCH DETAIL 1
MATCHLINE -L- STA. 266+50.00 SEE SHEET 22
MATCHLINE -L- STA. 280+50.00 SEE SHEET 24
-L- POT Sta. 277+87.69 = -Y20- POT Sta. 13+47.09
-L- POT Sta. 279+65.19 = -Y21- POT Sta. 11+74.86
CLASS 'B' RIP-RAP EST. 3 TONS
GEOTEXTILE EST. 10 SY
100 x 50 x 3
2.0 inch Skimmer
with 1.875 inch
Orifice Diameter
19 ft. weir
ID 23.1
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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-25/CONST.24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

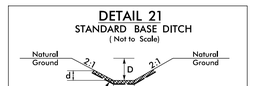
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-L-
PI Sta 287+97.96
△ = 26° 23' 54.3" (RT)
D = 6° 11' 14.8"
L = 426.64'
T = 217.18'
R = 926.00'
SE = 0.04
Lr = 132'

① = -L- POC Sta.288+63.17=
-Y22- POT Sta. 11+71.73

DETAIL 21
STANDARD BASE DITCH
(Not to Scale)



Type of Liner = Class 'B' Rip-Rap

-Y22- STA. 7+35 TO 7+80 LT
-Y22- STA. 9+95 TO 10+50 RT

COORDINATE PIPE INSTALLATION WITH FIRE DEPARTMENT

-L- PC Sta. 285+80.78

80 x 40 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 24.1

90 x 45 x 3
2.0 inch Skimmer
with 1.75 inch
Orifice Diameter
14 ft. weir
ID 24.2

-Y22- POT Sta. 6+25.00

BEGIN CONSTRUCTION
-Y22- POT 7+32.00

-Y23- POT Sta. 10+00.00

-L- POT Sta.293+54.06=
-Y23- POT Sta. 12+27.07

-L- PT Sta. 290+07.43

MATCHLINE -L- STA. 280+50.00
SEE SHEET 23

MATCHLINE -L- STA. 294+50.00
SEE SHEET 25

STANDARD BASE DITCH
SEE DETAIL 21
S=1.2%
L=55'
EST. 15 CY DDE
CLASS 'B' RIP-RAP
EST. 40 TONS
GEOTEXTILE
EST. 95 SY

STANDARD BASE DITCH
SEE DETAIL 21
S=2.0%
L=45'
EST. 15 CY DDE
CLASS 'B' RIP-RAP
EST. 40 TONS
GEOTEXTILE
EST. 95 SY

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 24

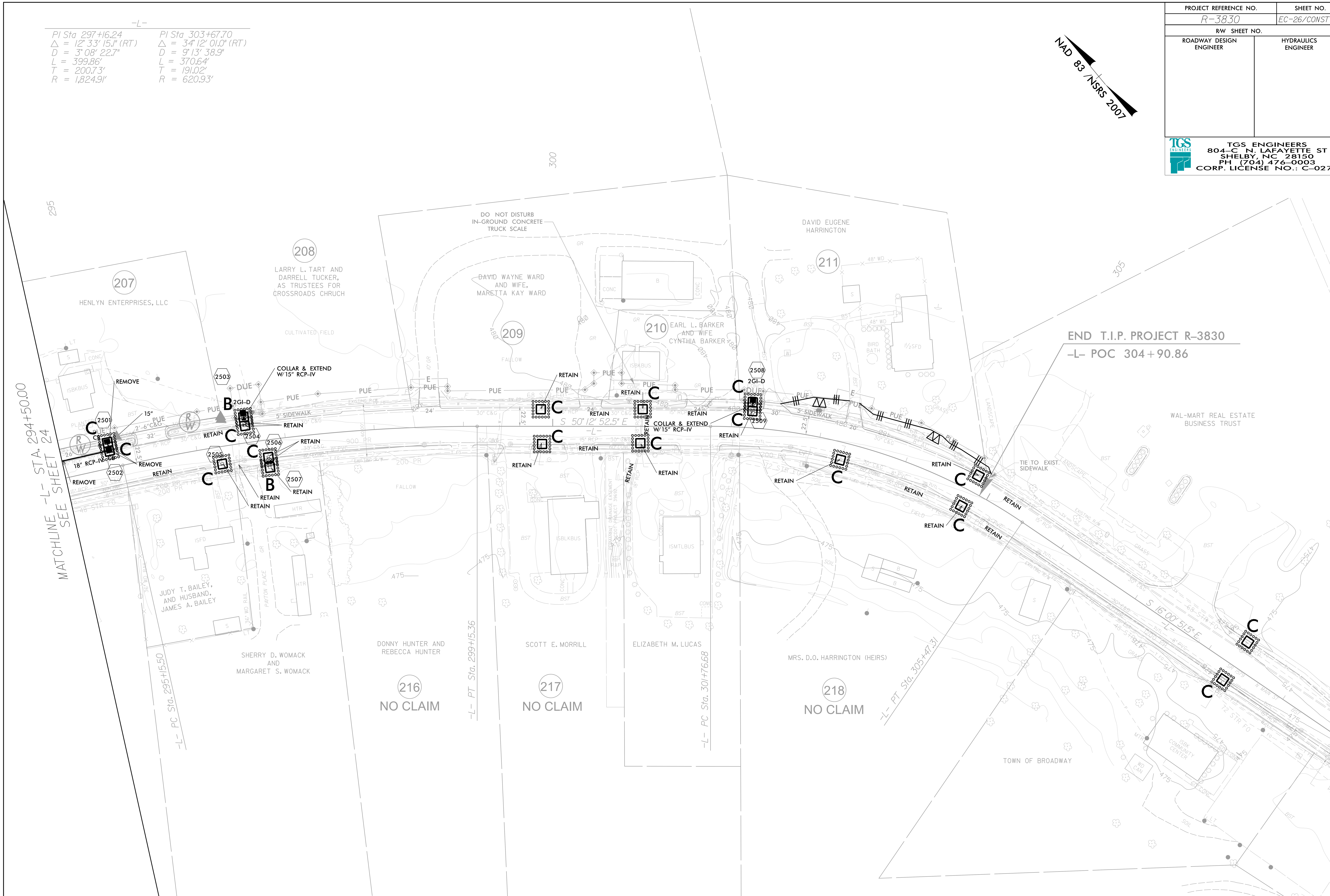
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

190 FRANCES A. EDMONDS AND HUSBAND, ROBERT J. EDMONDS
193 JAMES W. KING, AND WIFE, DOROTHY S. KING
194 DOROTHY S. KING
196 CAPE FEAR RURAL FIRE DEPARTMENT, INC.
202 ROBERT ALFORD JONES
206 WORNOM & PERKINS, L.L.C.C.
191 DOROTHY S. KING
199 FRANK W. MCDONALD AND SUZANNE B. MCDONALD, HUSBAND AND WIFE
200 PAYLINK LLC
201 LORI SAUNDERS ANDREWS AND DONALD FRANKLIN ANDREWS, JR
204 FIRST BANK
205 PARK OIL COMPANY, INC.
195 MRS. D.O. HARRINGTON (HEIRS)

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-26/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



-L-
PI Sta 297+16.24
Δ = 12° 33' 15.1" (RT)
D = 3° 08' 22.7"
L = 399.86'
T = 200.73'
R = 1,824.91'
PI Sta 303+67.70
Δ = 34° 12' 01.0" (RT)
D = 9° 13' 38.9"
L = 370.64'
T = 191.02'
R = 620.93'
NAD 83 /NSRS 2007
MATCHLINE -L- STA. 294+50.00
SEE SHEET 24
END T.I.P. PROJECT R-3830
-L- POC 304+90.86
HENLYN ENTERPRISES, LLC
LARRY L. TART AND DARRELL TUCKER, AS TRUSTEES FOR CROSSROADS CHRUCH
DAVID WAYNE WARD AND WIFE, MARETTA KAY WARD
DO NOT DISTURB IN-GROUND CONCRETE TRUCK SCALE
EARL L. BARKER AND WIFE CYNTHIA BARKER
DAVID EUGENE HARRINGTON
WAL-MART REAL ESTATE BUSINESS TRUST
JUDY T. BAILEY, AND HUSBAND, JAMES A. BAILEY
SHERRY D. WOMACK AND MARGARET S. WOMACK
DONNY HUNTER AND REBECCA HUNTER
SCOTT E. MORRILL
ELIZABETH M. LUCAS
MRS. D.O. HARRINGTON (HEIRS)
TOWN OF BROADWAY
216 NO CLAIM
217 NO CLAIM
218 NO CLAIM
COLLAR & EXTEND W/15" RCP-IV
TIE TO EXIST. SIDEWALK
-L- PC Sta. 295+15.50
-L- PT Sta. 299+15.36
-L- PC Sta. 301+76.68
-L- PT Sta. 305+47.31
S 50° 12' 52.5" E
S 16° 00' 51.5" E

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-27/CONST.26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-Y5-
PI Sta 16+63.28
Δ = 0° 33' 05.7" (RT)
D = 0° 19' 06.4"
L = 173.21'
T = 86.61'
R = 17,992.44'
SE = SEE PLANS

BRITNEY A. ELLIS
AND HUSBAND,
TRAVIS ELLIS

KEEPSAFE
MINI-STORAGE, LLC

END CONSTRUCTION
-Y5- POC 16+40.00

30
CHARLES OLDHAM, III

MATCHLINE -Y5- STA.13+50.00
SEE SHEET 06

187.5' TAPER
100' TAPER
WD POST & CHAIN
EXISTING R/W
4' FDPS
600' PR
S 20° 15' 23.6" E
-Y5-
SR 1520 ROSSER RD
BST
4' FDPS
LOEXISTING R/W
30'
E
36" WD RAIL
25' BST
-Y5- PC Sta. 15+76.68
-Y5- PT Sta. 17+49.89

27
D. DURAN JOHNSON
AND WIFE,
SHARON A. JOHNSON

22
TYSON FOODS, INC.

UPGRADE EXISTING
SIGNAL

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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-28/CONST.27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-Y13-
PI Sta 11+54.71
△ = 44° 10' 17.0" (LT)
D = 19° 05' 54.9"
L = 231.28'
T = 121.73'
R = 300.00'
SE = SEE PLANS

PI Sta 22+03.97
△ = 0° 10' 23.4" (LT)
D = 0° 17' 11.3"
L = 60.44'
T = 30.22'
R = 20,000.00'

MATCHLINE -Y13- STA.12+50.00
SEE SHEET 12

-Y13- PT Sta. 12+64.26

END GRADE
BEGIN RESURFACING
-Y13- POT STA.16+25.00

-Y13- PC Sta. 21+73.75

-Y13- PT Sta. 22+34.19

-Y13- POT Sta. 26+50.97

END CONSTRUCTION
END RESURFACING
-Y13- POT STA.26+10.00

90 HARRINGTON COMPANIES, LLC

212 GNY PROPERTIES, LLC.

213 MOEN, INC.

86 COTY INC.

86 COTY INC.

CLASS 'I' RIP-RAP
EST. 11 TONS
GEOTEXTILE
EST. 22 SY

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.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-29/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007
-L-
PI Sta 13+48.92
△ = 6°35' 54.9" (RT)
D = 0°56' 47.9"
L = 697.06'
T = 348.92'
R = 6,052.59'
SE = EXIST.
PI Sta 22+87.42
△ = 0°53' 42.5" (RT)
D = 0°42' 58.3"
L = 124.99'
T = 62.49'
R = 8,000.00'
SE = NC
-Y1-
PI Sta 12+54.69
△ = 18°01' 10.9" (LT)
D = 3°34' 01.4"
L = 505.17'
T = 254.69'
R = 1,606.25'
SE = EXIST.
① = -L- POT STA 17+83.13= -Y1- POT STA 15+26.37
② = -L- POT STA 21+80.28= -DRW1- POT STA 10+00.00
BEGIN T.I.P. PROJECT R-3830
-L- POC 13+25.00
BEGIN CONSTRUCTION -L- POC 11+37.00
BEGIN CONSTRUCTION -Y1- POC 12+20.00
-Y1- PC Sta. 10+00.00
-Y1- PT Sta. 15+05.17
-L- PT Sta. 16+97.06
-L- PC Sta. 10+00.00
-L- PT Sta. 23+49.92
-L- PC Sta. 22+24.93
END CONSTRUCTION -Y1- POT 20+95.00
END CONSTRUCTION -DRW1- POT 11+62.00
-DRW1- POT Sta. 11+87.20
MATCHLINE -L- STA. 24+00.00 SEE SHEET 5
AUTOZONE INC.
THE CAMERON COMPANY
LARRY S. O'CONNELL
J.R. SIMPSON AND DONALD R. SIMPSON
MICHAEL W. BARBOUR &WIFE, JAN M. BARBOUR
WAREHOUSE HOME FURNISHINGS DISTRIBUTORS, INC.
SIMPSON & SIMPSON II
THREE REALTIES, LLC
RUBBER SOLE PROPERTIES, LLC
EARL GREEN HARBOUR AND JUANITA HARRELL HARBOUR
AOM INVESTMENTS LLC. DB 664 PG 585
PRESSLEY ALEXANDER WICKER, et als
PJH PROPERTIES, LLC.
2515 HORNER, LLC.
221
220
219
1
2
2Z
3
5
6
7
8
9
150' MEDIAN TRANSITION
103' TAPER
PROP. MONO. CONC. ISLAND
NOTE: QWEST REP. ON SITE DURING EXCAVATION OPERATIONS
TIE TO EXIST. GRNT CURB
FLOWABLE FILL
RAISED MEDIAN
5' SIDEWALK
5' BIKE LANE
END PROP. RET. WALL 1 +44.74 53.50'RT
BEGIN PROP. RET. WALL 1 +27.37 66.14'RT
BEGIN PROP. RET. WALL 2 +84.00 68.43'RT
RET. WALL 2 +49.92 56.50'RT
TIE 2'-6" C&G TO EXIST.
24" RCP-IV
18" RCP-IV
15" RCP-IV
0401
0402
0404
0405
0406
0407
0413
0414
0415
0416
0417
0418
0419
0420
0421
0422
0423
0424
0426
0427
0428
0429
RETAIN
REMOVE
PLUG
UPGRADE EXISTING SIGNAL

IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN AREAS WHERE WATER MAY POND ON ROAD OPEN TO LIVE TRAFFIC.

PROJECT REFERENCE NO.	SHEET NO.
R-3830	EC-30/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NAD 83 /NSRS 2007

-Y4-
PI Sta 10+48.40
Δ = 8° 35' 19.1" (RT)
D = 8° 53' 21.4"
L = 96.62'
T = 48.40'
R = 644.55'

PI Sta 11+81.35
Δ = 11° 20' 51.2" (RT)
D = 6° 43' 06.6"
L = 168.90'
T = 847.3'
R = 852.81'

PI Sta 15+82.05
Δ = 8° 52' 42.5" (LT)
D = 5° 20' 35.7"
L = 166.16'
T = 83.25'
R = 1,072.30'

PI Sta 18+43.53
Δ = 21° 44' 18.7" (LT)
D = 6° 09' 39.0"
L = 352.85'
T = 178.57'
R = 930.00'

-L-
PI Sta 34+90.71
Δ = 3° 54' 18.9" (RT)
D = 0° 42' 58.3"
L = 545.28'
T = 272.74'
R = 8,000.00'
SE = SEE PLANS

-DRW4-
PI Sta 11+64.41
Δ = 17° 15' 58.5" (RT)
D = 47° 44' 47.3"
L = 36.16'
T = 18.22'
R = 120.00'
SE = SEE PLANS
① -L- POC Sta.33+77.99=
-Y3- POT Sta. 19+75.09
② -L- POC Sta.33+84.18=
-DRW4- POT Sta.10+00.00

-L- POT STA 28+99.54=
-Y2- POT ST A 10+00.00

-Y4- PC Sta. 10+00.00
-Y4- PCC Sta. 10+96.62
-Y3- POT Sta.16+38.19=
-Y4- POC Sta.12+59.93
-Y4- PT Sta. 12+65.52
-Y4- PC Sta. 14+98.80
-Y4- PCC Sta. 16+64.96
-L- POC Sta. 35+49.39=
-Y4- POC Sta.16+76.20
-DRW4- PC Sta. 11+46.19
-DRW4- PT Sta. 11+82.35
-DRW4- POT Sta. 12+29.80
-Y2- POT 11+70.00
-Y2- POT Sta. 12+09.01
-Y3- PC Sta. 32+17.97
BEGIN CONSTRUCTION
-Y3- POT 15+15.00
S35°14'09.4"E
-Y3-
S 35°14' 09.3" E
-DRW4-

MATCHLINE -L- STA. 24+00.00
SEE SHEET 4

MATCHLINE -L- STA. 38+00.00
SEE SHEET 6

10 HAROLD W. WEATHERS, AND WIFE HELEN W. WEATHERS
12 MAI VAN HO AND WIFE, KIM THI HO
13 JEFFREY A. JONES AND WIFE, ANGELA R. JONES
16 EARLINE BEASLEY PEELE
18 18Z J.C. PEELE AND WIFE, EARLINE BEASLEY PEELE
20 HARVEY GLENN LEE, III AND WIFE, RITA DIANNE LEE
MR. JAMES L. DOSS AND WIFE SELVIA M. DOSS
DOSTER, POST, SILVERMAN, FOUSHEE & POST
19 SPECIAL CUT DITCH SEE DETAIL 2
23 HARRINGTON COMPANIES, LLC,
8 2515 HORNER, LLC,
11 C.W. WOMACK, LLC, A NORTH CAROLINA LIMITED LIABILITY COMANY
14 C.W. WOMACK, LLC
15 FRANKLIN BAKING CO., INC.
17 PER TOMMY THYSTRUP
21 PER TOMMY THYSTRUP AND WIFE, DONNA COE MADDOX
22 TYSON FOODS, INC.
24 RICHARD W. NOEL AND WIFE EDIE N. NOEL

STANDARD BASE DITCH
SEE DETAIL 11
S=3.4%
L=125'
EXT. 70 CY DDE
CLASS 'B' RIP-RAP
EST. 90 TONS
GEOTEXTILE
EST. 225 SY

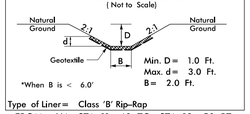
CLASS 'B' RIP-RAP
EST. 4 TONS
GEOTEXTILE
EST. 12 SY

RAIL TO BE REMOVED BY OTHERS

Place Matting for Erosion Control on Slope as Work Allows.
-L- Sta. 36+50 to 37+50 RT

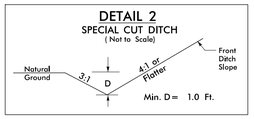
UPGRADE EXISTING SIGNAL

DETAIL 11
STANDARD BASE DITCH
(Not to Scale)



Type of Liner = Class 'B' Rip-Rap
FROM -Y4- STA. 11+40 TO STA. 12+50 RT

DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y3- STA. 17+25 TO STA. 18+35 RT