

Storm Sewer Design
 10 yr. Storm
 Formulas Used:
 $Q_r = ACI$
 $V_p = 1.486 R^{1/2/3} S^{1/12/n}$
 $Q_p = A_p V_p$

Bayer Becker
 Designed By: JAG
 Reviewed By: _____
 Date: 4/26/2007
 Revisions: _____
 Date: _____

Project: Chestnutwood Village
 Job No.: 07F-014-000
 $n = 0.013$ Unless Otherwise Shown

LOCATION		TOPOGRAPHY			TIME			DESIGN				CAPACITY		INLET DESIGN				HGL CALCULATION													
From	To	Area (acres)	"C" (acres)	A+C (acres)	Cumm. AC (acres)	To-inl. (min.)	T-p-pipe (min.)	T-c-conc. (min.)	Intensity (in./hr.)	Q _r (c.f.s.)	Pipe (in.)	"n"	Dist. (ft.)	Slope (%)	Velocity (ft./sec)	Q _p cfs	Q _r cfs	Q _{def.} = Q _r - Q _p	%Prov.	T/Grate	Inlet Invert	Outlet Invert	Orifice Height(ft)	Orifice Flow(cfs)	V ² /2g	Loss Coeff.	Loss	Hydraulic Radius	Pipe Area	Slope Needed	HGL Elev.
YD 3	EX 3	0.12	0.85	0.10	0.10	10.00	0.37	10.00	5.15	0.53	12	0.013	102	1.00	4.54	3.56	0.53	0.00	678	892.70	889.60	888.58	2.60	6.30	0.32	0.5	0.160	0.397	0.785	0.02%	890.62
EX 3	EX 2	0.17	0.85	0.14	0.25	10.00	0.33	10.37	5.09	1.26	12	0.013	71	0.62	3.57	2.81	1.26	0.00	223	892.00	888.58	888.14	2.92	6.68	0.20	0.5	0.099	0.397	0.785	0.12%	890.44
CB 1	EX 2	0.12	0.85	0.10	0.10	10.00	0.33	10.00	5.15	0.53	12	0.013	70	0.61	3.54	2.78	0.53	0.00	530	891.22	888.57	888.14	2.15	5.73	0.19	0.5	0.097	0.397	0.785	0.02%	890.37
EX 4	EX 2	0.35	0.85	0.30	0.30	10.00	0.23	10.00	5.15	1.53	12	0.013	45	0.51	3.24	2.54	1.53	0.00	166	890.99	888.37	888.14	2.12	5.69	0.16	0.5	0.081	0.397	0.785	0.19%	890.42
EX 2	EX 1	0.11	0.85	0.09	0.74	10.00	0.37	10.71	5.04	3.73	12	0.013	72	0.50	3.21	2.52	3.73	1.21	68	891.72	888.14	887.78	3.08	6.86	0.16	0.5	0.080	0.397	0.785	1.10%	890.25
EX 1	E	0.15	0.85	0.13	0.87	10.00	0.05	11.08	4.99	4.32	12	0.013	14	1.00	4.54	3.56	4.32	0.76	82	890.36	887.78	887.64	2.08	5.64	0.32	0.5	0.160	0.397	0.785	1.47%	889.38
E	EX CB	0.20	0.50	0.10	0.97	10.00	0.23	11.13	4.98	4.82	15	0.013	52	0.53	3.83	4.70	4.82	0.11	98	889.75	887.64	887.36	1.49	7.44	0.23	0.5	0.114	0.461	1.227	0.56%	889.02
A	B	0.25	0.85	0.21	0.21	10.00	0.49	10.00	5.15	1.09	12	0.013	95	0.50	3.21	2.52	1.09	0.00	230	892.00	889.87	889.40	1.63	4.99	0.16	0.5	0.080	0.397	0.785	0.09%	891.94
B	D	0.79	0.85	0.67	0.88	10.00	0.44	10.49	5.08	4.49	18	0.013	145	0.85	5.48	9.68	4.49	0.00	216	892.00	889.39	888.16	1.86	11.99	0.47	0.5	0.233	0.520	1.767	0.18%	891.77
C	D	0.96	0.50	0.48	0.48	15.00	0.57	15.00	4.47	2.15	12	0.013	110	0.50	3.21	2.52	2.15	0.00	117	890.24	888.70	888.15	1.04	3.99	0.16	0.5	0.080	0.397	0.785	0.36%	891.75
D	EX 6	0.19	0.85	0.16	1.53	10.00	0.45	15.57	4.41	6.72	18	0.013	165	1.05	6.09	10.76	6.72	0.00	160	892.00	888.15	886.42	3.10	15.48	0.58	0.5	0.288	0.520	1.767	0.41%	891.28
YD 2	CB 4	0.24	0.85	0.20	0.20	10.00	0.18	10.00	5.15	1.05	12	0.013	49	1.00	4.54	3.56	1.05	0.00	339	892.60	888.49	888.00	3.61	7.42	0.32	0.5	0.160	0.397	0.785	0.09%	890.51
CB 4	EX 6	0.27	0.85	0.23	0.43	10.00	0.16	10.18	5.12	2.22	12	0.013	44	1.00	4.54	3.56	2.22	0.00	160	892.50	888.00	887.56	4.00	7.82	0.32	0.5	0.160	0.397	0.785	0.39%	890.31
CB 5	EX 6	0.10	0.85	0.09	0.09	10.00	0.05	10.00	5.15	0.44	12	0.013	21	2.00	6.42	5.04	0.44	0.00	1151	891.98	888.98	888.56	2.50	6.18	0.64	0.5	0.320	0.397	0.785	0.02%	889.98
EX 6	EX 8	0.13	0.85	0.11	2.15	10.00	0.28	16.02	4.36	9.39	24	0.013	100	0.69	5.98	18.79	9.39	0.00	200	891.68	886.30	885.61	4.38	32.71	0.56	0.5	0.278	0.630	3.142	0.17%	888.30
EX 8	OFFSITE	0.08	0.85	0.07	2.22	10.00	0.32	16.30	4.33	9.61	24	0.013	202	2.20	10.68	33.55	9.61	0.00	349	889.86	885.61	881.17	3.25	28.18	1.77	0.5	0.886	0.630	3.142	0.18%	887.61
YD 1	EX 5	0.17	0.85	0.14	0.14	10.00	0.20	10.00	5.15	0.74	12	0.013	48	0.81	4.08	3.21	0.74	0.00	431	890.80	886.12	885.73	4.18	7.99	0.26	0.5	0.129	0.397	0.785	0.04%	887.53
EX 5	EX CB 1	0.11	0.85	0.09	0.24	10.00	0.03	10.20	5.12	1.22	12	0.013	15	2.87	7.68	6.04	1.22	0.00	495	890.78	885.73	885.30	4.55	8.34	0.92	0.5	0.459	0.397	0.785	0.12%	887.21
F	G	0.27	0.85	0.23	0.23	15.60	0.07	15.60	4.40	1.01	12	0.013	26	1.80	6.09	4.78	1.01	0.00	473	889.58	885.76	885.29	3.32	7.12	0.58	0.5	0.288	0.397	0.785	0.08%	887.38
G	CB 2	0.27	0.85	0.23	0.70	15.60	0.44	15.67	4.40	3.06	12	0.013	110	0.83	4.13	3.25	3.06	0.00	106	889.50	885.30	884.39	3.70	7.52	0.27	0.5	0.133	0.397	0.785	0.74%	886.90
CB 2	MH 1	0.36	0.85	0.31	1.00	15.60	0.30	16.11	4.35	4.36	12	0.013	81	1.00	4.54	3.56	4.36	0.80	82	888.68	884.39	883.58	3.79	7.61	0.32	0.5	0.160	0.397	0.785	1.50%	886.95
CB 3	MH 1	0.17	0.85	0.14	0.14	10.00	0.07	10.00	5.15	0.74	12	0.013	20	1.00	4.54	3.56	0.74	0.00	479	888.70	883.78	883.58	5.42	9.10	0.32	0.5	0.160	0.397	0.785	0.04%	884.78
EX 7	MH 1	0.08	0.85	0.07	0.07	10.00	0.04	10.00	5.15	0.35	12	0.013	32	8.06	12.88	10.11	0.35	0.00	2887	887.46	886.16	883.58	0.80	3.50	2.58	0.5	1.288	0.397	0.785	0.01%	884.16
MH 1	OFFSITE				1.22	10.00	0.18	16.41	4.31	5.24	12	0.013	84	3.00	7.86	6.17	5.24	0.00	118	887.94	883.58	881.06	3.86	7.68	0.96	0.5	0.479	0.397	0.785	2.17%	884.06

10-yr

RECEIVED
 APR 26 2007
 BY: _____