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COMPUTED BY: JLS DATE: 1/28/2014
 CHECKED BY: JYP DATE: 3/12/2015

(4-21-15)

PROJECT NO.	SHEET NO.
34360.1.2 (R-1015)	3G-1

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
-SERVRD-	32+80	56+74	RT	SD	2400
				SD	4000
				TOTAL LF:	6400

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

**SUMMARY OF
 BRIDGE WAITING PERIODS**

Bridge Description	End Bent/ Bent No.	MONTHS
BRIDGE 276 OVER EAST PRONG OF SLOCUM CREEK ON US 70 BYPASS (LEFT LANES)	EB #2	3
BRIDGE 277 OVER EAST PRONG OF SLOCUM CREEK ON US 70 BYPASS (RIGHT LANES)	EB #2	3
BRIDGE 278 OVER CAMP LEJEUNE RR ON US 70 BYPASS (LEFT LANES)	EB #1 & #2	1
BRIDGE 279 OVER CAMP LEJEUNE RR ON US 70 BYPASS (RIGHT LANES)	EB #1 & #2	1
BRIDGE 280 OVER US 70 BYPASS ON SR 1756	EB #1 & #2	1
BRIDGE 284 OVER NCRRL ON US 70 BYPASS (LEFT LANES)	EB #1 & #2	2
BRIDGE 284 OVER NCRRL ON US 70 BYPASS (RIGHT LANES)	EB #1 & #2	2
BRIDGE 286 ON US 70 BYPASS OVER US 70 BUS LEFT LANES	EB #1 & #2	2
BRIDGE 287 ON US 70 BYPASS OVER US 70 BUS RIGHT LANES	EB #1 & #2	2

**SUMMARY OF
 SETTLEMENT GAUGES**

Gauge No.	LINE	Approx. Station	Approx. Offset
1	-L-	186+00	60ft LT
2	-L-	186+00	60ft RT
		TOTAL GAUGES (EACH):	2

**SUMMARY OF PERMANENT SOIL
 REINFORCEMENT MAT**

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	SY
-L-	2.75:1	345+25	2.75:1	351+25	LT	1380
-L-	2.75:1	349+75	2.75:1	380+25	RT	8320
-L-	2.75:1	389+75	2.75:1	393+25	LT	800
					TOTAL SY:	10500

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS	
-L-	32+80	547+00							50600	
-LP2A-	83+75	87+25	ASU			650				
			ASU	12	1000	1900	3000			
					TOTAL CY/TONS/SY:	1000	2550	3000*	0	50600

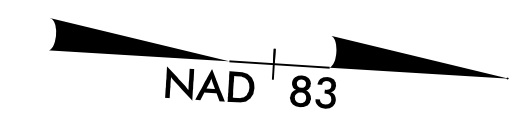
ASU = Aggregate Subgrade, AST = Aggregate Stabilization
 *Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

8/17/99

PROJECT REFERENCE NO. R-1015	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

-L-
 PI Sta 33+69.33
 $\Delta = 17' 46' 26.7" (RT)$
 $D = 3' 19' 35.2"$
 $L = 534.33'$
 $T = 269.33'$
 $R = 1,722.44'$
 $SE = 0.08$
 $RO = 320.00'$
 $DS = 60 \text{ mph}$

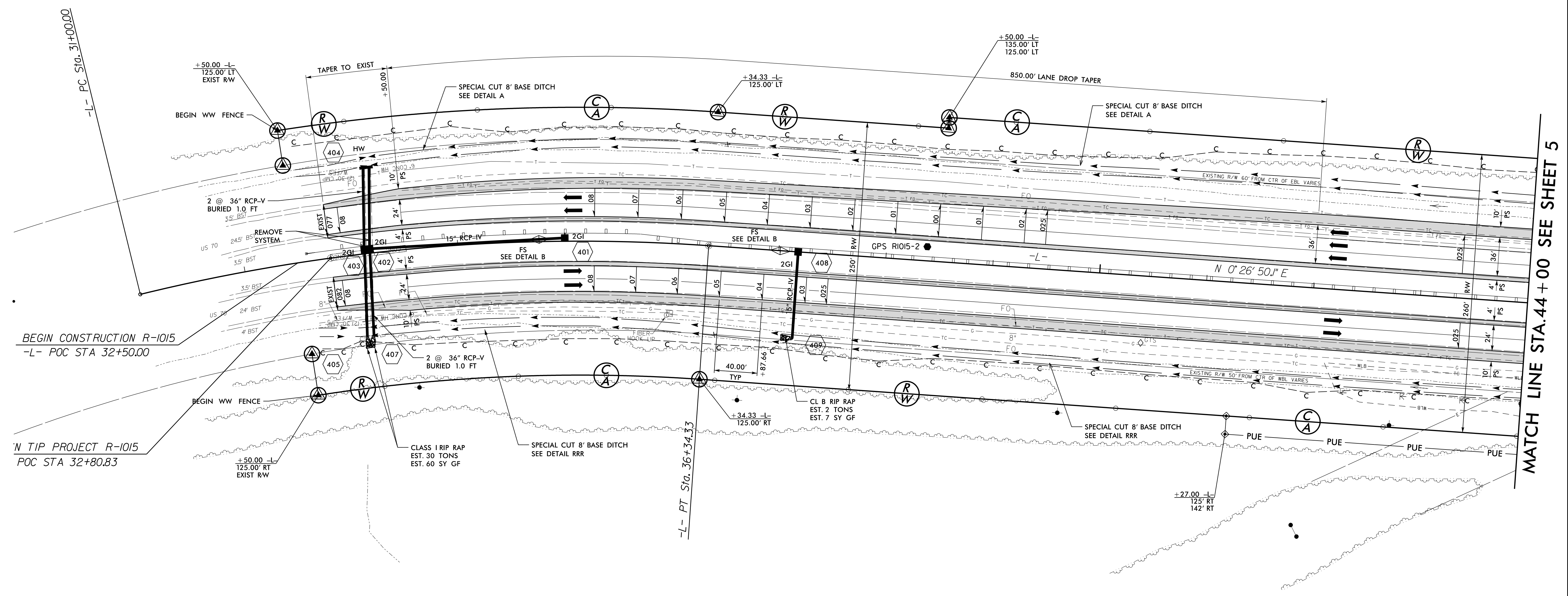
DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)



1

35

40



BEGIN CONSTRUCTION R-1015
 -L- POC STA 32+50.00

'N TIP PROJECT R-1015
 POC STA 32+80.83

MATCH LINE STA. 44 + 00 SEE SHEET 5

DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)

1

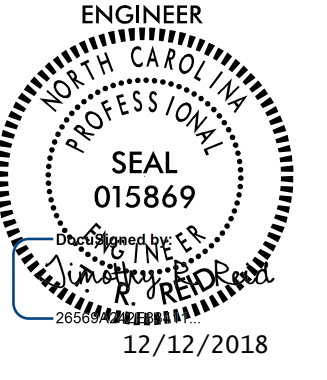


SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

SEE RDWY STD DWGS 865.01
 FOR CABLE GUIDERAIL INSTALLATION

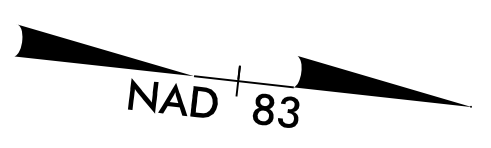
SEE SHEET 49 FOR PROFILE -L-

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8/17/99

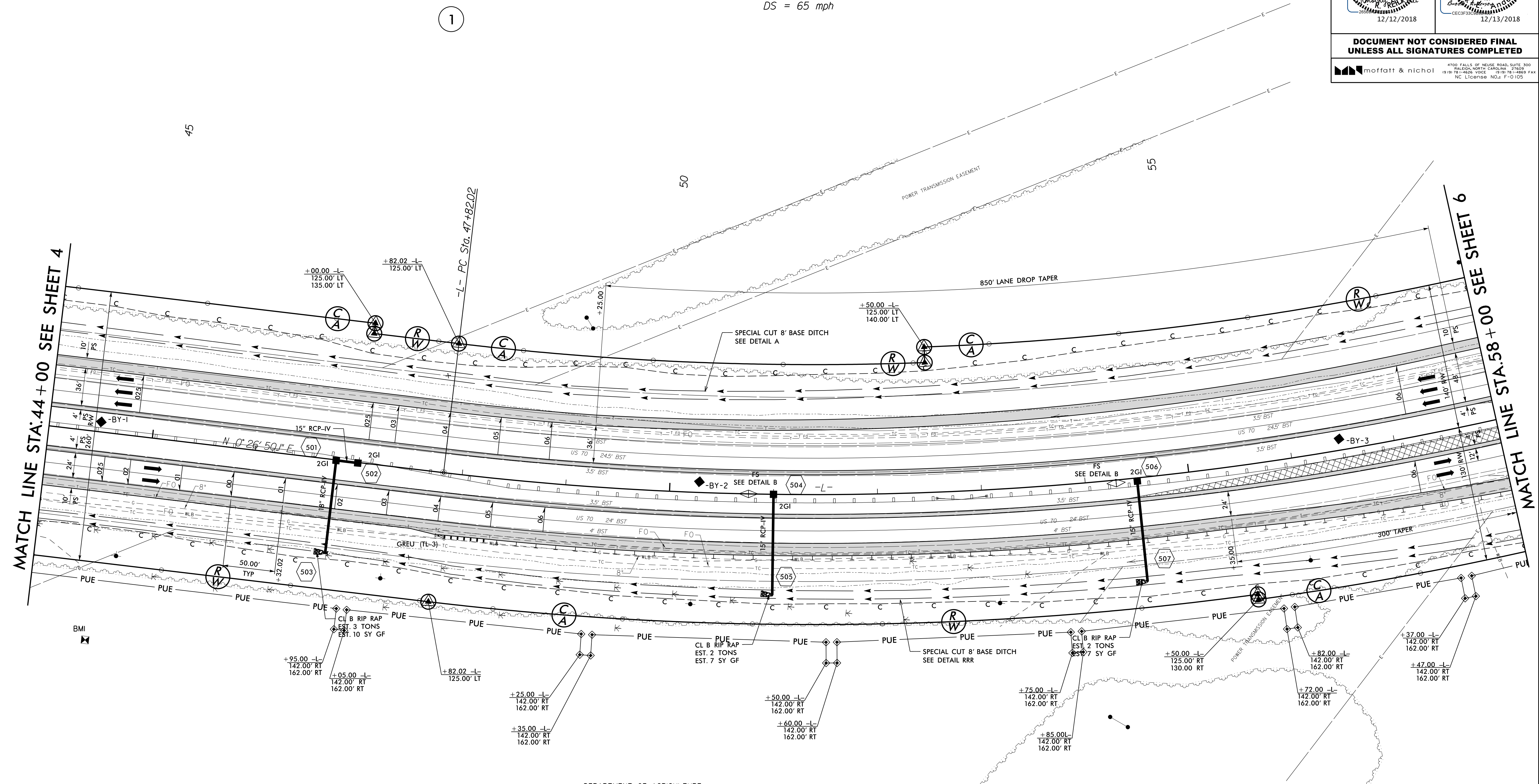
PROJECT REFERENCE NO. R-1015		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC License No. F-0105	

-L-
 PI Sta 58+21.81
 $\Delta = 38^{\circ} 01' 15.2''$ (LT)
 $D = 1' 53' 54.5''$
 $L = 2,002.71'$
 $T = 1,039.80'$
 $R = 3,018.00'$
 $SE = 0.06$
 $RO = 300.00'$
 $DS = 65$ mph



DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)

1



DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)

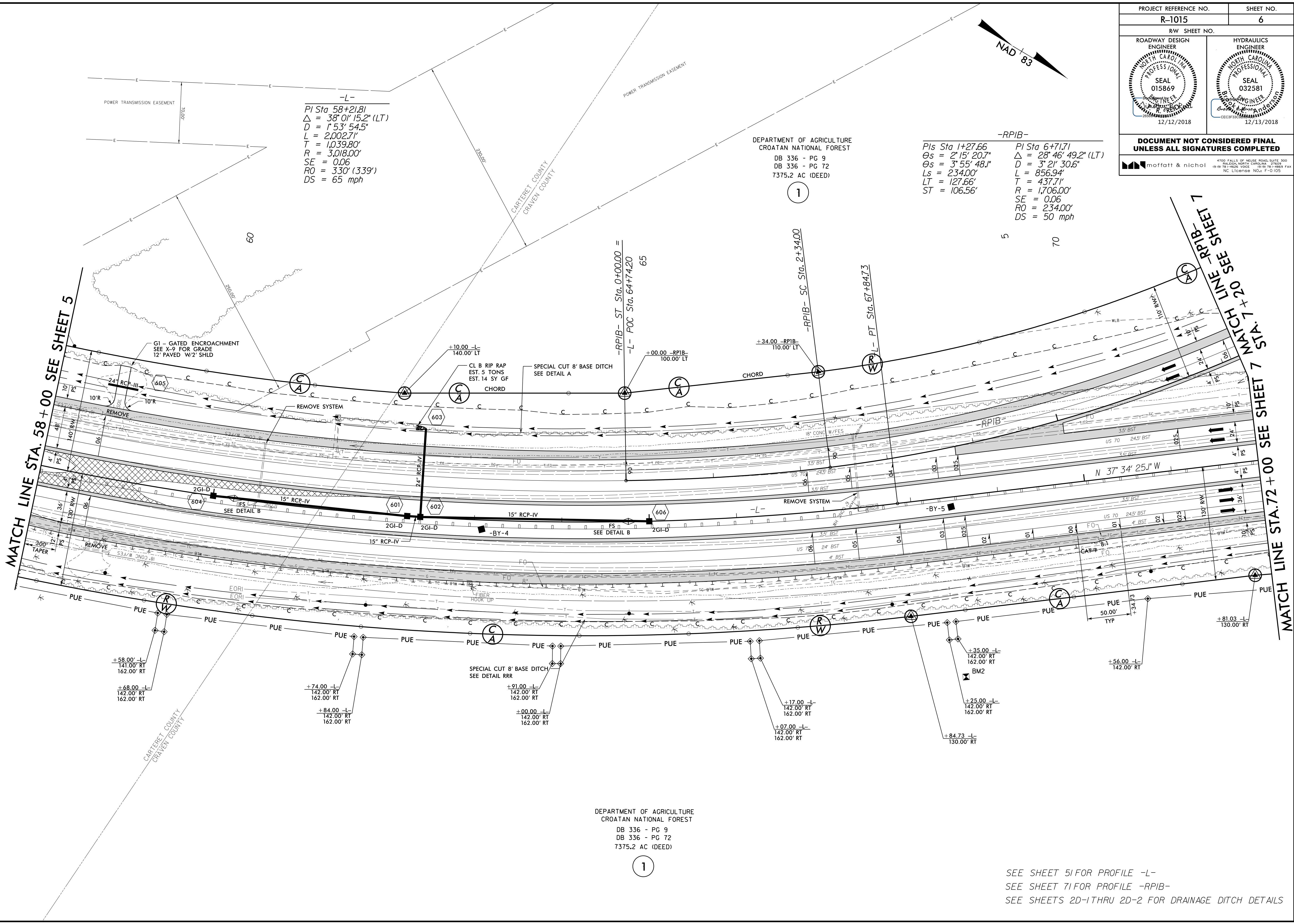
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SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS
 SEE SHEET 50 FOR PROFILE -L-

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8/17/19

PROJECT REFERENCE NO. R-1015		SHEET NO. 6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018		HYDRAULICS ENGINEER SEAL 032581 12/13/2018	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p>moftatt & nichol</p> <p>4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC LICENSE NO. F-0105</p>			



-L-

PI Sta 58+21.81
 $\Delta = 38^{\circ} 01' 15.2''$ (LT)
 $D = 1^{\circ} 53' 54.5''$
 $L = 2,002.71'$
 $T = 1,039.80'$
 $R = 3,018.00'$
 $SE = 0.06$
 $RO = 330' (339')$
 $DS = 65$ mph

DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)

1

-RPIB-

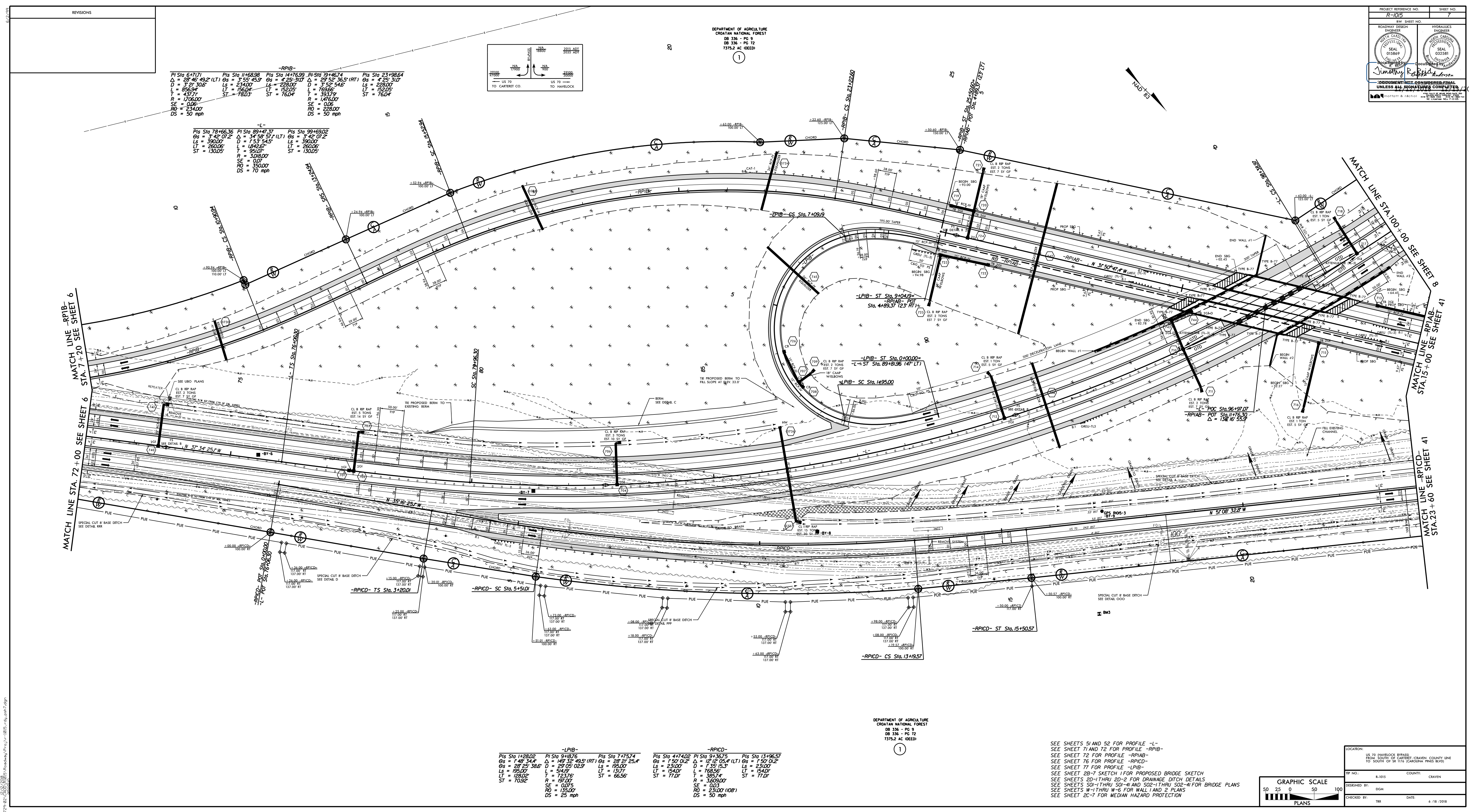
PIs Sta 1+27.66 PI Sta 6+71.71
 $\Theta_s = 2^{\circ} 15' 20.7''$ $\Delta = 28^{\circ} 46' 49.2''$ (LT)
 $\Theta_s = 3^{\circ} 55' 48.1''$ $D = 3^{\circ} 21' 30.6''$
 $L_s = 234.00'$ $L = 856.94'$
 $LT = 127.66'$ $T = 437.71'$
 $ST = 106.56'$ $R = 1,706.00'$
 $SE = 0.06$
 $RO = 234.00'$
 $DS = 50$ mph

DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 DB 336 - PG 9
 DB 336 - PG 72
 7375.2 AC (DEED)

1

SEE SHEET 5 FOR PROFILE -L-
 SEE SHEET 7 FOR PROFILE -RPIB-
 SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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 12/12/2018 10:15:29 AM
 10/15/19 10:15:29 AM



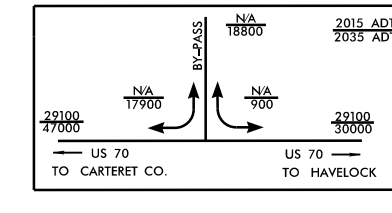
REVISIONS

-RP1B-

PI Sta 6+71.71	PI Sta 11+68.98	PI Sta 14+76.99	PI Sta 19+46.74	PI Sta 23+98.64
Δ = 28° 46' 49.2" (LT)	Δ = 3° 55' 45.9"	Δ = 4° 28' 31.0"	Δ = 29° 52' 36.5" (RT)	Δ = 4° 25' 31.0"
D = 37° 30.0'	Ls = 234.00'	Ls = 228.00'	D = 3° 52' 54.8'	Ls = 228.00'
L = 856.94'	LT = 156.04'	LT = 152.05'	L = 769.66'	LT = 152.05'
R = 437.0'	ST = 78.03'	ST = 76.04'	R = 393.79'	ST = 76.04'
SE = 0.06	SE = 0.07	SE = 0.07	SE = 0.06	SE = 0.06
DS = 23.00 mph	DS = 23.00 mph	DS = 23.00 mph	DS = 23.00 mph	DS = 23.00 mph

-L-

PI Sta 78+66.36	PI Sta 89+47.37	PI Sta 99+69.02
Δ = 3° 42' 07.2"	Δ = 3° 42' 07.2"	Δ = 3° 42' 07.2"
D = 300.00'	Ls = 153.545'	Ls = 300.00'
L = 260.00'	L = 164.267'	L = 260.00'
LT = 130.05'	LT = 93.07'	LT = 130.05'
R = 308.00'	R = 308.00'	R = 308.00'
SE = 0.07	SE = 0.07	SE = 0.07
DS = 35.00 mph	DS = 35.00 mph	DS = 35.00 mph



DEPARTMENT OF AGRICULTURE
CROFTON NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG 72
1375.2 AC (RECD)

PROJECT REFERENCE NO. 8-1015 SHEET NO. 7

R-1015

ROADWAY DESIGN ENGINEER

SEAL 015889

HYDRAULICS ENGINEER

SEAL 032581

UNIVERSITY OF CALIFORNIA

UNIVERSITY OF CALIFORNIA

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.

-LP1B-

PI Sta 1+28.02	PI Sta 9+18.76	PI Sta 7+75.74
Δ = 1° 48' 34.4"	Δ = 1° 48' 34.4"	Δ = 1° 48' 34.4"
D = 28° 25' 38.8"	D = 29° 05' 02.5"	D = 29° 21' 25.4"
Ls = 195.00'	Ls = 54.05'	Ls = 131.71'
L = 128.02'	L = 72.576'	L = 97.01'
LT = 70.32'	LT = 37.01'	LT = 50.075'
R = 97.01'	R = 97.01'	R = 97.01'
SE = 0.075	SE = 0.075	SE = 0.075
DS = 25 mph	DS = 25 mph	DS = 25 mph

-RP1C-

PI Sta 4+74.02	PI Sta 9+36.75	PI Sta 13+96.57
Δ = 1° 01' 01.2"	Δ = 12° 19' 05.4" (LT)	Δ = 1° 50' 01.2"
D = 231.00'	D = 135° 15.3"	D = 231.00'
Ls = 154.00'	Ls = 768.56'	Ls = 154.00'
L = 77.01'	L = 385.74'	L = 77.01'
R = 369.00'	R = 369.00'	R = 369.00'
SE = 0.075	SE = 0.075	SE = 0.075
DS = 23.00 mph	DS = 23.00 mph	DS = 23.00 mph

SEE SHEETS 51 AND 52 FOR PROFILE -L-
SEE SHEET 71 AND 72 FOR PROFILE -RP1B-
SEE SHEET 72 FOR PROFILE -RP1C-
SEE SHEET 76 FOR PROFILE -RP1D-
SEE SHEET 77 FOR PROFILE -LP1B-
SEE SHEET 28-T SKETCH 1 FOR PROPOSED BRIDGE SKETCH
SEE SHEETS 20-1 THRU 20-2 FOR DRAINAGE DITCH DETAILS
SEE SHEETS 50-1 THRU 50-4 AND 50-2-1 THRU 50-2-4 FOR BRIDGE PLANS
SEE SHEETS W-1 THRU W-6 FOR WALL 1 AND 2 PLANS
SEE SHEET 20-T FOR MEDIAN HAZARD PROTECTION

LOCATION: 0.75 HAWLECK BRIDGE FROM SOUTH OF EASTBET CROFTON COUNTY LINE 100 SOUTH OF SA 119, CROFTON PINES BLVD

TR NO. 8-1015 COUNTY: CROFTON

DESIGNED BY: DGM

CHECKED BY: TR DATE: 6/18/2018

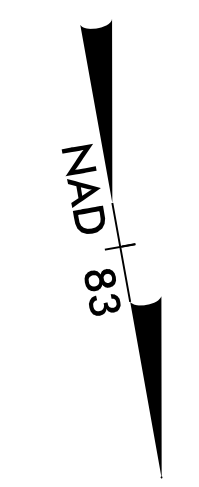
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-L-
Pls Sta 99+69.02
 $\theta_s = 3^\circ 42' 07.2''$
Ls = 390.00'
LT = 260.06'
ST = 130.05'

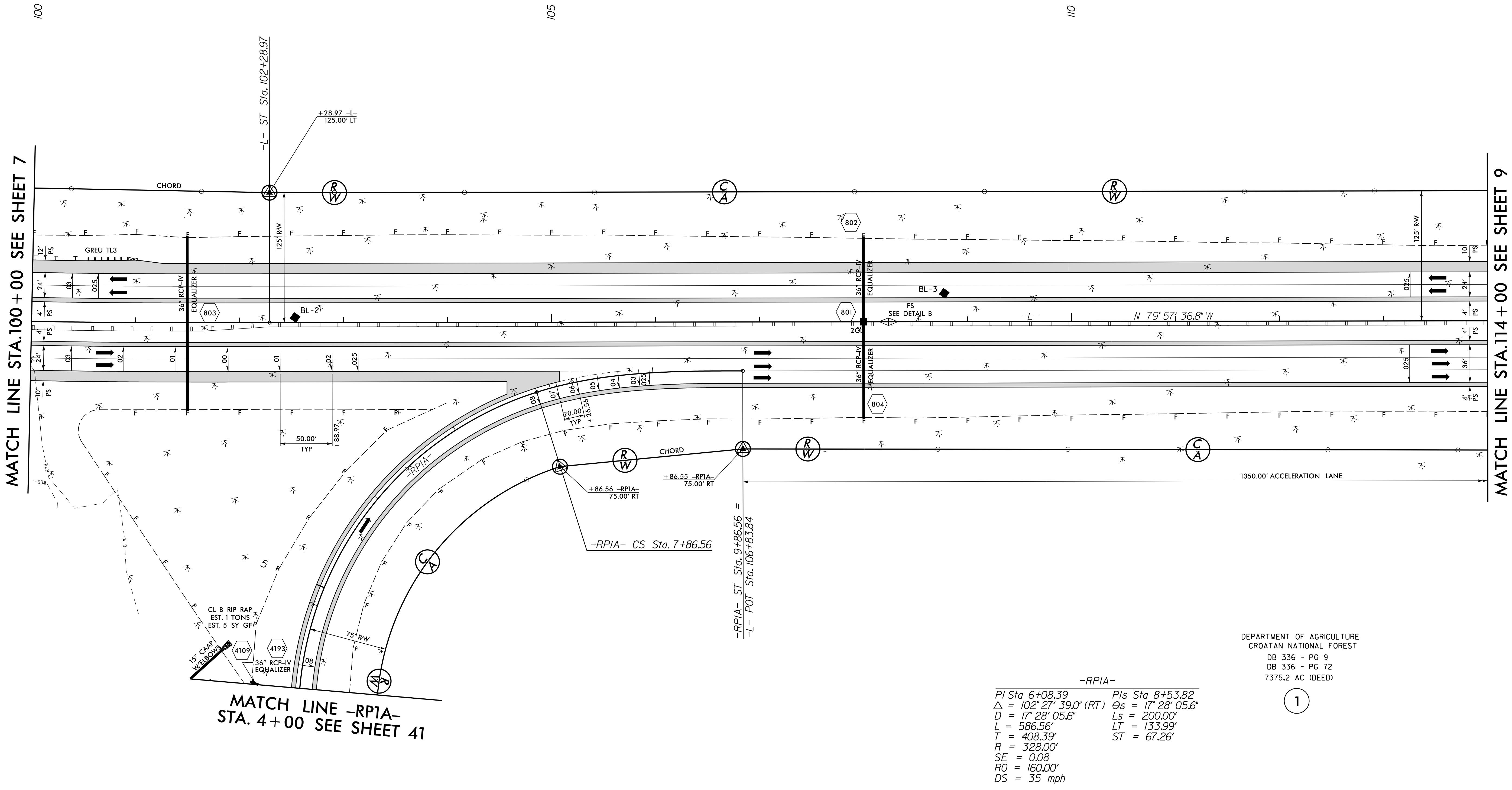
DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG 72
7375.2 AC (DEED)

1

BM5



PROJECT REFERENCE NO. R-1015	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol 4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27603 (919) 781-4626 VOICE (919) 781-4869 FAX NC LICENSE NO. F-0105	



MATCH LINE -RPIA-
STA. 4 + 00 SEE SHEET 41

-RPIA-
 PI Sta 6+08.39 Pls Sta 8+53.82
 $\Delta = 102^\circ 27' 39.0''$ (RT) $\theta_s = 17^\circ 28' 05.6''$
 $D = 17^\circ 28' 05.6''$ Ls = 200.00'
 L = 586.56' LT = 133.99'
 T = 408.39' ST = 67.26'
 R = 328.00'
 SE = 0.08
 RO = 160.00'
 DS = 35 mph

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG 72
7375.2 AC (DEED)

1

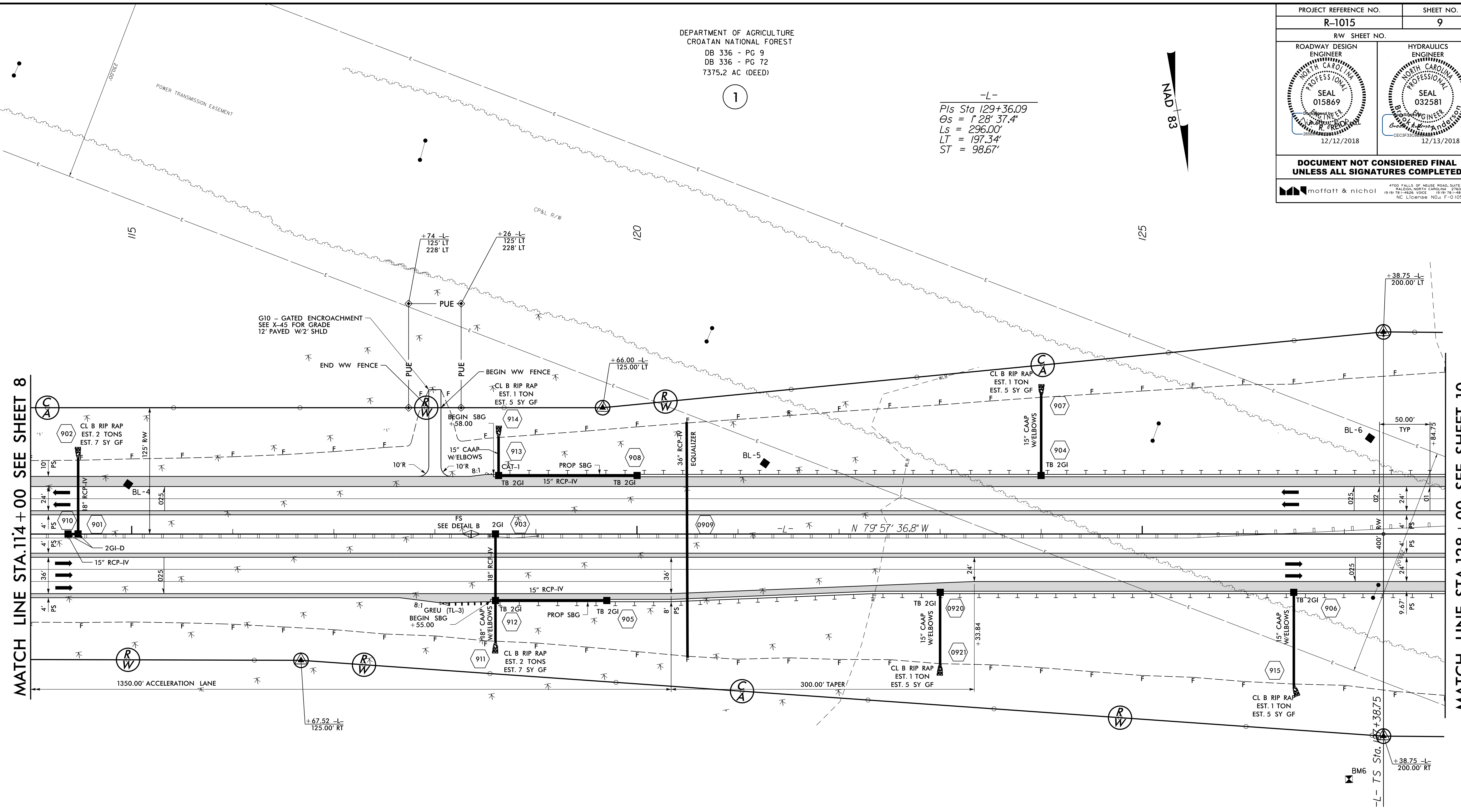
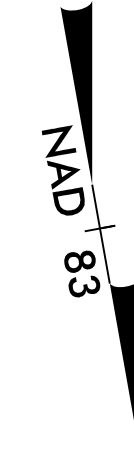
SEE SHEET 52 FOR PROFILE -L-
SEE SHEET 71 FOR PROFILE -RPIA-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

8/17/19

PROJECT REFERENCE NO. R-1015		SHEET NO. 9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018		HYDRAULICS ENGINEER SEAL 032581 12/13/2018	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
moffatt & nichol		4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27603 (919) 781-4626 VOICE (919) 781-4669 FAX NC License No. F-0105	

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG T2
7375.2 AC (DEED)

-L-
Pls Sta 129+36.09
Os = 1' 28' 37.4"
Ls = 296.00'
LT = 197.34'
ST = 98.67'



MATCH LINE STA. 114 + 00 SEE SHEET 8

MATCH LINE STA. 128 + 00 SEE SHEET 10

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG T2
7375.2 AC (DEED)

1

SEE SHEETS 53 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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8/17/99

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG 72
7375.2 AC (DEED)

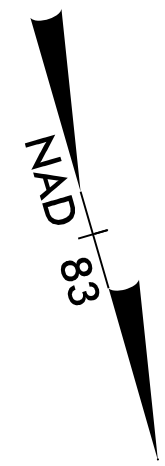
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-L-
Pls Sta 129+36.09 PI Sta 137+14.92
 $\Theta_s = 1^\circ 28' 37.4''$ $\Delta = 13^\circ 30' 48.2''$ (RT)
 $L_s = 296.00'$ $D = 0^\circ 59' 52.8''$
 $LT = 197.34'$ $L = 1,354.03'$
 $ST = 98.67'$ $T = 680.17'$
 $R = 5,741.00'$
 $SE = 0.04$
 $RO = 200.00'$
 $DS = 70$ mph

-RR EYI-
POT Sta. 10+00.00

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

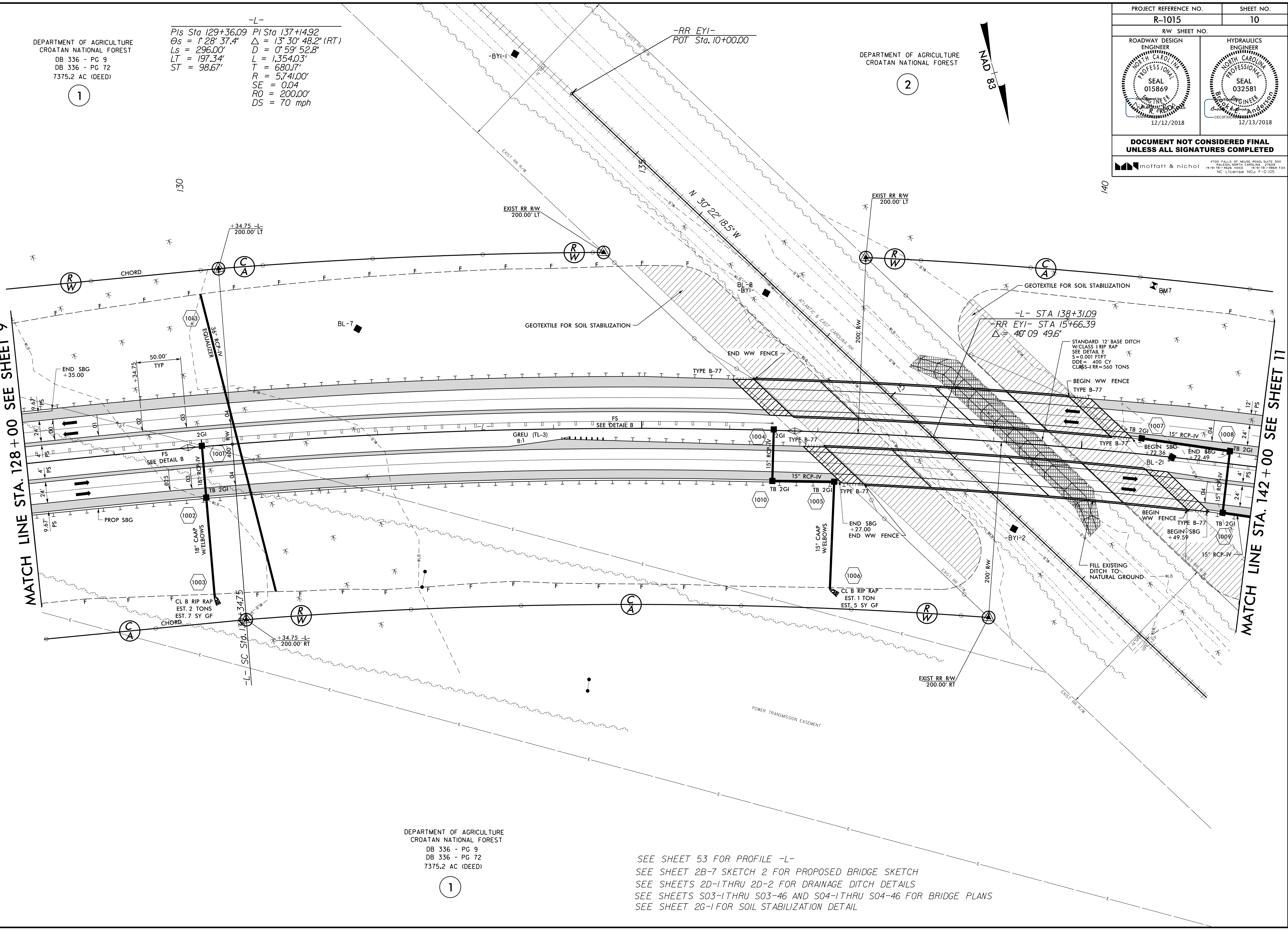
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PROJECT REFERENCE NO. R-1015	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

MATCH LINE STA. 128 + 00 SEE SHEET 9

MATCH LINE STA. 142 + 00 SEE SHEET 11



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
DB 336 - PG 9
DB 336 - PG 72
7375.2 AC (DEED)

1

SEE SHEET 53 FOR PROFILE -L-
SEE SHEET 2B-7 SKETCH 2 FOR PROPOSED BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS
SEE SHEETS S03-1 THRU S03-46 AND S04-1 THRU S04-46 FOR BRIDGE PLANS
SEE SHEET 26-1 FOR SOIL STABILIZATION DETAIL

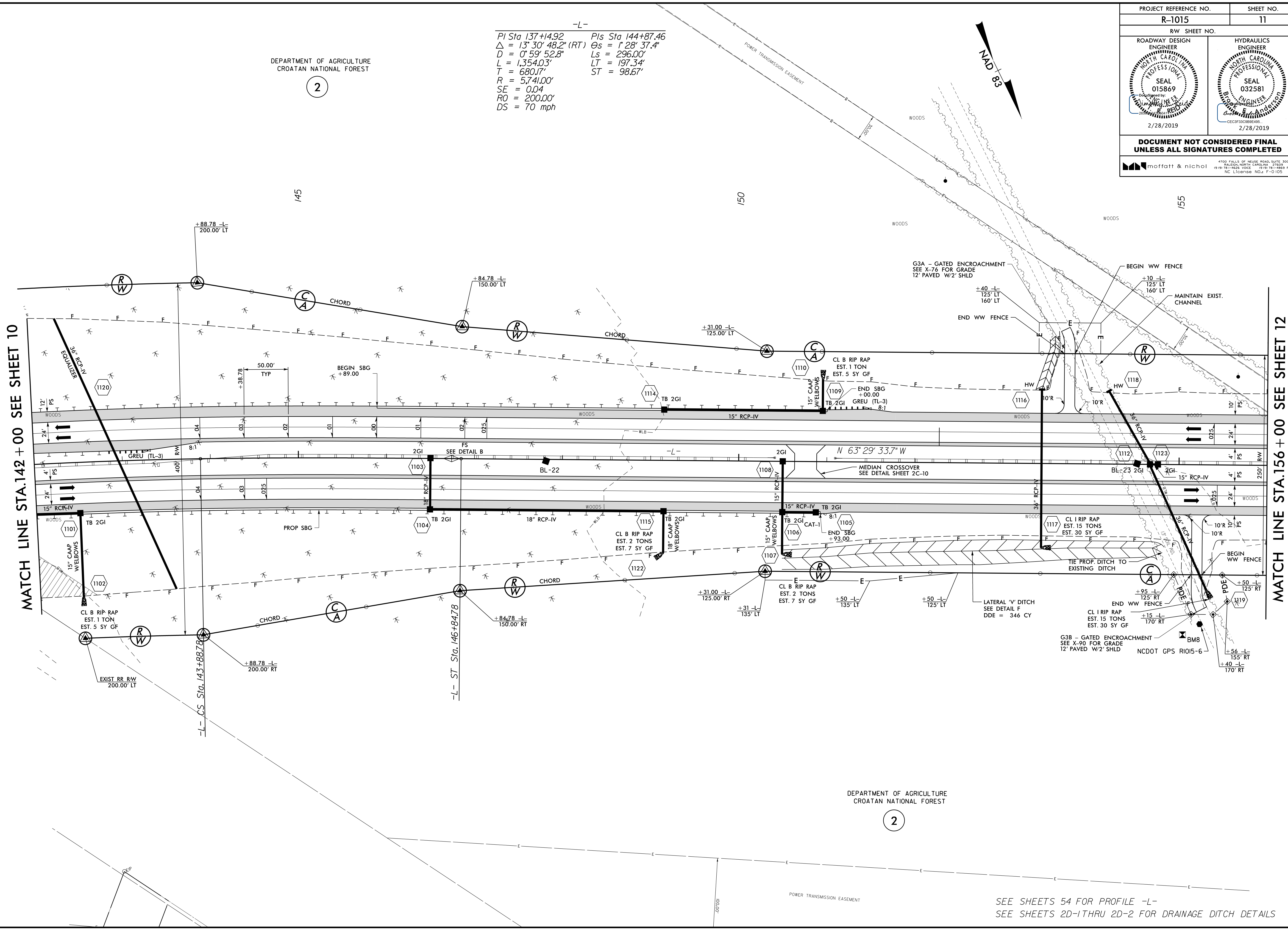
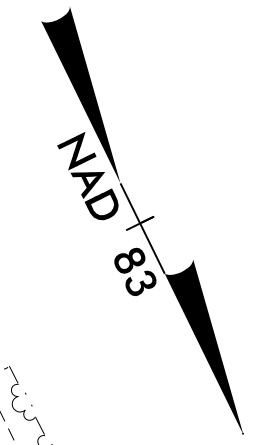
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8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 MOTT & NICHOL	HYDRAULICS ENGINEER SEAL 032581 MOTT & NICHOL
2/28/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

-L-
 PIs Sta 137+14.92 PIs Sta 144+87.46
 $\Delta = 13^{\circ} 30' 48.2''$ (RT) $\Theta_s = 1^{\circ} 28' 37.4''$
 $D = 0^{\circ} 59' 52.8''$ $L_s = 296.00'$
 $L = 1,354.03'$ $LT = 197.34'$
 $T = 680.17'$ $ST = 98.67'$
 $R = 5,741.00'$
 $SE = 0.04$
 $RO = 200.00'$
 $DS = 70$ mph

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2



MATCH LINE STA. 142 + 00 SEE SHEET 10

MATCH LINE STA. 156 + 00 SEE SHEET 12

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

SEE SHEETS 54 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

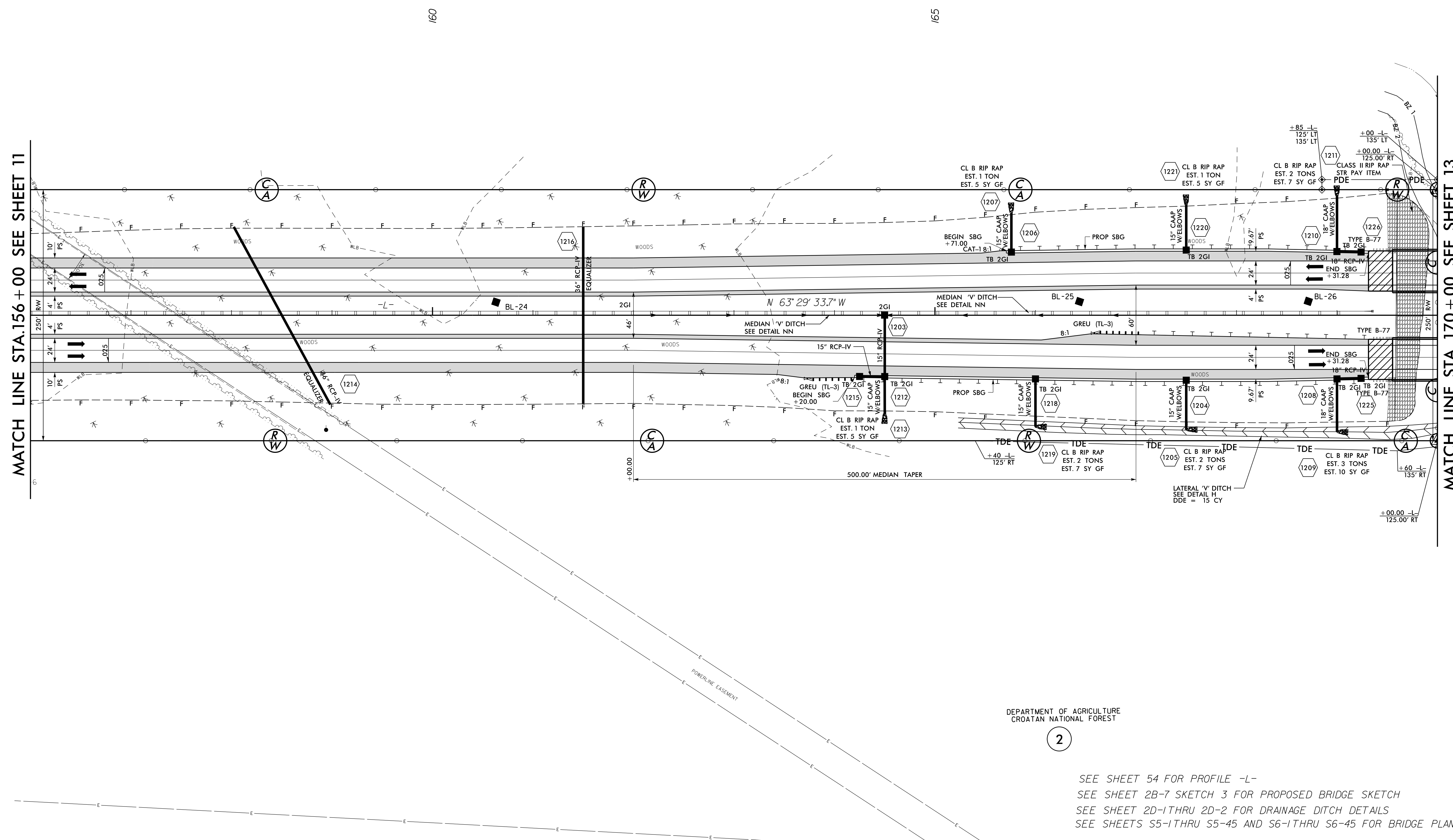
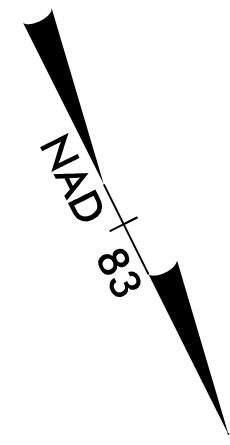
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8/17/19

PROJECT REFERENCE NO.		SHEET NO.	
R-1015		12	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
2/28/2019		2/28/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
moffatt & nichol		<small>4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License No. F-0105</small>	

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2



MATCH LINE STA. 156 + 00 SEE SHEET 11

MATCH LINE STA. 170 + 00 SEE SHEET 13

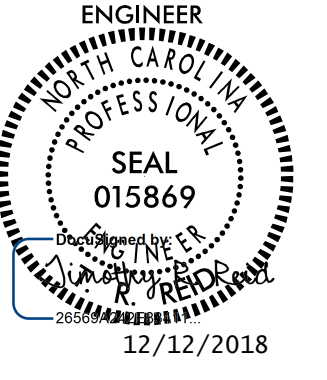


DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

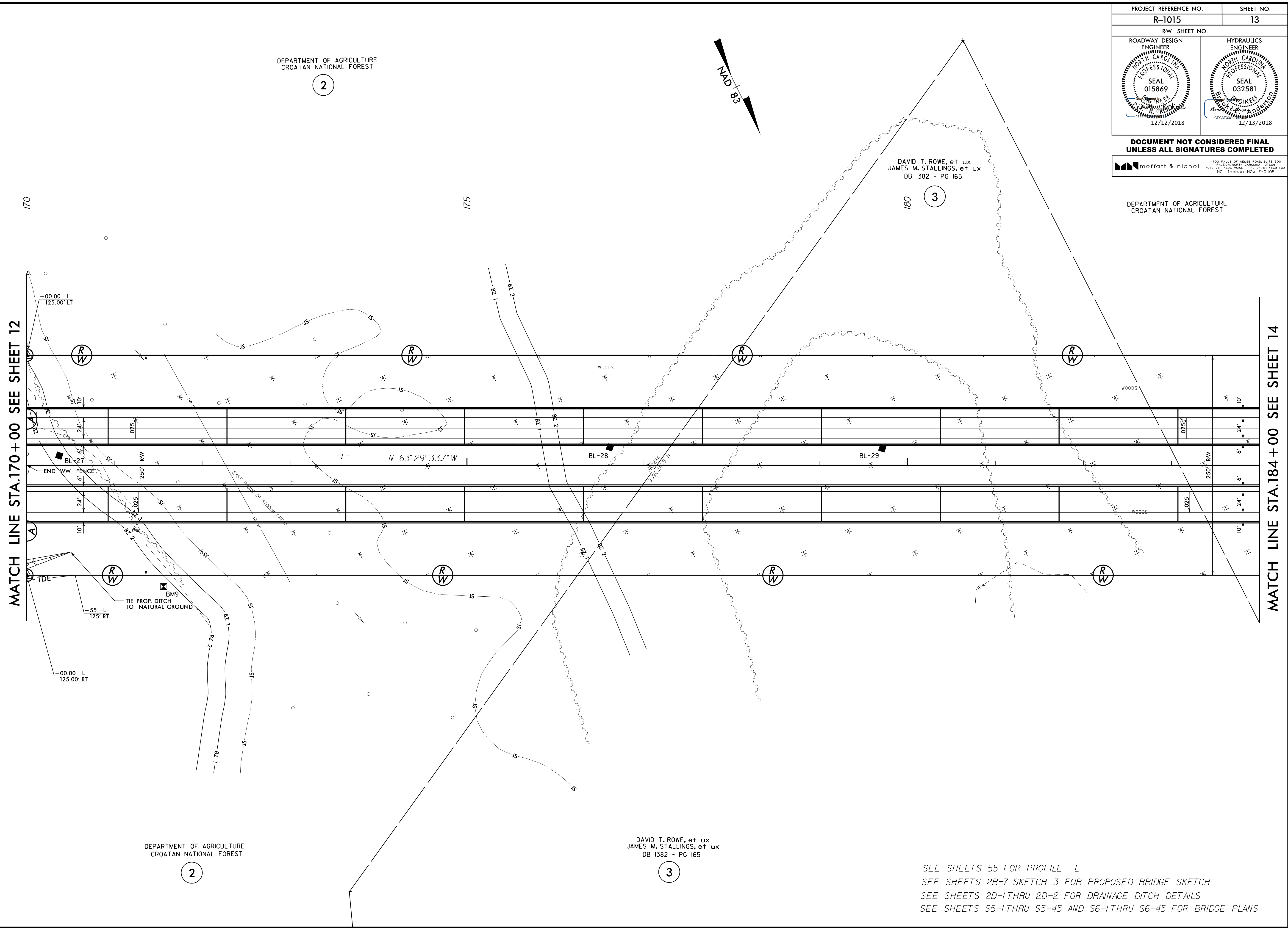
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SEE SHEET 54 FOR PROFILE -L-
 SEE SHEET 2B-7 SKETCH 3 FOR PROPOSED BRIDGE SKETCH
 SEE SHEET 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS
 SEE SHEETS S5-1 THRU S5-45 AND S6-1 THRU S6-45 FOR BRIDGE PLANS

2/28/2019
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8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <small>4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC LICENSE NO. F-0105</small>	



MATCH LINE STA.170 + 00 SEE SHEET 12

MATCH LINE STA.184 + 00 SEE SHEET 14

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

DAVID T. ROWE, et ux
JAMES M. STALLINGS, et ux
DB 1382 - PG 165
3

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

DAVID T. ROWE, et ux
JAMES M. STALLINGS, et ux
DB 1382 - PG 165
3

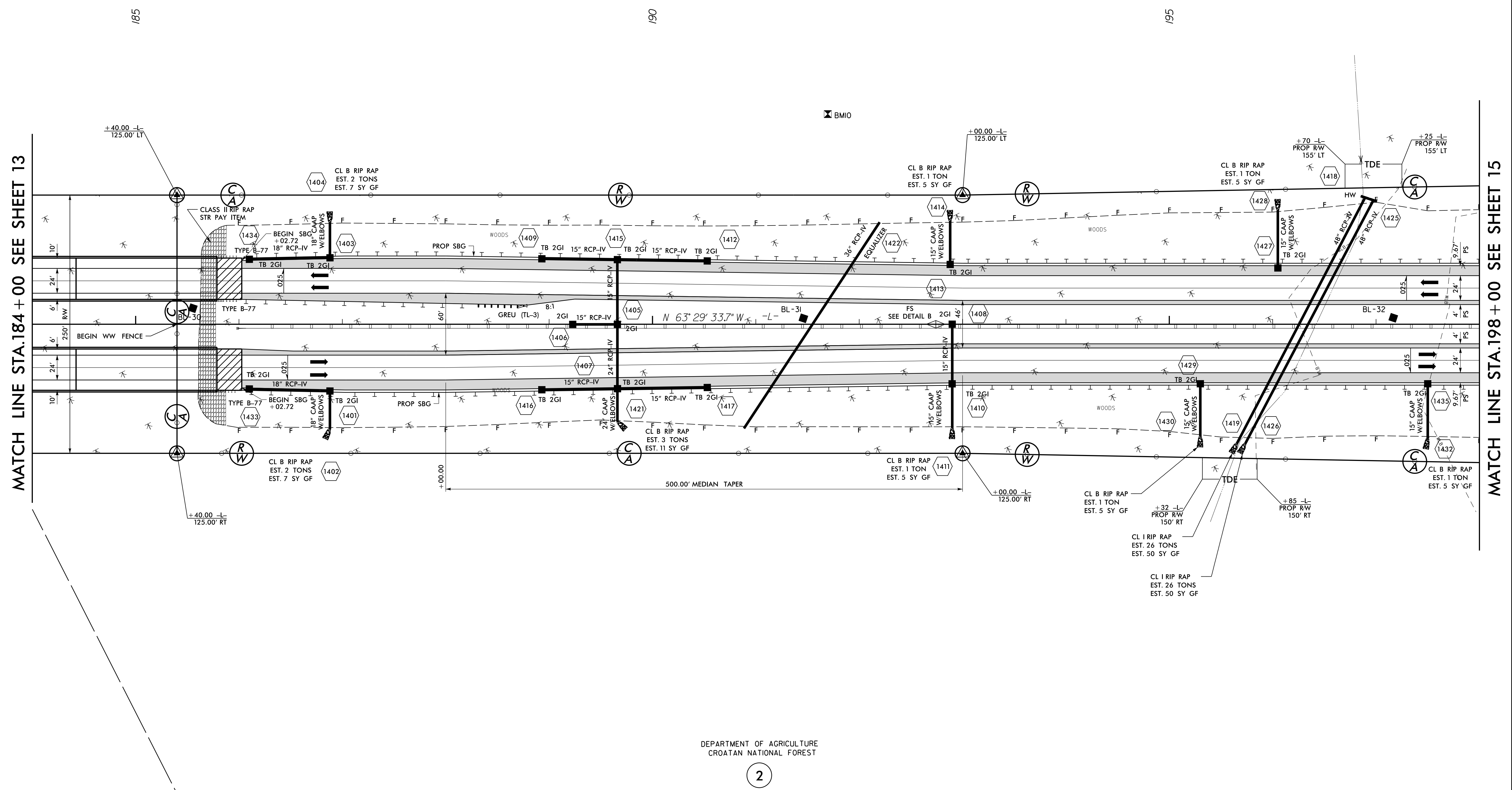
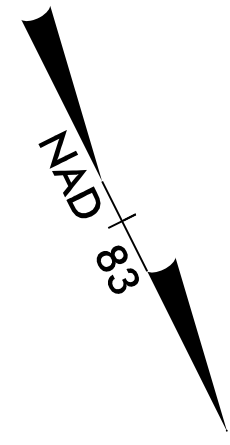
SEE SHEETS 55 FOR PROFILE -L-
SEE SHEETS 2B-7 SKETCH 3 FOR PROPOSED BRIDGE SKETCH
SEE SHEETS 2D-1THRU 2D-2 FOR DRAINAGE DITCH DETAILS
SEE SHEETS S5-1THRU S5-45 AND S6-1THRU S6-45 FOR BRIDGE PLANS

11/28/2018
I:\S\RA\9729-02\CA000\1015\Roadway\Proj\1015_rdi_psh13.dgn

8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2



MATCH LINE STA.184 + 00 SEE SHEET 13

MATCH LINE STA.198 + 00 SEE SHEET 15

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

SEE SHEET 55 FOR PROFILE -L-
SEE SHEET 2B-7 SKETCH 3 FOR PROPOSED BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS
SEE SHEETS S5-1 THRU S5-45 AND S6-1 THRU S6-45 FOR BRIDGE PLANS

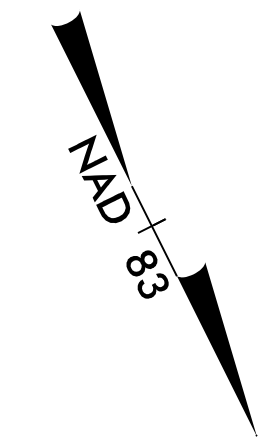
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8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

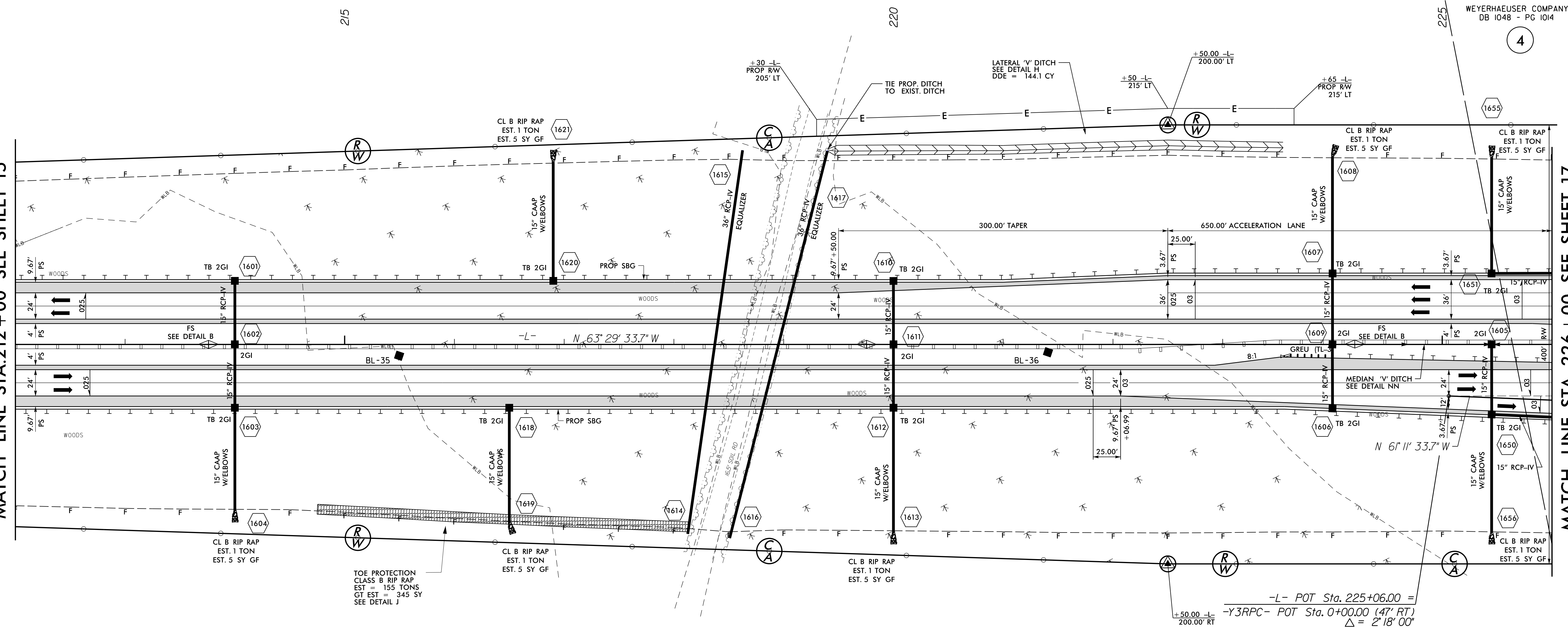
DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2



MATCH LINE STA. 212 + 00 SEE SHEET 15

MATCH LINE STA. 226 + 00 SEE SHEET 17



1/28/2018
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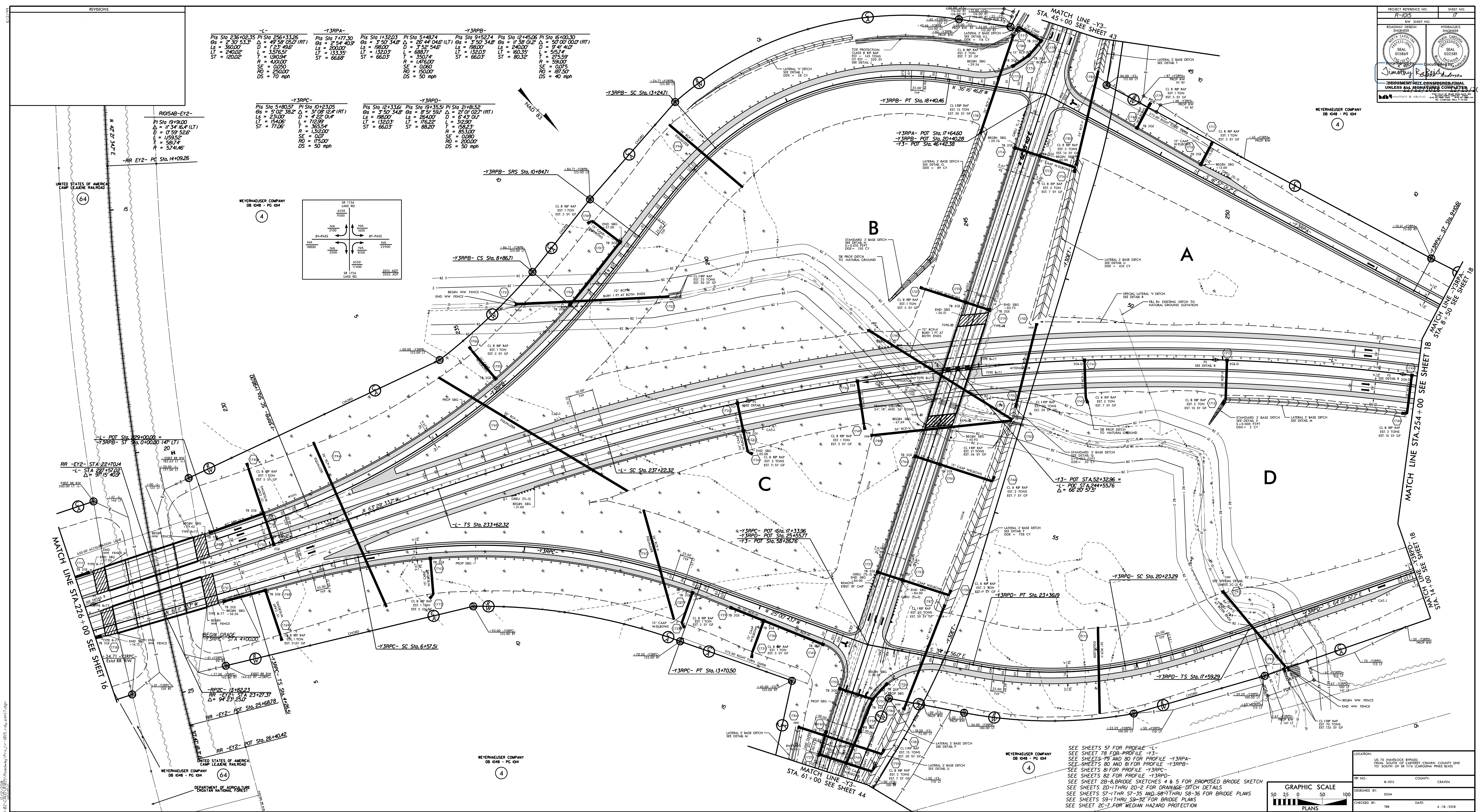
DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

SEE SHEET 56 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

WEYERHAEUSER COMPANY
DB 1048 - PG 1014

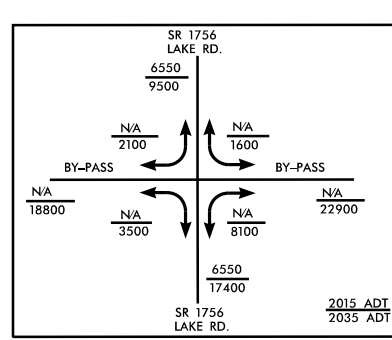
4



-L-		-Y3RPA-		-Y3RPB-	
Pi Sta 236+02.35	Pi Sta 256+33.26	Pi Sta 7+17.30	Pi Sta 11+32.03	Pi Sta 5+48.74	Pi Sta 9+52.74
Os = 2' 30" 53.3'	Δ = 45° 59' 05.0" (RT)	Os = 3' 52' 34.8"	Δ = 26° 44' 04.0" (LT)	Os = 3' 50' 34.8"	Os = 1' 58' 02.2" Δ = 87° 00' 00.0" (RT)
Ls = 360.00'	D = 1' 23' 49.6"	Ls = 200.00'	Ls = 198.00'	Ls = 198.00'	Ls = 240.00'
Lt = 240.00'	L = 357.65'	Lt = 132.03'	L = 688.71'	Lt = 132.03'	Lt = 80.35'
T = 150.00'	R = 4.0000'	T = 130.07'	R = 1476.00'	T = 130.07'	T = 275.59'
SE = 0.000'	SE = 0.000'	SE = 0.000'	SE = 0.000'	SE = 0.000'	SE = 0.000'
RO = 250.00'	RO = 250.00'	RO = 150.00'	RO = 150.00'	RO = 187.50'	RO = 187.50'
DS = 70 mph	DS = 70 mph	DS = 50 mph	DS = 50 mph	DS = 50 mph	DS = 40 mph

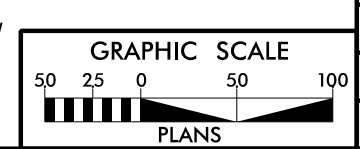
-Y3RPC-		-Y3RPD-	
Pi Sta 5+80.57	Pi Sta 10+23.05	Pi Sta 12+33.61	Pi Sta 19+35.51
Os = 3' 02' 36.2"	Δ = 31° 08' 12.4" (RT)	Os = 3' 50' 34.8"	Os = 8' 51' 59.7"
Ls = 210.00'	D = 4' 25' 0.4"	Ls = 254.00'	Δ = 21° 07' 02.7" (RT)
Lt = 154.00'	L = 712.92'	Lt = 132.03'	L = 312.90'
T = 365.54'	R = 1.31200'	T = 132.03'	T = 132.03'
SE = 0.000'	SE = 0.000'	SE = 0.000'	SE = 0.000'
RO = 175.00'	RO = 175.00'	RO = 200.00'	RO = 200.00'
DS = 70 mph	DS = 70 mph	DS = 50 mph	DS = 50 mph

RR EY2 - STA 14+09.26
 RR EY2 - POT STA 14+09.26
 Δ = 11° 54' 18.4" (LT)
 D = 0' 59' 32.6"
 L = 1.0952'



PROJECT REFERENCE NO. R-105
 SHEET NO. 17
 ROADWAY DESIGN ENGINEER
 SEAL 015869
 SEAL 032581
 METERHAUSER COMPANY
 DB 1048 - PG 104
 UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
 UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.

SEE SHEETS 57 FOR PROFILE -L-
 SEE SHEET 78 FOR PROFILE -Y3-
 SEE SHEETS 79 AND 80 FOR PROFILE -Y3RPA-
 SEE SHEETS 80 AND 81 FOR PROFILE -Y3RPB-
 SEE SHEETS 81 FOR PROFILE -Y3RPC-
 SEE SHEETS 82 FOR PROFILE -Y3RPD-
 SEE SHEET 28-B BRIDGE SKETCHES 4 & 5 FOR PROPOSED BRIDGE SKETCH
 SEE SHEETS 20-1 THRU 20-2 FOR DRAINAGE-DITCH DETAILS
 SEE SHEETS 37-1 THRU 37-35 AND 38-1 THRU 38-36 FOR BRIDGE PLANS
 SEE SHEETS 39-1 THRU 39-12 FOR BRIDGE PLANS
 SEE SHEET 20-7 FOR MEDIAN HAZARD PROTECTION

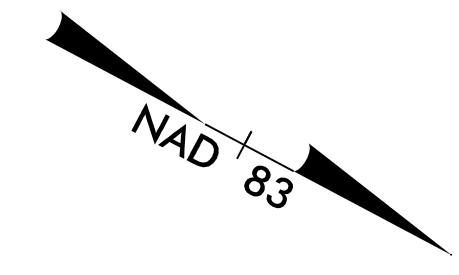


LOCATION:	S. 10. 38. HANDELCO BRIDGE FROM SOUTH OF EASTERN CRAVEN COUNTY LINE 100 SOUTH OF SR 170, CRAVEN PINE BLVD		
TRP NO.:	8-1015	COUNTY:	CRAVEN
DESIGNED BY:	DGM	CHECKED BY:	TBR
DATE:	6/18/2018		

8.17.17.199
I:\2018\10-22\CA000\1015\Roadway\Proj\1015_rdl\psh18.dgn

-L-		-Y3RPA-		-Y3RPA-	
PIs Sta 236+02.35	PI Sta 256+33.26	PIs Sta 0+66.67	PI Sta 6+37.36	PIs Sta 4+97.39	
$\Theta_s = 2^\circ 30' 53.3''$	$\Delta = 49^\circ 58' 05.0''$ (RT)	$\Theta_s = 1^\circ 22' 52.6''$	$\Delta = 4^\circ 16' 02.1''$ (RT)	$\Theta_s = 2^\circ 54' 40.9''$	
Ls = 360.00'	D = 123' 49.6'	Ls = 200.00'	D = 2' 54' 40.9''	Ls = 200.00'	
LT = 240.02'	T = 3,576.51'	LT = 133.34'	L = 73.32'	LT = 133.35'	
ST = 120.02'	R = 4,101.00'	ST = 66.67'	R = 1,968.00'	ST = 66.68'	
	SE = 0.050		R = 1,968.00'		
	RO = 250.00'		SE = 0.060		
	DS = 70 mph		RO = 125.00'		
			DS = 50 mph		

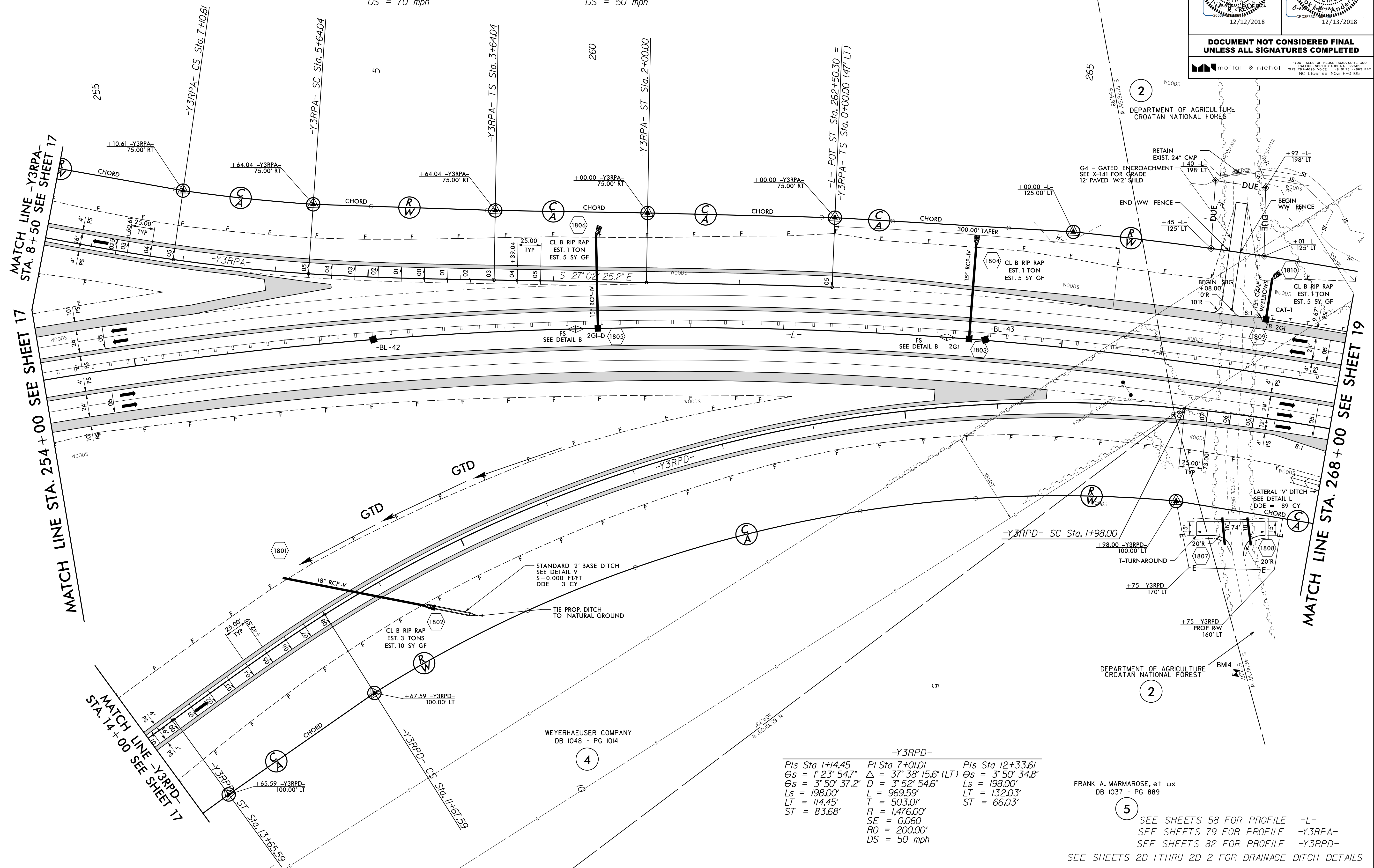
WEYERHAEUSER COMPANY
DB 1048 - PG 1014
4



PROJECT REFERENCE NO. R-1015	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

moftatt & nichol



WEYERHAEUSER COMPANY
DB 1048 - PG 1014
4

-Y3RPD-		
PIs Sta 1+44.45	PI Sta 7+01.01	PIs Sta 12+33.61
$\Theta_s = 1^\circ 23' 54.7''$	$\Delta = 37^\circ 38' 15.6''$ (LT)	$\Theta_s = 3^\circ 50' 34.8''$
$\Theta_s = 3^\circ 50' 37.2''$	D = 3' 52' 54.6''	Ls = 198.00'
Ls = 198.00'	L = 969.59'	LT = 132.03'
LT = 114.45'	T = 503.01'	ST = 66.03'
ST = 83.68'	R = 1,476.00'	
	SE = 0.060	
	RO = 200.00'	
	DS = 50 mph	

FRANK A. MARMAROSE, et ux
DB 1037 - PG 889
5

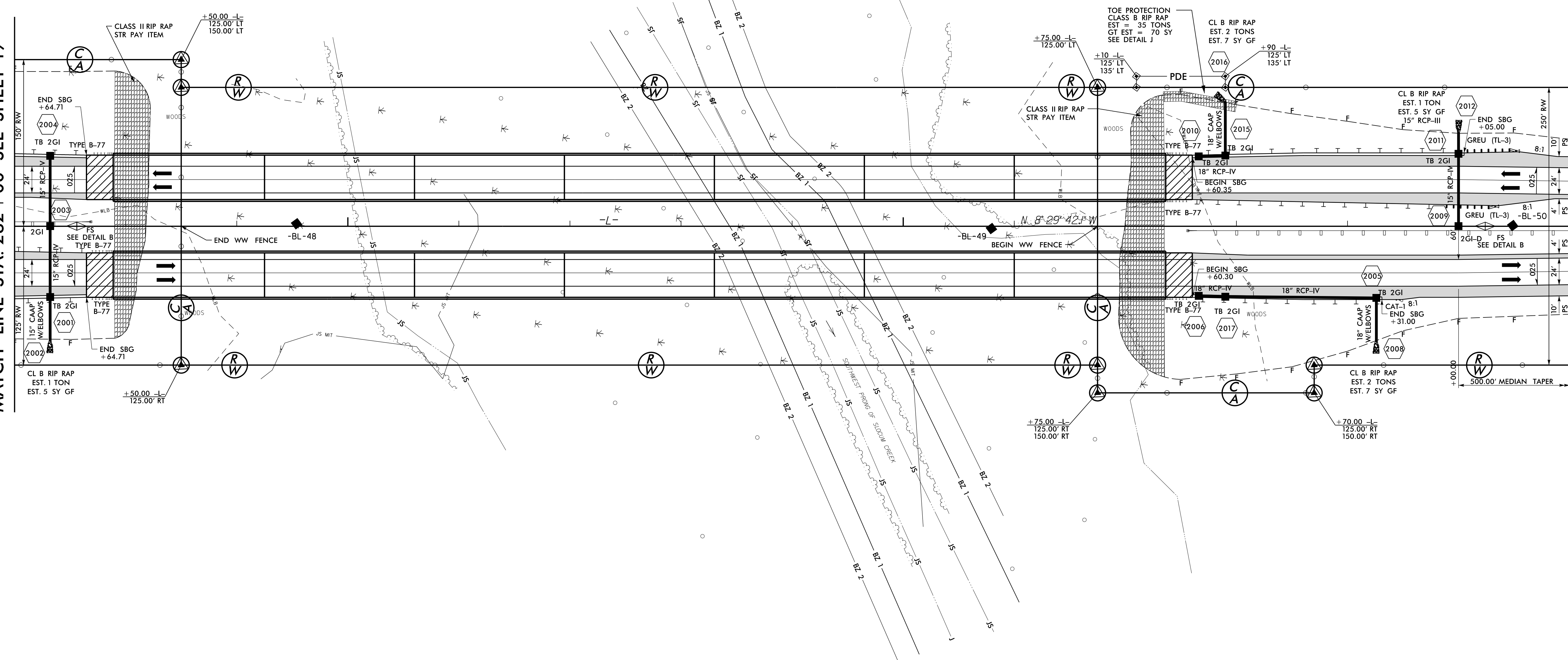
SEE SHEETS 58 FOR PROFILE -L-
SEE SHEETS 79 FOR PROFILE -Y3RPA-
SEE SHEETS 82 FOR PROFILE -Y3RPD-
SEE SHEETS 2D-1THRU 2D-2 FOR DRAINAGE DITCH DETAILS

8/17/99

PROJECT REFERENCE NO. R-1015	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER MOFFATT & NICHOL SEAL 015869 12/12/2018	HYDRAULICS ENGINEER MOFFATT & NICHOL SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
<small>4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC License No. F-0105</small>	

MATCH LINE STA. 282+00 SEE SHEET 19

MATCH LINE STA. 296+00 SEE SHEET 21



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

SEE SHEETS 59 FOR PROFILE -L-
 SEE SHEET 2B-8 SKETCH 6 FOR PROPOSED BRIDGE SKETCH
 SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS
 SEE SHEETS S10-1 THRU S10-44 AND S11-1 THRU S11-44 FOR BRIDGE PLANS

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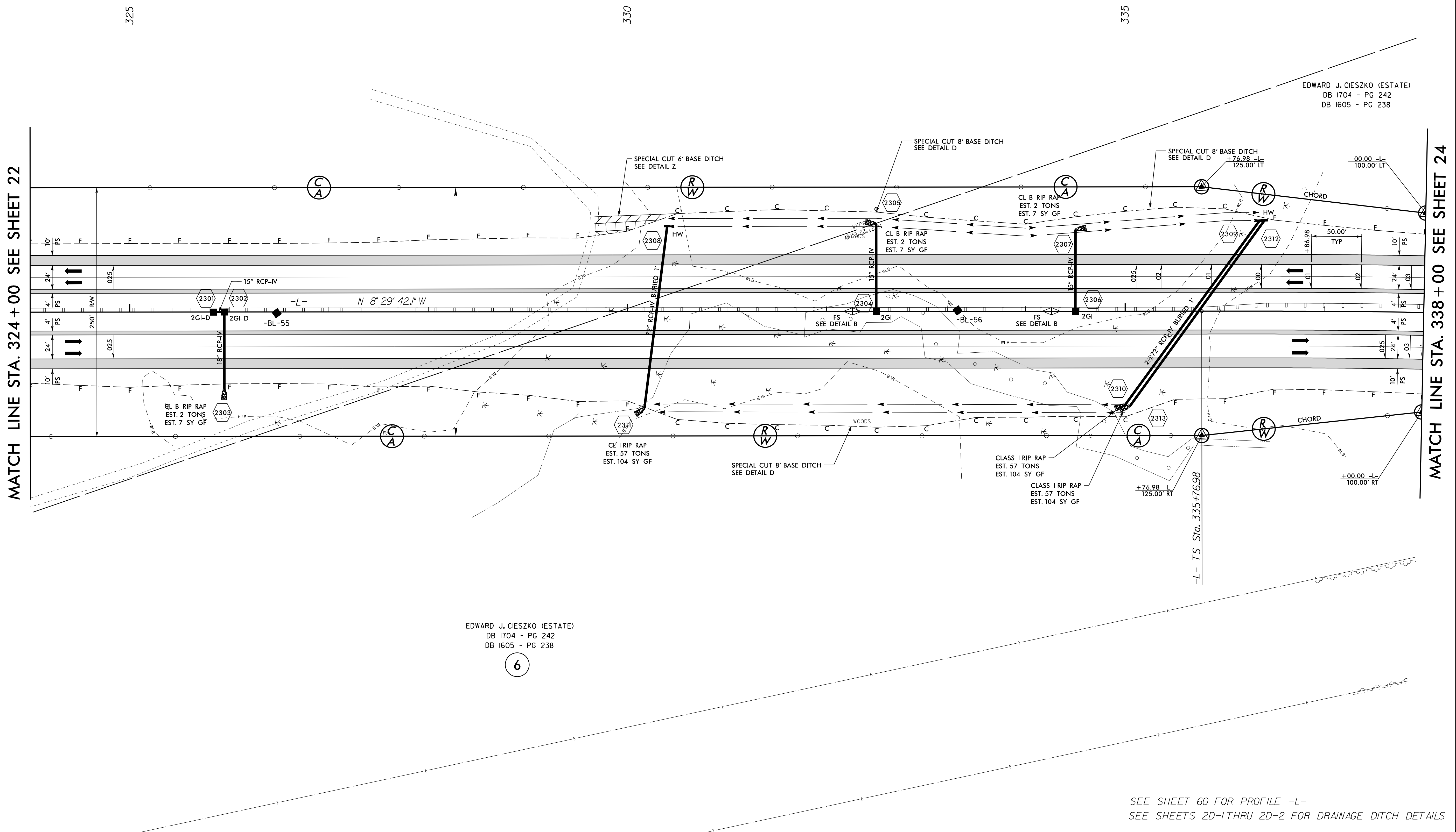
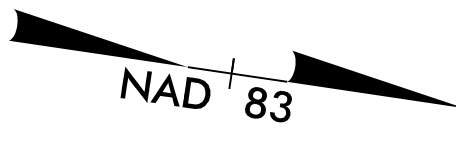
8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER MOFFATT & NICHOL SEAL 015869 12/12/2018	HYDRAULICS ENGINEER MOFFATT & NICHOL SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

-L-
Pls Sta 338+17.02
Os = 3' 08' 39.4"
Ls = 360.00'
LT = 240.04'
ST = 120.03'



MATCH LINE STA. 324 + 00 SEE SHEET 22

MATCH LINE STA. 338 + 00 SEE SHEET 24

EDWARD J. CIESZKO (ESTATE)
DB 1704 - PG 242
DB 1605 - PG 238

EDWARD J. CIESZKO (ESTATE)
DB 1704 - PG 242
DB 1605 - PG 238

6

SEE SHEET 60 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018

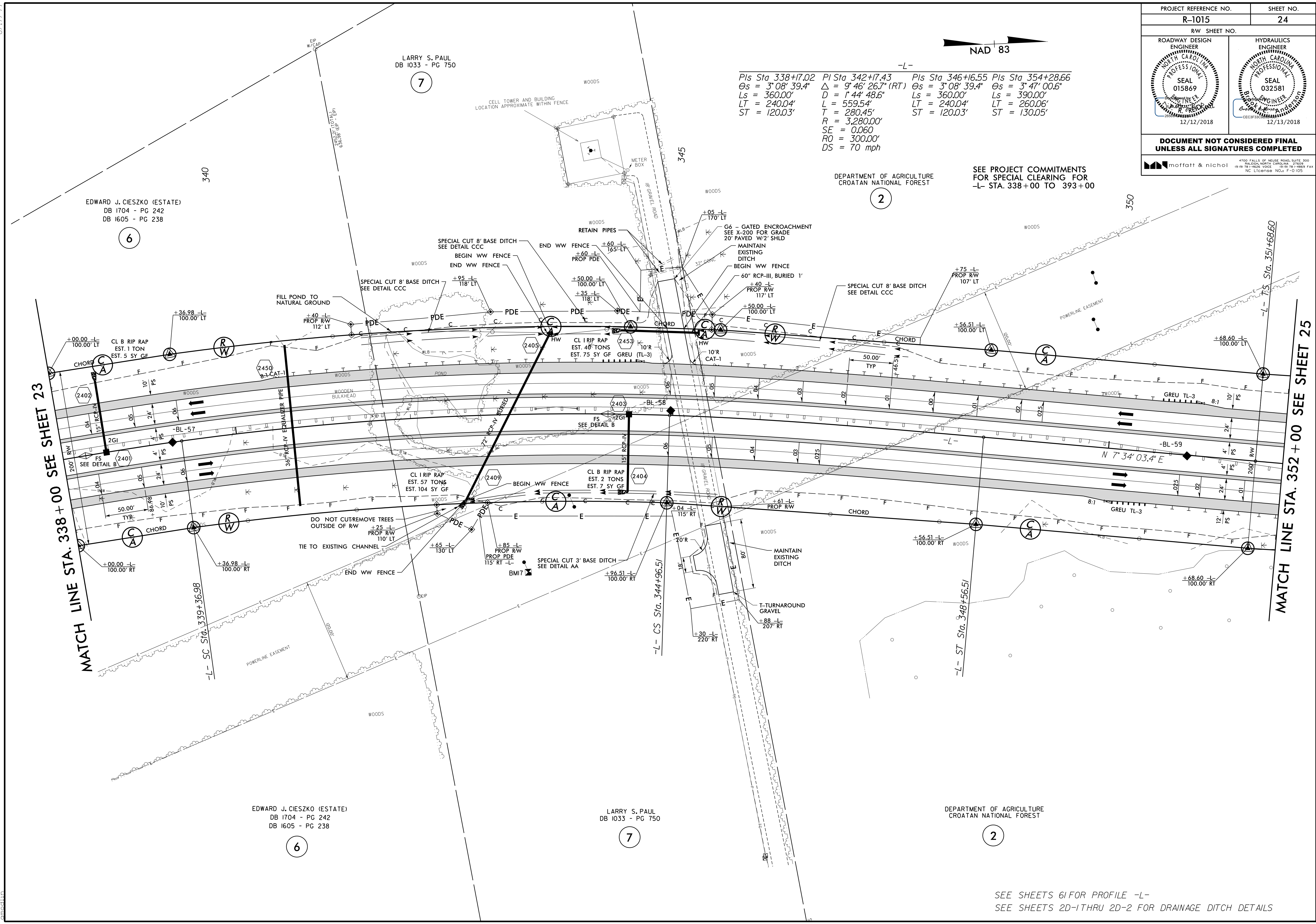


-L-

<i>Pls Sta 338+17.02</i>	<i>Pl Sta 342+17.43</i>	<i>Pls Sta 346+16.55</i>	<i>Pls Sta 354+28.66</i>
$\Theta_s = 3'08'39.4"$	$\Delta = 9'46'26.7" (RT)$	$\Theta_s = 3'08'39.4"$	$\Theta_s = 3'47'00.6"$
$L_s = 360.00'$	$D = 1'44'48.6"$	$L_s = 360.00'$	$L_s = 390.00'$
$LT = 240.04'$	$L = 559.54'$	$LT = 240.04'$	$LT = 260.06'$
$ST = 120.03'$	$T = 280.45'$	$ST = 120.03'$	$ST = 130.05'$
	$R = 3,280.00'$		
	$SE = 0.060$		
	$RO = 300.00'$		
	$DS = 70 \text{ mph}$		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4669 FAX
NC LICENSE NO. F-0105



MATCH LINE STA. 338 + 00 SEE SHEET 23

MATCH LINE STA. 352 + 00 SEE SHEET 25

EDWARD J. CIESZKO (ESTATE)
DB 1704 - PG 242
DB 1605 - PG 238

LARRY S. PAUL
DB 1033 - PG 750

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

SEE PROJECT COMMITMENTS
FOR SPECIAL CLEARING FOR
-L- STA. 338+00 TO 393+00

EDWARD J. CIESZKO (ESTATE)
DB 1704 - PG 242
DB 1605 - PG 238

LARRY S. PAUL
DB 1033 - PG 750

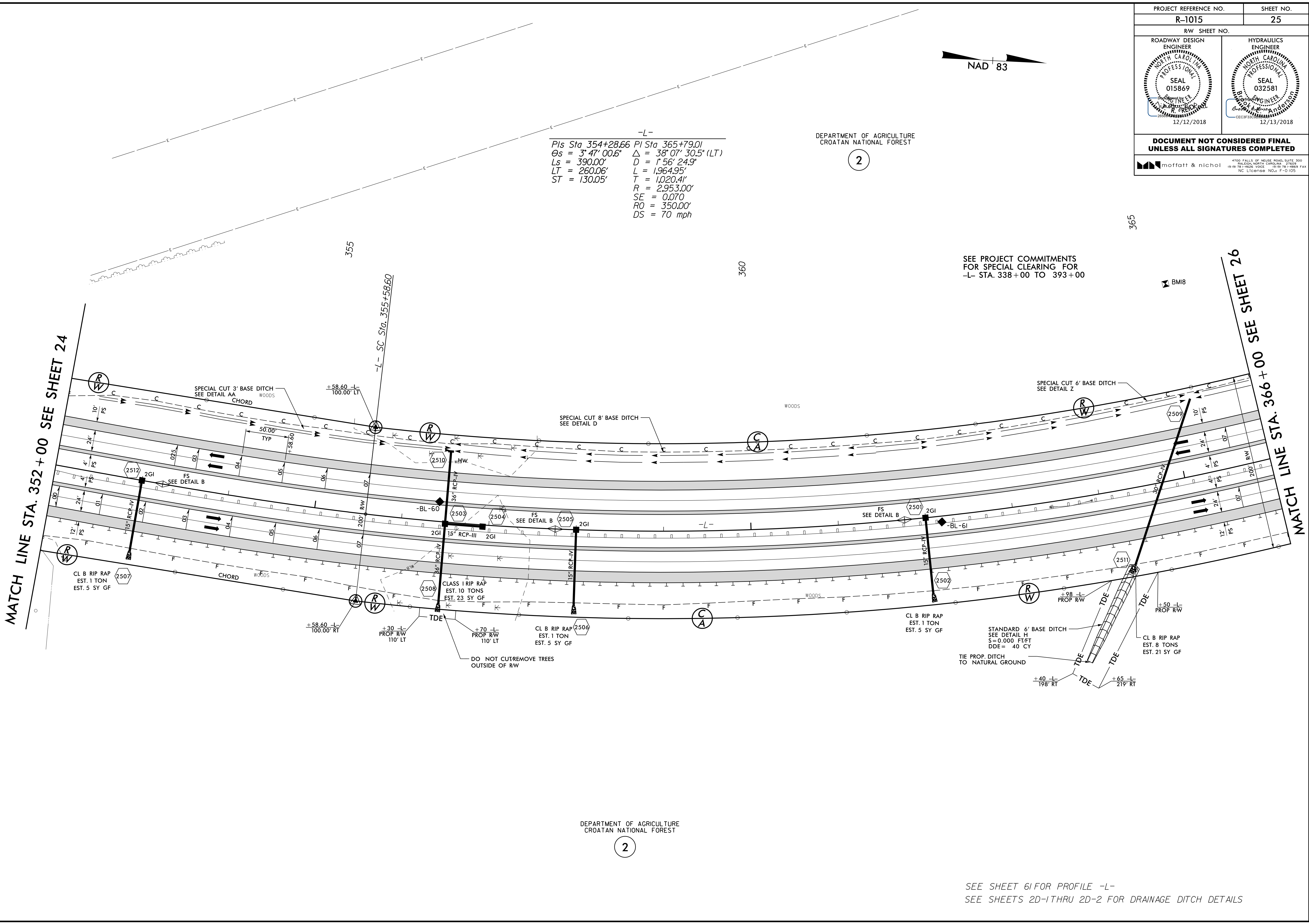
DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

SEE SHEETS 61 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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8/17/99

PROJECT REFERENCE NO. R-1015	SHEET NO. 25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	



-L-

$Pis\ Sta\ 354+28.66$	$PI\ Sta\ 365+79.01$
$\theta_s = 3^\circ 47' 00.6"$	$\Delta = 38^\circ 07' 30.5" (LT)$
$Ls = 390.00'$	$D = 1^\circ 56' 24.9"$
$LT = 260.06'$	$L = 1,964.95'$
$ST = 130.05'$	$T = 1,020.41'$
	$R = 2,953.00'$
	$SE = 0.070$
	$RO = 350.00'$
	$DS = 70\ mph$

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

SEE PROJECT COMMITMENTS
FOR SPECIAL CLEARING FOR
-L- STA. 338+00 TO 393+00

MATCH LINE STA. 352+00 SEE SHEET 24

MATCH LINE STA. 366+00 SEE SHEET 26

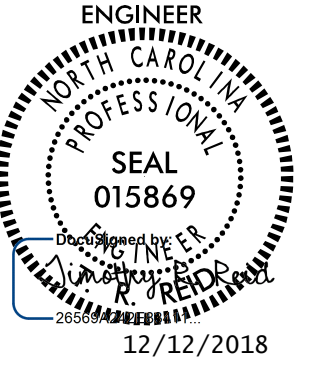


DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

SEE SHEET 61 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

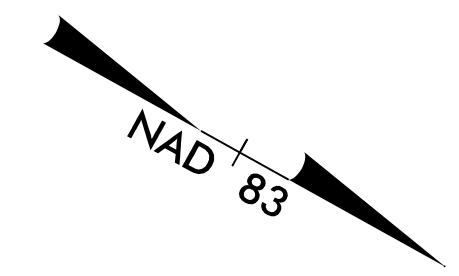
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8/17/99

PROJECT REFERENCE NO. R-1015		SHEET NO. 26	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		<small>4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License No. F-0105</small>	

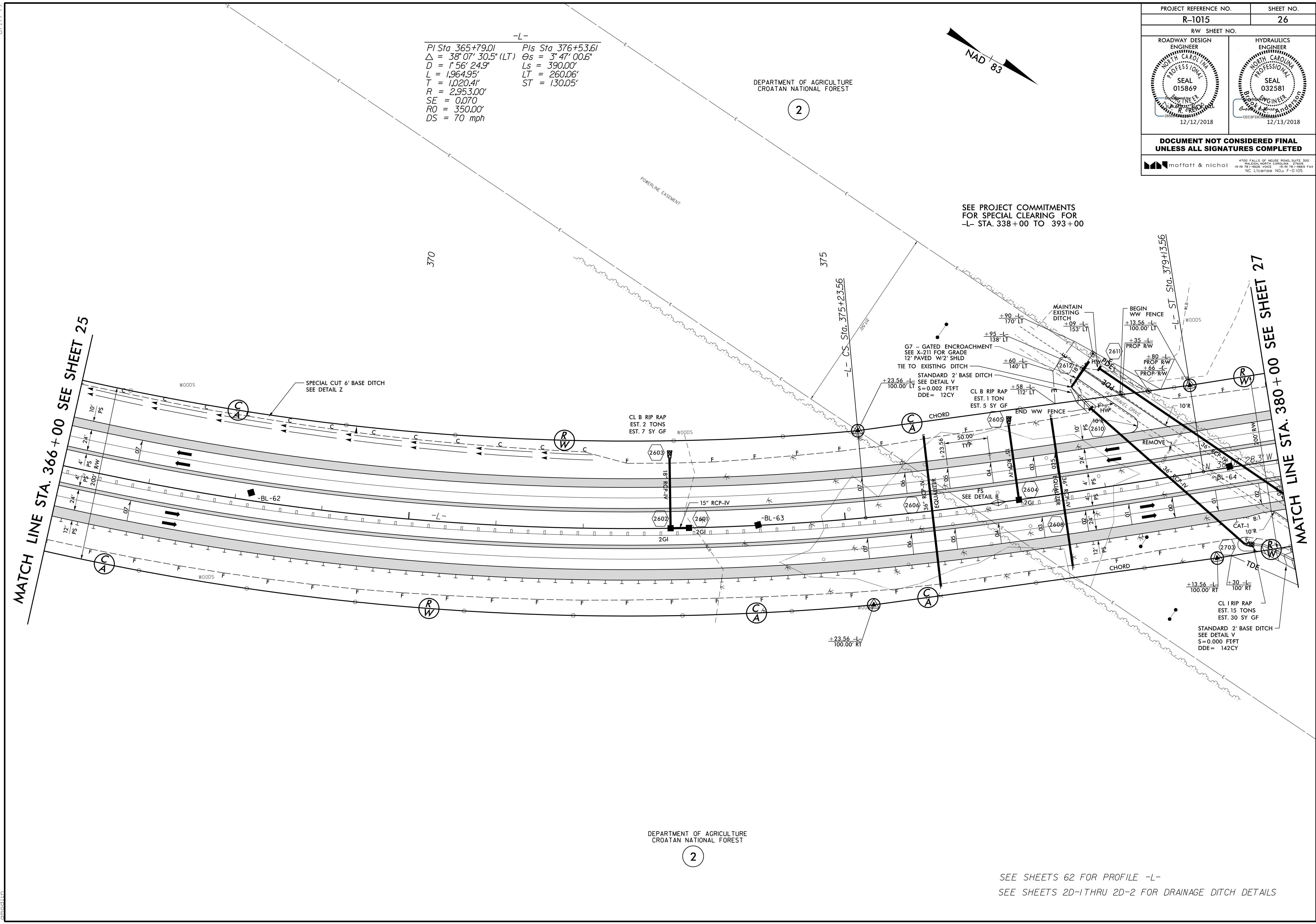
-L-

PI Sta 365+79.01	PIs Sta 376+53.61
$\Delta = 38^{\circ} 07' 30.5" (LT)$	$\Theta s = 3^{\circ} 47' 00.6"$
$D = 1^{\circ} 56' 24.9"$	$Ls = 390.00'$
$L = 1,964.95'$	$LT = 260.06'$
$T = 1,020.41'$	$ST = 130.05'$
$R = 2,953.00'$	
$SE = 0.070$	
$RO = 350.00'$	
$DS = 70 \text{ mph}$	



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

SEE PROJECT COMMITMENTS
FOR SPECIAL CLEARING FOR
-L- STA. 338+00 TO 393+00



MATCH LINE STA. 366+00 SEE SHEET 25

MATCH LINE STA. 380+00 SEE SHEET 27

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
2

SEE SHEETS 62 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

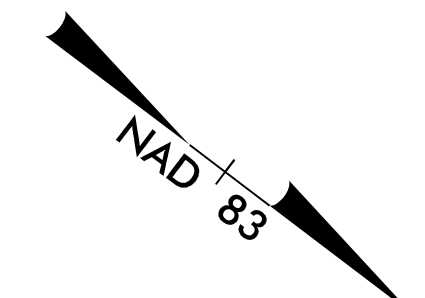
11/28/2018
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8/17/19

PROJECT REFERENCE NO.		SHEET NO.	
R-1015		27	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			
moffatt & nichol		<small>4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC LICENSE NO. F-0105</small>	

-L-

Pls Sta 389+15.83 PI Sta 392+92.64
 $\theta_s = 1' 26'' 08.8''$ $\Delta = 5' 23'' 33.7'' (RT)$
 $L_s = 296.00'$ $D = 0' 58'' 12.5''$
 $LT = 197.34'$ $L = 555.87'$
 $ST = 98.67'$ $T = 278.14'$
 $R = 5,906.00'$ $SE = 0.040$
 $RO = 200.00'$ $DS = 70 \text{ mph}$



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

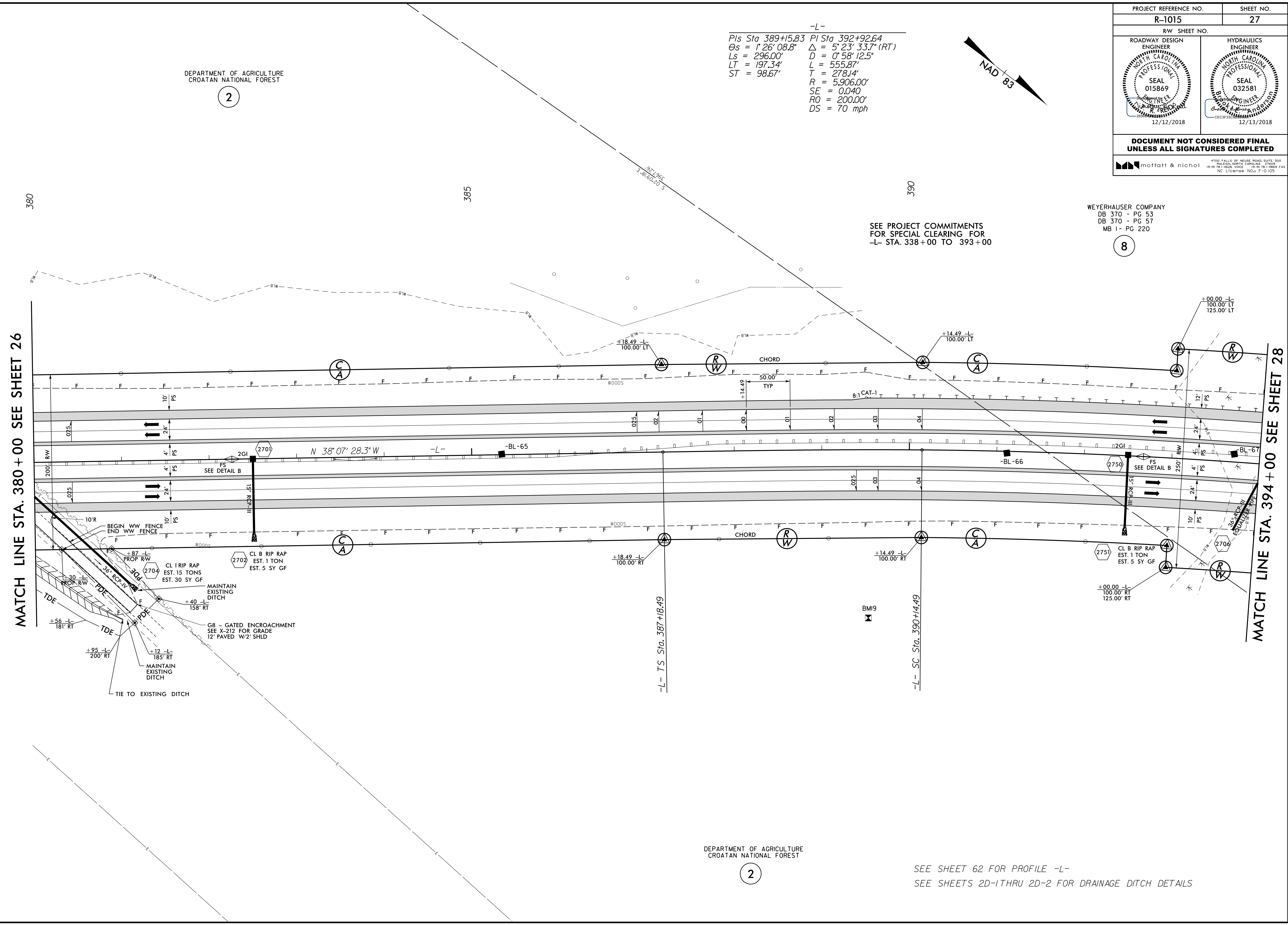
WEYERHAUSER COMPANY
DB 370 - PG 53
DB 370 - PG 57
MB 1 - PG 220

8

SEE PROJECT COMMITMENTS
FOR SPECIAL CLEARING FOR
-L- STA. 338+00 TO 393+00

MATCH LINE STA. 380 + 00 SEE SHEET 26

MATCH LINE STA. 394 + 00 SEE SHEET 28



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST

2

SEE SHEET 62 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

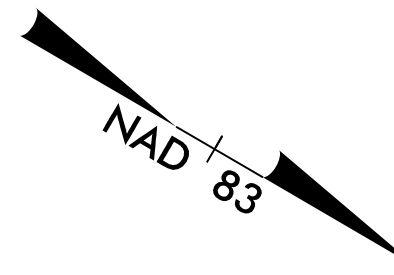
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 10/15/2018 10:15:29 AM

8/17/99

PROJECT REFERENCE NO. R-1015	SHEET NO. 28
RW SHEET NO.	
ROADWAY DESIGN ENGINEER R. REID	HYDRAULICS ENGINEER R. REID
SEAL 015809 R. REID	SEAL 032581 R. REID
2/28/2019	2/28/2019
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moftatt & nichol	

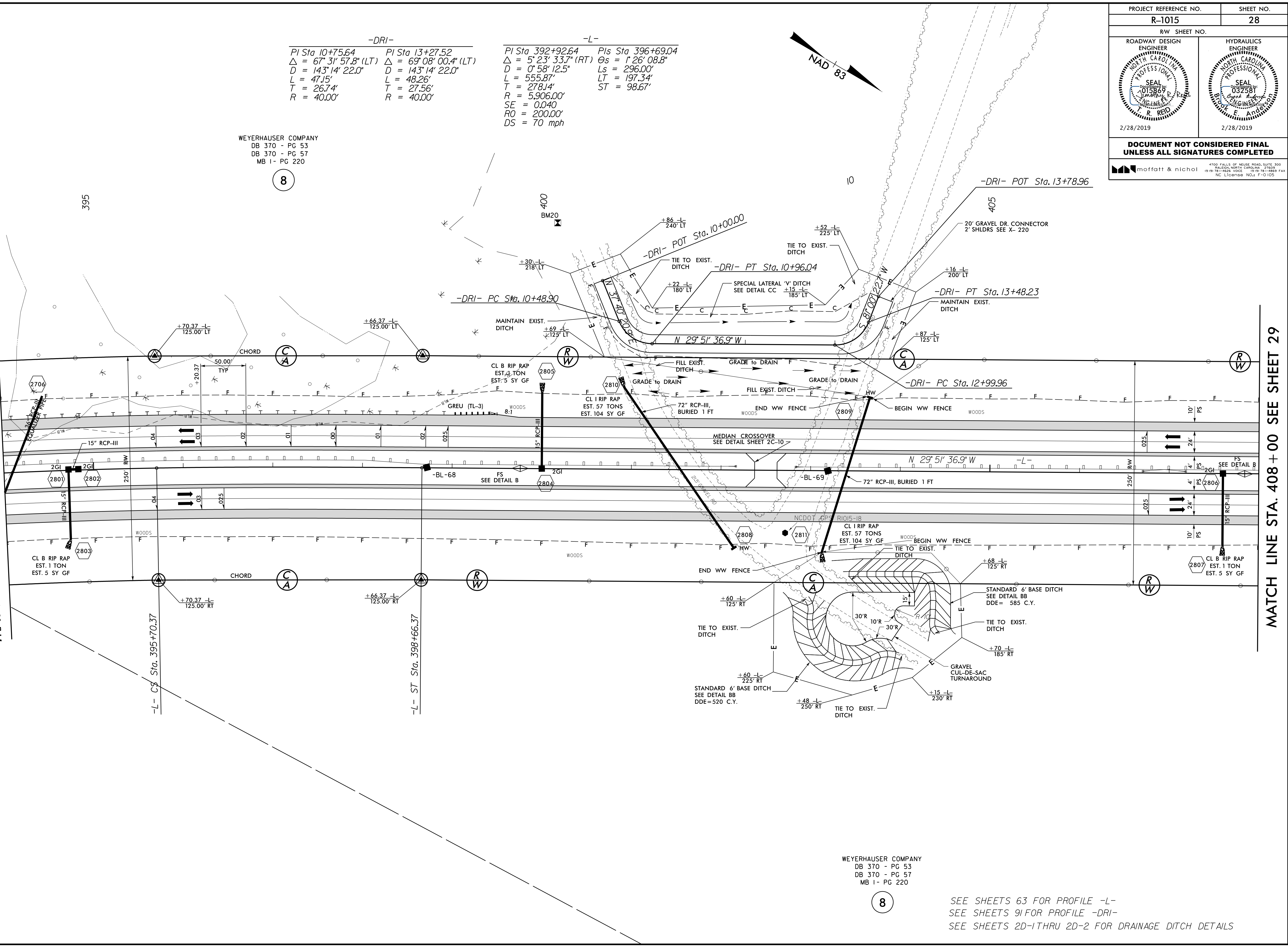
-DRI-

PI Sta 10+75.64	PI Sta 13+27.52	PI Sta 392+92.64	PIs Sta 396+69.04
$\Delta = 67^{\circ} 31' 57.8" (LT)$	$\Delta = 69^{\circ} 08' 00.4" (LT)$	$\Delta = 5^{\circ} 23' 33.7" (RT)$	$\Theta_s = 1^{\circ} 26' 08.8"$
$D = 143^{\circ} 14' 22.0"$	$D = 143^{\circ} 14' 22.0"$	$D = 0^{\circ} 58' 12.5"$	$L_s = 296.00'$
$L = 47.15'$	$L = 48.26'$	$L = 555.87'$	$LT = 197.34'$
$T = 26.74'$	$T = 27.56'$	$T = 278.14'$	$ST = 98.67'$
$R = 40.00'$	$R = 40.00'$	$R = 5,906.00'$	
		$SE = 0.040$	
		$RO = 200.00'$	
		$DS = 70 \text{ mph}$	



MATCH LINE STA. 394 + 00 SEE SHEET 27

MATCH LINE STA. 408 + 00 SEE SHEET 29



WEYERHAUSER COMPANY
DB 370 - PG 53
DB 370 - PG 57
MB 1 - PG 220

8

WEYERHAUSER COMPANY
DB 370 - PG 53
DB 370 - PG 57
MB 1 - PG 220

8

SEE SHEETS 63 FOR PROFILE -L-
SEE SHEETS 91 FOR PROFILE -DRI-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

2/28/2019
D:\Projects\1015\Roadway\Proj\1015_rdi_rsh_28.dgn

8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

MATCH LINE STA. 422 + 00 SEE SHEET 29

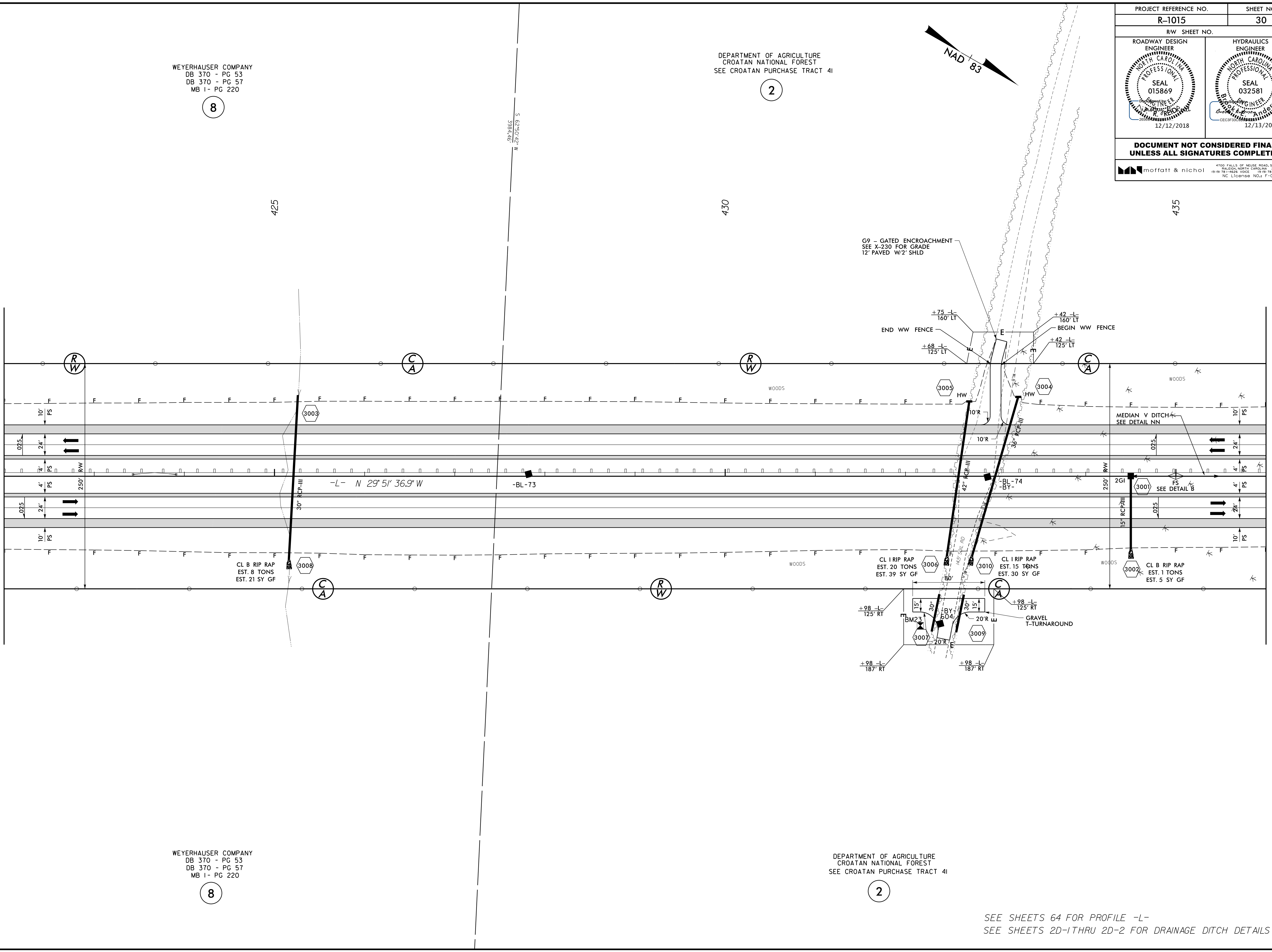
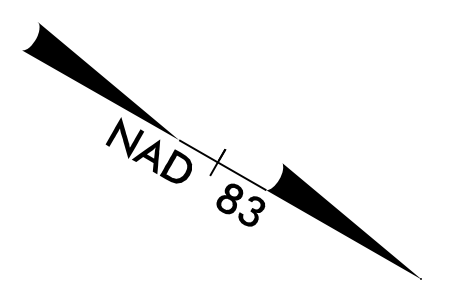
MATCH LINE STA. 436 + 00 SEE SHEET 31

WEYERHAUSER COMPANY
DB 370 - PG 53
DB 370 - PG 57
MB 1 - PG 220

WEYERHAUSER COMPANY
DB 370 - PG 53
DB 370 - PG 57
MB 1 - PG 220

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
SEE CROATAN PURCHASE TRACT 41

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
SEE CROATAN PURCHASE TRACT 41



SEE SHEETS 64 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

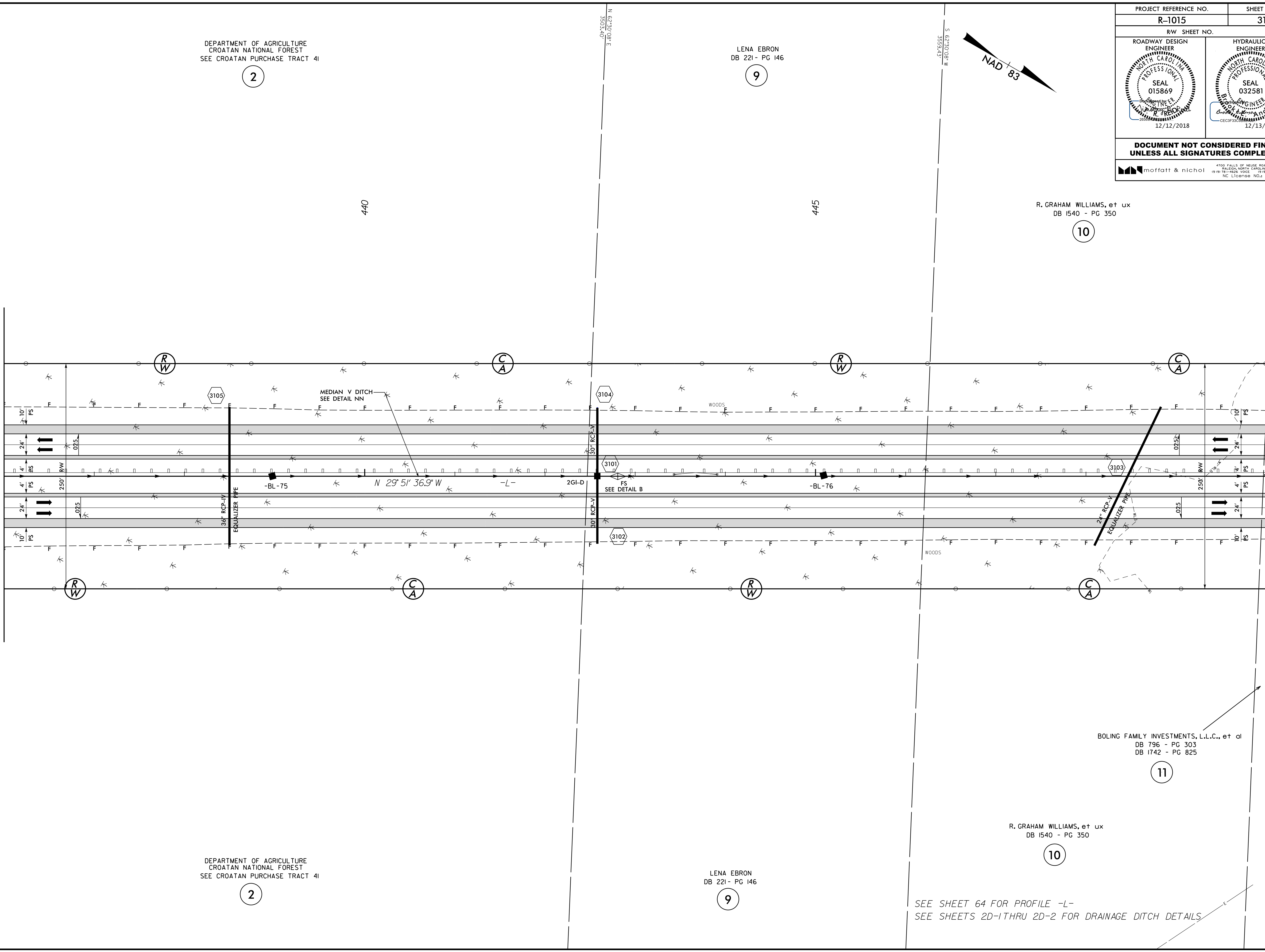
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8/17/19

I:\2018\10-16-19\1015\Roadway\Proj\1015_rdi_rsh31.dgn

MATCH LINE STA. 436 + 00 SEE SHEET 30

MATCH LINE STA. 450 + 00 SEE SHEET 32



DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
SEE CROATAN PURCHASE TRACT 41

2

LENA EBRON
DB 221 - PG 146

9

R. GRAHAM WILLIAMS, et ux
DB 1540 - PG 350

10

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
SEE CROATAN PURCHASE TRACT 41

2

LENA EBRON
DB 221 - PG 146

9

R. GRAHAM WILLIAMS, et ux
DB 1540 - PG 350

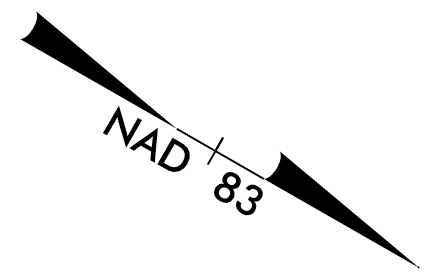
10

BOLING FAMILY INVESTMENTS, L.L.C., et al
DB 796 - PG 303
DB 1742 - PG 825

11

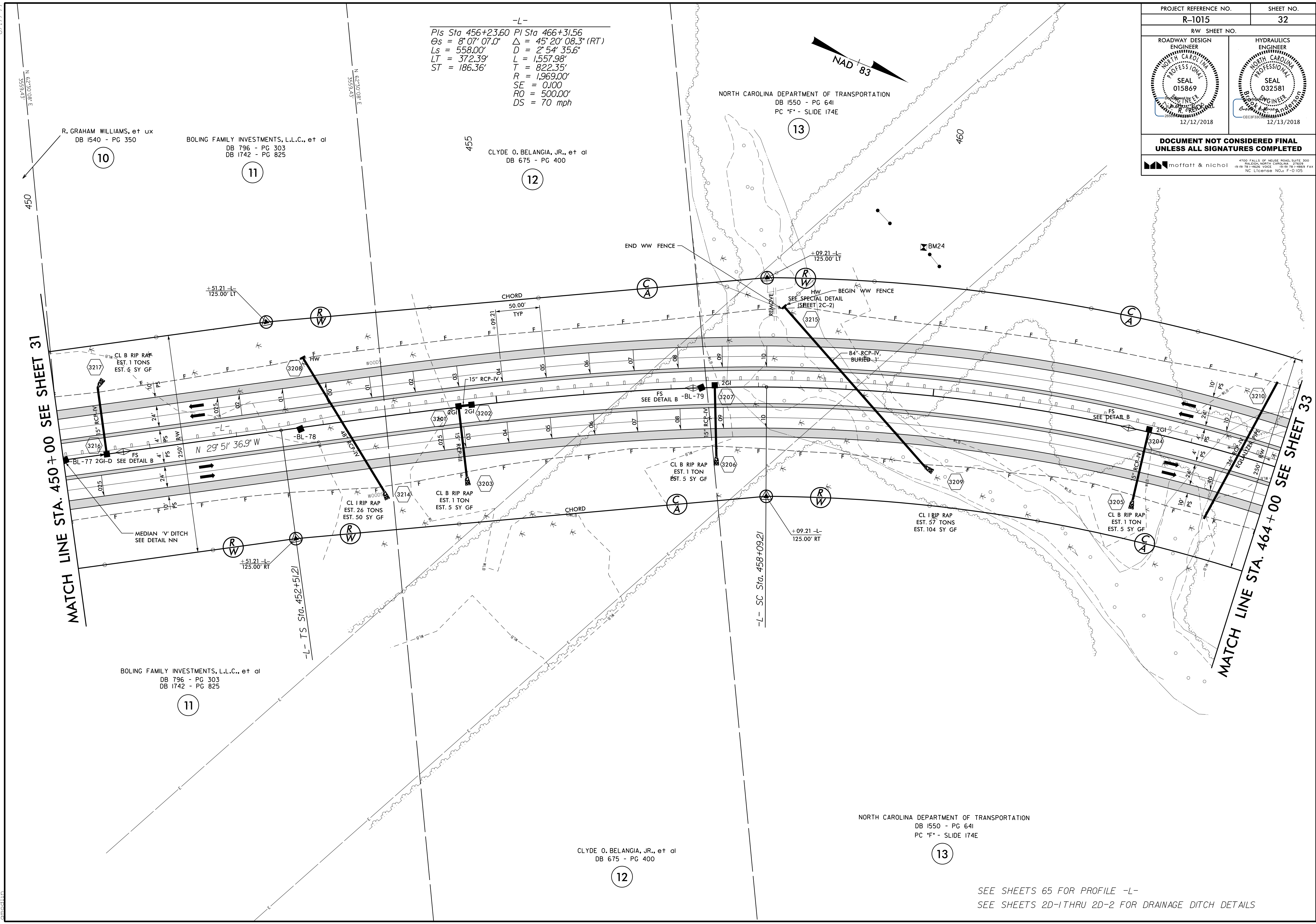
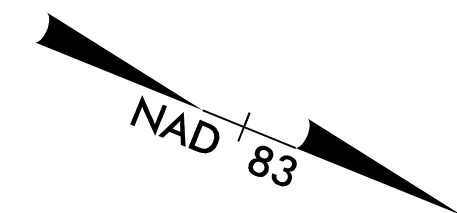
SEE SHEET 64 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

PROJECT REFERENCE NO. R-1015	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p>moffatt & nichol</p> <p>4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC LICENSE NO. F-0105</p>	



PROJECT REFERENCE NO.		SHEET NO.	
R-1015		32	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		<small>4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License No. F-0105</small>	

-L-
 PIs Sta 456+23.60 PI Sta 466+31.56
 $\theta_s = 8^{\circ}07'07.0''$ $\Delta = 45^{\circ}20'08.3''$ (RT)
 $L_s = 558.00'$ $D = 2^{\circ}54'35.6''$
 $LT = 372.39'$ $L = 1,557.98'$
 $ST = 186.36'$ $T = 822.35'$
 $R = 1,969.00'$
 $SE = 0.00$
 $RO = 500.00'$
 $DS = 70$ mph



R. GRAHAM WILLIAMS, et ux
DB 1540 - PG 350

BOLING FAMILY INVESTMENTS, L.L.C., et al
DB 796 - PG 303
DB 1742 - PG 825

CLYDE O. BELANGIA, JR., et al
DB 675 - PG 400

MATCH LINE STA. 450+00 SEE SHEET 31

MATCH LINE STA. 464+00 SEE SHEET 33

BOLING FAMILY INVESTMENTS, L.L.C., et al
DB 796 - PG 303
DB 1742 - PG 825

CLYDE O. BELANGIA, JR., et al
DB 675 - PG 400

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DB 1550 - PG 641
PC *F* - SLIDE 174E

SEE SHEETS 65 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

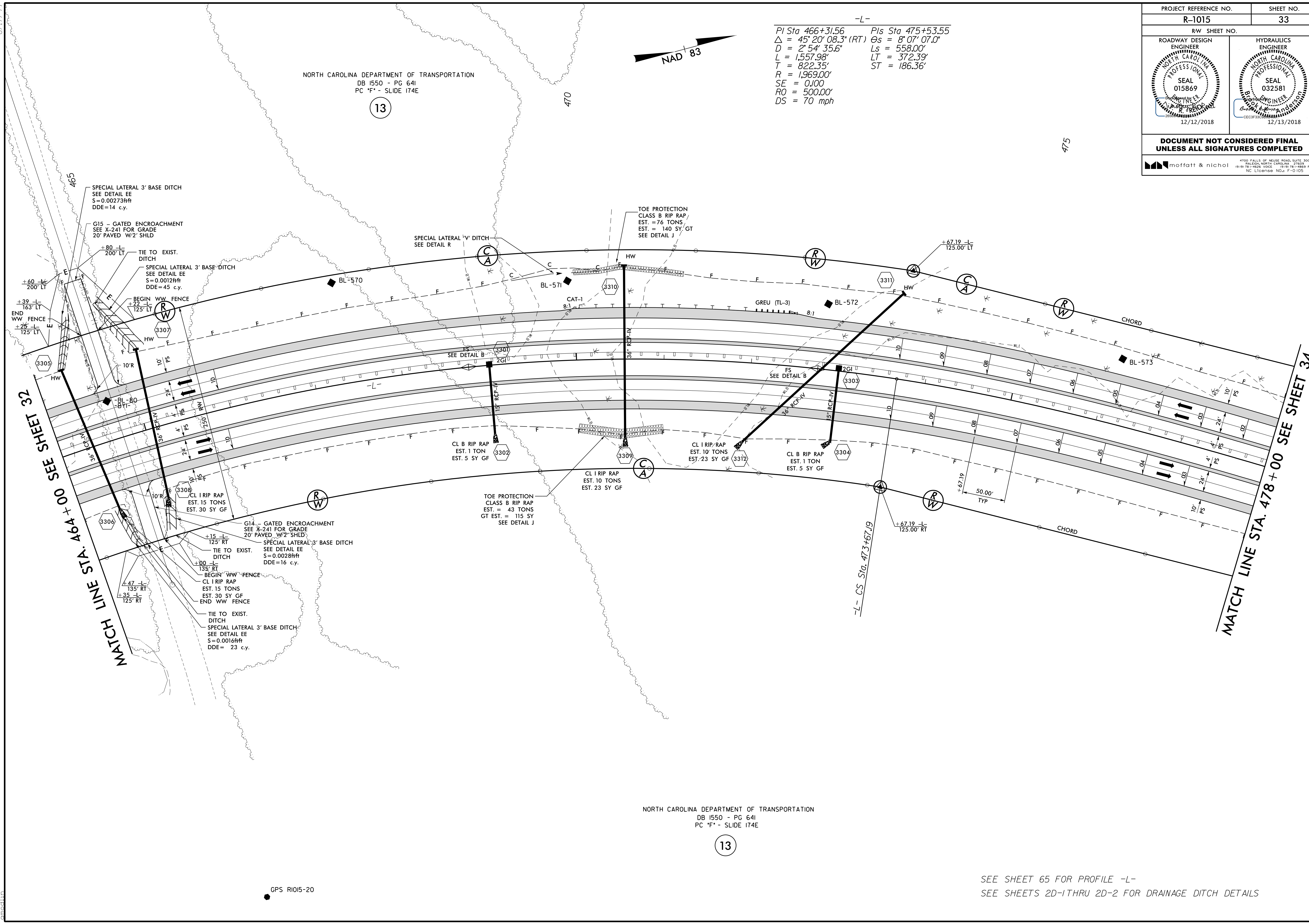
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PROJECT REFERENCE NO. R-1015	SHEET NO. 33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
moffatt & nichol	

-L-

<i>PI Sta</i> 466+31.56	<i>PIs Sta</i> 475+53.55
$\Delta = 45^{\circ} 20' 08.3" (RT)$	$\Theta_s = 8^{\circ} 07' 07.0"$
$D = 2^{\circ} 54' 35.6"$	$L_s = 558.00'$
$L = 1,557.98'$	$LT = 372.39'$
$T = 822.35'$	$ST = 186.36'$
$R = 1,969.00'$	
$SE = 0.100$	
$RO = 500.00'$	
$DS = 70 \text{ mph}$	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DB 1550 - PG 641
PC 'F' - SLIDE 174E



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DB 1550 - PG 641
PC 'F' - SLIDE 174E

13

SEE SHEET 65 FOR PROFILE -L-
SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

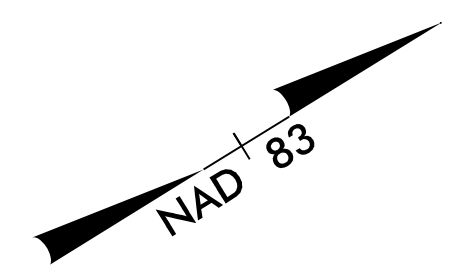
8.17.19
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8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 34
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L-
 PIs Sta 475+53.55
 $\theta_s = 8^\circ 07' 07.0''$
 $L_s = 558.00'$
 $LT = 372.39'$
 $ST = 186.36'$

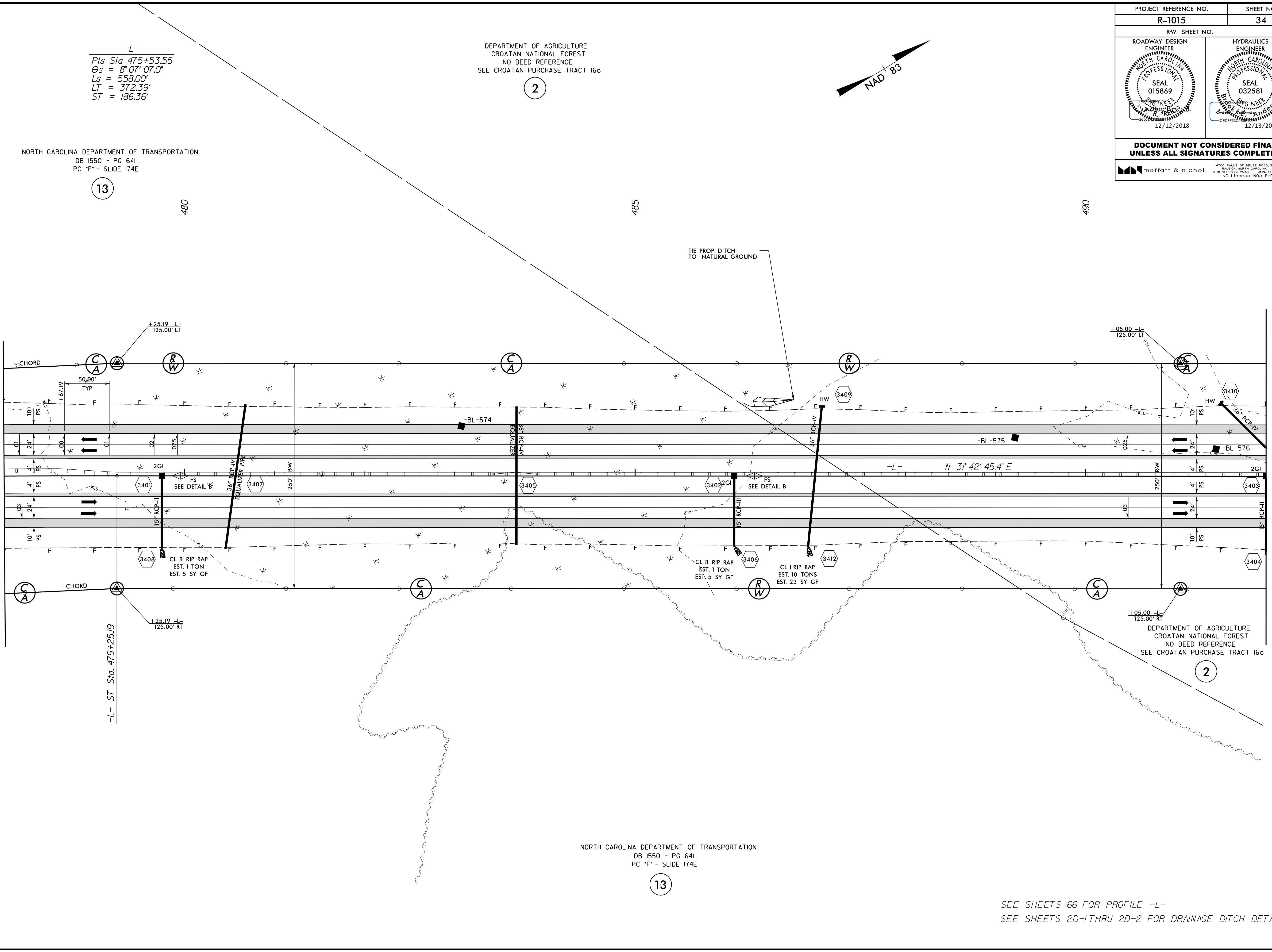
DEPARTMENT OF AGRICULTURE
 CROATAN NATIONAL FOREST
 NO DEED REFERENCE
 SEE CROATAN PURCHASE TRACT 16c



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DB 1550 - PG 641
 PC *F* - SLIDE 174E

MATCH LINE STA. 478 + 00 SEE SHEET 33

MATCH LINE STA. 492 + 00 SEE SHEET 35



13

2

13

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DB 1550 - PG 641
 PC *F* - SLIDE 174E

SEE SHEETS 66 FOR PROFILE -L-
 SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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 12/18/2018 10:54:59 AM
 moffatt

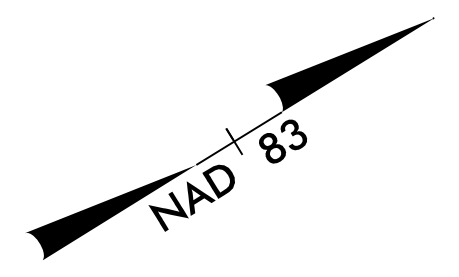
8/17/19

PROJECT REFERENCE NO. R-1015	SHEET NO. 35
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 015869 12/12/2018	HYDRAULICS ENGINEER SEAL 032581 12/13/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

moffatt & nichol 4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License No. F-0105

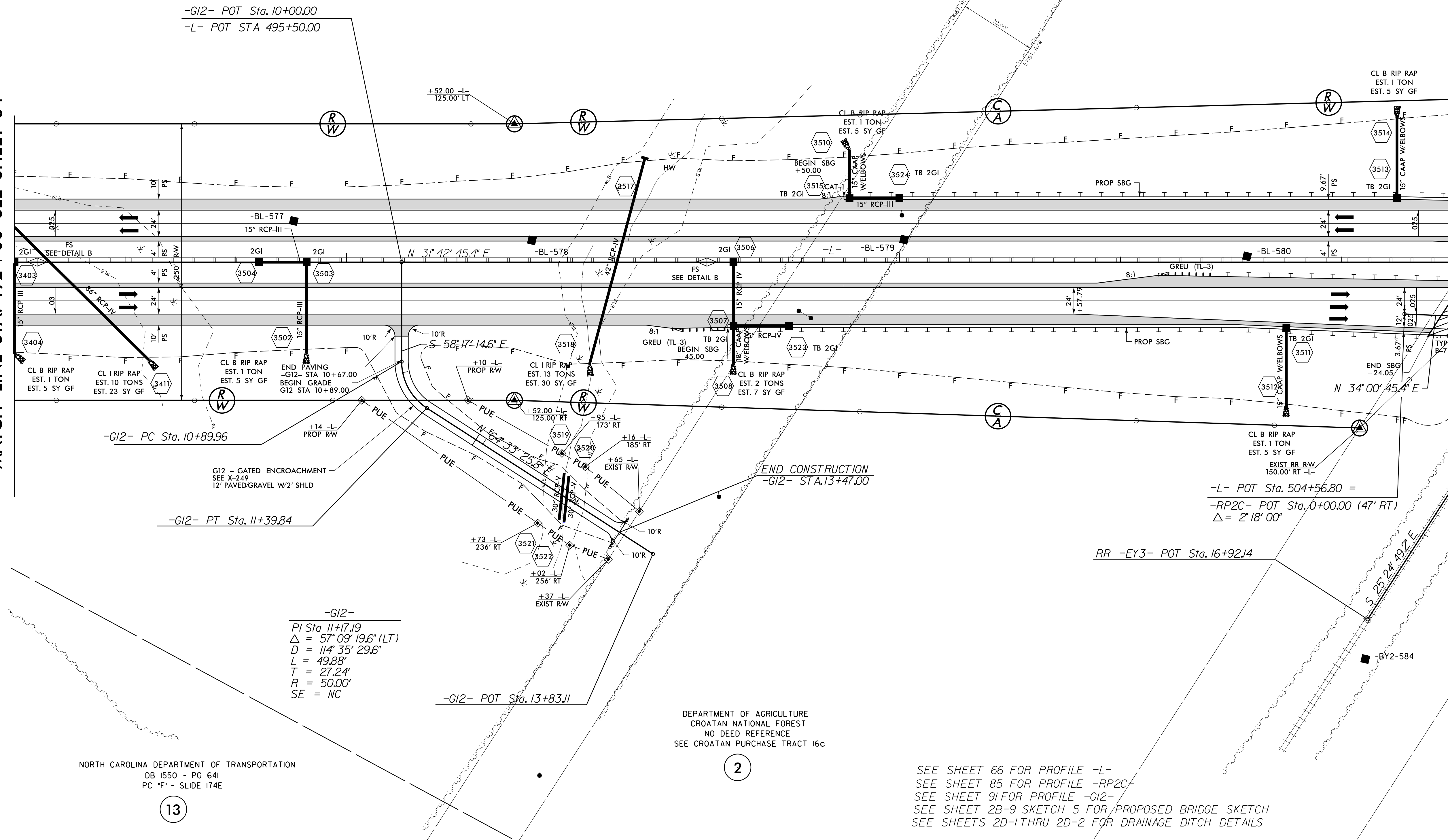
DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
NO DEED REFERENCE
SEE CROATAN PURCHASE TRACT 16c



2

MATCH LINE STA. 492 + 00 SEE SHEET 34

MATCH LINE STA. 505 + 00 SEE SHEET 36



-G12-
 PI Sta 11+17.19
 $\Delta = 57^{\circ} 09' 19.6''$ (LT)
 $D = 114^{\circ} 35' 29.6''$
 $L = 49.88'$
 $T = 27.24'$
 $R = 50.00'$
 $SE = NC$

DEPARTMENT OF AGRICULTURE
CROATAN NATIONAL FOREST
NO DEED REFERENCE
SEE CROATAN PURCHASE TRACT 16c

2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DB 1550 - PG 641
PC *P* - SLIDE 174E

13

SEE SHEET 66 FOR PROFILE -L-
 SEE SHEET 85 FOR PROFILE -RP2C-
 SEE SHEET 91 FOR PROFILE -G12-
 SEE SHEET 2B-9 SKETCH 5 FOR PROPOSED BRIDGE SKETCH
 SEE SHEETS 2D-1 THRU 2D-2 FOR DRAINAGE DITCH DETAILS

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