



PROJECT REFERENCE NO. R-4753	SHEET NO. 24
ROADWAY DESIGN ENGINEER <i>David J. Cledge, PE</i>	HYDRAULICS ENGINEER <i>Stephen R. Morgan, PE</i>

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PIPE HYDRAULIC DATA
Exist. 3' x 3' RCBC -L- Sta.154+17

2,190	DRAINAGE AREA	= 30	AC
	DESIGN FREQUENCY	= 50	YRS
	DESIGN DISCHARGE	= 55	CFS
	DESIGN HW ELEVATION	= 2144.37	FT
2,180	100 YEAR DISCHARGE	= 67	CFS
	100 YEAR HW ELEVATION	= 2145.1	FT
	OVERTOPPING FREQUENCY	=	YRS
	OVERTOPPING DISCHARGE	=	CFS
2,170	OVERTOPPING ELEVATION	=	FT

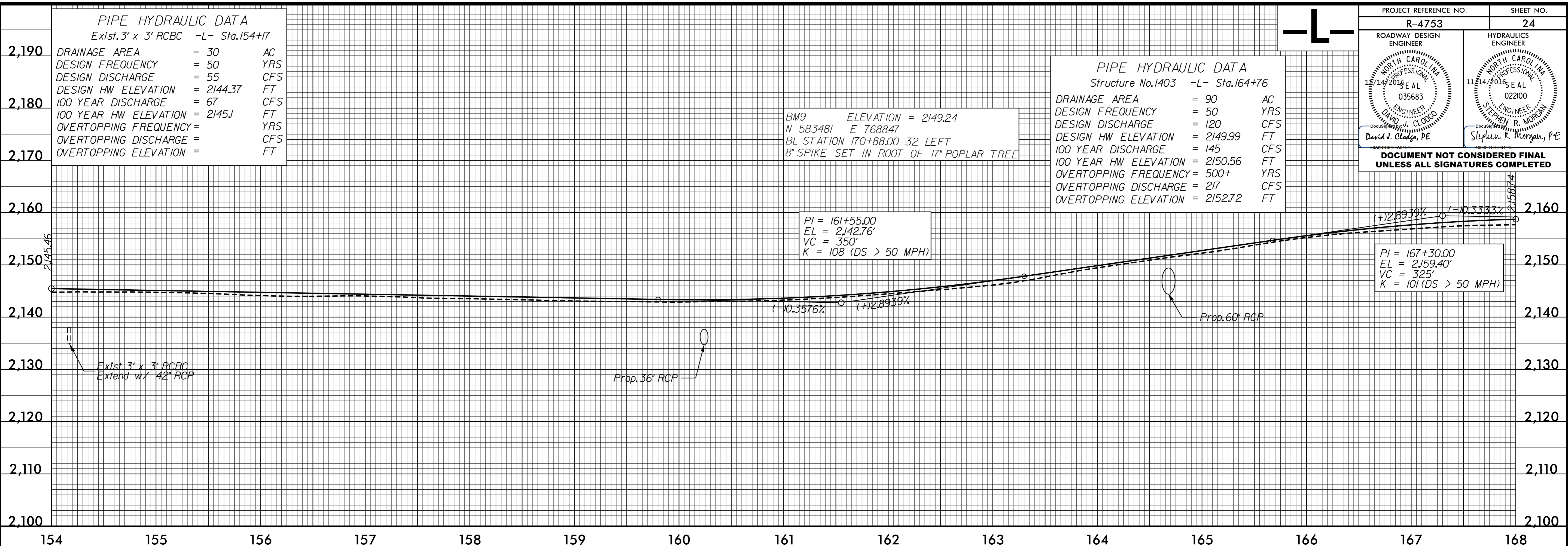
PIPE HYDRAULIC DATA
Structure No.1403 -L- Sta.164+76

	DRAINAGE AREA	= 90	AC
	DESIGN FREQUENCY	= 50	YRS
	DESIGN DISCHARGE	= 120	CFS
	DESIGN HW ELEVATION	= 2149.99	FT
	100 YEAR DISCHARGE	= 145	CFS
	100 YEAR HW ELEVATION	= 2150.56	FT
	OVERTOPPING FREQUENCY	= 500+	YRS
	OVERTOPPING DISCHARGE	= 217	CFS
	OVERTOPPING ELEVATION	= 2152.72	FT

BM9 ELEVATION = 2149.24
N 583481 E 768847
BL STATION 170+88.00 32 LEFT
8" SPIKE SET IN ROOT OF 17" POPLAR TREE

PI = 161+55.00
EL = 2142.76'
VC = 350'
K = 108 (DS > 50 MPH)

PI = 167+30.00
EL = 2159.40'
VC = 325'
K = 101 (DS > 50 MPH)



CULVERT HYDRAULIC DATA

2,200	DESIGN DISCHARGE	= 280	CFS
	DESIGN FREQUENCY	= 50	YRS
	DESIGN HW ELEVATION	= 2156.6	FT
	BASE DISCHARGE	= 330	CFS
2,190	BASE FREQUENCY	= 100	YRS
	BASE HW ELEVATION	= 2157.2	FT
	OVERTOPPING DISCHARGE	= 500	CFS
	OVERTOPPING FREQUENCY	= 500	YRS
2,180	OVERTOPPING ELEVATION	= 2159.2	FT

PIPE HYDRAULIC DATA
Structure No.1503 -L- Sta.170+31

	DRAINAGE AREA	= 6.4	AC
	DESIGN FREQUENCY	= 50	YRS
	DESIGN DISCHARGE	= 13.0	CFS
	DESIGN HW ELEVATION	= 2158.53	FT
	100 YEAR DISCHARGE	= 15	CFS
	100 YEAR HW ELEVATION	= 2158.78	FT
	OVERTOPPING FREQUENCY	= 100+	YRS
	OVERTOPPING DISCHARGE	= 19.5	CFS
	OVERTOPPING ELEVATION	= 2159.54	FT

PIPE HYDRAULIC DATA
Structure No.1509 -L- Sta.177+23

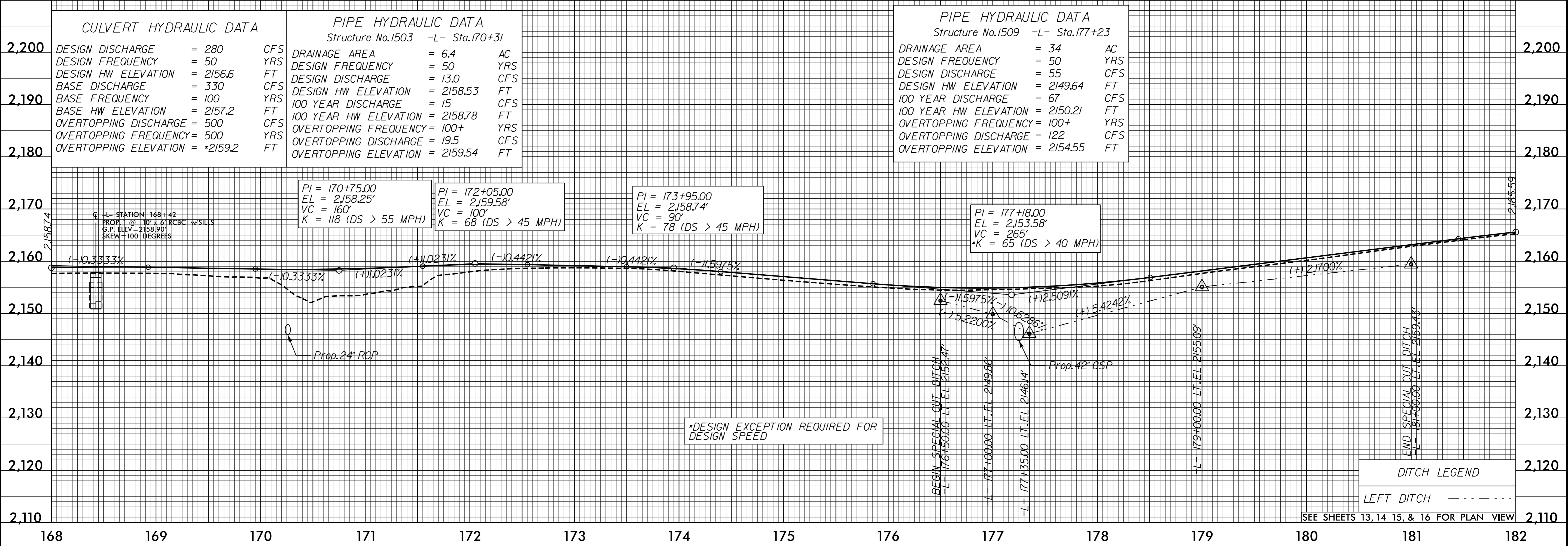
	DRAINAGE AREA	= 34	AC
	DESIGN FREQUENCY	= 50	YRS
	DESIGN DISCHARGE	= 55	CFS
	DESIGN HW ELEVATION	= 2149.64	FT
	100 YEAR DISCHARGE	= 67	CFS
	100 YEAR HW ELEVATION	= 2150.21	FT
	OVERTOPPING FREQUENCY	= 100+	YRS
	OVERTOPPING DISCHARGE	= 122	CFS
	OVERTOPPING ELEVATION	= 2154.55	FT

PI = 170+75.00
EL = 2158.25'
VC = 160'
K = 118 (DS > 55 MPH)

PI = 172+05.00
EL = 2159.58'
VC = 100'
K = 68 (DS > 45 MPH)

PI = 173+95.00
EL = 2158.74'
VC = 90'
K = 78 (DS > 45 MPH)

PI = 177+18.00
EL = 2153.58'
VC = 265'
*K = 65 (DS > 40 MPH)



*DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

DITCH LEGEND
LEFT DITCH - - - - -

SEE SHEETS 13, 14, 15, & 16 FOR PLAN VIEW

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