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5/28/99

-YIRPB-

BEGIN GRADE
-YIRPB- STA.10+00.00 =
-LWB- STA.29+56.42
OFF.= 24.00'

PI = 11+25.00
EL = 71.02'
VC = 150'
K = 197
V ≥ 50 MPH

(+)0.3000%

(−)0.4600%

PIPE HYDRAULIC DATA
48" RCP-III Sta. 19+95

DRAINAGE AREA	= 74.6	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 102	CFS
DESIGN HW ELEVATION	= 64.7	FT
100 YEAR DISCHARGE	= 120	CFS
100 YEAR HW ELEVATION	= 65.5	FT
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING DISCHARGE	= 130.4	CFS
OVERTOPPING ELEVATION	= 66.1	FT

PI = 18+65.00
EL = 67.61'
VC = 300'
K = 206
V ≥ 50 MPH

(−)0.4600%

(+)0.9992%

BEGIN DITCH LT
STA 19+50.00 -YIRPB-
= STA 38+81.06 -LWB-
ELEV = 59.55'

END DITCH LT
STA = 21+00.00
EL = 64.00'

(+)0.1%

(+)3.5%

48" RCP-III

PI = 19+70.00
ELEV = 59.53'

UNDERCUT EXCAVATION

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

130 120 110 100 90 80 70 60 50 40

-YIRPB-

END GRADE /
TIE TO ROUNDABOUT
-YIRPB- STA.31+57.88 =
ELEV.= 80.53'

(+)0.9992%

PIPE HYDRAULIC DATA
24" RCP-IV Sta. 31+07

DRAINAGE AREA	= 11.5	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 10.2	CFS
DESIGN HW ELEVATION	= 61.1	FT
100 YEAR DISCHARGE	= 11.3	CFS
100 YEAR HW ELEVATION	= 61.2	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 29.8	CFS
OVERTOPPING ELEVATION	= 65.5	FT

24" RCP-IV

UNDERCUT EXCAVATION

MEDIAN DITCH ----------
LEFT DITCH
RIGHT DITCH

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00

130 120 110 100 90 80 70 60 50 40

NV5
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CARY, NC 27518
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NC License # F-1333
formerly CALYX Engineers & Consultants

PROJECT REFERENCE NO.	SHEET NO.
R-5819/R-5820	40

ROADWAY DESIGN ENGINEER
4/13/2022
NORTH CAROLINA PROFESSIONAL SEAL 017265 ENGINEER STEVEN RAY HORNEY JR
DocuSigned by: Steve Horney
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HYDRAULICS ENGINEER
4/13/2022
NORTH CAROLINA PROFESSIONAL SEAL 039102 ENGINEER BRANDON T. BARNHAM
DocuSigned by: Brandon Barnham
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2/14/2022
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