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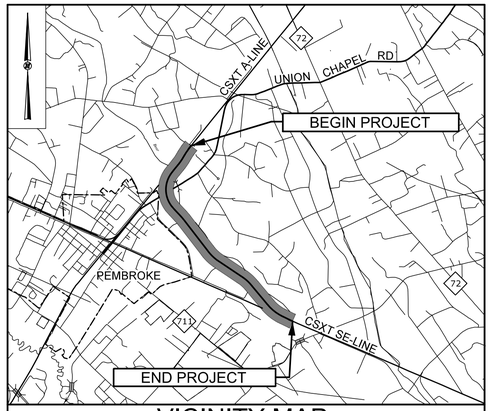
TIP PROJECT: P-4900A

CONTRACT: C203632

SEE SHEET 1A FOR INDEX OF SHEETS



VICINITY MAP

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-4900A	EC-1	28

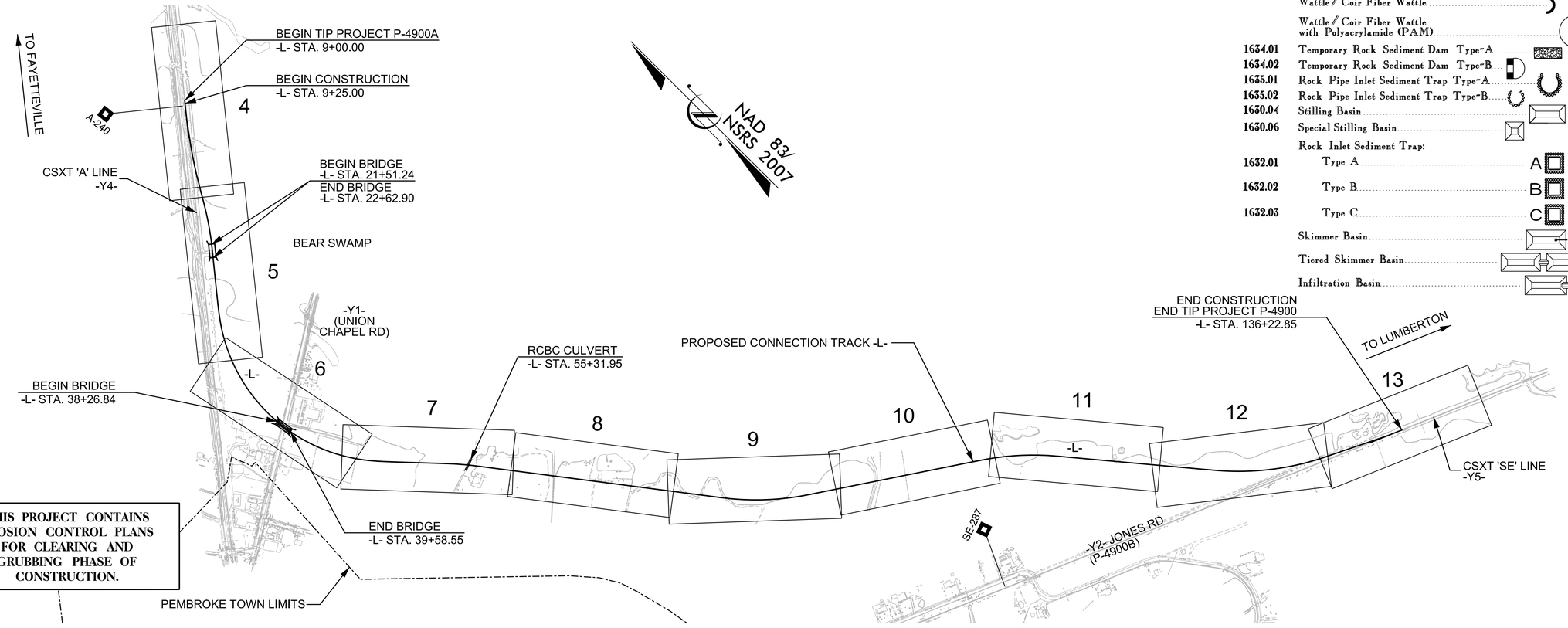
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
41099.1.S3		P.E. / UTIL P.E. / ROW
41099.3.S2		CONST./UTIL CONST.

ROBESON COUNTY

EROSION CONTROL

LOCATION: RAILROAD BYPASS OF PEMBROKE

TYPE OF WORK: RAILROAD ROADBED, GRADING, DRAINAGE, STRUCTURES



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

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

GRAPHIC SCALES

50 0 50 100
PLAN

50 0 50 100
PROFILE (HORIZONTAL)

10 0 10 20
PROFILE (VERTICAL)

PROJECT LENGTH

LENGTH OF RAIL TIP PROJECT	2.364 MILES
LENGTH OF STRUCTURES TIP PROJECT	0.046 MILES
TOTAL LENGTH OF RAIL TIP PROJECT	2.410 MILES

NCDOT CONTACT: BRAD SMYTHE, P.E.
NCDOT PROJECT MANAGER

Prepared In the Office of:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

JOHN F. WATSON, P.E.
EROSION CONTROL
LEVEL III–A
CERTIFICATION #3419

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		

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
DESIGN AND CONSTRUCTION

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

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.

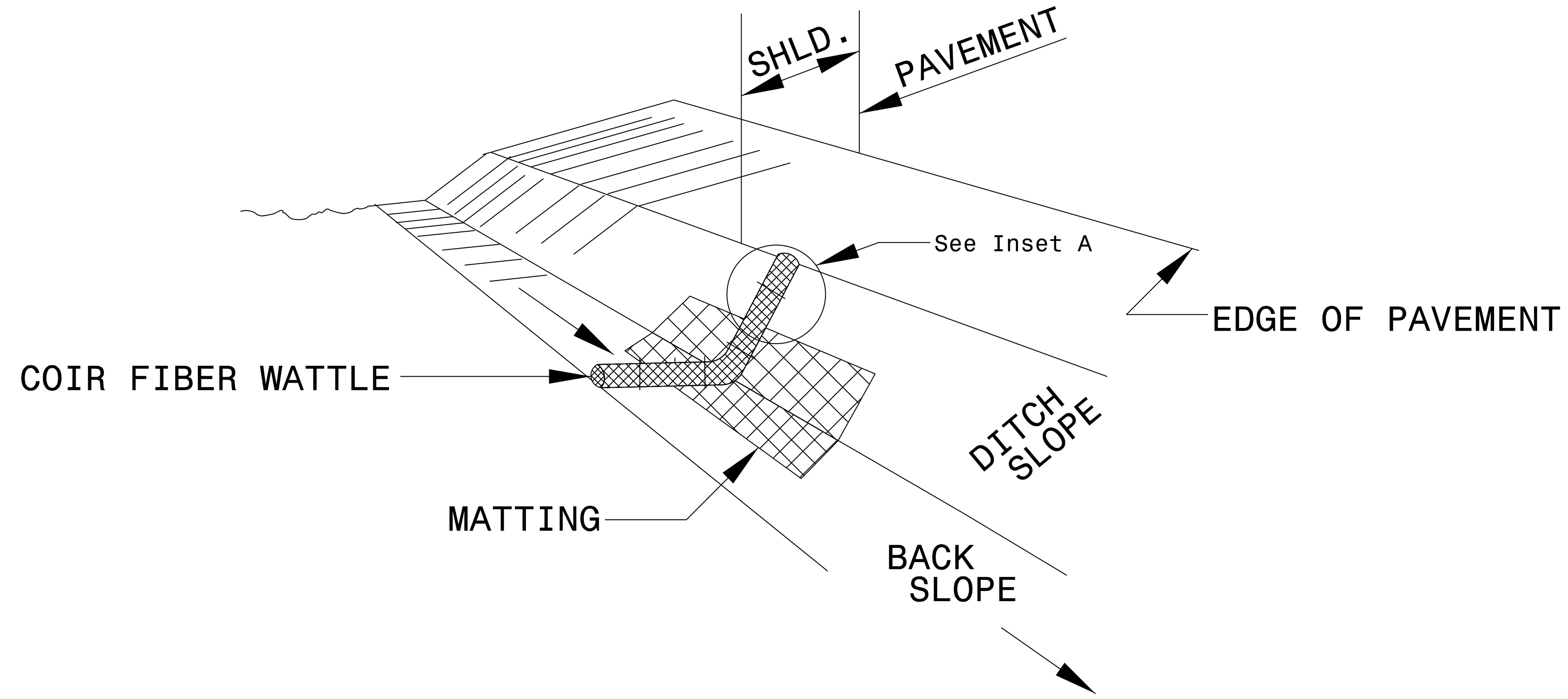
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

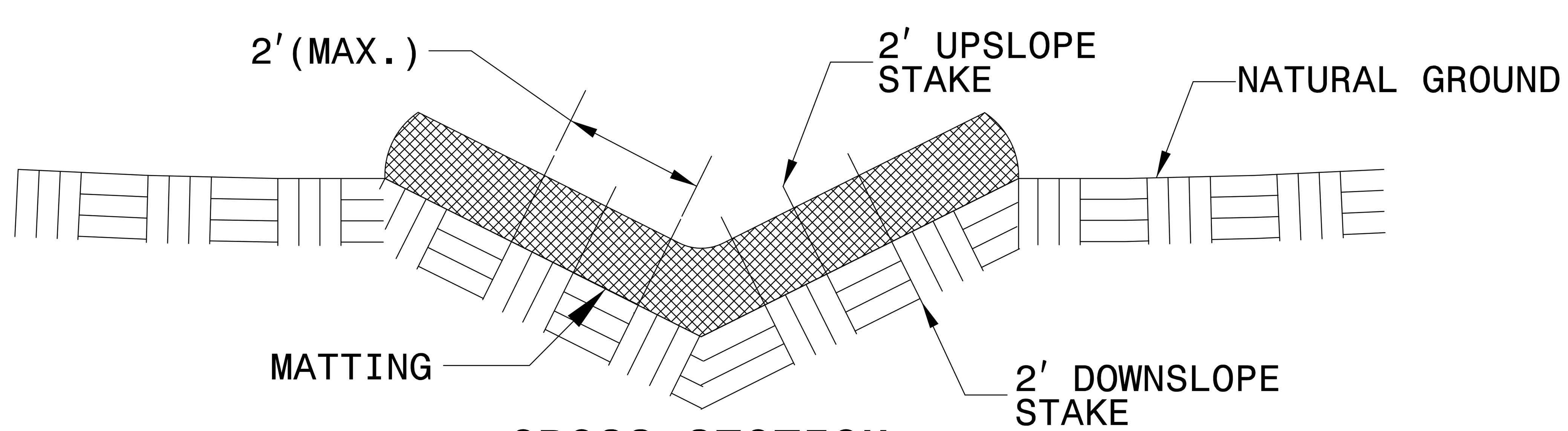
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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.

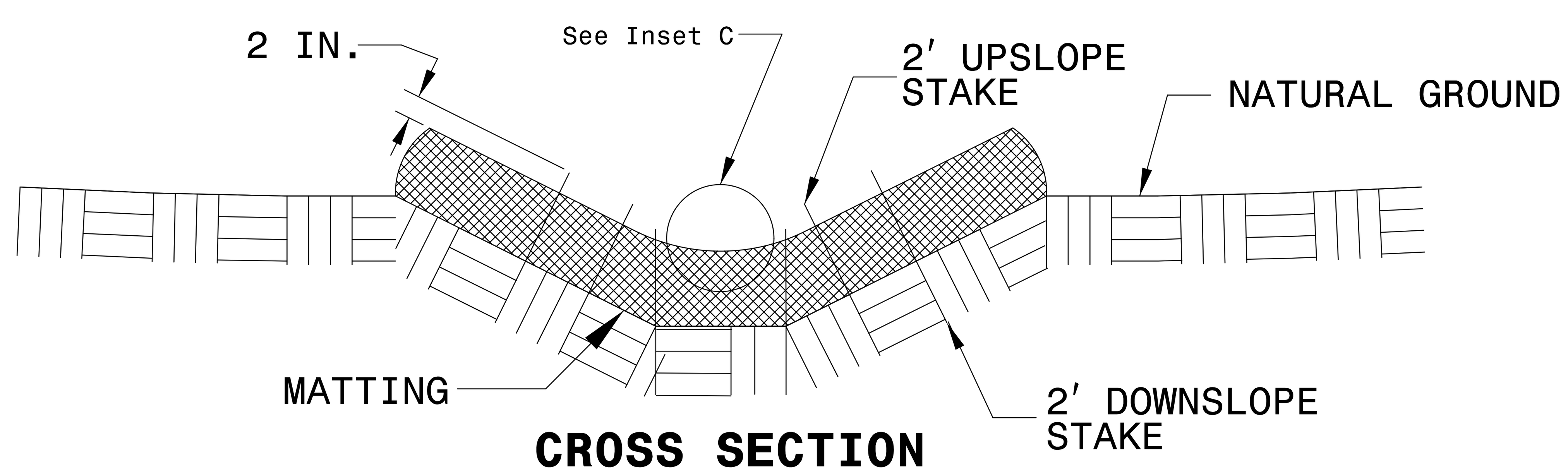
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



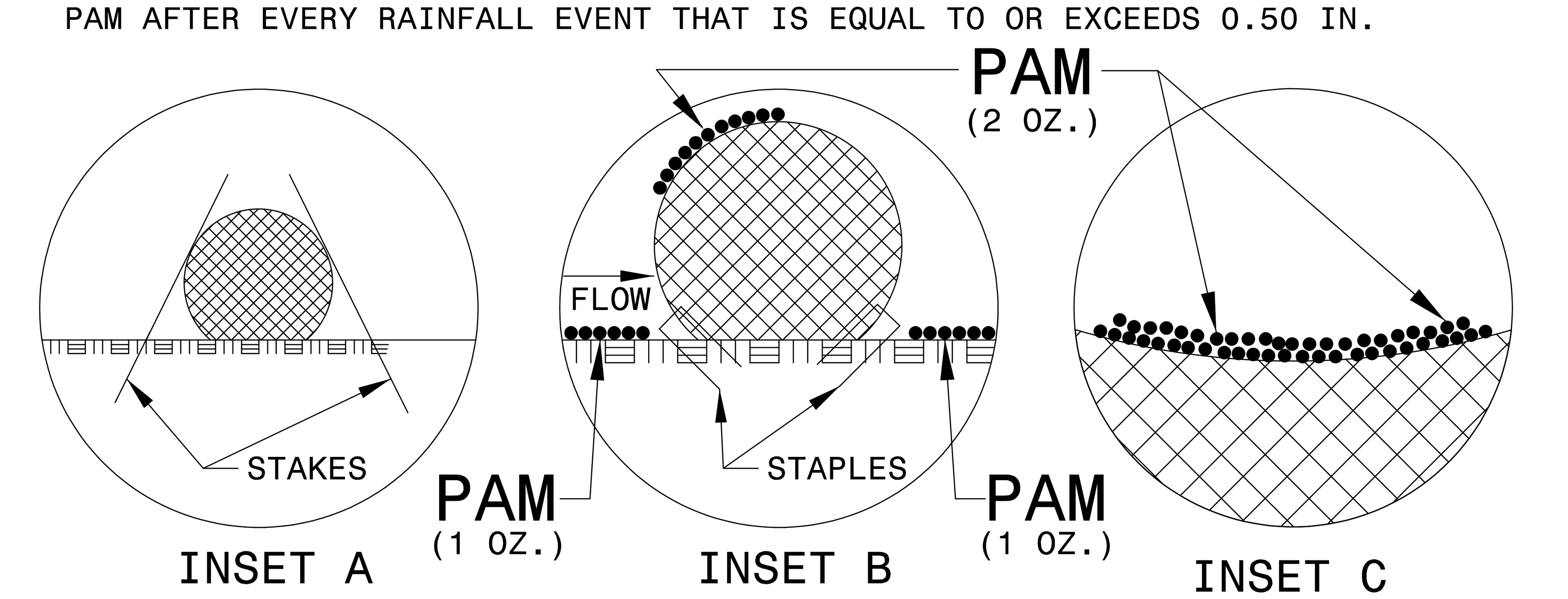
ISOMETRIC VIEW

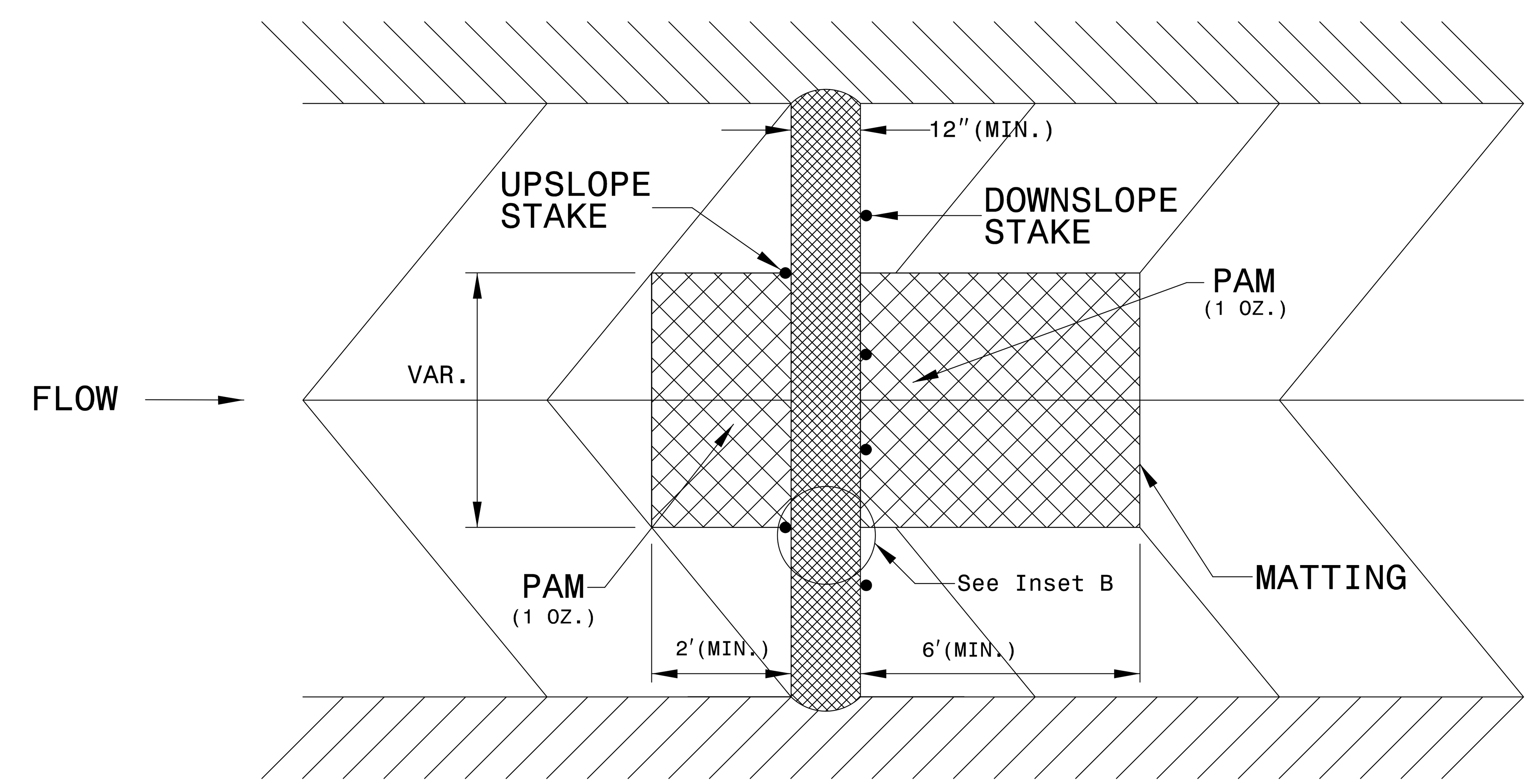


CROSS SECTION
VEE DITCH



CROSS SECTION
TRAPEZOIDAL DITCH



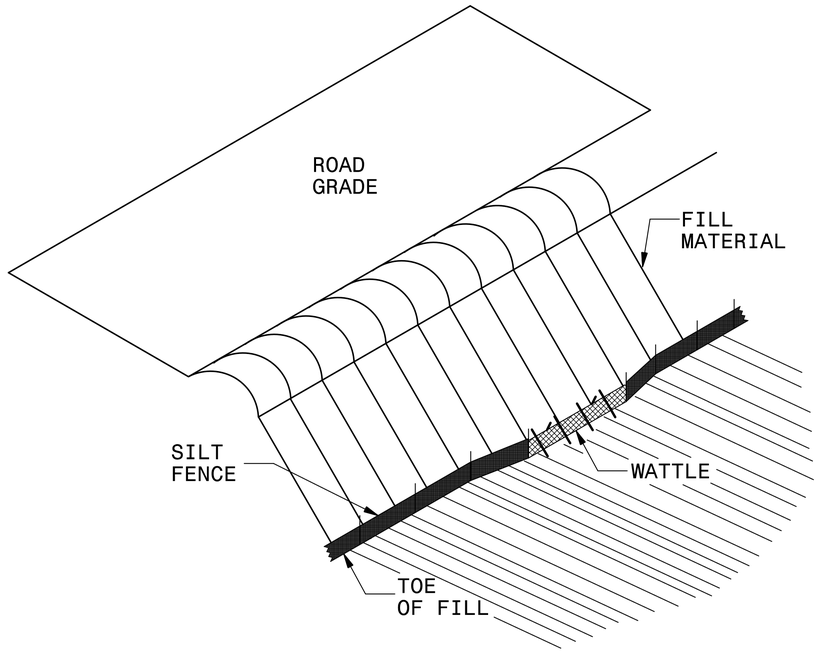


TOP VIEW

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-2A
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.

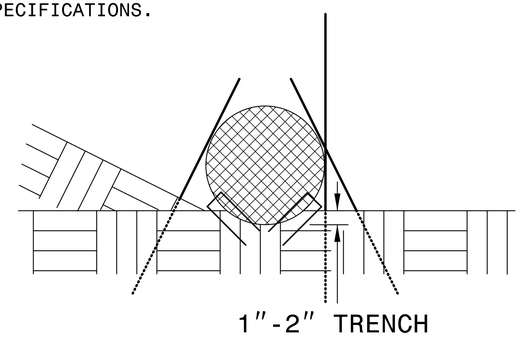
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

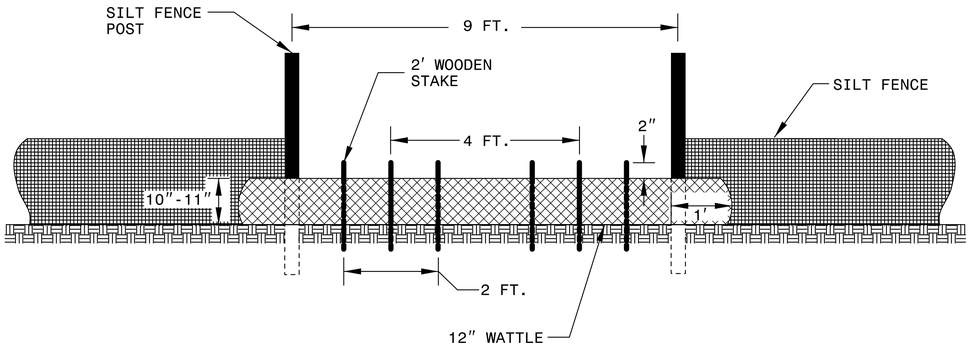
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

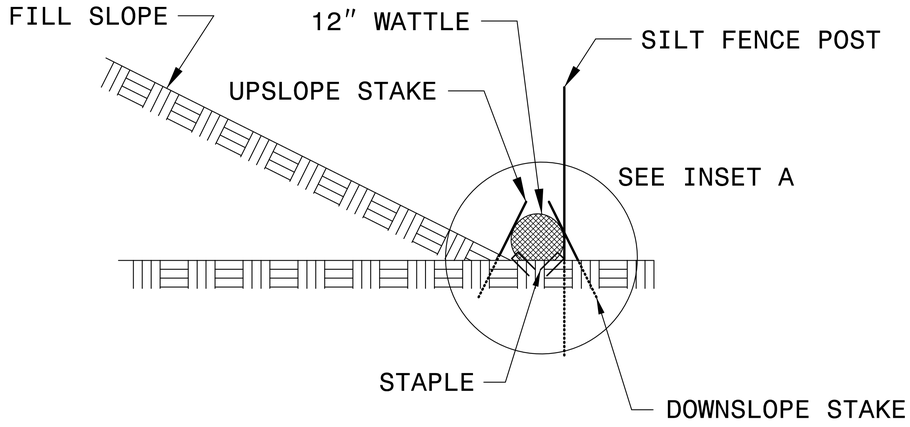
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





VIEW FROM SLOPE



SIDE VIEW

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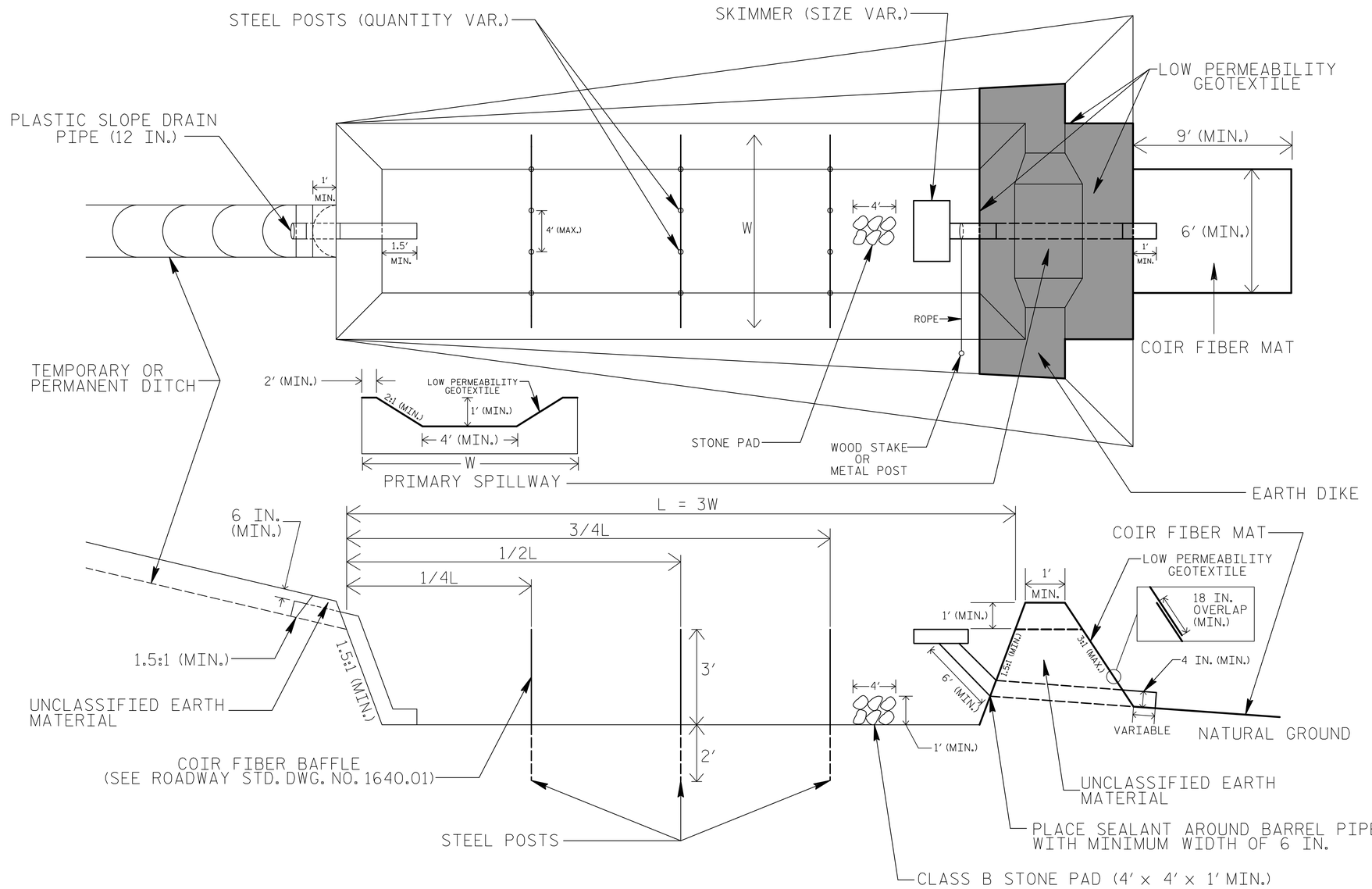
NC License No: C-1554

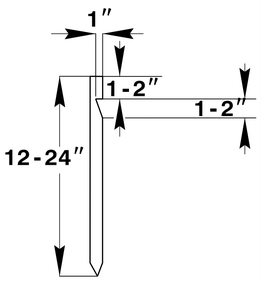
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-2B
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

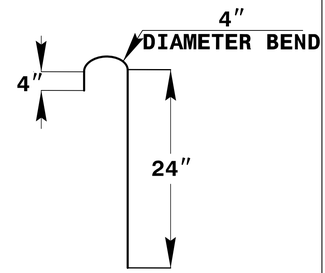
SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



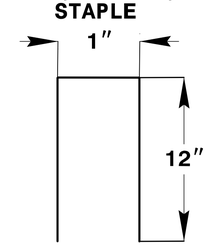
2" x 2" (nominal) WOODEN STAKE



#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

BORROW PIT DEWATERING BASIN DETAIL

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NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING V = 8.0203 * Q * T, WHERE V IS VOLUME (FT^3), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5′ STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3′ OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12″ STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

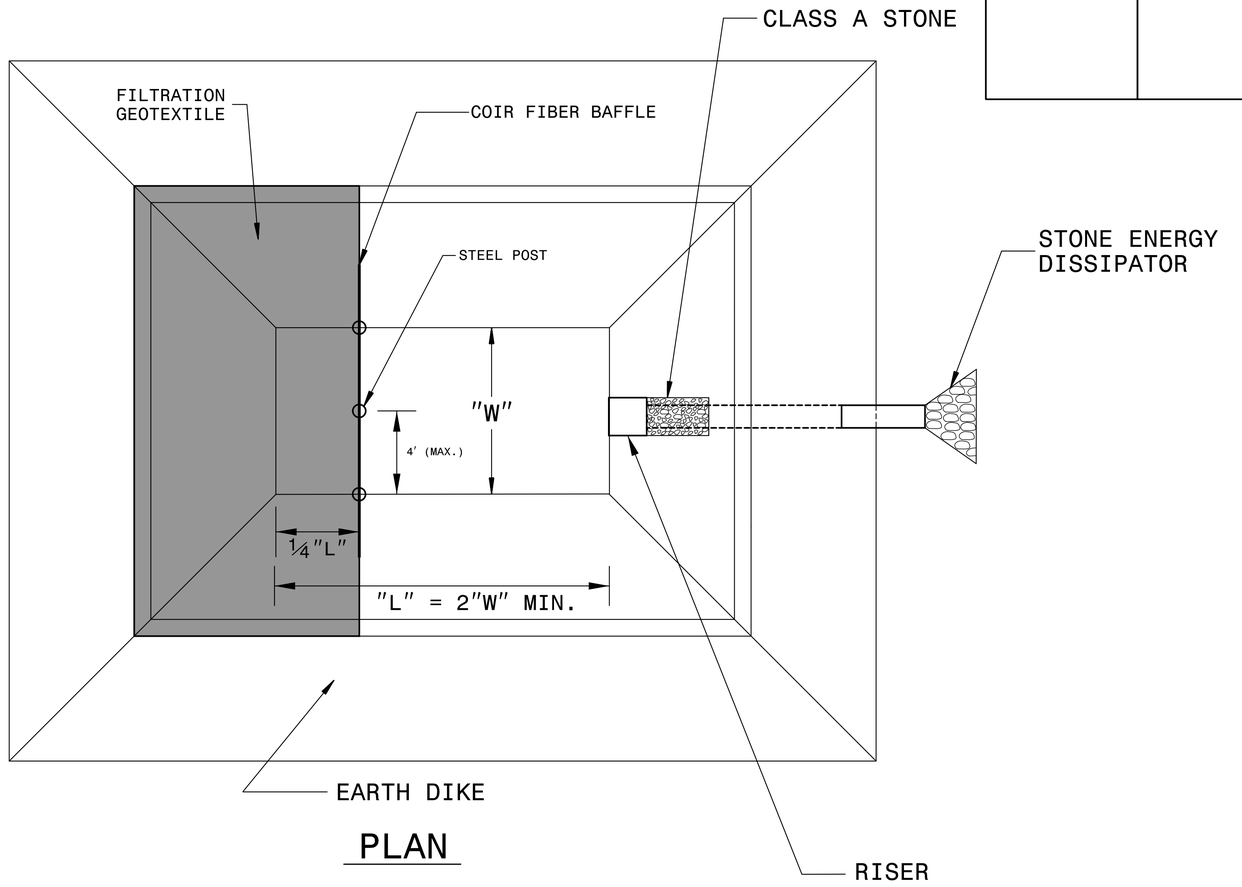
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

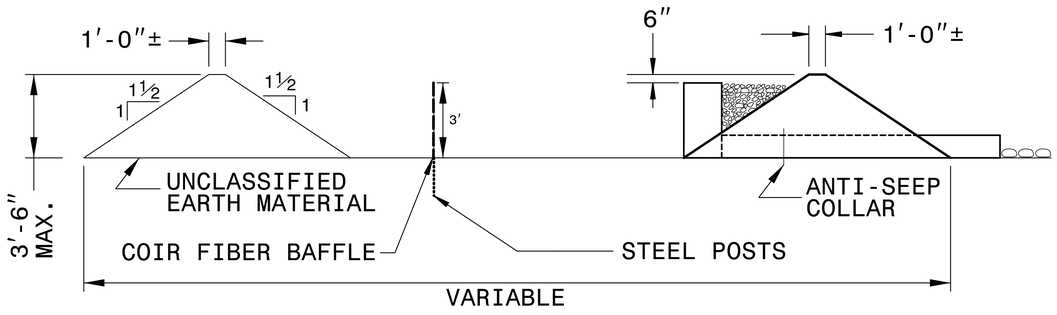
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



PLAN



TYPICAL SECTION VIEW

NOT TO SCALE

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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	L	9+25	17+00	LT	2420
4	L	15+50	19+00	RT	1095
5	L	17+00	18+00	LT	315
5	L	19+00	20+73	RT	540
5	L	24+50	34+50	RT	2315
5	L	28+00	34+00	LT	1455
6	L	39+11	40+69	LT	160
6	L	40+00	49+00	RT	2805
7	L	46+50	51+00	LT	1405
7	L	53+00	58+00	LT	1410
7	L	49+00	54+90	RT	1840
8	L	58+00	70+50	RT	3865
8	L	63+50	73+00	LT	2305
9	L	70+50	87+00	RT	4275
9	L	77+00	81+02	LT	975
9	L	82+50	88+00	LT	1330
10	L	87+00	100+00	RT	3385
10	L	88+00	100+00	LT	3090
11	L	100+00	102+00	LT	625
11	L	100+00	109+18	RT	2865
11	L	105+50	112+00	LT	1575
12	L	109+18	128+00	RT	5060
12	L	112+00	120+00	LT	2245
12	L	12550	128+00	LT	780
13	L	128+00	132+00	LT	1250
				SUBTOTAL	49,385
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					5,411
				TOTAL	54,796
				SAY	55,500

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
				SUBTOTAL	0
	ADDITIONAL PSRM TO BE INSTALLED				13925
				TOTAL	13925
				SAY	13925

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DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-3A
R/W SHEET NO.	
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.

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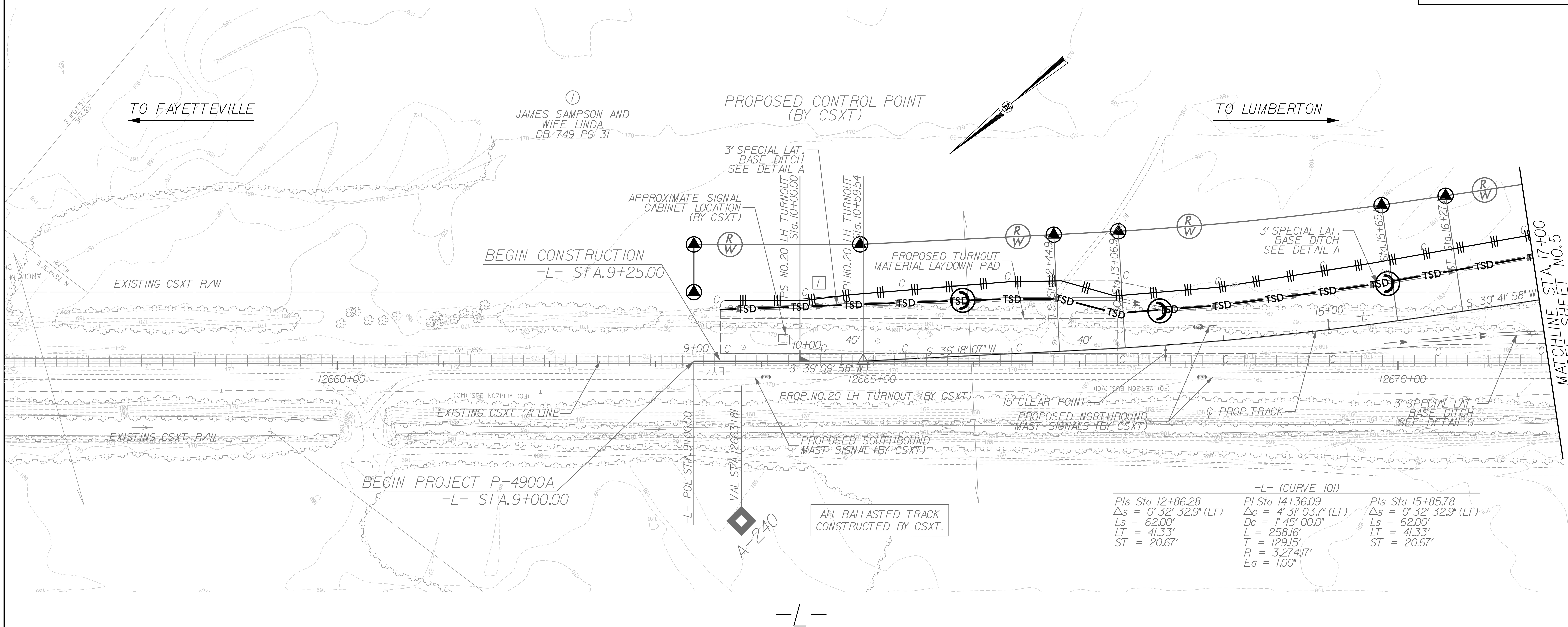
PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-04/CONST.04
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04



TO FAYETTEVILLE
TO LUMBERTON
JAMES SAMPSON AND WIFE LINDA DB 749 PG 31
PROPOSED CONTROL POINT (BY CSXT)
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
APPROXIMATE SIGNAL CABINET LOCATION (BY CSXT)
BEGIN CONSTRUCTION -L- STA.9+25.00
EXISTING CSXT R/W
PROPOSED TURNOUT MATERIAL LAYDOWN PAD
MATCHLINE STA.17+00 SEE SHEET NO.5
S 39°09'58" W
S 36°18'07" W
S 30°41'58" W
12660+00
12665+00
12670+00
EXISTING CSXT 'A' LINE
PROP.NO.20 LH TURNOUT (BY CSXT)
15' CLEAR POINT
PROPOSED NORTHBOUND MAST SIGNALS (BY CSXT)
℄ PROP.TRACK
3' SPECIAL LAT. BASE DITCH SEE DETAIL G
EXISTING CSXT R/W
PROPOSED SOUTHBOUND MAST SIGNAL (BY CSXT)
BEGIN PROJECT P-4900A -L- STA.9+00.00
-L- POL STA.9+00.00
VAL STA.12663+81
A-240
ALL BALLASTED TRACK CONSTRUCTED BY CSXT.
-L- (CURVE 101)
PIs Sta 12+86.28 Δs = 0°32' 32.9" (LT) Ls = 62.00' LT = 41.33' ST = 20.67'
PI Sta 14+36.09 Δc = 4°31' 03.7" (LT) Dc = 1°45' 00.0" L = 258.16' T = 129.15' R = 3,274.17' Ea = 1.00'
PIs Sta 15+85.78 Δs = 0°32' 32.9" (LT) Ls = 62.00' LT = 41.33' ST = 20.67'
-L-

6:34:10 PM
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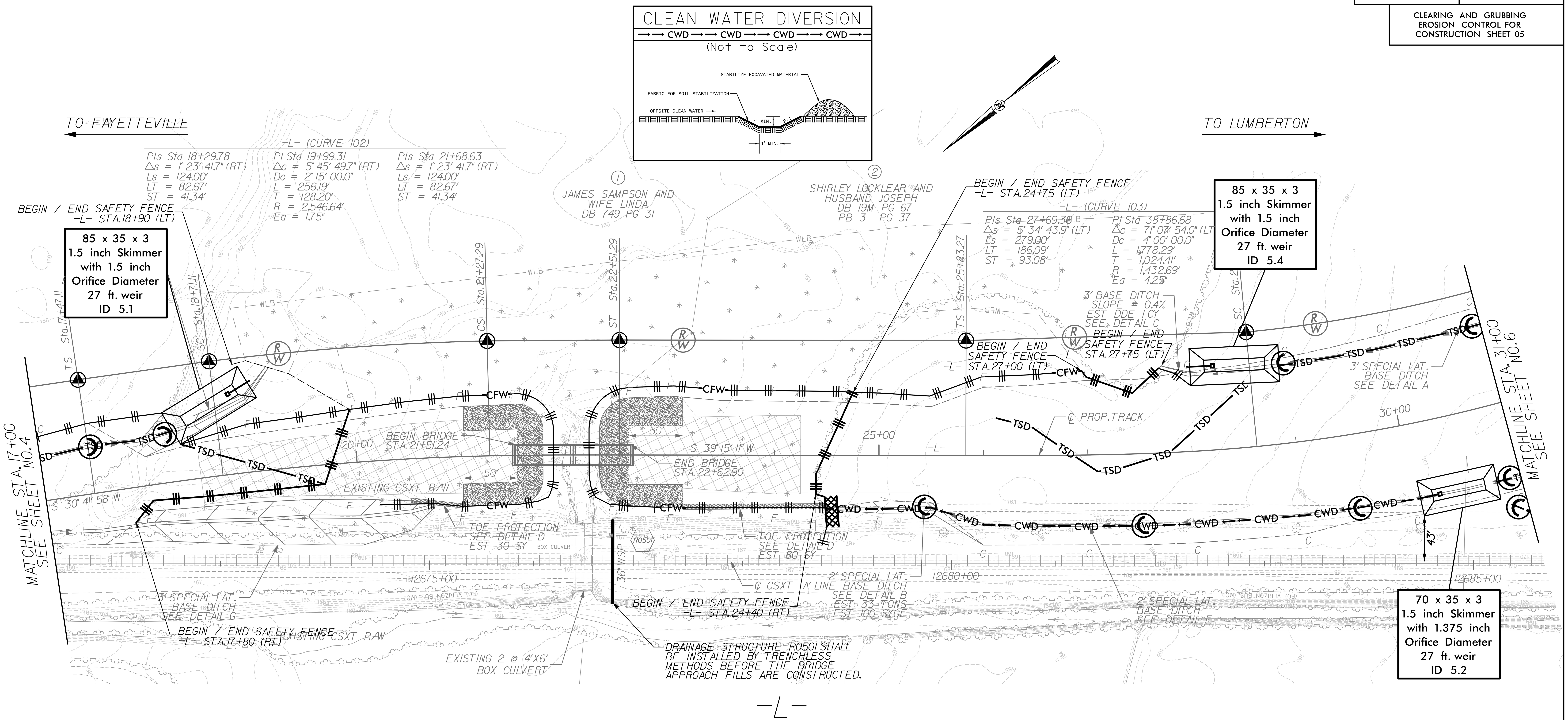
HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
DATE: JANUARY 19, 2015	P-4900A	EC-05/CONST.05
	R/W SHEET NO.	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05



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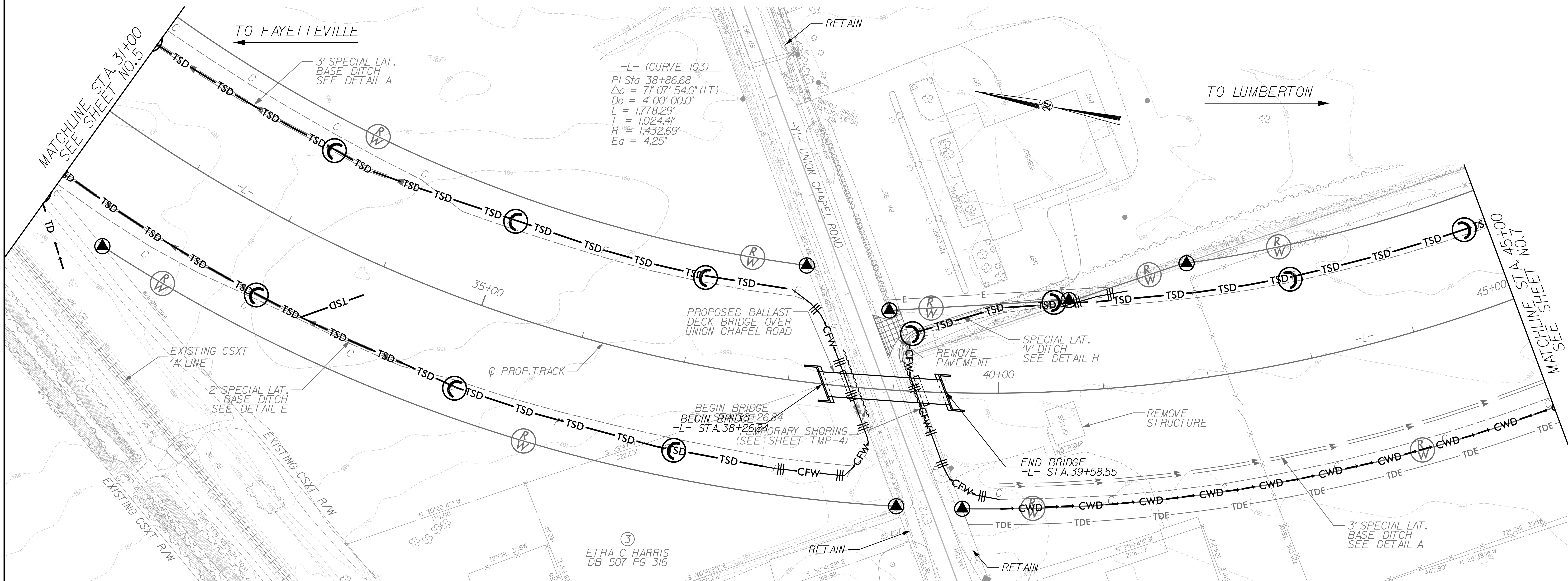
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-06/CONST.06
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 06



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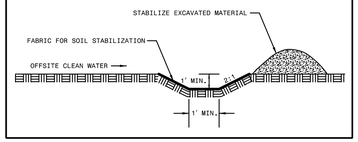
HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
	P-4900A	EC-07/CONST.07
DATE: JANUARY 19, 2015	R/W SHEET NO.	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 07

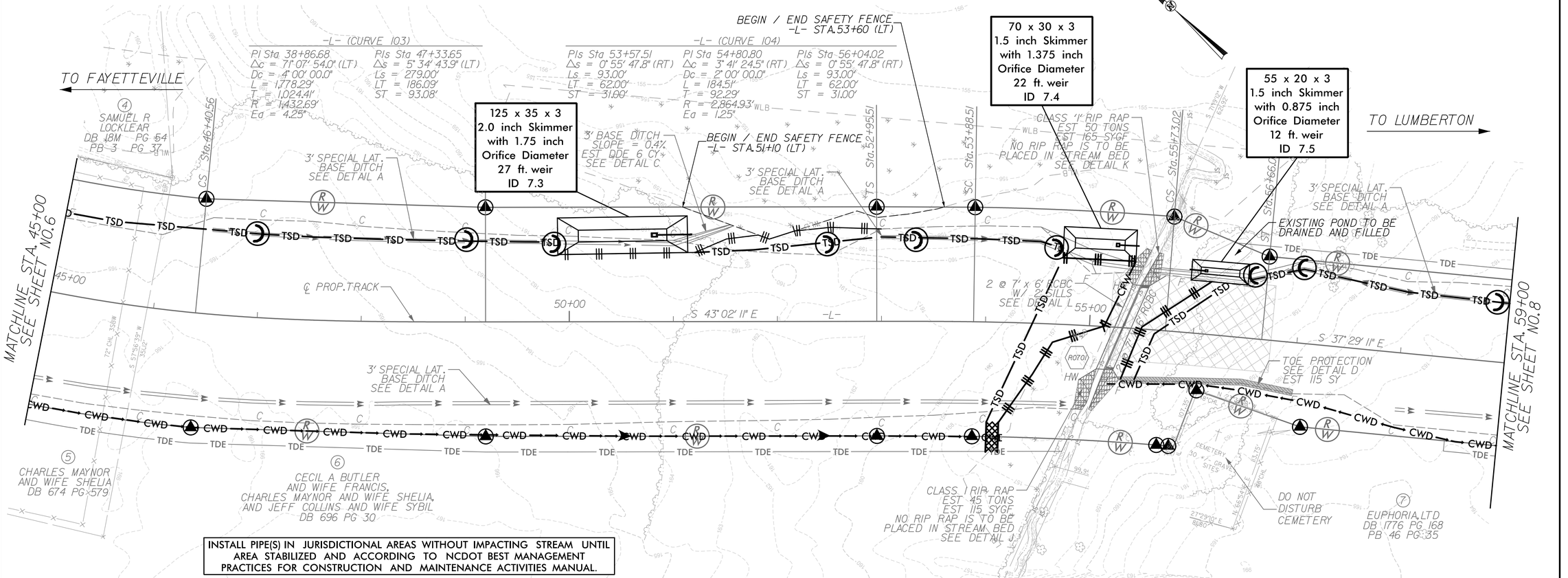
CLEAN WATER DIVERSION

CWD CWD CWD CWD

(Not to Scale)



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



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.

6:34:18 PM
$$$$USERNAME$$$$

P-4900A (PEMBROKE) CULVERT PHASING
BEAR SWAMP TRIBUTARY

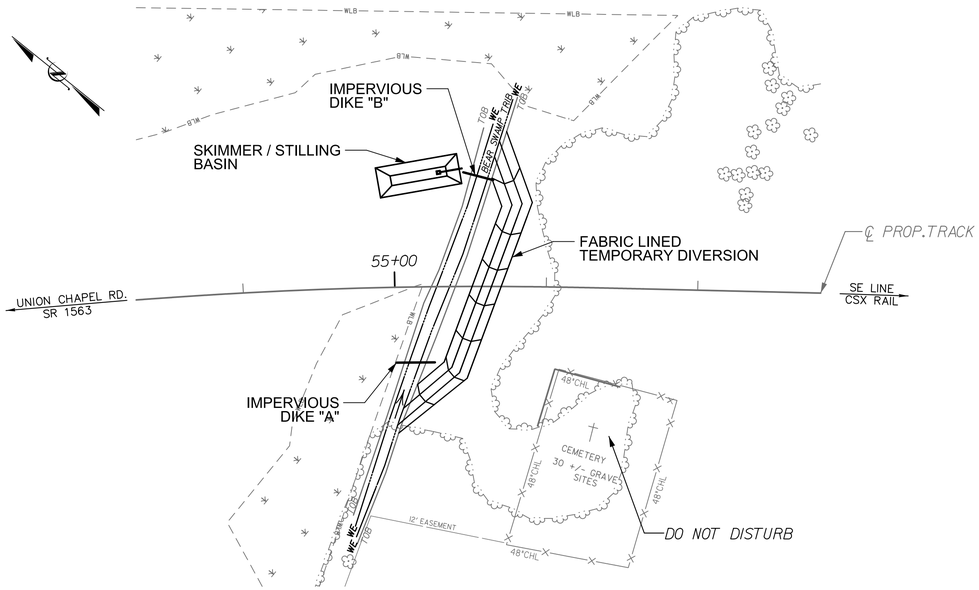
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: January 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-07A
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

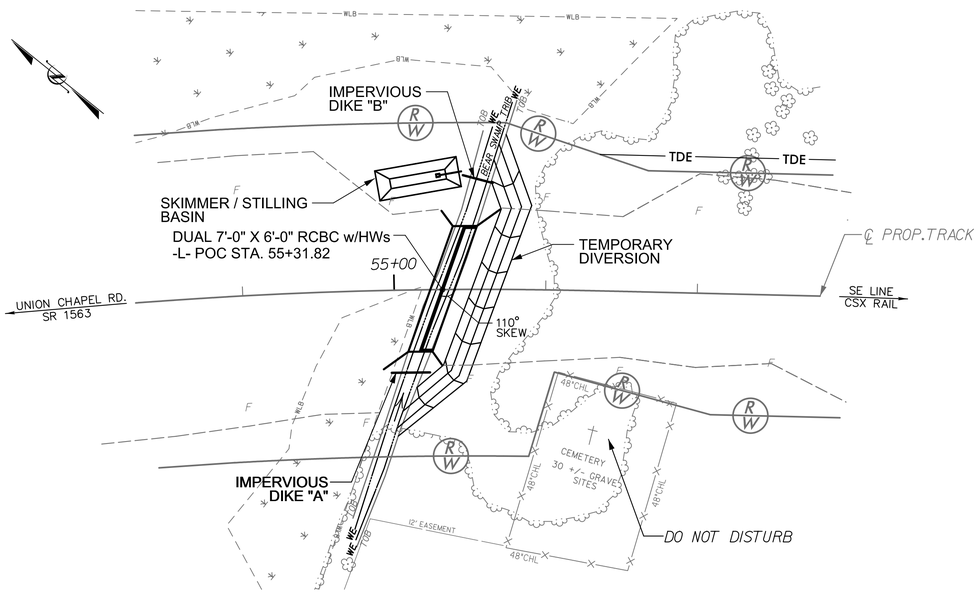
REVISIONS

REVISION #1 DATED 7/31/15: NEW SHEET



PHASE I

1. INSTALL IMPERVIOUS DIKES "A" AND "B" AS SHOWN.
2. INSTALL TEMPORARY DIVERSION, WITH 2' BASE AND 2:1 SIDE SLOPES, AS SHOWN AND DIVERT BEAR SWAMP TRIBUTARY AROUND THE CONSTRUCTION AREA. LINE TEMPORARY DIVERSION WITH SOIL STABILIZATION GEOTEXTILE FABRIC.
3. DEWATER CONSTRUCTION AREA INTO SPECIAL SKIMMER / STILLING BASIN.



PHASE II

1. CONSTRUCT REINFORCED CONCRETE BOX CULVERT. LINE DOWNSTREAM CHANNEL BANKS WITH CLASS I RIP RAP AS SHOWN.
2. UPON COMPLETION OF CULVERT, REMOVE TEMPORARY DIRVERSION AND DIKES.

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-08/CONST.08
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

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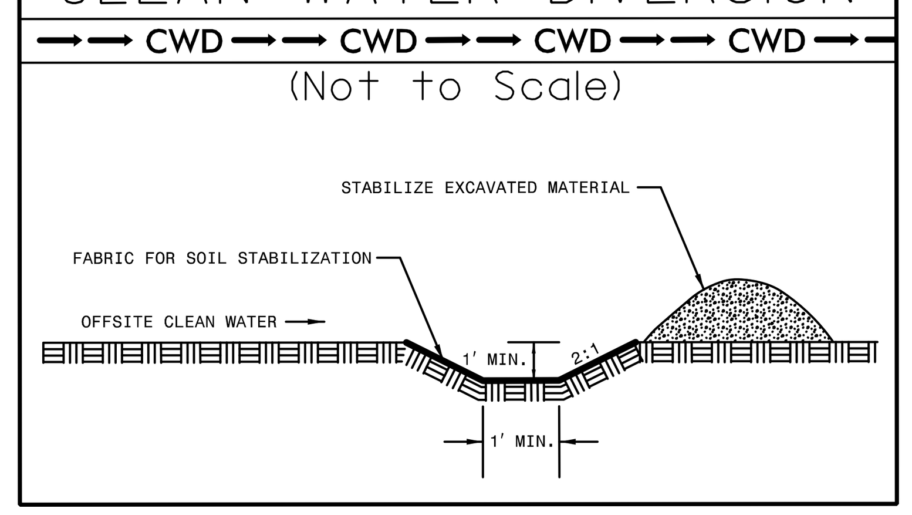
NC License No: C-1554

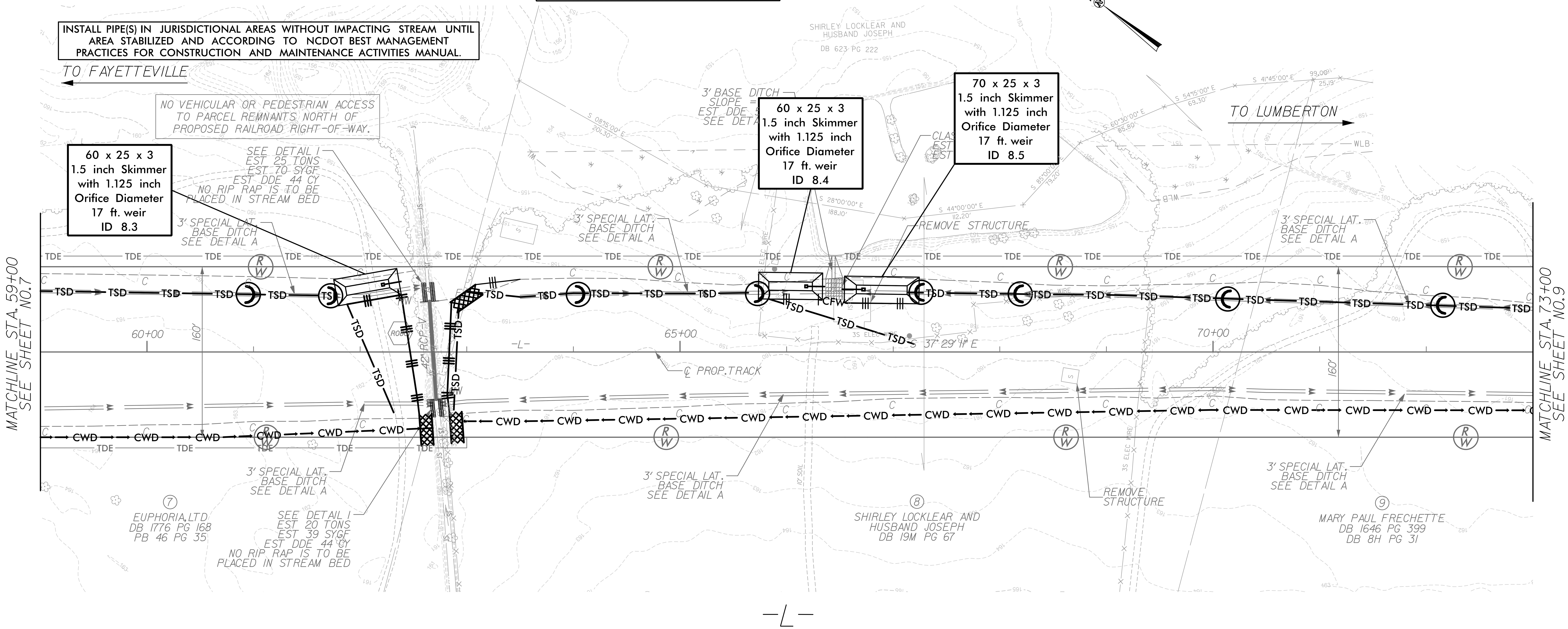
DATE: JANUARY 19, 2015

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 08

CLEAN WATER DIVERSION



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.



TO FAYETTEVILLE
TO LUMBERTON
NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.
60 x 25 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 17 ft. weir ID 8.3
60 x 25 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 17 ft. weir ID 8.4
70 x 25 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 17 ft. weir ID 8.5
SEE DETAIL I EST 25 TONS EST 70 SYGF EST DDE 44 CY NO RIP RAP IS TO BE PLACED IN STREAM BED
SEE DETAIL I EST 20 TONS EST 39 SYGF EST DDE 44 CY NO RIP RAP IS TO BE PLACED IN STREAM BED
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
3' BASE DITCH SLOPE = EST DDE SEE DETA
REMOVE STRUCTURE
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH DB 623 PG 222
MATCHLINE STA. 59+00 SEE SHEET NO.7
MATCHLINE STA. 73+00 SEE SHEET NO.9
60+00
65+00
70+00
160'
-L-
℄ PROP. TRACK
S 37° 29' 11" E
7 EUPHORIA,LTD DB 1776 PG 168 PB 46 PG 35
8 SHIRLEY LOCKLEAR AND HUSBAND JOSEPH DB 19M PG 67
9 MARY PAUL FRECHETTE DB 1646 PG 399 DB 8H PG 31
TDE
TSD
CWD
CFW
R/W
-L-

6:35:01PM
\\05624_pembroke_CG_EC-08.dgn
$$$$USERNAME$$$$

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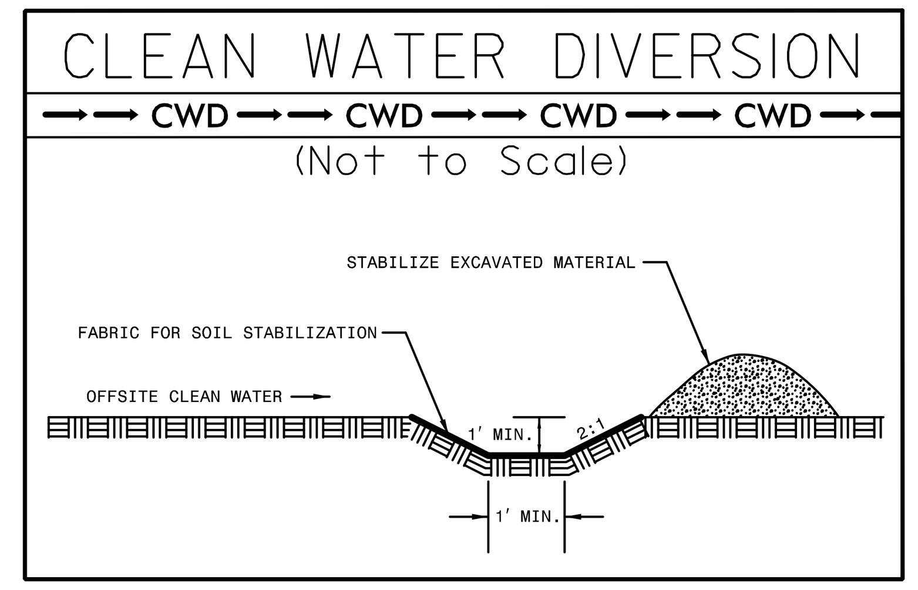
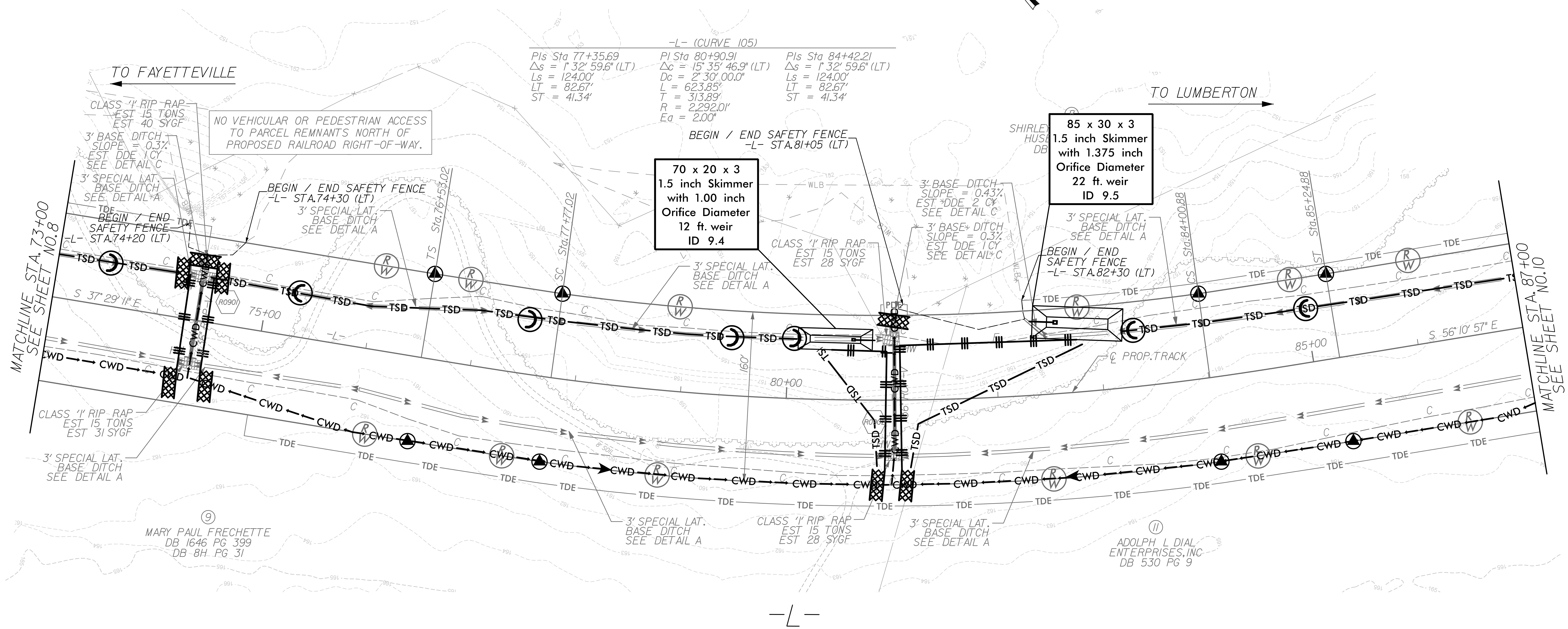
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-09/CONST.09
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 09





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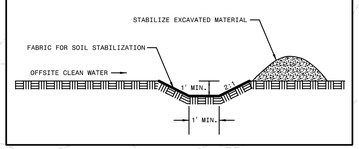
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-10/CONST.10
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10



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.

NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.

50 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
7 ft. weir
ID 10.3

60 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 10.4

SEE DETAIL I
EST 40 TONS
EST 75 SYGF
EST DDE 61 CY
NO RIP RAP IS TO BE PLACED IN STREAM BED

SEE DETAIL I
EST 40 TONS
EST 75 SYGF
EST DDE 61 CY
NO RIP RAP IS TO BE PLACED IN STREAM BED

3' SPECIAL LAT. BASE DITCH SEE DETAIL A

CLEAN WATER DIVERSION
(Not to Scale)

-L- (CURVE 106)

PIs Sta 99+80.52
Δs = 1° 32' 59.6" (RT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'

PI Sta 102+89.70
Δc = 13° 19' 51.7" (RT)
Dc = 2° 30' 00.0"
L = 533.24'
T = 267.85'
R = 2,292.01'
Ea = 2.00"

-L-

6:35:26 PM
..\55624_pembroke_CG_EC-10.dgn
$$$$USERNAME$$$$

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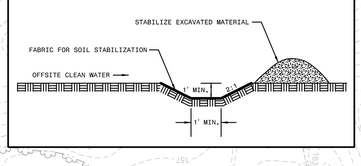
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-11/CONST11
R/W SHEET NO.	

RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11



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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
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DATE: JANUARY 19, 2015

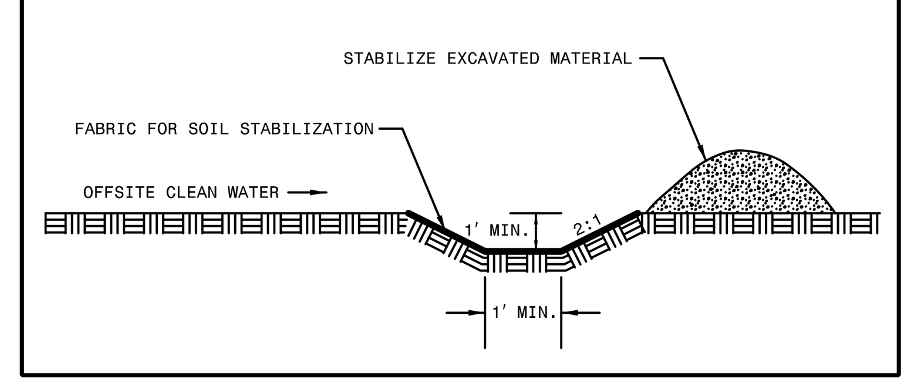
PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-12/CONST.12
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

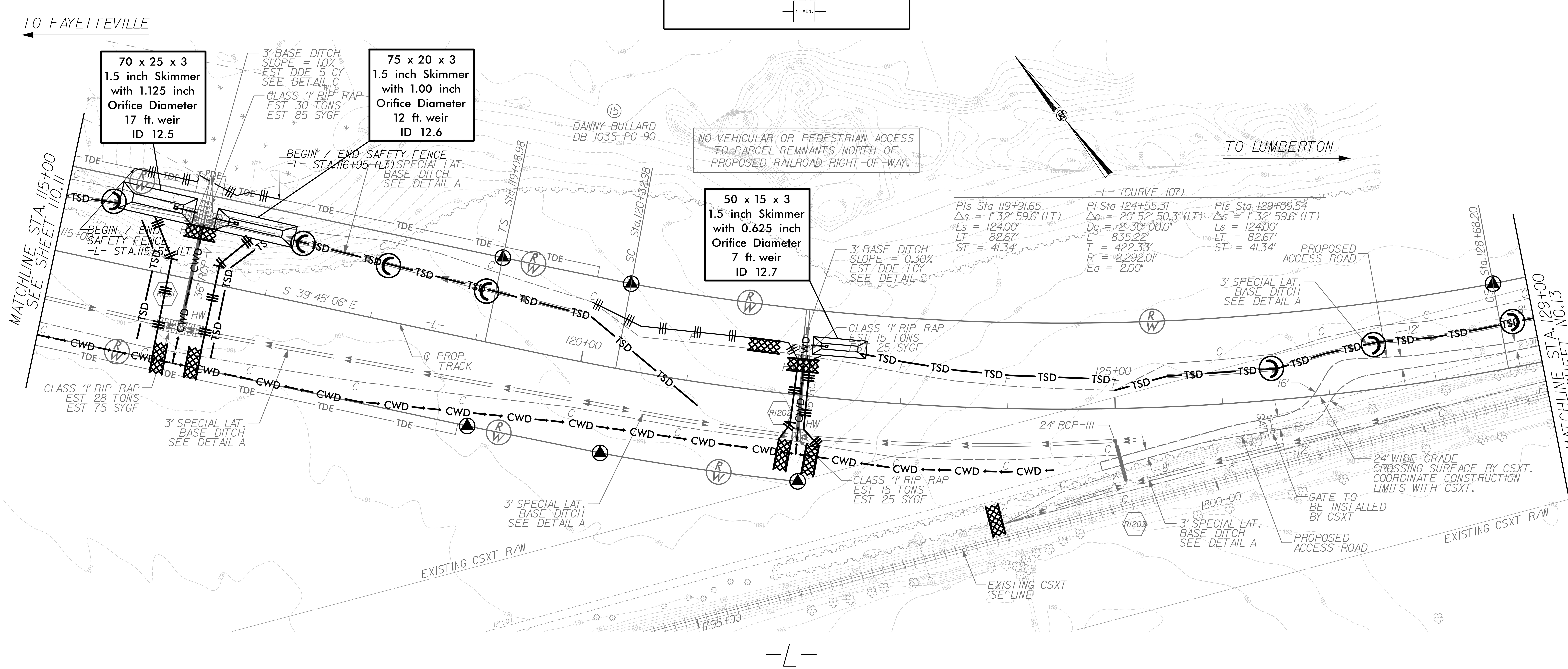
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)





-L-

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343 E. Six Forks Road, Suite 200
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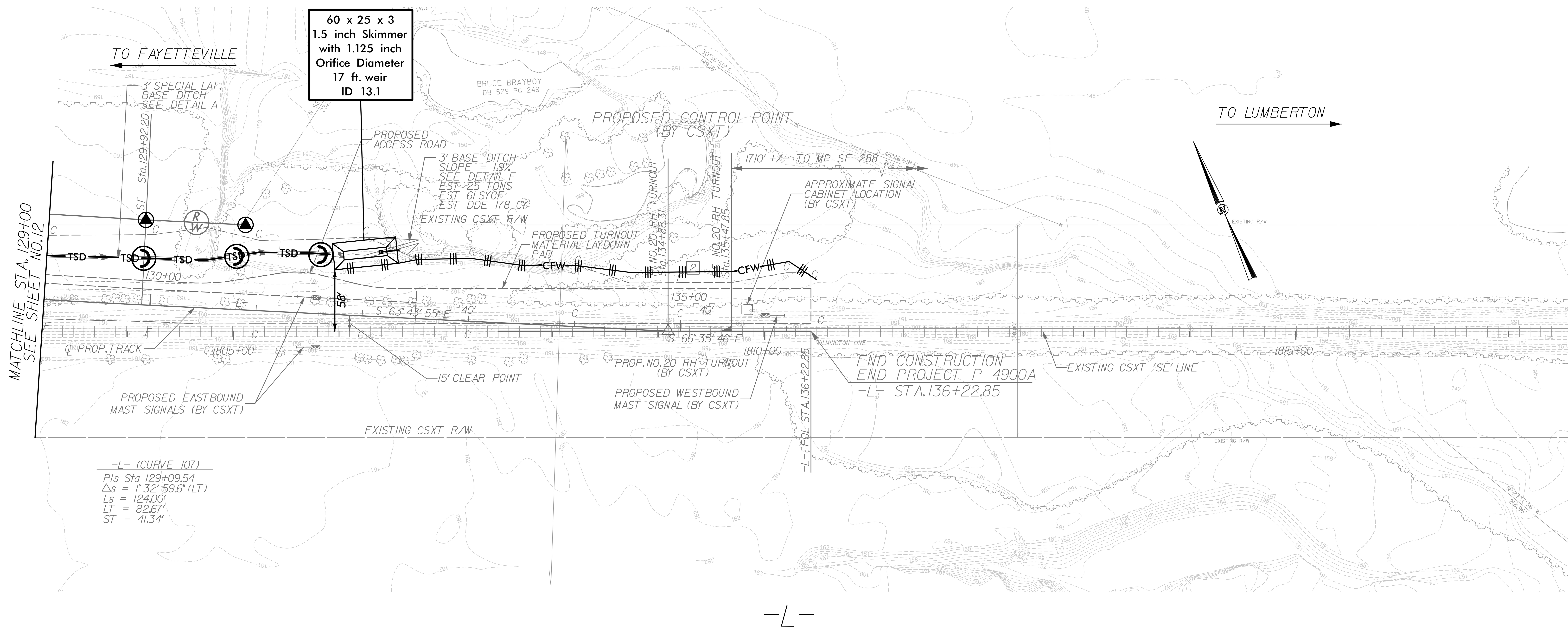
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-13/CONST13
R/W SHEET NO.	

RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13



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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
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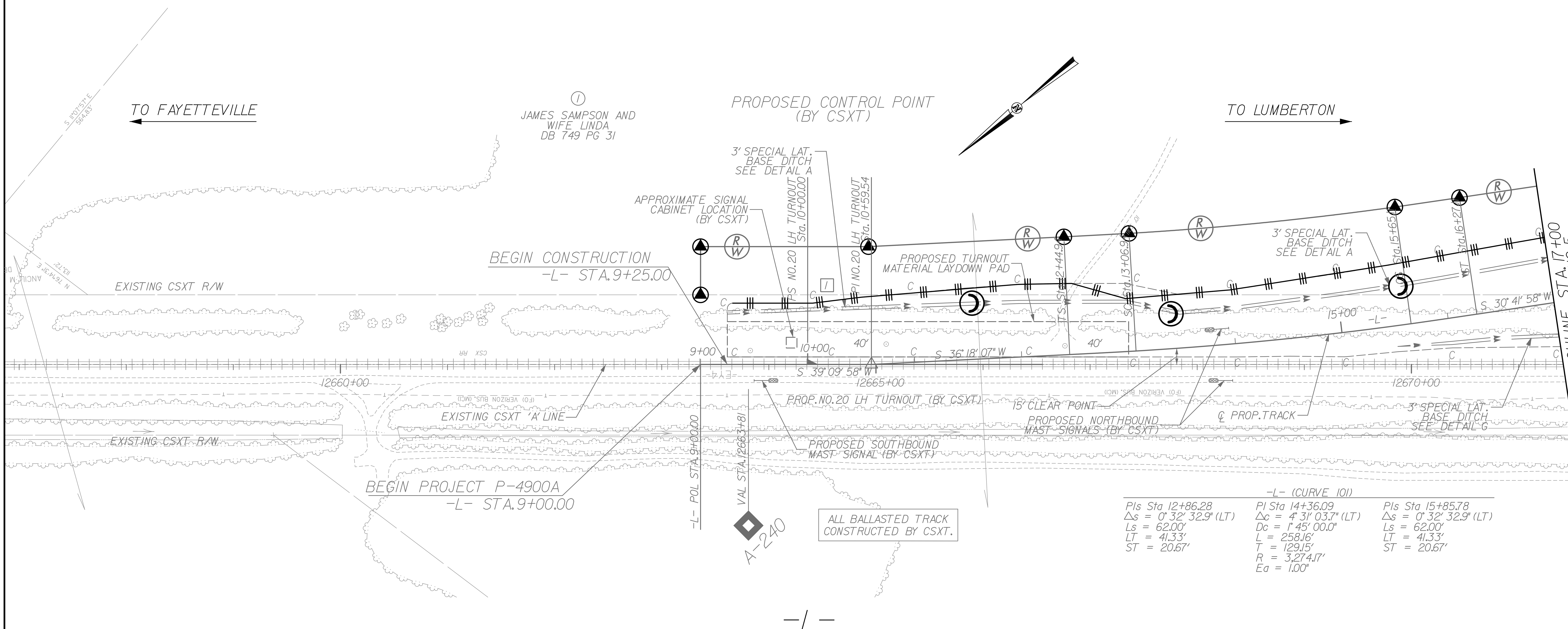
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-14/CONST.04
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



TO FAYETTEVILLE
TO LUMBERTON
JAMES SAMPSON AND WIFE LINDA DB 749 PG 31
PROPOSED CONTROL POINT (BY CSXT)
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
APPROXIMATE SIGNAL CABINET LOCATION (BY CSXT)
PS NO.20 LH TURNOUT Sta.10+00.00
PI NO.20 LH TURNOUT Sta.10+59.54
PROPOSED TURNOUT MATERIAL LAYDOWN PAD
BEGIN CONSTRUCTION -L- STA.9+25.00
EXISTING CSXT R/W
S. 39°09' 58" W
S. 36°18' 07" W
S. 30°41' 58" W
12660+00
12665+00
12670+00
PROP.NO.20 LH TURNOUT (BY CSXT)
15' CLEAR POINT
PROPOSED NORTHBOUND MAST SIGNALS (BY CSXT)
℄ PROP.TRACK
3' SPECIAL LAT. BASE DITCH SEE DETAIL G
EXISTING CSXT 'A' LINE
EXISTING CSXT R/W
PROPOSED SOUTHBOUND MAST SIGNAL (BY CSXT)
BEGIN PROJECT P-4900A -L- STA.9+00.00
-L- POL STA.9+00.00
VAL STA.12663+81
A-240
ALL BALLASTED TRACK CONSTRUCTED BY CSXT.
MATCHLINE STA.17+00 SEE SHEET NO.5
-L- (CURVE 101)
PIs Sta 12+86.28
Δs = 0°32' 32.9" (LT)
Ls = 62.00'
LT = 41.33'
ST = 20.67'
PI Sta 14+36.09
Δc = 4°31' 03.7" (LT)
Dc = 1°45' 00.0"
L = 258.16'
T = 129.15'
R = 3,274.17'
Ea = 1.00"
PIs Sta 15+85.78
Δs = 0°32' 32.9" (LT)
Ls = 62.00'
LT = 41.33'
ST = 20.67'
-L-

6:36:17 PM
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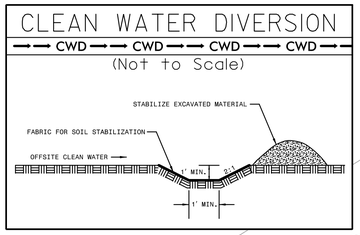
$$$$USERNAME$$$$



HNTB
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Raleigh, North Carolina 27609
NC License No: C-1554

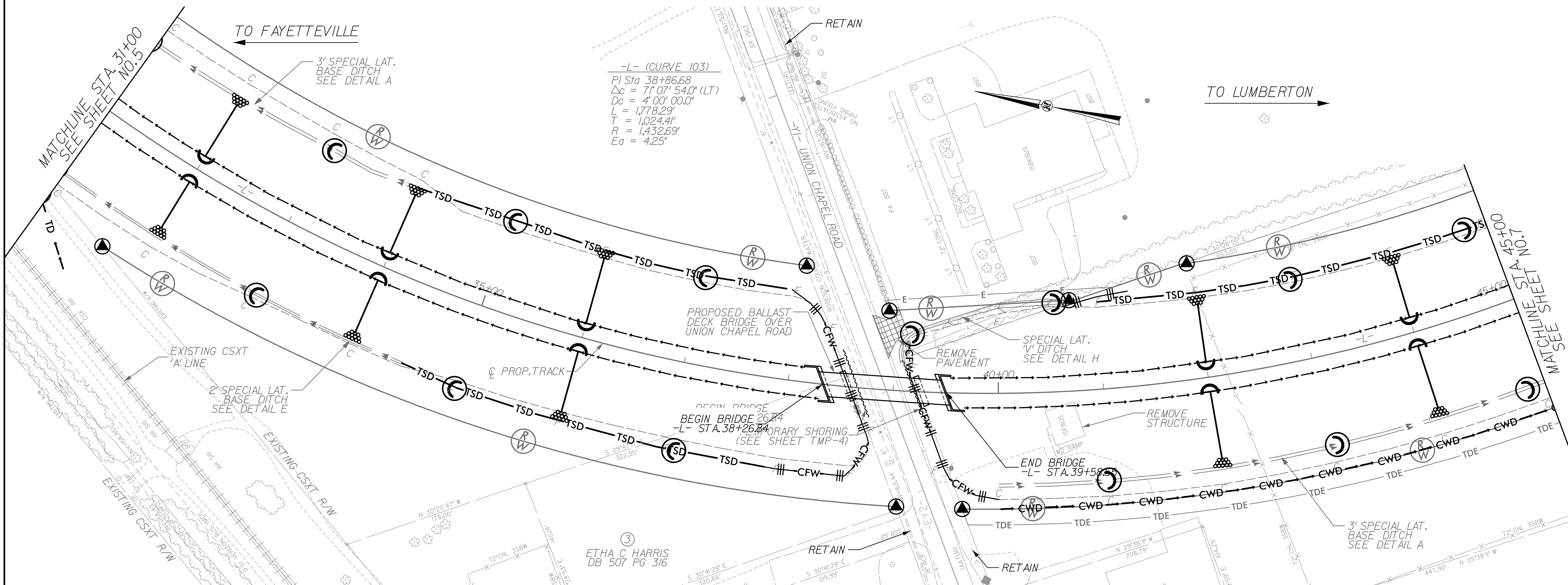
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-15/CONST.05
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

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

6:36:29 PM
..\55624_pembroke_EC_15.dgn
$$$$USERNAME$$$$

HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
	P-4900A	EC-16/CONST.06
	R/W SHEET NO.	
DATE: JANUARY 19, 2015	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-

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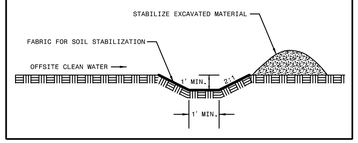
$$$$USERNAME$$$$

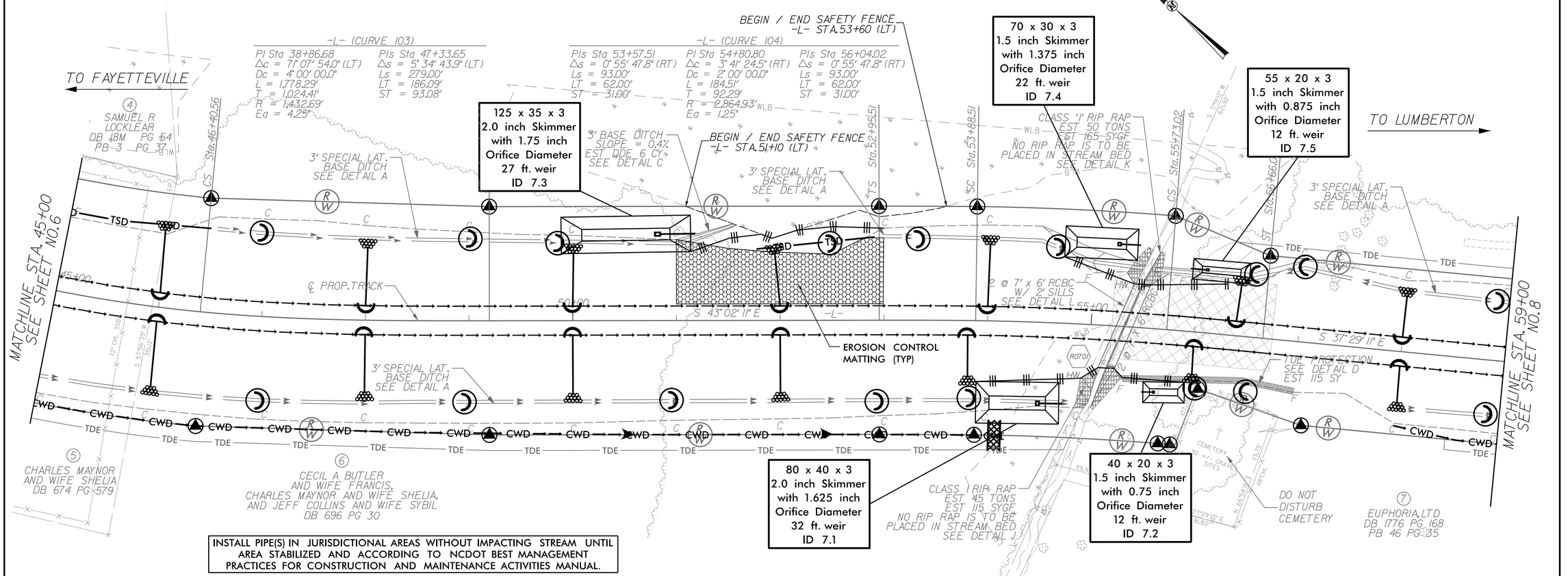
HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
	P-4900A	EC-17/CONST.07
DATE: JANUARY 19, 2015	R/W SHEET NO.	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEAN WATER DIVERSION

CWD — CWD — CWD — CWD

(Not to Scale)





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.

6:36:54 PM
$$$$USERNAME$$$$

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Raleigh, North Carolina 27609
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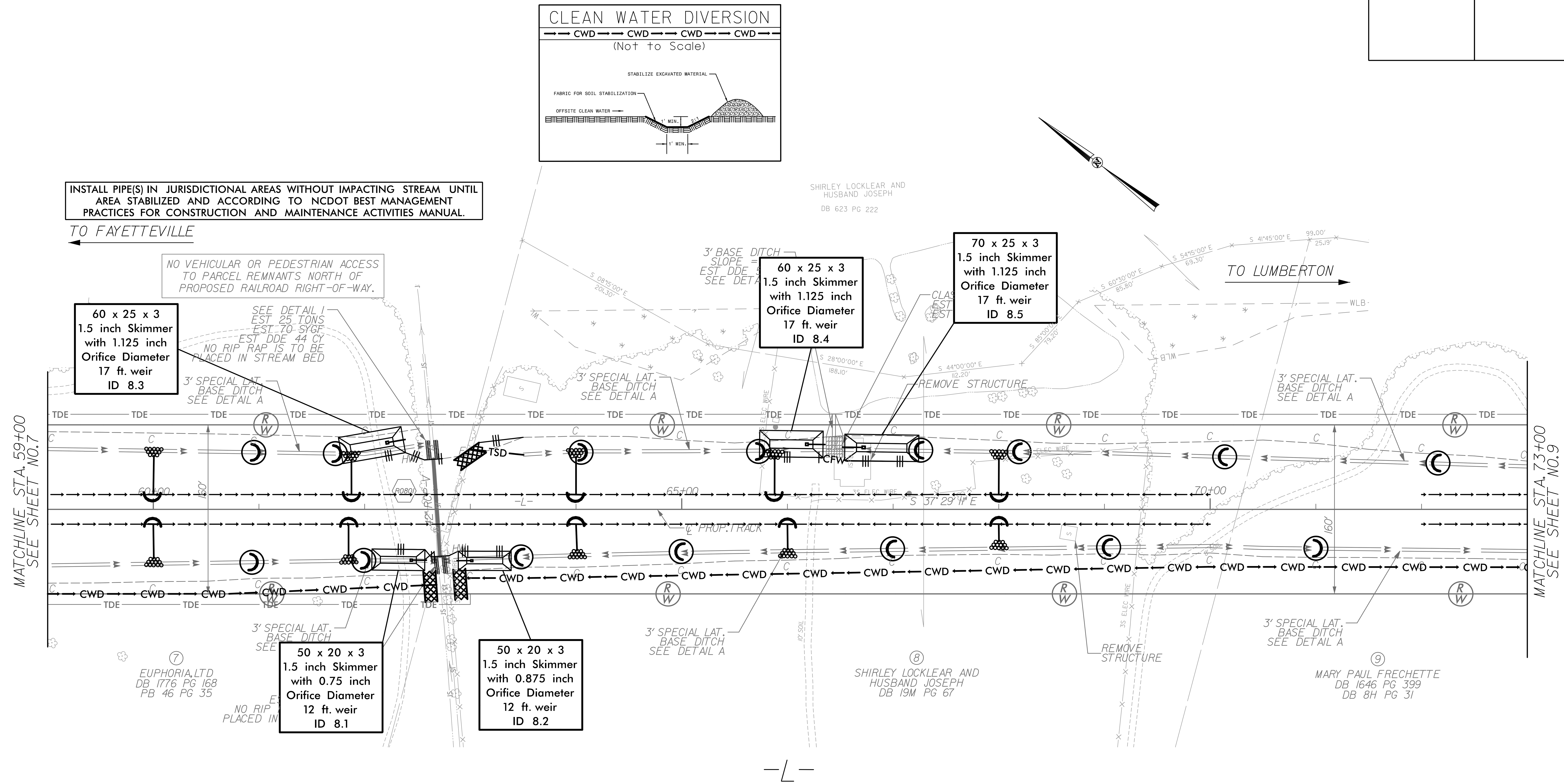
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-18/CONST.08
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



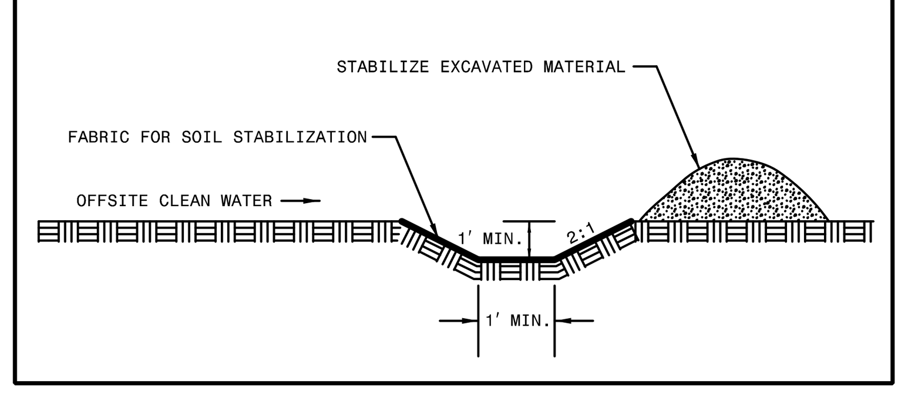
CLEAN WATER DIVERSION
CWD CWD CWD CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
FABRIC FOR SOIL STABILIZATION
OFFSITE CLEAN WATER
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.
TO FAYETTEVILLE
TO LUMBERTON
NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH
DB 623 PG 222
60 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 8.3
60 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 8.4
70 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 8.5
50 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 8.1
50 x 20 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
12 ft. weir
ID 8.2
SEE DETAIL I
EST 25 TONS
EST 70 SYGF
EST DDE 44 CY
NO RIP RAP IS TO BE PLACED IN STREAM BED
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
REMOVE STRUCTURE
TSD
CFW
TDE
CWD
60+00
65+00
70+00
S 37° 29' 11" E
℄ PROP. TRACK
160'
MATCHLINE STA. 59+00 SEE SHEET NO. 7
MATCHLINE STA. 73+00 SEE SHEET NO. 9
EUPHORIA, LTD
DB 1776 PG 168
PB 46 PG 35
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH
DB 19M PG 67
MARY PAUL FRECHETTE
DB 1646 PG 399
DB 8H PG 31
-L-

6:37:07 PM
..\05524_pembroke_EC_18.dgn
$$$$USERNAME$$$$

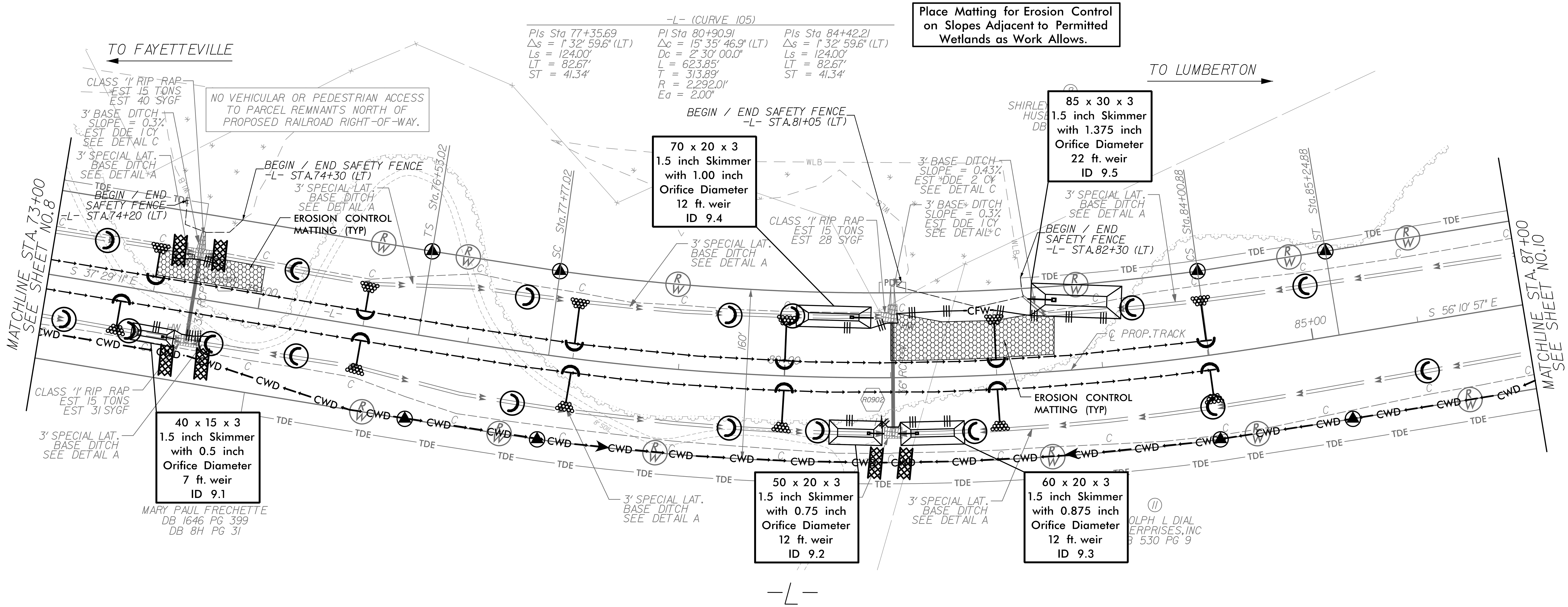
CLEAN WATER DIVERSION

—CWD— —CWD— —CWD— —CWD—

(Not to Scale)



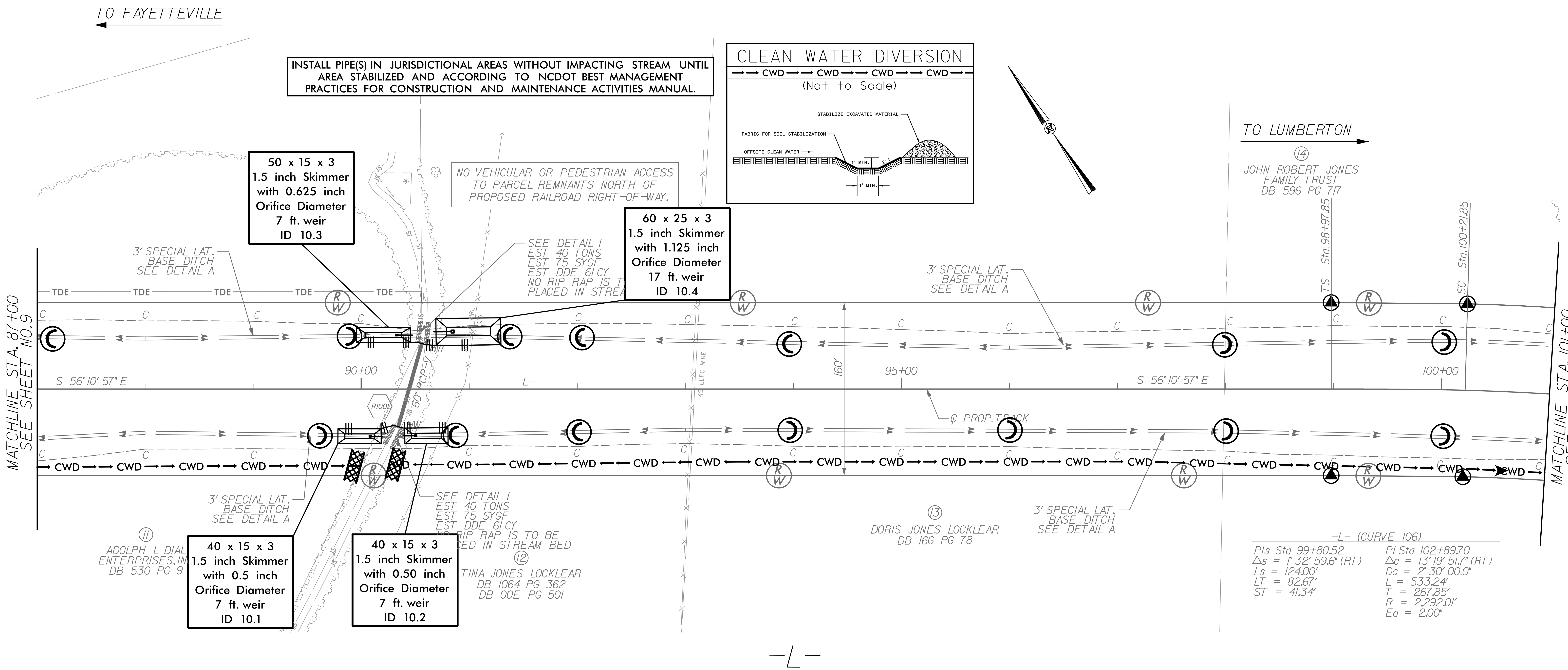
Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.


-L- (CURVE 105)
PIs Sta 77+35.69
Δs = 1° 32' 59.6" (LT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
PI Sta 80+90.91
Δc = 15° 35' 46.9" (LT)
Dc = 2° 30' 00.0"
L = 623.85'
T = 313.89'
R = 2,292.01'
Ea = 2.00"
PIs Sta 84+42.21
Δs = 1° 32' 59.6" (LT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
TO FAYETTEVILLE
TO LUMBERTON
NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.
CLASS 'I' RIP RAP EST 15 TONS EST 40 SYGF
3' BASE DITCH SLOPE = 0.3% EST DDE 1 CY SEE DETAIL C
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
BEGIN / END SAFETY FENCE -L- STA.74+20 (LT)
BEGIN / END SAFETY FENCE -L- STA.74+30 (LT)
EROSION CONTROL MATTING (TYP)
BEGIN / END SAFETY FENCE -L- STA.81+05 (LT)
70 x 20 x 3
1.5 inch Skimmer
with 1.00 inch
Orifice Diameter
12 ft. weir
ID 9.4
85 x 30 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
22 ft. weir
ID 9.5
3' BASE DITCH SLOPE = 0.43% EST DDE 2 CY SEE DETAIL C
3' BASE DITCH SLOPE = 0.3% EST DDE 1 CY SEE DETAIL C
CLASS 'I' RIP RAP EST 15 TONS EST 28 SYGF
BEGIN / END SAFETY FENCE -L- STA.82+30 (LT)
MATCHLINE STA. 73+00 SEE SHEET NO.8
MATCHLINE STA. 87+00 SEE SHEET NO.10
S 37° 29' 11" E
S 56° 10' 57" E
Sta.76+53.02
Sta.77+77.02
Sta.84+00.88
Sta.85+24.88
PROP. TRACK
CLASS 'I' RIP RAP EST 15 TONS EST 31 SYGF
40 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
7 ft. weir
ID 9.1
MARY PAUL FRECHETTE DB 1646 PG 399 DB 8H PG 31
50 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 9.2
60 x 20 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
12 ft. weir
ID 9.3
ERPRISES,INC B 530 PG 9
-L-

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-20/CONST.10
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



TO FAYETTEVILLE
TO LUMBERTON
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.
CLEAN WATER DIVERSION
CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
FABRIC FOR SOIL STABILIZATION
OFFSITE CLEAN WATER
1' MIN.
NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.
50 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
7 ft. weir
ID 10.3
60 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 10.4
40 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
7 ft. weir
ID 10.1
40 x 15 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
7 ft. weir
ID 10.2
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
SEE DETAIL I
EST 40 TONS
EST 75 SYGF
EST DDE 61 CY
NO RIP RAP IS TO BE PLACED IN STREAM BED
TDE
CWD
MATCHLINE STA. 87+00 SEE SHEET NO. 9
MATCHLINE STA. 101+00 SEE SHEET NO. 11
S 56° 10' 57" E
90+00
95+00
100+00
-L-
℄ PROP. TRACK
160'
TS Sta. 98+97.85
SC Sta. 100+21.85
14
JOHN ROBERT JONES FAMILY TRUST
DB 596 PG 717
11
ADOLPH L DIAL ENTERPRISES, IN
DB 530 PG 9
12
TINA JONES LOCKLEAR
DB 1064 PG 362
DB 00E PG 501
13
DORIS JONES LOCKLEAR
DB 166 PG 78
-L- (CURVE 106)
PIs Sta 99+80.52
Δs = 1° 32' 59.6" (RT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
PI Sta 102+89.70
Δc = 13° 19' 51.7" (RT)
Dc = 2° 30' 00.0"
L = 533.24'
T = 267.85'
R = 2,292.01'
Ea = 2.00"
-L-

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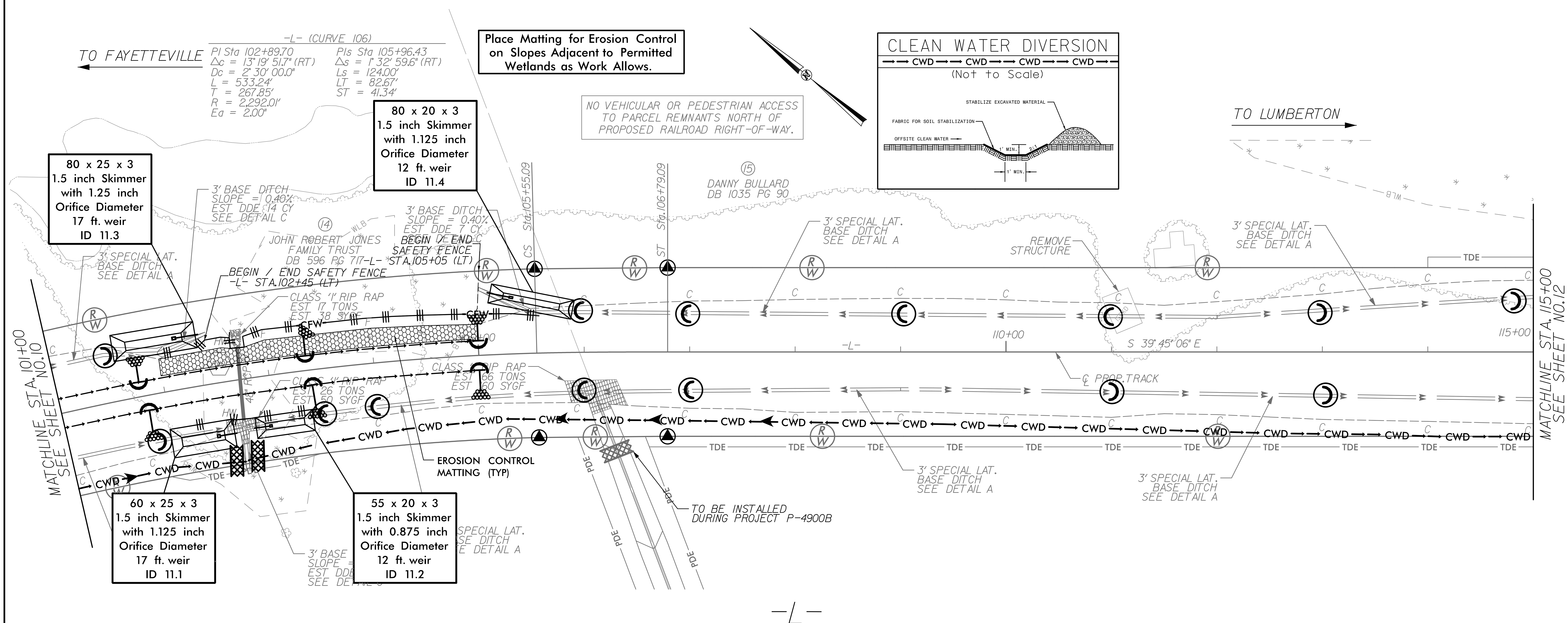
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-21/CONSTJI
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



TO FAYETTEVILLE
-L- (CURVE 106)
PI Sta 102+89.70
Δc = 13° 19' 51.7" (RT)
Dc = 2° 30' 00.0"
L = 533.24'
T = 267.85'
R = 2,292.01'
Ea = 2.00"
PIs Sta 105+96.43
Δs = 1° 32' 59.6" (RT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.
NO VEHICULAR OR PEDESTRIAN ACCESS TO PARCEL REMNANTS NORTH OF PROPOSED RAILROAD RIGHT-OF-WAY.
CLEAN WATER DIVERSION
CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
FABRIC FOR SOIL STABILIZATION
OFFSITE CLEAN WATER
1' MIN.
TO LUMBERTON
80 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 11.3
80 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 11.4
3' BASE DITCH
SLOPE = 0.40%
EST DDE 14 CY
SEE DETAIL C
3' BASE DITCH
SLOPE = 0.40%
EST DDE 7 CY
14
JOHN ROBERT JONES
FAMILY TRUST
DB 596 PG 717-L-
BEGIN / END
SAFETY FENCE
STA.105+05 (LT)
BEGIN / END SAFETY FENCE
-L- STA.102+45 (LT)
3' SPECIAL LAT.
BASE DITCH
SEE DETAIL A
CLASS 'I' RIP RAP
EST 17 TONS
EST 38 SYGF
CS Sta.105+55.09
ST Sta.106+79.09
15
DANNY BULLARD
DB 1035 PG 90
3' SPECIAL LAT.
BASE DITCH
SEE DETAIL A
REMOVE
STRUCTURE
3' SPECIAL LAT.
BASE DITCH
SEE DETAIL A
TDE
MATCHLINE STA.101+00
SEE SHEET NO.10
MATCHLINE STA.115+00
SEE SHEET NO.12
110+00
115+00
-L-
S 39° 45' 06" E
℄ PROP.TRACK
CLASS 'I' RIP RAP
EST 66 TONS
EST 160 SYGF
EST 26 TONS
EST 50 SYGF
CWD
PDE
EROSION CONTROL
MATTING (TYP)
TO BE INSTALLED
DURING PROJECT P-4900B
3' SPECIAL LAT.
BASE DITCH
SEE DETAIL A
60 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 11.1
55 x 20 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
12 ft. weir
ID 11.2
3' BASE
SLOPE
SEE DETAIL C
-L-

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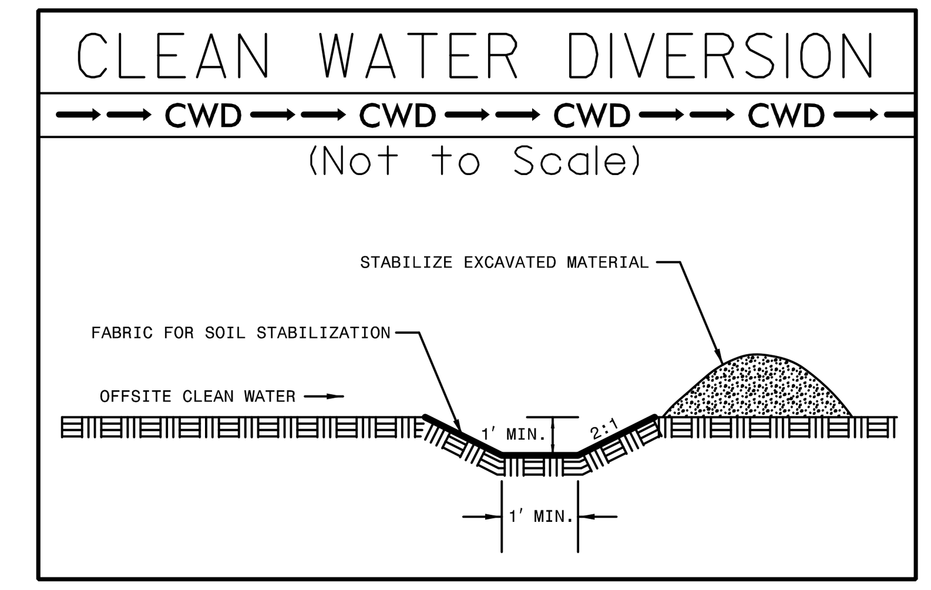
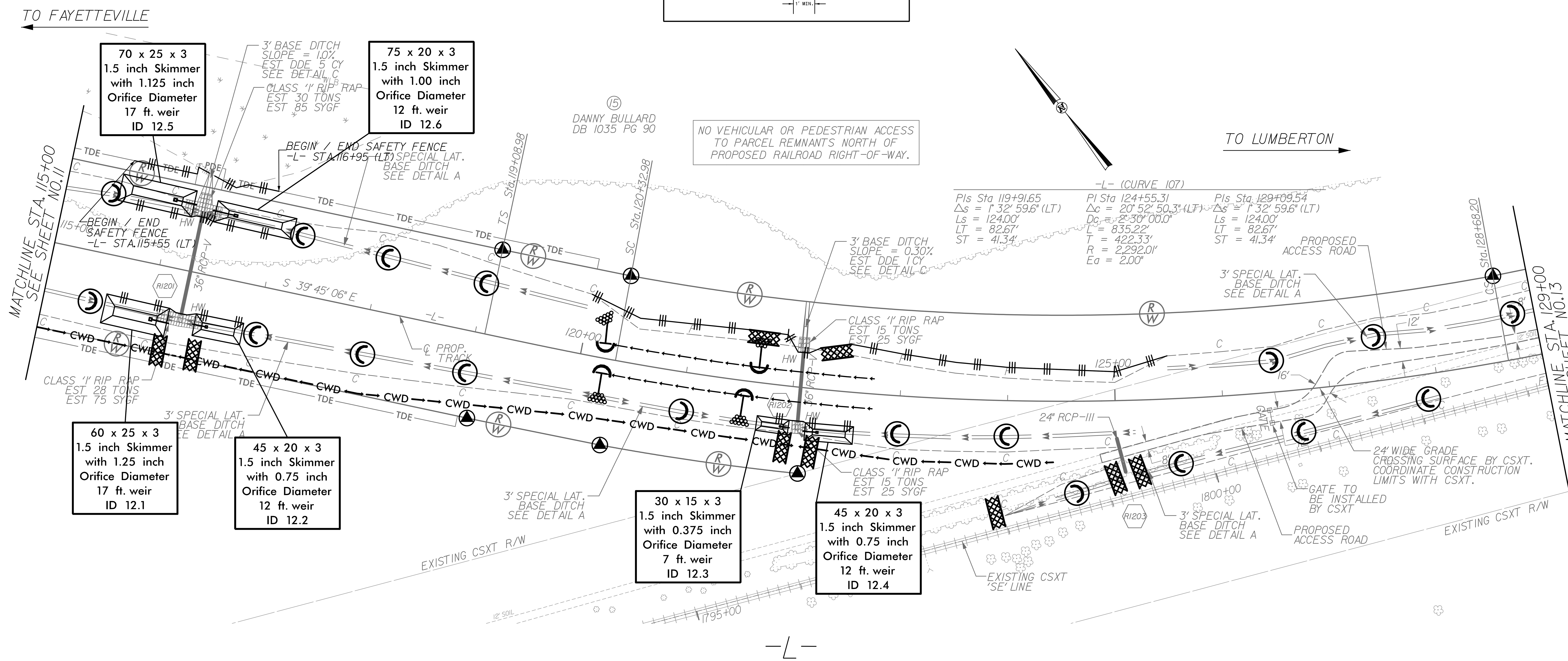
HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO.	SHEET NO.
DATE: JANUARY 19, 2015	P-4900A	EC-22/CONSTJ2
	R/W SHEET NO.	
	RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER





TO FAYETTEVILLE
TO LUMBERTON
70 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
17 ft. weir
ID 12.5
75 x 20 x 3
1.5 inch Skimmer
with 1.00 inch
Orifice Diameter
12 ft. weir
ID 12.6
60 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 12.1
45 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 12.2
30 x 15 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
7 ft. weir
ID 12.3
45 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 12.4
3' BASE DITCH
SLOPE = 1.0%
EST DDE 5 CY
SEE DETAIL C
CLASS 'I' RIP RAP
EST 30 TONS
EST 85 SYGF
BEGIN / END SAFETY FENCE
-L- STA.116+95 (LT)
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
15
DANNY BULLARD
DB 1035 PG 90
NO VEHICULAR OR PEDESTRIAN ACCESS
TO PARCEL REMNANTS NORTH OF
PROPOSED RAILROAD RIGHT-OF-WAY.
MATCHLINE STA.115+00 SEE SHEET NO.11
BEGIN / END SAFETY FENCE
-L- STA.115+55 (LT)
TS Sta.119+08.98
SC Sta.120+32.98
S 39°45' 06" E
-L-
℄ PROP. TRACK
36" RCP-V
CLASS 'I' RIP RAP
EST 28 TONS
EST 75 SYGF
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
3' BASE DITCH
SLOPE = 0.30%
EST DDE 1 CY
SEE DETAIL C
CLASS 'I' RIP RAP
EST 15 TONS
EST 25 SYGF
-L- (CURVE 107)
PIs Sta 119+91.65
Δs = 1°32' 59.6" (LT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
PI Sta 124+55.31
Δc = 20°52' 50.3" (LT)
Dc = 2°30' 00.0"
L = 835.22'
T = 422.33'
R = 2,292.01'
Ea = 2.00"
PIs Sta 129+09.54
Δs = 1°32' 59.6" (LT)
Ls = 124.00'
LT = 82.67'
ST = 41.34'
PROPOSED ACCESS ROAD
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
CS Sta.128+68.20
MATCHLINE STA.129+00 SEE SHEET NO.13
120+00
125+00
R1201
R1202
R1203
CLASS 'I' RIP RAP
EST 15 TONS
EST 25 SYGF
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
24" RCP-III
1800+00
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
GATE TO BE INSTALLED BY CSXT
PROPOSED ACCESS ROAD
24' WIDE GRADE CROSSING SURFACE BY CSXT. COORDINATE CONSTRUCTION LIMITS WITH CSXT.
EXISTING CSXT R/W
EXISTING CSXT R/W
EXISTING CSXT 'SE' LINE
1795+00
CWD
TDE
HW
-L-

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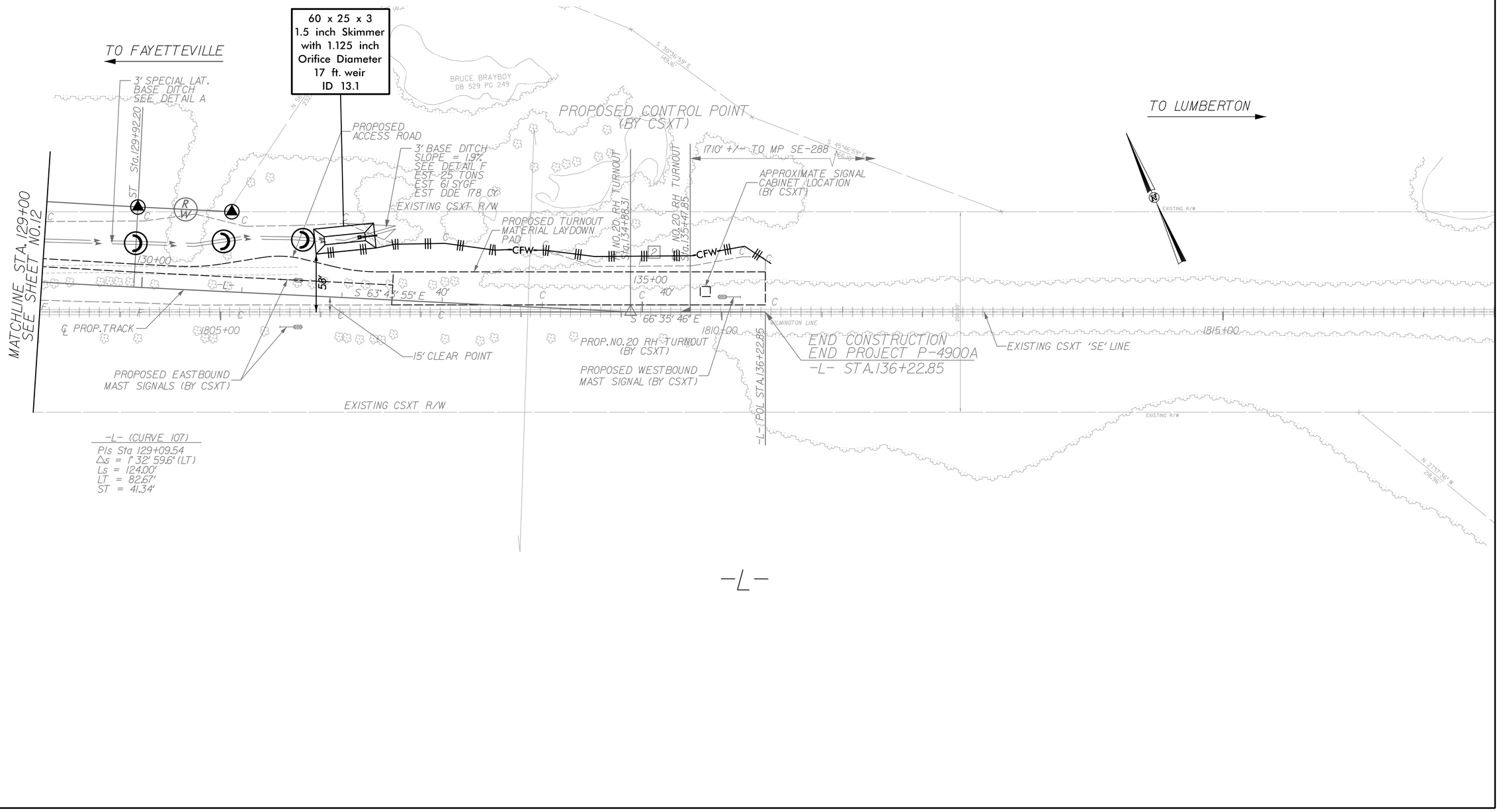
DATE: JANUARY 19, 2015

PROJECT REFERENCE NO.	SHEET NO.
P-4900A	EC-23/CONST.13
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER



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