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

METRIC

5 0 10

CONST.REV.

R /W REV.

PROJECT REFERENCE NO.	SHEET NO.
R-2911A	39

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028434 ENGINEER BRYON M. PALMER 3-12-04

SEAL NOT VALID UNLESS SIGNED AND DATED

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 12786 ENGINEER STEVEN M. BONDOR 3-12-04

SEAL NOT VALID UNLESS SIGNED AND DATED

TBM9 RR SPIKE IN 700MM BIRCH TREE
STA.48+22.347 -L-,380.469m RT.,EL =236.764

TBM10 RR SPIKE IN 600MM OAK TREE
STA.50+29.022 -L-,253.042m LT.,EL =261.740

PVT 48+150.000 EL =249.529

PVC 48+250.000 EL =249.471

Sta.48+382.99 -L-
Sta.49+37.432 -PT-

PI = 49+250.000
EL = 248.900
K = 50
VC = 200 m
100 km/h

PVT 50+250.000 EL =252.347

PVC 50+450.000 EL =253.205

-0.57141%

-0.57141%

+3.44711%

1050mm

1200mm

-L-

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.79

DRAINAGE AREA	= 15.6	HA
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 3.46	CMS
DESIGN HW ELEVATION	= 242.30M	
100 YEAR DISCHARGE	= 4.02	CMS
100 YEAR HW ELEVATION	= 242.70 M	
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 9.50	CMS
OVERTOPPING ELEVATION	= 249.80M	

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.80

DRAINAGE AREA	= 4.9	HA
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 1.12	CMS
DESIGN HW ELEVATION	= 249.91 M	
100 YEAR DISCHARGE	= 1.30	CMS
100 YEAR HW ELEVATION	= 249.99 M	
OVERTOPPING FREQUENCY	= 200+	YRS
OVERTOPPING DISCHARGE	= 1.90	CMS
OVERTOPPING ELEVATION	= 250.30M	

SEE SHEET 15 FOR -L- PLAN

TBM11 RR SPIKE IN 350MM OAK TREE
STA.52+72.314 -L-,193.058m RT.,EL =260.369

PI = 52+80.000
EL = 261.137
K = 91
VC = 160 m
100 km/h

Sta.52+30.107 -L-
Sta.11+22.243 -PT-

+3.44711%

-1.59170%

-L-

SEE SHEET 16 FOR -L- PLAN

ARCADIS G&M
Date:3/12/2004 Time: 8:09:42 AM
Filename:r:\roadway\proj\r-2911a_rdy_pfl-s39.dgn