

DRAINAGE DESIGN COMPUTATION

	No. MH	FROM MH	TO MH	LENGTH	TRIBUTARY AREAS		TIME OF FLOW		RUNOFF COEFFICIENT	INTENSITY FROM CURVE 2 1/2 IN. STORM	TOTAL RUNOFF Q: C.F.A		SLOPE OF DRAIN	VELOCITY FT./SEC	DIAM.	THEORETICAL CAPACITY cfs	ELEVATIONS		NOTES
					ING. ACRES	TOTAL ACRES	TO UPPER END	IN SECTION (MIN.)			ING.	TOTAL					UPPER END INVERT	LOWER END INVERT	
DRAIN A	8	8	7	290	1.39	1.39	20.0	2.4	0.29	2.80	1.14	1.14	.0025	2.0	12"	1.6	13.61	12.88	C(Turf)=0.05 C(Pavement)=0.90
	7	7	6	290	2.78	4.17	22.4	2.1	0.20	2.60	1.44	2.58	.0025	2.3	15"	2.8	12.88	12.16	n=.015 Concrete Pipe
	6	6	5	250	1.40	5.57	24.5	1.5	0.35	2.45	1.20	3.78	.0025	2.7	18"	4.7	12.16	11.53	
	5	5	4	250	1.62	7.19	26.0	1.5	0.30	2.36	1.15	4.93	.0025	2.9	21"	7.0	11.53	10.91	
	4	4	3	250	1.73	8.92	27.5	1.4	0.26	2.25	1.04	5.97	.0025	2.9	21"	7.0	10.91	10.28	
	3	3	2	240	2.60	11.52	28.9	1.4	0.19	2.20	1.08	7.05	.0025	2.9	21"	7.0	10.28	9.68	
	2				3.55	15.07	30.3		0.17	2.12	1.27	8.32					9.68		Junction with Crossing
CROSSING		2	1(Drain B)	170								8.32	.0020		24"	8.7	9.68	9.28	Under Runway-Heavy Rein. Pipe
DRAIN B	7	7	6	280	0.28	0.28	20.0	2.6	0.90	2.80	0.70	0.70	.0025	1.8	10"	0.96	13.16	12.46	
	6	6	5	280	0.48	0.76	22.6	2.0	0.90	2.60	1.13	1.83	.0025	2.3	15"	2.8	12.46	11.76	
	5	5	4	250	0.46	1.12	24.6	1.8	0.90	2.45	1.02	2.85	.0025	2.3	15"	2.8	11.76	11.13	
	4	4	3	250	0.43	1.65	26.4	1.6	0.90	2.33	0.90	3.75	.0025	2.6	18"	4.6	11.13	10.51	
	3	3	2	250	0.42	2.07	28.0	1.6	0.90	2.25	0.85	4.60	.0025	2.6	18"	4.6	10.51	9.88	
	2	2	1	240	0.41	2.48	29.6	1.4	0.90	2.15	0.80	5.40	.0025	2.9	21"	7.0	9.88	9.28	
	1				0.46	2.94	31.0		0.90	2.10	0.87	6.27	.0025				9.28		Junction with Crossing & Outfall
OUTFALL		1	A	370								14.59	.0032		27"	14.0	9.28	8.10	
DRAIN D	6	6	5	295	2.35	2.35	20.0	3.1	0.10	2.80	0.66	0.66	.0020	1.6	10"	0.87	14.07	13.48	
	5	5	4	295	1.75	4.10	23.1	2.9	0.30	2.55	1.34	2.00	.0020	2.0	15"	2.5	13.48	12.89	
	4	4	3	250	3.64	7.74	26.0	1.7	0.18	2.37	1.54	3.54	.0020	2.4	18"	4.2	12.89	12.39	
	3	3	2	250	3.80	11.54	27.7	1.6	0.15	2.25	1.29	4.83	.0020	2.6	21"	6.3	12.39	11.89	
	2	2	1	250	1.72	13.26	29.3	1.6	0.26	2.18	0.98	5.81	.0020	2.6	21"	6.3	11.89	11.39	
	1				1.97	15.23	30.9		0.26	2.10	1.08	6.89					11.39		Junction with Crossing
		1	1A	185								6.89	.0023		21"	7.0	11.39	10.96	Under Runway-Heavy Rein. Pipe
DRAIN C	7	7	6	250	0.26	0.26	20.0	2.6	0.90	2.80	0.65	0.65	.0020	1.6	10"	0.87	13.63	13.13	
	6	6	5	250	0.42	0.68	22.6	2.1	0.90	2.58	0.98	1.63	.0020	2.0	15"	2.5	13.13	12.63	
	5	5	4	250	0.42	1.10	24.7	2.1	0.90	2.45	0.93	2.56	.0020	2.0	15"	2.5	12.63	12.13	
	4	4	3	250	0.33	1.43	26.8	1.7	0.90	2.30	0.68	3.24	.0020	2.4	18"	4.2	12.13	11.63	
	3	3	2	220	0.41	1.84	28.5	1.5	0.90	2.22	0.81	4.05	.0020	2.4	18"	4.2	11.63	11.19	
	2	2	1A	117	0.38	2.22	30.0	0.7	0.90	2.13	0.73	4.78	.0020	2.7	21"	6.5	11.19	10.96	Junction with Crossing & Drain F
	1A	1A	1	105	0.00	2.22	30.7	0.5				11.67	.0025	3.6	27"	13.0	10.96	10.70	From Drains C & D
DRAIN F	1	1	2	230	0.44	2.66	31.2	1.2	0.90	2.08	0.83	12.50	.0025	3.2	27"	13.0	10.70	10.13	
	2	2	3	130	0.34	3.00	32.4	0.7	0.90	2.03	0.62	13.12	.0025	3.2	27"	13.0	10.13	9.80	
	3	3	Outfall	240	0.22	3.22	33.1		0.90	2.00	0.40	13.52	.0025	3.2	30"	18.0	9.80	9.20	Junction with N-3 outfall- Cap. 1.75 cfs
DRAIN E	3	3	2	307	0.15	0.15	20.0	3.2	0.90	2.80	0.38	0.38	.0025	1.6	8"	0.55	10.48	9.71	
	2	2	Outfall	107	0.51	0.66	23.2		0.90	2.55	1.18	1.56	.0047		12"	2.1	9.71	9.20	To Ditch

CITY OF HARTFORD, CONN.	
HARTFORD MUNICIPAL AIRPORT	
DRAINAGE DESIGN COMPUTATIONS	
CONCRETE PIPE	
City of Hartford	Department of Engineering
APPROVED	City Engineer
DATE	
APPROVED	
DATE	
DRAWN	CHECKED
DATE	SHEET 10 OF 18
CONN. PROJECT NO.	
DAYBOOK NO. 08984	