

DRAINAGE AREA CALCULATIONS

AREA DESIGN	AREA ACRES	RESIDENTIAL C=0.50	COLLECTOR STREET & COMMERCIAL C=0.80	CxA	tc	ls	Qa	lso	Qto	lso	Qto
A-1	1.34	1.34	---	0.67	10	6.3	4.22	---	---	9.8	6.57
A-2	1.31	1.31	---	0.66	10	6.3	4.16	---	---	9.8	6.47
A-3	1.44	1.44	---	0.72	10	6.3	4.54	---	---	9.8	7.06
A-4	4.08	1.16	2.92	2.92	10	6.3	18.40	---	---	9.8	28.62
A-5	2.96	2.48	0.48	1.62	10	6.3	10.21	---	---	9.8	15.88
A-6	2.58	2.58	---	1.29	10	6.3	8.13	---	---	9.8	12.64
A-7	0.31	0.31	---	0.16	10	6.3	1.01	---	---	9.8	1.57
A-8	2.92	2.92	---	1.46	10	6.3	9.20	---	---	9.8	14.31
B-1	2.94	2.94	---	1.47	10	6.3	9.26	---	---	9.8	14.40
C-1	1.56	1.56	---	0.78	10	6.3	4.91	---	---	9.8	7.64
C-2	1.36	1.36	---	0.68	10	6.3	4.28	---	---	9.8	6.66
C-3	0.91	0.91	---	0.46	10	6.3	2.90	---	---	9.8	4.51
C-4	4.00	4.00	---	2.00	10	6.3	12.00	---	---	9.8	19.60
C-5	1.38	1.38	---	0.69	10	6.3	4.35	---	---	9.8	6.76
C-6	0.14	0.14	---	0.07	10	6.3	0.44	---	---	9.8	0.69
C-7	0.17	0.17	---	0.09	10	6.3	0.57	---	---	9.8	0.86
C-8	2.44	2.44	---	1.22	10	6.3	7.69	---	---	9.8	11.96
C-9	0.29	0.29	---	0.15	10	6.3	0.95	---	---	9.8	1.47
C-10	1.59	1.59	---	0.80	10	6.3	5.04	---	---	9.8	7.84
C-11	0.58	0.58	---	0.29	10	6.3	1.83	---	---	9.8	2.84
C-12	1.61	1.61	---	0.81	10	6.3	5.10	---	---	9.8	7.94
C-13	1.92	1.52	0.40	1.08	10	---	---	7.20	7.78	9.8	10.56
D-1	1.82	1.82	---	0.91	10	---	---	7.20	6.55	9.8	8.92
D-2	1.61	1.29	0.32	0.90	10	---	---	7.20	6.48	9.8	8.82
D-3	1.12	1.12	---	0.56	10	---	---	7.20	4.03	9.8	5.49
D-4	0.69	---	0.69	0.55	10	---	---	7.20	3.96	9.8	5.39
D-5	1.73	1.35	0.38	0.98	10	---	---	7.20	7.06	9.8	9.60
D-6	1.63	1.31	0.32	0.91	10	---	---	7.20	6.55	9.8	8.92
D-7	0.95	---	0.95	0.76	10	---	---	7.20	5.47	9.8	7.45
D-8	0.21	---	0.21	0.17	10	---	---	7.20	1.22	9.8	1.67
E-1	0.47	---	0.47	0.38	10	---	---	7.20	2.74	9.8	3.72
E-2	0.55	---	0.55	0.44	10	---	---	7.20	3.17	9.8	4.31
F-1	0.68	0.68	---	0.34	10	6.3	2.14	---	---	9.8	3.33

COMPUTATION SHEET FOR DETERMINING CAPACITY OF INLETS

INLET TYPE & NO.	D.A. NO.	Qp C.F.S.	CARRYOVER FLOW q C.F.S.	TOTAL FLOW Q C.F.S.	So FT/FT	Yo FT	SPREAD	Q=	CARRYOVER FLOW q C.F.S.	REMARKS
1	A-3	7.06	0	1.06						* Sump 3'x3' Inlet Yo = LESS THAN 6"
2	A-4	28.62	0	28.62						* Sump 4'x4' Inlet Yo = 0.59'
3	A-5	15.88	0	15.88						* Sump 4'x4' Inlet Yo = 0.45' Fully Developed Q
4	A-1, 2&6	25.68	0	25.68						15' Sump Ongrade Inlet Capacity = 2 cfs / L.F.
5	NO INLET									15' Curb Inlet
6	NO INLET									
7	C-1	7.64	0	7.64	0.10			5.20	2.44	4-Grate Combination
8	C-2	6.66	2.44	9.10	0.01	0.48		9.10	0.0	15' Recessed
9	C-3	4.51	0	4.51	0.01			4.51	0.0	10' Curb
10	C-4	19.60	0	19.60	0.073			10.24	9.36	10' Recessed
11	C-6	0.69	9.36	10.05	0.073			7.81	2.24	10' Recessed
12	C-5	6.76	0	6.76	0.073			6.43	0.33	10' Recessed
13	C-7	0.88	0.33	1.21	0.073			1.21	0.0	5' Recessed
14	C-8	11.96	0	11.96	0.073			6.82	5.14	2-Grate Inlet 57% Collected
15	C-9	1.47	5.14	6.61	0.10			4.43	2.18	4-Grate Combination Inlet 67% Collect
16	C-10	7.84	0	7.84	0.10			7.84	0.0	15' Recessed
17	C-11	2.84	0	2.84	0.10			2.84	0.0	10' Recessed
18	C-12	7.94	4.22	12.36	0.01			12.36		10' Sump Ongrade Inlet = 2 cfs/L.F.
19	D-1, 2, 3&5	24.12	0	24.12	0.0436	0.48		14.54	19.34	4.78 20' Curb
20	D-4	3.96	0	3.96	0.0436	0.25		5.47	3.14	0.82 5' Curb
21	D-6	6.55	4.78	11.33	0.008	0.49		17.8	9.58	1.75 10' Curb
22	C-13	7.78	1.75	9.53	0.01	0.45		12.48	8.60	0.93 5' Curb
23	D-7	5.47	0.82	6.29	0.005			6.29	0.0	10' Curb
24	D-8	1.67	0	1.67	0.005			1.67	0.0	5' Curb

\* Orifice Equation Q = CxA√2gh C=0.70 if Submerged Outlet

COLLECTOR STREET CALCULATIONS CONFIRMATION OF 100-YEAR CAPACITY

DESIGN POINT	TOTAL AREA	C=0.50	C=0.80	CXA	tc	lso	Qto	GRADE %	STREET CAPACITY	PIPE CAPACITY	TOTAL CAPACITY	COMMENTS	10 YEAR STORM GUTTER			OPEN LANE WIDTH	
													Q RT	SPREAD RT	Qto LT		
A	5.08	4.34	0.74	2.76	10	9.8	27.04	4.36	192	0	192	O.K.	17.73	15.53	2.13	4.20	16.27
B	6.97	5.58	1.39	3.90	10	9.8	38.24	4.36	192	0	192	O.K.	24.12	14.54	3.96	5.47	15.99
C	8.94	6.89	2.05	5.09	10	9.8	49.88	0.80	82	23.3	105.3	O.K.			N/A		
D	11.23	8.41	2.82	6.46	10	9.8	63.30	1.0	91.8	32.9	124.7	O.K.			N/A		

