

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
RWP121A	0.000	0.180	Type E	6.228	5.700	0.428	488752.818	98318.534
RE121A	0.000	0.180	Type E	6.251	5.650	0.501	488750.662	98318.644
PS58	0.000	0.450	450	6.310	5.500	0.710	488744.778	98316.580
RWP144B	0.000	0.180	Type E	6.135	5.600	0.435	488709.609	98300.511
RE144A	0.000	0.180	Type E	6.207	5.550	0.557	488708.754	98304.863
PS38	0.000	0.450	450	5.981	5.300	0.581	488728.731	98309.134
RE121B	0.000	0.180	Type E	6.375	5.650	0.625	488757.160	98308.020
RE144B	0.000	0.180	Type E	6.022	5.400	0.522	488711.672	98291.872
PS41	0.000	0.450	450	6.160	5.000	1.060	488729.078	98297.109
RWP147B	0.000	0.180	Type E	6.036	5.600	0.336	488730.396	98299.119
PS42	0.000	0.450	450	6.087	4.900	1.087	488731.231	98298.879
S2 (D)	0.049	0.480	Type E	6.006	5.500	0.356	488731.424	98300.880
PS39	0.000	0.450	Unknown	6.180	4.825	1.205	488733.212	98298.629
RE91A	0.000	0.180	Type E	6.272	5.700	0.472	488757.795	98283.597
S24 (D)	0.027	0.180	Type E	6.062	5.500	0.412	488735.282	98274.835
PS44	0.000	0.250	250	6.117	5.400	0.567	488736.944	98276.106
RE91B	0.000	0.180	Type E	6.448	5.600	0.748	488753.547	98295.357
PS45	0.000	0.450	450	6.289	5.100	1.039	488732.705	98287.654
S1	0.043	1.350	Type C	6.285	4.750	1.235	488753.992	98299.541
S3	0.073	1.350	Type C	6.091	4.615	1.176	488731.360	98291.332
YGS4	0.000	0.180	Type E	6.015	5.500	0.365	488703.930	98299.821
S4	0.004	1.350	Type C	5.794	4.400	1.019	488696.132	98299.932
S5	0.048	1.350	Type C	5.650	4.325	0.950	488696.223	98279.636
RWP148A	0.000	0.180	Type E	6.103	5.500	0.503	488719.760	98280.866
RE148A	0.000	0.180	Type E	6.110	5.350	0.610	488720.862	98281.251
S16	0.010	0.450	450	5.743	4.900	0.693	488726.939	98260.580
RWP148B	0.000	0.180	Type E	6.008	5.500	0.408	488710.600	98278.171
RE148B	0.014	0.180	Type E	6.055	5.350	0.555	488708.893	98277.749
RE152B	0.000	0.180	Type E	5.777	5.350	0.327	488716.751	98244.785
ACO151A	0.015	0.180	Type E	5.700	4.900	0.700	488715.395	98255.023
S17	0.000	0.450	450	5.698	4.500	1.048	488713.835	98255.374
S7	0.000	1.350	Type C	5.446	4.150	0.921	488700.143	98249.911
S10	0.000	1.350	Type C	5.371	4.000	0.996	488699.411	98232.987
S11	0.032	0.000	Type C	5.250	4.000	0.875	488689.938	98215.568
S12	0.000	1.350	Type C	5.367	3.970	1.022	488693.509	98206.563
S8	0.108	1.500	Type C	5.245	3.927	0.943	488706.114	98212.490
S26	0.000	0.450	Unknown	5.650	4.050	1.225	488731.654	98215.438
S25	0.000	1.350	Type C	5.650	4.000	1.275	488727.422	98213.365
S20	0.000	1.350	Type C	5.245	3.900	1.120	488709.879	98204.328
S23	0.000	0.000	Type C	4.064	3.875	-0.036	488709.538	98199.636

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)	DS Depth To Soffit (m)
1.000	RWP121A	5.700	RE121A	5.650	Circ	0.1mØ	2.159	43.2	0.600	0.428	0.501
1.001	RE121A	5.650	PS58	5.500	Circ	0.1mØ	6.236	41.6	0.600	0.501	0.710
1.002	PS58	5.500	PS38	5.300	Circ	0.1mØ	17.691	88.5	0.600	0.710	0.581
2.000	RWP144B	5.600	RE144A	5.550	Circ	0.1mØ	4.435	88.7	0.600	0.435	0.557
2.001	RE144A	5.550	PS38	5.300	Circ	0.1mØ	20.428	81.7	0.600	0.557	0.581
1.003	PS38	5.300	PS39	4.875	Circ	0.1mØ	11.421	26.9	0.600	0.581	1.205
3.000	RE121B	5.650	PS39	4.875	Circ	0.1mØ	25.724	33.2	0.600	0.625	1.205
4.000	RE144B	5.400	PS41	5.000	Circ	0.1mØ	18.176	45.4	0.600	0.522	1.060
4.001	PS41	5.000	PS42	4.900	Circ	0.1mØ	2.787	27.9	0.600	1.060	1.087
5.000	RWP147B	5.600	PS42	4.900	Circ	0.1mØ	0.869	1.2	0.600	0.336	1.087
4.002	PS42	4.900	PS39	4.875	Circ	0.1mØ	1.997	79.9	0.600	1.087	1.205
6.000	S2 (D)	5.500	PS39	4.825	Circ	0.15mØ	2.875	4.3	0.600	0.356	1.205
1.004	PS39	4.825	S3	4.765	Circ	0.15mØ	7.528	125.5	0.600	1.205	1.176
7.000	RE91A	5.700	PS44	5.450	Circ	0.1mØ	22.156	88.6	0.600	0.472	0.567
8.000	S24 (D)	5.500	PS44	5.400	Circ	0.15mØ	2.092	20.9	0.600	0.412	0.567
7.001	PS44	5.400	PS45	5.100	Circ	0.15mØ	12.302	41.0	0.600	0.567	1.039
9.000	RE91B	5.600	PS45	5.150	Circ	0.1mØ	22.220	49.4	0.600	0.748	1.039

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)	DS Depth To Soffit (m)
7.002	PS45	5.100	S3	4.765	Circ	0.15mØ	3.916	11.7	0.600	1.039	1.176
10.000	S1	4.750	S3	4.615	Circ	0.3mØ	24.075	178.3	0.600	1.235	1.176
1.005	S3	4.615	S5	4.400	Circ	0.3mØ	37.033	172.2	0.600	1.176	0.950
11.000	YGS4	5.500	S4	4.625	Circ	0.15mØ	7.799	8.9	0.600	0.365	1.019
11.001	S4	4.400	S5	4.325	Circ	0.375mØ	20.296	270.6	0.600	1.019	0.950
1.006	S5	4.325	S7	4.150	Circ	0.375mØ	29.983	171.3	0.600	0.950	0.921
12.000	RWP148A	5.500	RE148A	5.400	Circ	0.1mØ	1.167	11.7	0.600	0.503	0.610
12.001	RE148A	5.350	S16	4.900	Circ	0.15mØ	21.546	47.9	0.600	0.610	0.693
12.002	S16	4.900	S17	4.500	Circ	0.15mØ	14.100	35.2	0.600	0.693	1.048
13.000	RWP148B	5.500	RE148B	5.400	Circ	0.1mØ	1.759	17.6	0.600	0.408	0.555
13.001	RE148B	5.350	S17	4.500	Circ	0.15mØ	22.914	27.0	0.600	0.555	1.048
14.000	RE152B	5.350	S17	4.550	Circ	0.1mØ	10.982	13.7	0.600	0.327	1.048
15.000	ACO151A	4.900	S17	4.550	Circ	0.1mØ	1.598	4.6	0.600	0.700	1.048
12.003	S17	4.500	S7	4.375	Circ	0.15mØ	14.742	117.9	0.600	1.048	0.921
1.007	S7	4.150	S10	4.000	Circ	0.375mØ	16.940	112.9	0.600	0.921	0.996
1.008	S10	4.000	S8	3.927	Circ	0.375mØ	21.565	295.4	0.600	0.996	0.943
16.000	S11	4.000	S12	3.970	Circ	0.375mØ	9.687	322.9	0.600	0.875	1.022
16.001	S12	3.970	S8	3.927	Circ	0.375mØ	13.929	323.9	0.600	1.022	0.943
1.009	S8	3.927	S20	3.900	Circ	0.375mØ	8.988	332.9	0.600	0.943	0.970
17.000	S26	4.050	S25	4.000	Circ	0.375mØ	4.712	94.2	0.600	1.225	1.275
17.001	S25	4.000	S20	3.900	Circ	0.375mØ	19.734	197.3	0.600	1.275	0.970
1.010	S20	3.900	S23	3.875	Circ	0.225mØ	4.704	188.2	0.600	1.120	-0.036

Permeable Paving Schedule

Permeable Paving	Assigned Manhole	Effective Storage Volume (m3)	CL (m)	IL (m)	Storage Infil Rate (m/hr)	Safety Factor	Easting (m)	Northing (m)
S2	S2 (D)	17.944	6.006	5.426	0.00000000	2.00	488733.978	98306.464
S24	S24 (D)	9.914	6.062	5.482	0.00000000	2.00	488734.064	98284.188

Outfall Details

Outfall Manhole S23 : Surcharged (Constant Level)

Surcharged Constant

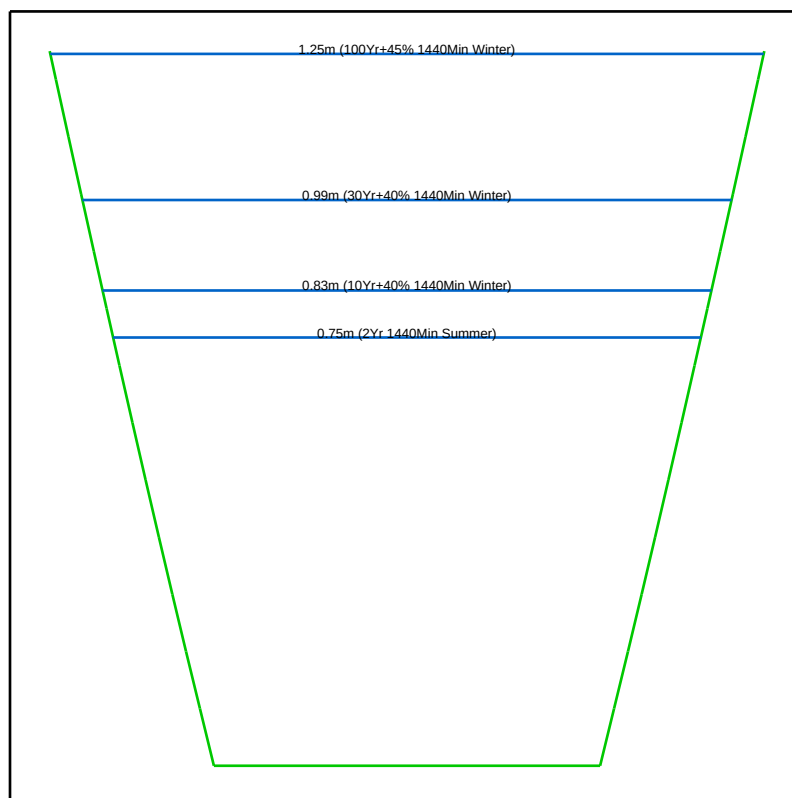
Water Elevation (m)	Water Depth (m)
4.750	0.875

Flow Control Details

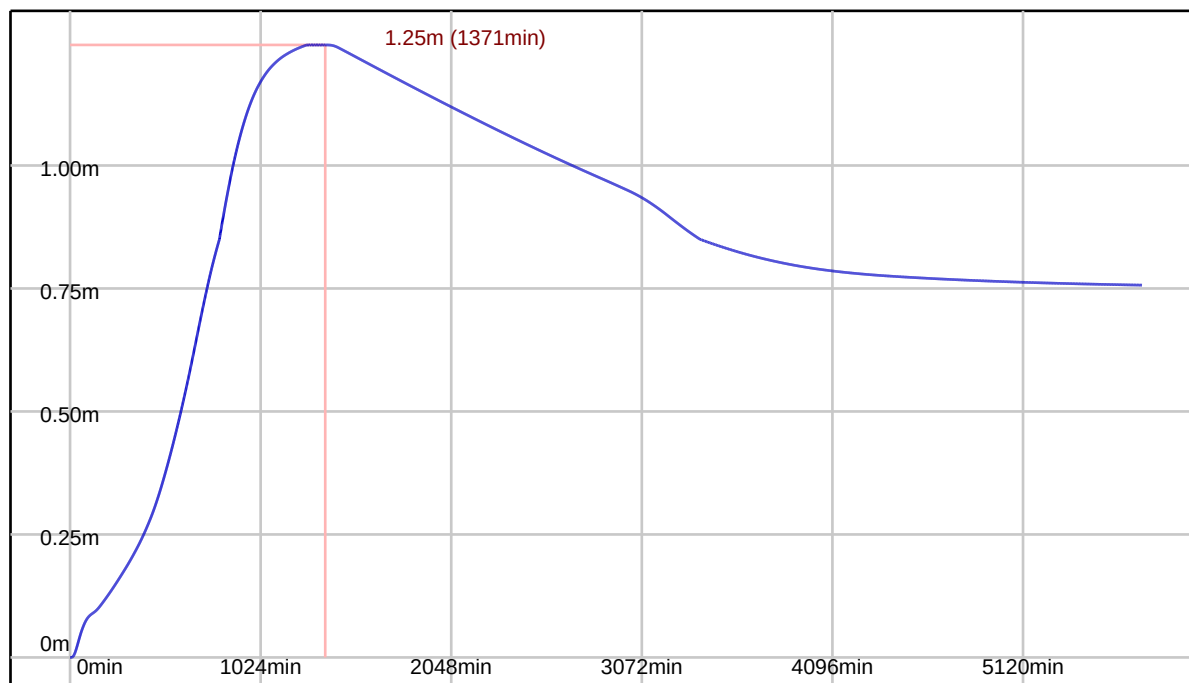
Pond Structure at Manhole S11

Pond Invert (m)	Max Depth (m)	Volume To Water Level (m3)	Water Level (m)	Freeboard (m)	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
4.000	1.250	205.186	5.100	0.150	0.00000000	0.00000000	2.00

Pond Depth/Area Diagram at S11



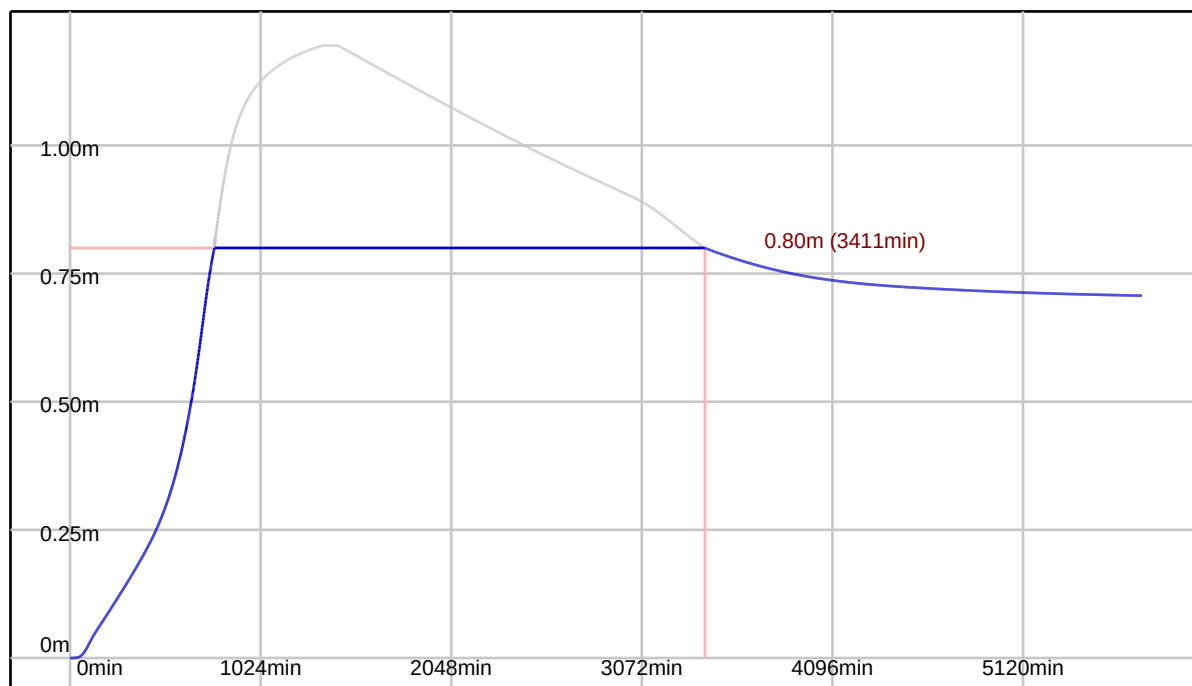
Pond at S11 (100Yr+45% 1440Min Winter)



Tank Structure at Manhole S26

Tank Invert (m)	Tank Height (m)	Porosity Ratio (%)	Area (m2)	Effective Area (m2) Area x Porosity Ratio	Max Storage (m3) Effective Area x Height	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
4.050	0.800	95.00	246.612	234.281	187.425	0.00000000	0.00000000	2.00

Tank at S26 (100Yr+45% 1440Min Summer)

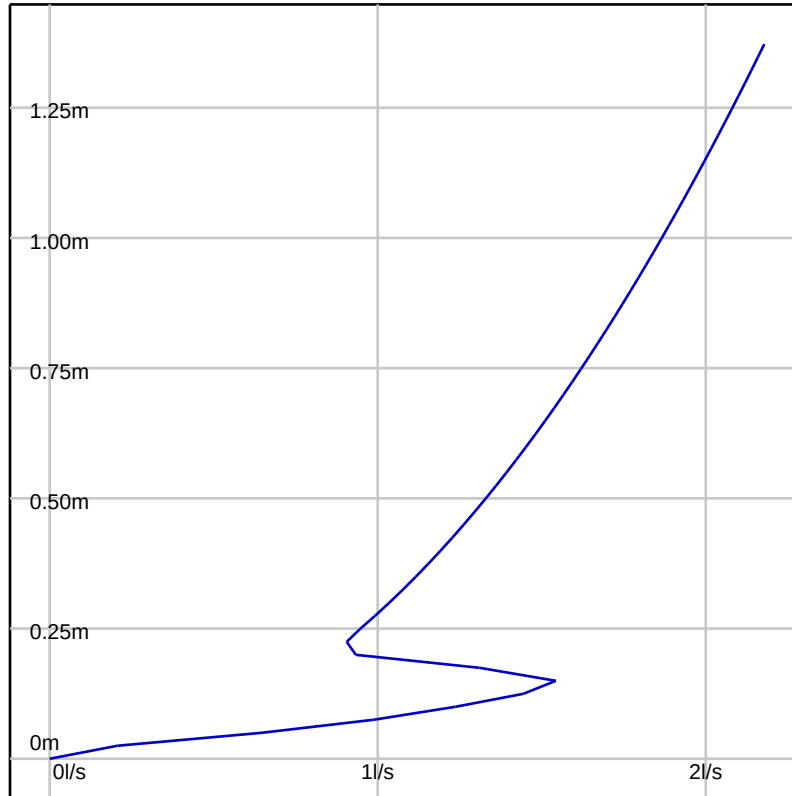


Controls within Manhole S20

Hydro-Brake® Optimum Control at Manhole S20

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-0062-2000-1155-2000 ID:626597	1.155	2.000	0.000	0.151	1.543	0.215	0.899

Hydro-Brake® Optimum Control at S20



Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_488693_97897_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

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

Return Periods (yrs) + Climate Change: (2, +0%), (10, +40%), (30, +40%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr 15Min Winter	32.920	0.00	0.64	30Yr+40% 15Min Summer	112.863	0.00	1.33
2Yr 15Min Summer	32.920	0.00	0.65	30Yr+40% 15Min Winter	112.863	0.00	1.28
2Yr 30Min Winter	21.400	0.00	0.74	30Yr+40% 30Min Summer	74.071	0.00	1.64
2Yr 30Min Summer	21.400	0.00	0.76	30Yr+40% 30Min Winter	74.071	0.00	1.64
2Yr 60Min Winter	13.300	0.00	0.87	30Yr+40% 60Min Summer	46.547	0.00	2.02
2Yr 60Min Summer	13.300	0.00	0.87	30Yr+40% 60Min Winter	46.547	0.00	1.98
2Yr 120Min Summer	8.917	0.00	1.04	30Yr+40% 120Min Summer	27.731	0.00	2.11
2Yr 120Min Winter	8.917	0.00	1.05	30Yr+40% 120Min Winter	27.731	0.00	2.10
2Yr 180Min Summer	6.969	0.00	1.16	30Yr+40% 180Min Summer	20.307	0.00	2.12
2Yr 180Min Winter	6.969	0.00	1.16	30Yr+40% 180Min Winter	20.307	0.00	2.12
2Yr 240Min Summer	5.692	0.00	1.25	30Yr+40% 240Min Summer	16.265	0.00	2.13
2Yr 240Min Winter	5.692	0.00	1.25	30Yr+40% 240Min Winter	16.265	0.00	2.13
2Yr 360Min Summer	4.267	0.00	1.42	30Yr+40% 360Min Summer	11.803	0.00	2.16
2Yr 360Min Winter	4.267	0.00	1.42	30Yr+40% 360Min Winter	11.803	0.00	2.17
2Yr 480Min Summer	3.462	0.00	1.60	30Yr+40% 480Min Summer	9.367	0.00	2.09
2Yr 480Min Winter	3.462	0.00	1.60	30Yr+40% 480Min Winter	9.367	0.00	2.09
2Yr 600Min Summer	2.922	0.00	1.95	30Yr+40% 600Min Summer	7.810	0.00	1.98
2Yr 600Min Winter	2.922	0.00	1.94	30Yr+40% 600Min Winter	7.810	0.00	1.99
2Yr 720Min Winter	2.536	0.00	2.11	30Yr+40% 720Min Summer	6.721	0.00	1.89
2Yr 720Min Summer	2.536	0.00	2.11	30Yr+40% 720Min Winter	6.721	0.00	1.90
2Yr 960Min Summer	2.031	0.00	2.19	30Yr+40% 960Min Summer	5.302	0.00	1.72
2Yr 960Min Winter	2.031	0.00	2.19	30Yr+40% 960Min Winter	5.302	0.00	1.72
2Yr 1440Min Summer	1.486	0.00	2.22	30Yr+40% 1440Min Summer	3.817	0.00	1.50
2Yr 1440Min Winter	1.486	0.00	2.23	30Yr+40% 1440Min Winter	3.817	0.00	1.45
10Yr+40% 15Min Summer	87.036	0.00	1.10	100Yr+45% 15Min Summer	146.276	0.00	1.86
10Yr+40% 15Min Winter	87.036	0.00	1.08	100Yr+45% 15Min Winter	146.276	0.00	1.80
10Yr+40% 30Min Summer	56.678	0.00	1.28	100Yr+45% 30Min Summer	96.982	0.00	2.14
10Yr+40% 30Min Winter	56.678	0.00	1.29	100Yr+45% 30Min Winter	96.982	0.00	2.10
10Yr+40% 60Min Summer	35.401	0.00	1.59	100Yr+45% 60Min Summer	61.530	0.00	2.12
10Yr+40% 60Min Winter	35.401	0.00	1.57	100Yr+45% 60Min Winter	61.530	0.00	2.11
10Yr+40% 120Min Winter	21.745	0.00	1.92	100Yr+45% 120Min Summer	35.946	0.00	2.17
10Yr+40% 120Min Summer	21.745	0.00	1.93	100Yr+45% 120Min Winter	35.946	0.00	2.15
10Yr+40% 180Min Summer	16.178	0.00	2.06	100Yr+45% 180Min Summer	26.053	0.00	2.09
10Yr+40% 180Min Winter	16.178	0.00	2.06	100Yr+45% 180Min Winter	26.053	0.00	2.10
10Yr+40% 240Min Summer	13.001	0.00	2.10	100Yr+45% 240Min Summer	20.923	0.00	1.98
10Yr+40% 240Min Winter	13.001	0.00	2.10	100Yr+45% 240Min Winter	20.923	0.00	1.99
10Yr+40% 360Min Summer	9.488	0.00	2.12	100Yr+45% 360Min Summer	15.176	0.00	1.79
10Yr+40% 360Min Winter	9.488	0.00	2.13	100Yr+45% 360Min Winter	15.176	0.00	1.79
10Yr+40% 480Min Summer	7.563	0.00	2.14	100Yr+45% 480Min Summer	12.028	0.00	1.67
10Yr+40% 480Min Winter	7.563	0.00	2.14	100Yr+45% 480Min Winter	12.028	0.00	1.68
10Yr+40% 600Min Winter	6.323	0.00	2.17	100Yr+45% 600Min Summer	10.033	0.00	1.53
10Yr+40% 600Min Summer	6.323	0.00	2.17	100Yr+45% 600Min Winter	10.033	0.00	1.54
10Yr+40% 720Min Summer	5.451	0.00	2.17	100Yr+45% 720Min Summer	8.641	0.00	1.40
10Yr+40% 720Min Winter	5.451	0.00	2.17	100Yr+45% 720Min Winter	8.641	0.00	1.40
10Yr+40% 960Min Summer	4.313	0.00	2.04	100Yr+45% 960Min Summer	6.827	0.00	1.21
10Yr+40% 960Min Winter	4.313	0.00	2.04	100Yr+45% 960Min Winter	6.827	0.00	1.21
10Yr+40% 1440Min Summer	3.111	0.00	1.82	100Yr+45% 1440Min Winter	4.922	0.00	0.97
10Yr+40% 1440Min Winter	3.111	0.00	1.82	100Yr+45% 1440Min Summer	4.922	0.00	0.98

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
RWP121A	-	0	5.700	0.000	0.000		OK
RE121A	-	0	5.650	0.000	0.000		OK
PS58	-	0	5.500	0.000	0.000		OK
RWP144B	-	0	5.600	0.000	0.000		OK
RE144A	-	0	5.550	0.000	0.000		OK
PS38	-	0	5.300	0.000	0.000		OK
RE121B	-	0	5.650	0.000	0.000		OK
RE144B	-	0	5.400	0.000	0.000		OK
PS41	-	0	5.000	0.000	0.000		OK
RWP147B	-	0	5.600	0.000	0.000		OK
PS42	-	0	4.900	0.000	0.000		OK
S2 (D)	15 min Summer	8	5.526	0.026	6.961		OK
PS39	15 min Summer	8	4.888	0.063	5.996		OK
RE91A	-	0	5.700	0.000	0.000		OK
S24 (D)	15 min Summer	8	5.527	0.027	3.902		OK
PS44	15 min Summer	8	5.434	0.034	2.880		OK
RE91B	-	0	5.600	0.000	0.000		OK
PS45	15 min Summer	8	5.124	0.024	2.865		OK
S1	15 min Summer	8	4.813	0.063	8.389		OK
S3	1440 min Summer	5742	4.749	0.134	0.021		OK
YGS4	-	0	5.500	0.000	0.000		OK
S4	1440 min Winter	5739	4.749	0.349	0.000		OK
S5	1440 min Winter	5724	4.749	0.424	0.041		Surcharged
RWP148A	-	0	5.500	0.000	0.000		OK
RE148A	-	0	5.350	0.000	0.000		OK
S16	15 min Summer	8	4.925	0.025	1.862		OK
RWP148B	-	0	5.500	0.000	0.000		OK
RE148B	15 min Summer	8	5.379	0.029	2.757		OK
RE152B	-	0	5.350	0.000	0.000		OK
ACO151A	15 min Summer	8	4.922	0.022	3.008		OK
S17	1440 min Summer	5752	4.749	0.249	0.014		Surcharged
S7	1440 min Summer	5752	4.749	0.599	0.014		Surcharged
S10	1440 min Summer	5752	4.749	0.749	0.009		Surcharged
S11	1440 min Summer	5759	4.749	0.749	0.049		Surcharged
S12	1440 min Summer	5759	4.749	0.779	0.045		Surcharged
S8	1440 min Winter	5753	4.749	0.822	0.212		Surcharged
S26	1440 min Summer	5755	4.749	0.699	0.000		Surcharged
S25	1440 min Summer	5754	4.749	0.749	0.115		Surcharged
S20	1440 min Winter	5753	4.749	0.849	0.208		Surcharged
S23	15 min Winter	0	4.750	0.875	1.692		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	0	RWP121A	RE121A	0.000	0.000	0.000	0.000	OK
1.001	15 min Winter	0	RE121A	PS58	0.000	0.000	0.000	0.000	OK
1.002	15 min Winter	0	PS58	PS38	0.000	0.000	0.000	0.000	OK
2.000	15 min Winter	0	RWP144B	RE144A	0.000	0.000	0.000	0.000	OK
2.001	15 min Winter	0	RE144A	PS38	0.000	0.000	0.000	0.000	OK
1.003	15 min Summer	8	PS38	PS39	0.007	0.000	0.000	0.000	OK
3.000	15 min Summer	8	RE121B	PS39	0.007	0.000	0.000	0.000	OK
4.000	15 min Winter	0	RE144B	PS41	0.000	0.000	0.000	0.000	OK
4.001	15 min Winter	0	PS41	PS42	0.000	0.000	0.000	0.000	OK
5.000	15 min Winter	0	RWP147B	PS42	0.000	0.000	0.000	0.000	OK
4.002	15 min Summer	8	PS42	PS39	0.007	0.000	0.000	0.000	OK
6.000	15 min Summer	8	S2 (D)	PS39	0.045	1.350	5.996	0.069	OK

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
1.004	15 min Summer	8	PS39	S3	0.063	0.837	5.927	0.375	OK
7.000	15 min Winter	0	RE91A	PS44	0.000	0.000	0.000	0.000	OK
8.000	15 min Summer	8	S24 (D)	PS44	0.031	1.104	2.880	0.074	OK
7.001	15 min Summer	8	PS44	PS45	0.029	1.201	2.865	0.103	OK
9.000	15 min Winter	0	RE91B	PS45	0.000	0.000	0.000	0.000	OK
7.002	15 min Summer	8	PS45	S3	0.024	1.588	2.853	0.055	OK
10.000	15 min Summer	9	S1	S3	0.093	0.446	8.275	0.100	OK
1.005	1440 min Summer	5742	S3	S5	0.217	0.578	3.070	0.036	OK
11.000	1440 min Winter	5739	YGS4	S4	0.062	0.000	0.000	0.000	OK
11.001	1440 min Winter	5739	S4	S5	0.362	0.022	0.169	0.001	OK
1.006	720 min Summer	2398	S5	S7	0.375	0.576	6.147	0.040	Surcharged
12.000	15 min Winter	0	RWP148A	RE148A	0.000	0.000	0.000	0.000	OK
12.001	15 min Summer	8	RE148A	S16	0.013	0.000	0.000	0.000	OK
12.002	720 min Summer	1957	S16	S17	0.075	0.221	0.264	0.009	OK
13.000	15 min Winter	0	RWP148B	RE148B	0.000	0.000	0.000	0.000	OK
13.001	720 min Summer	1957	RE148B	S17	0.075	0.310	0.391	0.011	OK
14.000	600 min Summer	2057	RE152B	S17	0.050	0.000	0.000	0.000	OK
15.000	720 min Summer	1957	ACO151A	S17	0.050	1.319	0.426	0.015	OK
12.003	720 min Summer	1957	S17	S7	0.150	0.528	1.081	0.066	Surcharged
1.007	480 min Summer	1358	S7	S10	0.375	0.425	9.642	0.051	Surcharged
1.008	15 min Summer	1322	S10	S8	0.375	0.728	48.766	0.422	Surcharged
16.000	30 min Summer	1216	S11	S12	0.375	0.147	7.139	0.065	Surcharged
16.001	30 min Summer	1036	S12	S8	0.375	0.118	7.322	0.066	Surcharged
1.009	15 min Summer	899	S8	S20	0.375	0.341	27.967	0.257	Surcharged
17.000	1440 min Winter	5117	S26	S25	0.375	0.002	0.259	0.001	Surcharged
17.001	30 min Winter	1216	S25	S20	0.375	0.005	0.320	0.002	Surcharged
1.010	15 min Winter	0	S20	S23	0.225	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S2	600 min Summer	341	5.514	0.088	0.246		OK
S24	120 min Summer	67	5.526	0.044	0.512		OK

Return Period Yrs: 10.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
RWP121A	-	0	5.700	0.000	0.000		OK
RE121A	-	0	5.650	0.000	0.000		OK
PS58	-	0	5.500	0.000	0.000		OK
RWP144B	-	0	5.600	0.000	0.000		OK
RE144A	-	0	5.550	0.000	0.000		OK
PS38	-	0	5.300	0.000	0.000		OK
RE121B	-	0	5.650	0.000	0.000		OK
RE144B	-	0	5.400	0.000	0.000		OK
PS41	-	0	5.000	0.000	0.000		OK
RWP147B	-	0	5.600	0.000	0.000		OK
PS42	15 min Summer	8	4.946	0.046	0.105		OK
S2 (D)	15 min Summer	8	5.544	0.044	18.404		OK
PS39	15 min Summer	8	4.946	0.121	16.360		OK
RE91A	-	0	5.700	0.000	0.000		OK
S24 (D)	15 min Summer	8	5.546	0.046	10.315		OK
PS44	15 min Summer	8	5.458	0.058	8.140		OK
RE91B	-	0	5.600	0.000	0.000		OK
PS45	15 min Summer	8	5.140	0.040	8.093		OK
S1	15 min Summer	8	4.854	0.104	22.180		OK
S3	15 min Summer	9	4.847	0.232	81.453		OK
YGS4	-	0	5.500	0.000	0.000		OK
S4	1440 min Winter	1373	4.831	0.431	0.011		Surcharged
S5	1440 min Winter	1374	4.831	0.506	0.595		Surcharged
RWP148A	-	0	5.500	0.000	0.000		OK
RE148A	-	0	5.350	0.000	0.000		OK
S16	15 min Summer	8	4.941	0.041	4.923		OK
RWP148B	-	0	5.500	0.000	0.000		OK
RE148B	15 min Summer	8	5.397	0.047	7.290		OK
RE152B	-	0	5.350	0.000	0.000		OK
ACO151A	15 min Summer	8	4.936	0.036	7.953		OK
S17	1440 min Winter	1373	4.831	0.331	0.097		Surcharged
S7	1440 min Winter	1371	4.831	0.681	0.727		Surcharged
S10	1440 min Winter	1371	4.831	0.831	0.728		Surcharged
S11	1440 min Winter	1370	4.831	0.831	0.082		Surcharged
S12	1440 min Winter	1372	4.831	0.861	0.097		Surcharged
S8	1440 min Winter	1371	4.831	0.904	1.104		Surcharged
S26	1440 min Winter	1373	4.831	0.781	0.000		Surcharged
S25	1440 min Winter	1372	4.831	0.831	0.020		Surcharged
S20	1440 min Winter	1375	4.831	0.931	1.052		Surcharged
S23	15 min Summer	0	4.750	0.875	1.685		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 Summer	0	RWP121A	RE121A	0.000	0.000	0.000	0.000	OK
1.001	15 min Summer	0	RE121A	PS58	0.000	0.000	0.000	0.000	OK
1.002	15 min Summer	0	PS58	PS38	0.000	0.000	0.000	0.000	OK
2.000	15 min Summer	0	RWP144B	RE144A	0.000	0.000	0.000	0.000	OK
2.001	15 min Summer	0	RE144A	PS38	0.000	0.000	0.000	0.000	OK
1.003	15 min Summer	8	PS38	PS39	0.035	0.000	0.000	0.000	OK
3.000	15 min Summer	8	RE121B	PS39	0.035	0.000	0.000	0.000	OK
4.000	15 min Summer	0	RE144B	PS41	0.000	0.000	0.000	0.000	OK
4.001	15 min Summer	8	PS41	PS42	0.023	0.000	0.000	0.000	OK
5.000	15 min Summer	8	RWP147B	PS42	0.023	0.000	0.000	0.000	OK
4.002	15 min Summer	10	PS42	PS39	0.058	0.207	0.272	0.040	OK
6.000	15 min Summer	8	S2 (D)	PS39	0.082	1.721	16.360	0.188	OK
1.004	15 min Summer	8	PS39	S3	0.119	1.068	15.975	1.011	OK
7.000	15 min Summer	8	RE91A	PS44	0.004	0.000	0.000	0.000	OK
8.000	15 min Summer	8	S24 (D)	PS44	0.052	1.491	8.140	0.208	OK
7.001	15 min Summer	8	PS44	PS45	0.049	1.622	8.093	0.291	OK

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
9.000	15 min Summer	0	RE91B	PS45	0.000	0.000	0.000	0.000	OK
7.002	15 min Summer	9	PS45	S3	0.061	1.945	8.070	0.154	OK
10.000	15 min Summer	8	S1	S3	0.167	0.554	21.979	0.265	OK
1.005	1440 min Winter	1369	S3	S5	0.258	0.611	4.159	0.049	OK
11.000	960 min Summer	846	YGS4	S4	0.075	0.000	0.000	0.000	OK
11.001	960 min Winter	825	S4	S5	0.375	0.028	0.302	0.002	Surcharged
1.006	240 min Summer	1032	S5	S7	0.375	1.051	32.593	0.214	Surcharged
12.000	15 min Summer	0	RWP148A	RE148A	0.000	0.000	0.000	0.000	OK
12.001	15 min Summer	8	RE148A	S16	0.020	0.000	0.000	0.000	OK
12.002	15 min Summer	8	S16	S17	0.095	0.472	4.887	0.163	OK
13.000	15 min Summer	0	RWP148B	RE148B	0.000	0.000	0.000	0.000	OK
13.001	15 min Summer	8	RE148B	S17	0.098	0.688	7.262	0.211	OK
14.000	15 min Summer	8	RE152B	S17	0.050	0.000	0.000	0.000	OK
15.000	15 min Summer	8	ACO151A	S17	0.068	2.489	7.937	0.277	OK
12.003	120 min Summer	1211	S17	S7	0.150	0.949	8.771	0.538	Surcharged
1.007	30 min Winter	1398	S7	S10	0.375	1.195	91.518	0.487	Surcharged
1.008	15 min Winter	675	S10	S8	0.375	1.102	117.479	1.016	Surcharged
16.000	15 min Winter	675	S11	S12	0.375	0.340	31.651	0.286	Surcharged
16.001	15 min Winter	495	S12	S8	0.375	0.309	31.761	0.288	Surcharged
1.009	30 min Summer	19	S8	S20	0.375	0.793	87.598	0.804	Surcharged
17.000	15 min Winter	1000	S26	S25	0.375	0.178	12.677	0.062	Surcharged
17.001	15 min Winter	675	S25	S20	0.375	0.131	12.639	0.089	Surcharged
1.010	1440 min Winter	1375	S20	S23	0.225	0.026	1.052	0.028	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S2	120 min Summer	72	5.542	0.116	1.539		OK
S24	30 min Summer	22	5.553	0.071	1.991		OK

Return Period Yrs: 30.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
RWP121A	-	0	5.700	0.000	0.000		OK
RE121A	-	0	5.650	0.000	0.000		OK
PS58	-	0	5.500	0.000	0.000		OK
RWP144B	-	0	5.600	0.000	0.000		OK
RE144A	-	0	5.550	0.000	0.000		OK
PS38	-	0	5.300	0.000	0.000		OK
RE121B	-	0	5.650	0.000	0.000		OK
RE144B	-	0	5.400	0.000	0.000		OK
PS41	15 min Summer	9	5.022	0.022	0.510		OK
RWP147B	-	0	5.600	0.000	0.000		OK
PS42	15 min Summer	9	5.022	0.122	0.817		Surcharged
S2 (D)	15 min Summer	8	5.550	0.050	23.866		OK
PS39	15 min Summer	9	5.022	0.197	20.459		Surcharged
RE91A	-	0	5.700	0.000	0.000		OK
S24 (D)	15 min Summer	8	5.554	0.054	13.376		OK
PS44	15 min Summer	8	5.467	0.067	10.761		OK
RE91B	-	0	5.600	0.000	0.000		OK
PS45	15 min Summer	8	5.146	0.046	10.692		OK
S1	1440 min Winter	1391	4.990	0.240	0.094		OK
S3	1440 min Winter	1391	4.990	0.375	0.457		Surcharged
YGS4	-	0	5.500	0.000	0.000		OK
S4	1440 min Winter	1395	4.990	0.590	0.009		Surcharged
S5	1440 min Winter	1392	4.990	0.665	0.572		Surcharged
RWP148A	-	0	5.500	0.000	0.000		OK
RE148A	-	0	5.350	0.000	0.000		OK
S16	1440 min Winter	1393	4.990	0.090	0.020		OK
RWP148B	-	0	5.500	0.000	0.000		OK
RE148B	15 min Summer	8	5.403	0.053	9.454		OK
RE152B	-	0	5.350	0.000	0.000		OK
ACO151A	1440 min Winter	1391	4.990	0.090	0.034		OK
S17	1440 min Winter	1391	4.990	0.490	0.091		Surcharged
S7	1440 min Winter	1390	4.990	0.840	0.656		Surcharged
S10	1440 min Winter	1390	4.990	0.990	0.638		Surcharged
S11	1440 min Winter	1393	4.990	0.990	0.068		Surcharged
S12	1440 min Winter	1394	4.990	1.020	0.133		Surcharged
S8	1440 min Winter	1394	4.990	1.063	0.977		Surcharged
S26	1440 min Winter	1396	4.990	0.940	0.000		Surcharged
S25	1440 min Winter	1396	4.990	0.990	0.008		Surcharged
S20	1440 min Winter	1396	4.990	1.090	0.933		Surcharged
S23	15 min Summer	0	4.750	0.875	1.683		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 Summer	0	RWP121A	RE121A	0.000	0.000	0.000	0.000	OK
1.001	15 min Summer	0	RE121A	PS58	0.000	0.000	0.000	0.000	OK
1.002	15 min Summer	0	PS58	PS38	0.000	0.000	0.000	0.000	OK
2.000	15 min Summer	0	RWP144B	RE144A	0.000	0.000	0.000	0.000	OK
2.001	15 min Summer	0	RE144A	PS38	0.000	0.000	0.000	0.000	OK
1.003	15 min Summer	8	PS38	PS39	0.050	0.000	0.000	0.000	OK
3.000	15 min Summer	8	RE121B	PS39	0.050	0.000	0.000	0.000	OK
4.000	15 min Summer	9	RE144B	PS41	0.011	0.000	0.000	0.000	OK
4.001	15 min Summer	10	PS41	PS42	0.061	0.122	0.571	0.050	OK
5.000	15 min Summer	9	RWP147B	PS42	0.050	0.000	0.000	0.000	OK
4.002	15 min Summer	10	PS42	PS39	0.100	0.403	1.398	0.207	Surcharged
6.000	15 min Summer	8	S2 (D)	PS39	0.100	1.814	21.351	0.246	OK
1.004	1440 min Winter	1251	PS39	S3	0.150	0.545	1.726	0.109	Surcharged
7.000	15 min Summer	8	RE91A	PS44	0.009	0.000	0.000	0.000	OK
8.000	15 min Summer	8	S24 (D)	PS44	0.060	1.612	10.761	0.275	OK
7.001	15 min Summer	8	PS44	PS45	0.057	1.753	10.692	0.384	OK

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
9.000	15 min Summer	0	RE91B	PS45	0.000	0.000	0.000	0.000	OK
7.002	15 min Summer	9	PS45	S3	0.098	2.020	10.662	0.204	OK
10.000	1440 min Winter	1391	S1	S3	0.270	0.230	1.359	0.016	OK
1.005	1440 min Winter	1031	S3	S5	0.300	0.633	5.103	0.060	Surcharged
11.000	480 min Summer	427	YGS4	S4	0.075	0.000	0.000	0.000	OK
11.001	1440 min Winter	945	S4	S5	0.375	0.025	1.451	0.012	Surcharged
1.006	60 min Winter	1461	S5	S7	0.375	1.358	69.420	0.456	Surcharged
12.000	15 min Summer	0	RWP148A	RE148A	0.000	0.000	0.000	0.000	OK
12.001	1440 min Winter	1393	RE148A	S16	0.045	0.000	0.000	0.000	OK
12.002	1440 min Winter	1393	S16	S17	0.120	0.212	1.424	0.047	OK
13.000	15 min Summer	8	RWP148B	RE148B	0.002	0.000	0.000	0.000	OK
13.001	15 min Summer	8	RE148B	S17	0.102	0.738	9.419	0.274	OK
14.000	15 min Summer	7	RE152B	S17	0.050	0.000	0.000	0.000	OK
15.000	1440 min Winter	1391	ACO151A	S17	0.095	1.289	1.607	0.056	OK
12.003	30 min Summer	17	S17	S7	0.150	1.257	21.709	1.331	Surcharged
1.007	15 min Winter	1409	S7	S10	0.375	1.305	142.955	0.760	Surcharged
1.008	15 min Winter	10	S10	S8	0.375	1.289	142.368	1.231	Surcharged
16.000	15 min Winter	320	S11	S12	0.375	0.370	40.635	0.367	Surcharged
16.001	15 min Winter	14	S12	S8	0.375	0.372	41.075	0.372	Surcharged
1.009	30 min Summer	19	S8	S20	0.375	1.083	119.570	1.098	Surcharged
17.000	15 min Winter	645	S26	S25	0.375	0.152	14.176	0.069	Surcharged
17.001	15 min Winter	321	S25	S20	0.375	0.135	14.424	0.102	Surcharged
1.010	1440 min Summer	1007	S20	S23	0.225	0.039	1.543	0.041	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S2	120 min Summer	73	5.557	0.131	2.622		OK
S24	30 min Summer	21	5.566	0.084	2.808		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
RWP121A	-	0	5.700	0.000	0.000		OK
RE121A	-	0	5.650	0.000	0.000		OK
PS58	-	0	5.500	0.000	0.000		OK
RWP144B	-	0	5.600	0.000	0.000		OK
RE144A	-	0	5.550	0.000	0.000		OK
PS38	15 min Summer	11	5.312	0.012	0.000		OK
RE121B	-	0	5.650	0.000	0.000		OK
RE144B	-	0	5.400	0.000	0.000		OK
PS41	15 min Summer	10	5.323	0.323	0.029		Surcharged
RWP147B	-	0	5.600	0.000	0.000		OK
PS42	15 min Summer	10	5.322	0.422	0.116		Surcharged
S2 (D)	15 min Summer	9	5.559	0.059	29.616		OK
PS39	15 min Summer	10	5.321	0.496	21.890		Surcharged
RE91A	-	0	5.700	0.000	0.000		OK
S24 (D)	30 min Summer	17	5.565	0.065	15.332		OK
PS44	30 min Summer	17	5.480	0.080	15.327		OK
RE91B	-	0	5.600	0.000	0.000		OK
PS45	1440 min Winter	1273	5.245	0.145	0.139		OK
S1	1440 min Winter	1288	5.245	0.495	0.210		Surcharged
S3	1440 min Winter	1284	5.245	0.630	0.970		Surcharged
YGS4	-	0	5.500	0.000	0.000		OK
S4	1440 min Winter	1283	5.245	0.845	0.022		Surcharged
S5	1440 min Winter	1283	5.245	0.920	1.207		Surcharged
RWP148A	-	0	5.500	0.000	0.000		OK
RE148A	-	0	5.350	0.000	0.000		OK
S16	1440 min Winter	1278	5.245	0.345	0.047		Surcharged
RWP148B	-	0	5.500	0.000	0.000		OK
RE148B	15 min Summer	8	5.412	0.062	12.252		OK
RE152B	-	0	5.350	0.000	0.000		OK
ACO151A	1440 min Winter	1273	5.245	0.345	0.077		Surcharged
S17	1440 min Winter	1273	5.245	0.745	0.209		Surcharged
S7	1440 min Winter	1294	5.245	1.095	1.413		Surcharged
S10	1440 min Winter	1283	5.245	1.245	1.376		Flood Risk
S11	1440 min Winter	1274	5.245	1.245	0.162		Flood Risk
S12	1440 min Winter	1283	5.245	1.275	0.233		Flood Risk
S8	1440 min Winter	1285	5.245	1.318	2.822	3.850	Flood
S26	1440 min Summer	1404	5.245	1.195	0.006		Surcharged
S25	1440 min Summer	1427	5.245	1.245	0.000		Surcharged
S20	1440 min Winter	1383	5.245	1.345	1.358	0.005	Flood
S23	15 min Summer	0	4.750	0.875	1.680		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 Summer	0	RWP121A	RE121A	0.000	0.000	0.000	0.000	OK
1.001	15 min Summer	0	RE121A	PS58	0.000	0.000	0.000	0.000	OK
1.002	15 min Summer	11	PS58	PS38	0.006	0.000	0.000	0.000	OK
2.000	15 min Summer	0	RWP144B	RE144A	0.000	0.000	0.000	0.000	OK
2.001	15 min Summer	11	RE144A	PS38	0.006	0.000	0.000	0.000	OK
1.003	15 min Summer	11	PS38	PS39	0.056	0.082	0.372	0.032	OK
3.000	15 min Summer	7	RE121B	PS39	0.050	0.000	0.000	0.000	OK
4.000	15 min Summer	8	RE144B	PS41	0.050	0.000	0.000	0.000	OK
4.001	15 min Winter	12	PS41	PS42	0.100	0.539	3.305	0.287	Surcharged
5.000	15 min Summer	7	RWP147B	PS42	0.050	0.000	0.000	0.000	OK
4.002	15 min Winter	12	PS42	PS39	0.100	0.742	5.827	0.862	Surcharged
6.000	15 min Summer	9	S2 (D)	PS39	0.104	2.130	27.824	0.320	OK
1.004	15 min Winter	11	PS39	S3	0.150	1.210	21.390	1.354	Surcharged
7.000	30 min Summer	17	RE91A	PS44	0.015	0.000	0.000	0.000	OK
8.000	30 min Summer	17	S24 (D)	PS44	0.072	1.812	15.327	0.392	OK
7.001	15 min Summer	10	PS44	PS45	0.102	1.843	14.175	0.509	OK

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
9.000	1440 min Winter	1273	RE91B	PS45	0.048	0.000	0.000	0.000	OK
7.002	1440 min Winter	1273	PS45	S3	0.148	1.141	1.776	0.034	OK
10.000	15 min Winter	9	S1	S3	0.300	0.583	29.081	0.351	Surcharged
1.005	15 min Winter	9	S3	S5	0.300	1.613	110.176	1.306	Surcharged
11.000	15 min Summer	9	YGS4	S4	0.075	0.000	0.000	0.000	OK
11.001	15 min Winter	14	S4	S5	0.375	0.286	10.499	0.087	Surcharged
1.006	15 min Winter	10	S5	S7	0.375	1.441	140.345	0.921	Surcharged
12.000	15 min Summer	0	RWP148A	RE148A	0.000	0.000	0.000	0.000	OK
12.001	600 min Summer	590	RE148A	S16	0.075	0.000	0.000	0.000	OK
12.002	720 min Summer	612	S16	S17	0.150	0.303	0.899	0.030	Surcharged
13.000	15 min Summer	8	RWP148B	RE148B	0.006	0.000	0.000	0.000	OK
13.001	15 min Summer	8	RE148B	S17	0.106	0.917	12.211	0.355	OK
14.000	15 min Summer	6	RE152B	S17	0.050	0.000	0.000	0.000	OK
15.000	1440 min Summer	835	ACO151A	S17	0.100	1.452	3.037	0.106	Surcharged
12.003	15 min Winter	9	S17	S7	0.150	1.532	27.064	1.660	Surcharged
1.007	15 min Winter	10	S7	S10	0.375	1.492	164.813	0.876	Surcharged
1.008	15 min Winter	10	S10	S8	0.375	1.477	163.162	1.410	Surcharged
16.000	15 min Winter	16	S11	S12	0.375	0.462	51.026	0.461	Surcharged
16.001	15 min Winter	16	S12	S8	0.375	0.467	51.599	0.467	Surcharged
1.009	30 min Summer	18	S8	S20	0.375	1.338	147.758	1.357	Surcharged
17.000	15 min Winter	153	S26	S25	0.375	0.134	14.618	0.071	Surcharged
17.001	15 min Winter	22	S25	S20	0.375	0.134	14.839	0.105	Surcharged
1.010	600 min Summer	1426	S20	S23	0.225	0.039	1.543	0.041	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S2	60 min Summer	41	5.575	0.149	3.877		OK
S24	30 min Summer	20	5.582	0.100	4.188		OK