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5/28/99

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
R-5759	38

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 36786 ENGINEER
Douglas M. Kelley
A87893E0C6...
10/12/2026

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 40801 ENGINEER
Paul Jonathan Ambrose
037E3B7AD...
10/12/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-DRW10-

PI = 10+75.00
EL = 1,136.69'
K = 9
VC = 50'
V = 20 MPH

(+)10.3609%
(+)4.4463%
EXISTING GROUND
PROPOSED GRADE

BEGIN GRADE
-DRW10- STA 10+15.00
ELEV. = 1130.47'

END GRADE
-DRW10- STA 11+00.00
ELEV. = 1137.80'

FOR -DRW10- PLAN, SEE SHEET 12

-Y13-

PI = 11+25.00
EL = 1,019.89'
K = 16
VC = 180'
V = 15 MPH

PROPOSED GRADE
(+)10.8394%
(-)0.6697%
EXISTING GROUND

BEGIN GRADE
-Y13- STA 10+28.83
ELEV. = 1020.54'

END GRADE
-Y13- STA 12+25.00
ELEV. = 1030.73'

60" RCP

PIPE HYDRAULIC DATA
-Y13- Sta.11+78

DRAINAGE AREA	= 100.2	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 120	CFS
DESIGN HW ELEVATION	= 1010.4	FT
100 YEAR DISCHARGE	= 170	CFS
100 YEAR HW ELEVATION	= 1010.1	FT
OVERTOPPING FREQUENCY	= 500(+)	YRS
OVERTOPPING DISCHARGE	= 260	CFS
OVERTOPPING ELEVATION	= 1021.7	FT

FOR -Y13- PLAN, SEE SHEET 13

-Y14-

PI = 10+45.00
EL = 1,105.46'
K = 7
VC = 60'
V = 20 MPH

(-)8.1282%
(-)17.1500%
(-)16.2785%
(-)17.7059%
(-)16.6636%
(-)17.6940%
(-)15.0927%
(-)14.3856%
(-)17.1200%
(+)2.0000%
(-) 0.5200%
(-) 1.2000%

BEGIN GRADE
-Y14- STA 10+09.00
ELEV. = 1,108.38

BEGIN DITCH
PI = 10+25.00 (LT)
EI = 1105.59

PI = 11+25.000
EI = 1089.31

PI = 12+25.00 (LT)
EI = 1091.61

BEGIN DITCH
PI = 13+00.00 (RT)
EI = 1060.32

PI = 15+50.00 (LT)
EI = 1017.45
PI = 15+50.000 (RT)
EI = 1016.09

PI = 16+25.00 (LT)
EI = 1006.13
PI = 16+25.000 (RT)
EI = 1005.30

END DITCH
PI = 16+50.00 (LT)
EI = 1006.00
END DITCH
PI = 16+50.00 (RT)
EI = 1005.00

PI = 16+15.00
EL = 1,007.70'
K = 3
VC = 60'
V = <15 MPH

END GRADE
-Y14- STA 16+97.18
ELEV. = 1,009.35'

EXISTING GROUND
PROPOSED GRADE

DITCH LEGEND
LEFT DITCH
RIGHT DITCH

FOR -Y14- PLAN, SEE SHEET 13

-DRW13-

FOR -DRW13- PLAN, SEE SHEET 13

BEGIN GRADE
-DRW13- STA 10+50.00
ELEV. = 1,031.30'

PI = 10+65.00
EL = 1030.70'
K = 7
VC = 20'
V = 20 MPH

(-)4.0000%
(-)6.7687%
PROPOSED GRADE
EXISTING GROUND

END GRADE
-DRW13- STA 10+77.60
ELEV. = 1,029.85'

-DRW14-

FOR -DRW14- PLAN, SEE SHEET 13

BEGIN GRADE
-DRW14- STA 10+50.00
ELEV. = 1,027.50

PI = 10+78.00
EL = 1,022.91'
K = 1
VC = 15'
V = <15 MPH

PROPOSED GRADE
(-)12.0000%
(-)18.0199%
(-)15.0000%
EXISTING GROUND

END GRADE
-DRW14- STA 10+85.52
ELEV. = 1,022.53

PI = 10+57.50
EL = 1,026.60'
K = 2
VC = 15'
V = <15 MPH

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HNTB