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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.
R-5023B	19

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 25474 ENGINEER W. CRAIG PARKER

DocuSigned by: W. Craig Parker 11/4/2016

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 15764 ENGINEER JAMES A BYRD

DocuSigned by: James A. Byrd 11/3/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/28/99

PI = 45+21.00
EL = 59.55'
VC = 450'
K = 224
V = 67 MPH

(+) 1.3039%

(−) 0.7075%

(+) 1.6182%

(+) 2.3200%

(−) 0.8167%

(−) 0.6955%

EI = 45.00

PI = 41+50.000
EI = 48.60

END LEFT DITCH GRADE
-L 3425LT- STA 43+50.00
ELVE. = 53.90

END RIGHT DITCH GRADE
-L 3350RT- STA 44+00.00
ELEV. = 54.40

BEGIN RIGHT DITCH GRADE
-L 4550RT- STA 45+50.00
ELEV. = 55.20

BEGIN LEFT DITCH GRADE
-L 4650LT- STA 46+50.00
ELEV. = 55.10

50.15'

54.75'

DITCH LEGEND	
LEFT DITCH	— · — · —
RIGHT DITCH	----------

SEE SHEETS 7, 8 AND 9 FOR -L- PLAN

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00

0 10 20 30 40 50 60 70

BM4 ELEVATION = 51.56
N 362849 E 2446717
L STATION 56+35.00 119 LEFT
RR SPIKE IN 12" PINE

PIPE HYDRAULIC DATA
STR.0904, -L- Sta. 56+60

DRAINAGE AREA	= 41	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 55	CFS
DESIGN HW ELEVATION	= 49.8	FT
100 YEAR DISCHARGE	= 65	CFS
100 YEAR HW ELEVATION	= 50.2	FT
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING DISCHARGE	= 110	CFS
OVERTOPPING ELEVATION	= 52.1	FT

PI = 57+15.00
EL = 51.10'
VC = 550'
K = 385
V = 80 MPH

54.75'

(−) 0.8112%

(−) 0.7075%

(+) 1.5410%

(+) 0.7208%

(+) 0.6158%

(−) 0.5110%

(+) 1.2854%

2 @ 42" X 29" CAPA

24" RCP

PI = 52+50.000
EI = 50.20

PI = 55+58.500
EI = 47.49

PI = 56+60.500
EI = 46.87

END RIGHT DITCH GRADE
-L 4550RT- STA 57+50.00
ELVE. = 48.90

CENTERLINE INTERSECTION
-L- STA 58+46.24 =
-Y2- STA 113+81.81

END LEFT DITCH GRADE
-L 4650LT- STA 62+50.00
ELEV. = 50.50

BEGIN RIGHT DITCH GRADE
-L 6300RT- STA 63+00.00
ELVE. = 51.50

PI = 64+56.550
EI = 50.70

57.48'

PIPE HYDRAULIC DATA
STR.1005, -L- Sta. 64+56

DRAINAGE AREA	= 9.2	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 14	CFS
DESIGN HW ELEVATION	= 52.7	FT
100 YEAR DISCHARGE	= 16	CFS
100 YEAR HW ELEVATION	= 52.9	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= -	CFS
OVERTOPPING ELEVATION	= 56.2	FT

DITCH LEGEND	
LEFT DITCH	— · — · —
RIGHT DITCH	----------

SEE SHEETS 9 AND 10 FOR -L- PLAN

52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00

0 10 20 30 40 50 60 70

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