

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
S1	0.013	0.450	Type E	30.900	29.860	0.890	473322.903	107889.032
S2	0.026	0.450	Type E	31.500	29.748	1.602	473324.304	107905.222
S2A	0.016	0.450	Type E	31.484	29.677	1.657	473334.538	107903.979
S3	0.016	0.450	Type E	31.030	29.506	1.300	473348.573	107904.259
S4	0.051	1.200	Type B	31.679	29.399	2.055	473369.837	107906.893
S16	0.016	0.450	Type E	31.500	30.450	0.900	473353.606	107883.753
S17	0.003	0.450	Type E	31.333	30.166	1.017	473364.590	107883.897
S5	0.034	1.200	Type B	31.178	29.273	1.755	473373.300	107881.926
S6	0.000	1.200	Type B	30.159	27.800	2.134	473370.503	107856.265
S10	0.023	0.450	Type E	28.240	27.190	0.900	473328.307	107872.334
S11	0.001	0.450	Type E	28.250	27.071	1.029	473311.031	107867.690
S12	0.000	1.350	Type E	29.080	26.860	1.995	473311.538	107847.280
S19	0.009	0.450	Type E	28.250	27.097	1.003	473361.879	107871.751
S18	0.019	0.450	Type E	28.250	27.200	0.900	473352.771	107872.372
S14	0.018	0.450	Type E	28.250	27.200	0.900	473326.563	107851.687
S20	0.005	0.450	Type E	28.250	27.550	0.550	473360.287	107852.823
S15	0.000	0.450	Type E	28.250	26.895	1.205	473350.869	107851.607
S13	0.000	1.350	Type C	28.890	26.675	1.990	473350.241	107847.144
S53	0.228	1.350	Type E	31.723	30.256	1.242	473375.678	107921.923
S50	0.000	1.350	Type C	31.524	30.235	1.064	473376.346	107917.265
S51	0.000	1.200	Type B	30.740	28.500	2.015	473373.037	107860.271
S52	0.000	1.200	Type B	28.702	26.775	1.702	473367.235	107844.754
S7	0.000	1.500	Type C	28.652	26.619	1.883	473362.520	107843.467
S9	0.000	1.350	Type C	27.800	26.450	1.200	473355.009	107822.925

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)
1.000	S1	29.860	S2	29.748	Circ	0.15mØ	16.250	145.7	0.600	0.890
1.001	S2	29.749	S2A	29.677	Circ	0.15mØ	10.309	145.0	0.600	1.601
1.002	S2A	29.677	S3	29.581	Circ	0.15mØ	14.038	145.0	0.600	1.657
1.003	S3	29.506	S4	29.399	Circ	0.225mØ	21.427	200.0	0.600	1.299
1.004	S4	29.399	S5	29.273	Circ	0.225mØ	25.206	200.0	0.600	2.055
2.000	S16	30.450	S17	30.166	Circ	0.15mØ	10.986	38.7	0.600	0.900
2.001	S17	30.166	S5	29.273	Circ	0.15mØ	8.930	10.0	0.600	1.017
1.005	S5	29.273	S6	27.800	Circ	0.225mØ	25.813	17.5	0.600	1.680
1.006	S6	27.800	S7	26.619	Circ	0.225mØ	15.083	12.8	0.600	2.134
3.000	S10	27.190	S11	27.071	Circ	0.15mØ	17.889	150.0	0.600	0.900
3.001	S11	27.071	S12	26.935	Circ	0.15mØ	20.417	150.0	0.600	1.029
3.002	S12	26.860	S13	26.675	Circ	0.225mØ	38.703	209.6	0.600	1.995
4.000	S19	27.097	S18	27.200	Circ	0.15mØ	9.129	88.7	0.600	1.003
4.001	S18	27.200	S15	26.895	Circ	0.15mØ	20.852	68.3	0.600	0.900
5.000	S14	27.200	S15	26.895	Circ	0.15mØ	24.305	79.6	0.600	0.900
6.000	S20	27.550	S15	26.895	Circ	0.15mØ	9.497	14.5	0.600	0.550
4.002	S15	26.895	S13	26.750	Circ	0.15mØ	4.506	31.1	0.600	1.205
3.003	S13	26.675	S7	26.619	Circ	0.225mØ	12.818	228.9	0.600	1.990
7.000	S53	30.256	S50	30.235	Circ	0.225mØ	4.705	225.0	0.600	1.242
7.001	S50	30.235	S51	28.500	Circ	0.225mØ	57.091	32.9	0.600	1.064
7.002	S51	28.500	S52	26.775	Circ	0.225mØ	16.566	9.6	0.600	2.015
7.003	S52	26.775	S7	26.694	Circ	0.225mØ	4.887	60.3	0.600	1.702
1.007	S7	26.619	S9	26.450	Circ	0.15mØ	21.873	129.4	0.600	1.883

Outfall Details

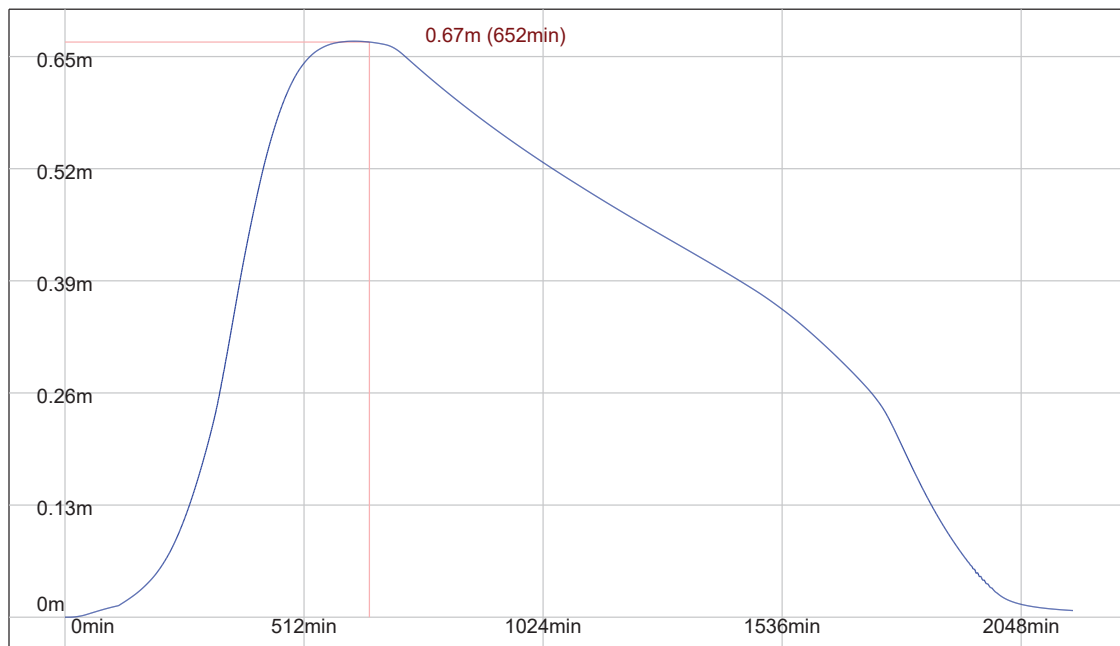
Outfall Manhole S9 : Free Discharge

Flow Control Details

Tank Structure at Manhole S13

Tank Invert (m)	Tank Height (m)	Void Ratio (%)	Area (m2)	Effective Area (m2) Area x Void Ratio	Max Storage (m3) Effective Area x Height	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
26.675	0.800	95.00	174.800	166.060	132.848	0.00000000	0.00000000	3.00

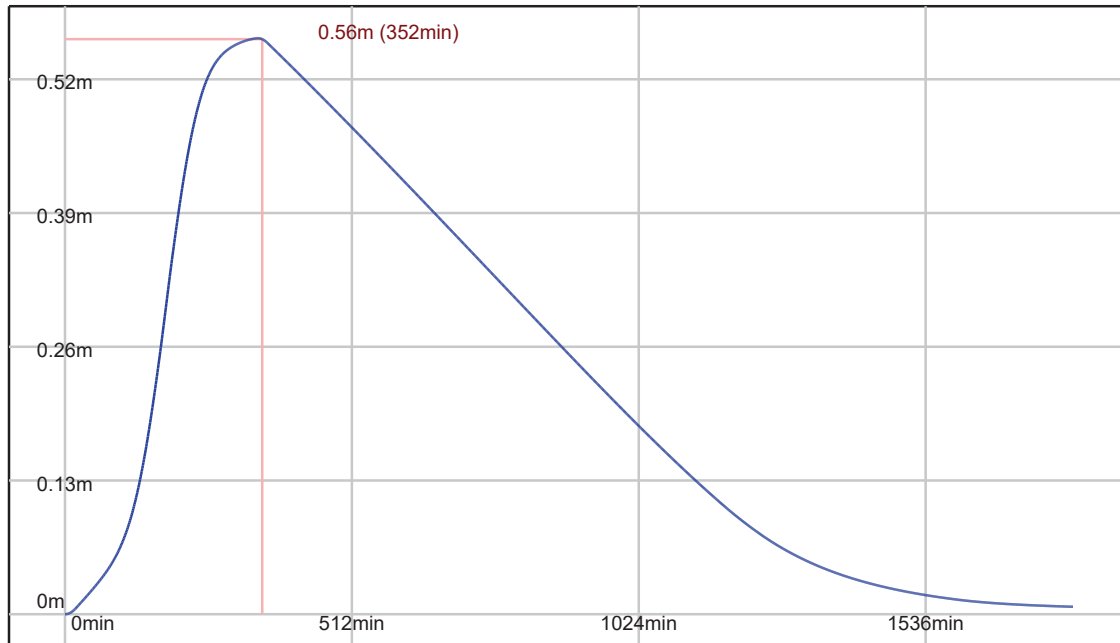
Tank at S13 (100Yr+45% 720Min Winter)



Tank Structure at Manhole S53

Tank Invert (m)	Tank Height (m)	Void Ratio (%)	Area (m2)	Effective Area (m2) Area x Void Ratio	Max Storage (m3) Effective Area x Height	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
30.256	1.200	95.00	253.993	241.293	289.552	0.00000000	0.00000000	3.00

Tank at S53 (100Yr+45% 360Min Winter)

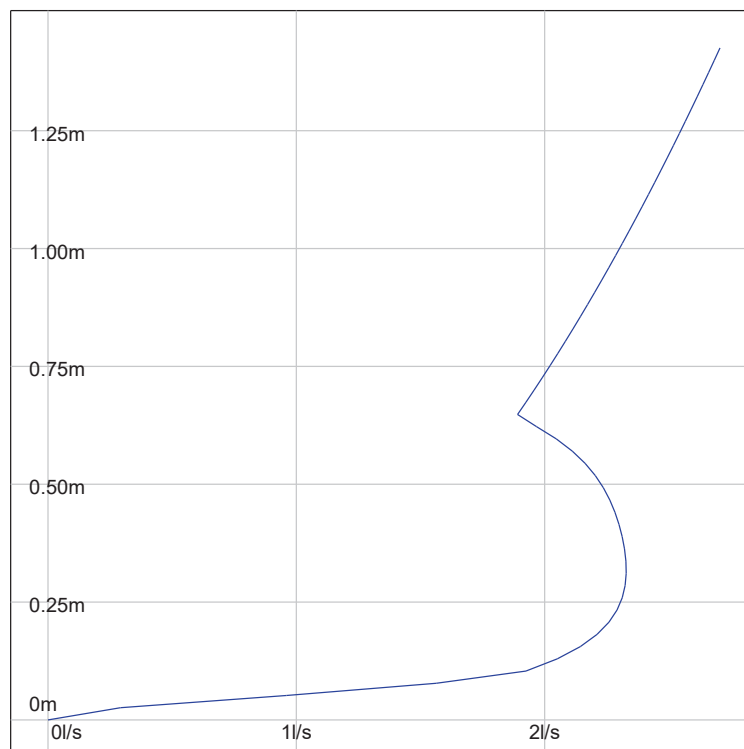


Controls within Manhole S50

Hydro-Brake® Optimum Control at Manhole S50

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0072-2500-1200-2500 ID:644786	1.200	2.500	0.000	0.318	2.329	0.644	1.885

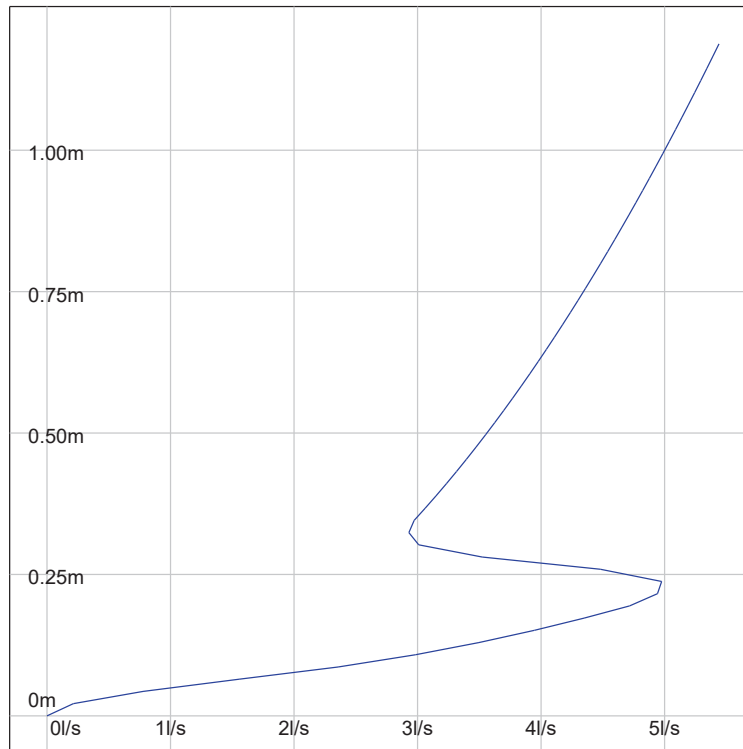
Hydro-Brake® Optimum Control at S50



Hydro-Brake® Optimum Control at Manhole S7

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
CHE-0101-5000-1000-5000 ID:657957	1.000	5.000	0.000	0.230	5.002	0.322	2.929

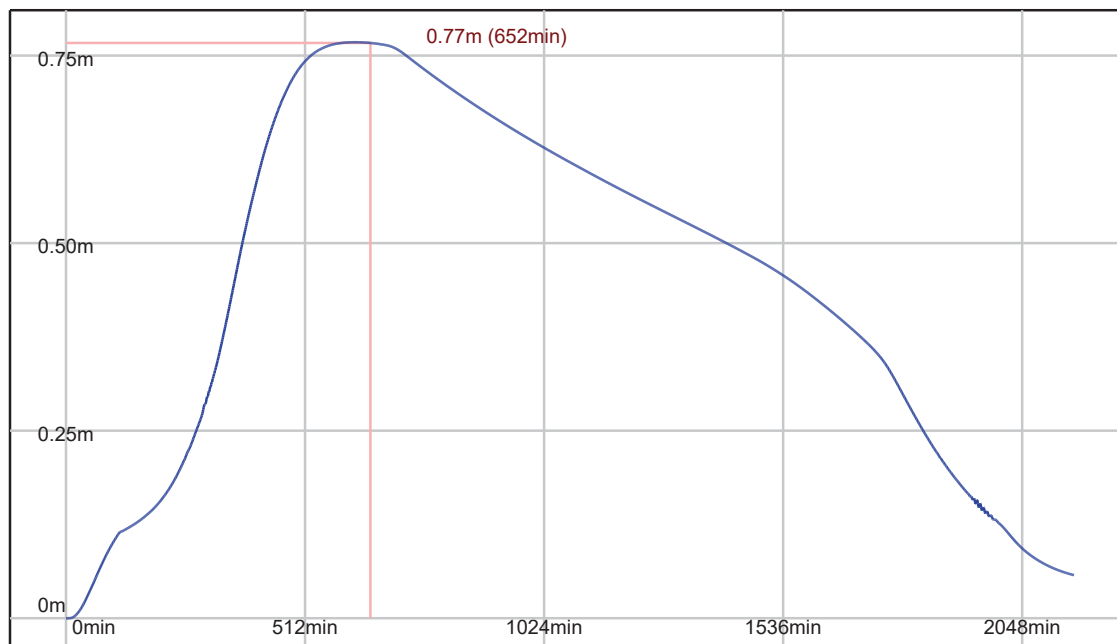
Hydro-Brake® Optimum Control at S7



Tank Structure at Manhole S7

Tank Invert (m)	Tank Height (m)	Void Ratio (%)	Area (m2)	Effective Area (m2) Area x Void Ratio	Max Storage (m3) Effective Area x Height	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
26.619	0.800	95.00	54.000	51.300	41.040	0.00000000	0.00000000	3.00

Tank at S7 (100Yr+45% 720Min Winter)



Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_473428_107780_v5_0_1.xml

Summer (Cv: 0.75), Winter (Cv: 0.84)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760

Return Periods (yrs) + Climate Change: (2, +45%), (30, +45%), (100, +0%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr+45% 15Min Winter	47.243	0.00	0.00	100Yr 15Min Summer	99.088	0.00	0.00
2Yr+45% 15Min Summer	47.243	0.00	0.00	100Yr 15Min Winter	99.088	0.00	0.00
2Yr+45% 30Min Winter	30.684	0.00	0.00	100Yr 30Min Summer	66.273	0.00	-0.06
2Yr+45% 30Min Summer	30.684	0.00	0.00	100Yr 30Min Winter	66.273	0.00	0.00
2Yr+45% 60Min Winter	19.443	0.00	0.00	100Yr 60Min Summer	42.236	0.00	0.04
2Yr+45% 60Min Summer	19.443	0.00	0.00	100Yr 60Min Winter	42.236	0.00	0.02
2Yr+45% 120Min Winter	12.957	0.00	0.05	100Yr 120Min Summer	24.468	0.00	0.03
2Yr+45% 120Min Summer	12.957	0.00	0.07	100Yr 120Min Winter	24.468	0.00	0.03
2Yr+45% 180Min Winter	10.153	0.00	0.05	100Yr 180Min Summer	17.674	0.00	0.03
2Yr+45% 180Min Summer	10.153	0.00	0.06	100Yr 180Min Winter	17.674	0.00	0.03
2Yr+45% 240Min Winter	8.350	0.00	0.05	100Yr 240Min Summer	14.225	0.00	0.03
2Yr+45% 240Min Summer	8.350	0.00	0.06	100Yr 240Min Winter	14.225	0.00	0.03
2Yr+45% 360Min Winter	6.360	0.00	0.04	100Yr 360Min Summer	10.377	0.00	0.03
2Yr+45% 360Min Summer	6.360	0.00	0.05	100Yr 360Min Winter	10.377	0.00	0.03
2Yr+45% 480Min Summer	5.231	0.00	0.05	100Yr 480Min Summer	8.290	0.00	0.03
2Yr+45% 480Min Winter	5.231	0.00	0.04	100Yr 480Min Winter	8.290	0.00	0.03
2Yr+45% 600Min Summer	4.466	0.00	0.04	100Yr 600Min Summer	6.980	0.00	0.03
2Yr+45% 600Min Winter	4.466	0.00	0.04	100Yr 600Min Winter	6.980	0.00	0.03
2Yr+45% 720Min Winter	3.910	0.00	0.04	100Yr 720Min Summer	6.070	0.00	0.03
2Yr+45% 720Min Summer	3.910	0.00	0.04	100Yr 720Min Winter	6.070	0.00	0.03
2Yr+45% 960Min Winter	3.171	0.00	0.04	100Yr 960Min Summer	4.872	0.00	0.03
2Yr+45% 960Min Summer	3.171	0.00	0.04	100Yr 960Min Winter	4.872	0.00	0.02
2Yr+45% 1440Min Summer	2.355	0.00	0.04	100Yr 1440Min Summer	3.573	0.00	0.03
2Yr+45% 1440Min Winter	2.355	0.00	0.03	100Yr 1440Min Winter	3.573	0.00	0.02
2Yr+45% 2160Min Winter	1.754	0.00	0.03	100Yr 2160Min Summer	2.620	0.00	0.02
2Yr+45% 2160Min Summer	1.754	0.00	0.03	100Yr 2160Min Winter	2.620	0.00	0.02
2Yr+45% 2880Min Summer	1.429	0.00	0.03	100Yr 2880Min Summer	2.098	0.00	0.02
2Yr+45% 2880Min Winter	1.429	0.00	0.03	100Yr 2880Min Winter	2.098	0.00	0.02
2Yr+45% 4320Min Summer	1.089	0.00	0.02	100Yr 4320Min Summer	1.540	0.00	0.02
2Yr+45% 4320Min Winter	1.089	0.00	0.00	100Yr 4320Min Winter	1.540	0.00	0.00
2Yr+45% 5760Min Summer	0.912	0.00	0.02	100Yr 5760Min Summer	1.245	0.00	0.01
2Yr+45% 5760Min Winter	0.912	0.00	0.00	100Yr 5760Min Winter	1.245	0.00	0.00
30Yr+45% 15Min Summer	114.324	0.00	0.00	100Yr+45% 15Min Summer	143.677	0.00	0.00
30Yr+45% 15Min Winter	114.324	0.00	0.00	100Yr+45% 15Min Winter	143.677	0.00	0.00
30Yr+45% 30Min Summer	75.635	0.00	-0.04	100Yr+45% 30Min Summer	96.096	0.00	-0.02
30Yr+45% 30Min Winter	75.635	0.00	0.00	100Yr+45% 30Min Winter	96.096	0.00	-0.02
30Yr+45% 60Min Summer	47.945	0.00	0.03	100Yr+45% 60Min Summer	61.243	0.00	0.02
30Yr+45% 60Min Winter	47.945	0.00	0.00	100Yr+45% 60Min Winter	61.243	0.00	0.00
30Yr+45% 120Min Summer	28.283	0.00	0.03	100Yr+45% 120Min Summer	35.479	0.00	0.02
30Yr+45% 120Min Winter	28.283	0.00	0.02	100Yr+45% 120Min Winter	35.479	0.00	0.00
30Yr+45% 180Min Summer	20.630	0.00	0.03	100Yr+45% 180Min Summer	25.628	0.00	0.02
30Yr+45% 180Min Winter	20.630	0.00	0.02	100Yr+45% 180Min Winter	25.628	0.00	0.01
30Yr+45% 240Min Winter	16.628	0.00	0.02	100Yr+45% 240Min Summer	20.626	0.00	0.02
30Yr+45% 240Min Summer	16.628	0.00	0.03	100Yr+45% 240Min Winter	20.626	0.00	0.01
30Yr+45% 360Min Summer	12.176	0.00	0.03	100Yr+45% 360Min Summer	15.047	0.00	0.02
30Yr+45% 360Min Winter	12.176	0.00	0.02	100Yr+45% 360Min Winter	15.047	0.00	0.01
30Yr+45% 480Min Summer	9.748	0.00	0.03	100Yr+45% 480Min Summer	12.021	0.00	0.02
30Yr+45% 480Min Winter	9.748	0.00	0.02	100Yr+45% 480Min Winter	12.021	0.00	0.01
30Yr+45% 600Min Summer	8.207	0.00	0.02	100Yr+45% 600Min Summer	10.122	0.00	0.02
30Yr+45% 600Min Winter	8.207	0.00	0.02	100Yr+45% 600Min Winter	10.122	0.00	0.01
30Yr+45% 720Min Summer	7.128	0.00	0.02	100Yr+45% 720Min Summer	8.801	0.00	0.02
30Yr+45% 720Min Winter	7.128	0.00	0.02	100Yr+45% 720Min Winter	8.801	0.00	0.01
30Yr+45% 960Min Summer	5.709	0.00	0.02	100Yr+45% 960Min Summer	7.065	0.00	0.02
30Yr+45% 960Min Winter	5.709	0.00	0.02	100Yr+45% 960Min Winter	7.065	0.00	0.01
30Yr+45% 1440Min Summer	4.174	0.00	0.02	100Yr+45% 1440Min Summer	5.181	0.00	0.02

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
30Yr+45% 1440Min Winter	4.174	0.00	0.02	100Yr+45% 1440Min Winter	5.181	0.00	0.01
30Yr+45% 2160Min Summer	3.064	0.00	0.02	100Yr+45% 2160Min Summer	3.799	0.00	0.02
30Yr+45% 2160Min Winter	3.064	0.00	0.02	100Yr+45% 2160Min Winter	3.799	0.00	0.01
30Yr+45% 2880Min Summer	2.468	0.00	0.02	100Yr+45% 2880Min Summer	3.043	0.00	0.01
30Yr+45% 2880Min Winter	2.468	0.00	0.01	100Yr+45% 2880Min Winter	3.043	0.00	0.01
30Yr+45% 4320Min Summer	1.839	0.00	0.01	100Yr+45% 4320Min Summer	2.233	0.00	0.01
30Yr+45% 4320Min Winter	1.839	0.00	0.01	100Yr+45% 4320Min Winter	2.233	0.00	0.01
30Yr+45% 5760Min Summer	1.510	0.00	0.01	100Yr+45% 5760Min Winter	1.805	0.00	0.00
30Yr+45% 5760Min Winter	1.510	0.00	0.00	100Yr+45% 5760Min Summer	1.805	0.00	0.01

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S1	15 min Winter	8	29.903	0.043	2.737		OK
S2	15 min Winter	8	29.828	0.079	8.136		OK
S2A	15 min Winter	8	29.775	0.098	11.477		OK
S3	15 min Winter	9	29.604	0.097	14.422		OK
S4	15 min Winter	9	29.531	0.132	24.627		OK
S16	15 min Winter	8	30.486	0.036	3.453		OK
S17	15 min Winter	8	30.193	0.027	3.956		OK
S5	15 min Winter	9	29.356	0.083	35.367		OK
S6	15 min Winter	9	27.875	0.075	35.682		OK
S10	15 min Winter	8	27.249	0.059	4.841		OK
S11	15 min Winter	9	27.131	0.060	4.815		OK
S12	15 min Winter	9	26.923	0.064	4.937		OK
S19	15 min Winter	8	27.256	0.159	1.873		OK
S18	15 min Winter	8	27.252	0.052	5.765		OK
S14	15 min Winter	8	27.244	0.044	3.789		OK
S20	15 min Winter	8	27.565	0.015	1.039		OK
S15	15 min Winter	8	26.953	0.058	10.469		OK
S13	360 min Winter	267	26.900	0.200	0.788		Surcharged
S53	360 min Winter	270	30.449	0.193	2.239		OK
S50	360 min Winter	270	30.449	0.213	2.223		OK
S51	360 min Winter	271	28.518	0.018	2.223		OK
S52	480 min Winter	347	26.919	0.144	2.222		OK
S7	360 min Winter	265	26.902	0.302	5.490		Surcharged
S9	360 min Winter	266	26.508	0.058	4.956		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	8	S1	S2	0.061	0.397	2.706	0.185	OK
1.001	15 min Winter	8	S2	S2A	0.089	0.738	8.024	0.547	OK
1.002	15 min Winter	9	S2A	S3	0.098	0.930	11.277	0.768	OK
1.003	15 min Winter	9	S3	S4	0.115	0.714	14.542	0.398	OK
1.004	15 min Winter	9	S4	S5	0.108	1.326	24.864	0.680	OK
2.000	15 min Winter	8	S16	S17	0.032	1.265	3.430	0.120	OK
2.001	15 min Winter	8	S17	S5	0.055	0.675	3.937	0.070	OK
1.005	15 min Winter	9	S5	S6	0.079	2.858	35.682	0.286	OK
1.006	30 min Winter	20	S6	S7	0.131	2.360	28.432	0.194	OK
3.000	15 min Winter	8	S10	S11	0.059	0.736	4.791	0.332	OK
3.001	15 min Winter	9	S11	S12	0.060	0.749	4.937	0.342	OK
3.002	360 min Winter	267	S12	S13	0.121	0.356	0.894	0.025	OK
4.000	15 min Winter	8	S19	S18	0.101	0.144	1.829	0.097	OK
4.001	15 min Winter	8	S18	S15	0.055	0.960	5.694	0.265	OK
5.000	15 min Winter	8	S14	S15	0.051	0.704	3.744	0.188	OK
6.000	15 min Winter	8	S20	S15	0.037	0.313	1.031	0.022	OK
4.002	360 min Winter	259	S15	S13	0.082	0.947	1.875	0.059	OK
3.003	360 min Winter	626	S13	S7	0.213	0.262	3.715	0.109	OK
7.000	360 min Winter	270	S53	S50	0.203	0.162	2.227	0.065	OK
7.001	360 min Winter	271	S50	S51	0.022	1.131	2.223	0.024	OK
7.002	480 min Winter	349	S51	S52	0.081	1.003	2.222	0.013	OK
7.003	360 min Winter	338	S52	S7	0.174	0.603	14.639	0.218	OK
1.007	360 min Winter	266	S7	S9	0.058	0.790	4.956	0.319	OK

Return Period Yrs: 30.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S1	15 min Winter	10	30.150	0.290	5.153		Surcharged
S2	15 min Winter	10	30.132	0.383	16.160		Surcharged
S2A	15 min Winter	9	30.042	0.364	24.561		Surcharged
S3	15 min Winter	9	29.794	0.288	31.372		Surcharged
S4	15 min Winter	9	29.720	0.321	55.280		Surcharged
S16	15 min Winter	8	30.507	0.057	8.357		OK
S17	15 min Winter	8	30.208	0.042	9.593		OK
S5	15 min Winter	9	29.405	0.132	79.813		OK
S6	15 min Winter	9	27.918	0.118	79.834		OK
S10	15 min Winter	8	27.291	0.101	11.720		OK
S11	600 min Winter	568	27.234	0.163	0.140		Surcharged
S12	600 min Winter	568	27.234	0.374	0.140		Surcharged
S19	15 min Winter	8	27.298	0.200	4.535		OK
S18	15 min Winter	8	27.287	0.087	13.980		OK
S14	15 min Winter	8	27.271	0.071	9.172		OK
S20	15 min Winter	8	27.573	0.023	2.517		OK
S15	600 min Winter	567	27.234	0.339	0.295		Surcharged
S13	600 min Winter	568	27.234	0.534	0.437		Surcharged
S53	360 min Winter	323	30.685	0.429	2.295		Surcharged
S50	360 min Winter	323	30.685	0.450	2.294		Surcharged
S51	960 min Summer	681	28.518	0.018	2.328		OK
S52	600 min Winter	566	27.234	0.459	2.306		Surcharged
S7	600 min Winter	566	27.234	0.634	3.782		Surcharged
S9	360 min Winter	1194	26.508	0.058	4.976		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	18	S1	S2	0.150	0.427	5.348	0.365	Surcharged
1.001	15 min Winter	10	S2	S2A	0.150	0.961	16.990	1.157	Surcharged
1.002	15 min Winter	10	S2A	S3	0.150	1.374	24.280	1.654	Surcharged
1.003	15 min Winter	10	S3	S4	0.225	0.826	31.504	0.862	OK
1.004	15 min Winter	9	S4	S5	0.179	1.629	54.437	1.489	OK
2.000	15 min Winter	8	S16	S17	0.050	1.634	8.319	0.290	OK
2.001	15 min Winter	9	S17	S5	0.086	0.916	9.558	0.169	OK
1.005	15 min Winter	9	S5	S6	0.125	3.523	79.834	0.639	OK
1.006	15 min Winter	9	S6	S7	0.171	3.156	79.808	0.545	OK
3.000	15 min Winter	8	S10	S11	0.102	0.908	11.608	0.804	OK
3.001	480 min Winter	387	S11	S12	0.150	0.520	1.371	0.095	Surcharged
3.002	120 min Summer	121	S12	S13	0.225	0.558	5.033	0.141	OK
4.000	15 min Winter	8	S19	S18	0.119	0.297	4.452	0.236	OK
4.001	15 min Winter	8	S18	S15	0.093	1.197	13.842	0.644	OK
5.000	600 min Winter	567	S14	S15	0.092	0.454	0.862	0.043	OK
6.000	120 min Winter	77	S20	S15	0.080	0.284	0.808	0.017	OK
4.002	120 min Summer	91	S15	S13	0.150	1.449	10.658	0.333	Surcharged
3.003	180 min Winter	1138	S13	S7	0.225	0.329	5.203	0.152	OK
7.000	30 min Winter	20	S53	S50	0.225	0.344	3.909	0.114	OK
7.001	720 min Summer	621	S50	S51	0.022	1.148	2.328	0.026	OK
7.002	960 min Summer	681	S51	S52	0.122	1.001	2.328	0.014	OK
7.003	2160 min Winter	1262	S52	S7	0.225	0.587	14.299	0.213	OK
1.007	720 min Winter	1491	S7	S9	0.058	0.791	4.976	0.320	OK

Return Period Yrs: 100.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S1	15 min Winter	9	30.023	0.163	5.390		Surcharged
S2	15 min Winter	9	30.009	0.260	15.947		Surcharged
S2A	15 min Winter	9	29.929	0.251	22.595		Surcharged
S3	15 min Winter	9	29.698	0.192	29.028		OK
S4	15 min Winter	9	29.649	0.250	49.396		Surcharged
S16	15 min Winter	8	30.503	0.053	7.243		OK
S17	15 min Winter	8	30.205	0.039	8.312		OK
S5	15 min Winter	8	29.396	0.123	71.054		OK
S6	15 min Winter	8	27.909	0.109	70.685		OK
S10	15 min Winter	8	27.282	0.092	10.157		OK
S11	15 min Winter	8	27.164	0.093	10.543		OK
S12	480 min Winter	463	27.145	0.285	0.109		Surcharged
S19	15 min Winter	8	27.289	0.192	3.930		OK
S18	15 min Winter	8	27.280	0.080	12.114		OK
S14	15 min Winter	8	27.265	0.065	7.949		OK
S20	15 min Winter	8	27.572	0.022	2.181		OK
S15	480 min Winter	464	27.145	0.250	0.219		Surcharged
S13	480 min Winter	464	27.145	0.445	0.320		Surcharged
S53	240 min Winter	227	30.608	0.352	2.306		Surcharged
S50	240 min Winter	227	30.608	0.373	2.325		Surcharged
S51	720 min Winter	609	28.518	0.018	2.328		OK
S52	480 min Winter	463	27.145	0.370	2.328		Surcharged
S7	480 min Winter	463	27.145	0.545	3.487		Surcharged
S9	360 min Summer	863	26.508	0.058	4.976		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	10	S1	S2	0.150	0.431	5.528	0.377	Surcharged
1.001	15 min Winter	9	S2	S2A	0.150	0.894	15.796	1.076	Surcharged
1.002	15 min Winter	9	S2A	S3	0.142	1.296	22.436	1.528	OK
1.003	15 min Winter	10	S3	S4	0.208	0.821	28.405	0.777	OK
1.004	15 min Winter	9	S4	S5	0.173	1.597	48.168	1.318	OK
2.000	15 min Winter	8	S16	S17	0.046	1.569	7.208	0.252	OK
2.001	15 min Winter	8	S17	S5	0.081	0.854	8.281	0.146	OK
1.005	15 min Winter	8	S5	S6	0.116	3.422	70.685	0.566	OK
1.006	15 min Winter	9	S6	S7	0.167	3.251	70.327	0.481	OK
3.000	15 min Winter	8	S10	S11	0.092	0.882	10.058	0.697	OK
3.001	480 min Winter	462	S11	S12	0.112	0.496	1.165	0.081	OK
3.002	180 min Winter	147	S12	S13	0.225	0.486	2.475	0.069	OK
4.000	15 min Winter	8	S19	S18	0.115	0.266	3.856	0.205	OK
4.001	240 min Winter	157	S18	S15	0.087	0.739	2.289	0.106	OK
5.000	240 min Winter	157	S14	S15	0.085	0.539	1.493	0.075	OK
6.000	240 min Winter	157	S20	S15	0.079	0.236	0.410	0.009	OK
4.002	240 min Winter	157	S15	S13	0.150	1.110	9.821	0.307	Surcharged
3.003	240 min Winter	1065	S13	S7	0.225	0.334	5.409	0.158	OK
7.000	1440 min Winter	940	S53	S50	0.225	0.142	3.129	0.091	OK
7.001	720 min Winter	609	S50	S51	0.022	1.148	2.328	0.026	OK
7.002	720 min Winter	610	S51	S52	0.122	1.001	2.328	0.014	OK
7.003	960 min Winter	558	S52	S7	0.225	0.590	14.241	0.213	OK
1.007	15 min Winter	14	S7	S9	0.058	0.791	4.976	0.320	OK

Return Period Yrs: 100.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S1	15 min Winter	10	30.477	0.617	6.474		Surcharged
S2	15 min Winter	10	30.452	0.704	19.705		Surcharged
S2A	15 min Winter	10	30.322	0.644	28.354		Surcharged
S3	15 min Winter	9	29.959	0.452	37.285		Surcharged
S4	15 min Winter	9	29.856	0.457	66.955		Surcharged
S16	15 min Winter	8	30.515	0.065	10.503		OK
S17	15 min Winter	8	30.213	0.047	12.060		OK
S5	15 min Winter	9	29.424	0.151	97.141		OK
S6	15 min Winter	9	27.933	0.133	97.100		OK
S10	720 min Winter	619	27.368	0.178	0.185		Surcharged
S11	720 min Winter	619	27.368	0.297	0.194		Surcharged
S12	720 min Winter	619	27.368	0.508	0.194		Surcharged
S19	720 min Winter	620	27.368	0.271	0.071		OK
S18	720 min Winter	620	27.368	0.168	0.221		Surcharged
S14	720 min Winter	618	27.368	0.168	0.145		Surcharged
S20	15 min Winter	8	27.576	0.026	3.163		OK
S15	720 min Winter	618	27.368	0.473	0.408		Surcharged
S13	720 min Winter	618	27.368	0.668	0.602		Surcharged
S53	360 min Winter	344	30.816	0.560	2.198		Surcharged
S50	360 min Winter	344	30.816	0.581	2.140		Surcharged
S51	240 min Summer	491	28.518	0.018	2.328		OK
S52	720 min Winter	619	27.368	0.593	2.168		Surcharged
S7	720 min Winter	619	27.368	0.768	4.188		Surcharged
S9	15 min Summer	33	26.508	0.058	4.977		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	12	S1	S2	0.150	0.434	7.614	0.520	Surcharged
1.001	15 min Winter	10	S2	S2A	0.150	1.142	20.186	1.375	Surcharged
1.002	15 min Winter	10	S2A	S3	0.150	1.634	28.875	1.967	Surcharged
1.003	15 min Winter	10	S3	S4	0.225	0.947	37.672	1.031	OK
1.004	15 min Winter	9	S4	S5	0.188	1.861	65.258	1.785	OK
2.000	15 min Winter	8	S16	S17	0.056	1.742	10.459	0.365	OK
2.001	15 min Winter	9	S17	S5	0.098	0.993	12.021	0.212	OK
1.005	15 min Winter	9	S5	S6	0.142	3.678	97.100	0.778	OK
1.006	15 min Winter	9	S6	S7	0.179	3.368	97.035	0.663	OK
3.000	480 min Winter	361	S10	S11	0.150	0.537	1.613	0.112	Surcharged
3.001	240 min Summer	206	S11	S12	0.150	0.700	3.865	0.268	Surcharged
3.002	60 min Summer	46	S12	S13	0.225	0.706	9.891	0.277	OK
4.000	480 min Winter	378	S19	S18	0.150	0.063	0.624	0.033	Surcharged
4.001	480 min Winter	378	S18	S15	0.150	0.680	1.935	0.090	Surcharged
5.000	480 min Winter	379	S14	S15	0.150	0.495	1.262	0.063	Surcharged
6.000	60 min Winter	36	S20	S15	0.084	0.338	1.708	0.036	OK
4.002	60 min Summer	40	S15	S13	0.150	1.890	20.766	0.649	Surcharged
3.003	480 min Summer	1555	S13	S7	0.225	0.336	5.425	0.159	OK
7.000	30 min Summer	18	S53	S50	0.225	0.352	3.886	0.113	OK
7.001	480 min Winter	900	S50	S51	0.022	1.148	2.328	0.026	OK
7.002	720 min Summer	891	S51	S52	0.122	0.999	2.328	0.014	OK
7.003	4320 min Summer	2493	S52	S7	0.225	0.597	14.362	0.214	OK
1.007	15 min Summer	33	S7	S9	0.058	0.791	4.977	0.320	OK