

HYDROLOGICAL DESIGN SHEET

PIT	LAND USE	FLOW LENGTH	SLOPE	"n"	TIME	TIME	INTENSITY	CODE	COEFF	AREA	CA	SUM AREA	Q	BY PASS	TOTAL FLOW	GUTTER SLOPE	FLOW WIDTH	PIT TYPE	INLET	INFLOW	BY FLOW	BY PIT	KINEMATIC MIN TIME 5 MAX TIME 20 HAWKS NEST	REMARKS
		m	%		min	min	mm/h			ha	ha	ha	L/s	L/s	L/s	%	m		m	L/s	L/s			
71	2 4	35 40	0.7 0.5	0.053 0.010	7.943	7.9	126 5Yr	-0.5 -0.9	0.652 0.814	0.164 0.022	0.107 0.018	0.125	44		44	0.511	2.233	1	1.8	44		73		
73	2 4	35 40	0.7 0.5	0.053 0.010	7.943	7.9	126 5Yr	-0.5 -0.9	0.652 0.814	0.203 0.015	0.132 0.012	0.145	51		51	0.511	2.37 0.03PH	1 SAG	1.8	51		73		
75	2 4	30 10	0.7 0.5	0.053 0.010	6.056	6.1	140 5Yr	-0.5 -0.9	0.652 0.814	0.040 0.008	0.026 0.007	0.033	13		13	0.51	1.29	1	1.8	13		61		
77	2 4	35 60	0.7 0.5	0.053 0.010	8.694	8.7	122 5Yr	-0.5 -0.9	0.652 0.814	0.268 0.025	0.175 0.020	0.195	66		66	0.506	2.534 0.04PH	1 SAG	1.8	66		77		
78	2 4	20 60	0.7 0.5	0.053 0.010	6.865	6.9	134 5Yr	-0.5 -0.9	0.652 0.814	0.175 0.020	0.114 0.016	0.13	48		48	0.506	2.231 0.03PH	1 SAG	1.8	48		78		
79	2 4	7 10	3 0.5	0.170 0.010	3.436	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.013 0.013	0.007 0.011	0.017	7		7	0.5	0.963	1	1.8	7		78		
42	2 4	35 35	0.7 0.5	0.053 0.010	7.746	7.7	128 5Yr	-0.5 -0.9	0.652 0.814	0.185 0.011	0.121 0.009	0.13	46		46	0.5	2.286	1	1.8	46		44		
43	2 4	3 60	3 0.5	0.010 0.010	3.016	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.020 0.034	0.011 0.028	0.038	16		16	0.5	1.448 0.03PH	1 SAG	1.8	16		43		
44	2 4	35 25	0.7 0.5	0.053 0.010	7.336	7.3	130 5Yr	-0.5 -0.9	0.652 0.814	0.118 0.011	0.077 0.009	0.086	31		31	0.5	1.942 0.03PH	1 SAG	1.8	31		44		
45	2 4	30 7	0.7 0.5	0.053 0.010	5.911	5.9	141 5Yr	-0.5 -0.9	0.652 0.814	0.053 0.010	0.035 0.008	0.043	17		17	0.672	1.379	1	1.8	17		53		
60	2 4	10 10	0.7 0.5	0.053 0.010	3.747	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.040 0.046	0.026 0.037	0.064	27		27	0.5	1.645 0.03PH	1 SAG	1.8	27		60		
61	2 4	10 20	0.7 0.5	0.053 0.010	3.747	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.046 0.046	0.030 0.037	0.067	28		28	0.5	1.69 0.03PH	1 SAG	1.8	28		61		
49	2 4	40 30	0.7 0.5	0.053 0.010	8.122	8.1	125 5Yr	-0.5 -0.9	0.652 0.814	0.136 0.040	0.089 0.033	0.121	42		42	0.5	2.207	1	1.8	42		19		
19	2 4	35 30	1 0.5	0.010 0.010	2.843	5	150 5Yr	-0.6 -0.9	0.693 0.814	0.164 0.030	0.114 0.024	0.138	58		58	0.5	2.506	1	2.4	58		51		
51	2 4	40 25	0.7 0.5	0.053 0.010	7.918	7.9	127 5Yr	-0.5 -0.9	0.652 0.814	0.164 0.038	0.107 0.031	0.138	48		48	0.5	2.016 0.03PH	1 SAG	1.8	48		51		
55	2 4	10 20	1 0.5	0.053 0.010	3.428	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.030 0.034	0.020 0.028	0.047	20		20	0.5	1.592 0.03PH	1 SAG	1.8	20		55		
56	3 4	10 20	1 0.5	0.053 0.010	3.428	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.050 0.025	0.033 0.020	0.053	22		22	0.5	1.676 0.03PH	1 SAG	1.8	22		56		
57	3 4	7 6	3 0.5	0.010 0.010	0.707	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.005 0.005	0.003 0.004	0.007	3		3	0.5	0.406	1	1.8	3		56		
20	2 4	35 40	0.7 0.5	0.053 0.010	7.943	7.9	126 5Yr	-0.5 -0.9	0.652 0.814	0.210 0.043	0.137 0.035	0.172	60		60	0.5	2.553	1	2.4	60		63		
63	2 4	40 40	0.7 0.5	0.053 0.010	8.516	8.5	123 5Yr	-0.5 -0.9	0.652 0.814	0.214 0.050	0.140 0.041	0.18	62		62	0.5	2.575 0.04PH	1 SAG	1.8	62		63		
64	2 4	10 10	3 0.5	0.053 0.010	2.147	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.046 0.036	0.024 0.029	0.054	22		22	0.5	1.526 0.03PH	1 SAG	1.8	22		64		
65	2 4	6 10	3 0.5	0.010 0.010	0.985	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.025 0.020	0.013 0.016	0.03	12		12	0.5	1.278 0.03PH	1 SAG	1.8	12		65		
66	2 4	7 3	3 0.5	0.010 0.010	0.530	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.005 0.005	0.003 0.004	0.007	3		3	0.5	0.406	1	1.8	3		67		
67	2 4	7 60	3 0.5	0.010 0.010	5.760	5.8	143 5Yr	-0.2 -0.9	0.530 0.814	0.025 0.061	0.013 0.050	0.063	25		25	0.5	1.766	1	1.8	25		[?]		
50	2 4	7 35	3 0.5	0.010 0.010	4.727	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.030 0.036	0.016 0.029	0.045	19		19	0.5	1.561	1	1.8	19		52		
52	2 4	7 35	3 0.5	0.010 0.010	4.727	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.020 0.053	0.011 0.043	0.054	22		22	0.5	1.526 0.03PH	1 SAG	1.8	22		52		
53	3 4	6 15	3 0.5	0.010 0.010	1.164	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.020 0.025	0.013 0.020	0.033	14		14	0.672	1.125 0.03PH	1 SAG	1.8	14		53		
54	3 4	6 15	1 0.5	0.170 0.010	4.670	5	150 5Yr	-0.5 -0.9	0.652 0.814	0.030 0.036	0.020 0.029	0.049	20		20	0.672	1.362 0.03PH	1 SAG	1.8	20		54		
58	3 4	7 6	3 0.5	0.010 0.010	0.707	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.005 0.005	0.003 0.004	0.007	3		3	0.5	0.406	1	1.8	3		54		
59	2 4	7 70	3 0.5	0.010 0.010	6.140	6.1	139 5Yr	-0.2 -0.9	0.530 0.814	0.111 0.010	0.059 0.008	0.067	26		26	0.5	1.797	1	1.8	26		60		
62	2 4	7 3	3 0.5	0.010 0.010	0.530	5	150 5Yr	-0.2 -0.9	0.530 0.814	0.005 0.005	0.003 0.004	0.007	3		3	0.5	0.406	1	1.8	3		68		
68	2 4	7 60	3 0.5	0.010 0.010	5.760	5.8	143 5Yr	-0.2 -0.9	0.530 0.814	0.030 0.067	0.016 0.055	0.07	28		28	0.5	1.856	1	1.8	28		69		
69	2 4	7 15	1 0.5	0.170 0.010	5.056	5.1	150 5Yr	-0.5 -0.9	0.652 0.814	0.034 0.038	0.022 0.031	0.053	22		22	0.5	1.323 0.03PH	1 SAG	1.8	22		69		
84	2 4	35 50	1 0.5	0.170 0.010	14.951	15	97 5Yr	-0.5 -0.9	0.652 0.814	0.256 0.036	0.167 0.029	0.196	53		53	0.5	2.422	1	1.8	53		85		
85	2 4	35 45	1 0.5	0.170 0.010	14.736	14.7	98 5Yr	-0.5 -0.9	0.652 0.814	0.191 0.036	0.125 0.029	0.154	42		42	0.5	2.2	1	1.8	42		86		
86	2 4	35 40	1 0.5	0.170 0.010	14.517	14.5	99 5Yr	-0.5 -0.9	0.652 0.814	0.157 0.022	0.102 0.018	0.12	33		33	0.5	1.903 0.03PH	1 SAG	1.8	33		86		
100	2 4	30 40	1 0.5	0.170 0.010	13.237	13.2	103 5Yr	-0.5 -0.9	0.652 0.814	0.130 0.020	0.085 0.016	0.101	29		29	0.5	1.879	1	1.8	29		97		
97	2 4	30 45	1 0.5	0.170 0.010	13.458	13.5	102 5Yr	-0.5 -0.9	0.652 0.814	0.191 0.046	0.125 0.037	0.162	46		46	0.505	2.079 0.03PH	1 SAG	1.8	46		97		

HYDRAULIC DESIGN SHEET

PIT	TIME	INTENSITY	AREAS	FLOW	LENGTH	DIAMETER	GRADE	HGL GRADE	VEL O/A	K	HEAD LOSS	VEL CAP	PIPE VEL	PIPE CAP	PIPE TIME	C=C.W. MAX TIME 20 HAWKS NEST BY PASS=AREA AREA=ADP Q	N=MANNINGS MAX TIME 20 HAWKS NEST BY PASS=AREA AREA=ADP Q	REMARKS
	min	mm/hr	ha	L/s	m	mm	%	%	m/s		m	m/s	m/s	L/s	min			
LINE 22 43-44	5	150 5Yr	0.038	16	6.371 C0.0006	375	0.314	0.008	0.145	3.5	0.004	1.022	0.62	113	0.17			
44-45	8.4	123 5Yr	0.254	87	12.06 C0.0006	375	0.332	0.193	0.788	1.8	0.057	1.051	1.05	116	0.19			
45-53	8.6	122 5Yr	0.296	101	21.808 C0.0006	375	0.16	0.258	0.912	1.2	0.051	0.731	0.731	81	0.5			
LINE 24 60-61	5	150 5Yr	0.064	27	11 C0.0006	375	0.318	0.019	0.24	3.5	0.01	1.029	0.72	114	0.25			
61-62	5.3	147 5Yr	0.131	54	18.385 C0.0006	375	0.315	0.076	0.486	1.6	0.019	1.025	0.89	113	0.34			
LINE 25 49-19	8.1	125 5Yr	0.121	42	44.318 C0.0006	375	0.496	0.048	0.382	3.5	0.026	1.285	0.97	142	0.76			
19-51	8.9	120 5Yr	0.259	87	25.31 C0.0006	451	0.316	0.075	0.545	1.3	0.02	1.152	1.01	184	0.42			
51-55	9.3	118 5Yr	0.397	131	12.541 C0.0006	451	0.319	0.166	0.82	1.4	0.048	1.157	1.14	185	0.18			
55-56	9.5	117 5Yr	0.444	145	7.524 C0.0006	451	0.399	0.205	0.911	1	0.042	1.293	1.28	207	0.1			
56-57	9.6	117 5Yr	0.497	162	12.585 C0.0006	522	0.318	0.119	0.758	0.9	0.026	1.265	1.19	271	0.18			
57-20	9.8	116 5Yr	0.504	163	56.325 C0.0006	522	0.391	0.12	0.762	0.8	0.024	1.403	1.28	300	0.73			
20-63	10.5	113 5Yr	0.676	212	47.392 C0.0006	522	0.464	0.202	0.993	1.1	0.055	1.529	1.47	327	0.54			
63-64	11	110 5Yr	0.856	264	19.534 C0.0006	590	0.307	0.163	0.964	1.4	0.066	1.342	1.33	367	0.24			