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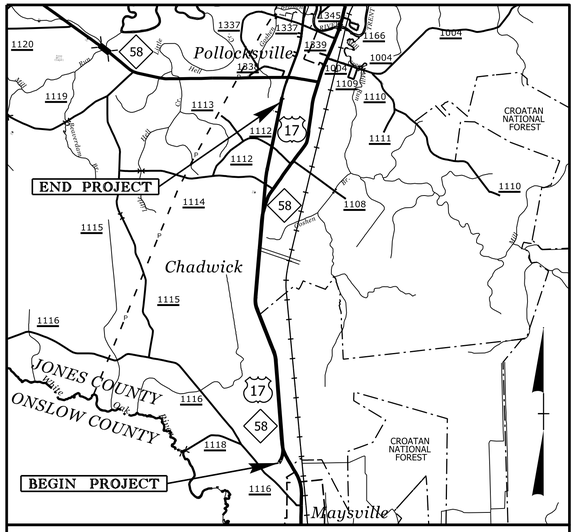
TIP PROJECT: R-2514C



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NAD 83/
NSRS 2007

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

JONES COUNTY

LOCATION: US 17 FROM NORTH OF MAYSVILLE TO SOUTH OF NC 58 NEAR POLLOCKSVILLE

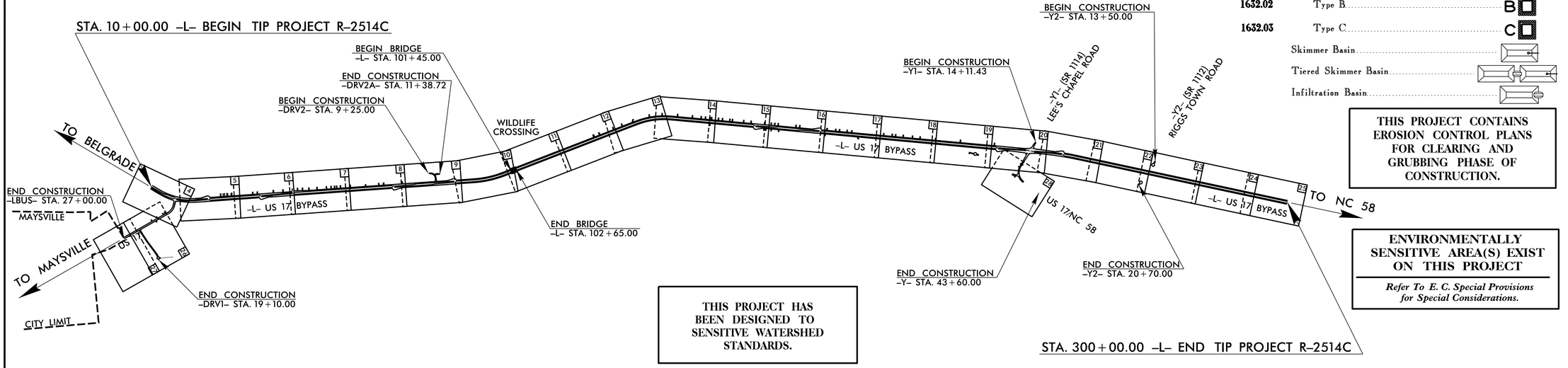
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514C	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34442.1.4	N/A	

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.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

GRAPHIC SCALE

25 0 50

PLANS

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:

HDR Engineering, Inc. of the Carolinas
N.C.B.E.L.S. License Number: F-0116
3733 National Drive, Suite 207 Raleigh, N.C. 27612

2012 STANDARD SPECIFICATIONS

Designed by:

WYATT D. YELVERTON, P.E. ***3609***

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 2012 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		

1/30/2015
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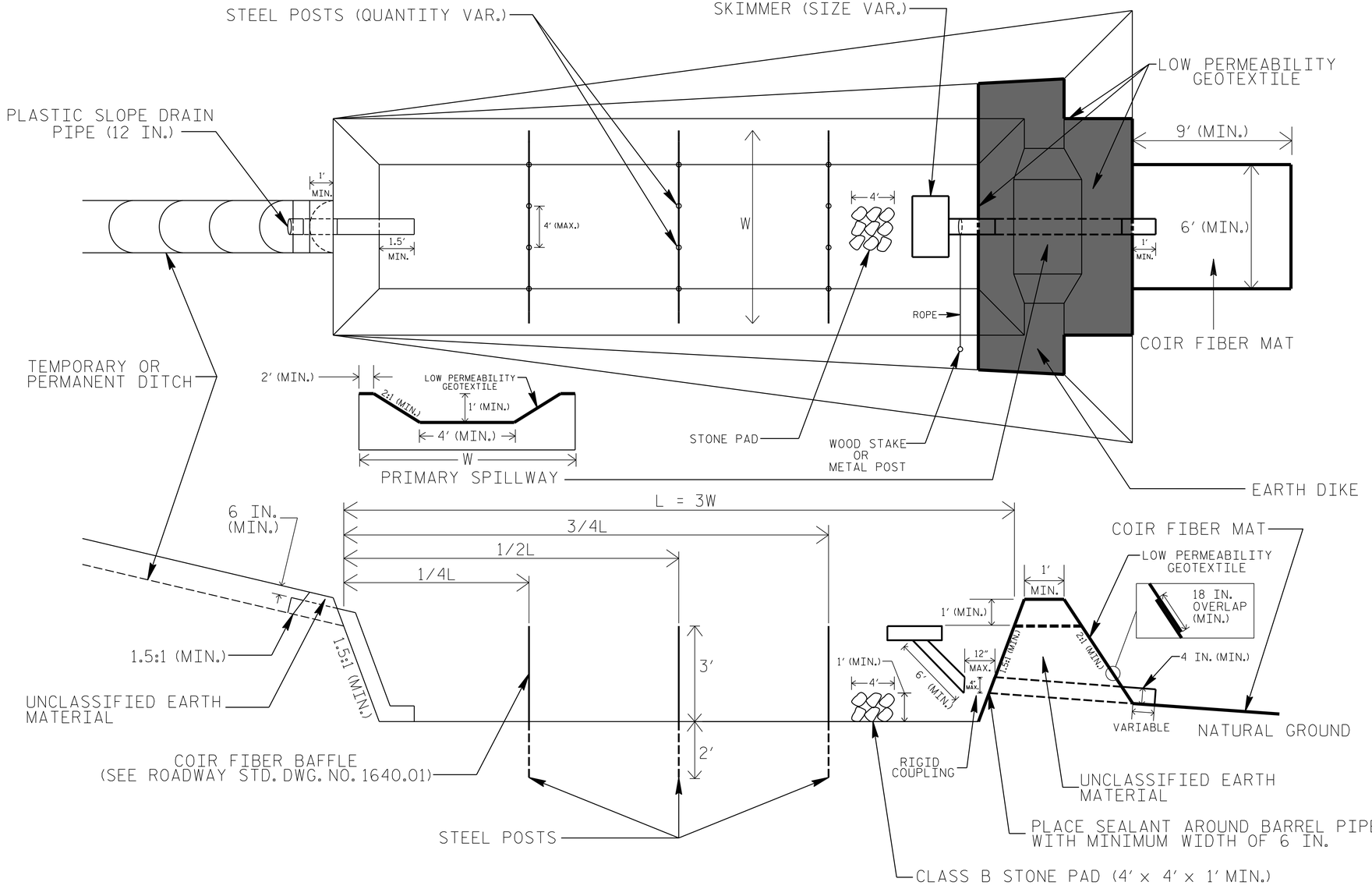
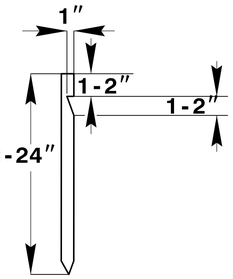
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

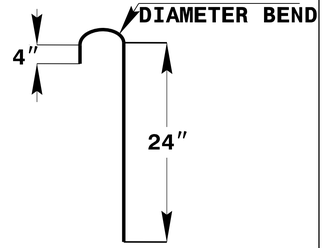
SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



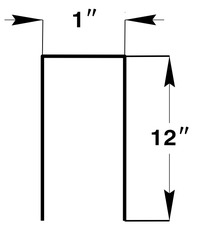
2" x 2" (nominal) WOODEN STAKE



#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/0.4, 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

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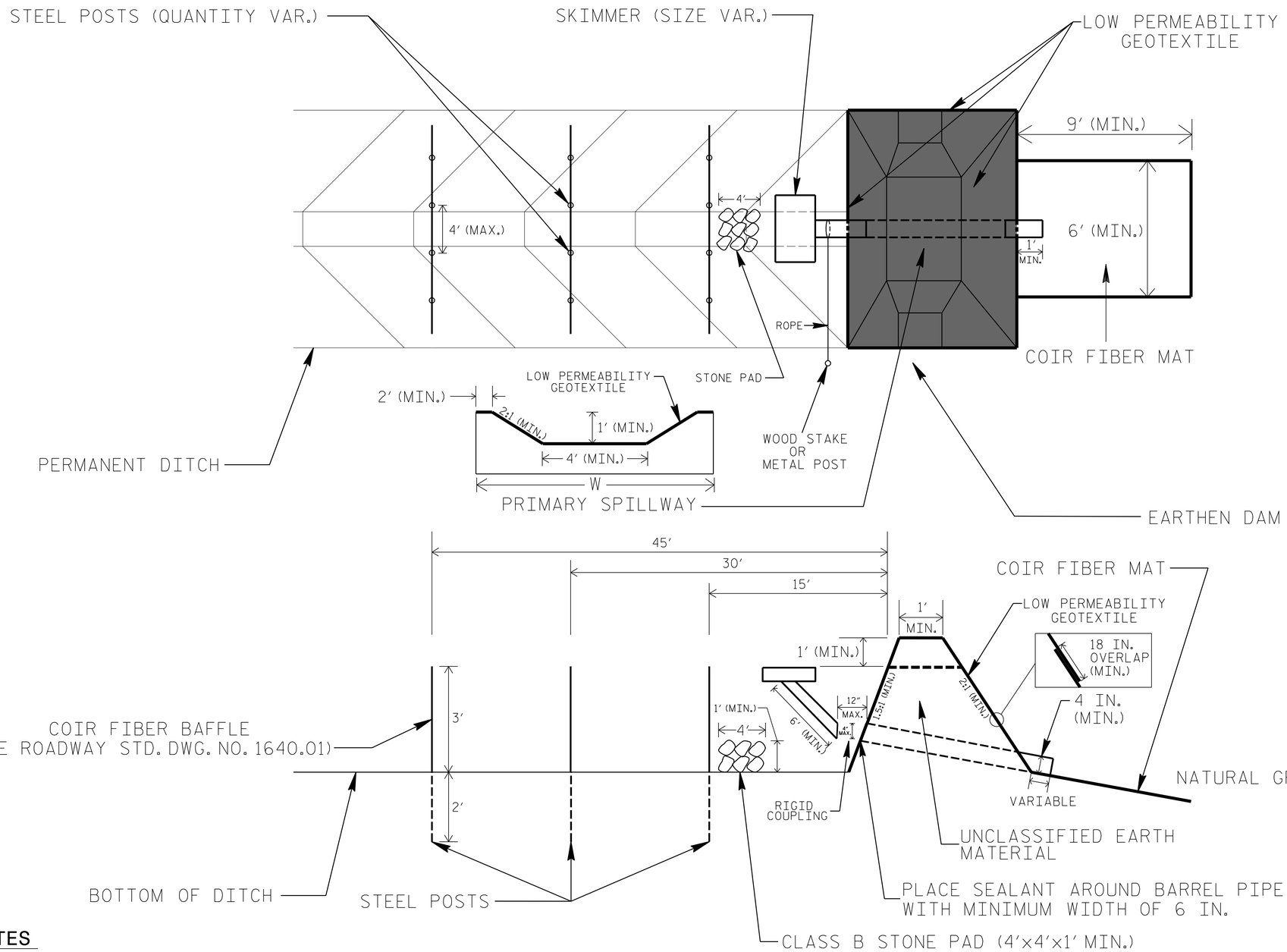
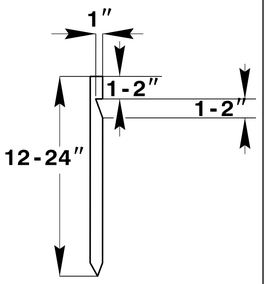
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

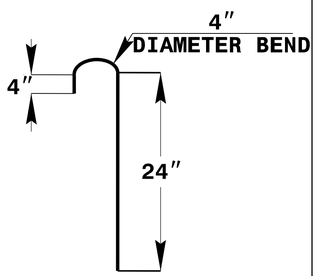
EARTHEN DAM WITH SKIMMER DETAIL (EAST)



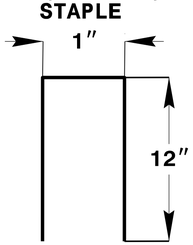
2″ x 2″ (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1″ (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

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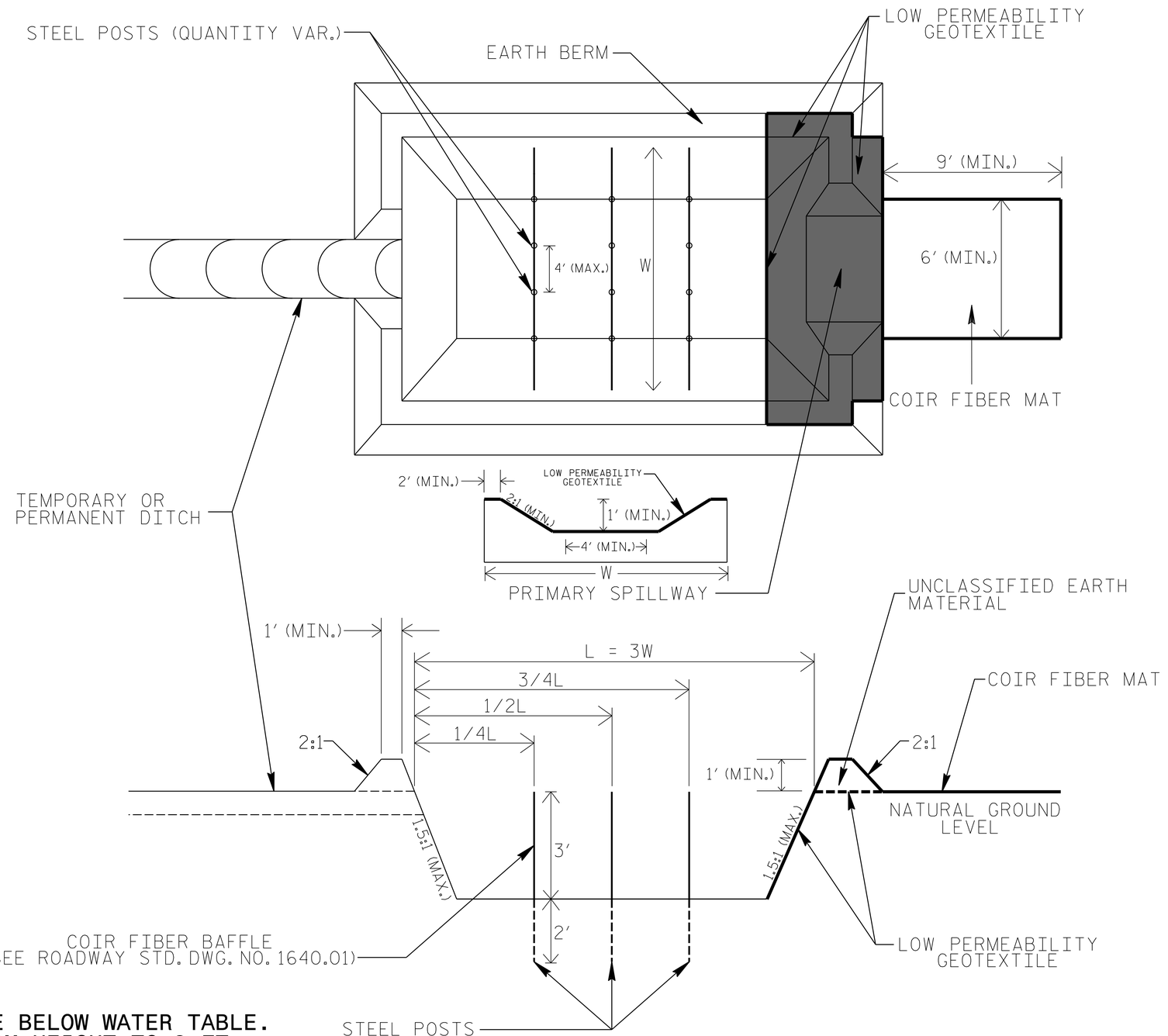
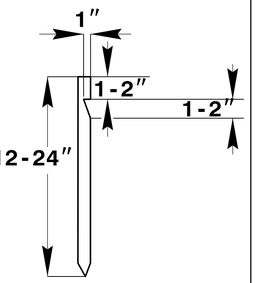
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

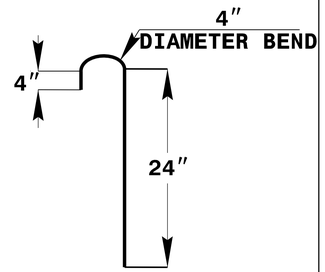
INFILTRATION BASIN WITH BAFFLES DETAIL (EAST)



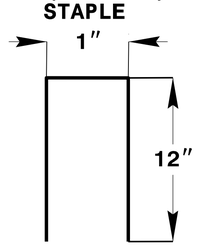
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOT TO SCALE

NOTES

1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.

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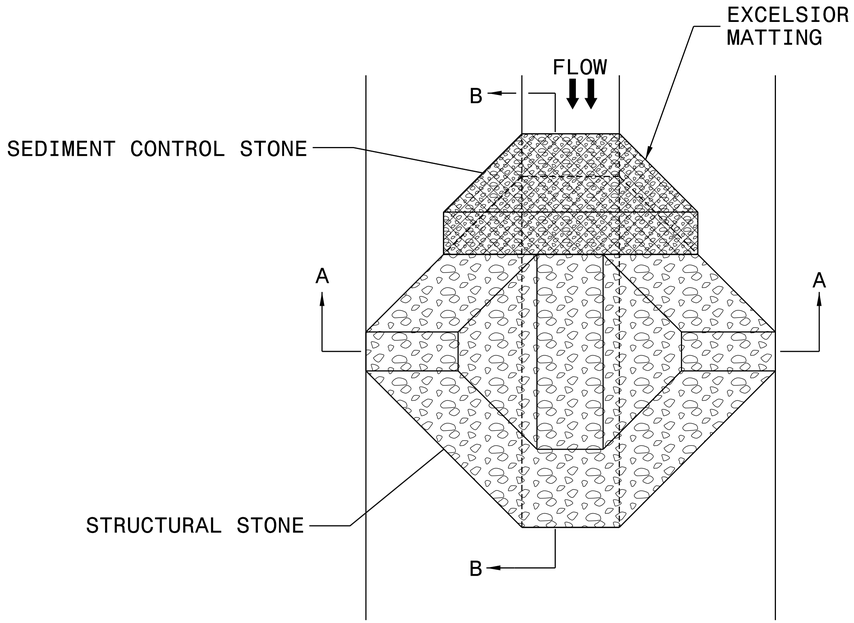
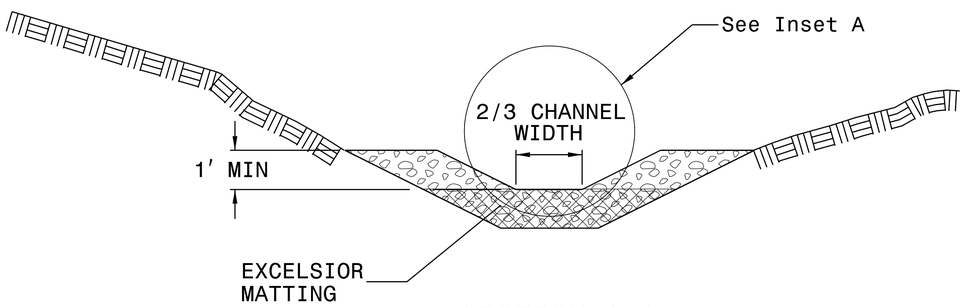
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

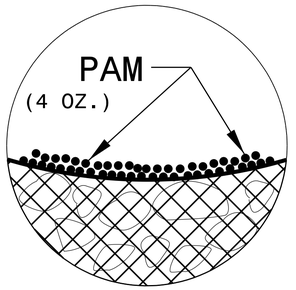
NOTES:

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

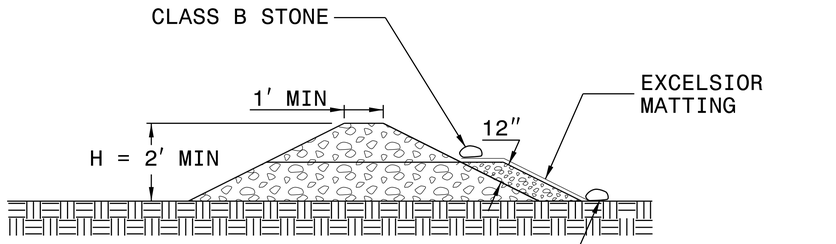
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

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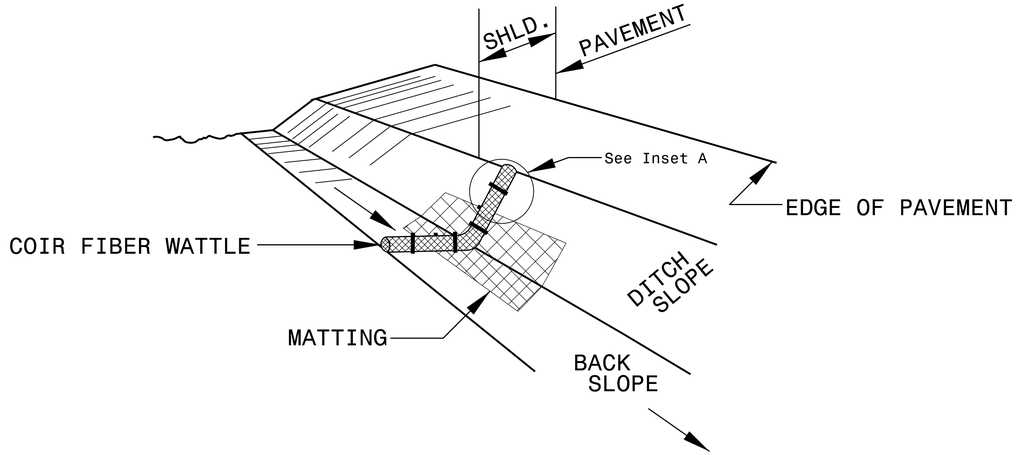
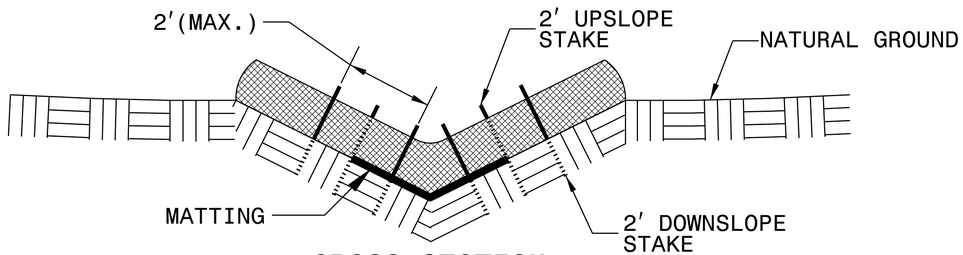
PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

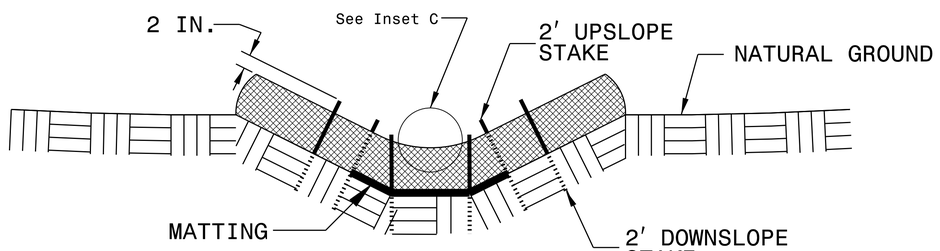
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

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

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

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

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

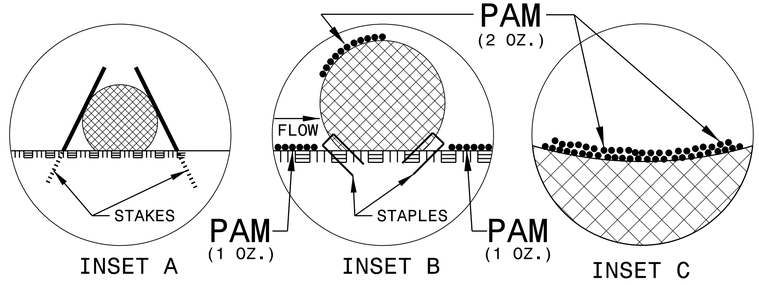
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

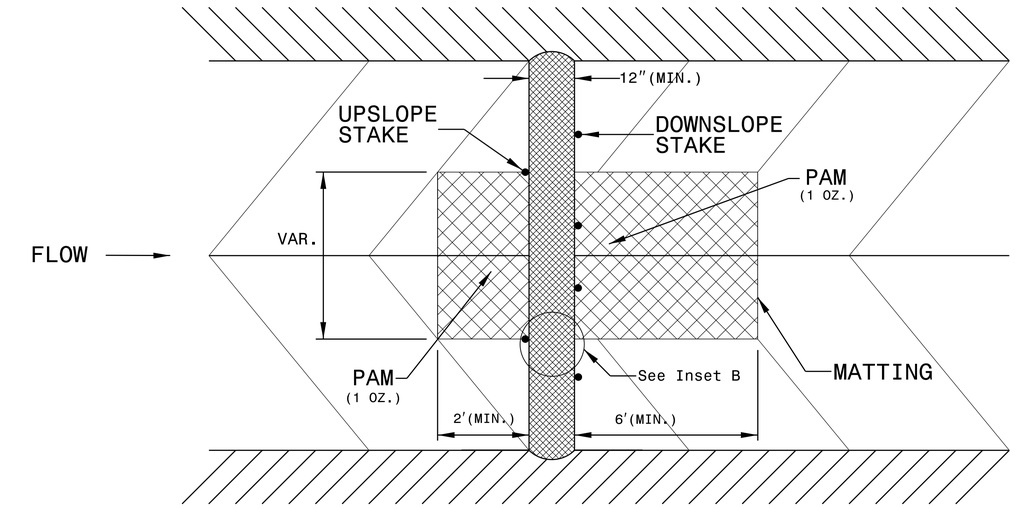
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

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





TOP VIEW

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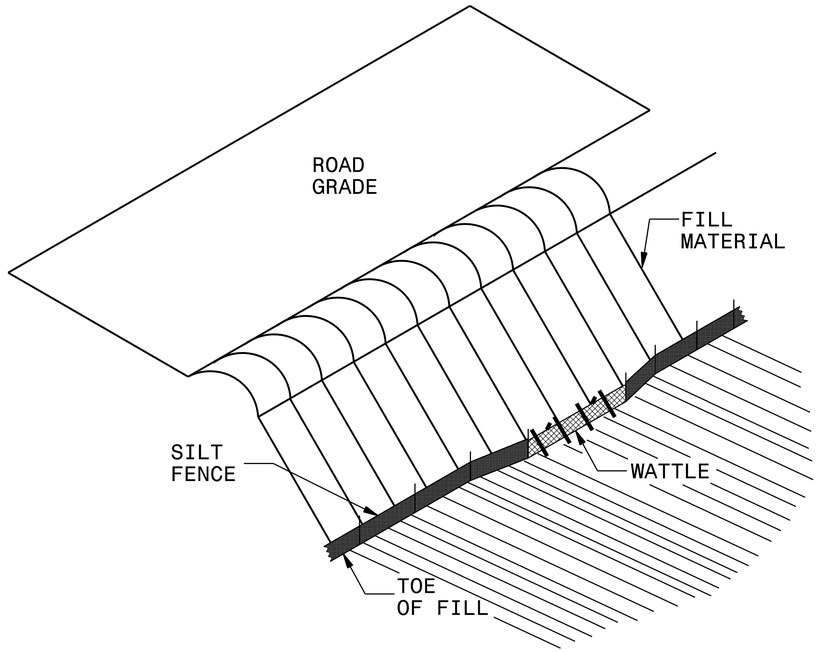
SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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.

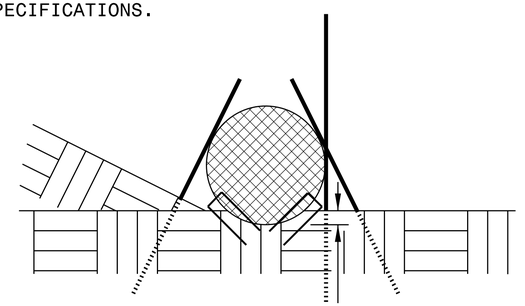
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

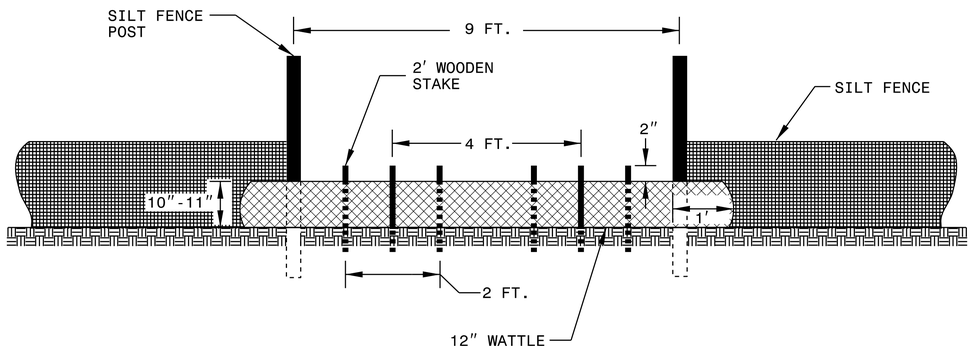
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

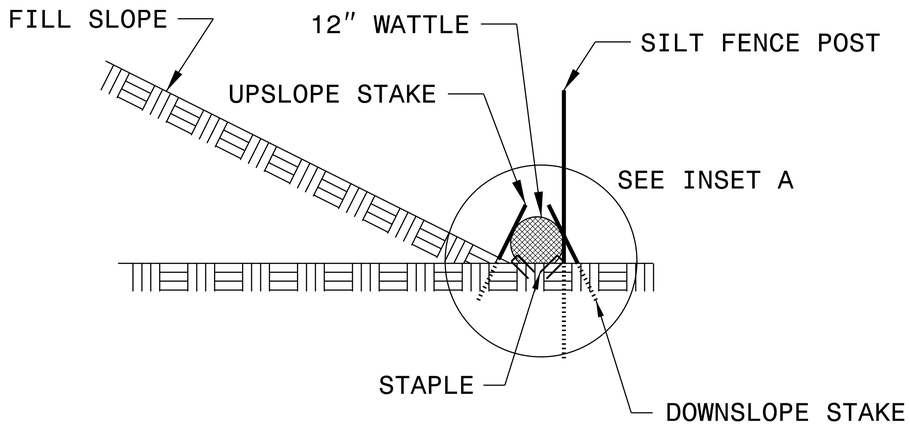
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





VIEW FROM SLOPE



SIDE VIEW

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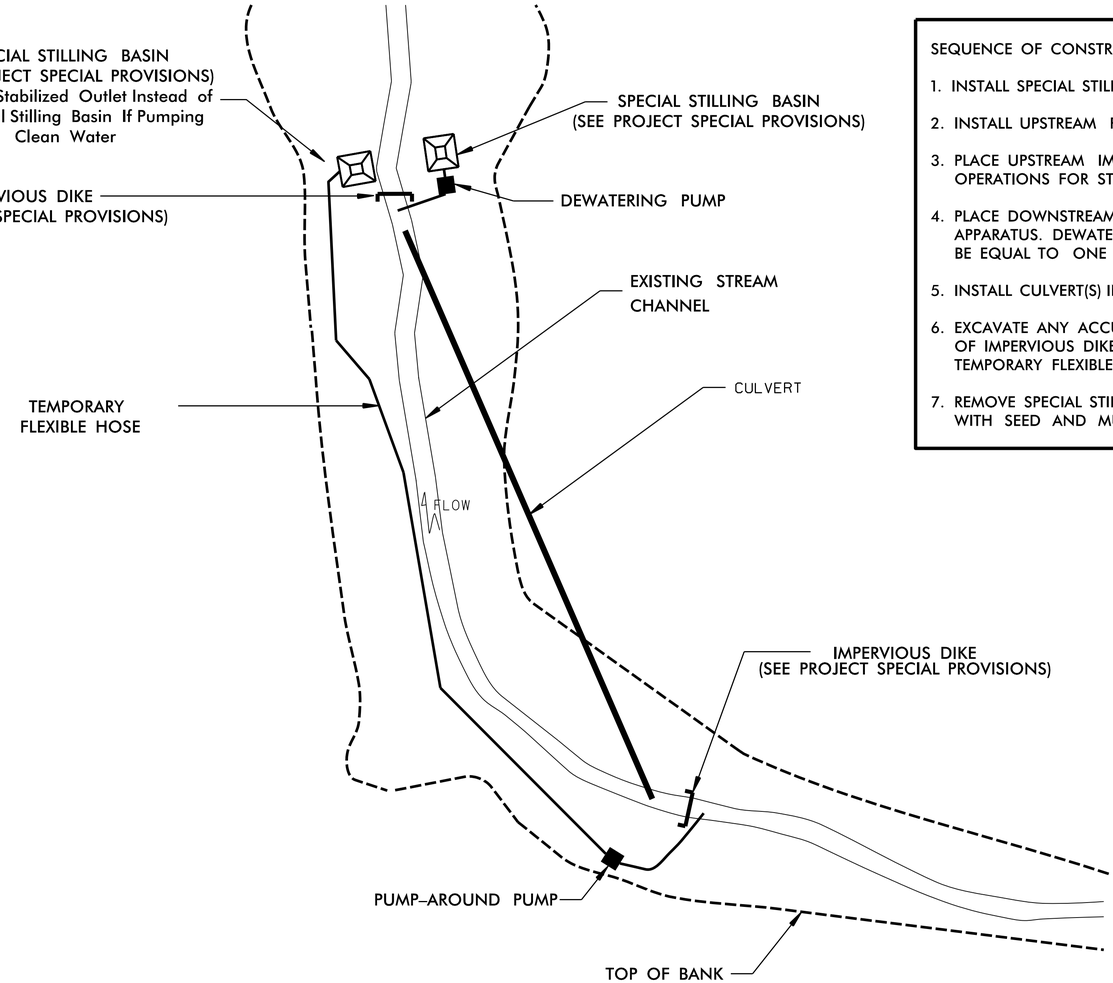
PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–2F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_EC_BW.tbl
USER: wyelvert DATE: 1/30/2015 TIME: 2:39:42 PM
FILE: North_Carolina_Dept_of_Transportation\Erosion_Crtl_R_2514B_TO_3_c\13.00_CAD\Erosion Control\R2514B_Hyd_EC_DETAILS.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR FILL SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4&5	-L-	10+00	22+00	LT	3733
5	-L-	24+00	25+00	LT	189
6	-L-	33+00	37+50	LT	1350
8	-L-	62+00	66+50	LT	1250
9&10	-L-	78+00	101+00	LT	10478
11&12	-L-	101+00	121+50	LT	9111
12&13	-L-	128+00	131+50	LT	894
14	-L-	143+50	151+50	LT	2222
22	-L-	258+00	261+00	LT	1233
23	-L-	269+00	270+00	LT	244
4	-L-	10+00	16+00	RT	2000
5&6	-L-	21+00	40+00	RT	3800
6-10	-L-	40+00	101+00	RT	21011
11&12	-L-	101+00	124+50	RT	10967
12-14	-L-	128+00	151+50	RT	5483
15	-L-	159+00	164+50	RT	733
16	-L-	172+50	174+50	RT	189
16	-L-	179+00	182+00	RT	967
17	-L-	194+00	196+00	RT	378
22&23	-L-	255+50	271+00	RT	5167
4&26	-L- BUS	11+08	20+00	LT	2973
4&26	-L- BUS	11+08	20+00	RT	4064
9	DRV2	11+50	12+50	LT	222
9	DRV2	11+50	12+50	RT	222
			SUBTOTAL		88880

MATTING FOR CUT DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
26	-DRV1-	11+45	12+06	RT	60
26	-DRV1-	11+45	12+06	LT	160
5	-L-	21+65	22+65	MED	95
10	-L-	92+92	94+25	MED	500
13	-L-	133+50	135+95	LT	440
11	-L-	114+87	115+00	RT	15
15	-L-	158+25	158+90	RT	75
17&18	-L-	194+93	200+00	RT	1510
18	-L-	207+39	210+00	RT	425
18	-L-	206+75	208+37	LT	330
19	-L-	213+50	214+40	LT	265
19	-L-	214+44	215+50	LT	205
20	-L-	230+95	233+07	LT	410
28	-YA-	10+50	11+79	RT	410
28	-YA-	10+76	11+79	LT	330
22	-L-	261+00	262+50	LT	265
22	-L-	262+50	263+50	LT	160
23	-L-	263+50	264+50	LT	180
22	-Y2-	19+50	20+21	LT	110
24	-L-	289+17	289+50	LT	45
25	-L-	290+00	290+96	RT	150
			SUBTOTAL		6140
			FILL SLOPE TOTAL		88880
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					30800
			SUBTOTAL		125820
				SAY	126000

PLOT DRIVER: $PLTDRV$$ PENTABLE: $PENTBL$$
USER: $USER$$ DATE: $DATE$$ TIME: $TIME$$
FILE: $PWVARVAULTPATHDESC$$

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-3A
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.

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_EC_BW.tbl
USER: cmyers DATE: 1/30/2015 TIME: 2:23:21 PM
FILE: North_Carolina_Dept_of_Transportation\Erosion_Cntl_R2514CTO4_c\13.00_CAD\Erosion Control\R2514C_Hyd_EC_MATTING.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PROPOSED US 17

7,700 / 11,400 — 4,400 / 6,500 — 12,000 / 17,700

4,500 / 6,700 EXISTING US 17

ADT 2015 / 2035

TRAFFIC DIAGRAM

PIs Sta 12+17.85	PI Sta 16+95.31	PI Sta 13+12.68
Δs = 4° 11' 32.5"	Δ = 27° 14' 57.6" (LT)	Δ = 46° 08' 20.6" (RT)
Ls = 240.00'	D = 3° 29' 37.1"	D = 19° 05' 54.9"
LT = 160.04'	L = 779.97'	L = 241.58'
ST = 80.04'	T = 397.51'	T = 127.77'
	R = 1,640.00'	R = 300.00'
	SE = .06	SE = SEE PLANS
	RO = 240'	

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 or Flatter — D — 3:1 or Flatter — B — Fill Slope

Min. D = 2.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.

-LBUS- STA. 11+22 to STA. 12+24 LT DDE=181 CY
-L- STA. 17+50 to STA. 19+15 RT DDE=569 CY

DETAIL AM
FALSE SUMP
(Not to Scale)

Median Ditch — 9" — 2' — L (See Chart Below) — 20' — S — GI etc. — ℄ Proposed Ditch

S = Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

DETAIL AP
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 3:1 — 2.00' @ 6 — 3:1 or Flatter — Fill Slope

Min. D = 2.0 Ft.
B = 3 Ft.

-LBUS- STA. 13+70 TO STA. 19+44 (RT)

DETAIL L
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — Natural Ground

Min. D = VAR.
B = 3.0 Ft.

-LBUS- STA. 12+50 TO STA. 13+00 LT

NAD 83/NSRS 2007

-BL- 106 POT 5+00.00 (BEGIN R2514C)
-BL- 106 PINC 243+83.34 (END R2514B)

-L- POT Sta. 10+00.00
-L- TS Sta. 10+57.80
-L- SC Sta. 12+97.80
-L- POC Sta. 16+75.00=
-LBUS- POT Sta. 10+00.00

BEGIN PROJECT R-2514C
-L- STA. 10+00.00

BEGIN R-2514C
R/W ACQUISITION

BEGIN R-2514C
R/W ACQUISITION

J. C. LAROQUE, HEIRS
DB 109 PG 559

FRANK JENKINS HEIRS
DB 181 PG 494
MB 3 PG 7

AMBROSE ROBERTS, JR.
DB 122 PG 245

DONELLE MAURICE MYERS
DB 320 PG 847

MARY ELLEN EADY
DB 195 PG 551
DB 274 PG 50
DB 344 PG 21

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

MATCHLINE -L- STA. 19+00.00 SEE SHEET 5

MATCHLINE -LBUS- STA. 15+00.00 SEE SHEET 26

SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 40 FOR -LBUS- PROFILE

10-FEB-2015 13:28
C:\Users\cnorris\Desktop\R-2514\R-2514C\Final Plan\Design\Added detour after turn in 2-9-2015\R2514C_EC_psh_04_updated_2-9-2015.dgn
cnorris
dgn_Lib_NCDOT_Standard_Cells.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

MATCHLINE –L– STA. 19+00.00 SEE SHEET 4

MATCHLINE –L– STA. 32+00.00 SEE SHEET 6

FRANK JENKINS HEIRS
DB 181PG 494
MB 3 PG 7

AMBROSE ROBERTS, JR.
DB 122 PG 245

EDITH MATTOCKS, et ux
DB 236 PG 382
WB 04E PG 104

MARION G. HILL, et ux
DB 186 PG 815
DB 307 PG 898
DB 369 PG 947

ROSALEE SMITH HEIRS
DB 106 PG 252

LEAMON GODLEY HEIRS
ESTATE FILE 84-E-37
DB 109 PG 473
DB 109 PG 475

MICHEAL FROST
DB 329 PG 995
DB 338 PG 460
MB 10 PG 11

DOROTHY WARD
DB 164 PG 668

DAVID WARD, ET UX
DB 137 PG 169

HORACE TIMMONS, ET UX
DB 156 PG 379

VERA LEE WARD
DB 153 PG 263

CENTURYLINK
DB 117 PG 278

LOUISE DUDLEY HEIRS
DB 186 PG 183
WB 35E PG 143

ROBERT BARBER HEIRS
DB 186 PG 186

ALPHONSO HILL
DB 272 PG 219
MB 3 PG 7

UNITED STATES DEPARTMENT OF AGRICULTURE
DB 89 PG 285

-L- CS Sta. 20+77.77

-L- ST Sta. 23+47.77

-BL- BS05 PINC 23+19.89

-DET3- PCC Sta. 25+23.80

-DET3- PT Sta. 32+26.17

-L- POT Sta. 25+95.85 35.00 LT.

-DET3- POT Sta. 36+30.32

END DETOUR

CHORD

CFW

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL C

CL B RIP RAP
EST. 20 TONS
EST. 36 SY GEOTEXTILE

CL B RIP RAP
EST 5 TONS
EST 14 SY GEOTEXTILE
(REMOVE WHEN DETOUR REMOVED)

LATERAL 3' BASE DITCH
SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN 'V' DITCH
SEE DETAIL B

REMOVE 24" RCP

REMOVE 24" CMP

REMOVE 18" RCP

REMOVE 24" CONC

REMOVE 24" RCP

REMOVE 18" HDPE

PLACED AS PER UTILITY RECORD
UNABLE TO COLLECT DUE TO FENCE

ACCESS POINT

ISFD

PUE

–L–	
PI Sta 16+95.31	PIs Sta 21+57.81
△ = 27° 14' 57.6" (LT)	Θs = 4° 11' 32.5"
D = 3° 29' 37.1"	Ls = 240.00'
L = 779.97'	LT = 160.04'
T = 397.51'	ST = 80.04'
R = 1,640.00'	
SE = .06	
RO = 240'	

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-0" Ft., Fill Slope, B

Min. D= 2.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 17+50 to STA. 19+15 RT
DDE=564 CY

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-0" Ft., Fill Slope, B

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 30+50 to STA. 52+00 LT
DDE=2610 CY

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 3:1 or Flatter, D, 3:1 or Flatter, b, 1'-0" Ft., Fill Slope, B

Min. D= 2.0 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–L– STA. 21+10 to STA. 30+50 LT
DDE=2251 CY

DETAIL E
MEDIAN V D
(Not to Scale

Shoulder Point, 3:1 or Flatter, 3:1 or Flatter, Point

–L– STA. 20+15 TO STA. 24+00 MED

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2A–5 FOR DRIVEWAY PROFILE DETAILS

SEE SHEET 29 FOR –L– PROFILE

8/17/99
10-FEB-2015 13:40
C:\Users\cnash\Desktop\R-2514\R-2514C\Final Plan\Design\Added detour after turn in 2-9-2015\R2514C_EC_psh_05_updated_2-9-2015.dgn
coppa 4.0 (PENTIUM)

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 15 (ELEANOR JEAN HOLT JACKSON, ET ALI, PARCEL 16 (ROCHELLE ANITA HOLT), PARCEL 17 (LYNELL MATTOCKS, ET UX), AND PARCEL 20 (WOODROW F. LASSITER, ET UX) AT -L- STA.38+50.00 LT.

8/17/99

NAD 83/NSRS 2007

MATCHLINE -L- STA. 32+00.00 SEE SHEET 5

MATCHLINE -L- STA. 46+00.00 SEE SHEET 7

LATERAL 3' BASE DITCH SEE DETAIL D

MEDIAN 'V' DITCH SEE DETAIL B

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

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:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR -L- PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:26:27 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-7/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

R/W REVISION 7-28-14 (DWG) - REVISED THE PROPERTY OWNER NAME OF PARCEL 21 (DORIS L. HILL) TO PARCEL 21A (BRADLEY HILL). ADDED A SECOND CLAIM OF PUE ON PARCEL 21AZ (BRADLEY HILL), PARCEL 21Z (DORIS L. HILL), AND PARCEL 28Z (RAYMOND C. BANKS, JR., ET UX).

R/W REVISION 9-25-14 (DWG) - REVISED THE PUE ON PARCEL 21 (DORIS L. HILL). ELIMINATED THE SECOND CLAIMS (21Z AND 21AZ) FROM PARCEL 21 (DORIS L. HILL) AND PARCEL 21A (BRADLEY HILL).

8/17/99

MATCHLINE –L– STA. 46+00.00 SEE SHEET 6

MATCHLINE –L– STA. 60+00.00 SEE SHEET 8

–Y3– POT Sta. 10+00.00

–L– POT Sta. 46+34.83=
–Y3– POT Sta. 12+60.19

LATERAL 3' BASE DITCH
SEE DETAIL D

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL E

MEDIAN 'V' DITCH
SEE DETAIL B

PUE

CFW

REMOVE

0701 0702 0703 0704 0705 0706 0707 0708 0709 0710 0711 0712 0713 0714 0715

15" RCP-III

24" RCP-III

18" HDPE

GTD

DF

3Gi

2Gi

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:26:34 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-8/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 282 (RAYMOND C. BAWKS, JR., ET UX) AND PARCEL 292 (JOHN TAYLOR, JR., ET UX).

8/17/99

MATCHLINE –L– STA. 60 + 00.00 SEE SHEET 7

MATCHLINE –L– STA. 74 + 00.00 SEE SHEET 9

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 'V' DITCH SEE DETAIL G

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

REMOVE

REMOVE

REMOVE

REMOVE

REMOVE

REMOVE

REMOVE

REMOVE

N 4°26'35.8" W

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 31 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:26:52 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-9/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 01-06-14 (DWG) - ADDED R/W AND REVISED THE TCE AND PUE ON PARCEL 32 (RACHEL M.EUBANK), PARCEL 33 (JACK L.HOLLAND), AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20' WIDTH OF -DRV2- AND -DRV2A-.

NAD 83/NSRS 2007

MATCHLINE -L- STA. 74+00.00 SEE SHEET 8

MATCHLINE -L- STA. 88+00.00 SEE SHEET 10

-DRV2- PC Sta. 10+00.00
MAINTAIN EXISTING DITCH
SPECIAL CUT DITCH SEE DETAIL K
N 39° 55' 58.0" W
-DRV2A- PC Sta. 10+13.96
SPECIAL CUT DITCH SEE DETAIL AF
SPECIAL CUT DITCH SEE DETAIL I
-DRV2A- PT Sta. 10+88.72
-DRV2- POT Sta. 9+25.00
-DRV2A- POT Sta. 11+38.72
-DRV2- PCC Sta. 11+00.00
-DRV2A- POT Sta. 10+08.53
-DRV2- PT Sta. 11+73.65
18" CAAP W/ 2 ELBOWS
LATERAL 'V' DITCH SEE DETAIL J
LATERAL 'V' DITCH SEE DETAIL G
TIE DITCH TO NATURAL GROUND
LATERAL 'V' DITCH SEE DETAIL H
CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE
18" RCP-III
30" RCP-III
48" RCP-III
WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-1
BEG. SBG -L- 87+40 LT
BURY 1.0'
N 83° 49' 25.7" E
N 35° 35.9" W
CL B RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE
-L- POT Sta. 32+25.00=
-DRV2- POT Sta. 13+11.66
15" RCP-V
15" RCP-III
REMOVE
0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915 0916 0917

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: SBG – "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 43 FOR -DRV2- PROFILE
SEE SHEET 43 FOR -DRV2A- PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:07:03 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–10/CONST.10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/NSRS 2007

MATCHLINE –L– STA. 88+00.00 SEE SHEET 9

MATCHLINE –L– STA. 101+00.00 SEE SHEET 11

LATERAL 'V' DITCH SEE DETAIL J

LATERAL 'V' DITCH SEE DETAIL H

–L– TS Sta. 90+92.17

–L– SC Sta. 92+92.17

–L– CS Sta. 98+26.23

–L– ST Sta. 100+26.23

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 7 SY GEOTEXTILE

BEGIN SBG –L– 99+45 RT

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-2

JB wSlab Lid

15" RCP–III

18" RCP–III

48" RCP–III

72" RCP–III

15" CMP

REMOVE

BURY 1.0'

PUE

CFW

GRAU 350

TYPE M 350

NOTE: SBG – "SHOULDER BERM GUTTER"
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR –L– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) – REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) FROM –L– STA. 92+92.17 TO STA. 99+68.00 LT.

8/17/99

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:07:13 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–11/CONST.11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/NSRS 2007

MATCHLINE –L– STA. 101+00.00 SEE SHEET 10

MATCHLINE –L– STA. 115+00.00 SEE SHEET 12

REMOVE EXISTING ROADWAY UNDER PROPOSED BRIDGE AND GRADE TO DRAIN

REMOVE

TYPE M-350

N 21° 32' 24.4" W

BURY 1.0'

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2–F

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

LATERAL 3' BASE DITCH SEE DETAIL E

CL B RIP RAP EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

LATERAL 'V' DITCH SEE DETAIL H

51 x 17 x 3
9 ft. weir
(See Infiltration Basin Detail)
ID 11.1 B

NOTE: SBG – "SHOULDER BERM GUTTER"
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR –L– PROFILE
SEE SHEET 44 FOR –DRV3– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

REVISIONS 8/17/99

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:14 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–12/CONST.12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

R/W REVISION 6-25-14 (DW6) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) AT -L- STA. 115+80.00 LT.

8/17/99

NAD 83/NSRS 2007

MATCHLINE -L- STA. 115 + 00.00 SEE SHEET 11

MATCHLINE -L- STA. 129 + 00.00 SEE SHEET 13

39
JOSEPH L. JACKSON, ET UX
DB 3019 PG 137

18" CAAP W/ 2 ELBOWS

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL E

SEPTIC SYSTEM

ISFD

END SBG
-L- 116+27 LT

GRAD 350

15" RCP-III

36" RCP-III

REMOVE

REMOVE 15" RCP

BURY 1.0'

48" RCP-III

WILDLIFE CROSSING
ACCESS STRUCTURE
SEE SPECIAL DETAIL 2-E

N 21° 32' 22" W

REMOVE

REPEATER PED

END SBG
-L- 117+95 RT

18" RCP-III

18" CAAP W/ 2 ELBOWS

CAT-1

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

TDE

STANDARD 3' BASE DITCH
SEE DETAIL L
EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL `V' DITCH
SEE DETAIL H

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: SBG – "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.
SEE SHEET 33 FOR –L– PROFILE
SEE SHEET 44 FOR –DRV3– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:20 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-13/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DMG) - REVISED THE PUE ON PARCEL 42 (OTIS A. SIMMONS, ET AL), PARCEL 46 (JAMES V. BENDER, JR.), PARCEL 47 (CHARLES W. JONES, ET UX), AND PARCEL 48 (BERNARD JONES, SR.).

NAD 83/NSRS 2007

MATCHLINE -L- STA. 129+00.00 SEE SHEET 12

MATCHLINE -L- STA. 141+00.00 SEE SHEET 14

-L- TS Sta. 133+93.78

-L- SC Sta. 136+33.78

LATERAL 3' BASE DITCH
SEE DETAIL E

PUE · CFW · REMOVE · 18" · 24" · 24" RCP-III · 18" RCP-III · FS · 2GI · 3GI · 1301 · 1302 · 1303 · 1304 · 1305 · 1306 · 1307 · 1308 · 1309 · B · C A · R W

REMOVE EXIST. 24" RCP

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 33 FOR -L- PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:43:25 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-14/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

MATCHLINE –L– STA. 141+00.00 SEE SHEET 13

MATCHLINE –L– STA. 154+00.00 SEE SHEET 15

–L– CS Sta. 142+61.44

–L– ST Sta. 145+01.44

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL C

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

PUE

CFW

REMOVE

18" RCP

18" RCP–III

24"

US HWY 70/NC 58 2 BST

N 4°49'58.0" E

SEPTIC SYSTEM

ISBLKD

ISFD

PLACED PER UTILITY RECORD

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL 'V' DITCH SEE DETAIL H

72' CHL & 35BW

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 51(ABUNDANT BLESSINGS MINISTRIES INC.NEW HOPE CHURCH OF GOD C/O OLIVER J.COLLINS). ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES, INC.).

8/17/99

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:43:30 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–15/CONST.15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6–25–14 (DWG) – REVISED THE PUE ON PARCEL 86 (VAN S. SMITH), ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES,INC.) AND PARCEL 88 (LOUISE MURRELL FOYE, ET AL C/O ROBERT HORRY). ADDED A NEW CLAIM OF PUE ON PARCEL 90A (LEVY MOORE, ET UX).

MATCHLINE –L– STA. 154+00.00 SEE SHEET 14

MATCHLINE –L– STA. 168+00.00 SEE SHEET 16

LATERAL 3' BASE DITCH SEE DETAIL C

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

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

PUE · CFW · TSD · REMOVE · REMOVE SYSTEM · 24" · 18" · 15" RCP–III · 30" RCP–III · 18" RCP–III · 2GI · DI · FS · CA · RW · B

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL M

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL N

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:34 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–16/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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.

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 7–28–14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 982 (JAMES HENRY BRYANT).

MATCHLINE –L– STA. 168 + 00.00 SEE SHEET 15

MATCHLINE –L– STA. 182 + 00.00 SEE SHEET 17

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

20 x 60 x 3
11 ft. weir
(See Infiltration Basin Detail)
ID 16.1 B

46 x 22 x 3
1.5 inch Skimmer
with 0.875 inch Orifice Diameter
7 ft. weir
ID 16.2 B

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:41 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–17/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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.

NAD 83/NSRS 2007

MATCHLINE –L– STA. 182 + 00.00 SEE SHEET 16

MATCHLINE –L– STA. 196 + 00.00 SEE SHEET 18

REVISIONS

R/W REVISION 7-28-14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 1142 (BETTY LOU W. LIGH.

8/17/99

MEDIAN 'V' DITCH
SEE DETAIL R

LATERAL 3' BASE DITCH
SEE DETAIL E

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

PUE CFW REMOVE RW CA RW RW

1701 1702 1703 1704 1705 1706 1707 1709 1710 1711 1712 1713

18" 15" 15" 18" 36" RCP-III 18" RCP-III

HW 2.47 B

2GI FS 18" RCP-III 2GI

49° 58.0' E

US HWY 17/NC 58 24' BST 2' BST

REPEATER

BURY 0.7 FT

BZ 1 BZ 2

TSD F

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

STANDARD 2' BASE DITCH
SEE DETAIL T
SLOPE = 0.007407
EST. 37 CY DDE

CL I RIP RAP
EST. 19 TONS
EST. 59 SY GEOTEXTILE

60 x 20 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
12 ft. weir
ID 17.1 CG

Existing Retaining Wall

GTD 2' F 18" GTD

TDE

RETAIN

REMOVE RETAINING WALL TO R/W OR AS DIRECTED BY ENGINEER

BANK STABILIZATION
SEE DETAIL AQ
EST. 60 CY DDE
EST. 64 TONS RIP RAP
EST. 100 SY FG

STANDARD 3' BASE DITCH
W/CLASS I RIP RAP
SEE DETAIL V
FROM 80' RT TO 100' RT
OR MIN. 15' ALONG CHANNEL
FROM PIPE OUTLET,
STR. NO. 1711)
SLOPE = 0.0100
EST. 30 CY DDE
EST. 30 TONS RIP RAP
EST. 60 SY FG

SPECIAL LATERAL
3' BASE DITCH
SEE DETAIL U

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:43:48 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-18/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

R/W REVISION 7-28-14 (DMG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 122 (GEORGE W. GRIGGS, ET AL).

8/17/99

MATCHLINE -L- STA. 196+00.00 SEE SHEET 17

MATCHLINE -L- STA. 210+00.00 SEE SHEET 19

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE. PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS. SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR -L- PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:43:35 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–19/CONST.19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 125 (MELVIN L. AYCOCK, JR., ET UX), PARCEL 126 (WEYERHAEUSER), AND PARCEL 129 (DELGEN L. MITCHELL, ET UX) AT –L– STA.224+84.00 LT. ADDED ADDITIONAL PUE ON PARCEL 129 (DELGEN L. MITCHELL, ET UX) AT –Y– STA. 26+33.00 LT. AND –L– STA. 225+21.00 RT.

MATCHLINE –L– STA. 210+00.00 SEE SHEET 18

MATCHLINE –L– STA. 224+00.00 SEE SHEET 20

MATCHLINE –Y– STA. 28+00.00 SEE SHEET 20

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

PUE

TSD

TST

TDE

HW

1901 1902 1903 1904 1905 1906 1907

REMOVE

48" RCP-III

15" RCP-III

FS 2GI

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL I RIP RAP
EST. 26 TONS
EST. 50 SY GEOTEXTILE

STANDARD 4' BASE DITCH
SEE DETAIL X
SLOPE=0.004717
EST. 80 CY DDE

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.0066
EST. 148 CY DDE

OBLITERATE DITCH; FILL TO NATURAL GROUND

OBLITERATE DITCH; FILL TO NATURAL GROUND

SPECIAL CUT DITCH
SEE DETAIL Z

N 4° 49' 58.0" E

N 18° 21' 25.0" E

–Y– POT Sta. 21+50.00

–Y– PC Sta. 24+81.61

–Y– PT Sta. 25+89.30

–Y– PC Sta. 26+33.53

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR –L– PROFILE
SEE SHEET 42 FOR –Y– PROFILE

2/2/2015
R-2514C_Hyd-EC_CG_PSH.dgn
10:44:02 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–20/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

MATCHLINE –L– STA. 224+00.00 SEE SHEET 19

MATCHLINE –L– STA. 238+00.00 SEE SHEET 21

MATCHLINE –Y– STA. 28+00.00

MATCHLINE –Y– STA. 32+00.00 SEE SHEET 28

MATCHLINE –Y1– STA. 21+00.00 SEE SHEET 28

–L– POT Sta. 234+27.30=
–Y1– POT Sta. 16+67.29

–L– TS Sta. 236+12.25

–L– SC Sta. 237+62.25

–Y– PCC Sta. 29+07.76

–Y– PCC Sta. 31+40.98

SPECIAL CUT DITCH SEE DETAIL Z

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

MEDIAN 'V' DITCH SEE DETAIL AA

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.00269
EST. 123 CY DDE

STANDARD 3' BASE DITCH
SEE DETAIL AB
EST. 15 CY DDE

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 41 FOR –Y1– PROFILE

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 1342 (RANDY D. RIGGS, ET AL).

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
12:44:08 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–21/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/NSRS 2007

MATCHLINE –L– STA. 238+00.00 SEE SHEET 20

MATCHLINE –L– STA. 251+00.00 SEE SHEET 22

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

–L– CS Sta. 245+22.89

–L– ST Sta. 246+72.89

2102 — 15" RCP-III — 2GI 2101

2103 — DI — 15" RCP-III — DI 2104 — 18" RCP-III — 2GI 2105

18" RCP-III — 2106

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

N 11° 39' 27.2" E

OUTLET POND

DRIVE 7800

MB 4 PG 31

FENCE POST

EIP

SEE SHEET 37 FOR –L– PROFILE

REVISIONS

8/17/99

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:13 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–22/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS 8/17/99

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NAD 83/NSRS 2007

MATCHLINE –L– STA. 251+00.00 SEE SHEET 21

MATCHLINE –L– STA. 263+00.00 SEE SHEET 23

100 x 28 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
20 ft. weir
ID 22.2 B

100 x 28 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
20 ft. weir
ID 22.1 B

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

TOE PROTECTION
SEE DETAIL AC

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

TSD

CFW

CAT-1

2201 FS 2GI

2202 CAU 350

2203

2204

2205

2206

2207 FS 2GI

2208

2209

2210

15" RCP-III

30" RCP-III

36" RCP-III

BURY 0.5 FT.

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 5 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

REMOVE EXISTING ROADWAY TO
NATURAL GROUND, FILL EXISTING
DITCH, & GRADE TO DRAIN

–Y2– PT Sta. 19+79.83

SPECIAL CUT DITCH
SEE DETAIL AE

S 46° 20' 06.3" E

–Y2– POT Sta. 20+72.79

SPECIAL CUT DITCH
SEE DETAIL AE

N 11° 39' 27.2" E

142
JERE WALTER PELLETIER, II, ET UX
DB 264 PG 391

SR 1112 RIGGS TOWN RD 20' EOS

70.00

SEE SHEET 38 FOR –L– PROFILE
SEE SHEET 42 FOR –Y2– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:41:18 AM

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–23/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

MATCHLINE –L– STA. 263+00.00 SEE SHEET 22

MATCHLINE –L– STA. 277+00.00 SEE SHEET 24

S 60°28'22.9" E

HTR

PUMP HOUSE

CANOPY

REMOVE

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.002737
EST. 5 CY DDE

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

SPECIAL CUT DITCH
SEE DETAIL AE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

-Y2- PT Sta. 16+46.21

S 59°03'35.2" E

-Y2- PC Sta. 14+98.11

-Y2- PC Sta. 16+70.90

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

GRAU 350

36" RCP III

15" RCP III

15" RCP III

N 11°39'27.2" E

-L- POT Sta. 264+44.34=
-Y2- POC Sta. 16+77.67

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CAT-1

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL U

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.005426
EST. 47 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

STANDARD 4' BASE DITCH
SEE DETAIL X
SLOPE=0.005892
EST. 152 CY DDE

REMOVE EXISTING 24" RCP

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

+40.00 –L–
120.00' (RT.)

+61.33 –L–
110.00' (RT.)

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96

139

20 x 44 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 23.1 B

46 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 23.2 B

80 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 23.3 B

SEE SHEET 38 FOR –L– PROFILE
SEE SHEET 42 FOR –Y2– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:41:25 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–24/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS 8/17/99

NAD 83/NSRS 2007

MATCHLINE –L– STA. 277+00.00 SEE SHEET 23

MATCHLINE –L– STA. 290+00.00 SEE SHEET 25

50 x 25 x 3 1.5 inch Skimmer with 1.00 inch Orifice Diameter 10 ft. weir ID 24.1 CG

50 x 25 x 3 1.5 inch Skimmer with 1.00 inch Orifice Diameter 10 ft. weir ID 24.2 CG

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL AF

SPECIAL LATERAL BASE DITCH SEE DETAIL AG

CL I RIP RAP EST. 20 TONS EST. 39 SY GEOTEXTILE

CL I RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

2401 2402 2403 2404 2405 2406 2407 2408 2409 2410

2GI FS

48" RCP-III 36" RCP-III 15" RCP-III 18" RCP-III 30" RCP-III

REMOVE

CFW C R/W C/A

N 11° 39' 27.2" E

280 285

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

SEE SHEET 39 FOR –L– PROFILE

2/4/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:38 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–25/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99

NAD 83/NSRS 2007

MATCHLINE –L– STA. 290+00.00 SEE SHEET 24

50 x 25 x 3
1.5 inch Skimmer
with 1.00 inch
Orifice Diameter
10 ft. weir
ID 25.1 CG

55 x 25 x 3
1.5 inch Skimmer
with 1.00 inch
Orifice Diameter
10 ft. weir
ID 25.2 CG

STANDARD 2' BASE DITCH
SEE DETAIL T
SLOPE = 0.003243
EST. 54 CY DDE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

LATERAL BASE DITCH
SEE DETAIL AH

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

TDE

CFW

2502 2504 2506 2501 2505 2503

15" RCP-III

24" RCP-III

24" HDPE
REMOVE

2GI

FS

295 300

N 11° 39' 27.2" E

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

SEE SHEET 39 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd-EC_CG_PSH.dgn
10:41:46 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-26/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 4

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.

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.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

65 x 20 x 3 10 ft. weir (See Infiltration Basin Detail) ID 26.1 B

143 MARY ELLEN EADY, et UX DB 195 PG 550 DB 274 PG 507 DB 344 PG 213

143A VANESSA L. MARTIN, et UX DB 334 PG 210

144 ARRIETT BARBER HEIRS DB 106 PG 48

145 MANUFACTURERS AND TRADERS TRUST CO. DB 318 PG 778

146 R.S. PRIDGEN ESTATE DB 90 PG 177 DB 112 PG 30 MB 1PG 59

147 MAYSVILLE DEVELOPMENT CORPERATION DB 283 PG 282 PC B SLIDE 355-2

4 UNITED STATES DEPARTMENT OF AGRICULTURE DB 89 PG 285

147A SAFE HARBOR FARM, INC. DB 3011PG 583 PC B SLIDE 374-1

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP

LATERAL 3' BASE DITCH SEE DETAIL D

+97.00 –LBUS– 119.00' (RT.)

+35.00 –LBUS– 124.00' (RT.) 137.00' (RT.)

+55.00 –LBUS– 90.00' (RT.)

+75.00 –LBUS– 60.00' (RT.) 90.00' (RT.)

REMOVE 24" CMP

REMOVE 36" CMP

REMOVE 30" RCP

REMOVE 15" CMP

TIE TO EXIST. SWALE

STANDARD 'V' DITCH SEE DETAIL AN

SPECIAL LATERAL 'V' DITCH SEE DETAIL AO

STANDARD 3' BASE DITCH W/CLASS B RIP RAP SEE DETAIL AJ EST. 25 CY DDE EST. 27 TONS CL B RIP RAP EST. 47 SY F.G.

CL B RIP RAP EST. 12 TONS EST. 38 SY GEOTEXTILE

SPECIAL CUT DITCH SEE DETAIL AL

SPECIAL CUT BASE DITCH SEE DETAIL AI

RETAIN CL B RIP RAP EST. 3 TONS EST. 11 SY GEOTEXTILE

SPECIAL CUT DITCH SEE DETAIL AK

STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.01868 EST. 14 CY DDE

-LBUS- POT Sta. 10+00.00= -DRV1- POT Sta. 22+59.00

BEGIN DETOUR -DET3- POC Sta. 17+26.9 -LBUS- POT Sta. 0+00.00= 0.00 RT.

-DRV1- PC Sta. 13+12.29

-DRV1- PT Sta. 13+77.62

-DRV1- PC Sta. 17+48.85

-DRV1- PT Sta. 19+01.27

END CONSTRUCTION -DRV1- STA. 19+10.00

-DRV1- POT Sta. 19+50.00

-BYA- 103 PINC

-BYB- 101 POT

BM E33 ELEV. 39.84'

N 56° 33' 10.1" E

N 52° 48' 34.8" E

N 52°01'05" E 956.54'

S 31° 40' 55.7" W

S 30° 02' 25.8" E

S 59°51'27" W 416.89'

S 55°42'13" W 32.05'

N 30°08'35" W 50.00'

S 59°51'27" W 97.56'

S 30°08'35" E 50.00'

N 30° 02' 25.8" W

+28.00 –DRV1– 35.00' (LT.) 51.00' (LT.)

+80.00 –DRV1– 35.00' (LT.) 50.00' (LT.)

+25.00 –DRV1– 35.00' (LT.) 50.00' (LT.)

+37.14 –LBUS– 82.00' (LT.)

+93.55 –LBUS– 61.50' (LT.)

+05.00 –LBUS– 60.00' (LT.)

+70.00 –DRV1– 35.00' (LT.)

+94.00 –LBUS– 80.00' (LT.)

+83.00 –DRV1– 51.00' (LT.)

+89.36 –LBUS– 79.00' (LT.)

+00.00 –DRV1– 35.00' (RT.)

+12.29 –DRV1– 35.00' (RT.) +50.00 –DRV1– 50.00' (RT.)

+77.62 –DRV1– 35.00' (RT.)

+50.00 –DRV1– 40.00' (LT.)

+50.00 –DRV1– 50.00' (LT.)

+00.00 –DRV1– 50.00' (LT.)

+50.00 –DRV1– 40.00' (RT.)

+00.00 –DRV1– 60.00' (RT.)

+00.00 –DRV1– 55.00' (RT.)

+50.00 –DRV1– 45.00' (RT.)

+00.00 –DRV1– 50.00' (RT.) +03.57 –DRV1– 50.00' (RT.)

+48.65 –DRV1– 35.00' (RT.) +35.00 –DRV1– 70.00' (RT.) +80.00 –DRV1– 75.00' (RT.)

+00.00 –DRV1– 35.00' (RT.)

+80.00 –DRV1– 35.00' (RT.)

+00.00 –LBUS– 60.00' (LT.)

+50.00 –DRV1– 50.00' (LT.)

+15.00 –DRV1A– 25.00' (RT.)

+48.65 –DRV1– 35.00' (LT.) +80.00 –DRV1– 36.80' (LT.)

+50.00 –DRV1A– 25.00' (RT.)

+50.00 –DRV1A– 25.00' (LT.)

+15.00 –DRV1A– 25.00' (LT.)

+10.00 –DRV1– 42.88' (LT.)

+10.00 –DRV1– 35.00' (RT.)

+10.00 –DRV1– 45.00' (RT.)

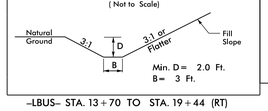
+01.27 –DRV1– 35.00' (RT.)

50' PROP. R/W

30' ACCESS EASEMENT

ABANDONED A.C. RAILROAD

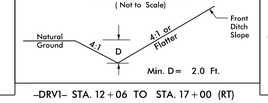
DETAIL AP
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D= 2.0 Ft.
B= 3 Ft.

–LBUS– STA. 13+70 TO STA. 19+44 (RT)

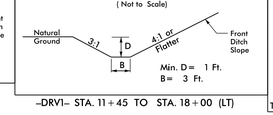
DETAIL AK
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 2.0 Ft.

–DRV1– STA. 12+06 TO STA. 17+00 (RT)

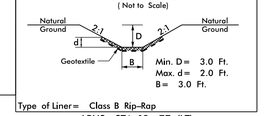
DETAIL AI
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1 Ft.
B= 3 Ft.

–DRV1– STA. 11+45 TO STA. 18+00 (LT)

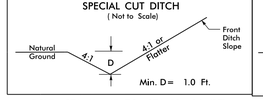
DETAIL AJ
STANDARD BASE DITCH
(Not to Scale)



Min. D= 3.0 Ft.
Max. d= 2.0 Ft.
B= 3.0 Ft.
Type of Liner= Class B Rip-Rap

–LBUS– STA. 19+77 (LT)

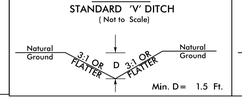
DETAIL AL
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.

–DRV1– STA. 11+45 TO STA. 12+06 (RT)

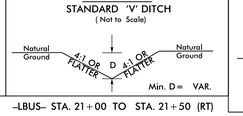
DETAIL Y
STANDARD 'V' DITCH
(Not to Scale)



Min. D= 1.5 Ft.

–DRV1– STA. 17+00 (RT)

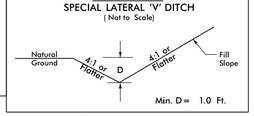
DETAIL AN
STANDARD 'V' DITCH
(Not to Scale)



Min. D= VAR.

–LBUS– STA. 21+00 TO STA. 21+50 (RT)

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



Min. D= 1.0 Ft.

–LBUS– STA. 19+40 TO STA. 24+50 (LT)
–LBUS– STA. 21+50 TO STA. 25+00 (RT)

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 3.0 Ft.
b= 5.0 Ft.

–LBUS– STA. 13+00 to STA. 19+40 LT

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 27

SEE SHEET 40 FOR –LBUS– PROFILE
SEE SHEET 43 FOR –DRV1– PROFILE

10-FEB-2015 13:49
C:\Users\ApfenyDesktop\R-2514\R-2514C\Final Plan\Design\Added detour after turn in 2-9-2015\R2514C_EC_psh_26_updated_2-9-2015.dgn
dgnlib: NCDOT_Roadway.dgnlib
Default

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-27/CONST.27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

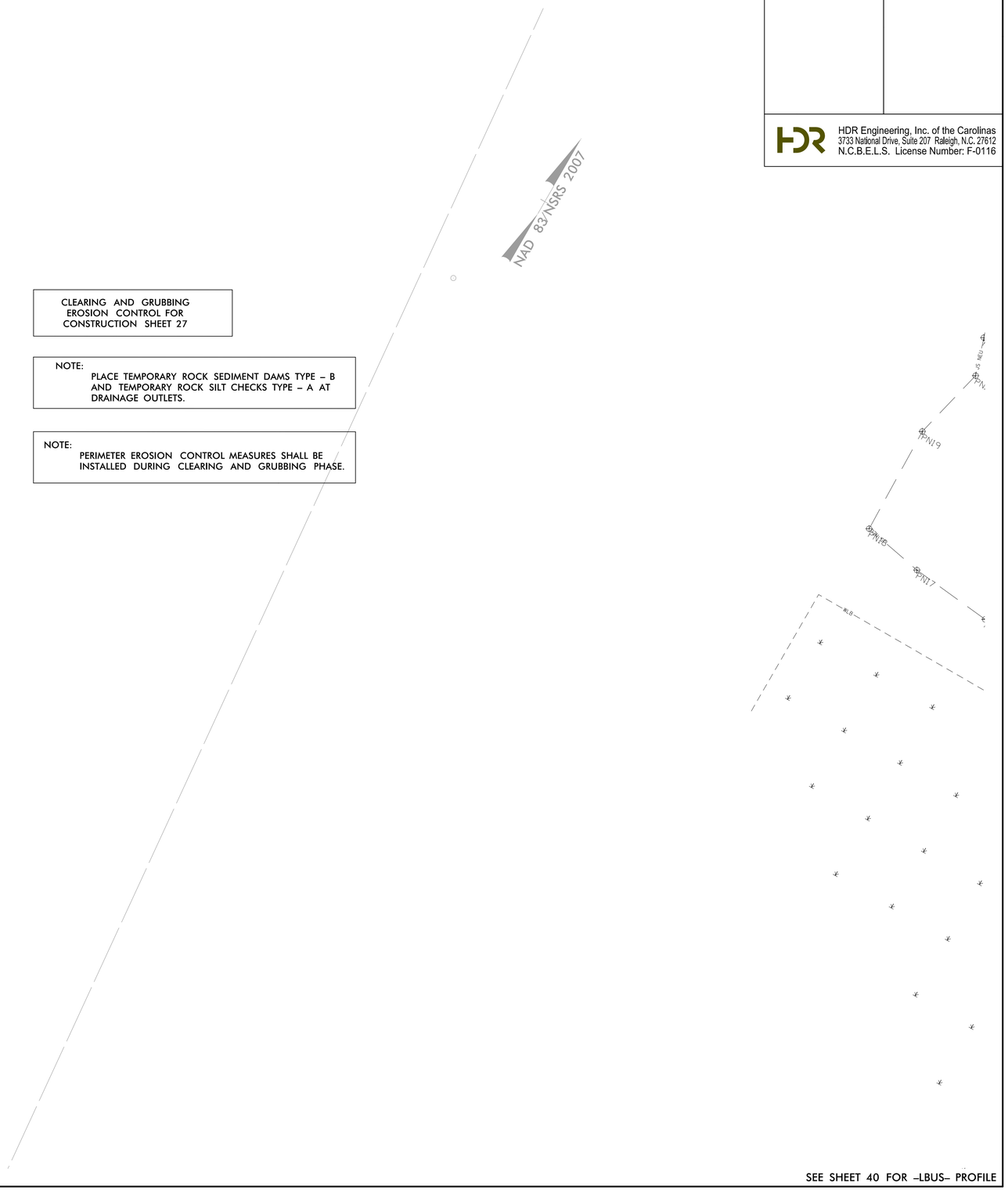
HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 26

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.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET 40 FOR –LBUS– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) – ADDED PUE ON PARCEL 146 (R. S. PRIDGEN ESTATE) AND PARCEL 147 (MAYSVILLE DEVELOPMENT CORPORATION).

8/17/99

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:44:52 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–28/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 1342 (RANDY D. RIGGS, ET AL.

8/17/99

MATCHLINE –Y1– STA. 21+00.00 SEE SHEET 20

MATCHLINE –Y– STA. 32+00.00 SEE SHEET 20

NAD 83/NSRS 2007

–Y1– POT Sta. 21+23.02=
–Y1A– PC Sta. 10+00.00

–Y– POT Sta. 38+93.75=
–Y1A– PT Sta. 14+49.16

S 12° 02' 56.3" E

–Y1A– POC Sta. 12+27.00=
–Y– POT Sta. 10+00.00

–Y1A– PT Sta. 10+31.53

–Y– PT Sta. 33+45.40

–Y– POT Sta. 35+39.20=
–YA– PT Sta. 11+78.57

–Y– POT Sta. 36+12.64=
–Y1– POT Sta. 24+04.13

–Y– POT Sta. 44+00.00

N 34° 45' 16.8" E

SPECIAL CUT DITCH SEE DETAIL Z

SPECIAL CUT DITCH SEE DETAIL AE

CL B RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.0015
EST. 330 CY DDE

REMOVE

CLEAN–OUT

PUE

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 28

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

SEE SHEET 41 FOR –Y1– PROFILE
SEE SHEET 41 FOR –Y1A– PROFILE
SEE SHEET 41 FOR –YA– PROFILE

2/2/2015
R-2514C_Hyd_EC_CG_PSH.dgn
10:45:32 AM

8/17/99

-DET 3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-28A/CONST.26A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

MATCHLINE -DET3- STA. 23+00.00 SEE SHEET 26B

-DET3-

PI Sta 16+66.85	PI Sta 18+87.48	PI Sta 23+24.44
△ = 11° 44' 35.4" (RT)	△ = 11° 44' 35.4" (LT)	△ = 8° 06' 00.8" (RT)
D = 8° 48' 53.0"	D = 3° 49' 11.0"	D = 2° 01' 41.4"
L = 133.22'	L = 307.44'	L = 399.39'
T = 66.85'	T = 154.26'	T = 200.03'
R = 650.00'	R = 1,500.00'	R = 2,825.00'
DS = 45 mph	DS = 45 mph	DS = 45 mph
	e = .04	e = .03
	RO = 92'	RO = 69'

SEE SHEET 44 FOR -DET3- PROFILE

10-FEB-2015 10:51
C:\Users\cpharr\Desktop\R-2514\R-2514CVFinal Plan\Design\Added detour after turn in 2-9-2015\R2514C_EC_psh_26A.dgn
cpharr

-DET3- DETOUR SHEET

NOTE: USE FOR CONSTRUCTION OF DETOUR ONLY

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-28B/CONST.26B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

MATCHLINE -DET3- STA. 23+00.00 SEE SHEET 26A

-DET3- PCC Sta. 25+23.80

-DET3- PT Sta. 32+26.17

-DET3- POT Sta. 36+30.32

END DETOUR
-DET3- PT Sta. 32+26.17=
-L- POT Sta. 25+95.85 35.00 LT.

PI Sta 23+24.44
Δ = 8° 06' 00.8" (RT)
D = 2° 01' 41.4"
L = 399.39'
T = 200.03'
R = 2,825.00'
DS = 45 mph
e = .03
RO = 69'

PI Sta 28+77.74
Δ = 17° 29' 49.2" (RT)
D = 2° 29' 28.0"
L = 702.37'
T = 353.94'
R = 2,300.00'
DS = 45 mph
e = .03
RO = 69'

SEE SHEET 44 FOR -DET3- PROFILE

8/17/99
10-FEB-2015 13:18
C:\Users\cgriffin\Desktop\R-2514\R-2514C\Final Plan\Design\Added detour after turn in 2-9-2015\R2514C_EC_psh_26B.dgn
cgriffin (ENV)

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–29/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DMG) – ADDED ADDITIONAL PUE FROM –L– STA.14+85.00 TO STA.18+75.00 LT.ON PARCEL I (ESTATE OF FRANK JENKINS). ADDED PUE ON PARCEL 2 (DONELLE MAURICE MYERS) AND REVISED PUE ON PARCEL 3 (AMBROSE ROBERTS, JR.).

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 10+00 LT to Sta. 19+00 LT –L–
Sta. 10+00 RT to Sta. 16+00 RT –L–
Sta. 11+08 LT to 15+00 LT –LBUS–
Sta. 11+08 RT to 15+00 RT –LBUS–

12 x 6 x 3 ID 4.1 F

12 x 6 x 3 ID 4.2 F

–L– POT Sta. 10+00.00

–L– TS Sta. 10+57.80

–L– SC Sta. 12+97.80

–L– POC Sta. 16+75.00=
–LBUS– POT Sta. 10+00.00

–LBUS– PC Sta. 11+84.91

–LBUS– PT Sta. 14+26.49

36" RCP-III EQUALIZER PIPE

18" RCP-IV

18" RCP-III

15" RCP-III

12" RCP-III

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

CL I RIP RAP
EST. 20 TONS
EST. 39 SY GEOTEXTILE

REMOVE 18" RCP

TIE TO EXISTING DITCH

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AP

LATERAL 3' BASE DITCH
SEE DETAIL A

FILL EXISTING DITCH

TIE TO EXIST. DITCH

STANDARD BASE DITCH
SEE DETAIL L

LATERAL 3' BASE DITCH
SEE DETAIL D

1.5 inch Skimmer with 0.875 inch Orifice Diameter 14 ft. weir with 3 ft. weir height ID 4.3 F (See Earthen Dam with Skimmer Detail)

STA. 19+00.00 SEE SHEET 5 MATCHLINE –L–

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 26

SEE SHEET 29 FOR –L– PROFILE
SEE SHEET 40 FOR –LBUS– PROFILE

2/2/2015
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10:41:30 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–30/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 7–28–14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 142 (ALPHONSO HILL).

NAD 83/NSRS 2007

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 19+00 LT to Sta. 22+00 LT –L–
Sta. 24+00 LT to Sta. 25+00 LT –L–
Sta. 21+00 RT to Sta. 32+00 RT –L–

1.5 inch Skimmer with 0.875 inch Orifice Diameter 20 ft. weir with 2.5 ft. weir height ID 5.1 F (See Earthen Dam with Skimmer Detail)

64 x 25 x 3 ID 5.2 F

60 x 24 x 3 ID 5.3 F

MATCHLINE –L– STA. 19+00.00 SEE SHEET 4

MATCHLINE –L– STA. 32+00.00 SEE SHEET 6

–L– CS Sta. 20+77.77

–L– ST Sta. 21+

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH SEE DETAIL C

CL I RIP RAP
EST. 20 TONS
EST. 99 SY GEOTEXTILE

LATERAL 3' BASE DITCH SEE DETAIL A

MAINTAIN EXISTING DITCH

MEDIAN 'V' DITCH SEE DETAIL B

REMOVE 24" RCP

REMOVE 24" CMP

REMOVE 42" RCP III

REMOVE

18" RCP-III

PLACED AS PER UTILITY RECORD UNABLE TO COLLECT DUE TO FENCE

N 4° 26' 35.8" W

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS

SEE SHEET 29 FOR –L– PROFILE

2/2/2015
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10:41:55 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-31/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 32+00 RT to Sta. 46+00 RT –L–
Sta. 33+00 LT to Sta. 37+50 LT –L–

MATCHLINE –L– STA. 32+00.00 SEE SHEET 5

MATCHLINE –L– STA. 46+00.00 SEE SHEET 7

75 x 24 x 3
ID 6.1 F

70 x 22 x 3
ID 6.2 F

70 x 22 x 3
ID 6.3 F

LATERAL 3' BASE DITCH
SEE DETAIL D

MEDIAN 'V' DITCH
SEE DETAIL B

MEDIAN 'V' DITCH
SEE DETAIL B

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

15" RCP-III

REMOVE

CFW

PUE

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR –L– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 15 (ELEANOR JEAN HOLT JACKSON, ET ALI, PARCEL 16 (ROCHELLE ANITA HOLT), PARCEL 17 (LYWELL MATTOCKS, ET UX), AND PARCEL 20 (WOODROW F. LASSITER, ET UX) AT –L– STA. 38+50.00 LT.

8/17/99

2/2/2015
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10:46:03 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-32/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

MATCHLINE –L– STA. 46+00 SEE SHEET 6

MATCHLINE –L– STA. 60+00 SEE SHEET 8

-Y3- POT Sta. 10+00.00

-L- POT Sta. 46+34.83=
-Y3- POT Sta. 12+60.19

55 x 20 x 3
ID 7.1 F

55 x 20 x 3
ID 7.2 F

55 x 20 x 3
ID 7.3 F

55 x 20 x 3
ID 7.6 F

66 x 20 x 3
ID 7.7 F

12 x 6 x 2
ID 7.4 F

12 x 6 x 2
ID 7.5 F

LATERAL 3' BASE DITCH
SEE DETAIL D

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

LATERAL 3' BASE DITCH
SEE DETAIL E

MEDIAN 'V' DITCH
SEE DETAIL B

Place Matting or Compost
Blanket for Erosion Control
on Slope as Work Allows.
Sta. 46+00 RT to Sta. 60+00 RT –L–

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 30 FOR –L– PROFILE

REVISIONS

R/W REVISION 7-28-14 (DWG) - REVISED THE PROPERTY OWNER NAME OF PARCEL 21 (DORIS L. HILL) TO PARCEL 21A (BRADLEY HILL). ADDED A SECOND CLAIM OF PUE ON PARCEL 21AZ (BRADLEY HILL). PARCEL 21Z (DORIS L. HILL), AND PARCEL 282 (RAYMOND C. BANKS, JR., ET UX).

R/W REVISION 9-25-14 (DWG) - REVISED THE PUE ON PARCEL 21 (DORIS L. HILL) AND PARCEL 21A (BRADLEY HILL). ELIMINATED THE SECOND CLAIMS (21Z AND 21AZ) FROM PARCEL 21 (DORIS L. HILL) AND

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-33/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 282 (RAYMOND C. BANKS, JR., ET UX) AND PARCEL 292 (JOHN TAYLOR, JR., ET UX).

MATCHLINE –L– STA. 60+00.00 SEE SHEET 7

MATCHLINE –L– STA. 74+00.00 SEE SHEET 9

70 x 20 x 3
ID 8.1 F

75 x 20 x 3
ID 8.4 F

LATERAL 3' BASE DITCH
SEE DETAIL E

LATERAL 3' BASE DITCH
SEE DETAIL F

LATERAL 'V' DITCH
SEE DETAIL G

PUE

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

REMOVE

18" RCP-III

18" RCP-IV

GTD

CFW

N 4°26'35.8" W

Place Matting or Compost
Blanket for Erosion Control
on Slope as Work Allows.
Sta. 62+00 LT to Sta. 66+50 LT –L–
Sta. 60+00 RT to Sta. 74+00 RT –L–

12 x 6 x 2
ID 8.2 F

12 x 6 x 2
ID 8.3 F

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 31 FOR –L– PROFILE

2/2/2015
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10:46:13 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–34/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 01-06-14.DWG) – ADDED R/W AND REVISED THE TCE AND PUE ON PARCEL 32 (RACHEL M.EUBANK),PARCEL 33 (JACK L.HOLLAND),AND PARCEL 34 (WEYERHAEUSER COMPANY) FOR THE REVISED 20'WIDTH OF –DRV2– AND –DRV2A–.

MATCHLINE –L– STA. 74+00.00 SEE SHEET 8

MATCHLINE –L– STA. 88+00.00 SEE SHEET 10

60 x 20 x 3
ID 9.1 F

56 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
10 ft. weir
ID 9.2 F

100 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
12 ft. weir
ID 9.3 F

–DRV2– PC Sta. 10+00.00
–DRV2– POT Sta. 9+25.00
–DRV2– PCC Sta. 11+00.00
–DRV2A– POT Sta. 10+08.80
–DRV2– PT Sta. 11+73.65
–DRV2A– PC Sta. 10+13.96
–DRV2A– PT Sta. 10+88.72
–DRV2A– POT Sta. 11+38.72
–L– POT Sta. 82+25.00=
–DRV2– POT Sta. 13+11.66

MAINTAIN EXISTING DITCH
SPECIAL CUT DITCH SEE DETAIL K
SPECIAL CUT DITCH SEE DETAIL AF
SPECIAL CUT DITCH SEE DETAIL I
N 39° 55' 58.0" W
N 83° 49' 25.7" E

LATERAL 'V' DITCH SEE DETAIL G
TIE DITCH TO NATURAL GROUND
LATERAL 'V' DITCH SEE DETAIL H
LATERAL 'V' DITCH SEE DETAIL J

CL B RIP RAP EST. 3 TONS EST. 10 SY. GEOTEXTILE
CL B RIP RAP EST. 5 TONS EST. 16 SY GEOTEXTILE

18" RCP-III
30" RCP-III
48" RCP-III
15" RCP
15" RCP-V
15" RCP-III
18" CAAP W/ 2 ELBOWS

REMOVE 15" RCP 10' SOIL
REMOVE 30" RCP-III
BURY 1.0'
BEG. SBG –L– 87+40 LT
WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D–1

0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915 0916 0917

Place Matting or Compost
Blanket for Erosion Control
on Slope as Work Allows.
Sta. 78+00 LT to Sta. 88+00 LT –L–
Sta. 74+00 RT to Sta. 88+00 RT –L–
Sta. 11+50 LT to Sta. 12+50 LT –DRV2–
Sta. 11+50 RT to Sta. 12+50 RT –DRV2–

NOTE: SBG – "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 31 FOR –L– PROFILE
SEE SHEET 43 FOR –DRV2– PROFILE
SEE SHEET 43 FOR –DRV2A– PROFILE

2/2/2015
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PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-35/CONST.10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) FROM -L- STA. 92+92.17 TO STA. 99+68.00 LT.

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 88+00 LT to Sta. 101+00 LT –L–
Sta. 88+00 RT to Sta. 101+00 RT –L–

NAD 83/NSRS 2007

MATCHLINE –L– STA. 88+00.00 SEE SHEET 9

MATCHLINE –L– STA. 101+00.00 SEE SHEET 11

100 x 20 x 3
ID 10.1 F

12 x 6 x 2
ID 10.2 F

12 x 6 x 2
ID 10.3 F

LATERAL 'V' DITCH SEE DETAIL J

LATERAL 'V' DITCH SEE DETAIL H

18" CAAP W/ 2 ELBOWS

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-2

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2D-2

BEGIN SBG –L– 99+45 RT

-L- TS Sta. 90+92.17

-L- SC Sta. 92+92.17

-L- CS Sta. 98+26.23

-L- ST Sta. 100+26.23

PUE

BURY 1.0'

REMOVE

48" RCP-III

72" RCP-III

15" RCP-III

GRAU 350

NOTE: SBG – "SHOULDER BERM GUTTER"
SEE SHEET 2-G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR –L– PROFILE

2/2/2015
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8/17/99

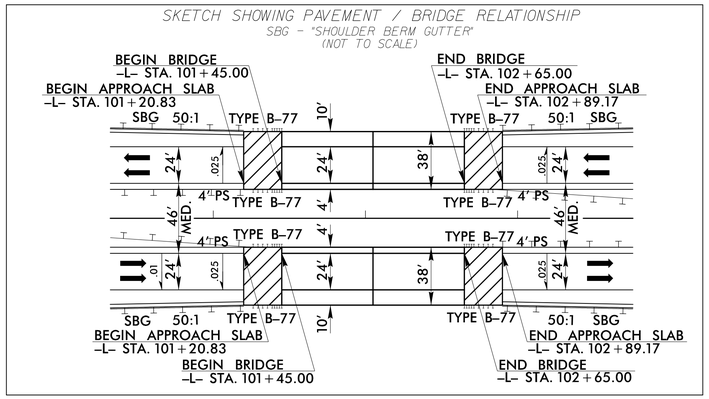
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–36/CONST.11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP
SBG - "SHOULDER BERM GUTTER"
(NOT TO SCALE)



MATCHLINE –L– STA. 101+00.00 SEE SHEET 10

MATCHLINE –L– STA. 115+00.00 SEE SHEET 12

CHORD

REMOVE EXISTING ROADWAY UNDER PROPOSED BRIDGE AND GRADE TO DRAIN

1.5 inch Skimmer with 0.875 inch Orifice Diameter 14 ft. weir with 2.25 ft. weir height ID 11.3 F (See Earthen Dam with Skimmer Detail)

1.5 inch Skimmer with 1.125 inch Orifice Diameter 14 ft. weir with 2.25 ft. weir height ID 11.4 F (See Earthen Dam with Skimmer Detail)

PUE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

LATERAL 3' BASE DITCH SEE DETAIL E

CFW

GTD

TSD

REMOVE

15" RCP–III

72" RCP–III

48" RCP–III

BURY 1.0'

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2–F

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2–E

TYPE M–350

TYPE M–350/GS

N 21° 32' 24.4" W

1107 Top = 56.32 inv = 53.57

1110 INV = 40.48 BURIED 1' (ACTUAL 39.48)

1111 INV = 40.06 BURIED 1' (ACTUAL 40.06)

1105 inv = 38.34

1103 top = 54.78 inv = 51.78

1116 top = 52.78 inv = 50.03

1102 top = 54.78 inv = 49.60

1106

1112 INV = 42.02 BURIED 1' (ACTUAL 41.02)

1117 TOP = 55.92 INV = 39.74

1113 INV = 39.94 BURIED 1' (ACTUAL 38.94)

1118 TOP = 54.69 INV = 40.17

1109

1104 Top = 54.54 inv = 50.54

1101 Top = 54.54 inv = 50.54

1108

1114 INV = 40.24 BURIED 1' (ACTUAL 39.24)

1119 TOP = 53.44 INV = 38.94

1115 INV = 39.52 BURIED 1' (ACTUAL 38.52)

inv = 37.35

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

18" CAAP W/ 2 ELBOWS

12 x 6 x 2 ID 11.2 F

51 x 17 x 3 9 ft. weir (See Infiltration Basin Detail) ID 11.1 B

LATERAL 'V' DITCH SEE DETAIL H

+95.00 –L– 125.00' (RT.) 145.00' (RT.)

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 101+00 LT to Sta. 115+00 LT –L–
Sta. 101+00 RT to Sta. 115+00 RT –L–

NOTE: SBG – "SHOULDER BERM GUTTER" SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 32 FOR –L– PROFILE
SEE SHEET 44 FOR –DRV3– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

2/2/2015
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PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–37/CONST.12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 34 (WEYERHAEUSER COMPANY) AT –L– STA. 115+80.00 LT.

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 115+00 LT to Sta. 121+50 LT –L–
Sta. 115+00 RT to Sta. 124+50 RT –L–
Sta. 128+00 LT to Sta. 129+00 LT –L–
Sta. 128+00 RT to Sta. 129+00 RT –L–

NAD 83/NSRS 2007

MATCHLINE –L– STA. 115+00.00 SEE SHEET 11

MATCHLINE –L– STA. 129+00.00 SEE SHEET 13

39 JOSEPH L. JACKSON, ET UX DB 301PG 137

1.5 inch Skimmer with 1.25 inch Orifice Diameter 17 ft. weir with 2.5 ft. weir height ID 12.1 F (See Earthen Dam with Skimmer Detail)

72 x 20 x 3 ID 12.4 F

12 x 6 x 2 ID 12.2 F

12 x 6 x 2 ID 12.3 F

18" CAAP W/ 2 ELBOWS

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

LATERAL 3' BASE DITCH SEE DETAIL E

END SBG –L– 116+27 LT

15" RCP–III

18" RCP–III

48" RCP–III

BURY 1.0'

WILDLIFE CROSSING ACCESS STRUCTURE SEE SPECIAL DETAIL 2-E

END SBG –L– 117+95 RT

CL I RIP RAP EST. 15 TONS EST. 30 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

STANDARD 3' BASE DITCH SEE DETAIL L EST. 37 C.Y. DDE

TIE TO EXISTING DITCH

LATERAL `V' DITCH SEE DETAIL H

TDE

REMOVE 15" RCP

REMOVE

REMOVE

REMOVE

NOTE: SBG – "SHOULDER BERM GUTTER"
ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.
SEE SHEET 2–G FOR WILDLIFE FENCE DETAIL.

SEE SHEET 33 FOR –L– PROFILE
SEE SHEET 44 FOR –DRV3– PROFILE

2/2/2015
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10:46:36 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–38/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 42 (OTIS A. SIMMONS, ET AL), PARCEL 46 (JAMES V. BENDER, JR.), PARCEL 47 (CHARLES W. JONES, ET UX), AND PARCEL 48 (BERNARD JONES, SR.).

NAD 83/NSRS 2007

MATCHLINE –L– STA. 129+00.00 SEE SHEET 12

MATCHLINE –L– STA. 141+00.00 SEE SHEET 14

54 x 20 x 3
ID 13.1 F

44 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 13.3 F

76 x 22 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
13 ft. weir
ID 13.5 F

12 x 6 x 2
ID 13.2 F

12 x 6 x 2
ID 13.4 F

12 x 6 x 2
ID 13.6 F

LATERAL 3' BASE DITCH
SEE DETAIL E

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

REMOVE EXIST.
24" RCP

Place Matting or Compost
Blanket for Erosion Control
on Slope as Work Allows.
Sta. 129+00 LT to Sta. 131+50 LT –L–
Sta. 129+00 RT to Sta. 141+00 RT –L–

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 33 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:46:46 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–39/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 51(ABUNDANT BLESSINGS MINISTRIES INC. NEW HOPE CHURCH OF GOD C/O OLIVER J.COLLINS). ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES, INC.).

NAD 83/NSRS 2007

MATCHLINE –L– STA. 141+00.00 SEE SHEET 13

MATCHLINE –L– STA. 154+00.00 SEE SHEET 15

-L- CS Sta. 142+61.44

-L- ST Sta. 145+01.44

PAGE LANE

SEPTIC SYSTEM

ISBLKD

ISFD

30" CONC

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL F

LATERAL 3' BASE DITCH SEE DETAIL E

LATERAL 3' BASE DITCH SEE DETAIL C

CL B RIP RAP EST. 3 TONS
EST. 10 SY GEOTEXTILE

PUE

REMOVE

18" RCP

15" HDPE

24"

18" RCP–III

RIP RAP

EXISTING R/W

US HWY 70/NC 58

2 BST

N 4°49'58.0" E

CFW

PLACED PER UTILITY RECORD

TIE EXISTING DITCH TO PROPOSED DITCH

LATERAL 'V' DITCH SEE DETAIL H

12 x 6 x 2
ID 14.1 F

72" CHL & 3SBW

BST

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 143+50 LT to Sta. 151+50 LT –L–
Sta. 141+00 RT to Sta. 151+50 RT –L–

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:47:01 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–40/CONST.15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 86 (VAN S. SMITH), ADDED PUE ON PARCEL 58 (BLUE ROCK STRUCTURES,INC.) AND PARCEL 88 (LOUISE MURRELL FOYE, ET AL C/O ROBERT HORRY). ADDED A NEW CLAIM OF PUE ON PARCEL 90A (LEVY MOORE, ET UX).

MATCHLINE –L– STA. 154 + 00.00 SEE SHEET 14

MATCHLINE –L– STA. 168 + 00.00 SEE SHEET 16

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 159 + 00 RT to Sta. 164 + 50 RT –L–

84 x 24 x 3
ID 15.2 F

1.5 inch Skimmer with 0.75 inch Orifice Diameter
19 ft. weir with 2.5 ft. weir height
ID 15.3 F
(See Earthen Dam with Skimmer Detail)

100 x 20 x 3
1.5 inch Skimmer with 1.25 inch Orifice Diameter
12 ft. weir
ID 15.1 F

LATERAL 3' BASE DITCH SEE DETAIL C

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

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

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL M

LATERAL 'V' DITCH SEE DETAIL H

LATERAL 'V' DITCH SEE DETAIL N

REMOVE SYSTEM

15" RCP–III

30" RCP–III

18" RCP–III

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 34 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:44:13 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–41/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/NSRS 2007

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 172+50 RT to Sta. 174+50 RT –L–
Sta. 179+00 RT to Sta. 182+00 RT –L–

MATCHLINE –L– STA. 168+00.00 SEE SHEET 15

MATCHLINE –L– STA. 182+00.00 SEE SHEET 17

84 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 16.4 F

110 x 32 x 3
2.0 inch Skimmer
with 1.75 inch
Orifice Diameter
24 ft. weir
ID 16.7 F

1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
14 ft. weir with
2.5 ft. weir height
ID 16.8 F
(See Earthen Dam
with Skimmer Detail)

100 x 25 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
20 ft. weir
ID 16.3 F

12 x 6 x 2
ID 16.5 F

12 x 6 x 2
ID 16.6 F

20 x 60 x 3
11 ft. weir
(See Infiltration
Basin Detail)
ID 16.1 B

46 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
7 ft. weir
ID 16.2 B

REMOVE FOOT BRIDGE

LATERAL 3' BASE DITCH SEE DETAIL C

LATERAL 3' BASE DITCH SEE DETAIL E

MEDIAN 'V' DITCH SEE DETAIL R

LATERAL 'V' DITCH SEE DETAIL N

SPECIAL CUT DITCH SEE DETAIL O

CHANNEL CHANGE W/ CLASS B RIP RAP SEE DETAIL P

STANDARD 2' BASE DITCH W/CLASS B RIP RAP SEE DETAIL Q
EST. 4 C.Y. DDE
EST. 10 TONS RIP RAP
EST. 15 S.Y. F.G.

CL I RIP RAP
EST. 33 TONS
EST. 62 SY GEOTEXTILE

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

REVISIONS

8/17/99 R/W REVISION 7–28–14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 982 (JAMES HENRY BRYANT).

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:47:43 AM

0.10 ACRE STREAMBANK REFORESTATION

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-41A/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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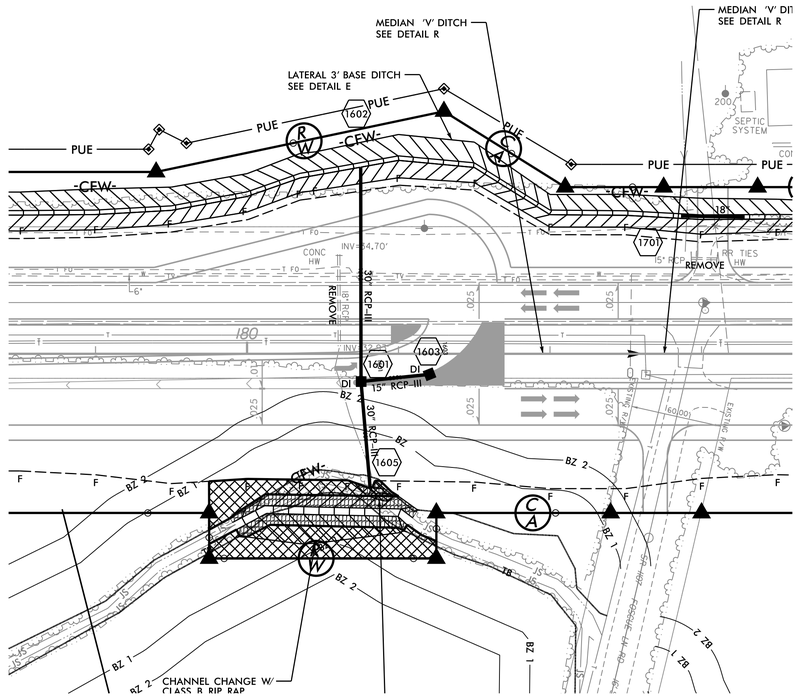

SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–42/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 1142 (BETTY LOU W. LIGHT

MATCHLINE –L– STA. 182+00.00 SEE SHEET 16

MATCHLINE –L– STA. 196+00.00 SEE SHEET 18

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 194+00 RT to Sta. 196+00 RT –L–

50 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
14 ft. weir
ID 17.1 F

70 x 23 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 17.5 F

75 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
14 ft. weir
ID 17.6 F

MEDIAN 'V' DITCH SEE DETAIL R

LATERAL 3' BASE DITCH SEE DETAIL E

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

12 x 6 x 2
ID 17.2 F

75 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
14 ft. weir
ID 17.3 F

12 x 6 x 2
ID 17.4 F

STANDARD 2' BASE DITCH
SEE DETAIL T
SLOPE=0.007407
EST. 37 CY DDE
CL I RIP RAP
EST. 19 TONS
EST. 59 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

BANK STABILIZATION
SEE DETAIL AQ
EST. 60 CY DDE
EST. 6A TONS RIP RAP
EST. 100 SY FG

REMOVE RETAINING WALL TO R/W OR AS DIRECTED BY ENGINEER

STANDARD 3' BASE DITCH
W/CLASS I RIP RAP
SEE DETAIL V
FROM 80' RT TO 100' RT
OR MIN. 15' ALONG CHANNEL
FROM PIPE OUTLET,
STR. NO. 1711)
SLOPE=0.0100
EST. 30 CY DDE
EST. 30 TONS RIP RAP
EST. 60 SY FG

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

84 x 26 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 17.7 F

Existing Retaining Wall

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 35 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:47:57 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-43/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 122Z (GEORGE W. GRIGGS, ET AL).

MATCHLINE -L- STA. 196+00.00 SEE SHEET 17

MATCHLINE -L- STA. 210+00.00 SEE SHEET 19

90 x 25 x 3
1.5 inch Skimmer
with 1.250 inch
Orifice Diameter
17 ft. weir
ID 18.1 F

12 x 6 x 2
ID 18.2 F

12 x 6 x 2
ID 18.3 F

110 x 30 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
22 ft. weir
ID 18.4 F

90 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
19 ft. weir
ID 18.5 F

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL U

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

CL B RIP RAP EST. 3 TONS EST. 10 SY GEOTEXTILE

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR -L- PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:43:07 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-44/CONST.19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99 R/W REVISION 6-25-14 (DWG) - REVISED THE PUE ON PARCEL 125 (MELVIN L. AYCOCK, JR., ET UX), PARCEL 126 (WEYERHAEUSER), AND PARCEL 129 (DELGEN L. MITCHELL, ET UX) AT -L- STA.224+84.00 LT. ADDED ADDITIONAL PUE ON PARCEL 129 (DELGEN L. MITCHELL, ET UX) AT -Y- STA. 26+33.00 LT. AND -L- STA. 225+21.00 RT.

MATCHLINE -L- STA. 210+00.00 SEE SHEET 18

MATCHLINE -L- STA. 224+00.00 SEE SHEET 20

MATCHLINE -Y- STA. 28+00.00 SEE SHEET 20

90 x 26 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 19.2 F

90 x 26 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 19.4 F

52 x 20 x 3
ID 19.6 F

75 x 23 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
13 ft. weir
ID 19.1 F

86 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 19.3 F

80 x 24 x 3
ID 19.5 F

SPECIAL LATERAL 'V' DITCH SEE DETAIL S

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

STANDARD 4' BASE DITCH SEE DETAIL X SLOPE = 0.004717 EST. 80 CY DDE

CL I RIP RAP EST. 26 TONS EST. 50 SY GEOTEXTILE

CL B RIP RAP EST. 2 TONS EST. 7 SY GEOTEXTILE

STANDARD 'V' DITCH SEE DETAIL Y SLOPE = 0.0066 EST. 148 CY DDE

SPECIAL CUT DITCH SEE DETAIL Z

OBLITERATE DITCH; FILL TO NATURAL GROUND

48" RCP-III

15" RCP-III

18" RCP

15" RCP

-Y- POT Sta. 21+50.00

-Y- PC Sta. 24+81.61

-Y- PT Sta. 25+89.30

-Y- PC Sta. 26+33.53

N 4° 49' 58.0" E

N 8° 21' 25.0" E

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2-D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 42 FOR -Y- PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:48:21 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–45/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) – ADDED A SECOND CLAIM OF PUE ON PARCEL 1342 (RANDY D. RIGGS, ET AL).

NAD 83/NSRS 2007

MATCHLINE –L– STA. 224+00.00 SEE SHEET 19

MATCHLINE –Y– STA. 28+00.00

95 x 30 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
22 ft. weir
ID 20.2 F

45 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
7 ft. weir
ID 20.4 F

62 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
10 ft. weir
ID 20.5 F

75 x 28 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 20.1 F

75 x 28 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
15 ft. weir
ID 20.3 F

88 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
19 ft. weir
ID 20.6 F

–L– POT Sta. 234+27.30=
–Y1– POT Sta. 16+67.29

–L– TS Sta. 236+12.25

–L– SC Sta. 237+62.25

–Y– PCC Sta. 29+07.76

–Y– PCC Sta. 31+40.98

MATCHLINE –Y– STA. 32+00.00 SEE SHEET 28

MATCHLINE –Y1– STA. 21+00.00 SEE SHEET 28

MATCHLINE –L– STA. 238+00.00 SEE SHEET 21

NOTE: ALL DRIVES ARE 12' UNLESS NOTED OTHERWISE.
PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.
SEE SHEET 2–D FOR DRIVEWAY PROFILE DETAILS.

SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 41 FOR –Y1– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:48:34 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–46/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99

NAD 83/NSRS 2007

MATCHLINE –L– STA. 238+00.00 SEE SHEET 20

MATCHLINE –L– STA. 251+00.00 SEE SHEET 22

SPECIAL LATERAL 'V' DITCH
SEE DETAIL S

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

–L– CS Sta. 245+22.89

–L– ST Sta. 246+72.89

80 x 20 x 3
ID 21.3 F

2102

15" RCP-III

2101

2104

18" RCP-III

2103

2105

18" RCP-III

2106

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

12 x 6 x 2
ID 21.1 F

80 x 20 x 3
ID 21.2 F

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

80 x 20 x 3
ID 21.4 F

N 11° 39' 27.2" E

FENCE POST

OUTLET POND

MB 4 PG 31

SEE SHEET 37 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:43:45 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–47/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS 8/17/99

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 255+50 RT to Sta. 263+00 RT –L–
Sta. 258+00 LT to Sta. 261+00 LT –L–

80 x 20 x 3
ID 22.3 F

12 x 6 x 2
ID 22.4 F

100 x 28 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
20 ft. weir
ID 22.2 B

52 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
10 ft. weir
ID 22.5 F

100 x 28 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
20 ft. weir
ID 22.1 B

12 x 6 x 2
ID 22.6 F

NAD 83/NSRS 2007

MATCHLINE –L– STA. 251+00.00 SEE SHEET 21

MATCHLINE –L– STA. 263+00.00 SEE SHEET 23

SPECIAL LATERAL 'V' DITCH SEE DETAIL W

TOE PROTECTION SEE DETAIL AC

SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AD

CFW

CAT-1

BURY 0.5 FT.

GRAU 350

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 11 SY GEOTEXTILE

CL B RIP RAP
EST. 1 TONS
EST. 5 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

SPECIAL CUT DITCH
SEE DETAIL AE

SPECIAL CUT DITCH
SEE DETAIL AE

142
JERE WALTER PELLETIER, II, ET UX
DB 264 PG 391

-Y2- PT Sta. 19+79.83

S 46° 20' 06.3" E

-Y2- POT Sta. 20+72.79

N 11° 39' 27.2" E

MB 4 PG 31

SR 1112 RIGGS TOWN RD 20' EOP

SEE SHEET 38 FOR –L– PROFILE
SEE SHEET 42 FOR –Y2– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:48:53 AM

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-48/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 263+00.00 SEE SHEET 22

MATCHLINE –L– STA. 277+00.00 SEE SHEET 24

S 60° 28' 22.9" E

HTR

PUMP HOUSE

CANOPY

10' SOIL

2304

REMOVE

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.002737
EST. 5 CY DDE

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL AD

45 x 18 x 3
ID 23.4 F

SPECIAL CUT DITCH
SEE DETAIL AE

–Y2– PC Sta. 14+98.11

–Y2– PT Sta. 16+46.21

S 59° 03' 35.2" E

REMOVE

2301

HW

A

GRAU 350

–Y2– PC Sta. 16+70.90

36" RCP III

265

12 x 6 x 2
ID 23.5 F

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

2305

15" RCP III

B

2304
FS
20

N 11° 39' 27.2" E

270

80 x 20 x 3
ID 23.6 F

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

275

12 x 6 x 2
ID 23.7 F

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

2308

15" RCP III

B

2306
FS
20

2302

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CAT-1

SPECIAL LATERAL 3' BASE DITCH
SEE DETAIL U

–L– POT Sta. 264+44.34=

–Y2– POC Sta. 16+77.67

STANDARD 3' BASE DITCH
SEE DETAIL AB
SLOPE=0.005426
EST. 47 CY DDE

CFW

TSD

F

GTD

TDE

REMOVE EXISTING ROADWAY TO NATURAL GROUND, FILL EXISTING DITCH, & GRADE TO DRAIN

STANDARD 4' BASE DITCH
SEE DETAIL X
SLOPE=0.005892
EST. 152 CY DDE

REMOVE EXISTING 24" RCP

STANDARD 'V' DITCH
SEE DETAIL Y
SLOPE=0.010429
EST. 28 CY DDE

+40.00 –L–
120.00' (RT.)

+61.33 –L–
110.00' (RT.)

HELEN ZAVALNEY
DB 266 PG 997
DB 327 PG 32
PB 12 PG 96

139

20 x 44 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 23.1 B

46 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 23.2 B

Place Matting or Compost
Blanket for Erosion Control
on Slope as Work Allows.
Sta. 263+00 RT to Sta. 271+00 RT –L–
Sta. 269+00 LT to Sta. 270+00 LT –L–

80 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 23.3 B

SEE SHEET 38 FOR –L– PROFILE
SEE SHEET 42 FOR –Y2– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:41:03 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–49/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD '83/NSRS 2007

REVISIONS 8/17/99

MATCHLINE –L– STA. 277+00.00 SEE SHEET 23

MATCHLINE –L– STA. 290+00.00 SEE SHEET 25

85 x 26 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 24.1 F

48 x 24 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
9 ft. weir
ID 24.3 F

76 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
14 ft. weir
ID 24.4 F

12 x 6 x 2
ID 24.5 F

12 x 6 x 2
ID 24.6 F

12 x 6 x 2
ID 24.7 F

45 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
7 ft. weir
ID 24.8 F

85 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 24.2 F

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

SPECIAL LATERAL BASE DITCH
SEE DETAIL AG

CL I RIP RAP
EST. 20 TONS
EST. 39 SY GEOTEXTILE

CL I RIP RAP
EST. 15 TONS
EST. 30 SY GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL B RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

CL B RIP RAP
EST. 3 TONS
EST. 10 SY GEOTEXTILE

42" RCP-III

36" RCP-III

15" RCP-III

30" RCP-III

18" RCP-III

18" RCP-III

REMOVE

2401 2402 2403 2404 2405 2406 2407 2408 2409 2410

280 285

N 11° 12' 2" E

FS

SEE SHEET 39 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:49:13 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–50/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

NAD 83/NSRS 2007

REVISIONS

8/17/99

MATCHLINE –L– STA. 290+00.00 SEE SHEET 24

42 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
6 ft. weir
ID 25.1 F

12 x 6 x 2
ID 25.2 F

120 x 30 x 3
2 inch Skimmer
with 1.750 inch
Orifice Diameter
22 ft. weir
ID 25.5 F

60 x 22 x 3
ID 25.3 F

60 x 22 x 3
ID 25.4 F

STANDARD 2' BASE DITCH
SEE DETAIL T
SLOPE=0.003243
EST. 54 CY DDE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

LATERAL BASE DITCH
SEE DETAIL AH

CL B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

SPECIAL LATERAL 'V' DITCH
SEE DETAIL AF

SPECIAL LATERAL 'V' DITCH
SEE DETAIL W

TDE

2501 2502 2503 2504 2505 2506

24" RCP-III

15" RCP-III

15" HDPE
REMOVE

RGI

FG

295 300

N 11° 39' 27.2" E

10' SOIL

A B

1

SEE SHEET 39 FOR –L– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:43:22 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–51/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

R/W REVISION 7-28-14 (DWG) - ADDED ADDITIONAL R/W ON PARCEL 4 (THE UNITED STATES OF AMERICA) ALONG -DRVIA- STA. 10+50.00 TO STA. 13+27.42 LT.
REVISED THE R/W AND TCE ON PARCEL 147 (MAYSVILLE DEVELOPMENT CORPORATION) AND PARCEL 147A (SAFE HARBOR FARM, INC.).

8/17/99

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:43:36 AM

MATCHLINE –LBUS– STA. 15+00.00 SEE SHEET 4

NAD 83/NSRS 2007

Place Matting or Compost Blanket for Erosion Control on Slope as Work Allows.
Sta. 15+00 LT to 20+00 LT –LBUS–
Sta. 15+00 RT to 20+00 RT –LBUS–

74 x 28 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 26.2 F

80 x 28 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 26.3 F

78 x 28 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 26.4 F

65 x 20 x 3
10 ft. weir
(See Infiltration
Basin Detail)
ID 26.1 B

REMOVE 18" RCP
REMOVE 24" CMP
REMOVE 36" CMP
REMOVE 30" RCP
REMOVE 15" CMP
LATERAL 3' BASE DITCH SEE DETAIL D
SPECIAL LATERAL 3' BASE DITCH SEE DETAIL AP
STANDARD 3' BASE D W/CLASS B RIP RAP SEE DETAIL AJ EST. 25 C.Y. DDE EST. 21 TONS RIP RAP EST. 47 S.Y. F.G.
CL I RIP RAP EST. 17 TONS EST. 38 SY GEOTEXTILE
CL B RIP RAP EST. 13 TONS EST. 11 SY GEOTEXTILE
SPECIAL LATERAL 'V' DITCH SEE DETAIL AO
STANDARD 'V' DITCH SEE DETAIL AN
SPECIAL CUT DITCH SEE DETAIL AL
SPECIAL CUT BASE DITCH SEE DETAIL AI
SPECIAL CUT DITCH SEE DETAIL AK
STANDARD 'V' DITCH SEE DETAIL Y SLOPE=0.01868 EST. 14 CY DDE
Temporary Rock Silt Check Type A 2.25 ft. weir height
Temporary Rock Silt Check Type A 2.50 ft. weir height
TIE TO EXIST. SWALE
48" RCP-III
24" RCP-III
18" RCP-III
PUE
PDE
TSD
-DRVIA- POT Sta. 10+00.00
-LBUS- POT Sta. 22+59.00=
-DRVI- POT Sta. 10+00.00
-DRVI- PC Sta. 13+12.29
-DRVI- PT Sta. 13+77.62
-DRVI- PC Sta. 17+48.85
-DRVI- PT Sta. 19+01.27
-DRVI- POT Sta. 19+50.00
-DRVI- POT Sta. 18+68.29=
-DRVIA- POT Sta. 13+71.06
S 30° 02' 25.8" E
S 56° 33' 10.1" E
N 52° 48' 34.8" E
S 5° 22' 10.3" E
N 86° 26' 32.2" E

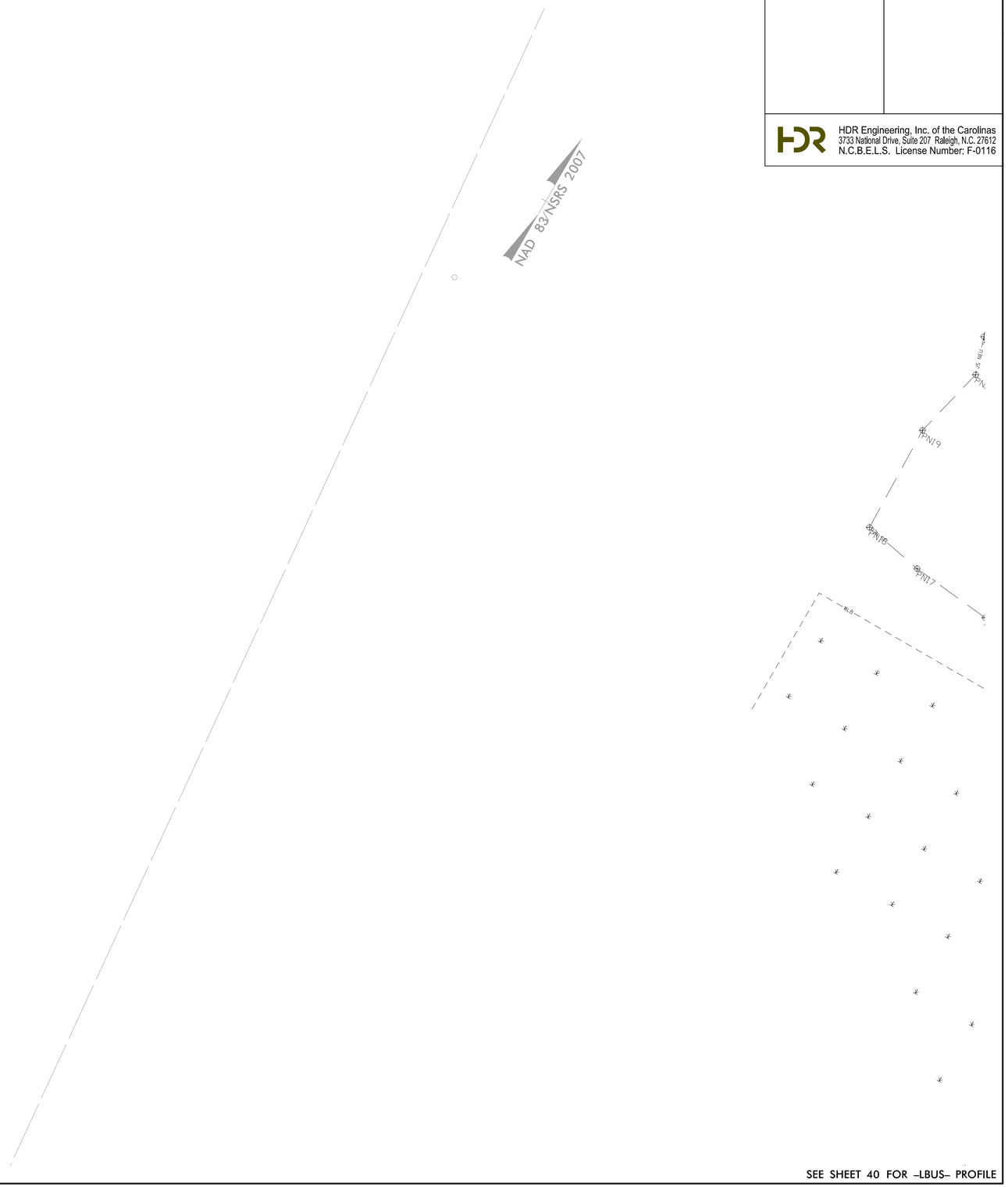
MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 27

SEE SHEET 40 FOR –LBUS– PROFILE
SEE SHEET 43 FOR –DRVI– PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-2514C	EC-52/CONST.27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

MATCHLINE –LBUS– STA. 24+00.00 SEE SHEET 26



SEE SHEET 40 FOR –LBUS– PROFILE

REVISIONS

R/W REVISION 6-25-14 (DWG) - ADDED PUE ON PARCEL 146 (R. S. PRIDGEN ESTATE) AND PARCEL 147 (MAYSVILLE DEVELOPMENT CORPORATION).

8/17/99

2/2/2015
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10:43:46 AM

PROJECT REFERENCE NO.	SHEET NO.
R–2514C	EC–53/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612
N.C.B.E.L.S. License Number: F-0116

REVISIONS

8/17/99 R/W REVISION 7-28-14 (DWG) - ADDED A SECOND CLAIM OF PUE ON PARCEL 1342 (RANDY D. RIGGS, ET AL.

MATCHLINE –Y1– STA. 21+00.00 SEE SHEET 20

MATCHLINE –Y– STA. 32+00.00 SEE SHEET 20

NAD 83/NSRS 2007

SPECIAL CUT DITCH SEE DETAIL Z

SPECIAL CUT DITCH SEE DETAIL AE

CL B RIP RAP EST. 8 TONS EST. 21 SY GEOTEXTILE

REMOVE

CLEAN–OUT

PUE

75 x 25 x 3 1.5 inch Skimmer with 1.25 inch Orifice Diameter 16 ft. weir ID 28.1 F

STANDARD 3' BASE DITCH SEE DETAIL AB SLOPE=0.0015 EST. 330 CY DDE

–Y1– POT Sta. 21+23.02=
–Y1A– PC Sta. 10+00.00

–Y– POT Sta. 38+93.75=
–Y1A– PT Sta. 14+49.16

S 12° 02' 56.3" E

–Y1A– POC Sta. 12+27.00=
–YA– POT Sta. 10+00.00

N 34° 45' 16.8" E

–YA– PC Sta. 10+31.53

–Y– PT Sta. 33+45.40

–Y– POT Sta. 35+39.20=
–YA– PT Sta. 11+78.57

–Y– POT Sta. 36+12.64=
–Y1– POT Sta. 24+04.13

–Y– POT Sta. 44+00.00

SEE SHEET 41 FOR –Y1– PROFILE
SEE SHEET 41 FOR –Y1A– PROFILE
SEE SHEET 41 FOR –YA– PROFILE

2/2/2015
R-2514C_Hyd_EC_FINAL_PSH.dgn
10:43:53 AM