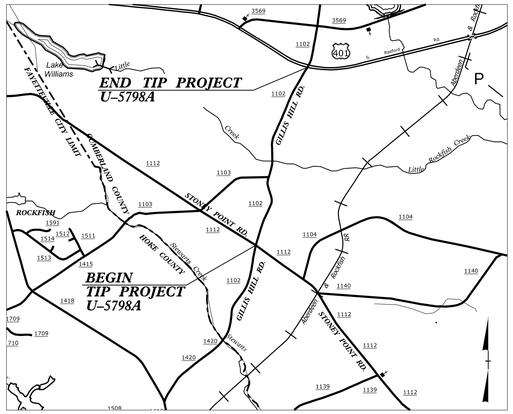
TIP PROJECT: U-5798A



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

CUMBERLAND COUNTY

LOCATION: *WIDEN SR 1102 (GILLIS HILL ROAD) TO MULTI-LANES FROM US 401 (RAEFORD ROAD) TO SR 1007 (STONEY POINT ROAD)*

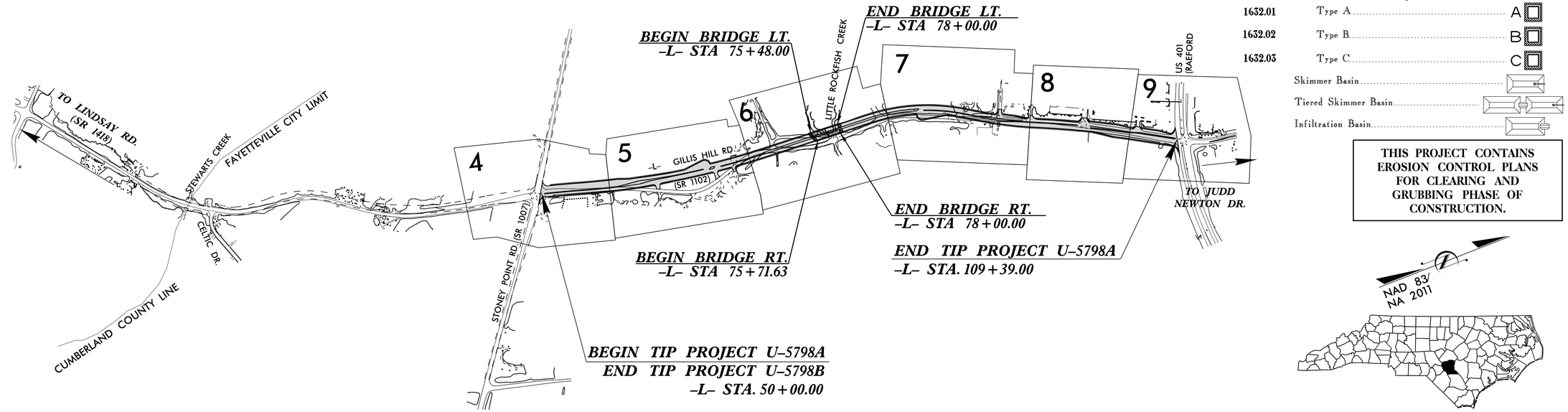
TYPE OF WORK: *PAVING, GRADING, DRAINAGE, STRUCTURES, AND SIGNALS.*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5798A	EC-1	21
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
44369.1.2	N/A	PE	

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	EW 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.



NAD 83/ NA 2011

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.

RS&H

Prepared in the Office of:

RS&H

8521 SIX FORKS ROAD, SUITE 400
RALEIGH, NC 27615
NC FIRM LICENSE No: F-0493

Designed by:

COLE BENJAMIN, P.E. ***3977***
NAME *LEVEL III CERTIFICATION NO.*

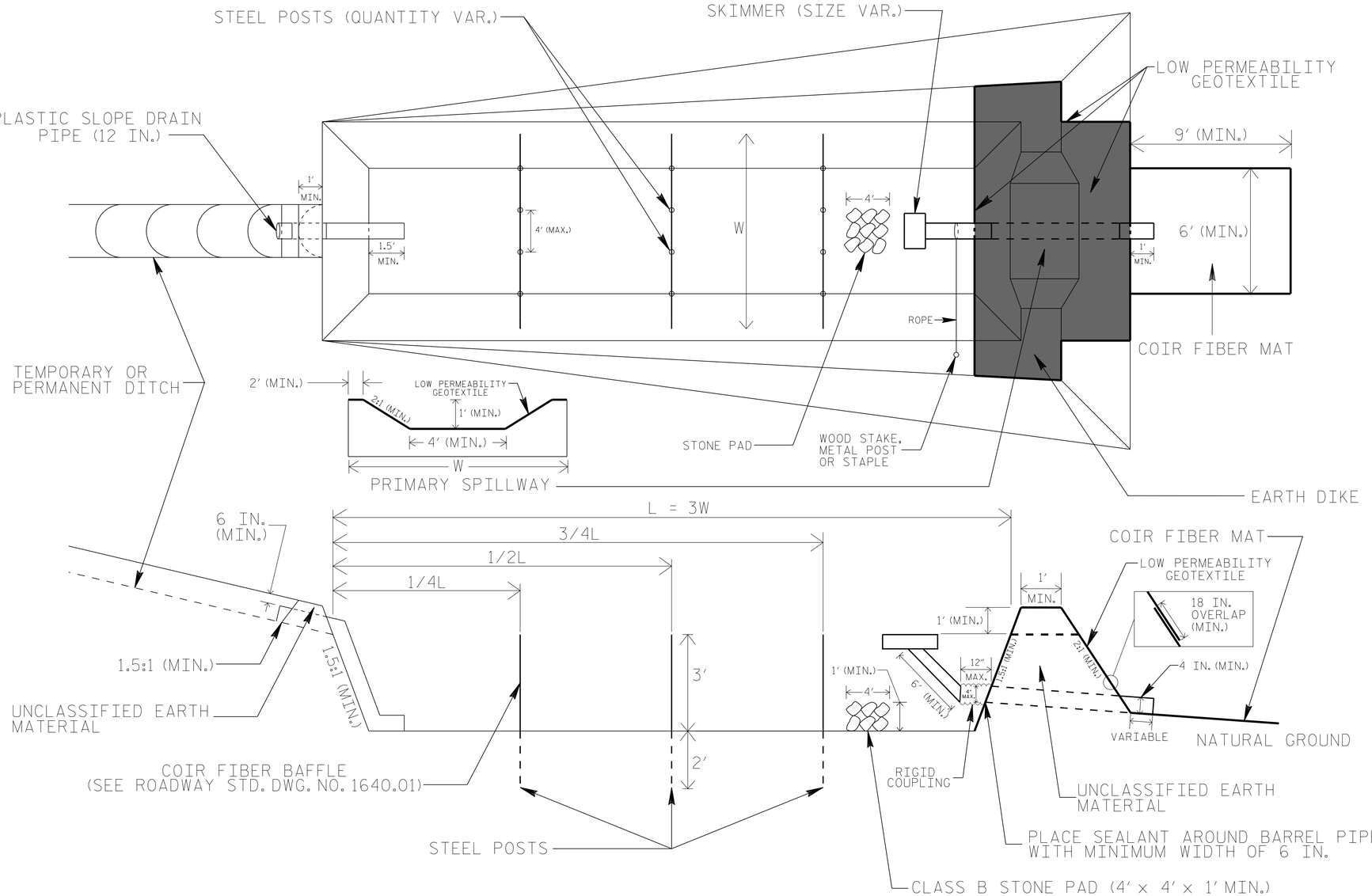
Roadway Standard Drawings

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.

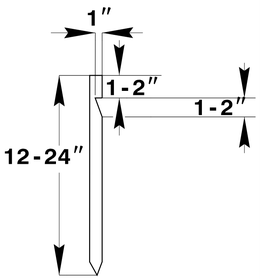
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type 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.
U-5798A	EC-2

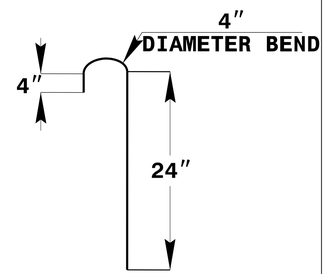
SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



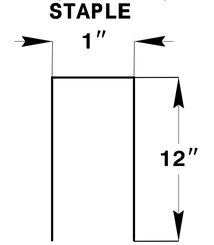
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

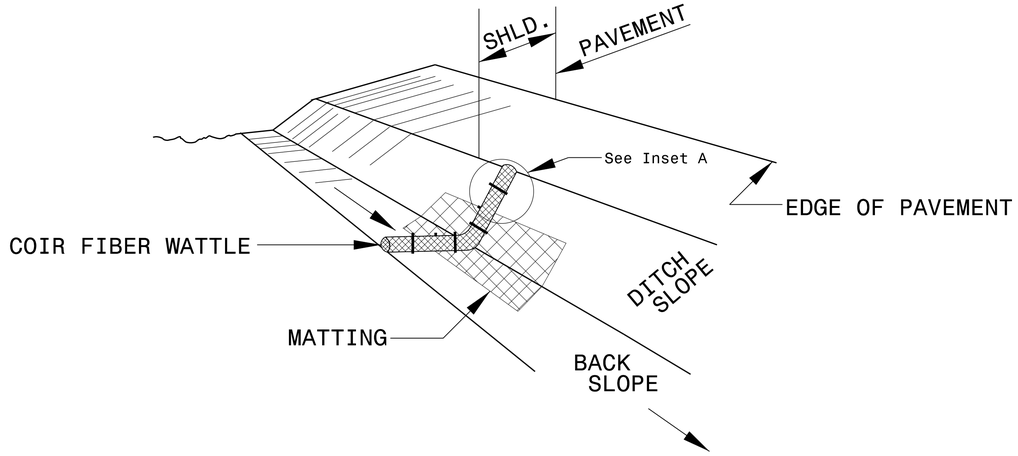
NOTES

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. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

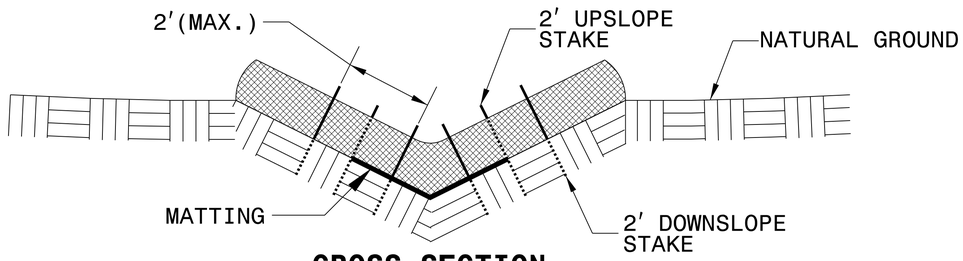
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-2A

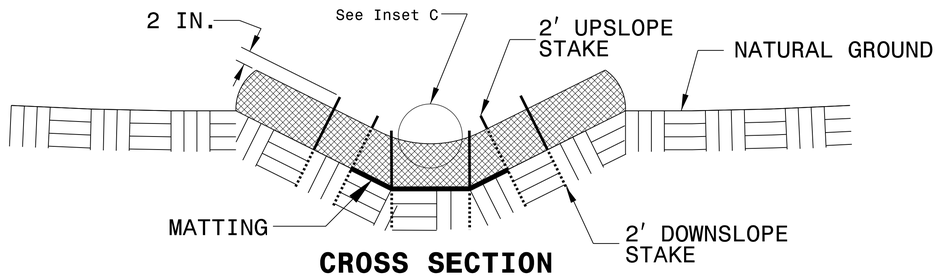
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

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

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

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

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

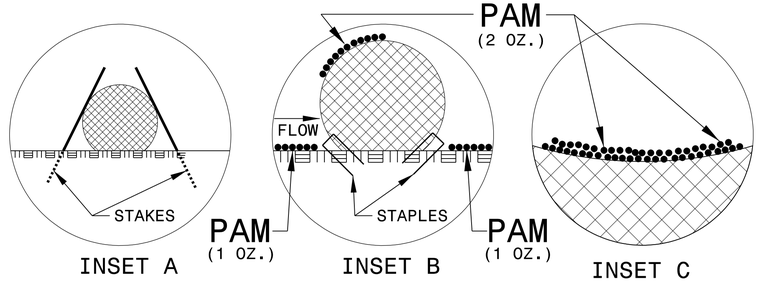
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

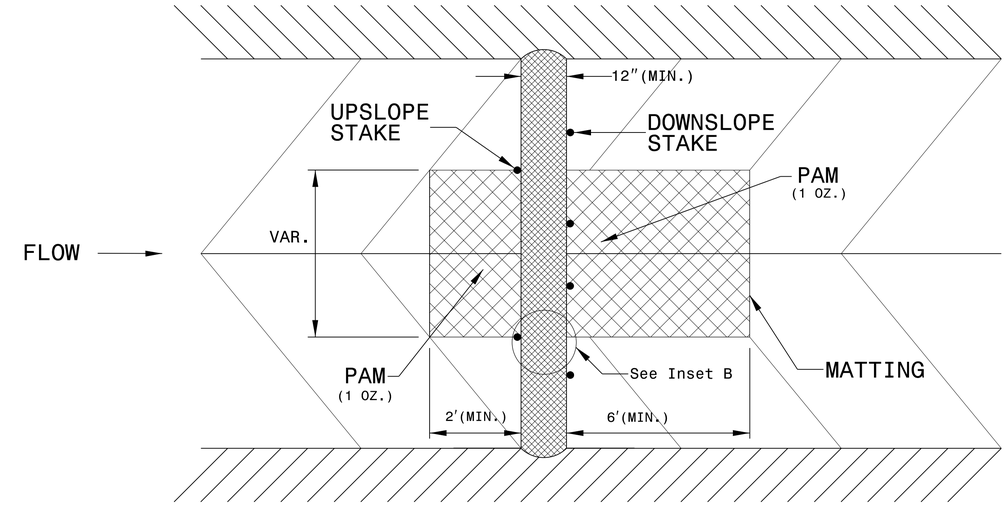
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

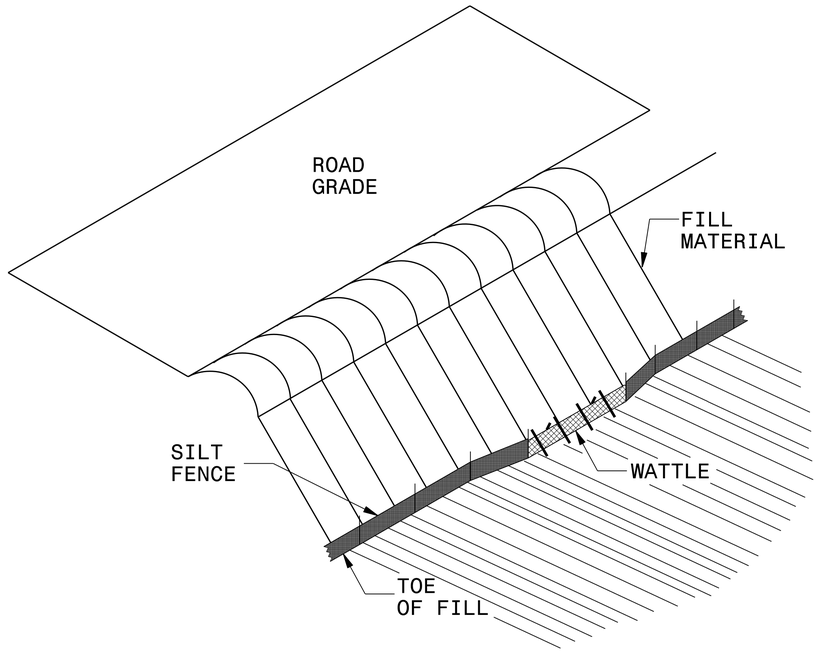




TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-2B

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

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.

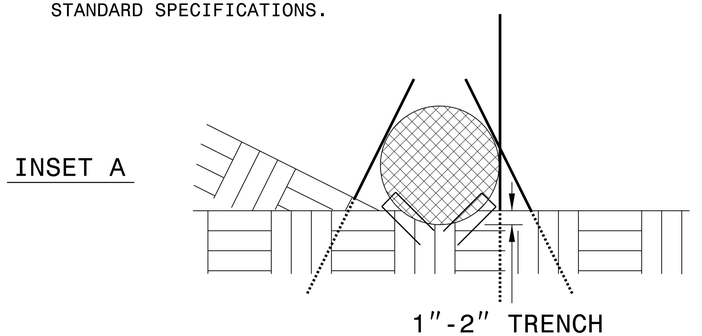
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

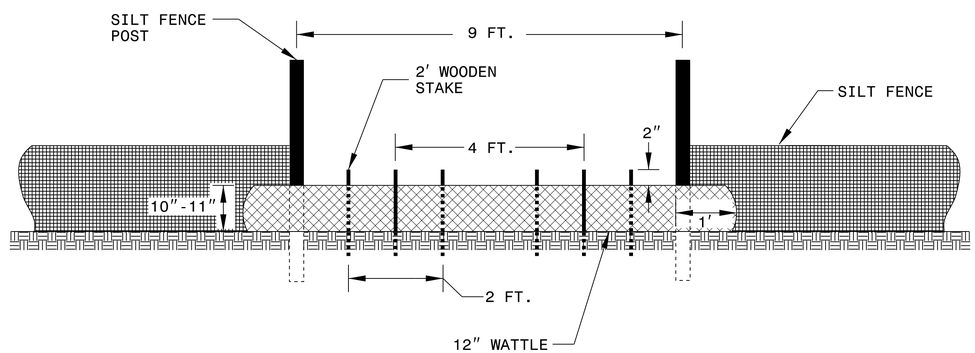
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

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

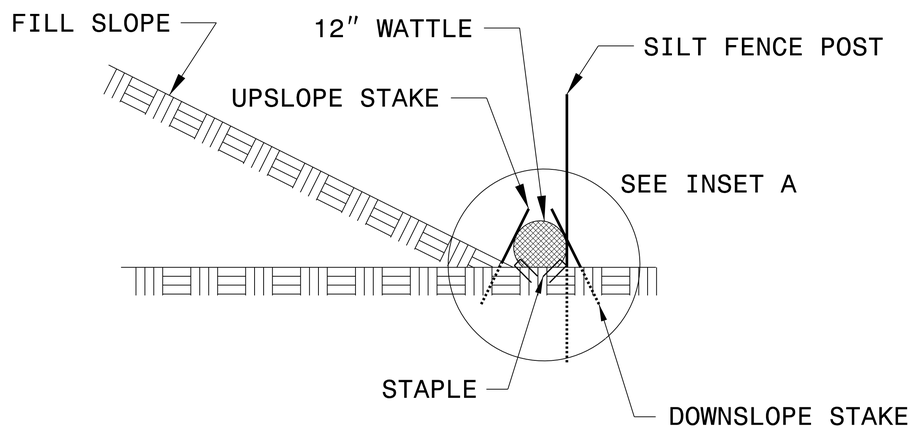
WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

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





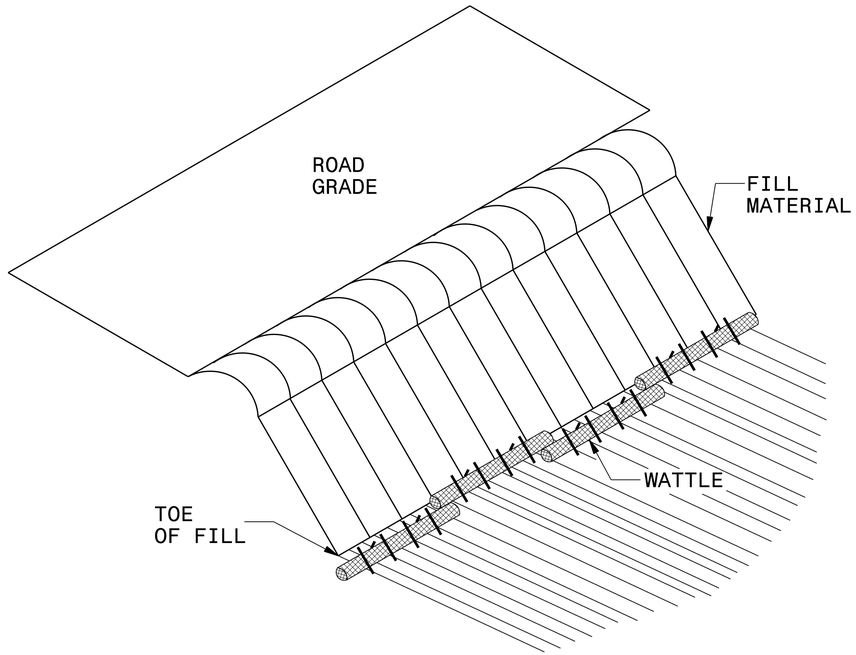
VIEW FROM SLOPE



SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-2C

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

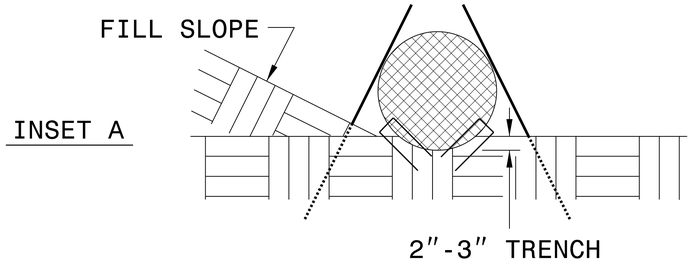
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

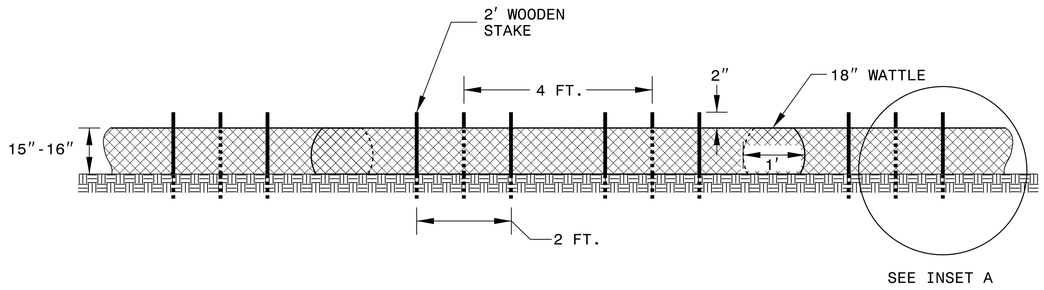
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

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

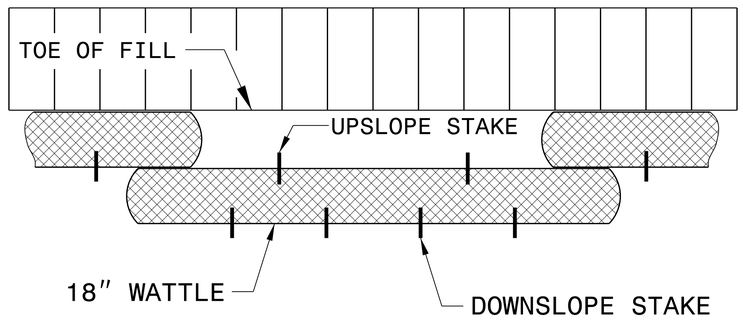
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.





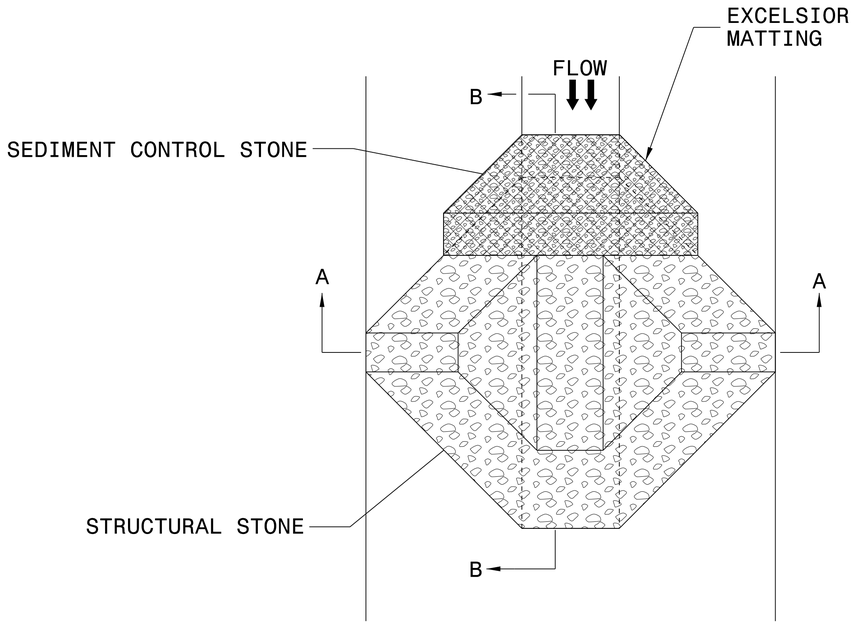
FRONT VIEW



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-2D

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



PLAN

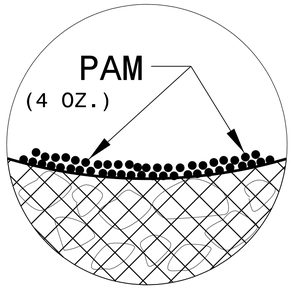
NOTES:

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

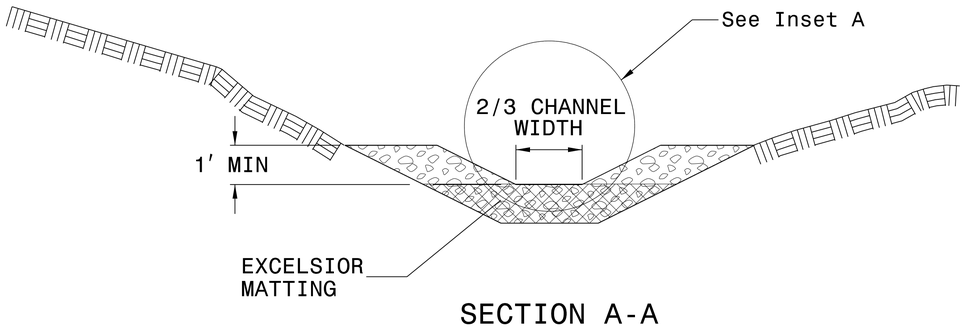
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

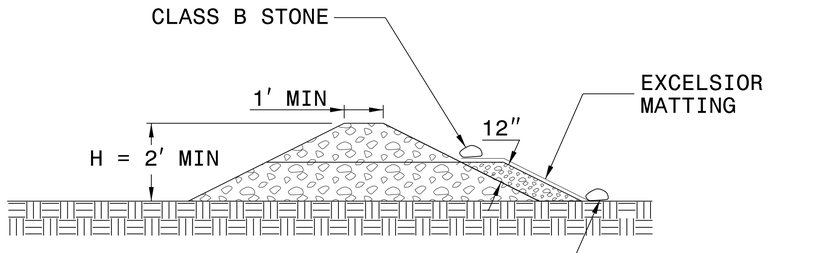
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



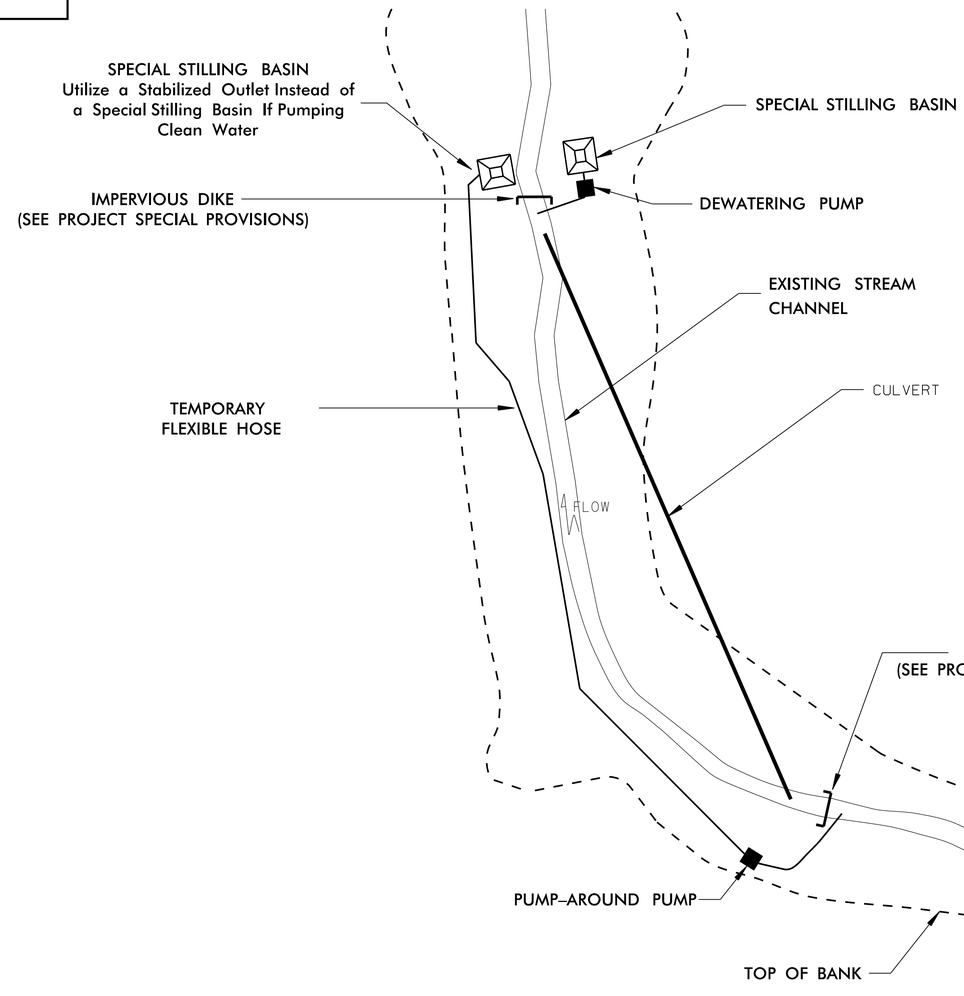
SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-2E

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.
U-5798A	EC-3

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)
4	-L-	50+50	56+25	LT	2435
5	-L-	56+25	58+50	LT	960
5	-L-	60+50	66+00	LT	915
5	-L-	59+85	59+85	RT	280
7	-L-	90+10	92+50	LT	295
7	-L-	93+50	95+00	LT	190
8	-L-	96+50	100+00	LT	360
9	-L-	107+00	108+50	LT	125
				SUBTOTAL	5560
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					11784
				TOTAL	17344
				SAY	17400

MATTING FOR EROSION CONTROL

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

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-3A

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.

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-4/CONST.4

RS&H
NC FIRM LICENSE No: F-0493

NAD 83/
NA 2011

-L- CURVE DATA

PI Sta 48+37.98
△ = 7°01' 28.2" (RT)
D = 0°40' 26.6"
L = 1,042.10'
T = 521.71'
R = 8,500.00'
SE = NC

PI Sta 62+27.11
△ = 13° 43' 19.0" (LT)
D = 0° 47' 36.9"
L = 1,729.14'
T = 868.73'
R = 7,220.00'
SE = NC

NOTE:
THE EXISTING DRAINAGE DITCHES WERE DRY AND APPEARED STABLE AT THE DATE OF THE FIELD INVESTIGATION. THE 24" RCP AT -Y2- STA. 28+73 WAS IN GOOD CONDITION, CONTAINED 1"-2" OF SILT AND WAS NOT CONVEYING ANY WATER. THE 2 @ 36" RCP AT -L- STA. 59+90 WAS IN GOOD CONDITION, CONTAINED NO SILT AND WAS NOT CONVEYING ANY WATER. THE EXISTING BRIDGE OVER LITTLE ROCKFISH CREEK WAS IN GOOD STRUCTURAL CONDITION, HOWEVER, EVIDENCE OF SCOURING AGAINST THE PILES AND ABUTMENT OF THE BRIDGE WAS NOTED. THE CREEK WAS FLOWING AT A LOW VELOCITY AT THE DATE OF THE FIELD INVESTIGATION.

JOHN MCNATT GILLIS, MARY ALMA GILLIS
MALCOLM D GILLIS HEIRS ET AL
MALCOLM GILLIS HEIRS
JUDY GILLIS MCKETHAN
DB 4093 PG 287 (TRACT 6C)

U-5798B -L- PRC Sta. 43+16.28

U-5798B FUTURE
WORK TO BE
DONE BY OTHERS

JOHN MCNATT GILLIS, MARY ALMA GILLIS
MALCOLM D GILLIS HEIRS ET AL
MALCOLM GILLIS HEIRS
JUDY GILLIS MCKETHAN
DB 4093 PG 287 (TRACT 6C)

1
JOHN D GILLIS
DB 4810 PG 586

2
W K GILLIS
DB 2749 PG 305
DB 2799 PG 629
DB 9583 PG 800 (NCDOT R/W)

-L- PRC Sta. 53+58.38

BEGIN PROJECT U-5798A
END PROJECT U-5798B
-L- Sta. 50+00.00

MATCHLINE SHEET 5 -L- STA. 56+25.00

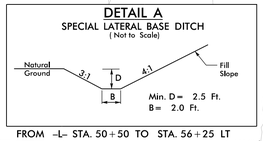
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

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

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)



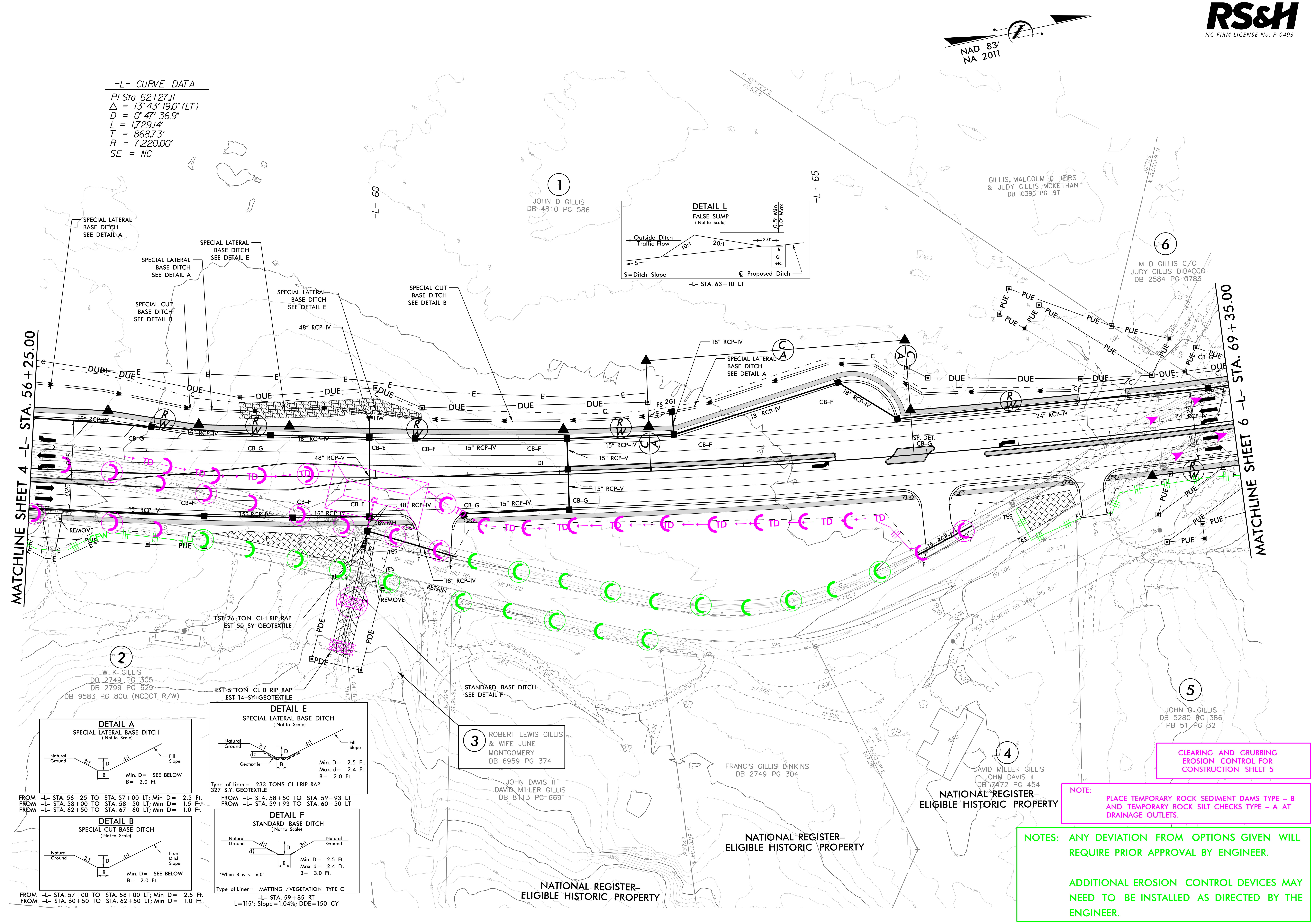
Min. D = 2.5 Ft.
B = 2.0 Ft.

FROM -L- STA. 50+50 TO STA. 56+25 LT

24-NOV-2021 11:45
R:\U-5798A\Design\Plan Sheets\U-5798A_psh_EC-4.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-5/CONST.5

RS&H
NC FIRM LICENSE No: F-0493



NAD 83/
NA 2011
-L- CURVE DATA
PI Sta 62+27.11
△ = 13° 43' 19.0" (LT)
D = 0° 47' 36.9"
L = 1,729.14'
T = 868.73'
R = 7,220.00'
SE = NC
MATCHLINE SHEET 4 -L- STA. 56+25.00
MATCHLINE SHEET 6 -L- STA. 69+35.00
-L- 60
-L- 65
1
JOHN D GILLIS
DB 4810 PG 586
GILLIS, MALCOLM D HEIRS
& JUDY GILLIS MCKETHAN
DB 10395 PG 197
6
M D GILLIS C/O
JUDY GILLIS DIBACCO
DB 2584 PG 0783
2
W K GILLIS
DB 2749 PG 305
DB 2799 PG 629
DB 9583 PG 800 (NCDOT R/W)
3
ROBERT LEWIS GILLIS
& WIFE JUNE
MONTGOMERY
DB 6959 PG 374
4
DAVID MILLER GILLIS
JOHN DAVIS II
DB 7472 PG 454
JOHN DAVIS II
DAVID MILLER GILLIS
DB 8113 PG 669
5
JOHN D GILLIS
DB 5280 PG 386
PB 51 PG 32
FRANCIS GILLIS DINKINS
DB 2749 PG 304
NATIONAL REGISTER-
ELIGIBLE HISTORIC PROPERTY
SPECIAL LATERAL BASE DITCH SEE DETAIL A
SPECIAL LATERAL BASE DITCH SEE DETAIL E
SPECIAL CUT BASE DITCH SEE DETAIL B
STANDARD BASE DITCH SEE DETAIL F
48" RCP-IV
18" RCP-IV
15" RCP-IV
24" RCP-IV
15" RCP-V
48" RCP-V
EST 26 TON CL I RIP RAP
EST 50 SY GEOTEXTILE
EST 5 TON CL B RIP RAP
EST 14 SY GEOTEXTILE
REMOVE
RETAIN
SP. DET. CB-G
DETAIL L
FALSE SUMP
(Not to Scale)
Outside Ditch
Traffic Flow
10:1
20:1
2.0'
0.5' Min. 1.0' Max
GI etc.
S=Ditch Slope
℄ Proposed Ditch
-L- STA. 63+10 LT
DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground
3:1
4:1
Fill Slope
Min. D= SEE BELOW
B= 2.0 Ft.
FROM -L- STA. 56+25 TO STA. 57+00 LT; Min D= 2.5 Ft.
FROM -L- STA. 58+00 TO STA. 58+50 LT; Min D= 1.5 Ft.
FROM -L- STA. 62+50 TO STA. 67+60 LT; Min D= 1.0 Ft.
DETAIL B
SPECIAL CUT BASE DITCH
(Not to Scale)
Natural Ground
3:1
4:1
Front Ditch Slope
Min. D= SEE BELOW
B= 2.0 Ft.
FROM -L- STA. 57+00 TO STA. 58+00 LT; Min D= 2.5 Ft.
FROM -L- STA. 60+50 TO STA. 62+50 LT; Min D= 1.0 Ft.
DETAIL E
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Geotextile
3:1
4:1
Fill Slope
Min. D= 2.5 Ft.
Max. d= 2.4 Ft.
B= 2.0 Ft.
Type of Liner= 233 TONS CL I RIP-RAP
327 S.Y. GEOTEXTILE
FROM -L- STA. 58+50 TO STA. 59+93 LT
FROM -L- STA. 59+93 TO STA. 60+50 LT
DETAIL F
STANDARD BASE DITCH
(Not to Scale)
Natural Ground
3:1
3:1
Natural Ground
Min. D= 2.5 Ft.
Max. d= 2.4 Ft.
B= 3.0 Ft.
*When B is < 6.0'
Type of Liner= MATTING /VEGETATION TYPE C
-L- STA. 59+85 RT
L=115'; Slope=1.04%; DDE=150 CY
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

8/17/99

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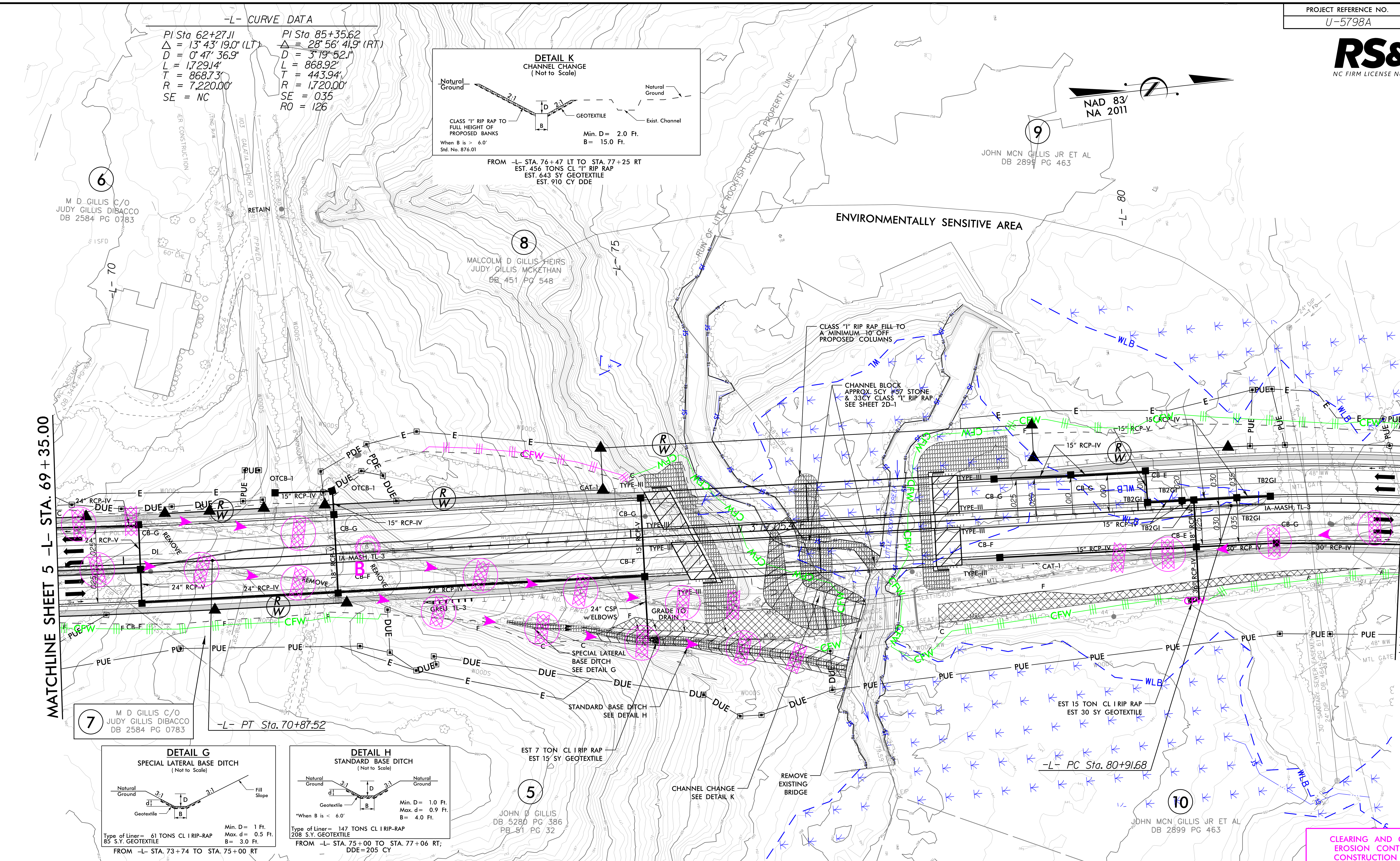
PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-6/CONST.6

RS&H
NC FIRM LICENSE No: F-0493

-L- CURVE DATA

PI Sta 62+27.11	PI Sta 85+35.62
Δ = 13° 43' 19.0" (LT)	Δ = 28° 56' 41.9" (RT)
D = 0° 47' 36.9"	D = 3° 19' 52.1"
L = 1,729.14'	L = 868.92'
T = 868.73'	T = 443.94'
R = 7,220.00'	R = 1,720.00'
SE = NC	SE = .035
	RO = 126



DETAIL K
CHANNEL CHANGE
(Not to Scale)
Natural Ground
CLASS "I" RIP RAP TO FULL HEIGHT OF PROPOSED BANKS
GEOTEXTILE
Exist. Channel
Min. D= 2.0 Ft.
B= 15.0 Ft.
FROM -L- STA. 76+47 LT TO STA. 77+25 RT
EST. 456 TONS CL "I" RIP RAP
EST. 643 SY GEOTEXTILE
EST. 910 CY DDE
NAD 83/ NA 2011
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
M D GILLIS C/O
JUDY GILLIS DIBACCO
DB 2584 PG 0783
MALCOLM D GILLIS HEIRS
JUDY GILLIS MCKETHAN
DB 451 PG 548
ENVIRONMENTALLY SENSITIVE AREA
CLASS "I" RIP RAP FILL TO A MINIMUM 10' OFF PROPOSED COLUMNS
CHANNEL BLOCK APPROX 5CY #57 STONE & 33CY CLASS "I" RIP RAP SEE SHEET 2D-1
MATCHLINE SHEET 5 -L- STA. 69+35.00
MATCHLINE SHEET 7 -L- STA. 82+60.00
SPECIAL LATERAL BASE DITCH SEE DETAIL G
STANDARD BASE DITCH SEE DETAIL H
EST 7 TON CL I RIP RAP
EST 15 SY GEOTEXTILE
CHANNEL CHANGE SEE DETAIL K
REMOVE EXISTING BRIDGE
EST 15 TON CL I RIP RAP
EST 30 SY GEOTEXTILE
-L- PT Sta. 70+87.52
-L- PC Sta. 80+91.68
JOHN D GILLIS
DB 5280 PG 386
PB 81 PG 32
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
DOUGLAS KEITH MILLER & WIFE
KATHRYN GILLIS
DB 4227 PG 487
DETAIL G
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Type of Liner= 61 TONS CL I RIP-RAP
85 S.Y. GEOTEXTILE
Min. D= 1 Ft.
Max. d= 0.5 Ft.
B= 3.0 Ft.
FROM -L- STA. 73+74 TO STA. 75+00 RT
DETAIL H
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.0 Ft.
Max. d= 0.9 Ft.
B= 4.0 Ft.
Type of Liner= 147 TONS CL I RIP-RAP
208 S.Y. GEOTEXTILE
FROM -L- STA. 75+00 TO STA. 77+06 RT;
DDE=205 CY

CHANNEL RELOCATION EXCAVATION SHALL BE PERFORMED IN ONLY DRY OR ISOLATED AREAS OF THE WORK ZONE. UTILIZE IMPERVIOUS DIKES, PUMPS, AND HOSES TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY. INSTALL RIP RAP AROUND PROPOSED COLUMNS AND CONSTRUCT CHANNEL BLOCK.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

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

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

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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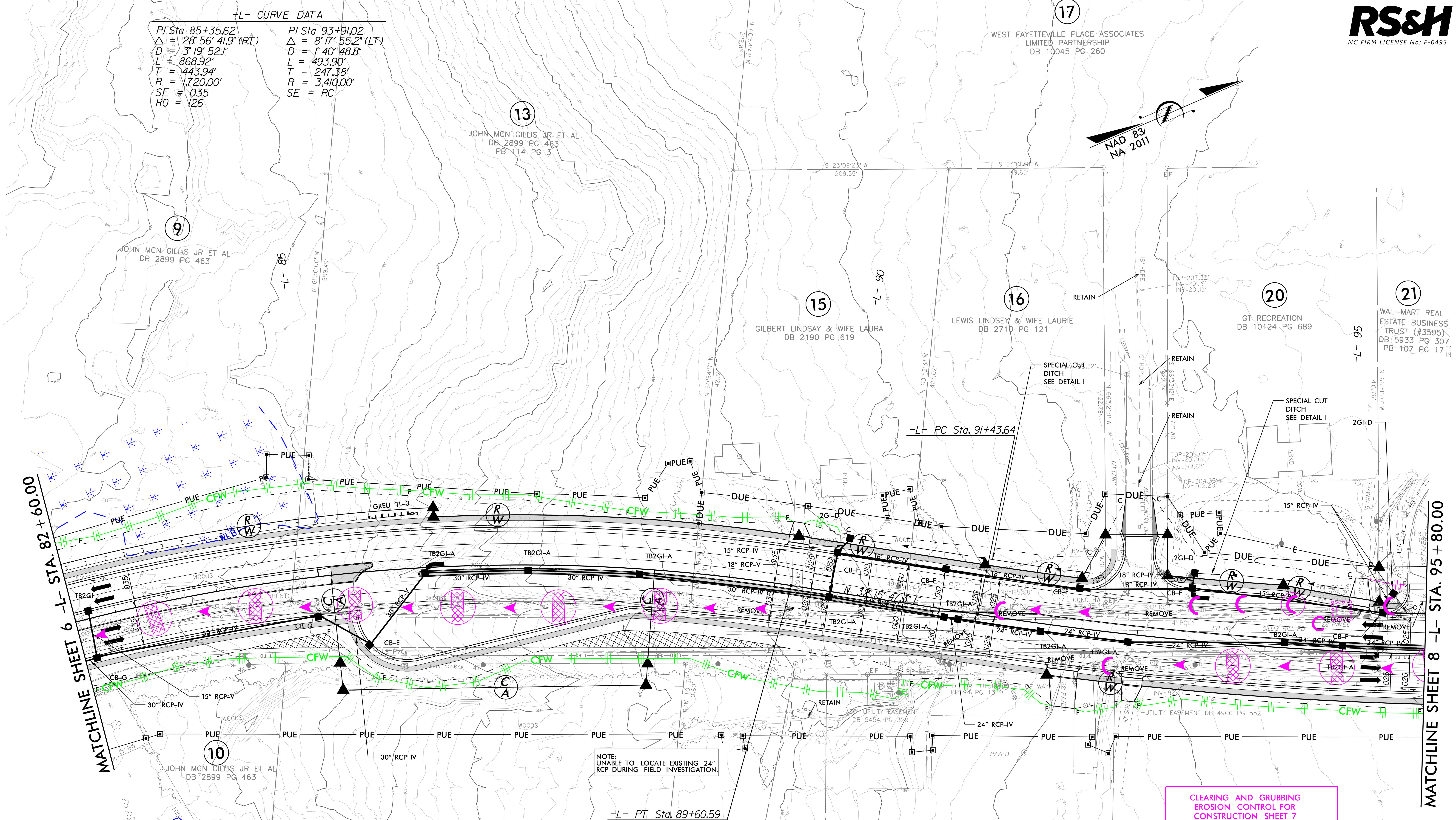
PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-7/CONST.7

RS&H
NC FIRM LICENSE No: F-0493

-L- CURVE DATA

PI Sta 85+35.62	PI Sta 93+91.02
△ = 28° 56' 41.9" (RT)	△ = 8° 17' 55.2" (LT)
D = 3° 19' 52.1"	D = 1° 40' 48.8"
L = 868.92'	L = 493.90'
T = 443.94'	T = 247.38'
R = 1,720.00'	R = 3,410.00'
SE = .035	SE = RC
RO = 126	



NAD 83/ NA 2011
MATCHLINE SHEET 6 -L- STA. 82+60.00
MATCHLINE SHEET 8 -L- STA. 95+80.00
9 JOHN MCN GILLIS JR ET AL DB 2899 PG 463
10 JOHN MCN GILLIS JR ET AL DB 2899 PG 463
11 DOUGLAS KEITH MILLER & WIFE KATHRYN GILLIS DB 4227 PG 487
12 JOHN MCN GILLIS JR ET AL DB 2899 PG 463 PB 114 PG 3
13 JOHN MCN GILLIS JR ET AL DB 2899 PG 463 PB 114 PG 3
14 KATHRYN GILLIS MILLER & HUSBAND DOUGLAS KEITH DB 9268 PG 320
15 GILBERT LINDSAY & WIFE LAURA DB 2190 PG 619
16 LEWIS LINDSEY & WIFE LAURIE DB 2710 PG 121
17 WEST FAYETTEVILLE PLACE ASSOCIATES LIMITED PARTNERSHIP DB 10045 PG 260
18 WEST FAYETTEVILLE BAPTIST CHURCH TRUSTEES DB 9240 PG 512 PB 132 PG 190
20 GT RECREATION DB 10124 PG 689
21 WAL-MART REAL ESTATE BUSINESS TRUST (#3595) DB 5933 PG 307 PB 107 PG 17
-L- PC Sta. 91+43.64
-L- PT Sta. 89+60.59
SPECIAL CUT DITCH SEE DETAIL I
NOTE: UNABLE TO LOCATE EXISTING 24" RCP DURING FIELD INVESTIGATION.
RETAIN
REMOVE
PUE
DUE
CFW
30" RCP-IV
24" RCP-IV
18" RCP-IV
15" RCP-IV
TB2GI-A
CB-F
CB-G
CB-E
2GI-D

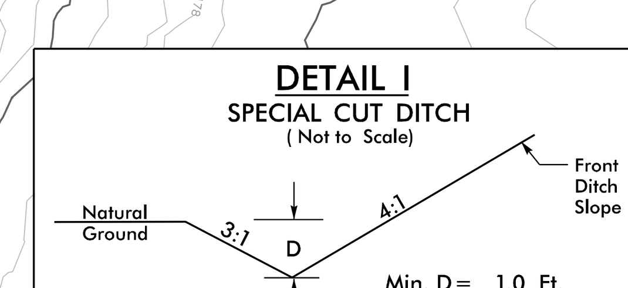
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

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

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



FROM -L- STA. 90+10 TO STA. 92+50 LT
FROM -L- STA. 93+50 TO STA. 95+00 LT

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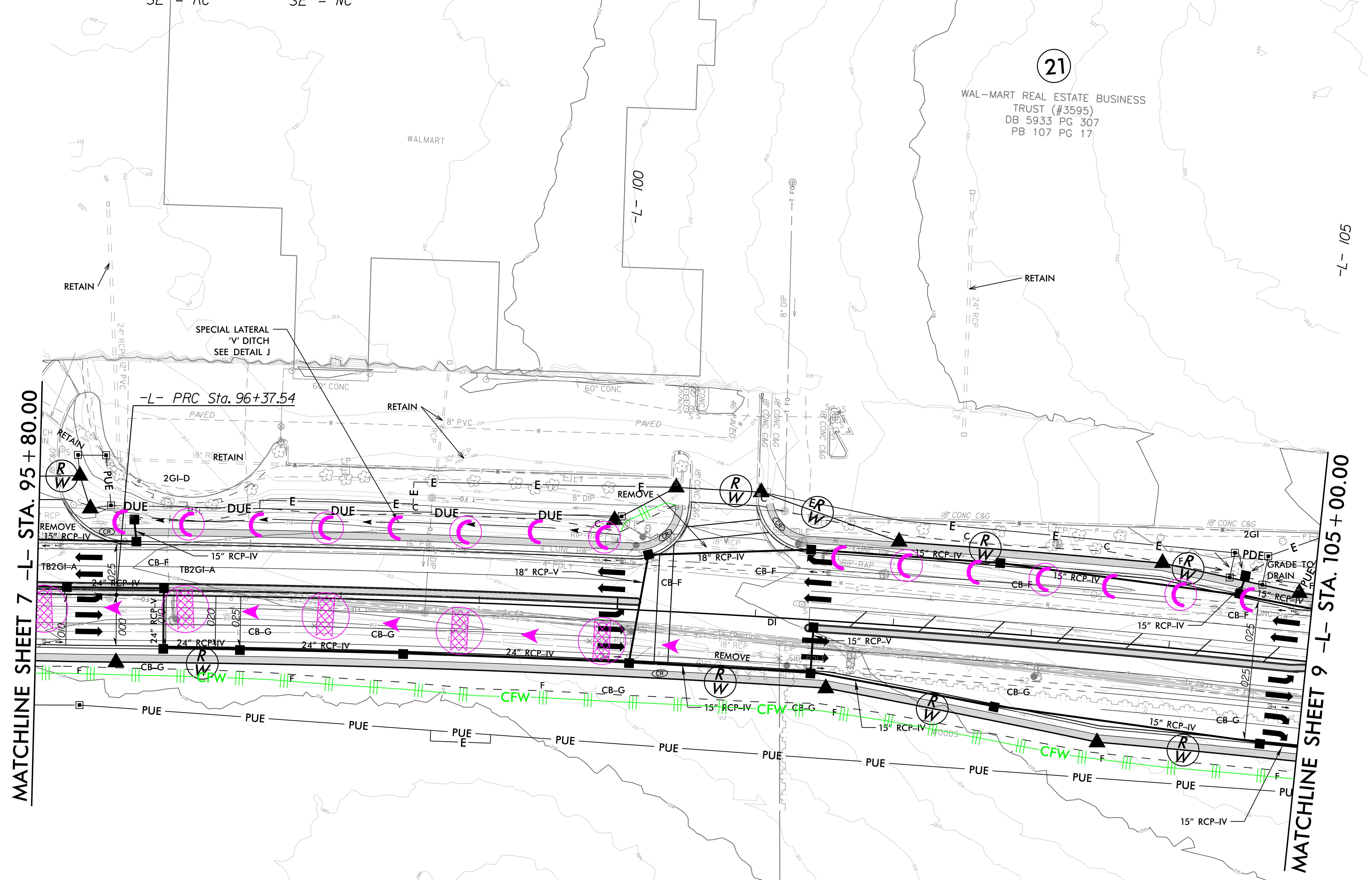
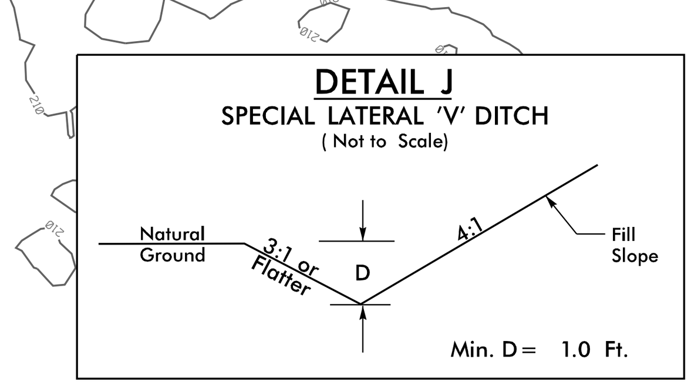
PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-8/CONST.8

RS&H
NC FIRM LICENSE No: F-0493

-L- CURVE DATA

PI Sta 93+91.02	PI Sta 101+25.50
△ = 8° 17' 55.2" (LT)	△ = 6° 12' 24.4" (RT)
D = 1° 40' 48.8"	D = 0° 38' 11.8"
L = 493.90'	L = 974.96'
T = 247.38'	T = 487.96'
R = 3,410.00'	R = 9,000.00'
SE = RC	SE = NC





FROM -L- STA. 96+50 TO STA. 100+00 LT

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.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-9/CONST.9

RS&H
NC FIRM LICENSE No: F-0493

NAD 83/
NA 2011

-L- CURVE DATA
PI Sta 111+73.23
△ = 19° 25' 26.6" (LT)
D = 6° 11' 14.8"
L = 313.93'
T = 158.48'
R = 926.00'

MICHAEL LYNN HELMS
DB 7028 PG 411
PB 107 PG 17

NATIONAL RETAIL PROPERTIES LP
DB 9454 PG 591
PB 107 PG 17

W H CAPITAL LLC
DB 7673 PG 368
PB 107 PG 17

21
WAL-MART REAL ESTATE BUSINESS TRUST (#3595)
DB 5933 PG 307
PB 107 PG 17

23
CUMBERLAND COUNTY ABC BOARD
DB 8509 PG 635
PB 107 PG 17

ALDI NC LLC
DB 10078 PG 265
PB 140 PG 70

22
BARKER PARTNERS LLC
DB 8580 PG 263

FLOWERY BRANCH MD
DB 11033 PG 795
PB 140 PG 70

JOSEPH P RIDDLE, III
DB 9379 PG 534

SCM ACCESS & MAINTENCE EASEMENT AREA PER PB 140 PG 70

ACCESS EASEMENT PER PB 140 PG 70

ACCESS EASEMENT PER DB 10078 PG 49

ACCESS EASEMENT PER PB 140 PG 70

MATCHLINE SHEET 8 -L- STA. 105+00.00

END PROJECT U-5798A
-L- Sta. 109+39.00

-L- PC Sta. 110+14.74

-L- POT Sta. 114+35.91

-L- PT Sta. 113+28.67

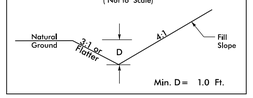
-L- PT Sta. 106+12.50

SPECIAL LATERAL 'V' DITCH SEE DETAIL J

N 30° 10' 16.5" E

N 10° 44' 49.9" E

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



FROM -L- STA. 106+73 TO STA. 108+50 LT

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.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-10/CONST.4

RS&H
NC FIRM LICENSE No: F-0493

NAD 83/
NA 2011

-L- CURVE DATA

PI Sta 48+37.98	PI Sta 62+27.11
△ = 7° 01' 28.2" (RT)	△ = 13° 43' 19.0" (LT)
D = 0° 40' 26.6"	D = 0° 47' 36.9"
L = 1,042.10'	L = 1,729.14'
T = 521.71'	T = 868.73'
R = 8,500.00'	R = 7,220.00'
SE = NC	SE = NC

NOTE:
THE EXISTING DRAINAGE DITCHES WERE DRY AND APPEARED STABLE AT THE DATE OF THE FIELD INVESTIGATION. THE 24" RCP AT -Y2- STA. 28+73 WAS IN GOOD CONDITION, CONTAINED 1"-2" OF SILT AND WAS NOT CONVEYING ANY WATER. THE 2 @ 36" RCP AT -L- STA. 59+90 WAS IN GOOD CONDITION, CONTAINED NO SILT AND WAS NOT CONVEYING ANY WATER. THE EXISTING BRIDGE OVER LITTLE ROCKFISH CREEK WAS IN GOOD STRUCTURAL CONDITION, HOWEVER, EVIDENCE OF SCOURING AGAINST THE PILES AND ABUTMENT OF THE BRIDGE WAS NOTED. THE CREEK WAS FLOWING AT A LOW VELOCITY AT THE DATE OF THE FIELD INVESTIGATION.

JOHN MCNATT GILLIS, MARY ALMA GILLIS
MALCOLM D GILLIS HEIRS ET AL
MALCOLM GILLIS HEIRS
JUDY GILLIS MCKETHAN
DB 4093 PG 287 (TRACT 6C)

U-5798B -L- PRC Sta. 43+16.28

U-5798B FUTURE WORK TO BE DONE BY OTHERS

JOHN MCNATT GILLIS, MARY ALMA GILLIS
MALCOLM D GILLIS HEIRS ET AL
MALCOLM GILLIS HEIRS
JUDY GILLIS MCKETHAN
DB 4093 PG 287 (TRACT 6C)

1
JOHN D GILLIS
DB 4810 PG 586

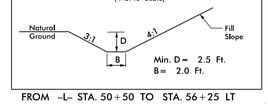
2
W K GILLIS
DB 2749 PG 305
DB 2799 PG 629
DB 9583 PG 800 (NCDOT R/W)

-L- PRC Sta. 53+58.38

BEGIN PROJECT U-5798A
END PROJECT U-5798B
-L- Sta. 50+00.00

MATCHLINE SHEET 5 -L- STA. 56+25.00

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)



FROM -L- STA. 50+50 TO STA. 56+25 LT

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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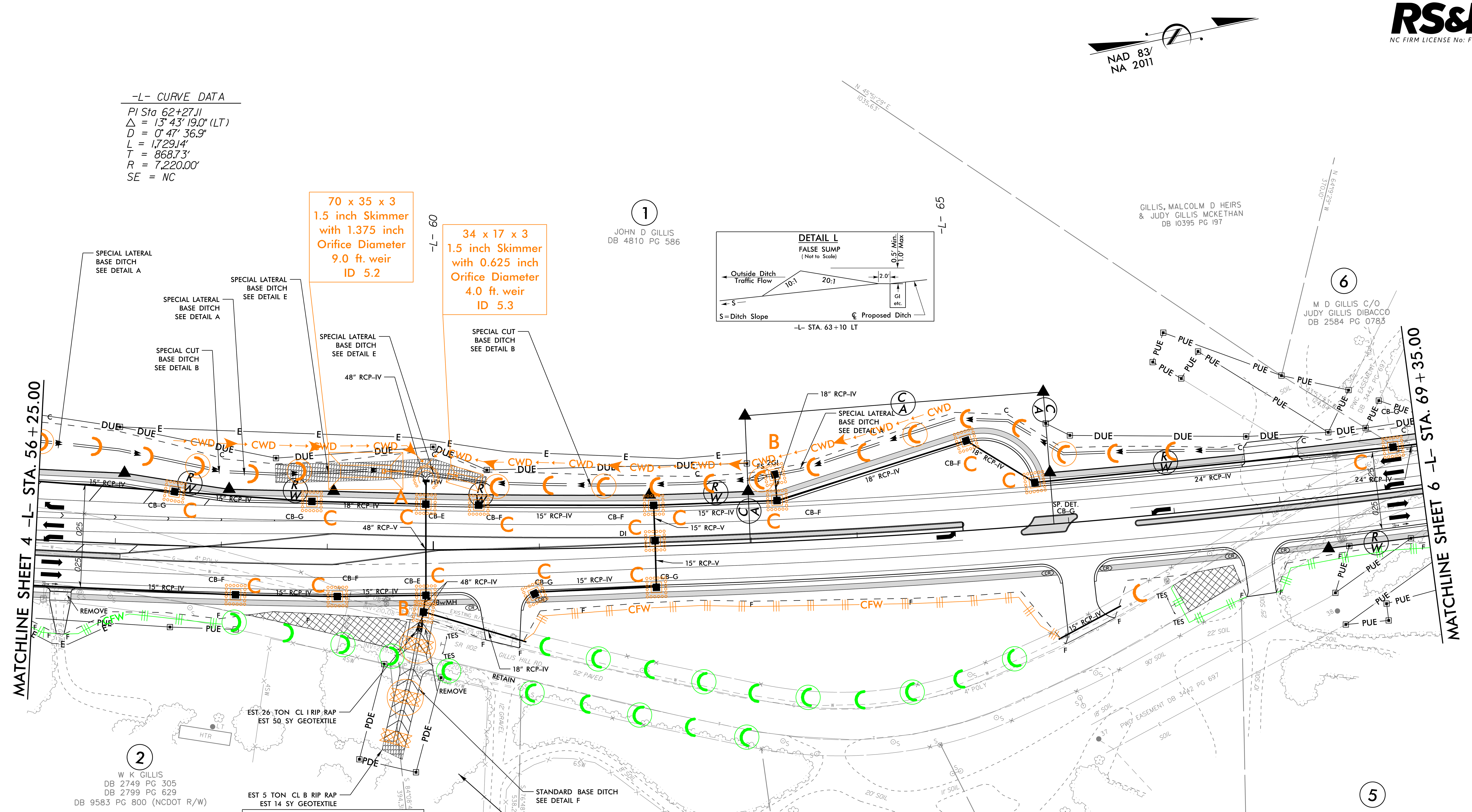
PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-II/CONST.5

RS&H
NC FIRM LICENSE No: F-0493



NAD 83/ NA 2011
-L- CURVE DATA
PI Sta 62+27.11
Δ = 13° 43' 19.0" (LT)
D = 0° 47' 36.9"
L = 1,729.14'
T = 868.73'
R = 7,220.00'
SE = NC
70 x 35 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9.0 ft. weir
ID 5.2
34 x 17 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4.0 ft. weir
ID 5.3
-L- 60
-L- 65
SPECIAL LATERAL BASE DITCH SEE DETAIL A
SPECIAL LATERAL BASE DITCH SEE DETAIL E
SPECIAL CUT BASE DITCH SEE DETAIL B
SPECIAL LATERAL BASE DITCH SEE DETAIL C
STANDARD BASE DITCH SEE DETAIL F
DETAIL L
FALSE SUMP
(Not to Scale)
Outside Ditch
Traffic Flow
10:1
20:1
2.0'
0.5' Min. 1.0' Max
GI etc.
S = Ditch Slope
℄ Proposed Ditch
-L- STA. 63+10 LT
1
JOHN D GILLIS
DB 4810 PG 586
GILLIS, MALCOLM D HEIRS
& JUDY GILLIS MCKETHAN
DB 10395 PG 197
6
M D GILLIS C/O
JUDY GILLIS DIBACCO
DB 2584 PG 0783
MATCHLINE SHEET 4 -L- STA. 56+25.00
MATCHLINE SHEET 6 -L- STA. 69+35.00
48" RCP-IV
18" RCP-IV
15" RCP-IV
24" RCP-IV
15" RCP-V
SP. DET. CB-G
EST 26 TON CL I RIP RAP
EST 50 SY GEOTEXTILE
EST 5 TON CL B RIP RAP
EST 14 SY GEOTEXTILE
REMOVE
RETAIN
2
W K GILLIS
DB 2749 PG 305
DB 2799 PG 629
DB 9583 PG 800 (NCDOT R/W)
3
ROBERT LEWIS GILLIS
& WIFE JUNE
MONTGOMERY
DB 6959 PG 374
JOHN DAVIS II
DAVID MILLER GILLIS
DB 8113 PG 669
FRANCIS GILLIS DINKINS
DB 2749 PG 304
4
DAVID MILLER GILLIS
JOHN DAVIS II
DB 7472 PG 454
NATIONAL REGISTER-
ELIGIBLE HISTORIC PROPERTY
5

NATIONAL REGISTER–
ELIGIBLE HISTORIC PROPERTY

NATIONAL REGISTER–
ELIGIBLE HISTORIC PROPERTY

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 3:1; D; 4:1; Fill Slope; B
Min. D = SEE BELOW
B = 2.0 Ft.

FROM -L- STA. 56+25 TO STA. 57+00 LT; Min D = 2.5 Ft.
FROM -L- STA. 58+00 TO STA. 58+50 LT; Min D = 1.5 Ft.
FROM -L- STA. 62+50 TO STA. 67+60 LT; Min D = 1.0 Ft.

DETAIL B
SPECIAL CUT BASE DITCH
(Not to Scale)

Natural Ground; 3:1; D; 4:1; Front Ditch Slope; B
Min. D = SEE BELOW
B = 2.0 Ft.

FROM -L- STA. 57+00 TO STA. 58+00 LT; Min D = 2.5 Ft.
FROM -L- STA. 60+50 TO STA. 62+50 LT; Min D = 1.0 Ft.

DETAIL E
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground; 3:1; d; D; 4:1; Fill Slope; Geotextile; B
Min. D = 2.5 Ft.
Max. d = 2.4 Ft.
B = 2.0 Ft.
Type of Liner = 233 TONS CL I RIP-RAP
327 S.Y. GEOTEXTILE

FROM -L- STA. 58+50 TO STA. 59+93 LT
FROM -L- STA. 59+93 TO STA. 60+50 LT

DETAIL F
STANDARD BASE DITCH
(Not to Scale)

Natural Ground; 3:1; d; D; 3:1; Natural Ground; B
Min. D = 2.5 Ft.
Max. d = 2.4 Ft.
B = 3.0 Ft.
*When B is < 6.0'
Type of Liner = MATTING / VEGETATION TYPE C

-L- STA. 59+85 RT
L=115'; Slope=1.04%; DDE=150 CY

CLEAN WATER DIVERSION
(Not to Scale)

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-12/CONST.6

RS&H
NC FIRM LICENSE No: F-0493

-L- CURVE DATA

PI Sta 62+27.11	PI Sta 85+35.62
Δ = 13° 43' 19.0" (LT)	Δ = 28° 56' 41.9" (RT)
D = 0° 47' 36.9"	D = 3° 19' 52.1"
L = 1,729.14'	L = 868.92'
T = 868.73'	T = 443.94'
R = 7,220.00'	R = 1,720.00'
SE = NC	SE = .035
	RO = 126

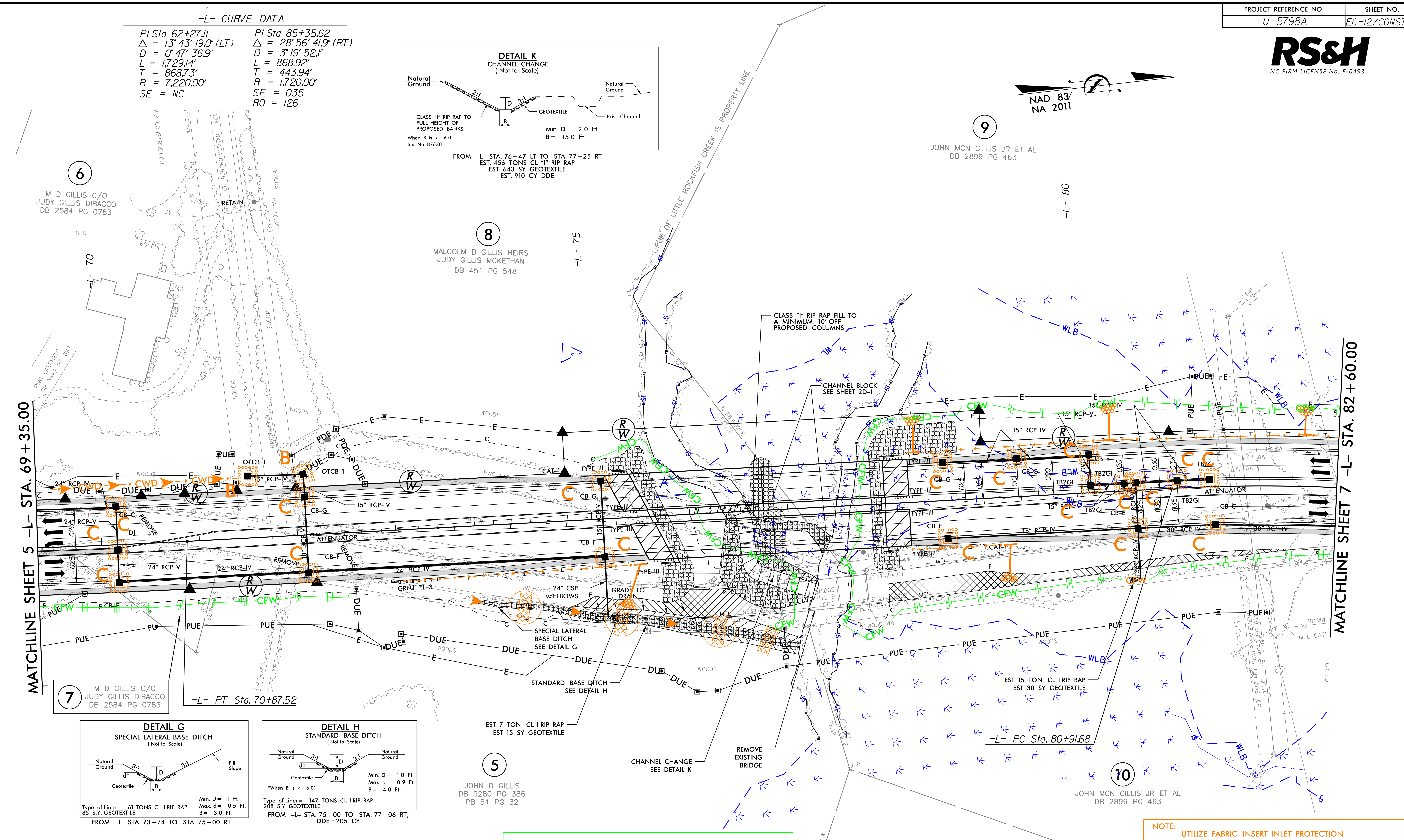
DETAIL K
CHANNEL CHANGE
(Not to Scale)

Natural Ground — 2:1 — D — 2:1 — GEOTEXTILE — Natural Ground — Exist. Channel — B

CLASS "I" RIP RAP TO FULL HEIGHT OF PROPOSED BANKS
When B is > 6.0'
Std. No. 876.01

Min. D = 2.0 Ft.
B = 15.0 Ft.

FROM -L- STA. 76+47 LT TO STA. 77+25 RT
EST. 456 TONS CL "I" RIP RAP
EST. 643 SY GEOTEXTILE
EST. 910 CY DDE



DETAIL G
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 — D — d — 3:1 — Fill Slope — Geotextile — B

Min. D = 1 Ft.
Max. d = 0.5 Ft.
B = 3.0 Ft.

Type of Liner = 61 TONS CL I RIP-RAP
85 S.Y. GEOTEXTILE

FROM -L- STA. 73+74 TO STA. 75+00 RT

DETAIL H
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 3:1 — D — d — 3:1 — Natural Ground — Geotextile — B

*When B is < 6.0'

Min. D = 1.0 Ft.
Max. d = 0.9 Ft.
B = 4.0 Ft.

Type of Liner = 147 TONS CL I RIP-RAP
208 S.Y. GEOTEXTILE

FROM -L- STA. 75+00 TO STA. 77+06 RT;
DDE = 205 CY

CHANNEL RELOCATION EXCAVATION SHALL BE PERFORMED IN ONLY DRY OR ISOLATED AREAS OF THE WORK ZONE. UTILIZE IMPERVIOUS DIKES, PUMPS, AND HOSES TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY. INSTALL RIP RAP AROUND PROPOSED COLUMNS AND CONSTRUCT CHANNEL BLOCK.

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

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

11
CLEAN WATER DIVERSION
(Not to Scale)

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 73+05 to Sta. 75+74 RT
Sta. 78+14 to Sta. 79+25 RT
Sta. 78+14 to Sta. 85+75 LT

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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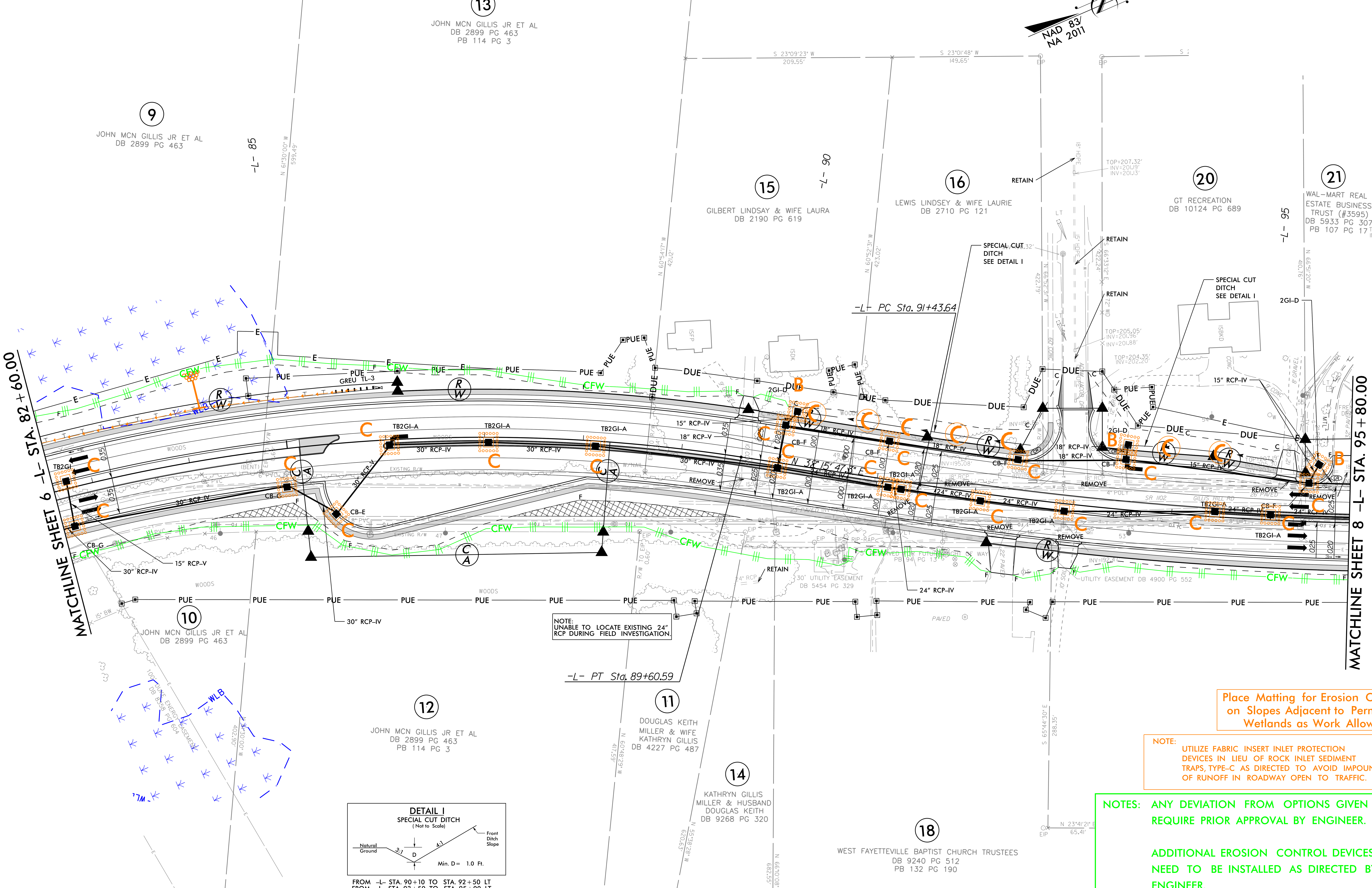
PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-13/CONST.7

RS&H
NC FIRM LICENSE No: F-0493

-L- CURVE DATA

PI Sta 85+35.62	PI Sta 93+91.02
△ = 28° 56' 41.9" (RT)	△ = 8° 17' 55.2" (LT)
D = 3° 19' 52.1"	D = 1° 40' 48.8"
L = 868.92'	L = 493.90'
T = 443.94'	T = 247.38'
R = 1,720.00'	R = 3,410.00'
SE = .035	SE = RC
RO = 126	



NAD 83/ NA 2011
17
WEST FAYETTEVILLE PLACE ASSOCIATES LIMITED PARTNERSHIP
DB 10045 PG 260
13
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
PB 114 PG 3
9
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
15
GILBERT LINDSAY & WIFE LAURA
DB 2190 PG 619
16
LEWIS LINDSEY & WIFE LAURIE
DB 2710 PG 121
20
GT RECREATION
DB 10124 PG 689
21
WAL-MART REAL ESTATE BUSINESS TRUST (#3595)
DB 5933 PG 307
PB 107 PG 17
-L- 85
-L- 90
-L- 95
-L- PC Sta. 91+43.64
-L- PT Sta. 89+60.59
SPECIAL CUT DITCH SEE DETAIL I
RETAIN
MATCHLINE SHEET 6 -L- STA. 82+60.00
MATCHLINE SHEET 8 -L- STA. 95+80.00
10
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
NOTE: UNABLE TO LOCATE EXISTING 24" RCP DURING FIELD INVESTIGATION.
12
JOHN MCN GILLIS JR ET AL
DB 2899 PG 463
PB 114 PG 3
11
DOUGLAS KEITH MILLER & WIFE KATHRYN GILLIS
DB 4227 PG 487
14
KATHRYN GILLIS MILLER & HUSBAND DOUGLAS KEITH
DB 9268 PG 320
18
WEST FAYETTEVILLE BAPTIST CHURCH TRUSTEES
DB 9240 PG 512
PB 132 PG 190
30' UTILITY EASEMENT DB 5454 PG 329
UTILITY EASEMENT DB 4900 PG 552
DETAIL I
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
3:1
4:1
D
Front Ditch Slope
Min. D= 1.0 Ft.
FROM -L- STA. 90+10 TO STA. 92+50 LT
FROM -L- STA. 93+50 TO STA. 95+00 LT

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-14/CONST.8

RS&H
NC FIRM LICENSE No: F-0493

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-L- CURVE DATA

PI Sta 93+91.02	PI Sta 101+25.50
△ = 8° 17' 55.2" (LT)	△ = 6° 12' 24.4" (RT)
D = 1° 40' 48.8"	D = 0° 38' 11.8"
L = 493.90'	L = 974.96'
T = 247.38'	T = 487.96'
R = 3,410.00'	R = 9,000.00'
SE = RC	SE = NC

NAD 83/
NA 2011

21

WAL-MART REAL ESTATE BUSINESS
TRUST (#3595)
DB 5933 PG 307
PB 107 PG 17

WALMART

-L- 100

-L- 105

-L- PRC Sta. 96+37.54

SPECIAL LATERAL
'V' DITCH
SEE DETAIL J

RETAIN

REMOVE 15" RCP-IV

REMOVE

2GI-D

TB2GI-A

CB-F

CB-G

DUE

DI

PDE

GRADE TO DRAIN

15" RCP-IV

18" RCP-IV

18" RCP-V

24" RCP-IV

15" RCP-V

CFW

PUE

MATCHLINE SHEET 7 -L- STA. 95+80.00

MATCHLINE SHEET 9 -L- STA. 105+00.00

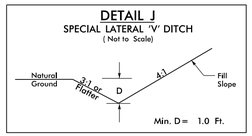
19

JOHN D GILLIS
DB 5280 PG 386
PB 94 PG 13

22

BARKER PARTNERS LLC
DB 8580 PG 263

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



FROM -L- STA. 96+50 TO STA. 100+00 LT

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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PROJECT REFERENCE NO.	SHEET NO.
U-5798A	EC-15/CONST.9

RS&H
NC FIRM LICENSE No: F-0493

MICHAEL LYNN HELMS
DB 7028 PG 411
PB 107 PG 17

NATIONAL RETAIL PROPERTIES LP
DB 9454 PG 591
PB 107 PG 17

W H CAPITAL LLC
DB 7673 PG 368
PB 107 PG 17

21
WAL-MART REAL ESTATE BUSINESS TRUST (#3595)
DB 5933 PG 307
PB 107 PG 17

23
CUMBERLAND COUNTY ABC BOARD
DB 8509 PG 635
PB 107 PG 17

ALDI NC LLC
DB 10078 PG 265
PB 140 PG 70

22
BARKER PARTNERS LLC
DB 8580 PG 263

FLOWERY BRANCH MD
DB 11033 PG 795
PB 140 PG 70

BARKER PARTNERS LLC
DB 8580 PG 263

JOSEPH P RIDDLE, III
DB 9379 PG 534

BARKER PARTNERS LLC
DB 8580 PG 263

-L- CURVE DATA
PI Sta 111+73.23
Δ = 19° 25' 26.6" (LT)
D = 6° 11' 14.8"
L = 313.93'
T = 158.48'
R = 926.00'

NAD 83/
NA 2011

MATCHLINE SHEET 8 -L- STA. 105+00.00

-L- PT Sta. 106+12.50

-L- PC Sta. 110+14.74

END PROJECT U-5798A
-L- Sta. 109+39.00

-L- POT Sta. 114+35.91

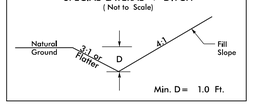
-L- PT Sta. 113+28.67

SPECIAL LATERAL 'V' DITCH SEE DETAIL J

N 30° 10' 16.5" E

N 10° 44' 49.9" E

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



FROM -L- STA. 106+73 TO STA. 108+50 LT

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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