

ENGINEER St. Charles Engineering JOB No. 93-303 DATE 8/20/93 ^{Rev. 9/13/93} J.N. PROJECT WINDING WOODS Phase 2

HYDRAULIC COMPUTATIONS

LINE		PIPE CHARACTERISTICS					STRUCT. TOPS		DEPTH	ELEV. HYD. GRD		HYD.	FRICT.	VEL.	$\frac{V^2}{2g}$	VHL	TURN	INLETS		FLOW REQUIREMENTS				PIPE
UPPER	LOWER	LENGTH	SIZE	F.L. GRADE	F.L. UPPER	F.L. LOWER	UPPER	LOWER	HYD. GRADE	UPPER	LOWER	GRADE	HEAD LOSS				LOSS	STREET GRADE	CAPACITY	DRNG. AREA	P.I.	Q	TOTAL Q	CAP.
C.I. 24	C.I. 23	34'	15"	0.019	564.00	563.35	568.25	568.25	3.00	564.62	< Full 564.60	.0007	0.02	1.4	.03	-	-	Low	4.0	0.65	2.64	1.72	1.72	8.92
C.I. 23	A.I. 22	124'	15"	0.0157	563.15	561.20	568.25	568.00	3.65	562.70	< Full 562.45	.0020	0.25	2.3	.08	0.08	$\frac{0.04}{55^\circ}$	Low	4.0	0.43	2.64	1.14	2.86	8.92
A.I. 22	A.I. 21	30'	15"	0.06	561.00	559.20	568.00	563.40	5.75	560.67	560.47	.0066	0.20	4.3	.29	0.33	$\frac{0.15}{50^\circ}$	2-5	5.50	0.91	2.64	2.40	5.26	16.75
A.I. 21	C.I. 20	115'	18"	0.019	559.00	556.81	563.40	563.09	2.53	560.22	559.50	.0063	0.72	4.7	.34	0.21	$\frac{0.04}{50^\circ}$	2-5	5.50	1.16	2.64	3.06	8.32	14.49
C.I. 20	C.I. 19	34'	18"	0.019	556.61	555.96	563.09	563.09	3.19	558.79	558.44	.0102	0.35	6.0	.56	0.39	$\frac{0.32}{65^\circ}$	Low	4.0	0.88	2.64	2.32	10.64	14.49
C.I. 19	MH. 18	36'	18"	0.019	555.76	555.08	563.09	563.60	4.25	557.20	< Full 556.58	.0171	0.62	7.8	.95	0.69	$\frac{0.55}{65^\circ}$	Low	4.0	1.17	2.64	3.09	13.73	14.49
MH. 18	F.E. 17	125'	18"	0.0358	553.48	549.00	563.60	-	6.62	552.64	550.50	.0171	2.14	7.8	.95	-	-	-	-	-0-	-0-	-0-	13.73	19.89

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