

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 1.000
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	0.028	5.00	16.394	1200	507641.336	104723.993	2.444
2	0.040	5.00	16.136	1200	507631.708	104722.863	2.246
3	0.023	5.00	16.554	600	507621.042	104706.180	0.954
4	0.010	5.00	16.143	1200	507618.383	104712.694	2.354
5	0.030	5.00	16.106	600	507601.117	104712.260	1.956
6	0.023	5.00	15.674	1200	507607.826	104720.578	1.855
7	0.043	5.00	16.154	1200	507612.603	104710.334	2.478
8	0.021	5.00	16.597	600	507606.341	104702.119	1.447
9			16.476		507612.139	104701.894	2.836
10	0.026	5.00	17.463	600	507618.488	104673.857	1.613
11	0.030	5.00	17.322	600	507605.362	104674.717	1.772
12			17.271	1200	507610.622	104674.293	3.748
13			17.439	1200	507610.229	104667.156	3.946
14	0.021	5.00	18.778	600	507606.997	104609.263	1.578
15	0.024	5.00	18.706	1200	507612.993	104608.461	1.700
16	0.015	5.00	18.442	600	507609.456	104634.447	2.032
17			18.295	1200	507617.048	104638.785	2.473
18			18.138	1200	507615.079	104645.832	3.048
19	0.008	5.00	18.152	600	507615.304	104652.381	1.302
20	0.010	5.00	17.926	1200	507610.036	104652.569	3.677
21			17.716	1200	507603.830	104656.445	4.274
22	0.037	5.00	17.489	600	507593.727	104652.114	1.939
23	0.010	5.00	17.540	600	507593.818	104662.551	1.290
24	0.019	5.00	17.376	1200	507593.652	104657.914	3.976
25	0.009	5.00	17.420	600	507561.823	104605.338	1.170
26			17.258	1200	507558.115	104607.580	1.395
27	0.022	5.00	17.242	600	507553.083	104617.522	1.162
28	0.004	5.00	17.334	600	507563.811	104612.972	0.734
29	0.038	5.00	17.085	1200	507559.235	104616.772	1.392
30	0.010	5.00	17.120	600	507558.147	104625.492	1.270
31	0.015	5.00	17.018	600	507572.168	104625.966	1.018
32	0.029	5.00	16.765	1200	507568.345	104629.849	1.571
33	0.001	5.00	16.443	600	507562.215	104650.883	1.193
34		5.00	16.582	600	507573.196	104648.968	0.732
35			16.359	1200	507569.096	104651.224	2.349
36			16.393	1350	507568.800	104657.591	3.170
37	0.019	5.00	15.943	600	507552.988	104653.237	1.093
38	0.049	5.00	15.824	1350	507554.450	104657.960	2.646
39	0.002	5.00	15.299	1350	507542.989	104664.309	2.162
40	0.033	5.00	14.877	600	507527.372	104657.442	1.127
41	0.013	5.00	14.698	1350	507528.116	104663.714	1.607
42	0.013	5.00	14.512	600	507516.583	104659.538	1.062
43	0.016	5.00	14.296	1350	507517.351	104666.008	1.575
44			13.500	1350	507517.742	104686.139	1.384
47A	0.004	5.00	18.463	600	507592.907	104580.058	1.063
45	0.009	5.00	18.261	600	507579.819	104582.938	1.111
46	0.035	5.00	18.172	600	507578.259	104571.333	1.462
47	0.047	5.00	18.032	1200	507578.886	104576.022	1.425
48	0.009	5.00	17.917	600	507562.462	104584.225	1.217
49	0.014	5.00	17.630	600	507547.802	104585.894	1.230
50	0.019	5.00	17.718	600	507549.431	104575.429	1.218
51			17.521	1200	507548.711	104580.057	1.393
52	0.014	5.00	17.418	600	507533.400	104584.011	1.268

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
53	0.018	5.00	17.449	600	507534.975	104573.772	1.149
54	0.025	5.00	17.272	1200	507534.199	104577.798	1.500
55	0.019	5.00	17.244	600	507509.502	104567.351	1.044
56	0.017	5.00	16.839	1200	507508.538	104572.850	1.507
57	0.009	5.00	17.643	600	507512.929	104545.716	1.143
58	0.026	5.00	17.536	600	507498.659	104543.462	1.336
59	0.055	5.00	17.432	1200	507503.025	104544.151	1.557
60	0.020	5.00	17.251	600	507495.770	104561.751	1.151
61	0.019	5.00	16.868	1200	507498.735	104571.301	1.627
62	0.020	5.00	16.867	600	507507.385	104580.459	1.737
63	0.021	5.00	16.701	600	507493.753	104577.812	1.351
64	0.017	5.00	16.498	1200	507497.276	104580.534	1.638
65	0.020	5.00	15.762	600	507508.403	104605.000	1.162
66	0.028	5.00	15.647	600	507492.475	104604.134	0.917
67	0.038	5.00	15.518	1350	507497.623	104605.395	1.575
68	0.015	5.00	15.228	600	507504.832	104621.085	1.128
69	0.024	5.00	14.970	600	507489.055	104620.304	1.370
70			14.802	1350	507493.445	104622.452	1.604
71	0.020	5.00	14.781	600	507500.392	104633.289	2.402
72	0.032	5.00	14.309	1350	507487.730	104634.130	2.282
73	0.054	5.00	13.925	1350	507488.700	104651.793	1.953
74	0.077	5.00	13.879	1200	507476.020	104653.812	1.604
75	0.023	5.00	13.561	1350	507481.029	104662.790	1.706
76			13.600	1350	507487.121	104677.527	1.777
77	0.034	5.00	14.752	600	507560.910	104689.140	1.152
78	0.020	5.00	14.678	1200	507554.257	104691.140	1.425
79	0.031	5.00	14.599	600	507558.578	104703.380	1.149
80	0.023	5.00	14.399	1200	507551.152	104701.054	1.540
81			13.500	1200	507533.931	104695.660	1.384
82_IN	0.123	5.00	13.500		507491.700	104690.559	1.700
82			13.500	1350	507488.730	104694.011	1.862
82A			13.055	1200	507487.246	104695.735	1.621
82_OUT			12.000		507478.465	104706.267	1.800

Links

Name	US Node	DS Node	Length (m)	ks n	(mm) / (m)	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	9.694	0.600	13.950	13.890	0.060	161.6	225	5.16	50.0	
1.001	2	4	16.762	0.600	13.890	13.789	0.101	166.0	225	5.43	50.0	
2.000	3	4	7.036	0.600	15.600	13.864	1.736	4.1	150	5.02	50.0	
1.002	4	7	6.243	0.600	13.789	13.751	0.038	164.3	225	5.54	50.0	
3.000	5	7	11.646	0.600	14.150	13.826	0.324	35.9	150	5.12	50.0	
4.000	6	7	11.303	0.600	13.819	13.751	0.068	166.2	225	5.19	50.0	
1.003	7	9	8.453	0.600	13.676	13.640	0.036	234.8	300	5.67	50.0	
5.000	8	9	5.802	0.600	15.150	13.790	1.360	4.3	150	5.02	50.0	
1.004	9	12	27.643	0.600	13.640	13.523	0.117	236.3	300	6.13	50.0	
6.000	10	12	7.878	0.600	15.850	13.673	2.177	3.6	150	5.02	50.0	
7.000	11	12	5.277	0.600	15.550	13.673	1.877	2.8	150	5.01	50.0	
1.005	12	13	7.148	0.600	13.523	13.493	0.030	238.3	300	6.24	50.0	
1.006	13	21	12.477	0.600	13.523	13.472	0.051	244.6	300	6.45	50.0	
8.000	14	15	6.049	0.600	17.200	17.103	0.097	62.4	150	5.08	50.0	
8.001	15	17	30.594	0.600	17.006	15.822	1.184	25.8	225	5.28	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)
1.000	1.026	40.8	5.1	2.219	2.021	0.028	0.0
1.001	1.012	40.2	12.3	2.021	2.129	0.068	0.0
2.000	5.041	89.1	4.2	0.804	2.129	0.023	0.0
1.002	1.017	40.4	18.3	2.129	2.178	0.101	0.0
3.000	1.684	29.8	5.4	1.806	2.178	0.030	0.0
4.000	1.011	40.2	4.2	1.630	2.178	0.023	0.0
1.003	1.022	72.2	35.6	2.178	2.536	0.197	0.0
5.000	4.913	86.8	3.8	1.297	2.536	0.021	0.0
1.004	1.018	72.0	39.4	2.536	3.448	0.218	0.0
6.000	5.335	94.3	4.7	1.463	3.448	0.026	0.0
7.000	6.055	107.0	5.4	1.622	3.448	0.030	0.0
1.005	1.014	71.7	49.5	3.448	3.646	0.274	0.0
1.006	1.001	70.7	49.5	3.616	3.944	0.274	0.0
8.000	1.275	22.5	3.8	1.428	1.453	0.021	0.0
8.001	2.584	102.7	8.1	1.475	2.248	0.045	0.0

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)
9.000	16	17	8.744	0.600	16.410	15.897	0.513	17.0	150	5.06	50.0
8.002	17	18	7.317	0.600	15.822	15.090	0.732	10.0	225	5.31	50.0
8.003	18	20	8.415	0.600	15.090	14.249	0.841	10.0	225	5.34	50.0
10.000	19	20	5.271	0.600	16.850	14.324	2.526	2.1	150	5.01	50.0
8.004	20	21	7.317	0.600	14.249	13.517	0.732	10.0	225	5.37	50.0
1.007	21	24	10.283	0.600	13.442	13.400	0.042	244.8	300	6.62	50.0
11.000	22	24	5.800	0.600	15.550	13.550	2.000	2.9	150	5.02	50.0
12.000	23	24	4.640	0.600	16.250	13.550	2.700	1.7	150	5.01	50.0
1.008	24	36	24.854	0.600	13.400	13.297	0.103	241.3	300	7.03	50.0
13.000	25	26	4.333	0.600	16.250	15.938	0.312	13.9	150	5.03	50.0
13.001	26	29	9.260	0.600	15.863	15.693	0.170	54.5	225	5.11	50.0
14.000	27	29	6.198	0.600	16.080	15.768	0.312	19.9	150	5.05	50.0
15.000	28	29	5.948	0.600	16.600	15.768	0.832	7.1	150	5.03	50.0
13.002	29	32	15.937	0.600	15.693	15.194	0.499	31.9	225	5.23	50.0
16.000	30	32	11.090	0.600	15.850	15.269	0.581	19.1	150	5.08	50.0
17.000	31	32	5.449	0.600	16.000	15.269	0.731	7.5	150	5.02	50.0
13.003	32	35	21.388	0.600	15.194	14.010	1.184	18.1	225	5.34	50.0
18.000	33	35	6.889	0.600	15.250	14.085	1.165	5.9	150	5.03	50.0
19.000	34	35	4.680	0.600	15.850	14.085	1.765	2.7	150	5.01	50.0
13.004	35	36	6.374	0.600	14.010	13.373	0.637	10.0	225	5.37	50.0
1.009	36	38	14.355	0.600	13.223	13.178	0.045	319.0	375	7.27	50.0
20.000	37	38	4.944	0.600	14.850	13.403	1.447	3.4	150	5.02	50.0
1.010	38	39	13.102	0.600	13.178	13.137	0.041	319.6	375	7.49	50.0
1.011	39	41	14.885	0.600	13.137	13.091	0.046	323.6	375	7.74	50.0
21.000	40	41	6.316	0.600	13.750	13.316	0.434	14.6	150	5.04	50.0
1.012	41	43	11.007	0.600	13.091	12.722	0.369	29.8	375	7.79	50.0
22.000	42	43	6.515	0.600	13.450	12.946	0.504	12.9	150	5.04	50.0
116	43	44	20.135	0.600	12.721	12.116	0.605	33.3	375	7.90	50.0
23.000	47A	47	14.590	0.600	17.400	16.682	0.718	20.3	150	5.11	50.0
24.000	45	47	6.979	0.600	17.150	16.682	0.468	14.9	150	5.04	50.0
25.000	46	47	4.731	0.600	16.710	16.682	0.028	169.0	150	5.10	50.0
23.001	47	51	30.444	0.600	16.607	16.128	0.479	63.6	225	5.42	50.0
26.000	48	51	14.369	0.600	16.700	16.203	0.497	28.9	150	5.13	50.0
27.000	49	51	5.907	0.600	16.400	16.203	0.197	30.0	150	5.05	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)
9.000	2.451	43.3	2.7	1.882	2.248	0.015	0.0
8.002	4.162	165.5	10.8	2.248	2.823	0.060	0.0
8.003	4.160	165.4	10.8	2.823	3.452	0.060	0.0
10.000	7.030	124.2	1.4	1.152	3.452	0.008	0.0
8.004	4.162	165.5	14.1	3.452	3.974	0.078	0.0
1.007	1.000	70.7	63.6	3.974	3.676	0.352	0.0
11.000	5.961	105.3	6.7	1.789	3.676	0.037	0.0
12.000	7.748	136.9	1.8	1.140	3.676	0.010	0.0
1.008	1.008	71.2	75.5	3.676	2.796	0.418	0.0
13.000	2.717	48.0	1.6	1.020	1.170	0.009	0.0
13.001	1.776	70.6	1.6	1.170	1.167	0.009	0.0
14.000	2.270	40.1	4.0	1.012	1.167	0.022	0.0
15.000	3.792	67.0	0.7	0.584	1.167	0.004	0.0
13.002	2.323	92.4	13.2	1.167	1.346	0.073	0.0
16.000	2.316	40.9	1.8	1.120	1.346	0.010	0.0
17.000	3.713	65.6	2.7	0.868	1.346	0.015	0.0
13.003	3.093	123.0	22.9	1.346	2.124	0.127	0.0
18.000	4.171	73.7	0.2	1.043	2.124	0.001	0.0
19.000	6.236	110.2	0.0	0.582	2.124	0.000	0.0
13.004	4.160	165.4	23.1	2.124	2.795	0.128	0.0
1.009	1.009	111.4	98.7	2.795	2.271	0.546	0.0
20.000	5.491	97.0	3.4	0.943	2.271	0.019	0.0
1.010	1.008	111.3	110.9	2.271	1.787	0.614	0.0
1.011	1.002	110.6	111.3	1.787	1.232	0.616	0.0
21.000	2.654	46.9	6.0	0.977	1.232	0.033	0.0
1.012	3.328	367.5	119.6	1.232	1.199	0.662	0.0
22.000	2.817	49.8	2.3	0.912	1.200	0.013	0.0
116	3.150	347.9	124.9	1.200	1.009	0.691	0.0
23.000	2.244	39.7	0.7	0.913	1.200	0.004	0.0
24.000	2.622	46.3	1.6	0.961	1.200	0.009	0.0
25.000	0.770	13.6	6.3	1.312	1.200	0.035	0.0
23.001	1.643	65.3	17.2	1.200	1.168	0.095	0.0
26.000	1.879	33.2	1.6	1.067	1.168	0.009	0.0
27.000	1.845	32.6	2.5	1.080	1.168	0.014	0.0

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)
28.000	50	51	4.684	0.600	16.500	16.203	0.297	15.8	150	5.03	50.0
23.002	51	54	14.687	0.600	16.128	15.847	0.281	52.3	225	5.55	50.0
29.000	52	54	6.264	0.600	16.150	15.922	0.228	27.5	150	5.05	50.0
30.000	53	54	4.100	0.600	16.300	15.922	0.378	10.8	150	5.02	50.0
23.003	54	56	26.134	0.600	15.772	15.332	0.440	59.4	300	5.77	50.0
31.000	55	56	5.583	0.600	16.200	15.482	0.718	7.8	150	5.03	50.0
23.004	56	61	9.925	0.600	15.332	15.241	0.091	109.1	300	5.88	50.0
32.000	57	59	10.027	0.600	16.500	15.950	0.550	18.2	150	5.07	50.0
33.000	58	59	4.420	0.600	16.200	15.950	0.250	17.7	150	5.03	50.0
32.001	59	61	27.487	0.600	15.875	15.316	0.559	49.2	225	5.32	50.0
34.000	60	61	10.000	0.600	16.100	15.391	0.709	14.1	150	5.06	50.0
23.005	61	64	9.348	0.600	15.241	14.860	0.381	24.5	300	5.92	50.0
35.000	62	64	10.109	0.600	15.130	15.010	0.120	84.2	150	5.15	50.0
36.000	63	64	4.452	0.600	15.350	15.010	0.340	13.1	150	5.03	50.0
23.006	64	67	24.863	0.600	14.860	14.018	0.842	29.5	300	6.07	50.0
37.000	65	67	10.787	0.600	14.600	14.168	0.432	25.0	150	5.09	50.0
38.000	66	67	5.300	0.600	14.730	14.168	0.562	9.4	150	5.03	50.0
23.007	67	70	17.561	0.600	13.943	13.227	0.716	24.5	375	6.15	50.0
39.000	68	70	11.469	0.600	14.100	13.423	0.677	16.9	150	5.08	50.0
40.000	69	70	4.887	0.600	13.600	13.423	0.177	27.6	150	5.04	50.0
23.008	70	72	13.001	0.600	13.198	12.027	1.171	11.1	375	6.19	50.0
41.000	71	72	12.690	0.600	12.379	12.252	0.127	99.9	150	5.21	50.0
23.009	72	73	17.690	0.600	12.027	11.972	0.055	321.6	375	6.48	50.0
23.010	73	75	13.408	0.600	11.972	11.930	0.042	319.2	375	6.70	50.0
42.000	74	75	10.281	0.600	12.275	12.080	0.195	52.7	225	5.09	50.0
23.011	75	76	15.947	0.600	11.855	11.823	0.032	498.3	450	7.00	50.0
43.000	77	78	6.947	0.600	13.600	13.328	0.272	25.5	150	5.06	50.0
43.001	78	80	10.389	0.600	13.253	12.859	0.394	26.4	225	5.13	50.0
44.000	79	80	7.782	0.600	13.450	12.934	0.516	15.1	150	5.05	50.0
43.002	80	81	18.046	0.600	12.859	12.116	0.743	24.3	225	5.24	50.0
43.003	82_IN	82	4.554	0.600	11.800	11.638	0.162	28.1	450	8.12	50.0
1.016	82	82A	2.275	0.600	11.638	11.434	0.204	11.2	150	8.13	50.0
1.017	82A	82_OUT	13.712	0.600	11.434	10.200	1.234	11.1	150	8.21	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)
28.000	2.549	45.0	3.4	1.068	1.168	0.019	0.0
23.002	1.813	72.1	24.8	1.168	1.200	0.137	0.0
29.000	1.928	34.1	2.5	1.118	1.200	0.014	0.0
30.000	3.076	54.4	3.3	0.999	1.200	0.018	0.0
23.003	2.043	144.4	35.1	1.200	1.207	0.194	0.0
31.000	3.636	64.2	3.4	0.894	1.207	0.019	0.0
23.004	1.505	106.4	41.6	1.207	1.327	0.230	0.0
32.000	2.370	41.9	1.6	0.993	1.332	0.009	0.0
33.000	2.407	42.5	4.7	1.186	1.332	0.026	0.0
32.001	1.870	74.3	16.3	1.332	1.327	0.090	0.0
34.000	2.696	47.6	3.6	1.001	1.327	0.020	0.0
23.005	3.187	225.3	64.9	1.327	1.338	0.359	0.0
35.000	1.096	19.4	3.6	1.587	1.338	0.020	0.0
36.000	2.799	49.5	3.8	1.201	1.338	0.021	0.0
23.006	2.904	205.2	75.4	1.338	1.200	0.417	0.0
37.000	2.023	35.8	3.6	1.012	1.200	0.020	0.0
38.000	3.300	58.3	5.1	0.767	1.200	0.028	0.0
23.007	3.671	405.5	90.9	1.200	1.200	0.503	0.0
39.000	2.459	43.5	2.7	0.978	1.229	0.015	0.0
40.000	1.923	34.0	4.3	1.220	1.229	0.024	0.0
23.008	5.463	603.3	97.9	1.229	1.907	0.542	0.0
41.000	1.005	17.8	3.6	2.252	1.907	0.020	0.0
23.009	1.005	111.0	107.3	1.907	1.578	0.594	0.0
23.010	1.008	111.4	117.1	1.578	1.256	0.648	0.0
42.000	1.805	71.8	13.9	1.379	1.256	0.077	0.0
23.011	0.904	143.7	135.2	1.256	1.327	0.748	0.0
43.000	2.000	35.3	6.1	1.002	1.200	0.034	0.0
43.001	2.558	101.7	9.8	1.200	1.315	0.054	0.0
44.000	2.607	46.1	5.6	0.999	1.315	0.031	0.0
43.002	2.666	106.0	19.5	1.315	1.159	0.108	0.0
43.003	3.845	611.6	301.8	1.250	1.412	1.670	0.0
1.016	3.034	53.6	301.8	1.712	1.471	1.670	0.0
1.017	3.039	53.7	301.8	1.471	1.650	1.670	0.0

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)
23.012	76	82_IN	12.859	0.600	11.823	11.800	0.023	559.1	450	7.25	50.0
1.014	44	82_IN	24.678	0.600	12.116	11.800	0.316	78.1	375	8.10	50.0
43.003_1	81	82_IN	41.283	0.600	12.116	11.800	0.316	130.6	225	5.84	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)
23.012	0.853	135.6	135.2	1.327	1.250	0.748	0.0
1.014	2.052	226.6	124.9	1.009	1.325	0.691	0.0
43.003_1	1.142	45.4	19.5	1.159	1.475	0.108	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	9.694	161.6	225	PH1	16.394	13.950	2.219	16.136	13.890	2.021
1.001	16.762	166.0	225	PH1	16.136	13.890	2.021	16.143	13.789	2.129
2.000	7.036	4.1	150	PH1	16.554	15.600	0.804	16.143	13.864	2.129
1.002	6.243	164.3	225	PH1	16.143	13.789	2.129	16.154	13.751	2.178
3.000	11.646	35.9	150	PH1	16.106	14.150	1.806	16.154	13.826	2.178
4.000	11.303	166.2	225	PH1	15.674	13.819	1.630	16.154	13.751	2.178
1.003	8.453	234.8	300	PH1	16.154	13.676	2.178	16.476	13.640	2.536
5.000	5.802	4.3	150	PH1	16.597	15.150	1.297	16.476	13.790	2.536
1.004	27.643	236.3	300	PH1	16.476	13.640	2.536	17.271	13.523	3.448
6.000	7.878	3.6	150	PH1	17.463	15.850	1.463	17.271	13.673	3.448
7.000	5.277	2.8	150	PH1	17.322	15.550	1.622	17.271	13.673	3.448
1.005	7.148	238.3	300	PH1	17.271	13.523	3.448	17.439	13.493	3.646
1.006	12.477	244.6	300	PH1	17.439	13.523	3.616	17.716	13.472	3.944
8.000	6.049	62.4	150	PH1	18.778	17.200	1.428	18.706	17.103	1.453
8.001	30.594	25.8	225	PH1	18.706	17.006	1.475	18.295	15.822	2.248
9.000	8.744	17.0	150	PH1	18.442	16.410	1.882	18.295	15.897	2.248
8.002	7.317	10.0	225	PH1	18.295	15.822	2.248	18.138	15.090	2.823
8.003	8.415	10.0	225	PH1	18.138	15.090	2.823	17.926	14.249	3.452
10.000	5.271	2.1	150	PH1	18.152	16.850	1.152	17.926	14.324	3.452
8.004	7.317	10.0	225	PH1	17.926	14.249	3.452	17.716	13.517	3.974
1.007	10.283	244.8	300	PH1	17.716	13.442	3.974	17.376	13.400	3.676
11.000	5.800	2.9	150	PH1	17.489	15.550	1.789	17.376	13.550	3.676
12.000	4.640	1.7	150	PH1	17.540	16.250	1.140	17.376	13.550	3.676
1.008	24.854	241.3	300	PH1	17.376	13.400	3.676	16.393	13.297	2.796
13.000	4.333	13.9	150	PH1	17.420	16.250	1.020	17.258	15.938	1.170
13.001	9.260	54.5	225	PH1	17.258	15.863	1.170	17.085	15.693	1.167
14.000	6.198	19.9	150	PH1	17.242	16.080	1.012	17.085	15.768	1.167

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1200	Manhole	Adoptable	2	1200	Manhole	Adoptable
1.001	2	1200	Manhole	Adoptable	4	1200	Manhole	Adoptable
2.000	3	600	Manhole	Adoptable	4	1200	Manhole	Adoptable
1.002	4	1200	Manhole	Adoptable	7	1200	Manhole	Adoptable
3.000	5	600	Manhole	Adoptable	7	1200	Manhole	Adoptable
4.000	6	1200	Manhole	Adoptable	7	1200	Manhole	Adoptable
1.003	7	1200	Manhole	Adoptable	9		Junction	
5.000	8	600	Manhole	Adoptable	9		Junction	
1.004	9		Junction		12	1200	Manhole	Adoptable
6.000	10	600	Manhole	Adoptable	12	1200	Manhole	Adoptable
7.000	11	600	Manhole	Adoptable	12	1200	Manhole	Adoptable
1.005	12	1200	Manhole	Adoptable	13	1200	Manhole	Adoptable
1.006	13	1200	Manhole	Adoptable	21	1200	Manhole	Adoptable
8.000	14	600	Manhole	Adoptable	15	1200	Manhole	Adoptable
8.001	15	1200	Manhole	Adoptable	17	1200	Manhole	Adoptable
9.000	16	600	Manhole	Adoptable	17	1200	Manhole	Adoptable
8.002	17	1200	Manhole	Adoptable	18	1200	Manhole	Adoptable
8.003	18	1200	Manhole	Adoptable	20	1200	Manhole	Adoptable
10.000	19	600	Manhole	Adoptable	20	1200	Manhole	Adoptable
8.004	20	1200	Manhole	Adoptable	21	1200	Manhole	Adoptable
1.007	21	1200	Manhole	Adoptable	24	1200	Manhole	Adoptable
11.000	22	600	Manhole	Adoptable	24	1200	Manhole	Adoptable
12.000	23	600	Manhole	Adoptable	24	1200	Manhole	Adoptable
1.008	24	1200	Manhole	Adoptable	36	1350	Manhole	Adoptable
13.000	25	600	Manhole	Adoptable	26	1200	Manhole	Adoptable
13.001	26	1200	Manhole	Adoptable	29	1200	Manhole	Adoptable
14.000	27	600	Manhole	Adoptable	29	1200	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)
15.000	5.948	7.1	150	PH1	17.334	16.600	0.584	17.085	15.768	1.167
13.002	15.937	31.9	225	PH1	17.085	15.693	1.167	16.765	15.194	1.346
16.000	11.090	19.1	150	PH1	17.120	15.850	1.120	16.765	15.269	1.346
17.000	5.449	7.5	150	PH1	17.018	16.000	0.868	16.765	15.269	1.346
13.003	21.388	18.1	225	PH1	16.765	15.194	1.346	16.359	14.010	2.124
18.000	6.889	5.9	150	PH1	16.443	15.250	1.043	16.359	14.085	2.124
19.000	4.680	2.7	150	PH1	16.582	15.850	0.582	16.359	14.085	2.124
13.004	6.374	10.0	225	PH1	16.359	14.010	2.124	16.393	13.373	2.795
1.009	14.355	319.0	375	PH1	16.393	13.223	2.795	15.824	13.178	2.271
20.000	4.944	3.4	150	PH1	15.943	14.850	0.943	15.824	13.403	2.271
1.010	13.102	319.6	375	PH1	15.824	13.178	2.271	15.299	13.137	1.787
1.011	14.885	323.6	375	PH1	15.299	13.137	1.787	14.698	13.091	1.232
21.000	6.316	14.6	150	PH1	14.877	13.750	0.977	14.698	13.316	1.232
1.012	11.007	29.8	375	PH1	14.698	13.091	1.232	14.296	12.722	1.199
22.000	6.515	12.9	150	PH1	14.512	13.450	0.912	14.296	12.946	1.200
116	20.135	33.3	375	PH1	14.296	12.721	1.200	13.500	12.116	1.009
23.000	14.590	20.3	150	PH1	18.463	17.400	0.913	18.032	16.682	1.200
24.000	6.979	14.9	150	PH1	18.261	17.150	0.961	18.032	16.682	1.200
25.000	4.731	169.0	150	PH1	18.172	16.710	1.312	18.032	16.682	1.200
23.001	30.444	63.6	225	PH1	18.032	16.607	1.200	17.521	16.128	1.168
26.000	14.369	28.9	150	PH1	17.917	16.700	1.067	17.521	16.203	1.168
27.000	5.907	30.0	150	PH1	17.630	16.400	1.080	17.521	16.203	1.168
28.000	4.684	15.8	150	PH1	17.718	16.500	1.068	17.521	16.203	1.168
23.002	14.687	52.3	225	PH1	17.521	16.128	1.168	17.272	15.847	1.200
29.000	6.264	27.5	150	PH1	17.418	16.150	1.118	17.272	15.922	1.200
30.000	4.100	10.8	150	PH1	17.449	16.300	0.999	17.272	15.922	1.200
23.003	26.134	59.4	300	PH1	17.272	15.772	1.200	16.839	15.332	1.207
31.000	5.583	7.8	150	PH1	17.244	16.200	0.894	16.839	15.482	1.207
23.004	9.925	109.1	300	PH1	16.839	15.332	1.207	16.868	15.241	1.327
32.000	10.027	18.2	150	PH1	17.643	16.500	0.993	17.432	15.950	1.332
33.000	4.420	17.7	150	PH1	17.536	16.200	1.186	17.432	15.950	1.332
32.001	27.487	49.2	225	PH1	17.432	15.875	1.332	16.868	15.316	1.327
34.000	10.000	14.1	150	PH1	17.251	16.100	1.001	16.868	15.391	1.327
23.005	9.348	24.5	300	PH1	16.868	15.241	1.327	16.498	14.860	1.338
35.000	10.109	84.2	150	PH1	16.867	15.130	1.587	16.498	15.010	1.338

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
15.000	28	600	Manhole	Adoptable	29	1200	Manhole	Adoptable
13.002	29	1200	Manhole	Adoptable	32	1200	Manhole	Adoptable
16.000	30	600	Manhole	Adoptable	32	1200	Manhole	Adoptable
17.000	31	600	Manhole	Adoptable	32	1200	Manhole	Adoptable
13.003	32	1200	Manhole	Adoptable	35	1200	Manhole	Adoptable
18.000	33	600	Manhole	Adoptable	35	1200	Manhole	Adoptable
19.000	34	600	Manhole	Adoptable	35	1200	Manhole	Adoptable
13.004	35	1200	Manhole	Adoptable	36	1350	Manhole	Adoptable
1.009	36	1350	Manhole	Adoptable	38	1350	Manhole	Adoptable
20.000	37	600	Manhole	Adoptable	38	1350	Manhole	Adoptable
1.010	38	1350	Manhole	Adoptable	39	1350	Manhole	Adoptable
1.011	39	1350	Manhole	Adoptable	41	1350	Manhole	Adoptable
21.000	40	600	Manhole	Adoptable	41	1350	Manhole	Adoptable
1.012	41	1350	Manhole	Adoptable	43	1350	Manhole	Adoptable
22.000	42	600	Manhole	Adoptable	43	1350	Manhole	Adoptable
116	43	1350	Manhole	Adoptable	44	1350	Manhole	Adoptable
23.000	47A	600	Manhole	Adoptable	47	1200	Manhole	Adoptable
24.000	45	600	Manhole	Adoptable	47	1200	Manhole	Adoptable
25.000	46	600	Manhole	Adoptable	47	1200	Manhole	Adoptable
23.001	47	1200	Manhole	Adoptable	51	1200	Manhole	Adoptable
26.000	48	600	Manhole	Adoptable	51	1200	Manhole	Adoptable
27.000	49	600	Manhole	Adoptable	51	1200	Manhole	Adoptable
28.000	50	600	Manhole	Adoptable	51	1200	Manhole	Adoptable
23.002	51	1200	Manhole	Adoptable	54	1200	Manhole	Adoptable
29.000	52	600	Manhole	Adoptable	54	1200	Manhole	Adoptable
30.000	53	600	Manhole	Adoptable	54	1200	Manhole	Adoptable
23.003	54	1200	Manhole	Adoptable	56	1200	Manhole	Adoptable
31.000	55	600	Manhole	Adoptable	56	1200	Manhole	Adoptable
23.004	56	1200	Manhole	Adoptable	61	1200	Manhole	Adoptable
32.000	57	600	Manhole	Adoptable	59	1200	Manhole	Adoptable
33.000	58	600	Manhole	Adoptable	59	1200	Manhole	Adoptable
32.001	59	1200	Manhole	Adoptable	61	1200	Manhole	Adoptable
34.000	60	600	Manhole	Adoptable	61	1200	Manhole	Adoptable
23.005	61	1200	Manhole	Adoptable	64	1200	Manhole	Adoptable
35.000	62	600	Manhole	Adoptable	64	1200	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)
36.000	4.452	13.1	150	PH1	16.701	15.350	1.201	16.498	15.010	1.338
23.006	24.863	29.5	300	PH1	16.498	14.860	1.338	15.518	14.018	1.200
37.000	10.787	25.0	150	PH1	15.762	14.600	1.012	15.518	14.168	1.200
38.000	5.300	9.4	150	PH1	15.647	14.730	0.767	15.518	14.168	1.200
23.007	17.561	24.5	375	PH1	15.518	13.943	1.200	14.802	13.227	1.200
39.000	11.469	16.9	150	PH1	15.228	14.100	0.978	14.802	13.423	1.229
40.000	4.887	27.6	150	PH1	14.970	13.600	1.220	14.802	13.423	1.229
23.008	13.001	11.1	375	PH1	14.802	13.198	1.229	14.309	12.027	1.907
41.000	12.690	99.9	150	PH1	14.781	12.379	2.252	14.309	12.252	1.907
23.009	17.690	321.6	375	PH1	14.309	12.027	1.907	13.925	11.972	1.578
23.010	13.408	319.2	375	PH1	13.925	11.972	1.578	13.561	11.930	1.256
42.000	10.281	52.7	225	PH1	13.879	12.275	1.379	13.561	12.080	1.256
23.011	15.947	498.3	450	PH1	13.561	11.855	1.256	13.600	11.823	1.327
43.000	6.947	25.5	150	PH1	14.752	13.600	1.002	14.678	13.328	1.200
43.001	10.389	26.4	225	PH1	14.678	13.253	1.200	14.399	12.859	1.315
44.000	7.782	15.1	150	PH1	14.599	13.450	0.999	14.399	12.934	1.315
43.002	18.046	24.3	225	PH1	14.399	12.859	1.315	13.500	12.116	1.159
43.003	4.554	28.1	450	PH1	13.500	11.800	1.250	13.500	11.638	1.412
1.016	2.275	11.2	150	PH1	13.500	11.638	1.712	13.055	11.434	1.471
1.017	13.712	11.1	150	PH1	13.055	11.434	1.471	12.000	10.200	1.650
23.012	12.859	559.1	450	PH1	13.600	11.823	1.327	13.500	11.800	1.250
1.014	24.678	78.1	375	PH1	13.500	12.116	1.009	13.500	11.800	1.325
43.003_1	41.283	130.6	225	PH1	13.500	12.116	1.159	13.500	11.800	1.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
36.000	63	600	Manhole	Adoptable	64	1200	Manhole	Adoptable
23.006	64	1200	Manhole	Adoptable	67	1350	Manhole	Adoptable
37.000	65	600	Manhole	Adoptable	67	1350	Manhole	Adoptable
38.000	66	600	Manhole	Adoptable	67	1350	Manhole	Adoptable
23.007	67	1350	Manhole	Adoptable	70	1350	Manhole	Adoptable
39.000	68	600	Manhole	Adoptable	70	1350	Manhole	Adoptable
40.000	69	600	Manhole	Adoptable	70	1350	Manhole	Adoptable
23.008	70	1350	Manhole	Adoptable	72	1350	Manhole	Adoptable
41.000	71	600	Manhole	Adoptable	72	1350	Manhole	Adoptable
23.009	72	1350	Manhole	Adoptable	73	1350	Manhole	Adoptable
23.010	73	1350	Manhole	Adoptable	75	1350	Manhole	Adoptable
42.000	74	1200	Manhole	Adoptable	75	1350	Manhole	Adoptable
23.011	75	1350	Manhole	Adoptable	76	1350	Manhole	Adoptable
43.000	77	600	Manhole	Adoptable	78	1200	Manhole	Adoptable
43.001	78	1200	Manhole	Adoptable	80	1200	Manhole	Adoptable
44.000	79	600	Manhole	Adoptable	80	1200	Manhole	Adoptable
43.002	80	1200	Manhole	Adoptable	81	1200	Manhole	Adoptable
43.003	82_IN		Junction		82	1350	Manhole	Adoptable
1.016	82	1350	Manhole	Adoptable	82A	1200	Manhole	Adoptable
1.017	82A	1200	Manhole	Adoptable	82_OUT		Manhole	Adoptable
23.012	76	1350	Manhole	Adoptable	82_IN		Junction	
1.014	44	1350	Manhole	Adoptable	82_IN		Junction	
43.003_1	81	1200	Manhole	Adoptable	82_IN		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
1	507641.336	104723.993	16.394	2.444	1200		0	1.000	13.950	225
2	507631.708	104722.863	16.136	2.246	1200		1	1.000	13.890	225
							0	1.001	13.890	225
3	507621.042	104706.180	16.554	0.954	600		0	2.000	15.600	150
4	507618.383	104712.694	16.143	2.354	1200		1	2.000	13.864	150
							2	1.001	13.789	225
							0	1.002	13.789	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
5	507601.117	104712.260	16.106	1.956	600		0	3.000	14.150	150
6	507607.826	104720.578	15.674	1.855	1200		0	4.000	13.819	225
7	507612.603	104710.334	16.154	2.478	1200		1 2 3 0	4.000 3.000 1.002 1.003	13.751 13.826 13.751 13.676	225 150 225 300
8	507606.341	104702.119	16.597	1.447	600		0	5.000	15.150	150
9	507612.139	104701.894	16.476	2.836			1 2 0	5.000 1.003 1.004	13.790 13.640 13.640	150 300 300
10	507618.488	104673.857	17.463	1.613	600		0	6.000	15.850	150
11	507605.362	104674.717	17.322	1.772	600		0	7.000	15.550	150
12	507610.622	104674.293	17.271	3.748	1200		1 2 3 0	7.000 6.000 1.004 1.005	13.673 13.673 13.523 13.523	150 150 300 300
13	507610.229	104667.156	17.439	3.946	1200		1 0	1.005 1.006	13.493 13.523	300 300
14	507606.997	104609.263	18.778	1.578	600		0	8.000	17.200	150
15	507612.993	104608.461	18.706	1.700	1200		1 0	8.000 8.001	17.103 17.006	150 225
16	507609.456	104634.447	18.442	2.032	600		0	9.000	16.410	150
17	507617.048	104638.785	18.295	2.473	1200		1 2 0	9.000 8.001 8.002	15.897 15.822 15.822	150 225 225
18	507615.079	104645.832	18.138	3.048	1200		1 0	8.002 8.003	15.090 15.090	225 225
19	507615.304	104652.381	18.152	1.302	600		0	10.000	16.850	150
20	507610.036	104652.569	17.926	3.677	1200		1 2 0	10.000 8.003 8.004	14.324 14.249 14.249	150 225 225
21	507603.830	104656.445	17.716	4.274	1200		1 2 0	8.004 1.006 1.007	13.517 13.472 13.442	225 300 300
22	507593.727	104652.114	17.489	1.939	600		0	11.000	15.550	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
23	507593.818	104662.551	17.540	1.290	600		0	12.000	16.250	150
24	507593.652	104657.914	17.376	3.976	1200		1 2 3 0	12.000 11.000 1.007 1.008	13.550 13.550 13.400 13.400	150 150 300 300
25	507561.823	104605.338	17.420	1.170	600		0	13.000	16.250	150
26	507558.115	104607.580	17.258	1.395	1200		1 0	13.000 13.001	15.938 15.863	150 225
27	507553.083	104617.522	17.242	1.162	600		0	14.000	16.080	150
28	507563.811	104612.972	17.334	0.734	600		0	15.000	16.600	150
29	507559.235	104616.772	17.085	1.392	1200		1 2 3 0	15.000 14.000 13.001 13.002	15.768 15.768 15.693 15.693	150 150 225 225
30	507558.147	104625.492	17.120	1.270	600		0	16.000	15.850	150
31	507572.168	104625.966	17.018	1.018	600		0	17.000	16.000	150
32	507568.345	104629.849	16.765	1.571	1200		1 2 3 0	17.000 16.000 13.002 13.003	15.269 15.269 15.194 15.194	150 150 225 225
33	507562.215	104650.883	16.443	1.193	600		0	18.000	15.250	150
34	507573.196	104648.968	16.582	0.732	600		0	19.000	15.850	150
35	507569.096	104651.224	16.359	2.349	1200		1 2 3 0	19.000 18.000 13.003 13.004	14.085 14.085 14.010 14.010	150 150 225 225
36	507568.800	104657.591	16.393	3.170	1350		1 2 0	13.004 1.008	13.373 13.297	225 300
37	507552.988	104653.237	15.943	1.093	600		0	1.009	13.223	375
38	507554.450	104657.960	15.824	2.646	1350		1 2 0	20.000 20.000 1.009	14.850 13.403 13.178	150 150 375
39	507542.989	104664.309	15.299	2.162	1350		1 0	1.010 1.011	13.137 13.137	375 375
40	507527.372	104657.442	14.877	1.127	600		0	21.000	13.750	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
41	507528.116	104663.714	14.698	1.607	1350		1 21.000 2 1.011 0 1.012	13.316 13.091 13.091	150 375 375
42	507516.583	104659.538	14.512	1.062	600		0 22.000	13.450	150
43	507517.351	104666.008	14.296	1.575	1350		1 22.000 2 1.012 0 116	12.946 12.722 12.721	150 375 375
44	507517.742	104686.139	13.500	1.384	1350		1 116	12.116	375
47A	507592.907	104580.058	18.463	1.063	600		0 1.014	12.116	375
45	507579.819	104582.938	18.261	1.111	600		0 23.000	17.400	150
46	507578.259	104571.333	18.172	1.462	600		0 24.000	17.150	150
47	507578.886	104576.022	18.032	1.425	1200		1 25.000 2 24.000 3 23.000 0 23.001	16.682 16.682 16.682 16.607	150 150 150 225
48	507562.462	104584.225	17.917	1.217	600		0 26.000	16.700	150
49	507547.802	104585.894	17.630	1.230	600		0 27.000	16.400	150
50	507549.431	104575.429	17.718	1.218	600		0 28.000	16.500	150
51	507548.711	104580.057	17.521	1.393	1200		1 28.000 2 27.000 3 26.000 4 23.001 0 23.002	16.203 16.203 16.203 16.128 16.128	150 150 150 225 225
52	507533.400	104584.011	17.418	1.268	600		0 29.000	16.150	150
53	507534.975	104573.772	17.449	1.149	600		0 30.000	16.300	150
54	507534.199	104577.798	17.272	1.500	1200		1 30.000 2 29.000 3 23.002 0 23.003	15.922 15.922 15.847 15.772	150 150 225 300
55	507509.502	104567.351	17.244	1.044	600		0 31.000	16.200	150
56	507508.538	104572.850	16.839	1.507	1200		1 31.000 2 23.003 0 23.004	15.482 15.332 15.332	150 300 300
57	507512.929	104545.716	17.643	1.143	600		0 32.000	16.500	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
58	507498.659	104543.462	17.536	1.336	600		0	33.000	16.200	150
59	507503.025	104544.151	17.432	1.557	1200		1	33.000	15.950	150
							2	32.000	15.950	150
							0	32.001	15.875	225
60	507495.770	104561.751	17.251	1.151	600		0	34.000	16.100	150
61	507498.735	104571.301	16.868	1.627	1200		1	34.000	15.391	150
							2	32.001	15.316	225
							3	23.004	15.241	300
							0	23.005	15.241	300
62	507507.385	104580.459	16.867	1.737	600		0	35.000	15.130	150
63	507493.753	104577.812	16.701	1.351	600		0	36.000	15.350	150
							1	36.000	15.010	150
64	507497.276	104580.534	16.498	1.638	1200		2	35.000	15.010	150
							3	23.005	14.860	300
							0	23.006	14.860	300
							0	23.006	14.860	300
65	507508.403	104605.000	15.762	1.162	600		0	37.000	14.600	150
66	507492.475	104604.134	15.647	0.917	600		0	38.000	14.730	150
67	507497.623	104605.395	15.518	1.575	1350		1	38.000	14.168	150
							2	37.000	14.168	150
							3	23.006	14.018	300
							0	23.007	13.943	375
68	507504.832	104621.085	15.228	1.128	600		0	39.000	14.100	150
							0	40.000	13.600	150
69	507489.055	104620.304	14.970	1.370	600		0	40.000	13.600	150
70	507493.445	104622.452	14.802	1.604	1350		1	40.000	13.423	150
							2	39.000	13.423	150
							3	23.007	13.227	375
							0	23.008	13.198	375
71	507500.392	104633.289	14.781	2.402	600		0	41.000	12.379	150
							1	41.000	12.252	150
72	507487.730	104634.130	14.309	2.282	1350		2	23.008	12.027	375
							0	23.009	12.027	375
							1	23.009	11.972	375
73	507488.700	104651.793	13.925	1.953	1350		0	23.010	11.972	375
							0	42.000	12.275	225
74	507476.020	104653.812	13.879	1.604	1200		0	42.000	12.275	225
75	507481.029	104662.790	13.561	1.706	1350		1	42.000	12.080	225
							2	23.010	11.930	375
							0	23.011	11.855	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
76	507487.121	104677.527	13.600	1.777	1350		1 23.011	11.823	450
77	507560.910	104689.140	14.752	1.152	600		0 23.012	11.823	450
78	507554.257	104691.140	14.678	1.425	1200		1 43.000	13.600	150
79	507558.578	104703.380	14.599	1.149	600		0 43.000	13.328	150
80	507551.152	104701.054	14.399	1.540	1200		1 43.001	13.253	225
81	507533.931	104695.660	13.500	1.384	1200		0 44.000	13.450	150
82_IN	507491.700	104690.559	13.500	1.700			1 44.000	12.934	150
82	507488.730	104694.011	13.500	1.862	1350		2 43.001	12.859	225
82A	507487.246	104695.735	13.055	1.621	1200		0 43.002	12.859	225
82_OUT	507478.465	104706.267	12.000	1.800			1 43.002	12.116	225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	19.000	Drain Down Time (mins)	240
Ratio-R	0.350	Additional Storage (m³/ha)	20.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15 | 30

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

Node 82 Online StormBrake™ Control

Flap Valve	x	Design Flow (l/s)	5.8
Replaces Downstream Link	x	Product Code	FPM-SB1-01560-00580-1100
Invert Level (m)	11.638	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.562	Min Node Diameter (mm)	1200

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.95
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	13.950
Safety Factor	6.5	Time to half empty (mins)	7

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	68.0	0.0	0.400	68.0	0.0	0.401	0.0	0.0

Node 82 IN Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	11.800
Safety Factor	6.5	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	626.5	0.0	0.700	940.5	0.0	1.400	1290.7	0.0	2.100	0.0	0.0
0.100	669.1	0.0	0.800	988.3	0.0	1.500	1343.7	0.0	2.200	0.0	0.0
0.200	712.5	0.0	0.900	1036.9	0.0	1.600	1397.4	0.0	2.300	0.0	0.0
0.300	756.7	0.0	1.000	1086.2	0.0	1.700	1451.8	0.0	2.400	0.0	0.0
0.400	801.5	0.0	1.100	1136.2	0.0	1.701	0.0	0.0	2.500	0.0	0.0
0.500	847.1	0.0	1.200	1187.0	0.0	1.900	0.0	0.0			
0.600	893.5	0.0	1.300	1238.5	0.0	2.000	0.0	0.0			

Results for 10 year +10% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	14	13.995	0.045	9.9	2.9669	0.0000	OK
15 minute winter	2	12	14.012	0.122	12.0	0.1815	0.0000	OK
15 minute winter	3	10	15.627	0.027	6.3	0.0206	0.0000	OK
15 minute winter	4	12	14.016	0.227	20.6	0.2756	0.0000	SURCHARGED
15 minute winter	5	10	14.206	0.056	8.2	0.0332	0.0000	OK
15 minute winter	6	12	13.994	0.175	6.3	0.2409	0.0000	OK
15 minute winter	7	12	14.005	0.329	45.5	0.4868	0.0000	SURCHARGED
15 minute winter	8	10	15.176	0.026	5.7	0.0149	0.0000	OK
15 minute winter	9	12	13.995	0.355	45.7	0.0000	0.0000	SURCHARGED
15 minute winter	10	10	15.878	0.028	7.1	0.0167	0.0000	OK
15 minute winter	11	10	15.578	0.028	8.2	0.0172	0.0000	OK
15 minute winter	12	12	13.948	0.425	56.2	0.4810	0.0000	SURCHARGED
15 minute winter	13	12	13.918	0.424	55.8	0.4801	0.0000	SURCHARGED
15 minute winter	14	10	17.255	0.055	5.7	0.0304	0.0000	OK
15 minute winter	15	10	17.059	0.053	12.1	0.0753	0.0000	OK
15 minute winter	16	10	16.442	0.032	4.1	0.0138	0.0000	OK
15 minute winter	17	10	15.872	0.050	16.1	0.0568	0.0000	OK
15 minute winter	18	10	15.139	0.049	16.0	0.0551	0.0000	OK
15 minute winter	19	10	16.864	0.014	2.2	0.0058	0.0000	OK
15 minute winter	20	10	14.303	0.054	20.8	0.0636	0.0000	OK
15 minute winter	21	12	13.874	0.432	69.8	0.4886	0.0000	SURCHARGED
15 minute winter	22	10	15.581	0.031	10.1	0.0206	0.0000	OK
15 minute winter	23	10	16.264	0.014	2.7	0.0061	0.0000	OK
15 minute winter	24	12	13.805	0.405	84.7	0.4965	0.0000	SURCHARGED
15 minute winter	25	10	16.274	0.024	2.5	0.0107	0.0000	OK
15 minute winter	26	10	15.892	0.029	2.5	0.0323	0.0000	OK
15 minute winter	27	10	16.122	0.042	6.0	0.0276	0.0000	OK
15 minute winter	28	10	16.614	0.014	1.1	0.0054	0.0000	OK
15 minute winter	29	10	15.764	0.071	19.9	0.1197	0.0000	OK
15 minute winter	30	10	15.877	0.027	2.7	0.0117	0.0000	OK
15 minute winter	31	10	16.027	0.027	4.1	0.0153	0.0000	OK
15 minute winter	32	10	15.281	0.087	34.3	0.1308	0.0000	OK
15 minute winter	33	11	15.257	0.007	0.3	0.0021	0.0000	OK
15 minute summer	34	1	15.850	0.000	0.0	0.0000	0.0000	OK
15 minute winter	35	10	14.079	0.069	34.3	0.0782	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	-3.9	0.513	-0.095	0.1269	
15 minute winter	2	1.001	4	11.9	0.638	0.295	0.5174	
15 minute winter	3	2.000	4	6.3	2.609	0.071	0.0683	
15 minute winter	4	1.002	7	19.5	0.925	0.483	0.2482	
15 minute winter	5	3.000	7	8.1	1.376	0.273	0.1343	
15 minute winter	6	4.000	7	7.5	0.556	0.187	0.4118	
15 minute winter	7	1.003	9	40.0	0.933	0.554	0.5953	
15 minute winter	8	5.000	9	5.7	2.692	0.065	0.0568	
15 minute winter	9	1.004	12	47.0	0.771	0.653	1.9466	
15 minute winter	10	6.000	12	7.1	2.613	0.075	0.0781	
15 minute winter	11	7.000	12	8.2	2.966	0.076	0.0523	
15 minute winter	12	1.005	13	55.8	0.792	0.778	0.5034	
15 minute winter	13	1.006	21	57.3	0.853	0.810	0.8786	
15 minute winter	14	8.000	15	5.6	1.010	0.251	0.0338	
15 minute winter	15	8.001	17	12.1	1.751	0.117	0.2106	
15 minute winter	16	9.000	17	4.1	1.504	0.094	0.0236	
15 minute winter	17	8.002	18	16.0	2.480	0.097	0.0472	
15 minute winter	18	8.003	20	15.9	2.353	0.096	0.0570	
15 minute winter	19	10.000	20	2.2	2.682	0.018	0.0043	
15 minute winter	20	8.004	21	20.8	1.749	0.125	0.1720	
15 minute winter	21	1.007	24	70.7	1.004	1.000	0.7241	
15 minute winter	22	11.000	24	10.1	3.117	0.096	0.0586	
15 minute winter	23	12.000	24	2.7	2.610	0.020	0.0428	
15 minute winter	24	1.008	36	86.0	1.221	1.207	1.7502	
15 minute winter	25	13.000	26	2.5	1.383	0.052	0.0078	
15 minute winter	26	13.001	29	2.4	0.373	0.035	0.0635	
15 minute winter	27	14.000	29	6.0	1.560	0.148	0.0237	
15 minute winter	28	15.000	29	1.1	1.393	0.016	0.0046	
15 minute winter	29	13.002	32	19.7	1.576	0.213	0.1993	
15 minute winter	30	16.000	32	2.7	1.290	0.066	0.0231	
15 minute winter	31	17.000	32	4.1	2.003	0.062	0.0111	
15 minute winter	32	13.003	35	34.0	2.780	0.277	0.2623	
15 minute winter	33	18.000	35	0.3	1.013	0.004	0.0020	
15 minute summer	34	19.000	35	0.0	0.000	0.000	0.0000	
15 minute winter	35	13.004	36	34.2	2.533	0.206	0.1597	

Results for 10 year +10% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	36	11	13.623	0.400	116.3	0.5721	0.0000	SURCHARGED
15 minute winter	37	10	14.873	0.023	5.2	0.0148	0.0000	OK
15 minute winter	38	11	13.547	0.369	133.7	0.6654	0.0000	OK
15 minute winter	39	11	13.435	0.298	134.2	0.4321	0.0000	OK
15 minute winter	40	10	13.798	0.048	9.0	0.0416	0.0000	OK
15 minute winter	41	11	13.284	0.193	145.8	0.3071	0.0000	OK
15 minute winter	42	10	13.478	0.028	3.5	0.0148	0.0000	OK
15 minute winter	43	11	12.908	0.187	153.1	0.3065	0.0000	OK
15 minute winter	44	11	12.352	0.236	153.2	0.3373	0.0000	OK
15 minute winter	47A	10	17.417	0.017	1.1	0.0061	0.0000	OK
15 minute winter	45	10	17.174	0.024	2.5	0.0108	0.0000	OK
15 minute winter	46	10	16.812	0.102	9.5	0.0774	0.0000	OK
15 minute winter	47	10	16.705	0.098	25.7	0.1750	0.0000	OK
15 minute winter	48	10	16.728	0.028	2.5	0.0119	0.0000	OK
15 minute winter	49	10	16.435	0.035	3.8	0.0177	0.0000	OK
15 minute winter	50	10	16.535	0.035	5.2	0.0207	0.0000	OK
15 minute winter	51	10	16.251	0.123	36.9	0.1390	0.0000	OK
15 minute winter	52	10	16.186	0.036	3.8	0.0179	0.0000	OK
15 minute winter	53	10	16.333	0.033	4.9	0.0195	0.0000	OK
15 minute winter	54	10	15.897	0.125	51.6	0.1833	0.0000	OK
15 minute winter	55	10	16.230	0.030	5.2	0.0193	0.0000	OK
15 minute winter	56	11	15.516	0.184	61.0	0.2494	0.0000	OK
15 minute winter	57	10	16.525	0.025	2.5	0.0112	0.0000	OK
15 minute winter	58	10	16.245	0.045	7.1	0.0305	0.0000	OK
15 minute winter	59	10	15.966	0.091	24.5	0.1680	0.0000	OK
15 minute winter	60	10	16.135	0.035	5.4	0.0222	0.0000	OK
15 minute winter	61	11	15.399	0.158	95.0	0.2152	0.0000	OK
15 minute winter	62	10	15.187	0.057	5.4	0.0290	0.0000	OK
15 minute winter	63	10	15.387	0.037	5.7	0.0220	0.0000	OK
15 minute winter	64	11	15.030	0.170	110.3	0.2278	0.0000	OK
15 minute winter	65	10	14.641	0.041	5.4	0.0256	0.0000	OK
15 minute winter	66	10	14.769	0.039	7.6	0.0350	0.0000	OK
15 minute winter	67	11	14.107	0.164	133.1	0.3141	0.0000	OK
15 minute winter	68	10	14.132	0.032	4.1	0.0175	0.0000	OK
15 minute winter	69	10	13.648	0.048	6.5	0.0307	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	36	1.009	38	116.2	1.054	1.043	1.5804	
15 minute winter	37	20.000	38	5.2	2.416	0.053	0.0471	
15 minute winter	38	1.010	39	133.7	1.290	1.201	1.3352	
15 minute winter	39	1.011	41	133.9	1.762	1.211	1.1236	
15 minute winter	40	21.000	41	9.0	1.947	0.191	0.0291	
15 minute winter	41	1.012	43	145.7	2.611	0.396	0.6149	
15 minute winter	42	22.000	43	3.5	1.579	0.070	0.0143	
15 minute winter	43	116	44	153.2	2.395	0.440	1.2885	
15 minute winter	44	1.014	82_IN	153.6	3.221	0.678	1.5802	
15 minute winter	47A	23.000	47	1.1	0.925	0.027	0.0203	
15 minute winter	45	24.000	47	2.5	1.365	0.053	0.0126	
15 minute winter	46	25.000	47	9.4	0.794	0.691	0.0560	
15 minute winter	47	23.001	51	25.5	1.316	0.390	0.5892	
15 minute winter	48	26.000	51	2.5	0.985	0.074	0.0508	
15 minute winter	49	27.000	51	3.8	1.099	0.116	0.0234	
15 minute winter	50	28.000	51	5.2	1.496	0.115	0.0186	
15 minute winter	51	23.002	54	36.4	1.735	0.505	0.3082	
15 minute winter	52	29.000	54	3.8	1.228	0.111	0.0192	
15 minute winter	53	30.000	54	4.9	1.815	0.090	0.0110	
15 minute winter	54	23.003	56	51.5	1.411	0.356	0.9524	
15 minute winter	55	31.000	56	5.2	2.068	0.081	0.0147	
15 minute winter	56	23.004	61	61.4	1.483	0.577	0.4106	
15 minute winter	57	32.000	59	2.5	1.277	0.059	0.0193	
15 minute winter	58	33.000	59	7.1	1.674	0.166	0.0187	
15 minute winter	59	32.001	61	24.1	1.639	0.324	0.4042	
15 minute winter	60	34.000	61	5.4	1.745	0.113	0.0307	
15 minute winter	61	23.005	64	95.3	2.422	0.423	0.3680	
15 minute winter	62	35.000	64	5.3	0.908	0.275	0.0593	
15 minute winter	63	36.000	64	5.7	1.769	0.115	0.0143	
15 minute winter	64	23.006	67	111.0	2.842	0.541	0.9712	
15 minute winter	65	37.000	67	5.4	1.420	0.150	0.0407	
15 minute winter	66	38.000	67	7.6	2.171	0.130	0.0185	
15 minute winter	67	23.007	70	133.6	3.105	0.329	0.7558	
15 minute winter	68	39.000	70	4.1	1.515	0.093	0.0307	
15 minute winter	69	40.000	70	6.5	1.396	0.190	0.0227	

Results for 10 year +10% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	70	11	13.326	0.128	143.6	0.1828	0.0000	OK
15 minute winter	71	11	12.632	0.253	5.4	0.1136	0.0000	SURCHARGED
15 minute winter	72	11	12.618	0.591	157.0	1.0123	0.0000	SURCHARGED
15 minute winter	73	11	12.455	0.483	171.1	0.9575	0.0000	SURCHARGED
15 minute winter	74	9	12.360	0.085	21.0	0.1785	0.0000	OK
15 minute winter	75	11	12.297	0.442	196.8	0.7512	0.0000	OK
15 minute winter	76	11	12.177	0.354	194.4	0.5065	0.0000	OK
15 minute winter	77	10	13.657	0.057	9.3	0.0495	0.0000	OK
15 minute winter	78	10	13.311	0.058	14.6	0.0813	0.0000	OK
15 minute winter	79	10	13.496	0.046	8.4	0.0378	0.0000	OK
15 minute winter	80	10	12.939	0.080	29.2	0.1145	0.0000	OK
15 minute winter	81	10	12.251	0.135	29.0	0.1531	0.0000	OK
30 minute winter	82_IN	38	12.158	0.358	351.9	252.1533	0.0000	OK
30 minute winter	82	31	12.178	0.540	69.8	0.7724	0.0000	SURCHARGED
30 minute winter	82A	209	11.468	0.034	5.8	0.0387	0.0000	OK
30 minute summer	82_OUT	131	10.233	0.033	5.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	70	23.008	72	143.9	1.691	0.238	0.9321	
15 minute winter	71	41.000	72	7.1	0.715	0.402	0.2234	
15 minute winter	72	23.009	73	157.3	1.427	1.418	1.9512	
15 minute winter	73	23.010	75	171.0	1.551	1.536	1.4743	
15 minute winter	74	42.000	75	20.9	1.351	0.291	0.2672	
15 minute winter	75	23.011	76	194.4	1.311	1.353	2.3242	
15 minute winter	76	23.012	82_IN	238.1	2.778	1.756	1.2663	
15 minute winter	77	43.000	78	9.2	1.598	0.261	0.0401	
15 minute winter	78	43.001	80	14.5	1.416	0.143	0.1073	
15 minute winter	79	44.000	80	8.4	1.905	0.181	0.0341	
15 minute winter	80	43.002	81	29.0	1.547	0.274	0.3392	
15 minute winter	81	43.003_1	82_IN	29.1	1.647	0.640	1.1114	
30 minute winter	82_IN	43.003	82	69.8	0.621	0.114	0.6684	
30 minute winter	82	1.016	82A	5.8	1.796	0.108	0.0074	
30 minute winter	82A	1.017	82_OUT	5.8	1.957	0.108	0.0406	89.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	15	14.366	0.416	84.2	26.4383	0.0000	SURCHARGED
15 minute winter	2	12	14.461	0.571	72.8	0.8484	0.0000	SURCHARGED
15 minute winter	3	10	15.639	0.039	13.0	0.0295	0.0000	OK
15 minute winter	4	12	14.652	0.863	53.9	1.0489	0.0000	SURCHARGED
15 minute winter	5	12	14.791	0.641	17.0	0.3775	0.0000	SURCHARGED
15 minute winter	6	12	14.704	0.885	15.2	1.2200	0.0000	SURCHARGED
15 minute winter	7	12	14.696	1.020	52.5	1.5075	0.0000	SURCHARGED
15 minute winter	8	10	15.187	0.037	11.9	0.0214	0.0000	OK
15 minute winter	9	12	14.694	1.054	57.4	0.0000	0.0000	SURCHARGED
15 minute winter	10	10	15.890	0.040	14.7	0.0240	0.0000	OK
15 minute winter	11	10	15.590	0.040	17.0	0.0248	0.0000	OK
15 minute winter	12	12	14.679	1.156	66.5	1.3075	0.0000	SURCHARGED
15 minute winter	13	12	14.653	1.160	69.6	1.3119	0.0000	SURCHARGED
15 minute winter	14	10	17.286	0.086	11.9	0.0474	0.0000	OK
15 minute winter	15	10	17.084	0.078	25.4	0.1101	0.0000	OK
15 minute winter	16	10	16.458	0.048	8.5	0.0204	0.0000	OK
15 minute winter	17	10	15.898	0.076	33.6	0.0863	0.0000	OK
15 minute winter	18	10	15.158	0.068	33.4	0.0772	0.0000	OK
15 minute summer	19	9	16.869	0.019	4.3	0.0079	0.0000	OK
15 minute winter	20	12	14.679	0.430	43.5	0.5094	0.0000	SURCHARGED
15 minute winter	21	12	14.614	1.172	87.5	1.3255	0.0000	SURCHARGED
15 minute winter	22	10	15.595	0.045	21.0	0.0297	0.0000	OK
15 minute winter	23	10	16.270	0.020	5.7	0.0087	0.0000	OK
15 minute winter	24	11	14.506	1.106	118.8	1.3571	0.0000	SURCHARGED
15 minute winter	25	10	16.286	0.035	5.1	0.0155	0.0000	OK
15 minute winter	26	10	15.904	0.041	5.1	0.0459	0.0000	OK
15 minute winter	27	10	16.143	0.063	12.5	0.0418	0.0000	OK
15 minute winter	28	10	16.619	0.019	2.3	0.0075	0.0000	OK
15 minute winter	29	10	15.804	0.111	41.2	0.1860	0.0000	OK
15 minute winter	30	10	15.888	0.038	5.7	0.0166	0.0000	OK
15 minute winter	31	10	16.037	0.037	8.5	0.0214	0.0000	OK
15 minute winter	32	10	15.316	0.122	71.4	0.1829	0.0000	OK
15 minute winter	33	10	15.260	0.010	0.6	0.0029	0.0000	OK
15 minute summer	34	1	15.850	0.000	0.0	0.0000	0.0000	OK
15 minute winter	35	11	14.332	0.322	71.6	0.3644	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	-69.3	-1.856	-1.700	0.3855	
15 minute winter	2	1.001	4	-51.4	-1.292	-1.277	0.6666	
15 minute winter	3	2.000	4	13.0	2.603	0.146	0.0745	
15 minute winter	4	1.002	7	45.5	1.172	1.124	0.2483	
15 minute winter	5	3.000	7	14.4	1.432	0.485	0.2050	
15 minute winter	6	4.000	7	11.3	0.561	0.280	0.4495	
15 minute winter	7	1.003	9	56.0	0.983	0.775	0.5953	
15 minute winter	8	5.000	9	11.9	2.578	0.137	0.0610	
15 minute winter	9	1.004	12	60.1	0.868	0.835	1.9466	
15 minute winter	10	6.000	12	14.7	2.592	0.156	0.0840	
15 minute winter	11	7.000	12	17.0	2.944	0.159	0.0563	
15 minute winter	12	1.005	13	69.6	0.988	0.971	0.5034	
15 minute winter	13	1.006	21	72.0	1.023	1.018	0.8786	
15 minute winter	14	8.000	15	11.8	1.204	0.523	0.0593	
15 minute winter	15	8.001	17	25.2	2.097	0.245	0.3677	
15 minute winter	16	9.000	17	8.4	1.834	0.195	0.0403	
15 minute winter	17	8.002	18	33.4	3.042	0.202	0.0804	
15 minute winter	18	8.003	20	33.3	2.603	0.201	0.2100	
15 minute summer	19	10.000	20	4.3	3.206	0.035	0.0496	
15 minute winter	20	8.004	21	40.2	1.939	0.243	0.2910	
15 minute winter	21	1.007	24	91.7	1.302	1.297	0.7241	
15 minute winter	22	11.000	24	21.0	3.086	0.199	0.0638	
15 minute winter	23	12.000	24	5.7	2.558	0.042	0.0441	
15 minute winter	24	1.008	36	119.6	1.699	1.680	1.7502	
15 minute winter	25	13.000	26	5.1	1.679	0.106	0.0131	
15 minute winter	26	13.001	29	5.0	0.430	0.071	0.1127	
15 minute winter	27	14.000	29	12.4	1.876	0.310	0.0411	
15 minute winter	28	15.000	29	2.3	1.562	0.034	0.0135	
15 minute winter	29	13.002	32	40.9	1.974	0.443	0.3302	
15 minute winter	30	16.000	32	5.7	1.482	0.138	0.0453	
15 minute winter	31	17.000	32	8.5	2.233	0.129	0.0220	
15 minute winter	32	13.003	35	71.0	2.932	0.577	0.6542	
15 minute winter	33	18.000	35	0.6	0.986	0.008	0.0621	
15 minute summer	34	19.000	35	0.0	0.000	0.000	0.0412	
15 minute winter	35	13.004	36	67.7	2.509	0.409	0.2535	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	36	11	14.145	0.922	184.7	1.3198	0.0000	SURCHARGED
15 minute winter	37	10	14.884	0.034	10.8	0.0211	0.0000	OK
15 minute winter	38	11	13.949	0.771	220.1	1.3900	0.0000	SURCHARGED
15 minute winter	39	11	13.687	0.550	220.3	0.7973	0.0000	SURCHARGED
15 minute winter	40	10	13.824	0.074	18.7	0.0640	0.0000	OK
15 minute winter	41	11	13.376	0.285	244.2	0.4534	0.0000	OK
15 minute summer	42	10	13.490	0.040	7.0	0.0213	0.0000	OK
15 minute winter	43	12	13.019	0.298	259.0	0.4867	0.0000	OK
30 minute winter	44	21	12.585	0.469	227.4	0.6716	0.0000	SURCHARGED
15 minute winter	47A	10	17.424	0.024	2.3	0.0087	0.0000	OK
15 minute winter	45	10	17.184	0.034	5.1	0.0150	0.0000	OK
15 minute winter	46	10	16.906	0.196	19.8	0.1494	0.0000	SURCHARGED
15 minute winter	47	11	16.773	0.166	53.6	0.2968	0.0000	OK
15 minute winter	48	10	16.740	0.040	5.1	0.0171	0.0000	OK
15 minute winter	49	12	16.536	0.136	7.9	0.0694	0.0000	OK
15 minute winter	50	10	16.550	0.050	10.8	0.0297	0.0000	OK
15 minute winter	51	12	16.525	0.397	77.4	0.4488	0.0000	SURCHARGED
15 minute winter	52	12	16.207	0.057	7.9	0.0286	0.0000	OK
15 minute winter	53	9	16.347	0.047	10.2	0.0281	0.0000	OK
15 minute winter	54	12	16.204	0.432	102.2	0.6319	0.0000	SURCHARGED
15 minute winter	55	10	16.242	0.042	10.8	0.0269	0.0000	OK
15 minute winter	56	12	15.967	0.635	114.7	0.8617	0.0000	SURCHARGED
15 minute winter	57	10	16.535	0.035	5.1	0.0155	0.0000	OK
15 minute winter	58	10	16.270	0.070	14.7	0.0468	0.0000	OK
15 minute winter	59	11	16.027	0.152	51.0	0.2793	0.0000	OK
15 minute winter	60	10	16.150	0.050	11.3	0.0313	0.0000	OK
15 minute winter	61	12	15.804	0.563	178.9	0.7687	0.0000	SURCHARGED
15 minute winter	62	12	15.459	0.329	11.3	0.1688	0.0000	SURCHARGED
15 minute winter	63	12	15.430	0.080	11.9	0.0477	0.0000	OK
15 minute winter	64	12	15.422	0.562	204.5	0.7523	0.0000	SURCHARGED
15 minute winter	65	10	14.661	0.061	11.3	0.0384	0.0000	OK
15 minute winter	66	10	14.790	0.060	15.9	0.0532	0.0000	OK
15 minute winter	67	12	14.391	0.448	248.2	0.8569	0.0000	SURCHARGED
15 minute winter	68	10	14.145	0.045	8.5	0.0247	0.0000	OK
15 minute winter	69	12	14.048	0.448	13.6	0.2836	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	36	1.009	38	184.9	1.677	1.660	1.5833	
15 minute winter	37	20.000	38	10.8	2.632	0.111	0.0508	
15 minute winter	38	1.010	39	219.2	1.987	1.969	1.4451	
15 minute winter	39	1.011	41	219.6	2.055	1.985	1.4889	
15 minute winter	40	21.000	41	18.6	2.321	0.397	0.0507	
15 minute winter	41	1.012	43	243.6	2.719	0.663	1.0042	
15 minute summer	42	22.000	43	7.0	1.909	0.140	0.0272	
15 minute winter	43	116	44	257.8	2.590	0.741	2.0551	
30 minute winter	44	1.014	82_IN	224.1	2.837	0.989	2.7219	
15 minute winter	47A	23.000	47	2.3	0.882	0.057	0.0942	
15 minute winter	45	24.000	47	5.1	1.307	0.110	0.0487	
15 minute winter	46	25.000	47	19.6	1.119	1.438	0.0795	
15 minute winter	47	23.001	51	53.7	1.465	0.822	1.0825	
15 minute winter	48	26.000	51	5.1	0.979	0.152	0.1532	
15 minute winter	49	27.000	51	7.9	1.113	0.241	0.1016	
15 minute winter	50	28.000	51	10.8	1.521	0.239	0.0533	
15 minute winter	51	23.002	54	69.5	1.901	0.965	0.5841	
15 minute winter	52	29.000	54	8.1	1.459	0.236	0.0742	
15 minute winter	53	30.000	54	10.4	2.148	0.191	0.0446	
15 minute winter	54	23.003	56	95.6	1.489	0.662	1.8403	
15 minute winter	55	31.000	56	10.8	2.103	0.168	0.0602	
15 minute winter	56	23.004	61	112.1	1.601	1.054	0.6989	
15 minute winter	57	32.000	59	5.1	1.350	0.121	0.0609	
15 minute winter	58	33.000	59	14.7	1.956	0.346	0.0364	
15 minute winter	59	32.001	61	49.1	1.693	0.661	0.9389	
15 minute winter	60	34.000	61	11.3	1.815	0.236	0.1135	
15 minute winter	61	23.005	64	175.1	2.552	0.777	0.6583	
15 minute winter	62	35.000	64	10.8	1.009	0.556	0.1780	
15 minute winter	63	36.000	64	11.9	1.836	0.240	0.0606	
15 minute winter	64	23.006	67	202.2	3.036	0.985	1.7508	
15 minute winter	65	37.000	67	11.2	1.725	0.314	0.1276	
15 minute winter	66	38.000	67	15.8	2.596	0.272	0.0609	
15 minute winter	67	23.007	70	238.0	3.279	0.587	1.9369	
15 minute winter	68	39.000	70	8.5	1.713	0.195	0.1263	
15 minute winter	69	40.000	70	12.8	1.557	0.377	0.0860	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	70	12	14.019	0.821	255.7	1.1743	0.0000	SURCHARGED
15 minute winter	71	12	13.706	1.327	11.3	0.5960	0.0000	SURCHARGED
15 minute winter	72	12	13.663	1.636	279.6	2.8016	0.0000	SURCHARGED
15 minute winter	73	12	13.146	1.174	307.9	2.3286	0.0000	SURCHARGED
15 minute winter	74	12	12.701	0.426	43.7	0.8899	0.0000	SURCHARGED
30 minute summer	75	20	12.640	0.785	333.2	1.3349	0.0000	SURCHARGED
30 minute winter	76	50	12.501	0.678	314.1	0.9695	0.0000	SURCHARGED
15 minute winter	77	10	13.689	0.089	19.3	0.0779	0.0000	OK
15 minute winter	78	10	13.340	0.087	30.5	0.1232	0.0000	OK
15 minute winter	79	10	13.520	0.070	17.6	0.0579	0.0000	OK
15 minute winter	80	11	12.996	0.137	60.9	0.1954	0.0000	OK
15 minute winter	81	11	12.569	0.453	59.7	0.5119	0.0000	SURCHARGED
30 minute winter	82_IN	48	12.501	0.701	635.3	547.9498	0.0000	SURCHARGED
30 minute winter	82	47	12.512	0.874	66.3	1.2510	0.0000	SURCHARGED
30 minute summer	82A	18	11.468	0.034	5.8	0.0386	0.0000	OK
30 minute summer	82_OUT	18	10.233	0.033	5.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	70	23.008	72	256.2	2.323	0.425	1.4340	
15 minute winter	71	41.000	72	18.6	1.054	1.045	0.2234	
15 minute winter	72	23.009	73	279.9	2.538	2.523	1.9512	
15 minute winter	73	23.010	75	306.5	2.779	2.752	1.4789	
15 minute winter	74	42.000	75	41.2	1.386	0.573	0.4089	
30 minute summer	75	23.011	76	331.3	2.091	2.305	2.5267	
30 minute winter	76	23.012	82_IN	313.0	2.444	2.309	2.0374	
15 minute winter	77	43.000	78	19.2	1.890	0.542	0.0704	
15 minute winter	78	43.001	80	30.4	1.655	0.299	0.2010	
15 minute winter	79	44.000	80	17.5	2.287	0.380	0.0596	
15 minute winter	80	43.002	81	59.7	1.741	0.564	0.5865	
15 minute winter	81	43.003_1	82_IN	55.6	1.773	1.225	1.6419	
30 minute winter	82_IN	43.003	82	66.3	0.780	0.108	0.7216	
30 minute winter	82	1.016	82A	5.8	1.795	0.108	0.0074	
30 minute summer	82A	1.017	82_OUT	5.8	1.957	0.108	0.0405	80.3