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: 10/17/17

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 No.	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	0.80	0.81	0.84	10.00	10.52	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
	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
	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
	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	13		0.09	0.90	0.27	0.90	10.00	10.14	10.14	5.13	1.25	12	0.015	120	2.34	6.01	4.72	0.33	894.58	891.00	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		0.47	0.85	0.99	0.86	10.00	10.47	10.47	5.08	4.34	18	0.015	95	0.50	3.64	6.44	0.43	891.82	887.69	887.22
	14	20		0.17	0.90	1.16	0.87	10.00	10.91	10.91	5.01	5.05	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	12.00	11.44	12.00	4.86	21.18	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	11.52	11.52	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	11.88	11.88	4.87	23.40	30	0.015	18	0.51	5.17	25.38	0.06	892.23	882.63	882.54