

Design Settings

Rainfall Methodology FSR
Return Period (years) 5
Additional Flow (%) 0
FSR Region England and Wales
M5-60 (mm) 19.000
Ratio-R 0.350
CV 0.750
Time of Entry (mins) 5.00
Maximum Time of Concentration (mins) 30.00
Maximum Rainfall (mm/hr) 50.0
Minimum Velocity (m/s) 1.00
Connection Type Level Soffits
Minimum Backdrop Height (m) 9.999
Preferred Cover Depth (m) 1.200
Include Intermediate Ground ✓
Enforce best practice design rules x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.029	5.00	18.783	600	507604.297	104590.960	1.533
2	0.020	5.00	18.705	1200	507609.104	104590.317	1.579
3A	0.021	5.00	18.416	600	507600.356	104546.980	1.116
3			18.286	1200	507604.546	104544.871	1.429
4	0.020	5.00	18.220	1200	507598.499	104519.863	1.220
5	0.047	5.00	18.032	1200	507604.600	104519.441	1.642
6	0.019	5.00	17.985	600	507592.416	104481.388	1.582
7	0.057	5.00	17.794	1200	507604.682	104480.526	1.563
8	0.010	5.00	18.212	600	507603.259	104454.637	1.012
9	0.047	5.00	18.054	1200	507607.955	104454.471	1.931
10	0.029	5.00	18.376	600	507605.544	104431.716	1.326
11			18.203	1200	507612.443	104433.169	2.169
12	0.001	5.00	18.220	600	507611.772	104416.783	0.770
13	0.023	5.00	18.062	1200	507616.249	104415.101	2.104
14			17.995	1200	507614.301	104409.919	2.060
15	0.014	5.00	18.104	600	507609.485	104410.317	1.254
16			17.935	1200	507610.376	104406.067	2.023
17	0.070	5.00	17.589	600	507554.582	104428.791	1.389
18	0.039	5.00	17.398	600	507550.025	104413.026	1.298
19	0.042	5.00	17.317	1200	507558.318	104415.662	1.425
21A	0.024	5.00	17.646	600	507571.233	104393.677	1.496
20			17.561	1200	507574.752	104399.021	1.882
21	0.031	5.00	17.771	600	507581.516	104403.042	0.871
22			17.636	1350	507581.902	104397.450	2.076
23			17.133	1350	507579.084	104368.940	1.662
24			16.997		507593.568	104356.332	1.997
25	0.034	5.00	17.923	1200	507518.841	104520.178	1.373
26	0.039	5.00	17.760	600	507502.741	104517.634	1.310
27	0.047	5.00	17.692	1200	507509.813	104518.751	1.500
28	0.002	5.00	17.714	600	507496.093	104488.048	1.289
29	0.002	5.00	17.785	600	507498.786	104499.168	0.935
30	0.018	5.00	17.672	1200	507499.603	104493.999	1.425
31			17.975	1200	507514.237	104490.750	1.952
32	0.022	5.00	18.380	600	507530.251	104478.473	1.430
33	0.019	5.00	18.292	1200	507521.618	104479.484	1.538
34	0.030	5.00	18.168	600	507507.885	104481.373	1.118
35	0.032	5.00	18.077	1200	507513.924	104480.384	2.097
36	0.004	5.00	18.193	600	507517.347	104455.603	1.580
37	0.018	5.00	17.945	1200	507509.656	104454.313	2.073
38	0.020	5.00	17.905	600	507506.498	104439.028	1.305
39	0.017	5.00	17.763	1350	507512.512	104437.288	2.037
40	0.020	5.00	17.758	600	507506.085	104426.660	1.358
41			17.651	1350	507512.571	104426.097	1.960
42	0.007	5.00	17.795	600	507523.799	104426.598	0.945
43	0.101	5.00	17.526	1350	507517.200	104416.031	1.870
44	0.004	5.00	17.516	600	507520.072	104401.675	0.616
45	0.039	5.00	17.388	600	507510.412	104395.940	1.588
46			17.286	1350	507515.124	104395.392	1.759
47	0.010	5.00	17.297	600	507518.945	104386.749	1.197
48			17.200		507514.127	104386.824	1.700
49	0.010	5.00	17.249	600	507518.152	104378.370	1.049
50	0.034	5.00	17.192	600	507508.339	104376.130	1.292
51			17.097	1350	507512.902	104376.294	1.630

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
52	0.007	5.00	16.997	600	507496.195	104357.148	1.047
53		5.00	17.081	600	507509.292	104363.633	1.081
54	0.026	5.00	16.937	1350	507516.081	104359.555	1.575
55	0.001	5.00	16.999	600	507521.523	104359.381	0.799
56	0.031	5.00	16.865	1350	507519.788	104355.136	1.521
57	0.008	5.00	17.008	600	507532.542	104353.640	0.808
58			16.600	1350	507537.777	104343.378	1.323
59	0.063	5.00	17.116	1200	507559.503	104354.247	1.421
60			16.956	1350	507559.588	104343.552	1.747
61			17.043	1350	507576.803	104343.689	1.888
62			17.000		507591.411	104345.507	2.000
63	0.057	5.00	16.997		507598.585	104350.517	1.997
63_OUT			16.997		507600.120	104347.686	1.997

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	4.850	0.600	17.250	17.201	0.049	99.0	150	5.08	50.0
1.001	2	3	45.674	0.600	17.126	16.857	0.269	169.8	225	5.84	50.0
2.000	3A	3	4.691	0.600	17.300	16.982	0.318	14.8	100	5.04	50.0
1.002	3	5	25.430	0.600	16.857	16.465	0.392	64.9	225	6.10	50.0
3.000	4	5	6.116	0.600	17.000	16.540	0.460	13.3	150	5.04	50.0
1.003	5	7	38.915	0.600	16.390	16.231	0.159	244.7	300	6.75	50.0
4.000	6	7	12.296	0.600	16.403	16.306	0.097	127.3	225	5.18	50.0
1.004	7	9	26.260	0.600	16.231	16.123	0.108	243.1	300	7.19	50.0
5.000	8	9	4.699	0.600	17.200	16.273	0.927	5.1	150	5.02	50.0
1.005	9	11	21.770	0.600	16.123	16.034	0.089	244.6	300	7.55	50.0
6.000	10	11	7.050	0.600	17.050	16.184	0.866	8.1	150	5.03	50.0
1.006	11	13	18.465	0.600	16.034	15.958	0.076	243.0	300	7.86	50.0
7.000	12	13	4.783	0.600	17.450	16.108	1.342	3.6	150	5.01	50.0
1.007	13	14	5.536	0.600	15.958	15.935	0.023	240.7	300	7.95	50.0
1.008	14	16	5.499	0.600	15.935	15.912	0.023	239.1	300	8.04	50.0
8.000	15	16	4.342	0.600	16.850	16.062	0.788	5.5	150	5.02	50.0
1.009	16	22	29.749	0.600	15.912	15.635	0.277	107.2	300	8.36	50.0
9.000	17	19	13.650	0.600	16.200	15.967	0.233	58.6	150	5.17	50.0
10.000	18	19	8.702	0.600	16.100	15.967	0.133	65.4	150	5.12	50.0
9.001	19	20	23.388	0.600	15.892	15.754	0.138	169.5	225	5.56	50.0
11.000	21A	20	6.399	0.600	16.150	15.829	0.321	19.9	150	5.05	50.0
9.002	20	22	7.321	0.600	15.679	15.635	0.044	166.4	300	5.66	50.0
12.000	21	22	5.605	0.600	16.900	15.785	1.115	5.0	150	5.02	50.0
1.010	22	23	28.649	0.600	15.560	15.471	0.089	321.9	375	8.84	50.0
1.011	23	24	19.203	0.600	15.471	15.109	0.362	53.0	375	8.97	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.010	17.8	3.9	1.383	1.354	0.029	0.0	48	0.812
1.001	1.000	39.8	6.6	1.354	1.204	0.049	0.0	62	0.745
2.000	2.022	15.9	2.8	1.016	1.204	0.021	0.0	29	1.526
1.002	1.625	64.6	9.5	1.204	1.342	0.070	0.0	58	1.164
3.000	2.776	49.1	2.7	1.070	1.342	0.020	0.0	24	1.489
1.003	1.000	70.7	18.6	1.342	1.263	0.137	0.0	105	0.847
4.000	1.157	46.0	2.6	1.357	1.263	0.019	0.0	36	0.623
1.004	1.004	70.9	28.9	1.263	1.631	0.213	0.0	133	0.954
5.000	4.505	79.6	1.4	0.862	1.631	0.010	0.0	14	1.709
1.005	1.001	70.7	36.6	1.631	1.869	0.270	0.0	153	1.009
6.000	3.552	62.8	3.9	1.176	1.869	0.029	0.0	25	1.992
1.006	1.004	71.0	40.5	1.869	1.804	0.299	0.0	163	1.036
7.000	5.376	95.0	0.1	0.620	1.804	0.001	0.0	4	0.921
1.007	1.009	71.3	43.8	1.804	1.760	0.323	0.0	170	1.059
1.008	1.012	71.5	43.8	1.760	1.723	0.323	0.0	170	1.061
8.000	4.320	76.3	1.9	1.104	1.723	0.014	0.0	16	1.816
1.009	1.518	107.3	45.7	1.723	1.701	0.337	0.0	137	1.460
9.000	1.316	23.3	9.5	1.239	1.200	0.070	0.0	67	1.249
10.000	1.245	22.0	5.3	1.148	1.200	0.039	0.0	50	1.027
9.001	1.001	39.8	20.5	1.200	1.582	0.151	0.0	115	1.009
11.000	2.266	40.0	3.3	1.346	1.582	0.024	0.0	29	1.373
9.002	1.216	85.9	23.7	1.582	1.701	0.175	0.0	108	1.044
12.000	4.525	80.0	4.2	0.721	1.701	0.031	0.0	23	2.393
1.010	1.004	110.9	73.6	1.701	1.287	0.543	0.0	224	1.071
1.011	2.492	275.2	73.6	1.287	1.513	0.543	0.0	132	2.126

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.012	24	63	1.000	0.600	15.000	15.000	0.000	0.0	375	9.28	50.0
13.000	25	27	9.140	0.600	16.550	16.267	0.283	32.3	225	5.07	50.0
14.000	26	27	7.160	0.600	16.450	16.342	0.108	66.3	150	5.10	50.0
13.001	27	31	28.348	0.600	16.192	16.023	0.169	167.7	300	5.49	50.0
15.000	28	30	6.909	0.600	16.425	16.322	0.103	67.1	150	5.09	50.0
16.000	29	30	5.233	0.600	16.850	16.322	0.528	9.9	150	5.03	50.0
15.001	30	31	14.990	0.600	16.247	16.098	0.149	100.6	225	5.29	50.0
13.002	31	35	10.371	0.600	16.023	15.980	0.043	241.2	300	5.66	50.0
17.000	32	33	8.692	0.600	16.950	16.754	0.196	44.4	150	5.10	50.0
17.001	33	35	7.746	0.600	16.754	16.130	0.624	12.4	150	5.14	50.0
18.000	34	35	6.119	0.600	17.050	16.130	0.920	6.7	150	5.03	50.0
13.003	35	37	26.418	0.600	15.980	15.872	0.108	244.6	300	6.10	50.0
19.000	36	37	7.798	0.600	16.613	16.022	0.591	13.2	150	5.05	50.0
13.004	37	39	17.263	0.600	15.872	15.801	0.071	243.1	300	6.38	50.0
20.000	38	39	6.261	0.600	16.600	15.951	0.649	9.6	150	5.03	50.0
13.005	39	41	11.191	0.600	15.726	15.691	0.035	319.7	375	6.57	50.0
21.000	40	41	6.510	0.600	16.400	15.916	0.484	13.5	150	5.04	50.0
13.006	41	43	11.079	0.600	15.691	15.656	0.035	316.6	375	6.75	50.0
22.000	42	43	12.458	0.600	16.850	15.881	0.969	12.9	150	5.07	50.0
13.007	43	46	20.743	0.600	15.656	15.527	0.129	160.8	375	6.99	50.0
23.000	44	46	7.997	0.600	16.900	15.752	1.148	7.0	150	5.03	50.0
24.000	45	46	4.744	0.600	15.800	15.752	0.048	98.8	150	5.08	50.0
13.008	46	48	8.626	0.600	15.527	15.500	0.027	320.0	375	7.14	50.0
25.000	47	48	4.819	0.600	16.100	15.725	0.375	12.8	150	5.03	50.0
13.009	48	51	10.601	0.600	15.500	15.467	0.033	320.0	375	7.31	50.0
26.000	49	51	5.646	0.600	16.200	15.692	0.508	11.1	150	5.03	50.0
27.000	50	51	4.566	0.600	15.900	15.692	0.208	22.0	150	5.04	50.0
13.010	51	54	17.038	0.600	15.467	15.362	0.105	162.3	375	7.51	50.0
28.000	52	54	20.031	0.600	15.950	15.587	0.363	55.2	150	5.25	50.0
29.000	53	54	7.920	0.600	16.000	15.587	0.413	19.2	150	5.06	50.0
13.011	54	56	5.768	0.600	15.362	15.344	0.018	320.0	375	7.61	50.0
30.000	55	56	4.586	0.600	16.200	15.569	0.631	7.3	150	5.02	50.0
13.012	56	58	21.491	0.600	15.344	15.277	0.067	320.8	375	7.96	50.0
31.000	57	58	11.520	0.600	16.200	15.502	0.698	16.5	150	5.08	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.012	1.000	110.4	73.6	1.622	1.622	0.543	0.0	0	∞
13.000	2.310	91.8	4.6	1.148	1.200	0.034	0.0	34	1.211
14.000	1.237	21.9	5.3	1.160	1.200	0.039	0.0	50	1.020
13.001	1.211	85.6	16.3	1.200	1.652	0.120	0.0	88	0.938
15.000	1.229	21.7	0.3	1.139	1.200	0.002	0.0	12	0.420
16.000	3.219	56.9	0.3	0.785	1.200	0.002	0.0	7	0.792
15.001	1.303	51.8	3.0	1.200	1.652	0.022	0.0	36	0.713
13.002	1.008	71.2	19.2	1.652	1.797	0.142	0.0	106	0.860
17.000	1.514	26.7	3.0	1.280	1.388	0.022	0.0	34	1.001
17.001	2.875	50.8	5.6	1.388	1.797	0.041	0.0	33	1.885
18.000	3.932	69.5	4.1	0.968	1.797	0.030	0.0	24	2.143
13.003	1.001	70.7	33.2	1.797	1.773	0.245	0.0	144	0.985
19.000	2.788	49.3	0.5	1.430	1.773	0.004	0.0	11	0.898
13.004	1.004	70.9	36.2	1.773	1.662	0.267	0.0	152	1.009
20.000	3.263	57.7	2.7	1.155	1.662	0.020	0.0	22	1.669
13.005	1.008	111.3	41.2	1.662	1.585	0.304	0.0	158	0.935
21.000	2.761	48.8	2.7	1.208	1.585	0.020	0.0	24	1.481
13.006	1.013	111.9	43.9	1.585	1.495	0.324	0.0	163	0.954
22.000	2.824	49.9	0.9	0.795	1.495	0.007	0.0	14	1.098
13.007	1.426	157.5	58.5	1.495	1.384	0.432	0.0	158	1.323
23.000	3.842	67.9	0.5	0.466	1.384	0.004	0.0	10	1.148
24.000	1.011	17.9	5.3	1.438	1.384	0.039	0.0	56	0.882
13.008	1.007	111.2	64.4	1.384	1.325	0.475	0.0	205	1.042
25.000	2.825	49.9	1.4	1.047	1.325	0.010	0.0	17	1.240
13.009	1.007	111.2	65.7	1.325	1.255	0.485	0.0	208	1.047
26.000	3.039	53.7	1.4	0.899	1.255	0.010	0.0	17	1.305
27.000	2.159	38.1	4.6	1.142	1.255	0.034	0.0	35	1.458
13.010	1.419	156.8	71.7	1.255	1.200	0.529	0.0	178	1.388
28.000	1.357	24.0	0.9	0.897	1.200	0.007	0.0	20	0.655
29.000	2.310	40.8	0.0	0.931	1.200	0.000	0.0	0	0.000
13.011	1.007	111.2	76.2	1.200	1.146	0.562	0.0	228	1.081
30.000	3.761	66.5	0.1	0.649	1.146	0.001	0.0	5	0.703
13.012	1.006	111.1	80.5	1.146	0.948	0.594	0.0	237	1.092
31.000	2.491	44.0	1.1	0.658	0.948	0.008	0.0	16	1.044

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
13.013	58	60	21.812	0.600	15.277	15.209	0.068	320.8	375	8.33	50.0
32.000	59	60	10.695	0.600	15.695	15.434	0.261	41.0	150	5.11	50.0
13.014	60	61	17.216	0.600	15.209	15.155	0.054	320.0	375	8.61	50.0
13.015	61	62	14.721	0.600	15.155	15.109	0.046	320.0	375	8.85	50.0
13.016	62	63	1.000	0.600	15.000	15.000	0.000	0.0	375	8.77	50.0
1.013	63	63_OUT	1.000	0.600	15.000	15.000	0.000	0.0	450	9.30	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	E Area (ha)	E Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
13.013	1.006	111.1	81.6	0.948	1.372	0.602	0.0	239	1.095
32.000	1.576	27.9	8.5	1.271	1.372	0.063	0.0	57	1.391
13.014	1.007	111.2	90.1	1.372	1.513	0.665	0.0	257	1.116
13.015	1.007	111.2	90.1	1.513	1.516	0.665	0.0	257	1.116
13.016	1.000	110.4	90.1	1.625	1.622	0.665	0.0	0	∞
1.013	1.000	159.0	171.4	1.547	1.547	1.265	0.0	0	∞

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	4.850	99.0	150	PH1	18.783	17.250	1.383	18.705	17.201	1.354
1.001	45.674	169.8	225	PH1	18.705	17.126	1.354	18.286	16.857	1.204
2.000	4.691	14.8	100	PH1	18.416	17.300	1.016	18.286	16.982	1.204
1.002	25.430	64.9	225	PH1	18.286	16.857	1.204	18.032	16.465	1.342
3.000	6.116	13.3	150	PH1	18.220	17.000	1.070	18.032	16.540	1.342
1.003	38.915	244.7	300	PH1	18.032	16.390	1.342	17.794	16.231	1.263
4.000	12.296	127.3	225	PH1	17.985	16.403	1.357	17.794	16.306	1.263
1.004	26.260	243.1	300	PH1	17.794	16.231	1.263	18.054	16.123	1.631
5.000	4.699	5.1	150	PH1	18.212	17.200	0.862	18.054	16.273	1.631
1.005	21.770	244.6	300	PH1	18.054	16.123	1.631	18.203	16.034	1.869
6.000	7.050	8.1	150	PH1	18.376	17.050	1.176	18.203	16.184	1.869
1.006	18.465	243.0	300	PH1	18.203	16.034	1.869	18.062	15.958	1.804
7.000	4.783	3.6	150	PH1	18.220	17.450	0.620	18.062	16.108	1.804
1.007	5.536	240.7	300	PH1	18.062	15.958	1.804	17.995	15.935	1.760
1.008	5.499	239.1	300	PH1	17.995	15.935	1.760	17.935	15.912	1.723
8.000	4.342	5.5	150	PH1	18.104	16.850	1.104	17.935	16.062	1.723
1.009	29.749	107.2	300	PH1	17.935	15.912	1.723	17.636	15.635	1.701
9.000	13.650	58.6	150	PH1	17.589	16.200	1.239	17.317	15.967	1.200
10.000	8.702	65.4	150	PH1	17.398	16.100	1.148	17.317	15.967	1.200
9.001	23.388	169.5	225	PH1	17.317	15.892	1.200	17.561	15.754	1.582
11.000	6.399	19.9	150	PH1	17.646	16.150	1.346	17.561	15.829	1.582
9.002	7.321	166.4	300	PH1	17.561	15.679	1.582	17.636	15.635	1.701
12.000	5.605	5.0	150	PH1	17.771	16.900	0.721	17.636	15.785	1.701
1.010	28.649	321.9	375	PH1	17.636	15.560	1.701	17.133	15.471	1.287

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	600	Manhole	Adoptable	2	1200	Manhole	Adoptable
1.001	2	1200	Manhole	Adoptable	3	1200	Manhole	Adoptable
2.000	3A	600	Manhole	Adoptable	3	1200	Manhole	Adoptable
1.002	3	1200	Manhole	Adoptable	5	1200	Manhole	Adoptable
3.000	4	1200	Manhole	Adoptable	5	1200	Manhole	Adoptable
1.003	5	1200	Manhole	Adoptable	7	1200	Manhole	Adoptable
4.000	6	600	Manhole	Adoptable	7	1200	Manhole	Adoptable
1.004	7	1200	Manhole	Adoptable	9	1200	Manhole	Adoptable
5.000	8	600	Manhole	Adoptable	9	1200	Manhole	Adoptable
1.005	9	1200	Manhole	Adoptable	11	1200	Manhole	Adoptable
6.000	10	600	Manhole	Adoptable	11	1200	Manhole	Adoptable
1.006	11	1200	Manhole	Adoptable	13	1200	Manhole	Adoptable
7.000	12	600	Manhole	Adoptable	13	1200	Manhole	Adoptable
1.007	13	1200	Manhole	Adoptable	14	1200	Manhole	Adoptable
1.008	14	1200	Manhole	Adoptable	16	1200	Manhole	Adoptable
8.000	15	600	Manhole	Adoptable	16	1200	Manhole	Adoptable
1.009	16	1200	Manhole	Adoptable	22	1350	Manhole	Adoptable
9.000	17	600	Manhole	Adoptable	19	1200	Manhole	Adoptable
10.000	18	600	Manhole	Adoptable	19	1200	Manhole	Adoptable
9.001	19	1200	Manhole	Adoptable	20	1200	Manhole	Adoptable
11.000	21A	600	Manhole	Adoptable	20	1200	Manhole	Adoptable
9.002	20	1200	Manhole	Adoptable	22	1350	Manhole	Adoptable
12.000	21	600	Manhole	Adoptable	22	1350	Manhole	Adoptable
1.010	22	1350	Manhole	Adoptable	23	1350	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.011	19.203	53.0	375	PH1	17.133	15.471	1.287	16.997	15.109	1.513
1.012	1.000	0.0	375	PH1	16.997	15.000	1.622	16.997	15.000	1.622
13.000	9.140	32.3	225	PH1	17.923	16.550	1.148	17.692	16.267	1.200
14.000	7.160	66.3	150	PH1	17.760	16.450	1.160	17.692	16.342	1.200
13.001	28.348	167.7	300	PH1	17.692	16.192	1.200	17.975	16.023	1.652
15.000	6.909	67.1	150	PH1	17.714	16.425	1.139	17.672	16.322	1.200
16.000	5.233	9.9	150	PH1	17.785	16.850	0.785	17.672	16.322	1.200
15.001	14.990	100.6	225	PH1	17.672	16.247	1.200	17.975	16.098	1.652
13.002	10.371	241.2	300	PH1	17.975	16.023	1.652	18.077	15.980	1.797
17.000	8.692	44.4	150	PH1	18.380	16.950	1.280	18.292	16.754	1.388
17.001	7.746	12.4	150	PH1	18.292	16.754	1.388	18.077	16.130	1.797
18.000	6.119	6.7	150	PH1	18.168	17.050	0.968	18.077	16.130	1.797
13.003	26.418	244.6	300	PH1	18.077	15.980	1.797	17.945	15.872	1.773
19.000	7.798	13.2	150	PH1	18.193	16.613	1.430	17.945	16.022	1.773
13.004	17.263	243.1	300	PH1	17.945	15.872	1.773	17.763	15.801	1.662
20.000	6.261	9.6	150	PH1	17.905	16.600	1.155	17.763	15.951	1.662
13.005	11.191	319.7	375	PH1	17.763	15.726	1.662	17.651	15.691	1.585
21.000	6.510	13.5	150	PH1	17.758	16.400	1.208	17.651	15.916	1.585
13.006	11.079	316.6	375	PH1	17.651	15.691	1.585	17.526	15.656	1.495
22.000	12.458	12.9	150	PH1	17.795	16.850	0.795	17.526	15.881	1.495
13.007	20.743	160.8	375	PH1	17.526	15.656	1.495	17.286	15.527	1.384
23.000	7.997	7.0	150	PH1	17.516	16.900	0.466	17.286	15.752	1.384
24.000	4.744	98.8	150	PH1	17.388	15.800	1.438	17.286	15.752	1.384
13.008	8.626	320.0	375	PH1	17.286	15.527	1.384	17.200	15.500	1.325
25.000	4.819	12.8	150	PH1	17.297	16.100	1.047	17.200	15.725	1.325
13.009	10.601	320.0	375	PH1	17.200	15.500	1.325	17.097	15.467	1.255
26.000	5.646	11.1	150	PH1	17.249	16.200	0.899	17.097	15.692	1.255
27.000	4.566	22.0	150	PH1	17.192	15.900	1.142	17.097	15.692	1.255
13.010	17.038	162.3	375	PH1	17.097	15.467	1.255	16.937	15.362	1.200
28.000	20.031	55.2	150	PH1	16.997	15.950	0.897	16.937	15.587	1.200
29.000	7.920	19.2	150	PH1	17.081	16.000	0.931	16.937	15.587	1.200
13.011	5.768	320.0	375	PH1	16.937	15.362	1.200	16.865	15.344	1.146
30.000	4.586	7.3	150	PH1	16.999	16.200	0.649	16.865	15.569	1.146
13.012	21.491	320.8	375	PH1	16.865	15.344	1.146	16.600	15.277	0.948
31.000	11.520	16.5	150	PH1	17.008	16.200	0.658	16.600	15.502	0.948

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.011	23	1350	Manhole	Adoptable	24		Junction	
1.012	24		Junction		63		Junction	
13.000	25	1200	Manhole	Adoptable	27	1200	Manhole	Adoptable
14.000	26	600	Manhole	Adoptable	27	1200	Manhole	Adoptable
13.001	27	1200	Manhole	Adoptable	31	1200	Manhole	Adoptable
15.000	28	600	Manhole	Adoptable	30	1200	Manhole	Adoptable
16.000	29	600	Manhole	Adoptable	30	1200	Manhole	Adoptable
15.001	30	1200	Manhole	Adoptable	31	1200	Manhole	Adoptable
13.002	31	1200	Manhole	Adoptable	35	1200	Manhole	Adoptable
17.000	32	600	Manhole	Adoptable	33	1200	Manhole	Adoptable
17.001	33	1200	Manhole	Adoptable	35	1200	Manhole	Adoptable
18.000	34	600	Manhole	Adoptable	35	1200	Manhole	Adoptable
13.003	35	1200	Manhole	Adoptable	37	1200	Manhole	Adoptable
19.000	36	600	Manhole	Adoptable	37	1200	Manhole	Adoptable
13.004	37	1200	Manhole	Adoptable	39	1350	Manhole	Adoptable
20.000	38	600	Manhole	Adoptable	39	1350	Manhole	Adoptable
13.005	39	1350	Manhole	Adoptable	41	1350	Manhole	Adoptable
21.000	40	600	Manhole	Adoptable	41	1350	Manhole	Adoptable
13.006	41	1350	Manhole	Adoptable	43	1350	Manhole	Adoptable
22.000	42	600	Manhole	Adoptable	43	1350	Manhole	Adoptable
13.007	43	1350	Manhole	Adoptable	46	1350	Manhole	Adoptable
23.000	44	600	Manhole	Adoptable	46	1350	Manhole	Adoptable
24.000	45	600	Manhole	Adoptable	46	1350	Manhole	Adoptable
13.008	46	1350	Manhole	Adoptable	48		Junction	
25.000	47	600	Manhole	Adoptable	48		Junction	
13.009	48		Junction		51	1350	Manhole	Adoptable
26.000	49	600	Manhole	Adoptable	51	1350	Manhole	Adoptable
27.000	50	600	Manhole	Adoptable	51	1350	Manhole	Adoptable
13.010	51	1350	Manhole	Adoptable	54	1350	Manhole	Adoptable
28.000	52	600	Manhole	Adoptable	54	1350	Manhole	Adoptable
29.000	53	600	Manhole	Adoptable	54	1350	Manhole	Adoptable
13.011	54	1350	Manhole	Adoptable	56	1350	Manhole	Adoptable
30.000	55	600	Manhole	Adoptable	56	1350	Manhole	Adoptable
13.012	56	1350	Manhole	Adoptable	58	1350	Manhole	Adoptable
31.000	57	600	Manhole	Adoptable	58	1350	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
13.013	21.812	320.8	375	PH1	16.600	15.277	0.948	16.956	15.209	1.372
32.000	10.695	41.0	150	PH1	17.116	15.695	1.271	16.956	15.434	1.372
13.014	17.216	320.0	375	PH1	16.956	15.209	1.372	17.043	15.155	1.513
13.015	14.721	320.0	375	PH1	17.043	15.155	1.513	17.000	15.109	1.516
13.016	1.000	0.0	375	PH1	17.000	15.000	1.625	16.997	15.000	1.622
1.013	1.000	0.0	450	PH1	16.997	15.000	1.547	16.997	15.000	1.547

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
13.013	58	1350	Manhole	Adoptable	60	1350	Manhole	Adoptable
32.000	59	1200	Manhole	Adoptable	60	1350	Manhole	Adoptable
13.014	60	1350	Manhole	Adoptable	61	1350	Manhole	Adoptable
13.015	61	1350	Manhole	Adoptable	62		Junction	
13.016	62		Junction		63		Junction	
1.013	63		Junction		63_OUT		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
1	507604.297	104590.960	18.783	1.533	600		0	1.000	17.250	150
2	507609.104	104590.317	18.705	1.579	1200		1	1.000	17.201	150
							0	1.001	17.126	225
3A	507600.356	104546.980	18.416	1.116	600		0	2.000	17.300	100
3	507604.546	104544.871	18.286	1.429	1200		1	2.000	16.982	100
							2	1.001	16.857	225
							0	1.002	16.857	225
4	507598.499	104519.863	18.220	1.220	1200		0	3.000	17.000	150
5	507604.600	104519.441	18.032	1.642	1200		1	3.000	16.540	150
							2	1.002	16.465	225
							0	1.003	16.390	300
6	507592.416	104481.388	17.985	1.582	600		0	4.000	16.403	225
7	507604.682	104480.526	17.794	1.563	1200		1	4.000	16.306	225
							2	1.003	16.231	300
							0	1.004	16.231	300
8	507603.259	104454.637	18.212	1.012	600		0	5.000	17.200	150
9	507607.955	104454.471	18.054	1.931	1200		1	5.000	16.273	150
							2	1.004	16.123	300
							0	1.005	16.123	300
10	507605.544	104431.716	18.376	1.326	600		0	6.000	17.050	150
11	507612.443	104433.169	18.203	2.169	1200		1	6.000	16.184	150
							2	1.005	16.034	300
							0	1.006	16.034	300
12	507611.772	104416.783	18.220	0.770	600		0	7.000	17.450	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
13	507616.249	104415.101	18.062	2.104	1200		1 7.000 2 1.006	16.108 15.958	150 300
14	507614.301	104409.919	17.995	2.060	1200		1 1.007 0 1.008	15.958 15.935	300 300
15	507609.485	104410.317	18.104	1.254	600		0 8.000	16.850	150
16	507610.376	104406.067	17.935	2.023	1200		1 8.000 2 1.008 0 1.009	16.062 15.912 15.912	150 300 300
17	507554.582	104428.791	17.589	1.389	600		0 9.000	16.200	150
18	507550.025	104413.026	17.398	1.298	600		0 10.000	16.100	150
19	507558.318	104415.662	17.317	1.425	1200		1 10.000 2 9.000 0 9.001	15.967 15.967 15.892	150 150 225
21A	507571.233	104393.677	17.646	1.496	600		0 11.000	16.150	150
20	507574.752	104399.021	17.561	1.882	1200		1 11.000 2 9.001 0 9.002	15.829 15.754 15.679	150 225 300
21	507581.516	104403.042	17.771	0.871	600		0 12.000	16.900	150
22	507581.902	104397.450	17.636	2.076	1350		1 12.000 2 9.002 3 1.009 0 1.010	15.785 15.635 15.635 15.560	150 300 300 375
23	507579.084	104368.940	17.133	1.662	1350		1 1.010 0 1.011	15.471 15.471	375 375
24	507593.568	104356.332	16.997	1.997			1 1.011 0 1.012	15.109 15.000	375 375
25	507518.841	104520.178	17.923	1.373	1200		0 13.000	16.550	225
26	507502.741	104517.634	17.760	1.310	600		0 14.000	16.450	150
27	507509.813	104518.751	17.692	1.500	1200		1 14.000 2 13.000 0 13.001	16.342 16.267 16.192	150 225 300
28	507496.093	104488.048	17.714	1.289	600		0 15.000	16.425	150
29	507498.786	104499.168	17.785	0.935	600		0 16.000	16.850	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
30	507499.603	104493.999	17.672	1.425	1200		1 16.000 2 15.000 0 15.001	16.322 16.322 16.247	150 150 225
31	507514.237	104490.750	17.975	1.952	1200		1 15.001 2 13.001 0 13.002	16.098 16.023 16.023	225 300 300
32	507530.251	104478.473	18.380	1.430	600		0 17.000	16.950	150
33	507521.618	104479.484	18.292	1.538	1200		1 17.000	16.754	150
34	507507.885	104481.373	18.168	1.118	600		0 17.001	16.754	150
35	507513.924	104480.384	18.077	2.097	1200		1 18.000 2 17.001 3 13.002 0 13.003	17.050 16.130 15.980 15.980	150 150 300 300
36	507517.347	104455.603	18.193	1.580	600		0 19.000	16.613	150
37	507509.656	104454.313	17.945	2.073	1200		1 19.000 2 13.003 0 13.004	16.022 15.872 15.872	150 300 300
38	507506.498	104439.028	17.905	1.305	600		0 20.000	16.600	150
39	507512.512	104437.288	17.763	2.037	1350		1 20.000 2 13.004 0 13.005	15.951 15.801 15.726	150 300 375
40	507506.085	104426.660	17.758	1.358	600		0 21.000	16.400	150
41	507512.571	104426.097	17.651	1.960	1350		1 21.000 2 13.005 0 13.006	15.916 15.691 15.691	150 375 375
42	507523.799	104426.598	17.795	0.945	600		0 22.000	16.850	150
43	507517.200	104416.031	17.526	1.870	1350		1 22.000 2 13.006 0 13.007	15.881 15.656 15.656	150 375 375
44	507520.072	104401.675	17.516	0.616	600		0 23.000	16.900	150
45	507510.412	104395.940	17.388	1.588	600		0 24.000	15.800	150
46	507515.124	104395.392	17.286	1.759	1350		1 24.000 2 23.000 3 13.007 0 13.008	15.752 15.752 15.527 15.527	150 150 375 375
47	507518.945	104386.749	17.297	1.197	600		0 25.000	16.100	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
48	507514.127	104386.824	17.200	1.700			1 25.000 2 13.008 0 13.009	15.725 15.500 15.500	150 375 375
49	507518.152	104378.370	17.249	1.049	600		0 26.000	16.200	150
50	507508.339	104376.130	17.192	1.292	600		0 27.000	15.900	150
51	507512.902	104376.294	17.097	1.630	1350		1 27.000 2 26.000 3 13.009 0 13.010	15.692 15.692 15.467 15.467	150 150 375 375
52	507496.195	104357.148	16.997	1.047	600		0 28.000	15.950	150
53	507509.292	104363.633	17.081	1.081	600		0 29.000	16.000	150
54	507516.081	104359.555	16.937	1.575	1350		1 29.000 2 28.000 3 13.010 0 13.011	15.587 15.587 15.362 15.362	150 150 375 375
55	507521.523	104359.381	16.999	0.799	600		0 30.000	16.200	150
56	507519.788	104355.136	16.865	1.521	1350		1 30.000 2 13.011 0 13.012	15.569 15.344 15.344	150 375 375
57	507532.542	104353.640	17.008	0.808	600		0 31.000	16.200	150
58	507537.777	104343.378	16.600	1.323	1350		1 31.000 2 13.012 0 13.013	15.502 15.277 15.277	150 375 375
59	507559.503	104354.247	17.116	1.421	1200		0 32.000	15.695	150
60	507559.588	104343.552	16.956	1.747	1350		1 32.000 2 13.013 0 13.014	15.434 15.209 15.209	150 375 375
61	507576.803	104343.689	17.043	1.888	1350		1 13.014	15.155	375
62	507591.411	104345.507	17.000	2.000			1 13.015	15.109	375
63	507598.585	104350.517	16.997	1.997			1 13.016 2 1.012 0 1.013	15.000 15.000 15.000	375 375 450
63_OUT	507600.120	104347.686	16.997	1.997			1 1.013	15.000	450

Simulation Settings

Rainfall Methodology	FEH-13	Drain Down Time (mins)	1440
Summer CV	0.750	Additional Storage (m³/ha)	20.0
Winter CV	0.840	Check Discharge Rate(s)	x
Analysis Speed	Detailed	Check Discharge Volume	x
Skip Steady State	✓		

Storm Durations

60	180	360	600	960	2160	4320	7200	10080
120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	10	0	0
100	40	0	0

Node 63 OUT Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	15.000
Safety Factor	5.0	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	316.0	0.0	0.700	554.6	0.0	1.400	935.2	0.0	2.001	0.0	0.0
0.100	347.1	0.0	0.800	592.7	0.0	1.500	999.5	0.0	2.200	0.0	0.0
0.200	379.2	0.0	0.900	644.7	0.0	1.600	1065.8	0.0	2.300	0.0	0.0
0.300	412.3	0.0	1.000	698.7	0.0	1.700	1134.1	0.0	2.400	0.0	0.0
0.400	446.4	0.0	1.100	754.7	0.0	1.800	1204.5	0.0	2.500	0.0	0.0
0.500	481.5	0.0	1.200	812.8	0.0	1.900	1277.0	0.0			
0.600	517.6	0.0	1.300	873.0	0.0	2.000	1351.9	0.0			

Node 63 OUT Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.69480	Porosity	0.30
Side Inf Coefficient (m/hr)	0.69480	Invert Level (m)	13.900
Safety Factor	5.0	Time to half empty (mins)	12

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	784.5	784.5	0.800	784.5	885.3	0.801	0.0	885.3

Node 63 OUT Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	14.700
Safety Factor	5.0	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	316.0	0.0	0.300	316.0	0.0	0.301	0.0	0.0

Results for 10 year +10% CC Critical Storm Duration. Lowest mass balance: 98.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
60 minute summer	1	33	17.316	0.066	6.1	0.0438	0.0000	OK
60 minute summer	2	33	17.205	0.079	10.3	0.1099	0.0000	OK
60 minute summer	3A	33	17.339	0.039	4.4	0.0256	0.0000	OK
60 minute summer	3	33	16.932	0.075	14.7	0.0845	0.0000	OK
60 minute summer	4	33	17.031	0.031	4.2	0.0454	0.0000	OK
60 minute summer	5	33	16.521	0.131	28.7	0.2226	0.0000	OK
60 minute summer	6	33	16.448	0.045	4.0	0.0233	0.0000	OK
60 minute summer	7	34	16.418	0.187	44.5	0.3480	0.0000	OK
60 minute summer	8	33	17.217	0.017	2.1	0.0081	0.0000	OK
60 minute summer	9	34	16.355	0.232	55.3	0.3754	0.0000	OK
60 minute summer	10	33	17.082	0.032	6.1	0.0228	0.0000	OK
60 minute summer	11	34	16.289	0.254	60.8	0.2874	0.0000	OK
60 minute summer	12	33	17.455	0.005	0.2	0.0016	0.0000	OK
60 minute summer	13	34	16.219	0.260	65.2	0.3516	0.0000	OK
60 minute summer	14	34	16.163	0.227	65.0	0.2572	0.0000	OK
60 minute summer	15	32	16.871	0.021	2.9	0.0106	0.0000	OK
60 minute summer	16	34	16.097	0.184	67.6	0.2085	0.0000	OK
60 minute summer	17	33	16.293	0.093	14.7	0.1197	0.0000	OK
60 minute summer	18	33	16.168	0.068	8.2	0.0597	0.0000	OK
60 minute summer	19	33	16.053	0.161	31.7	0.2768	0.0000	OK
60 minute summer	21A	33	16.188	0.038	5.0	0.0229	0.0000	OK
60 minute summer	20	34	15.857	0.178	36.6	0.2012	0.0000	OK
60 minute summer	21	32	16.930	0.030	6.5	0.0298	0.0000	OK
60 minute summer	22	34	15.833	0.273	109.6	0.3903	0.0000	OK
60 minute summer	23	34	15.644	0.173	109.5	0.2471	0.0000	OK
60 minute summer	24	35	15.355	0.355	109.2	0.0000	0.0000	OK
60 minute summer	25	33	16.594	0.044	7.1	0.0719	0.0000	OK
60 minute summer	26	33	16.519	0.069	8.2	0.0607	0.0000	OK
60 minute summer	27	33	16.302	0.110	25.2	0.1938	0.0000	OK
60 minute summer	28	35	16.439	0.014	0.4	0.0045	0.0000	OK
60 minute summer	29	34	16.859	0.009	0.4	0.0030	0.0000	OK
60 minute summer	30	33	16.292	0.045	4.6	0.0624	0.0000	OK
60 minute summer	31	33	16.200	0.177	29.8	0.2006	0.0000	OK
60 minute summer	32	33	16.994	0.044	4.6	0.0260	0.0000	OK
60 minute summer	33	32	16.797	0.043	8.6	0.0594	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)
60 minute summer	1	1.000	2	6.1	0.864	0.342	0.0342
60 minute summer	2	1.001	3	10.3	0.858	0.259	0.5483
60 minute summer	3A	2.000	3	4.4	1.643	0.277	0.0126
60 minute summer	3	1.002	5	14.6	1.297	0.225	0.2858
60 minute summer	4	3.000	5	4.2	1.646	0.086	0.0156
60 minute summer	5	1.003	7	28.5	0.760	0.403	1.4674
60 minute summer	6	4.000	7	4.0	0.546	0.087	0.1544
60 minute summer	7	1.004	9	43.7	0.845	0.616	1.3739
60 minute summer	8	5.000	9	2.1	1.715	0.026	0.0256
60 minute summer	9	1.005	11	54.9	0.908	0.777	1.3290
60 minute summer	10	6.000	11	6.1	2.000	0.097	0.0552
60 minute summer	11	1.006	13	60.4	0.940	0.851	1.1870
60 minute summer	12	7.000	13	0.2	0.878	0.002	0.0337
60 minute summer	13	1.007	14	65.0	1.059	0.911	0.3384
60 minute summer	14	1.008	16	64.8	1.262	0.906	0.2823
60 minute summer	15	8.000	16	2.9	2.019	0.038	0.0095
60 minute summer	16	1.009	22	67.6	1.478	0.631	1.4080
60 minute summer	17	9.000	19	14.7	1.341	0.632	0.1496
60 minute summer	18	10.000	19	8.2	1.016	0.373	0.0789
60 minute summer	19	9.001	20	31.6	1.085	0.795	0.6817
60 minute summer	21A	11.000	20	5.0	1.491	0.125	0.0215
60 minute summer	20	9.002	22	36.5	0.904	0.424	0.3396
60 minute summer	21	12.000	22	6.5	2.596	0.082	0.0199
60 minute summer	22	1.010	23	109.5	1.606	0.987	1.9395
60 minute summer	23	1.011	24	109.2	1.729	0.397	1.2105
60 minute summer	24	1.012	63	108.9	1.011	0.986	0.1078
60 minute summer	25	13.000	27	7.1	1.335	0.077	0.0486
60 minute summer	26	14.000	27	8.2	1.092	0.375	0.0538
60 minute summer	27	13.001	31	25.2	0.778	0.294	0.9469
60 minute summer	28	15.000	30	0.4	0.471	0.018	0.0059
60 minute summer	29	16.000	30	0.4	0.916	0.007	0.0023
60 minute summer	30	15.001	31	4.6	0.658	0.089	0.1739
60 minute summer	31	13.002	35	29.4	0.627	0.413	0.4890
60 minute summer	32	17.000	33	4.6	1.101	0.172	0.0368
60 minute summer	33	17.001	35	8.6	2.022	0.170	0.0376

Results for 10 year +10% CC Critical Storm Duration. Lowest mass balance: 98.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	34	33	17.081	0.031	6.3	0.0250	0.0000	OK
60 minute summer	35	33	16.184	0.204	51.0	0.2927	0.0000	OK
60 minute summer	36	33	16.626	0.013	0.8	0.0045	0.0000	OK
60 minute summer	37	34	16.084	0.212	55.1	0.2760	0.0000	OK
60 minute summer	38	33	16.629	0.029	4.2	0.0169	0.0000	OK
60 minute summer	39	34	15.973	0.247	62.6	0.3945	0.0000	OK
60 minute summer	40	33	16.431	0.031	4.2	0.0180	0.0000	OK
60 minute summer	41	35	15.945	0.254	66.5	0.3635	0.0000	OK
60 minute summer	42	33	16.868	0.018	1.5	0.0078	0.0000	OK
60 minute summer	43	35	15.916	0.260	87.6	0.6531	0.0000	OK
60 minute summer	44	33	16.912	0.012	0.8	0.0048	0.0000	OK
60 minute summer	45	35	15.891	0.091	8.2	0.0708	0.0000	OK
60 minute summer	46	35	15.886	0.359	94.8	0.5138	0.0000	OK
60 minute summer	47	33	16.121	0.021	2.1	0.0095	0.0000	OK
60 minute summer	48	35	15.864	0.364	93.9	0.0000	0.0000	OK
60 minute summer	49	31	16.220	0.020	2.1	0.0096	0.0000	OK
60 minute summer	50	32	15.947	0.047	7.1	0.0383	0.0000	OK
60 minute summer	51	35	15.837	0.370	101.0	0.5296	0.0000	OK
60 minute summer	52	33	15.975	0.025	1.5	0.0106	0.0000	OK
60 minute summer	53	1	16.000	0.000	0.0	0.0000	0.0000	OK
60 minute summer	54	35	15.777	0.415	104.4	0.7304	0.0000	SURCHARGED
60 minute summer	55	34	16.206	0.006	0.2	0.0019	0.0000	OK
60 minute summer	56	35	15.738	0.394	110.2	0.7244	0.0000	SURCHARGED
60 minute summer	57	33	16.220	0.020	1.7	0.0097	0.0000	OK
60 minute summer	58	35	15.650	0.373	111.6	0.5336	0.0000	OK
60 minute summer	59	32	15.772	0.077	13.2	0.1548	0.0000	OK
60 minute summer	60	35	15.565	0.356	123.1	0.5090	0.0000	OK
60 minute summer	61	35	15.458	0.303	123.0	0.4335	0.0000	OK
60 minute summer	62	35	15.356	0.356	122.9	0.0000	0.0000	OK
60 minute summer	63	35	15.352	0.352	242.0	0.2012	0.0000	OK
60 minute winter	63_OUT	61	14.935	-0.065	209.1	210.7048	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
60 minute summer	34	18.000	35	6.3	2.258	0.091	0.0252
60 minute summer	35	13.003	37	50.5	0.976	0.715	1.3724
60 minute summer	36	19.000	37	0.8	0.927	0.016	0.0295
60 minute summer	37	13.004	39	55.2	1.125	0.778	0.8458
60 minute summer	38	20.000	39	4.2	1.849	0.073	0.0142
60 minute summer	39	13.005	41	62.5	0.819	0.562	0.8749
60 minute summer	40	21.000	41	4.2	1.642	0.086	0.0167
60 minute summer	41	13.006	43	66.1	0.878	0.591	0.8918
60 minute summer	42	22.000	43	1.5	1.254	0.030	0.0258
60 minute summer	43	13.007	46	85.9	1.021	0.546	1.9723
60 minute summer	44	23.000	46	0.8	1.221	0.012	0.0687
60 minute summer	45	24.000	46	8.1	0.925	0.455	0.0661
60 minute summer	46	13.008	48	91.8	0.972	0.825	0.9401
60 minute summer	47	25.000	48	2.1	1.311	0.042	0.0443
60 minute summer	48	13.009	51	91.8	0.999	0.825	1.1625
60 minute summer	49	26.000	51	2.1	1.416	0.039	0.0529
60 minute summer	50	27.000	51	7.2	1.527	0.188	0.0486
60 minute summer	51	13.010	54	98.7	0.953	0.630	1.8765
60 minute summer	52	28.000	54	1.5	0.667	0.063	0.1959
60 minute summer	53	29.000	54	0.0	0.000	0.000	0.0697
60 minute summer	54	13.011	56	104.5	0.947	0.939	0.6362
60 minute summer	55	30.000	56	0.2	0.795	0.003	0.0409
60 minute summer	56	13.012	58	110.2	0.999	0.992	2.3690
60 minute summer	57	31.000	58	1.7	1.059	0.039	0.1083
60 minute summer	58	13.013	60	111.6	1.023	1.004	2.3808
60 minute summer	59	32.000	60	13.2	1.460	0.475	0.1307
60 minute summer	60	13.014	61	123.0	1.200	1.106	1.7520
60 minute summer	61	13.015	62	122.9	1.389	1.105	1.2988
60 minute summer	62	13.016	63	123.0	1.144	1.113	0.1079
60 minute summer	63	1.013	63_OUT	242.1	1.833	1.522	0.1321
60 minute winter	63_OUT	Infiltration		34.2			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	1	36	17.642	0.392	13.3	0.2589	0.0000	SURCHARGED
60 minute summer	2	36	17.618	0.492	22.4	0.6803	0.0000	SURCHARGED
60 minute summer	3A	36	17.655	0.355	9.6	0.2337	0.0000	SURCHARGED
60 minute summer	3	36	17.562	0.705	32.3	0.7979	0.0000	SURCHARGED
60 minute summer	4	36	17.509	0.509	9.1	0.7421	0.0000	SURCHARGED
60 minute summer	5	36	17.494	1.104	55.0	1.8804	0.0000	SURCHARGED
60 minute summer	6	36	17.409	1.006	8.7	0.5261	0.0000	SURCHARGED
60 minute summer	7	36	17.407	1.175	74.6	2.1870	0.0000	SURCHARGED
60 minute summer	8	36	17.257	0.057	4.6	0.0273	0.0000	OK
60 minute summer	9	36	17.257	1.134	94.5	1.8343	0.0000	SURCHARGED
60 minute summer	10	34	17.109	0.059	13.3	0.0427	0.0000	OK
60 minute summer	11	36	17.048	1.014	104.2	1.1466	0.0000	SURCHARGED
60 minute summer	12	33	17.458	0.008	0.5	0.0024	0.0000	OK
60 minute summer	13	35	16.821	0.863	112.8	1.1647	0.0000	SURCHARGED
60 minute summer	14	35	16.697	0.762	113.3	0.8614	0.0000	SURCHARGED
60 minute summer	15	33	16.879	0.029	6.4	0.0148	0.0000	OK
60 minute summer	16	35	16.574	0.661	118.5	0.7480	0.0000	SURCHARGED
60 minute summer	17	34	17.140	0.940	32.0	1.2130	0.0000	SURCHARGED
60 minute summer	18	34	16.752	0.652	17.8	0.5766	0.0000	SURCHARGED
60 minute summer	19	34	16.649	0.757	64.9	1.3014	0.0000	SURCHARGED
60 minute summer	21A	35	16.227	0.076	11.0	0.0462	0.0000	OK
60 minute summer	20	35	16.214	0.535	74.1	0.6046	0.0000	SURCHARGED
60 minute summer	21	33	16.943	0.043	14.2	0.0425	0.0000	OK
60 minute summer	22	35	16.154	0.594	202.2	0.8503	0.0000	SURCHARGED
120 minute winter	23	118	15.757	0.286	116.9	0.4090	0.0000	OK
120 minute winter	24	120	15.757	0.756	117.0	0.0000	0.0000	SURCHARGED
60 minute summer	25	36	17.506	0.956	15.5	1.5543	0.0000	SURCHARGED
60 minute summer	26	36	17.552	1.102	17.8	0.9675	0.0000	FLOOD RISK
60 minute summer	27	36	17.500	1.308	46.7	2.2999	0.0000	FLOOD RISK
60 minute summer	28	37	17.469	1.044	5.8	0.3277	0.0000	FLOOD RISK
60 minute summer	29	37	17.469	0.619	3.4	0.2018	0.0000	SURCHARGED
60 minute summer	30	37	17.468	1.221	15.5	1.6900	0.0000	FLOOD RISK
60 minute summer	31	37	17.463	1.440	45.4	1.6282	0.0000	SURCHARGED
60 minute summer	32	37	17.507	0.557	10.1	0.3287	0.0000	SURCHARGED
60 minute summer	33	37	17.491	0.736	18.9	1.0146	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
60 minute summer	1	1.000	2	13.3	1.033	0.745	0.0854
60 minute summer	2	1.001	3	22.3	1.035	0.561	1.8165
60 minute summer	3A	2.000	3	10.0	1.930	0.627	0.0367
60 minute summer	3	1.002	5	31.8	1.408	0.492	1.0114
60 minute summer	4	3.000	5	8.6	1.854	0.176	0.1077
60 minute summer	5	1.003	7	50.7	0.794	0.717	2.7404
60 minute summer	6	4.000	7	6.9	0.544	0.150	0.4890
60 minute summer	7	1.004	9	74.4	1.057	1.049	1.8492
60 minute summer	8	5.000	9	4.6	1.681	0.058	0.0557
60 minute summer	9	1.005	11	94.2	1.337	1.331	1.5330
60 minute summer	10	6.000	11	13.1	1.996	0.209	0.0849
60 minute summer	11	1.006	13	104.7	1.488	1.476	1.3003
60 minute summer	12	7.000	13	0.5	0.878	0.005	0.0429
60 minute summer	13	1.007	14	113.3	1.610	1.589	0.3898
60 minute summer	14	1.008	16	113.7	1.615	1.590	0.3872
60 minute summer	15	8.000	16	6.4	2.105	0.084	0.0435
60 minute summer	16	1.009	22	119.0	1.690	1.109	2.0949
60 minute summer	17	9.000	19	29.9	1.701	1.287	0.2403
60 minute summer	18	10.000	19	16.5	1.029	0.752	0.1532
60 minute summer	19	9.001	20	64.1	1.611	1.609	0.9302
60 minute summer	21A	11.000	20	11.0	1.540	0.274	0.0852
60 minute summer	20	9.002	22	73.7	1.047	0.857	0.5155
60 minute summer	21	12.000	22	14.2	2.604	0.178	0.0609
60 minute summer	22	1.010	23	202.4	1.920	1.825	2.7987
120 minute winter	23	1.011	24	117.0	1.730	0.425	1.9245
120 minute winter	24	1.012	63	117.0	1.064	1.059	0.1103
60 minute summer	25	13.000	27	13.1	1.400	0.142	0.3635
60 minute summer	26	14.000	27	15.1	1.240	0.692	0.1261
60 minute summer	27	13.001	31	41.0	0.806	0.479	1.9962
60 minute summer	28	15.000	30	-4.9	0.545	-0.225	0.1216
60 minute summer	29	16.000	30	3.7	1.075	0.065	0.0921
60 minute summer	30	15.001	31	12.3	0.648	0.237	0.5962
60 minute summer	31	13.002	35	44.8	0.636	0.628	0.7303
60 minute summer	32	17.000	33	10.2	1.287	0.380	0.1530
60 minute summer	33	17.001	35	16.4	2.028	0.323	0.1364

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	34	36	17.459	0.409	13.7	0.3351	0.0000	SURCHARGED
60 minute summer	35	37	17.435	1.455	76.3	2.0894	0.0000	SURCHARGED
60 minute summer	36	37	17.279	0.666	6.6	0.2219	0.0000	SURCHARGED
60 minute summer	37	37	17.278	1.406	82.2	1.8349	0.0000	SURCHARGED
60 minute summer	38	36	17.159	0.559	9.1	0.3293	0.0000	SURCHARGED
60 minute summer	39	36	17.147	1.421	93.6	2.2705	0.0000	SURCHARGED
60 minute summer	40	36	17.117	0.717	9.1	0.4134	0.0000	SURCHARGED
60 minute summer	41	36	17.104	1.413	100.6	2.0214	0.0000	SURCHARGED
60 minute summer	42	36	17.054	0.204	3.8	0.0879	0.0000	SURCHARGED
60 minute summer	43	36	17.054	1.398	135.3	3.5128	0.0000	SURCHARGED
60 minute summer	44	36	16.919	0.019	1.8	0.0078	0.0000	OK
60 minute summer	45	36	16.962	1.162	17.8	0.8993	0.0000	SURCHARGED
60 minute summer	46	36	16.921	1.394	148.3	1.9953	0.0000	SURCHARGED
60 minute summer	47	36	16.853	0.753	4.6	0.3390	0.0000	SURCHARGED
60 minute summer	48	36	16.851	1.351	150.5	0.0000	0.0000	SURCHARGED
60 minute summer	49	36	16.769	0.569	4.6	0.2691	0.0000	SURCHARGED
60 minute summer	50	36	16.795	0.895	15.5	0.7242	0.0000	SURCHARGED
60 minute summer	51	36	16.766	1.299	164.6	1.8589	0.0000	SURCHARGED
60 minute summer	52	36	16.595	0.645	3.8	0.2684	0.0000	SURCHARGED
60 minute summer	53	36	16.592	0.592	4.2	0.1677	0.0000	SURCHARGED
60 minute summer	54	36	16.592	1.230	175.2	2.1667	0.0000	SURCHARGED
60 minute summer	55	36	16.483	0.283	2.1	0.0872	0.0000	SURCHARGED
60 minute summer	56	36	16.483	1.139	185.0	2.0942	0.0000	SURCHARGED
60 minute summer	57	33	16.229	0.029	3.7	0.0142	0.0000	OK
60 minute summer	58	36	16.223	0.946	187.9	1.3541	0.0000	SURCHARGED
60 minute summer	59	35	16.226	0.531	28.8	1.0706	0.0000	SURCHARGED
60 minute summer	60	36	15.953	0.744	210.2	1.0652	0.0000	SURCHARGED
120 minute winter	61	118	15.758	0.603	136.9	0.8629	0.0000	SURCHARGED
120 minute winter	62	120	15.757	0.757	136.9	0.0000	0.0000	SURCHARGED
120 minute winter	63	120	15.756	0.756	265.9	0.4318	0.0000	SURCHARGED
120 minute winter	63_OUT	120	15.756	0.756	265.9	550.9008	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
60 minute summer	34	18.000	35	13.4	2.257	0.193	0.1077
60 minute summer	35	13.003	37	75.6	1.074	1.069	1.8603
60 minute summer	36	19.000	37	-4.8	0.927	-0.098	0.1373
60 minute summer	37	13.004	39	83.0	1.179	1.170	1.2156
60 minute summer	38	20.000	39	8.7	1.910	0.150	0.1102
60 minute summer	39	13.005	41	94.7	0.859	0.851	1.2343
60 minute summer	40	21.000	41	7.7	1.694	0.158	0.1146
60 minute summer	41	13.006	43	102.2	0.926	0.913	1.2220
60 minute summer	42	22.000	43	4.0	1.286	0.080	0.2193
60 minute summer	43	13.007	46	134.1	1.216	0.852	2.2879
60 minute summer	44	23.000	46	1.8	1.221	0.027	0.0755
60 minute summer	45	24.000	46	15.3	0.949	0.855	0.0835
60 minute summer	46	13.008	48	147.4	1.337	1.325	0.9514
60 minute summer	47	25.000	48	3.6	1.354	0.073	0.0848
60 minute summer	48	13.009	51	151.0	1.369	1.357	1.1693
60 minute summer	49	26.000	51	4.3	1.412	0.080	0.0994
60 minute summer	50	27.000	51	13.2	1.529	0.345	0.0804
60 minute summer	51	13.010	54	164.8	1.495	1.051	1.8792
60 minute summer	52	28.000	54	3.9	0.657	0.161	0.3526
60 minute summer	53	29.000	54	-4.2	-0.254	-0.103	0.1394
60 minute summer	54	13.011	56	175.5	1.592	1.578	0.6362
60 minute summer	55	30.000	56	1.9	0.684	0.029	0.0807
60 minute summer	56	13.012	58	185.6	1.682	1.670	2.3704
60 minute summer	57	31.000	58	3.7	1.059	0.084	0.1154
60 minute summer	58	13.013	60	188.5	1.709	1.696	2.4058
60 minute summer	59	32.000	60	26.4	1.499	0.947	0.1883
60 minute summer	60	13.014	61	210.2	1.906	1.890	1.8989
120 minute winter	61	13.015	62	136.9	1.446	1.230	1.6237
120 minute winter	62	13.016	63	136.9	1.246	1.239	0.1103
120 minute winter	63	1.013	63_OUT	265.9	1.930	1.672	0.1584
120 minute winter	63_OUT	Infiltration		34.2			