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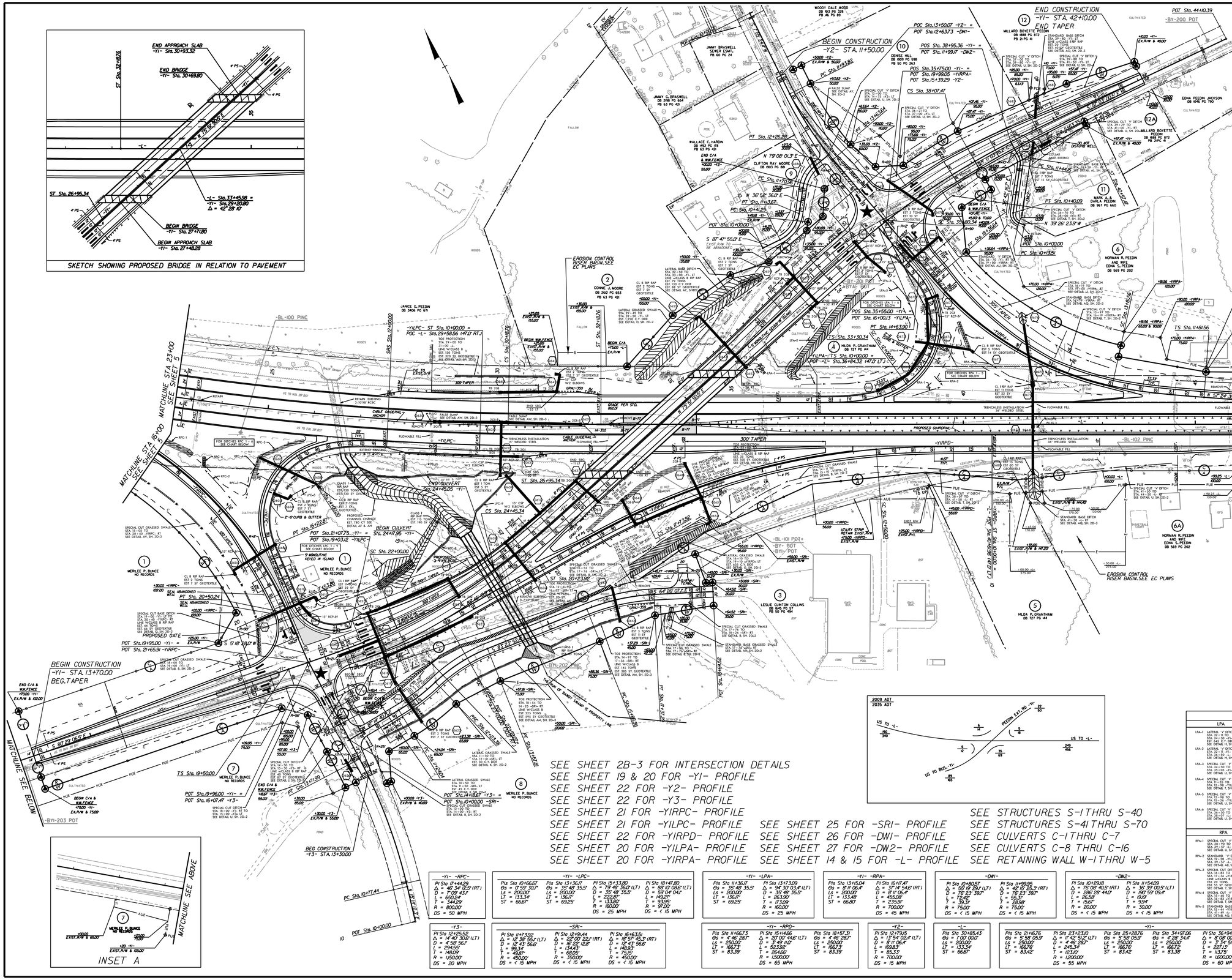
5/14/99

SKETCH SHOWING PROPOSED BRIDGE IN RELATION TO PAVEMENT



PROJECT REFERENCE NO.	SHEET NO.
W-5107	6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 022037 ENGINEER
DocuSigned by: STEPHEN A. SMITH-WOOD
5/14/2021
SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 26306 ENGINEER
DocuSigned by: Dave Passmore
12/17/2020
REGISTERED ENGINEER

ARCADIS
G & M of North Carolina, Inc.
WWW.ARCADIS-US.COM
801 Corporate Center Drive, Suite 300
Raleigh, NC 27607-5073
Tel: 919/854-1282 Fax: 919/854-5448 NC License No. C-1869

WSP
Transportation & Infrastructure
15401 Weston Parkway Suite 100
Cary, NC 27513 - 919.678.0035
www.wspsells.com
LICENSE NO. F-0891

★ PROPOSED SIGNAL

2009 ADT
2035 ADT

SEE SHEET 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 19 & 20 FOR -Y1- PROFILE
SEE SHEET 22 FOR -Y2- PROFILE
SEE SHEET 22 FOR -Y3- PROFILE
SEE SHEET 21 FOR -YIRPC- PROFILE
SEE SHEET 21 FOR -YILPC- PROFILE
SEE SHEET 22 FOR -YIRPD- PROFILE
SEE SHEET 20 FOR -YILPA- PROFILE
SEE SHEET 20 FOR -YIRPA- PROFILE
SEE SHEET 25 FOR -SRI- PROFILE
SEE SHEET 26 FOR -DWI- PROFILE
SEE SHEET 27 FOR -DW2- PROFILE
SEE SHEET 14 & 15 FOR -L- PROFILE
SEE STRUCTURES S-1 THRU S-40
SEE STRUCTURES S-41 THRU S-70
SEE CULVERTS C-1 THRU C-7
SEE CULVERTS C-8 THRU C-16
SEE RETAINING WALL W-1 THRU W-5

-Y1- -RPC-
PI Sta 17+44.29
Δ = 46° 38' 50.2" (RT)
D = 7° 09' 43.7"
Ls = 200.00'
T = 344.29'
R = 800.00'
DS = 50 MPH

-Y1- -LPC-	
PIs Sta 10+66.67	PIs Sta 13+36.17
Δ = 17° 59' 30.7"	Δ = 35° 48' 35.5"
Ls = 200.00'	Ls = 200.00'
LT = 133.34'	LT = 136.17'
ST = 66.67'	ST = 69.25'

-Y1- -LPA-	
PIs Sta 11+36.17	PIs Sta 13+73.09
Δ = 35° 48' 35.5"	Δ = 94° 30' 03.4" (LT)
Ls = 200.00'	D = 35° 48' 35.5"
LT = 136.17'	L = 282.83'
ST = 69.25'	T = 173.09'
	R = 160.00'
	DS = 25 MPH

-Y1- -LPA-	
PIs Sta 18+47.80	
Δ = 88° 10' 08.0" (LT)	
D = 59° 04' 04.7"	
L = 149.21'	
T = 93.95'	
R = 97.00'	
DS = < 15 MPH	

-Y1- -RPA-	
PIs Sta 13+15.04	PIs Sta 16+17.47
Δ = 8° 11' 06.4"	Δ = 75° 14' 54.8" (RT)
D = 8° 11' 06.4"	D = 8° 11' 06.4"
L = 69.92'	L = 455.92'
T = 35.00'	T = 275.91'
R = 700.00'	R = 700.00'
DS = 45 MPH	DS = 45 MPH

-DW1-	
PI Sta 10+80.57	PI Sta 11+99.95
Δ = 58° 19' 29.1" (LT)	Δ = 42° 25' 25.3" (RT)
D = 76° 23' 39.7"	D = 76° 23' 39.7"
L = 77.42'	L = 66.32'
T = 39.51'	T = 28.98'
R = 75.00'	R = 75.00'
DS = < 15 MPH	DS = < 15 MPH

-DW2-	
PI Sta 10+29.18	PI Sta 11+54.09
Δ = 76° 08' 40.5" (RT)	Δ = 36° 39' 09.5" (LT)
D = 286° 28' 44.0"	D = 190° 59' 09.4"
L = 26.58'	L = 19.19'
T = 15.67'	T = 9.94'
R = 20.00'	R = 30.00'
DS = < 15 MPH	DS = < 15 MPH

-Y3-
PI Sta 12+25.52
Δ = 14° 46' 31.2" (LT)
D = 4° 58' 56.1"
L = 294.55'
T = 148.09'
R = 1150.00'
DS = 20 MPH

-SRI-	
PI Sta 11+17.39	PI Sta 12+19.44
Δ = 12° 38' 55.2" (LT)	Δ = 22° 00' 22.2" (RT)
D = 12° 43' 56.6"	D = 16° 22' 12.8"
L = 99.34'	L = 134.43'
T = 49.87'	T = 68.05'
R = 450.00'	R = 350.00'
DS = < 15 MPH	DS = < 15 MPH

-SRI-	
PIs Sta 16+16.51	PI Sta 18+57.31
Δ = 18° 57' 45.3" (RT)	Δ = 4° 46' 28.7"
D = 12° 43' 56.6"	D = 16° 21' 13.1"
L = 148.93'	L = 292.37'
T = 75.15'	T = 146.23'
R = 450.00'	R = 350.00'
DS = < 15 MPH	DS = < 15 MPH

-Y1- -RPD-	
PIs Sta 15+14.66	PIs Sta 18+57.31
Δ = 25° 00' 44.6" (LT)	Δ = 4° 46' 28.7"
D = 3° 49' 11.0"	D = 16° 21' 13.1"
L = 525.39'	L = 292.37'
T = 264.66'	T = 146.23'
R = 1500.00'	R = 350.00'
DS = 65 MPH	DS = 15 MPH

-Y2-
PI Sta 12+79.15
Δ = 13° 54' 06.4" (LT)
D = 8° 11' 06.4"
L = 169.83'
T = 85.33'
R = 700.00'
DS = 15 MPH

-L-	
PIs Sta 30+85.43	PI Sta 31+76.76
Δ = 1° 00' 00.0"	Δ = 2° 58' 05.9"
D = 2° 23' 39.7"	D = 1° 46' 29.7"
Ls = 200.00'	Ls = 250.00'
LT = 133.34'	LT = 166.76'
ST = 66.67'	ST = 83.42'

-L-	
PIs Sta 33+45.98	PI Sta 34+97.06
Δ = 42° 28' 10.0" (RT)	Δ = 4° 28' 34.4"
D = 3° 34' 51.6"	D = 1° 43' 39.7"
Ls = 250.00'	Ls = 250.00'
LT = 291.13'	LT = 166.72'
R = 1600.00'	R = 1200.00'
DS = 60 MPH	DS = 55 MPH

-L-	
PIs Sta 36+94.01	PIs Sta 38+90.85
Δ = 8° 08' 00.0" (RT)	Δ = 4° 28' 34.4"
D = 3° 34' 51.6"	D = 1° 43' 39.7"
Ls = 250.00'	Ls = 250.00'
LT = 287.13'	LT = 166.72'
R = 1600.00'	R = 1200.00'
DS = 60 MPH	DS = 55 MPH

DITCH CHART

LPA	LPC
LPA-1 LATERAL 'Y' DITCH STA. 33+00 TO STA. 34+05 -Y1-, RT EST. 640 C.Y. DOE SEE DETAIL H, SH. 20-2	LPC-1 TRAPEZOIDAL GRASSED SWALE w/ROCK CHECK DAM STA. 11+00 -LPC-, LT STA. 22+00 -LPC-, LT SEE DETAIL AG, SH. 20-2
LPA-2 SPECIAL CUT 'Y' DITCH STA. 30+70 -Y1-, RT TO STA. 36+50 -L-, LT SEE DETAIL H, SH. 20-2	LPC-2 TRAPEZOIDAL GRASSED SWALE w/ROCK CHECK DAM STA. 17+50 -LPC-, LT TO STA. 22+00 -LPC-, LT SEE DETAIL AG, SH. 20-2 EST. 4 TONS CLASS B STONE
LPA-3 SPECIAL CUT 'Y' DITCH STA. 34+30 TO STA. 35+03 -Y1-, RT SEE DETAIL H, SH. 20-2	LPC-3 LATERAL BASE DITCH STA. 22+00 TO STA. 23+00 -Y1-, LT LINE w/PGL EST. 1,040 C.Y. DOE SEE DETAIL AAA, SH. 20-2
LPA-4 SPECIAL CUT 'Y' DITCH STA. 18+00 TO STA. 19+98 -Y1RPA-, LT SEE DETAIL H, SH. 20-2	LPC-4 STANDARD BASE GRASSED SWALE STA. 23+00 TO 24+70 -Y1-, LT STA. 24+70 -Y1-, LT SEE DETAIL AJ, SH. 20-2
LPA-5 SPECIAL CUT 'Y' DITCH STA. 12+98 TO STA. 13+15 -Y1RPA-, LT SEE DETAIL H, SH. 20-2	LPC-5 'Y' GRASSED SWALE w/ROCK CHECK DAM STA. 14+00 TO STA. 15+00 -Y1UPC-, LT SEE DETAIL AJ, SH. 20-2 EST. 7 TONS CLASS B STONE
LPA-6 SPECIAL CUT 'Y' DITCH STA. 38+07 TO STA. 38+37 -L-, LT SEE DETAIL H, SH. 20-2	LPC-6 TOE PROTECTION STA. 12+98 TO STA. 13+15 -Y1RPA-, LT EST. 25 TONS CLASS B RIP RAP EST. 43 TONS EST. 165 SY GEOTEXTILE SEE DETAIL AN, SH. 20-3
	LPC-7 TOE PROTECTION STA. 17+50 TO STA. 22+37 -L-, RT LINE w/CLASS B RIP RAP EST. 25 TONS EST. 415 SY GEOTEXTILE SEE DETAIL AN, SH. 20-3
	LPC-8 TOE PROTECTION STA. 22+00 TO STA. 24+04 -Y1-, LT LINE w/CLASS B RIP RAP EST. 65 TONS EST. 1,080 SY GEOTEXTILE SEE DETAIL AN, SH. 20-3
	LPC-9 TOE PROTECTION STA. 24+04 TO STA. 24+41 -Y1-, LT LINE w/CLASS B RIP RAP EST. 80 TONS EST. 310 SY GEOTEXTILE SEE DETAIL AN, SH. 20-3

RPA	RPC
RPA-1 SPECIAL CUT 'V' DITCH STA. 38+90 TO STA. 39+37 -L-, LT SEE DETAIL U, SH. 20-2	RPC-1 TOE PROTECTION STA. 15+33 TO STA. 16+00 -YIRPC-, LT LINE w/CLASS B RIP RAP EST. 30 TONS SEE DETAIL AE, SH. 20-2
RPA-2 STANDARD 'V' DITCH STA. 39+37 -L-, LT TO STA. 39+57 -L-, LT SEE DETAIL AB, SH. 20-2	RPC-2 SPECIAL CUT GRASSED SWALE STA. 17+00 TO STA. 18+00 -YIRPC-, LT SEE DETAIL B, SH. 20-2
RPA-3 SPECIAL CUT DITCH STA. 13+83 TO STA. 14+15 -Y1RPA-, LT LINE w/CLASS B RIP RAP EST. 35 TONS EST. 125 SY GEOTEXTILE SEE DETAIL H, SH. 20-2	RPC-3 SPECIAL CUT GRASSED SWALE STA. 17+00 TO STA. 18+00 -YIRPC-, LT SEE DETAIL B, SH. 20-2
RPA-4 SPECIAL CUT 'V' DITCH STA. 13+40 TO STA. 14+83 -Y1RPD-, LT SEE DETAIL H, SH. 20-2	RPC-4 SPECIAL CUT DITCH STA. 14+33 TO STA. 14+83 -Y1UPC-, RT SEE DETAIL B, SH. 20-2
RPA-5 STANDARD BASE DITCH STA. 13+40 -Y1RPD-, LT TO STA. 41+49 -L-, LT SEE DETAIL AG, SH. 20-3	RPC-5 TOE PROTECTION STA. 14+83 TO STA. 15+33 -Y1UPC-, LT LINE w/CLASS B RIP RAP EST. 30 TONS EST. 100 SY GEOTEXTILE SEE DETAIL AE, SH. 20-2
	RPC-6 STANDARD 'V' DITCH STA. 17+76 -L-, RT TO STA. 22+37 -L-, RT SEE DETAIL AN, SH. 20-3
	RPC-7 SPECIAL CUT DITCH STA. 11+40 TO STA. 11+83 -Y1UPC-, RT SEE DETAIL B, SH. 20-2

GRAPHIC SCALE
50 25 0 50 100
PLANS