

Storm Sewer Design

10 yr. Storm
Project: Hyatt House
Job No.: 15M040-000

Formulas Used:
Q_r = ACI
V_p = 1.486 R^(2/3) S^(1/2)/n
Q_p = A_p V_p

Bayer Becker Engineers

Designed By: MJL Date: 01/31/18
Reviewed By: Date:
Revisions: Date:

Revisions: Date:
Revisions: Date:
Revisions: Date:

LOCATION			TOPOGRAPHY				TIME		Min. Tc=	10	DESIGN											Constant n value:		0.015	
Street	From Structure	To Structure	Area (acres)	"C"	Contributing Area	Composite C	T-inlet (min.)	T-upstr (min.)	T_c-conc. (min.)	Intensity (in./hr.)	Q_r (c.f.s.)	Pipe Size (inches)	"n"	Distance (ft.)	Slope (%)	Velocity (ft./sec)	Q_p (c.f.s.)	Flow Time (min.)	T/Grate	Inlet Invert	Outlet Invert				
	1	2	0.34	0.90	0.34	0.90	10.00	10.00	10.00	5.15	1.58	15	0.015	142	1.00	4.56	5.60	0.52	893.02	889.02	887.60				
	2	3	0.47	0.8	0.81	0.84	10.00	10.51877	10.52	5.07	3.46	24	0.015	138	0.55	4.62	14.53	0.50	892.85	886.43	885.67				
	3	4	0.27	0.80	1.08	0.83	10.00	11.02	11.02	5.00	4.49	24	0.015	102	0.36	3.76	11.80	0.45	892.91	885.67	885.30				
	5	4	0.00	0.90	0.00	0.90	10.00	10.00	10.00	5.15	0.00	12	0.015	64	1.00	3.93	3.09	0.27	892.87	888.99	888.35				
	4	6	0.17	0.90	1.25	0.84	10.00	11.47	11.47	4.93	5.18	24	0.015	46	5.81	15.04	47.26	0.05	892.37	885.30	882.64				
	10	11	0.18	0.90	0.18	0.90	10.00	10.00	10.00	5.15	0.83	12	0.015	33	1.00	3.93	3.09	0.14	894.58	891.33	891.00				
	11	41	0.09	0.90	0.27	0.90	10.00	10.14	10.14	5.13	1.25	12	0.015	32	2.91	6.70	5.27	0.08	894.58	891.00	890.06				
	40	41	0.16	0.80	0.16	0.80	10.00	10.00	10.00	5.15	0.66	12	0.015	15	2.50	6.22	4.88	0.04	894.22	890.42	890.06				
	41	42	0.00	0.90	0.43	0.86	10.00	10.22	10.22	5.12	1.90	12	0.015	42	2.00	5.56	4.37	0.13	894.30	890.06	889.23				
	42	43	0.00	0.90	0.43	0.86	10.00	10.35	10.35	5.10	1.89	12	0.015	42	2.00	5.56	4.37	0.13	893.90	889.44	888.61				
	43	13	0.00	0.90	0.43	0.86	10.00	10.47	10.47	5.08	1.88	12	0.015	21	2.00	5.56	4.37	0.06	893.60	888.61	888.19				
	12	13	0.25	0.85	0.25	0.85	10.00	10.00	10.00	5.15	1.09	12	0.015	65	0.50	2.78	2.18	0.39	892.00	888.52	888.19				
	13	14	0.30	0.90	0.98	0.87	10.00	10.53	10.53	5.07	4.33	18	0.015	95	0.50	3.64	6.44	0.43	891.82	887.69	887.22				
	14	20	0.18	0.90	1.16	0.88	10.00	10.97	10.97	5.00	5.08	18	0.015	142	0.75	4.46	7.88	0.53	891.71	887.22	886.16				
	20	21	7.45	0.45	8.61	0.51	10.00	11.50	11.50	4.93	21.52	30	0.015	25	0.50	5.13	25.20	0.08	890.32	883.31	883.19				
	21	22	0.22	0.90	8.83	0.52	10.00	11.58	11.58	4.92	22.45	30	0.015	111	0.50	5.14	25.25	0.36	892.00	883.19	882.63				
	22	23	0.27	0.90	9.10	0.53	10.00	11.94	11.94	4.87	23.40	30	0.015	18	0.51	5.17	25.38	0.06	892.19	882.63	882.54				

