

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	5	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	9.999
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.029	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	0.021	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	0.029	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	0.024	5.00	17.463	600	507618.488	104673.857	1.613
11	0.039	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	0.017	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	0.035	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	0.002	5.00	16.443	600	507562.215	104650.883	1.193
34	0.002	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			14.698	1350	507528.116	104663.714	1.607
42	0.013	5.00	14.512	600	507516.583	104659.538	1.062
43	0.029	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	0.012	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
53	0.018	5.00	17.449	600	507534.975	104573.772	1.149
54	0.043	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	0.027	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

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
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	0.021	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		507477.949	104706.590	2.087

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	
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	

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	5.2	2.219	2.021	0.029	0.0
1.001	1.012	40.2	12.5	2.021	2.129	0.069	0.0
2.000	5.041	89.1	3.8	0.804	2.129	0.021	0.0
1.002	1.017	40.4	18.1	2.129	2.178	0.100	0.0
3.000	1.684	29.8	5.2	1.806	2.178	0.029	0.0
4.000	1.011	40.2	4.2	1.630	2.178	0.023	0.0
1.003	1.022	72.2	35.2	2.178	2.536	0.195	0.0
5.000	4.913	86.8	3.8	1.297	2.536	0.021	0.0
1.004	1.018	72.0	39.0	2.536	3.448	0.216	0.0
6.000	5.335	94.3	4.3	1.463	3.448	0.024	0.0
7.000	6.055	107.0	7.0	1.622	3.448	0.039	0.0
1.005	1.014	71.7	50.4	3.448	3.646	0.279	0.0
1.006	1.001	70.7	50.4	3.616	3.944	0.279	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
9.000	2.451	43.3	3.1	1.882	2.248	0.017	0.0
8.002	4.162	165.5	11.2	2.248	2.823	0.062	0.0
8.003	4.160	165.4	11.2	2.823	3.452	0.062	0.0
10.000	7.030	124.2	1.4	1.152	3.452	0.008	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)
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
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

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
8.004	4.162	165.5	14.5	3.452	3.974	0.080	0.0
1.007	1.000	70.7	64.9	3.974	3.676	0.359	0.0
11.000	5.961	105.3	6.3	1.789	3.676	0.035	0.0
12.000	7.748	136.9	1.8	1.140	3.676	0.010	0.0
1.008	1.008	71.2	76.4	3.676	2.796	0.423	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	0.4	1.043	2.124	0.002	0.0
19.000	6.236	110.2	0.4	0.582	2.124	0.002	0.0
13.004	4.160	165.4	23.7	2.124	2.795	0.131	0.0
1.009	1.009	111.4	100.1	2.795	2.271	0.554	0.0
20.000	5.491	97.0	3.4	0.943	2.271	0.019	0.0
1.010	1.008	111.3	112.4	2.271	1.787	0.622	0.0
1.011	1.002	110.6	112.8	1.787	1.232	0.624	0.0
21.000	2.654	46.9	6.0	0.977	1.232	0.033	0.0
1.012	3.328	367.5	118.7	1.232	1.199	0.657	0.0
22.000	2.817	49.8	2.3	0.912	1.200	0.013	0.0
116	3.150	347.9	126.3	1.200	1.009	0.699	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	2.2	1.067	1.168	0.012	0.0
27.000	1.845	32.6	2.5	1.080	1.168	0.014	0.0
28.000	2.549	45.0	3.4	1.068	1.168	0.019	0.0
23.002	1.813	72.1	25.3	1.168	1.200	0.140	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

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)
23.003	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	14.292	0.600	11.434	9.913	1.521	9.4	150	8.20	50.0
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)
23.003	2.043	144.4	38.9	1.200	1.207	0.215	0.0
31.000	3.636	64.2	3.4	0.894	1.207	0.019	0.0
23.004	1.505	106.4	45.4	1.207	1.327	0.251	0.0
32.000	2.370	41.9	1.6	0.993	1.332	0.009	0.0
33.000	2.407	42.5	4.9	1.186	1.332	0.027	0.0
32.001	1.870	74.3	16.4	1.332	1.327	0.091	0.0
34.000	2.696	47.6	3.6	1.001	1.327	0.020	0.0
23.005	3.187	225.3	68.8	1.327	1.338	0.381	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	79.3	1.338	1.200	0.439	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	94.9	1.200	1.200	0.525	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	101.9	1.229	1.907	0.564	0.0
41.000	1.005	17.8	3.6	2.252	1.907	0.020	0.0
23.009	1.005	111.0	111.3	1.907	1.578	0.616	0.0
23.010	1.008	111.4	121.1	1.578	1.256	0.670	0.0
42.000	1.805	71.8	13.9	1.379	1.256	0.077	0.0
23.011	0.904	143.7	139.1	1.256	1.327	0.770	0.0
43.000	2.000	35.3	6.1	1.002	1.200	0.034	0.0
43.001	2.558	101.7	9.9	1.200	1.315	0.055	0.0
44.000	2.607	46.1	5.6	0.999	1.315	0.031	0.0
43.002	2.666	106.0	19.7	1.315	1.159	0.109	0.0
43.003	3.845	611.6	307.4	1.250	1.412	1.701	0.0
1.016	3.034	53.6	307.4	1.712	1.471	1.701	0.0
1.017	3.306	58.4	307.4	1.471	1.937	1.701	0.0
23.012	0.853	135.6	139.1	1.327	1.250	0.770	0.0
1.014	2.052	226.6	126.3	1.009	1.325	0.699	0.0
43.003_1	1.142	45.4	19.7	1.159	1.475	0.109	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
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

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
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

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)
1.009	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
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

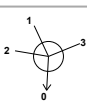
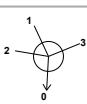
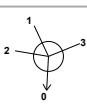
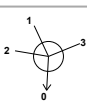
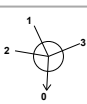
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.009	36	1350	Manhole	Adoptable	38	1350	Manhole	Adoptable
20.000	37	600	Manhole	Adoptable	38	1350	Manhole	Adoptable
1.010	38	1350	Manhole	Adoptable	39	1350	Manhole	Adoptable
1.011	39	1350	Manhole	Adoptable	41	1350	Manhole	Adoptable
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
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

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)
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	14.292	9.4	150	PH1	13.055	11.434	1.471	12.000	9.913	1.937
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
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				
2	507631.708	104722.863	16.136	2.246	1200		0 1.000 13.950 225		
3	507621.042	104706.180	16.554	0.954	600		0 1.000 13.890 225		
4	507618.383	104712.694	16.143	2.354	1200		0 2.000 15.600 150		
5	507601.117	104712.260	16.106	1.956	600		1 2.000 13.864 150		
6	507607.826	104720.578	15.674	1.855	1200		2 1.001 13.789 225		
7	507612.603	104710.334	16.154	2.478	1200		0 3.000 14.150 150		
8	507606.341	104702.119	16.597	1.447	600		0 4.000 13.819 225		
							1 4.000 13.751 225		
							2 3.000 13.826 150		
							3 1.002 13.751 225		
							0 1.003 13.676 300		
							0 5.000 15.150 150		

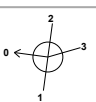
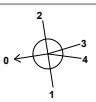
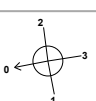
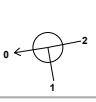
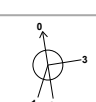
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
9	507612.139	104701.894	16.476	2.836			1 5.000 2 1.003 0 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 7.000 2 6.000 3 1.004 0 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 1.005 0 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 8.000 0 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 9.000 2 8.001 0 8.002	15.897 15.822 15.822	150 225 225
18	507615.079	104645.832	18.138	3.048	1200		1 8.002 0 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 10.000 2 8.003 0 8.004	14.324 14.249 14.249	150 225 225
21	507603.830	104656.445	17.716	4.274	1200		1 8.004 2 1.006 0 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
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 12.000 2 11.000 3 1.007 0 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 13.000 0 13.001	15.938 15.863	150 225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
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 1.009	13.373 13.297 13.223	225 300 375
37	507552.988	104653.237	15.943	1.093	600		0	20.000	14.850	150
38	507554.450	104657.960	15.824	2.646	1350		1 2 0	20.000 1.009 1.010	13.403 13.178 13.178	150 375 375
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
41	507528.116	104663.714	14.698	1.607	1350		1 2 0	21.000 1.011 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 2 0	22.000 1.012 116	12.946 12.722 12.721	150 375 375
44	507517.742	104686.139	13.500	1.384	1350		1 0	116 1.014	12.116 12.116	375 375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
47A	507592.907	104580.058	18.463	1.063	600	 0	23.000	17.400	150
45	507579.819	104582.938	18.261	1.111	600	 0	24.000	17.150	150
46	507578.259	104571.333	18.172	1.462	600	 0	25.000	16.710	150
47	507578.886	104576.022	18.032	1.425	1200	 1 2 3 0	25.000 24.000 23.000 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 2 3 4 0	28.000 27.000 26.000 23.001 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 2 3 0	30.000 29.000 23.002 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 2 0	31.000 23.003 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
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 2 0	33.000 32.000 32.001	15.950 15.950 15.875	150 150 225
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 2 3 0	34.000 32.001 23.004 23.005	15.391 15.316 15.241 15.241	150 225 300 300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
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
64	507497.276	104580.534	16.498	1.638	1200	 1	36.000	15.010	150
						2	35.000	15.010	150
						3	23.005	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
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
72	507487.730	104634.130	14.309	2.282	1350	 1	41.000	12.252	150
						2	23.008	12.027	375
						0	23.009	12.027	375
73	507488.700	104651.793	13.925	1.953	1350	 1	23.009	11.972	375
74	507476.020	104653.812	13.879	1.604	1200	 0	42.000	12.275	225
						1	42.000	12.080	225
75	507481.029	104662.790	13.561	1.706	1350	 2	23.010	11.930	375
						0	23.011	11.855	450
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	43.000	13.600	150
						1	43.000	13.328	150
78	507554.257	104691.140	14.678	1.425	1200	 0	43.001	13.253	225
						0	44.000	13.450	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
80	507551.152	104701.054	14.399	1.540	1200		1 44.000	12.934	150
							2 43.001	12.859	225
							0 43.002	12.859	225
81	507533.931	104695.660	13.500	1.384	1200		1 43.002	12.116	225
							0 43.003	12.116	225
82_IN	507491.700	104690.559	13.500	1.700			1 43.003	11.800	225
							2 23.012	11.800	450
							3 1.014	11.800	375
							0 43.003	11.800	450
82	507488.730	104694.011	13.500	1.862	1350		1 43.003	11.638	450
							0 1.016	11.638	150
82A	507487.246	104695.735	13.055	1.621	1200		1 1.016	11.434	150
							0 1.017	11.434	150
82_OUT	507477.949	104706.590	12.000	2.087			1 1.017	9.913	150

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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	40	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	5.0	Time to half empty (mins)	15

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
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	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	626.5	0.0	0.500	847.1	0.0	1.000	1086.2	0.0	1.500	1343.7	0.0
0.100	669.1	0.0	0.600	893.5	0.0	1.100	1136.2	0.0	1.600	1397.4	0.0
0.200	712.5	0.0	0.700	940.5	0.0	1.200	1187.0	0.0	1.700	1451.8	0.0
0.300	756.7	0.0	0.800	988.3	0.0	1.300	1238.5	0.0	1.701	0.0	0.0
0.400	801.5	0.0	0.900	1036.9	0.0	1.400	1290.7	0.0	1.900	0.0	0.0

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)
2.000	0.0	0.0	2.200	0.0	0.0	2.400	0.0	0.0			
2.100	0.0	0.0	2.300	0.0	0.0	2.500	0.0	0.0			

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	22	14.112	0.162	35.2	10.6671	0.0000	OK
30 minute summer	2	19	14.161	0.271	32.8	0.4026	0.0000	SURCHARGED
30 minute summer	3	18	15.629	0.029	7.4	0.0211	0.0000	OK
30 minute summer	4	19	14.192	0.403	31.5	0.4906	0.0000	SURCHARGED
30 minute summer	5	19	14.226	0.076	10.3	0.0438	0.0000	OK
30 minute summer	6	19	14.200	0.381	8.1	0.5248	0.0000	SURCHARGED
30 minute summer	7	19	14.195	0.519	51.4	0.7675	0.0000	SURCHARGED
30 minute summer	8	18	15.180	0.030	7.4	0.0169	0.0000	OK
30 minute summer	9	19	14.189	0.549	51.4	0.0000	0.0000	SURCHARGED
30 minute summer	10	18	15.880	0.030	8.5	0.0175	0.0000	OK
30 minute summer	11	18	15.586	0.036	13.8	0.0260	0.0000	OK
30 minute summer	12	19	14.167	0.644	58.8	0.7281	0.0000	SURCHARGED
30 minute summer	13	19	14.139	0.646	60.2	0.7305	0.0000	SURCHARGED
30 minute summer	14	18	17.265	0.065	7.4	0.0355	0.0000	OK
30 minute summer	15	18	17.067	0.061	15.9	0.0863	0.0000	OK
30 minute summer	16	18	16.449	0.039	6.0	0.0178	0.0000	OK
30 minute summer	17	18	15.881	0.059	21.9	0.0672	0.0000	OK
30 minute summer	18	18	15.148	0.058	21.9	0.0654	0.0000	OK
30 minute summer	19	18	16.866	0.016	2.8	0.0066	0.0000	OK
30 minute summer	20	18	14.312	0.063	28.2	0.0742	0.0000	OK
30 minute summer	21	19	14.099	0.657	77.4	0.7429	0.0000	SURCHARGED
30 minute summer	22	18	15.584	0.034	12.4	0.0221	0.0000	OK
30 minute summer	23	18	16.266	0.016	3.5	0.0069	0.0000	OK
30 minute summer	24	19	14.015	0.615	98.7	0.7551	0.0000	SURCHARGED
30 minute summer	25	18	16.278	0.028	3.2	0.0121	0.0000	OK
30 minute summer	26	18	15.896	0.033	3.2	0.0368	0.0000	OK
30 minute summer	27	18	16.128	0.048	7.8	0.0319	0.0000	OK
30 minute summer	28	18	16.615	0.015	1.4	0.0061	0.0000	OK
30 minute summer	29	18	15.776	0.083	25.9	0.1398	0.0000	OK
30 minute summer	30	18	15.880	0.030	3.5	0.0134	0.0000	OK
30 minute summer	31	18	16.030	0.030	5.3	0.0176	0.0000	OK
30 minute summer	32	17	15.294	0.100	45.0	0.1497	0.0000	OK
30 minute summer	33	17	15.260	0.010	0.7	0.0033	0.0000	OK
30 minute summer	34	17	15.859	0.009	0.7	0.0029	0.0000	OK
30 minute summer	35	18	14.103	0.093	46.4	0.1050	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)
30 minute winter	1	1.000	2	-26.4	-0.863	-0.647	0.3381	
30 minute summer	2	1.001	4	28.3	0.870	0.702	0.6666	
30 minute summer	3	2.000	4	7.4	2.486	0.083	0.0704	
30 minute summer	4	1.002	7	33.6	1.011	0.830	0.2483	
30 minute summer	5	3.000	7	10.2	1.355	0.343	0.1543	
30 minute summer	6	4.000	7	9.0	0.569	0.224	0.4495	
30 minute summer	7	1.003	9	49.1	0.942	0.680	0.5953	
30 minute summer	8	5.000	9	7.4	2.686	0.085	0.0582	
30 minute summer	9	1.004	12	52.9	0.770	0.735	1.9466	
30 minute summer	10	6.000	12	8.5	2.456	0.090	0.0793	
30 minute summer	11	7.000	12	13.8	3.090	0.129	0.0550	
30 minute summer	12	1.005	13	60.2	0.855	0.840	0.5034	
30 minute summer	13	1.006	21	61.2	0.911	0.866	0.8786	
30 minute summer	14	8.000	15	7.4	1.081	0.328	0.0414	
30 minute summer	15	8.001	17	15.9	1.866	0.155	0.2608	
30 minute summer	16	9.000	17	6.0	1.675	0.139	0.0313	
30 minute summer	17	8.002	18	21.9	2.669	0.132	0.0601	
30 minute summer	18	8.003	20	21.9	2.570	0.132	0.0717	
30 minute summer	19	10.000	20	2.8	2.878	0.023	0.0051	
30 minute summer	20	8.004	21	28.2	1.668	0.170	0.1784	
30 minute summer	21	1.007	24	78.0	1.108	1.103	0.7241	
30 minute summer	22	11.000	24	12.4	2.958	0.118	0.0598	
30 minute summer	23	12.000	24	3.5	2.268	0.026	0.0431	
30 minute summer	24	1.008	36	99.1	1.407	1.391	1.7502	
30 minute summer	25	13.000	26	3.2	1.484	0.067	0.0093	
30 minute summer	26	13.001	29	3.2	0.397	0.045	0.0782	
30 minute summer	27	14.000	29	7.8	1.674	0.194	0.0289	
30 minute summer	28	15.000	29	1.4	1.499	0.021	0.0056	
30 minute summer	29	13.002	32	25.9	1.712	0.280	0.2413	
30 minute summer	30	16.000	32	3.5	1.393	0.086	0.0279	
30 minute summer	31	17.000	32	5.3	2.157	0.081	0.0134	
30 minute summer	32	13.003	35	45.0	2.859	0.366	0.3460	
30 minute summer	33	18.000	35	0.7	1.286	0.009	0.0059	
30 minute summer	34	19.000	35	0.7	1.643	0.006	0.0037	
30 minute summer	35	13.004	36	46.2	2.320	0.280	0.1759	

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	36	18	13.759	0.536	143.3	0.7676	0.0000	SURCHARGED
30 minute summer	37	18	14.877	0.027	6.7	0.0167	0.0000	OK
30 minute summer	38	18	13.641	0.463	166.3	0.8346	0.0000	SURCHARGED
30 minute summer	39	19	13.492	0.355	166.7	0.5150	0.0000	OK
30 minute summer	40	18	13.806	0.056	11.7	0.0483	0.0000	OK
30 minute summer	41	19	13.313	0.222	178.3	0.3171	0.0000	OK
30 minute summer	42	18	13.482	0.032	4.6	0.0171	0.0000	OK
30 minute summer	43	19	12.941	0.220	192.3	0.3958	0.0000	OK
720 minute winter	44	705	12.726	0.610	23.9	0.8734	0.0000	SURCHARGED
30 minute summer	47A	18	17.419	0.019	1.4	0.0069	0.0000	OK
30 minute summer	45	18	17.177	0.027	3.2	0.0119	0.0000	OK
30 minute summer	46	18	16.833	0.123	12.4	0.0941	0.0000	OK
30 minute summer	47	18	16.722	0.115	33.6	0.2058	0.0000	OK
30 minute summer	48	18	16.736	0.036	4.2	0.0173	0.0000	OK
30 minute summer	49	18	16.440	0.040	5.0	0.0203	0.0000	OK
30 minute summer	50	18	16.539	0.039	6.7	0.0233	0.0000	OK
30 minute summer	51	18	16.280	0.152	49.5	0.1719	0.0000	OK
30 minute summer	52	18	16.191	0.041	5.0	0.0208	0.0000	OK
30 minute summer	53	18	16.338	0.038	6.4	0.0225	0.0000	OK
30 minute summer	54	18	15.934	0.162	76.0	0.2761	0.0000	OK
30 minute summer	55	18	16.233	0.033	6.7	0.0212	0.0000	OK
30 minute summer	56	18	15.573	0.241	88.7	0.3264	0.0000	OK
30 minute summer	57	18	16.529	0.029	3.2	0.0126	0.0000	OK
30 minute summer	58	18	16.254	0.054	9.6	0.0372	0.0000	OK
30 minute summer	59	17	15.980	0.105	32.3	0.1927	0.0000	OK
30 minute summer	60	17	16.140	0.040	7.1	0.0250	0.0000	OK
30 minute summer	61	18	15.445	0.204	134.5	0.2780	0.0000	OK
30 minute summer	62	18	15.196	0.066	7.1	0.0341	0.0000	OK
30 minute summer	63	16	15.391	0.041	7.4	0.0241	0.0000	OK
30 minute summer	64	18	15.077	0.217	154.8	0.2903	0.0000	OK
30 minute summer	65	18	14.647	0.047	7.1	0.0297	0.0000	OK
30 minute summer	66	18	14.775	0.045	9.9	0.0406	0.0000	OK
30 minute summer	67	18	14.145	0.202	184.7	0.3860	0.0000	OK
30 minute summer	68	18	14.137	0.037	5.3	0.0201	0.0000	OK
30 minute summer	69	18	13.657	0.057	8.5	0.0359	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)
30 minute summer	36	1.009	38	143.6	1.302	1.289	1.5833	
30 minute summer	37	20.000	38	6.7	2.552	0.069	0.0487	
30 minute summer	38	1.010	39	166.1	1.506	1.493	1.4304	
30 minute summer	39	1.011	41	167.6	1.843	1.515	1.3086	
30 minute summer	40	21.000	41	11.7	2.083	0.249	0.0355	
30 minute summer	41	1.012	43	178.8	2.658	0.486	0.7405	
30 minute summer	42	22.000	43	4.6	1.708	0.092	0.0175	
30 minute summer	43	116	44	192.9	2.497	0.554	1.5580	
720 minute winter	44	1.014	82_IN	23.3	1.098	0.103	2.7219	
30 minute summer	47A	23.000	47	1.4	0.906	0.035	0.0371	
30 minute summer	45	24.000	47	3.2	1.332	0.069	0.0205	
30 minute summer	46	25.000	47	12.4	0.868	0.911	0.0673	
30 minute summer	47	23.001	51	33.6	1.371	0.515	0.7447	
30 minute summer	48	26.000	51	4.2	1.042	0.126	0.0888	
30 minute summer	49	27.000	51	5.0	1.094	0.153	0.0379	
30 minute summer	50	28.000	51	6.7	1.496	0.149	0.0299	
30 minute summer	51	23.002	54	49.4	1.845	0.686	0.3932	
30 minute summer	52	29.000	54	5.0	1.325	0.147	0.0237	
30 minute summer	53	30.000	54	6.4	1.950	0.118	0.0135	
30 minute summer	54	23.003	56	76.0	1.512	0.526	1.2983	
30 minute summer	55	31.000	56	6.7	2.062	0.104	0.0389	
30 minute summer	56	23.004	61	88.4	1.591	0.831	0.5532	
30 minute summer	57	32.000	59	3.2	1.347	0.076	0.0241	
30 minute summer	58	33.000	59	9.6	1.805	0.226	0.0235	
30 minute summer	59	32.001	61	32.3	1.666	0.435	0.5705	
30 minute summer	60	34.000	61	7.1	1.818	0.149	0.0466	
30 minute summer	61	23.005	64	134.3	2.546	0.596	0.4928	
30 minute summer	62	35.000	64	7.1	0.969	0.367	0.0764	
30 minute summer	63	36.000	64	7.4	1.842	0.150	0.0250	
30 minute summer	64	23.006	67	154.2	3.018	0.751	1.2691	
30 minute summer	65	37.000	67	7.1	1.534	0.199	0.0500	
30 minute summer	66	38.000	67	9.9	2.328	0.170	0.0225	
30 minute summer	67	23.007	70	184.8	3.296	0.456	0.9847	
30 minute summer	68	39.000	70	5.3	1.634	0.122	0.0372	
30 minute summer	69	40.000	70	8.5	1.494	0.250	0.0278	

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	70	19	13.406	0.208	198.6	0.2979	0.0000	OK
30 minute summer	71	19	13.038	0.659	7.1	0.2957	0.0000	SURCHARGED
30 minute summer	72	19	13.009	0.982	213.3	1.6805	0.0000	SURCHARGED
720 minute winter	73	705	12.726	0.754	22.8	1.4966	0.0000	SURCHARGED
720 minute winter	74	705	12.726	0.451	2.6	0.9437	0.0000	SURCHARGED
720 minute winter	75	705	12.726	0.871	25.8	1.4821	0.0000	SURCHARGED
720 minute winter	76	705	12.726	0.903	25.6	1.2926	0.0000	SURCHARGED
30 minute summer	77	18	13.666	0.066	12.0	0.0576	0.0000	OK
30 minute summer	78	18	13.321	0.067	19.4	0.0963	0.0000	OK
30 minute summer	79	18	13.503	0.053	11.0	0.0440	0.0000	OK
30 minute summer	80	18	12.952	0.093	38.5	0.1334	0.0000	OK
720 minute winter	81	705	12.726	0.610	3.8	0.6903	0.0000	SURCHARGED
720 minute winter	82_IN	705	12.726	0.926	87.3	772.8673	0.0000	SURCHARGED
600 minute winter	82	600	12.727	1.089	56.5	1.5578	0.0000	SURCHARGED
120 minute summer	82A	1202	11.467	0.033	5.8	0.0370	0.0000	OK
60 minute winter	82_OUT	1030	9.945	0.032	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)
30 minute summer	70	23.008	72	196.4	2.013	0.325	1.1252	
30 minute summer	71	41.000	72	8.4	0.700	0.474	0.2234	
30 minute summer	72	23.009	73	214.5	1.945	1.934	1.9512	
720 minute winter	73	23.010	75	22.6	0.697	0.203	1.4789	
720 minute winter	74	42.000	75	2.6	0.782	0.036	0.4089	
720 minute winter	75	23.011	76	25.6	0.423	0.178	2.5267	
720 minute winter	76	23.012	82_IN	25.5	0.864	0.188	2.0374	
30 minute summer	77	43.000	78	12.0	1.705	0.339	0.0489	
30 minute summer	78	43.001	80	19.4	1.525	0.191	0.1327	
30 minute summer	79	44.000	80	11.0	2.045	0.239	0.0419	
30 minute summer	80	43.002	81	38.5	1.690	0.363	0.4090	
720 minute winter	81	43.003_1	82_IN	3.6	0.619	0.080	1.6419	
720 minute winter	82_IN	43.003	82	-58.2	0.703	-0.095	0.7216	
600 minute winter	82	1.016	82A	5.8	1.829	0.108	0.0072	
120 minute summer	82A	1.017	82_OUT	5.8	2.081	0.099	0.0398	504.9

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	22	15.292	1.342	82.6	27.7082	0.0000	SURCHARGED
30 minute winter	2	22	15.288	1.398	69.2	2.0792	0.0000	SURCHARGED
30 minute summer	3	18	15.638	0.038	12.6	0.0274	0.0000	OK
30 minute winter	4	22	15.250	1.461	50.2	1.7764	0.0000	SURCHARGED
30 minute winter	5	22	15.252	1.102	15.7	0.6380	0.0000	SURCHARGED
30 minute winter	6	22	15.216	1.397	12.4	1.9261	0.0000	SURCHARGED
30 minute winter	7	22	15.211	1.535	61.8	2.2694	0.0000	SURCHARGED
30 minute summer	8	18	15.192	0.042	12.6	0.0242	0.0000	OK
30 minute winter	9	22	15.176	1.536	68.3	0.0000	0.0000	SURCHARGED
30 minute summer	10	18	15.889	0.039	14.4	0.0228	0.0000	OK
30 minute summer	11	18	15.602	0.052	23.3	0.0377	0.0000	OK
30 minute winter	12	22	15.056	1.533	87.6	1.7340	0.0000	SURCHARGED
30 minute winter	13	22	14.969	1.476	89.4	1.6699	0.0000	SURCHARGED
30 minute summer	14	18	17.290	0.090	12.6	0.0495	0.0000	OK
30 minute summer	15	18	17.087	0.081	27.0	0.1138	0.0000	OK
30 minute summer	16	18	16.463	0.053	10.2	0.0237	0.0000	OK
30 minute summer	17	18	15.902	0.080	37.2	0.0906	0.0000	OK
30 minute summer	18	18	15.167	0.077	37.3	0.0874	0.0000	OK
30 minute summer	19	18	16.870	0.020	4.8	0.0080	0.0000	OK
30 minute summer	20	19	14.898	0.649	47.8	0.7690	0.0000	SURCHARGED
30 minute winter	21	22	14.846	1.404	117.0	1.5885	0.0000	SURCHARGED
30 minute summer	22	18	15.596	0.046	20.9	0.0296	0.0000	OK
30 minute summer	23	18	16.270	0.020	6.0	0.0090	0.0000	OK
30 minute summer	24	19	14.698	1.298	128.8	1.5928	0.0000	SURCHARGED
30 minute summer	25	18	16.287	0.037	5.4	0.0160	0.0000	OK
30 minute summer	26	18	15.905	0.042	5.4	0.0474	0.0000	OK
30 minute summer	27	18	16.146	0.066	13.2	0.0433	0.0000	OK
30 minute summer	28	18	16.619	0.019	2.4	0.0076	0.0000	OK
30 minute summer	29	18	15.808	0.115	43.7	0.1925	0.0000	OK
30 minute summer	30	18	15.889	0.039	6.0	0.0171	0.0000	OK
30 minute summer	31	17	16.038	0.038	9.0	0.0218	0.0000	OK
30 minute summer	32	18	15.327	0.133	76.2	0.1998	0.0000	OK
30 minute summer	33	18	15.263	0.013	1.2	0.0042	0.0000	OK
30 minute summer	34	18	15.861	0.011	1.2	0.0037	0.0000	OK
30 minute summer	35	19	14.502	0.492	77.8	0.5563	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)
30 minute winter	1	1.000	2	-67.4	-1.695	-1.653	0.3855	
30 minute winter	2	1.001	4	-48.5	-1.220	-1.206	0.6666	
30 minute summer	3	2.000	4	12.6	2.434	0.141	0.0742	
30 minute winter	4	1.002	7	44.3	1.170	1.096	0.2483	
30 minute winter	5	3.000	7	14.0	1.345	0.469	0.2050	
30 minute winter	6	4.000	7	10.5	0.563	0.262	0.4495	
30 minute winter	7	1.003	9	63.7	0.969	0.882	0.5953	
30 minute summer	8	5.000	9	12.6	2.613	0.145	0.0629	
30 minute winter	9	1.004	12	71.6	1.016	0.994	1.9466	
30 minute summer	10	6.000	12	14.4	2.348	0.153	0.0838	
30 minute summer	11	7.000	12	23.2	2.981	0.217	0.0608	
30 minute winter	12	1.005	13	89.4	1.270	1.248	0.5034	
30 minute winter	13	1.006	21	92.5	1.314	1.308	0.8786	
30 minute summer	14	8.000	15	12.6	1.223	0.559	0.0623	
30 minute summer	15	8.001	17	27.0	2.123	0.263	0.3888	
30 minute summer	16	9.000	17	10.2	1.926	0.235	0.0463	
30 minute summer	17	8.002	18	37.3	3.101	0.225	0.0904	
30 minute summer	18	8.003	20	37.0	2.622	0.224	0.2180	
30 minute summer	19	10.000	20	4.8	3.055	0.039	0.0500	
30 minute summer	20	8.004	21	43.5	1.760	0.263	0.2910	
30 minute winter	21	1.007	24	119.0	1.691	1.684	0.7241	
30 minute summer	22	11.000	24	20.9	2.835	0.198	0.0643	
30 minute summer	23	12.000	24	6.0	2.276	0.044	0.0442	
30 minute summer	24	1.008	36	132.7	1.885	1.864	1.7502	
30 minute summer	25	13.000	26	5.4	1.708	0.112	0.0137	
30 minute summer	26	13.001	29	5.4	0.440	0.076	0.1178	
30 minute summer	27	14.000	29	13.2	1.905	0.329	0.0430	
30 minute summer	28	15.000	29	2.4	1.550	0.036	0.0151	
30 minute summer	29	13.002	32	43.8	1.994	0.474	0.3571	
30 minute summer	30	16.000	32	6.0	1.462	0.147	0.0551	
30 minute summer	31	17.000	32	9.0	2.186	0.137	0.0266	
30 minute summer	32	13.003	35	75.4	2.887	0.613	0.6870	
30 minute summer	33	18.000	35	1.2	1.231	0.016	0.0633	
30 minute summer	34	19.000	35	1.2	1.643	0.011	0.0425	
30 minute summer	35	13.004	36	73.3	2.313	0.443	0.2535	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	36	19	14.291	1.068	197.2	1.5283	0.0000	SURCHARGED
30 minute summer	37	18	14.884	0.034	11.4	0.0217	0.0000	OK
30 minute summer	38	20	14.079	0.901	232.4	1.6240	0.0000	SURCHARGED
30 minute summer	39	20	13.809	0.672	230.8	0.9741	0.0000	SURCHARGED
30 minute summer	40	17	13.826	0.076	19.7	0.0662	0.0000	OK
30 minute summer	41	20	13.510	0.419	249.1	0.5995	0.0000	SURCHARGED
30 minute summer	42	16	13.490	0.040	7.8	0.0213	0.0000	OK
30 minute summer	43	20	13.226	0.505	271.7	0.9091	0.0000	SURCHARGED
960 minute winter	44	945	13.166	1.050	29.2	1.5026	0.0000	SURCHARGED
30 minute summer	47A	18	17.425	0.025	2.4	0.0090	0.0000	OK
30 minute summer	45	18	17.185	0.035	5.4	0.0154	0.0000	OK
30 minute summer	46	20	17.155	0.445	20.9	0.3389	0.0000	SURCHARGED
30 minute summer	47	20	17.092	0.485	56.3	0.8694	0.0000	SURCHARGED
30 minute summer	48	20	16.853	0.153	7.2	0.0734	0.0000	SURCHARGED
30 minute summer	49	20	16.850	0.450	8.4	0.2297	0.0000	SURCHARGED
30 minute summer	50	20	16.856	0.356	11.4	0.2118	0.0000	SURCHARGED
30 minute summer	51	20	16.839	0.711	76.5	0.8040	0.0000	SURCHARGED
30 minute summer	52	20	16.555	0.405	8.4	0.2041	0.0000	SURCHARGED
30 minute summer	53	20	16.558	0.258	10.8	0.1536	0.0000	SURCHARGED
30 minute summer	54	20	16.543	0.771	108.3	1.3141	0.0000	SURCHARGED
30 minute summer	55	20	16.298	0.098	11.4	0.0634	0.0000	OK
30 minute summer	56	20	16.286	0.954	120.5	1.2950	0.0000	SURCHARGED
30 minute summer	57	18	16.536	0.036	5.4	0.0160	0.0000	OK
30 minute summer	58	20	16.375	0.175	16.2	0.1200	0.0000	SURCHARGED
30 minute summer	59	20	16.336	0.461	54.4	0.8473	0.0000	SURCHARGED
30 minute summer	60	19	16.156	0.056	12.0	0.0354	0.0000	OK
30 minute summer	61	20	16.111	0.870	185.5	1.1873	0.0000	SURCHARGED
30 minute summer	62	20	15.747	0.617	12.0	0.3165	0.0000	SURCHARGED
30 minute summer	63	20	15.733	0.383	12.6	0.2272	0.0000	SURCHARGED
30 minute summer	64	20	15.710	0.850	207.6	1.1383	0.0000	SURCHARGED
30 minute summer	65	20	14.668	0.068	12.0	0.0428	0.0000	OK
30 minute summer	66	19	14.797	0.067	16.8	0.0596	0.0000	OK
30 minute summer	67	20	14.636	0.693	251.0	1.3267	0.0000	SURCHARGED
30 minute summer	68	20	14.272	0.172	9.0	0.0944	0.0000	SURCHARGED
30 minute summer	69	20	14.278	0.678	14.4	0.4294	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)
30 minute summer	36	1.009	38	195.4	1.772	1.754	1.5833	
30 minute summer	37	20.000	38	11.4	2.326	0.117	0.0511	
30 minute summer	38	1.010	39	229.6	2.082	2.062	1.4451	
30 minute summer	39	1.011	41	229.2	2.123	2.072	1.6418	
30 minute summer	40	21.000	41	19.8	2.346	0.423	0.0785	
30 minute summer	41	1.012	43	246.5	2.671	0.671	1.2140	
30 minute summer	42	22.000	43	7.8	1.906	0.158	0.0689	
30 minute summer	43	116	44	264.7	2.535	0.761	2.2208	
960 minute winter	44	1.014	82_IN	29.0	1.111	0.128	2.7219	
30 minute summer	47A	23.000	47	2.4	0.895	0.061	0.1425	
30 minute summer	45	24.000	47	5.4	1.287	0.117	0.0721	
30 minute summer	46	25.000	47	20.5	1.170	1.508	0.0833	
30 minute summer	47	23.001	51	51.9	1.451	0.795	1.2108	
30 minute summer	48	26.000	51	7.2	1.072	0.217	0.2530	
30 minute summer	49	27.000	51	7.5	1.130	0.229	0.1040	
30 minute summer	50	28.000	51	11.3	1.535	0.251	0.0825	
30 minute summer	51	23.002	54	67.9	1.972	0.942	0.5841	
30 minute summer	52	29.000	54	9.2	1.377	0.270	0.1103	
30 minute summer	53	30.000	54	10.8	2.040	0.198	0.0722	
30 minute summer	54	23.003	56	101.0	1.523	0.699	1.8403	
30 minute summer	55	31.000	56	11.4	2.002	0.177	0.0831	
30 minute summer	56	23.004	61	116.2	1.677	1.092	0.6989	
30 minute summer	57	32.000	59	5.4	1.316	0.129	0.1048	
30 minute summer	58	33.000	59	16.2	1.979	0.381	0.0778	
30 minute summer	59	32.001	61	50.5	1.662	0.680	1.0932	
30 minute summer	60	34.000	61	12.0	1.811	0.252	0.1181	
30 minute summer	61	23.005	64	176.0	2.548	0.781	0.6583	
30 minute summer	62	35.000	64	11.0	0.974	0.570	0.1780	
30 minute summer	63	36.000	64	12.0	1.831	0.242	0.0784	
30 minute summer	64	23.006	67	203.3	2.987	0.991	1.7508	
30 minute summer	65	37.000	67	12.2	1.696	0.342	0.1370	
30 minute summer	66	38.000	67	17.1	2.573	0.293	0.0667	
30 minute summer	67	23.007	70	244.5	3.301	0.603	1.9369	
30 minute summer	68	39.000	70	8.9	1.705	0.206	0.2019	
30 minute summer	69	40.000	70	12.7	1.554	0.374	0.0860	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	70	20	14.247	1.049	262.0	1.5011	0.0000	SURCHARGED
30 minute summer	71	20	13.919	1.540	12.0	0.6915	0.0000	SURCHARGED
30 minute summer	72	20	13.873	1.846	287.3	3.1601	0.0000	SURCHARGED
30 minute summer	73	20	13.326	1.354	314.8	2.6870	0.0000	SURCHARGED
960 minute winter	74	945	13.166	0.891	3.2	1.8629	0.0000	SURCHARGED
960 minute winter	75	945	13.166	1.311	31.5	2.2300	0.0000	SURCHARGED
960 minute winter	76	945	13.166	1.343	31.4	1.9218	0.0000	SURCHARGED
30 minute summer	77	18	13.693	0.093	20.3	0.0809	0.0000	OK
30 minute summer	78	17	13.343	0.090	32.9	0.1286	0.0000	OK
30 minute summer	79	17	13.521	0.071	18.5	0.0582	0.0000	OK
960 minute winter	80	945	13.166	0.307	4.6	0.4390	0.0000	SURCHARGED
960 minute winter	81	945	13.166	1.050	4.6	1.1876	0.0000	SURCHARGED
960 minute winter	82_IN	945	13.166	1.366	77.8	1283.6580	0.0000	SURCHARGED
1440 minute winter	82	1350	13.169	1.531	67.4	2.1911	0.0000	SURCHARGED
30 minute summer	82A	1418	11.467	0.033	5.8	0.0370	0.0000	OK
30 minute summer	82_OUT	1414	9.945	0.032	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)
30 minute summer	70	23.008	72	262.8	2.383	0.436	1.4340	
30 minute summer	71	41.000	72	12.3	0.707	0.693	0.2234	
30 minute summer	72	23.009	73	287.6	2.608	2.592	1.9512	
30 minute summer	73	23.010	75	313.1	2.839	2.811	1.4789	
960 minute winter	74	42.000	75	3.1	0.719	0.043	0.4089	
960 minute winter	75	23.011	76	31.4	0.437	0.218	2.5267	
960 minute winter	76	23.012	82_IN	31.3	0.867	0.231	2.0374	
30 minute summer	77	43.000	78	20.3	1.914	0.574	0.0737	
30 minute summer	78	43.001	80	32.9	1.672	0.324	0.2730	
30 minute summer	79	44.000	80	18.6	2.255	0.403	0.0939	
960 minute winter	80	43.002	81	4.6	0.826	0.043	0.7177	
960 minute winter	81	43.003_1	82_IN	4.5	0.625	0.098	1.6419	
960 minute winter	82_IN	43.003	82	64.7	0.781	0.106	0.7216	
1440 minute winter	82	1.016	82A	5.8	1.831	0.108	0.0072	
30 minute summer	82A	1.017	82_OUT	5.8	2.081	0.099	0.0398	458.9

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	5	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	9.999
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

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	0.025	5.00	18.286	1200	507604.546	104544.871	1.429
4	0.028	5.00	18.220	1200	507598.499	104519.863	1.220
5	0.055	5.00	18.032	1200	507604.600	104519.441	1.642
6	0.024	5.00	17.985	600	507592.416	104481.388	1.285
7	0.000	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	0.013	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	0.000		18.203	1200	507612.443	104433.169	2.169
12	0.002	5.00	18.220	600	507611.772	104416.783	0.770
13	0.012	5.00	18.062	1200	507616.249	104415.101	2.104
14			17.995	1200	507614.301	104409.919	2.060
15	0.015	5.00	18.104	600	507609.485	104410.317	1.254
16	0.030	5.00	17.935	1200	507610.376	104406.067	2.023
17	0.071	5.00	17.589	600	507554.582	104428.791	1.389
18	0.040	5.00	17.398	600	507550.025	104413.026	1.298
19	0.095	5.00	17.317	1200	507558.318	104415.662	1.500
21A	0.018	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	0.035	5.00	17.923	1200	507518.841	104520.178	1.373
26	0.040	5.00	17.760	600	507502.741	104517.634	1.310
27	0.035	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	0.023	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	0.011	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	0.008	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	0.006	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	0.026	5.00	17.192	600	507508.339	104376.130	1.292
51	0.032	5.00	17.097	1350	507512.902	104376.294	1.630
52	0.007	5.00	16.997	600	507496.195	104357.148	1.047
53	0.009	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	0.019	5.00	16.999	600	507521.523	104359.381	0.799
56	0.023	5.00	16.865	1350	507519.788	104355.136	1.521
57	0.007	5.00	17.008	600	507532.542	104353.640	0.808
58			16.600	1350	507537.777	104343.378	1.323
59	0.070	5.00	17.116	1200	507559.503	104354.247	1.421
60			16.956	1350	507559.588	104343.552	1.747

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
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	16.932	0.368	12.7	150	5.03	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	16.700	16.381	0.319	38.6	150	5.13	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	15.817	15.679	0.138	169.5	300	5.50	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	5.60	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
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

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)
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	2.837	50.1	2.8	0.966	1.204	0.021	0.0	24	1.545
1.002	1.625	64.6	12.9	1.204	1.342	0.095	0.0	68	1.277
3.000	2.776	49.1	3.8	1.070	1.342	0.028	0.0	28	1.662
1.003	1.000	70.7	24.1	1.342	1.263	0.178	0.0	120	0.907
4.000	1.625	28.7	3.3	1.135	1.263	0.024	0.0	34	1.085
1.004	1.004	70.9	27.4	1.263	1.631	0.202	0.0	129	0.941
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	30.5	1.631	1.869	0.225	0.0	137	0.964
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	34.4	1.869	1.804	0.254	0.0	147	0.997
7.000	5.376	95.0	0.3	0.620	1.804	0.002	0.0	6	1.175
1.007	1.009	71.3	36.3	1.804	1.760	0.268	0.0	151	1.013
1.008	1.012	71.5	36.3	1.760	1.723	0.268	0.0	151	1.016
8.000	4.320	76.3	2.0	1.104	1.723	0.015	0.0	17	1.858
1.009	1.518	107.3	42.4	1.723	1.701	0.313	0.0	131	1.432
9.000	1.316	23.3	9.6	1.239	1.200	0.071	0.0	67	1.254
10.000	1.245	22.0	5.4	1.148	1.200	0.040	0.0	51	1.033
9.001	1.205	85.1	27.9	1.200	1.582	0.206	0.0	118	1.083
11.000	2.266	40.0	2.4	1.346	1.582	0.018	0.0	25	1.251
9.002	1.216	85.9	30.4	1.582	1.701	0.224	0.0	123	1.113
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	77.0	1.701	1.287	0.568	0.0	230	1.081
1.011	2.492	275.2	77.0	1.287	1.513	0.568	0.0	135	2.149
1.012	1.000	110.4	77.0	1.622	1.622	0.568	0.0	0	∞
13.000	2.310	91.8	4.7	1.148	1.200	0.035	0.0	35	1.230
14.000	1.237	21.9	5.4	1.160	1.200	0.040	0.0	51	1.026
13.001	1.211	85.6	14.9	1.200	1.652	0.110	0.0	84	0.914

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)
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
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

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)
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	3.7	1.200	1.652	0.027	0.0	40	0.754
13.002	1.008	71.2	18.6	1.652	1.797	0.137	0.0	104	0.850
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	4.5	1.388	1.797	0.033	0.0	30	1.785
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	28.2	1.797	1.773	0.208	0.0	132	0.946
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	31.2	1.773	1.662	0.230	0.0	139	0.972
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	36.2	1.662	1.585	0.267	0.0	147	0.904
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	38.9	1.585	1.495	0.287	0.0	152	0.923
22.000	2.824	49.9	0.8	0.795	1.495	0.006	0.0	13	1.038
13.007	1.426	157.5	53.4	1.495	1.384	0.394	0.0	150	1.292
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	59.2	1.384	1.325	0.437	0.0	194	1.022
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	60.6	1.325	1.255	0.447	0.0	197	1.028
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	3.5	1.142	1.255	0.026	0.0	31	1.354
13.010	1.419	156.8	69.8	1.255	1.200	0.515	0.0	175	1.381
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	1.2	0.931	1.200	0.009	0.0	18	1.035
13.011	1.007	111.2	75.5	1.200	1.146	0.557	0.0	227	1.079
30.000	3.761	66.5	2.6	0.649	1.146	0.019	0.0	20	1.827
13.012	1.006	111.1	81.2	1.146	0.948	0.599	0.0	238	1.094
31.000	2.491	44.0	0.9	0.658	0.948	0.007	0.0	16	1.019
13.013	1.006	111.1	82.1	0.948	1.372	0.606	0.0	241	1.097
32.000	1.576	27.9	9.5	1.271	1.372	0.070	0.0	60	1.426
13.014	1.007	111.2	91.6	1.372	1.513	0.676	0.0	260	1.120
13.015	1.007	111.2	91.6	1.513	1.516	0.676	0.0	260	1.120

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)
13.016	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)
13.016	1.000	110.4	91.6	1.625	1.622	0.676	0.0	0	∞
1.013	1.000	159.0	176.3	1.547	1.547	1.301	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	12.7	150	PH1	18.416	17.300	0.966	18.286	16.932	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	38.6	150	PH1	17.985	16.700	1.135	17.794	16.381	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	300	PH1	17.317	15.817	1.200	17.561	15.679	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
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

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
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

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)
13.001	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
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

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
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
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	

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)
13.016	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
13.016	62		Junction		63		Junction	
1.013	63		Junction		63_OUT		Junction	

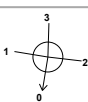
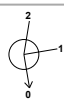
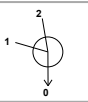
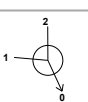
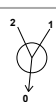
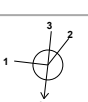
Manhole Schedule

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
						0	1.001	17.126	225
3A	507600.356	104546.980	18.416	1.116	600				
						0	2.000	17.300	150
3	507604.546	104544.871	18.286	1.429	1200		1	2.000	16.932
						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
						2	1.002	16.465	225
						0	1.003	16.390	300
6	507592.416	104481.388	17.985	1.285	600				
						0	4.000	16.700	150
7	507604.682	104480.526	17.794	1.563	1200		1	4.000	16.381
						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
						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
						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
13	507616.249	104415.101	18.062	2.104	1200		1	7.000	16.108
						2	1.006	15.958	300
						0	1.007	15.958	300
14	507614.301	104409.919	17.995	2.060	1200		1	1.007	15.935
						0	1.008	15.935	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
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 2 0	8.000 1.008 1.009	16.062 15.912	150 300
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	1.500	1200		1 2 0	10.000 9.000 9.001	15.967 15.967 15.817	150 150 300
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 2 0	11.000 9.001 9.002	15.829 15.679	150 300
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 2 3 0	12.000 9.002 1.009 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 0	1.010 1.011	15.471 15.471	375 375
24	507593.568	104356.332	16.997	1.997			1 0	1.011 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 2 0	14.000 13.000 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
30	507499.603	104493.999	17.672	1.425	1200		1 2 0	16.000 15.000 15.001	16.322 16.322 16.247	150 150 225
31	507514.237	104490.750	17.975	1.952	1200		1 2 0	15.001 13.001 13.002	16.098 16.023 16.023	225 300 300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
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
							0	17.001	16.754	150
34	507507.885	104481.373	18.168	1.118	600		0	18.000	17.050	150
35	507513.924	104480.384	18.077	2.097	1200		1	18.000	16.130	150
							2	17.001	16.130	150
							3	13.002	15.980	300
							0	13.003	15.980	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	16.022	150
							2	13.003	15.872	300
							0	13.004	15.872	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	15.951	150
							2	13.004	15.801	300
							0	13.005	15.726	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	15.916	150
							2	13.005	15.691	375
							0	13.006	15.691	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	15.881	150
							2	13.006	15.656	375
							0	13.007	15.656	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	15.752	150
							2	23.000	15.752	150
							3	13.007	15.527	375
							0	13.008	15.527	375
47	507518.945	104386.749	17.297	1.197	600		0	25.000	16.100	150
48	507514.127	104386.824	17.200	1.700			1	25.000	15.725	150
							2	13.008	15.500	375
							0	13.009	15.500	375
49	507518.152	104378.370	17.249	1.049	600		0	26.000	16.200	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
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	15.692	150
							2	26.000	15.692	150
							3	13.009	15.467	375
							0	13.010	15.467	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	15.587	150
							2	28.000	15.587	150
							3	13.010	15.362	375
							0	13.011	15.362	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	15.569	150
							2	13.011	15.344	375
							0	13.012	15.344	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	15.502	150
							2	13.012	15.277	375
							0	13.013	15.277	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	15.434	150
							2	13.013	15.209	375
							0	13.014	15.209	375
61	507576.803	104343.689	17.043	1.888	1350		1	13.014	15.155	375
							0	13.015	15.155	375
62	507591.411	104345.507	17.000	2.000			1	13.015	15.109	375
							0	13.016	15.000	375
63	507598.585	104350.517	16.997	1.997			1	13.016	15.000	375
							2	1.012	15.000	375
							0	1.013	15.000	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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	40	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 (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	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	0.95
Side Inf Coefficient (m/hr)	0.69480	Invert Level (m)	13.900
Safety Factor	5.0	Time to half empty (mins)	36

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	503.5	503.5	0.800	503.5	588.1	0.801	0.0	588.1

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 (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	316.0	0.0	0.300	316.0	0.0	0.301	0.0	0.0

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	18	17.342	0.092	10.3	0.0606	0.0000	OK
30 minute summer	2	18	17.231	0.105	17.4	0.1448	0.0000	OK
30 minute summer	3A	17	17.342	0.042	7.4	0.0278	0.0000	OK
30 minute summer	3	18	16.974	0.117	33.7	0.1738	0.0000	OK
30 minute summer	4	16	17.046	0.046	9.9	0.0738	0.0000	OK
30 minute summer	5	20	16.803	0.413	63.1	0.7438	0.0000	SURCHARGED
30 minute summer	6	18	16.756	0.056	8.5	0.0367	0.0000	OK
30 minute summer	7	20	16.703	0.472	66.9	0.5334	0.0000	SURCHARGED
30 minute summer	8	18	17.221	0.021	3.5	0.0103	0.0000	OK
30 minute summer	9	20	16.607	0.484	68.4	0.6126	0.0000	SURCHARGED
30 minute summer	10	18	17.091	0.041	10.3	0.0296	0.0000	OK
30 minute summer	11	20	16.504	0.470	75.1	0.5314	0.0000	SURCHARGED
30 minute summer	12	18	17.459	0.009	0.7	0.0031	0.0000	OK
30 minute summer	13	20	16.390	0.431	78.0	0.5368	0.0000	SURCHARGED
30 minute summer	14	20	16.329	0.394	78.4	0.4452	0.0000	SURCHARGED
30 minute summer	15	18	16.877	0.027	5.3	0.0140	0.0000	OK
30 minute summer	16	20	16.268	0.355	90.5	0.5076	0.0000	SURCHARGED
30 minute summer	17	19	16.493	0.293	25.1	0.3818	0.0000	SURCHARGED
30 minute summer	18	19	16.257	0.157	14.2	0.1416	0.0000	SURCHARGED
30 minute summer	19	19	16.195	0.378	70.5	0.9056	0.0000	SURCHARGED
30 minute summer	21A	18	16.191	0.041	6.4	0.0212	0.0000	OK
30 minute summer	20	19	16.083	0.404	73.9	0.4571	0.0000	SURCHARGED
30 minute summer	21	18	16.938	0.038	11.0	0.0373	0.0000	OK
30 minute summer	22	19	16.023	0.463	169.4	0.6628	0.0000	SURCHARGED
30 minute summer	23	19	15.705	0.234	169.0	0.3348	0.0000	OK
30 minute summer	24	20	15.422	0.422	168.8	0.0000	0.0000	SURCHARGED
30 minute summer	25	17	16.608	0.058	12.4	0.0955	0.0000	OK
30 minute summer	26	20	16.647	0.197	14.2	0.1757	0.0000	SURCHARGED
30 minute summer	27	20	16.614	0.422	39.5	0.6736	0.0000	SURCHARGED
30 minute summer	28	20	16.592	0.167	5.1	0.0523	0.0000	SURCHARGED
30 minute summer	29	18	16.862	0.012	0.7	0.0039	0.0000	OK
30 minute summer	30	20	16.592	0.345	15.1	0.5011	0.0000	SURCHARGED
30 minute summer	31	20	16.594	0.571	47.2	0.6455	0.0000	SURCHARGED
30 minute summer	32	18	17.010	0.060	7.8	0.0355	0.0000	OK
30 minute summer	33	18	16.803	0.049	11.7	0.0625	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute summer	1	1.000	2	10.3	0.979	0.577	0.0510
30 minute summer	2	1.001	3	17.4	0.894	0.438	0.8906
30 minute summer	3A	2.000	3	7.4	1.911	0.148	0.0189
30 minute summer	3	1.002	5	33.7	1.370	0.522	0.7557
30 minute summer	4	3.000	5	9.9	1.959	0.202	0.0669
30 minute summer	5	1.003	7	58.5	0.995	0.827	2.7404
30 minute summer	6	4.000	7	8.5	1.323	0.296	0.1450
30 minute summer	7	1.004	9	60.3	0.945	0.850	1.8492
30 minute summer	8	5.000	9	3.5	1.936	0.044	0.0450
30 minute summer	9	1.005	11	66.2	0.941	0.936	1.5330
30 minute summer	10	6.000	11	10.3	2.296	0.164	0.0759
30 minute summer	11	1.006	13	74.4	1.056	1.048	1.3003
30 minute summer	12	7.000	13	0.7	1.301	0.007	0.0432
30 minute summer	13	1.007	14	78.4	1.114	1.100	0.3898
30 minute summer	14	1.008	16	79.0	1.241	1.104	0.3872
30 minute summer	15	8.000	16	5.3	2.180	0.069	0.0425
30 minute summer	16	1.009	22	91.1	1.530	0.849	2.0949
30 minute summer	17	9.000	19	23.4	1.411	1.005	0.2403
30 minute summer	18	10.000	19	14.0	1.216	0.636	0.1532
30 minute summer	19	9.001	20	67.5	1.071	0.793	1.6470
30 minute summer	21A	11.000	20	6.4	1.325	0.160	0.0686
30 minute summer	20	9.002	22	73.0	1.058	0.849	0.5155
30 minute summer	21	12.000	22	11.0	2.773	0.138	0.0590
30 minute summer	22	1.010	23	169.0	1.699	1.524	2.6154
30 minute summer	23	1.011	24	168.8	1.963	0.613	1.6355
30 minute summer	24	1.012	63	169.1	1.533	1.531	0.1103
30 minute summer	25	13.000	27	12.9	1.479	0.140	0.2154
30 minute summer	26	14.000	27	14.2	1.235	0.650	0.1261
30 minute summer	27	13.001	31	37.9	0.853	0.443	1.9962
30 minute summer	28	15.000	30	-4.5	0.545	-0.208	0.1216
30 minute summer	29	16.000	30	0.7	1.075	0.013	0.0476
30 minute summer	30	15.001	31	10.0	0.729	0.194	0.5962
30 minute summer	31	13.002	35	42.8	0.697	0.600	0.7303
30 minute summer	32	17.000	33	7.8	1.349	0.292	0.0503
30 minute summer	33	17.001	35	11.7	2.018	0.230	0.0875

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	34	18	17.090	0.040	10.6	0.0324	0.0000	OK
30 minute summer	35	20	16.580	0.600	67.6	0.7248	0.0000	SURCHARGED
30 minute summer	36	18	16.630	0.017	1.4	0.0058	0.0000	OK
30 minute summer	37	20	16.511	0.639	72.0	0.8338	0.0000	SURCHARGED
30 minute summer	38	18	16.636	0.036	7.1	0.0210	0.0000	OK
30 minute summer	39	20	16.446	0.720	80.5	1.1506	0.0000	SURCHARGED
30 minute summer	40	18	16.439	0.039	7.1	0.0223	0.0000	OK
30 minute summer	41	20	16.423	0.732	70.7	1.0480	0.0000	SURCHARGED
30 minute summer	42	18	16.871	0.021	2.1	0.0086	0.0000	OK
30 minute summer	43	20	16.398	0.742	98.8	1.8635	0.0000	SURCHARGED
30 minute summer	44	18	16.915	0.015	1.4	0.0062	0.0000	OK
30 minute summer	45	20	16.352	0.552	13.8	0.4270	0.0000	SURCHARGED
30 minute summer	46	20	16.328	0.801	107.4	1.1469	0.0000	SURCHARGED
30 minute summer	47	20	16.293	0.193	5.0	0.0869	0.0000	SURCHARGED
30 minute summer	48	20	16.292	0.792	109.2	0.0000	0.0000	SURCHARGED
30 minute summer	49	20	16.248	0.048	3.5	0.0227	0.0000	OK
30 minute summer	50	20	16.256	0.356	9.2	0.2440	0.0000	SURCHARGED
30 minute summer	51	20	16.247	0.780	126.5	1.4226	0.0000	SURCHARGED
30 minute summer	52	20	16.159	0.209	3.7	0.0871	0.0000	SURCHARGED
30 minute summer	53	20	16.144	0.144	3.2	0.0646	0.0000	OK
30 minute summer	54	20	16.144	0.782	136.4	1.3786	0.0000	SURCHARGED
30 minute summer	55	18	16.232	0.032	6.7	0.0244	0.0000	OK
30 minute summer	56	20	16.078	0.734	146.7	1.2728	0.0000	SURCHARGED
30 minute summer	57	18	16.224	0.024	2.5	0.0111	0.0000	OK
30 minute summer	58	20	15.914	0.637	148.1	0.9121	0.0000	SURCHARGED
30 minute summer	59	19	15.949	0.254	24.8	0.5368	0.0000	SURCHARGED
30 minute summer	60	20	15.746	0.537	168.0	0.7678	0.0000	SURCHARGED
30 minute summer	61	20	15.563	0.408	168.0	0.5837	0.0000	SURCHARGED
30 minute summer	62	20	15.422	0.422	168.1	0.0000	0.0000	SURCHARGED
30 minute summer	63	20	15.415	0.415	352.1	0.2368	0.0000	OK
120 minute winter	63_OUT	120	14.672	-0.328	173.5	369.3571	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute summer	34	18.000	35	10.6	2.480	0.153	0.0652
30 minute summer	35	13.003	37	64.2	1.006	0.908	1.8603
30 minute summer	36	19.000	37	1.4	1.009	0.028	0.0731
30 minute summer	37	13.004	39	67.5	1.104	0.951	1.2156
30 minute summer	38	20.000	39	7.1	2.063	0.123	0.0651
30 minute summer	39	13.005	41	66.6	0.809	0.599	1.2343
30 minute summer	40	21.000	41	7.1	1.827	0.146	0.0690
30 minute summer	41	13.006	43	71.3	0.830	0.637	1.2220
30 minute summer	42	22.000	43	2.1	1.229	0.042	0.1190
30 minute summer	43	13.007	46	96.3	1.014	0.612	2.2879
30 minute summer	44	23.000	46	1.4	1.263	0.021	0.0740
30 minute summer	45	24.000	46	12.1	0.970	0.677	0.0835
30 minute summer	46	13.008	48	106.8	0.968	0.960	0.9514
30 minute summer	47	25.000	48	3.5	1.455	0.071	0.0848
30 minute summer	48	13.009	51	108.9	0.987	0.979	1.1693
30 minute summer	49	26.000	51	3.5	1.515	0.065	0.0634
30 minute summer	50	27.000	51	8.3	1.511	0.217	0.0804
30 minute summer	51	13.010	54	126.1	1.143	0.804	1.8792
30 minute summer	52	28.000	54	3.7	0.658	0.154	0.3526
30 minute summer	53	29.000	54	3.3	1.008	0.080	0.1385
30 minute summer	54	13.011	56	136.8	1.240	1.230	0.6362
30 minute summer	55	30.000	56	6.7	1.928	0.101	0.0467
30 minute summer	56	13.012	58	146.3	1.326	1.316	2.3704
30 minute summer	57	31.000	58	2.5	1.079	0.057	0.1121
30 minute summer	58	13.013	60	148.6	1.347	1.337	2.4058
30 minute summer	59	32.000	60	22.9	1.561	0.823	0.1883
30 minute summer	60	13.014	61	168.0	1.524	1.511	1.8989
30 minute summer	61	13.015	62	168.1	1.546	1.512	1.5351
30 minute summer	62	13.016	63	168.3	1.526	1.524	0.1103
30 minute summer	63	1.013	63_OUT	352.1	2.326	2.214	0.1514
120 minute winter	63_OUT	Infiltration		22.6			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	20	18.101	0.851	17.4	0.5622	0.0000	SURCHARGED
30 minute summer	2	20	18.067	0.941	28.9	1.3024	0.0000	SURCHARGED
30 minute summer	3A	20	18.013	0.713	12.6	0.4696	0.0000	SURCHARGED
30 minute summer	3	20	17.996	1.139	49.4	1.6868	0.0000	FLOOD RISK
30 minute summer	4	20	17.873	0.873	16.8	1.3887	0.0000	SURCHARGED
30 minute summer	5	20	17.839	1.449	80.7	2.6090	0.0000	FLOOD RISK
30 minute summer	6	20	17.698	0.998	14.4	0.6545	0.0000	FLOOD RISK
30 minute summer	7	20	17.651	1.419	80.2	1.6050	0.0000	FLOOD RISK
30 minute summer	8	20	17.481	0.281	6.0	0.1349	0.0000	SURCHARGED
30 minute summer	9	20	17.478	1.354	88.7	1.7144	0.0000	SURCHARGED
30 minute summer	10	20	17.342	0.292	17.4	0.2102	0.0000	SURCHARGED
30 minute summer	11	20	17.294	1.260	101.0	1.4246	0.0000	SURCHARGED
30 minute summer	12	18	17.462	0.012	1.2	0.0040	0.0000	OK
30 minute summer	13	20	17.086	1.127	107.0	1.4037	0.0000	SURCHARGED
30 minute summer	14	20	16.976	1.040	109.2	1.1766	0.0000	SURCHARGED
30 minute summer	15	18	16.885	0.035	9.0	0.0181	0.0000	OK
30 minute summer	16	20	16.866	0.953	125.3	1.3611	0.0000	SURCHARGED
30 minute summer	17	19	17.589	1.389	42.5	1.8126	0.1249	FLOOD
30 minute summer	18	19	17.043	0.943	23.9	0.8475	0.0000	SURCHARGED
30 minute summer	19	19	16.860	1.043	115.4	2.5005	0.0000	SURCHARGED
30 minute summer	21A	19	16.586	0.436	10.8	0.2278	0.0000	SURCHARGED
30 minute summer	20	19	16.558	0.879	120.1	0.9936	0.0000	SURCHARGED
30 minute summer	21	18	16.950	0.050	18.5	0.0499	0.0000	OK
30 minute summer	22	19	16.395	0.835	256.5	1.1954	0.0000	SURCHARGED
30 minute summer	23	19	15.802	0.331	255.8	0.4738	0.0000	OK
180 minute winter	24	180	15.603	0.603	89.7	0.0000	0.0000	SURCHARGED
30 minute summer	25	20	17.711	1.161	20.9	1.9045	0.0000	FLOOD RISK
30 minute winter	26	20	17.760	1.310	21.6	1.1698	0.2990	FLOOD
30 minute winter	27	20	17.692	1.500	49.2	2.3970	2.0061	FLOOD
30 minute winter	28	20	17.685	1.260	6.4	0.3957	0.0000	FLOOD RISK
30 minute winter	29	20	17.684	0.834	5.7	0.2720	0.0000	FLOOD RISK
30 minute winter	30	20	17.672	1.425	18.4	2.0720	0.8978	FLOOD
30 minute winter	31	21	17.671	1.648	50.8	1.8638	0.0000	SURCHARGED
30 minute winter	32	21	17.754	0.804	11.9	0.4743	0.0000	SURCHARGED
30 minute winter	33	21	17.724	0.969	16.8	1.2351	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute summer	1	1.000	2	16.9	1.058	0.949	0.0854
30 minute summer	2	1.001	3	24.4	0.935	0.613	1.8165
30 minute summer	3A	2.000	3	11.5	1.924	0.229	0.0826
30 minute summer	3	1.002	5	38.7	1.367	0.599	1.0114
30 minute summer	4	3.000	5	13.8	1.986	0.281	0.1077
30 minute summer	5	1.003	7	70.4	1.019	0.995	2.7404
30 minute summer	6	4.000	7	10.9	1.315	0.379	0.2165
30 minute summer	7	1.004	9	80.1	1.137	1.128	1.8492
30 minute summer	8	5.000	9	6.0	1.937	0.075	0.0827
30 minute summer	9	1.005	11	90.3	1.282	1.276	1.5330
30 minute summer	10	6.000	11	16.7	2.237	0.267	0.1241
30 minute summer	11	1.006	13	102.6	1.457	1.445	1.3003
30 minute summer	12	7.000	13	1.2	1.193	0.013	0.0436
30 minute summer	13	1.007	14	109.2	1.551	1.532	0.3898
30 minute summer	14	1.008	16	111.8	1.588	1.563	0.3872
30 minute summer	15	8.000	16	9.0	2.308	0.118	0.0449
30 minute summer	16	1.009	22	127.7	1.814	1.191	2.0949
30 minute summer	17	9.000	19	37.3	2.120	1.604	0.2403
30 minute summer	18	10.000	19	22.0	1.250	1.000	0.1532
30 minute summer	19	9.001	20	110.4	1.568	1.297	1.6470
30 minute summer	21A	11.000	20	9.7	1.373	0.241	0.1127
30 minute summer	20	9.002	22	119.8	1.702	1.394	0.5155
30 minute summer	21	12.000	22	18.5	2.695	0.231	0.0638
30 minute summer	22	1.010	23	255.8	2.322	2.306	3.0557
30 minute summer	23	1.011	24	255.5	2.418	0.928	2.0288
180 minute winter	24	1.012	63	89.7	0.883	0.812	0.1103
30 minute summer	25	13.000	27	18.8	1.470	0.205	0.3635
30 minute winter	26	14.000	27	17.5	1.245	0.800	0.1261
30 minute winter	27	13.001	31	42.2	0.848	0.493	1.9962
30 minute winter	28	15.000	30	-5.3	0.560	-0.245	0.1216
30 minute winter	29	16.000	30	-4.6	1.113	-0.080	0.0921
30 minute winter	30	15.001	31	14.4	0.729	0.278	0.5962
30 minute winter	31	13.002	35	45.1	0.696	0.633	0.7303
30 minute winter	32	17.000	33	11.2	1.430	0.420	0.1530
30 minute winter	33	17.001	35	14.5	2.025	0.286	0.1364

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	34	21	17.700	0.650	16.2	0.5326	0.0000	SURCHARGED
30 minute winter	35	21	17.659	1.679	71.3	2.0260	0.0000	SURCHARGED
30 minute winter	36	21	17.567	0.954	4.8	0.3177	0.0000	SURCHARGED
30 minute winter	37	21	17.565	1.693	75.6	2.2098	0.0000	SURCHARGED
30 minute winter	38	21	17.494	0.894	10.8	0.5267	0.0000	SURCHARGED
30 minute winter	39	21	17.475	1.749	86.7	2.7952	0.0000	FLOOD RISK
30 minute winter	40	21	17.461	1.061	10.8	0.6122	0.0000	FLOOD RISK
30 minute winter	41	21	17.441	1.750	96.1	2.5042	0.0000	FLOOD RISK
30 minute winter	42	21	17.404	0.554	5.0	0.2273	0.0000	SURCHARGED
30 minute winter	43	21	17.399	1.743	136.5	4.3791	0.0000	FLOOD RISK
30 minute winter	44	21	17.265	0.365	2.3	0.1508	0.0000	FLOOD RISK
30 minute winter	45	21	17.324	1.524	21.1	1.1797	0.0000	FLOOD RISK
30 minute winter	46	21	17.265	1.738	152.6	2.4869	0.0000	FLOOD RISK
30 minute winter	47	21	17.193	1.093	5.4	0.4918	0.0000	FLOOD RISK
30 minute winter	48	21	17.189	1.689	156.7	0.0000	0.0000	FLOOD RISK
30 minute winter	49	21	17.102	0.902	5.4	0.4266	0.0000	FLOOD RISK
30 minute winter	50	21	17.122	1.222	14.1	0.8368	0.0000	FLOOD RISK
30 minute winter	51	21	17.097	1.630	183.3	2.9731	0.6562	FLOOD
30 minute winter	52	21	16.912	0.962	9.4	0.4002	0.0000	FLOOD RISK
30 minute winter	53	21	16.909	0.909	6.4	0.4080	0.0000	FLOOD RISK
30 minute winter	54	21	16.905	1.543	190.5	2.7183	0.0000	FLOOD RISK
30 minute winter	55	21	16.790	0.590	10.3	0.4473	0.0000	FLOOD RISK
30 minute winter	56	21	16.776	1.432	206.5	2.4837	0.0000	FLOOD RISK
30 minute winter	57	21	16.457	0.257	4.4	0.1172	0.0000	SURCHARGED
30 minute winter	58	21	16.453	1.176	209.6	1.6824	0.0000	FLOOD RISK
30 minute summer	59	19	16.673	0.978	41.9	2.0695	0.0000	SURCHARGED
30 minute winter	60	21	16.115	0.906	240.5	1.2962	0.0000	SURCHARGED
30 minute winter	61	21	15.739	0.584	240.8	0.8353	0.0000	SURCHARGED
180 minute winter	62	180	15.603	0.603	106.0	0.0000	0.0000	SURCHARGED
180 minute winter	63	180	15.603	0.603	204.6	0.3442	0.0000	SURCHARGED
180 minute winter	63_OUT	180	15.603	0.603	204.6	661.3679	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute winter	34	18.000	35	15.3	2.434	0.221	0.1077
30 minute winter	35	13.003	37	68.2	0.994	0.964	1.8603
30 minute winter	36	19.000	37	3.4	1.019	0.070	0.1373
30 minute winter	37	13.004	39	77.2	1.114	1.088	1.2156
30 minute winter	38	20.000	39	9.1	2.063	0.158	0.1102
30 minute winter	39	13.005	41	89.9	0.815	0.808	1.2343
30 minute winter	40	21.000	41	9.1	1.827	0.187	0.1146
30 minute winter	41	13.006	43	98.9	0.897	0.884	1.2220
30 minute winter	42	22.000	43	5.2	1.235	0.104	0.2193
30 minute winter	43	13.007	46	135.0	1.224	0.857	2.2879
30 minute winter	44	23.000	46	4.2	1.273	0.062	0.1408
30 minute winter	45	24.000	46	17.9	1.019	1.004	0.0835
30 minute winter	46	13.008	48	152.9	1.386	1.374	0.9514
30 minute winter	47	25.000	48	4.6	1.350	0.092	0.0848
30 minute winter	48	13.009	51	156.8	1.421	1.409	1.1693
30 minute winter	49	26.000	51	4.5	1.409	0.085	0.0994
30 minute winter	50	27.000	51	11.3	1.427	0.296	0.0804
30 minute winter	51	13.010	54	175.8	1.594	1.121	1.8792
30 minute winter	52	28.000	54	-6.2	0.637	-0.259	0.3526
30 minute winter	53	29.000	54	4.1	1.008	0.100	0.1394
30 minute winter	54	13.011	56	191.5	1.736	1.721	0.6362
30 minute winter	55	30.000	56	8.9	1.854	0.133	0.0807
30 minute winter	56	13.012	58	206.7	1.874	1.860	2.3704
30 minute winter	57	31.000	58	3.8	0.976	0.086	0.2028
30 minute winter	58	13.013	60	209.9	1.904	1.890	2.4058
30 minute summer	59	32.000	60	36.7	2.084	1.317	0.1883
30 minute winter	60	13.014	61	240.8	2.183	2.165	1.8989
30 minute winter	61	13.015	62	240.9	2.184	2.166	1.6054
180 minute winter	62	13.016	63	106.0	1.042	0.960	0.1103
180 minute winter	63	1.013	63_OUT	204.6	1.688	1.287	0.1584
180 minute winter	63_OUT	Infiltration		22.7			

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	5	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	9.999
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.029	5.00	17.032	1200	507453.240	104484.843	1.559
2	0.030	5.00	16.667	1200	507417.319	104477.750	1.476
3	0.031	5.00	16.456	1200	507399.830	104490.204	1.425
4	0.010	5.00	15.974	600	507339.123	104491.209	1.424
5	0.021	5.00	15.864	1200	507340.391	104487.342	1.426
6	0.017	5.00	15.727	1200	507331.769	104489.462	1.561
7	0.002	5.00	15.773	600	507329.084	104481.541	0.973
8	0.024	5.00	15.818	1200	507336.121	104481.871	1.710
9	0.018	5.00	15.852	600	507340.862	104466.670	1.302
10	0.000		15.819	1200	507336.886	104465.548	1.886
11	0.055	5.00	15.922	600	507343.353	104458.983	1.372
12	0.022	5.00	15.965	600	507330.921	104466.806	1.565
13	0.000		15.864	1200	507334.188	104461.394	1.960
14	0.006	5.00	15.931	600	507330.135	104455.588	1.381
15	0.018	5.00	15.906	1200	507329.947	104458.834	2.031
16	0.020	5.00	15.645	600	507293.649	104462.611	1.595
17	0.032	5.00	15.509	600	507291.370	104452.382	1.559
18	0.000		15.434	1200	507291.126	104456.585	1.842
19	0.017	5.00	15.287	600	507282.875	104456.445	1.237
20	0.000		15.308	1200	507284.929	104459.179	1.779
21	0.056	5.00	15.107	600	507274.156	104475.338	1.467
22	0.000		14.985	1200	507271.953	104468.929	1.617
23	0.000		14.892	1350	507265.987	104470.486	1.584
24	0.008	5.00	14.912	600	507260.975	104464.438	1.307
25	0.056	5.00	14.859	1350	507258.340	104468.254	1.576
26	0.000		14.920	1350	507249.323	104462.026	1.671
27	0.037	5.00	15.293	600	507235.992	104466.629	1.748
28	0.000		15.189	1200	507232.996	104463.994	1.684
29	0.047	5.00	15.142	600	507246.274	104453.729	1.422
30	0.016	5.00	15.063	1350	507239.530	104453.046	1.856
31	0.010	5.00	15.150	1350	507235.200	104447.736	1.964

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	36.615	0.600	15.473	15.191	0.282	129.8	225	5.53	50.0
1.001	2	3	21.470	0.600	15.191	15.031	0.160	134.2	225	5.85	50.0
1.002	3	5	59.508	0.600	15.031	14.438	0.593	100.4	225	6.61	50.0
2.000	4	5	4.070	0.600	14.550	14.511	0.039	104.3	150	5.07	50.0
1.003	5	8	6.940	0.600	14.438	14.108	0.330	21.0	225	6.65	50.0
3.000	6	8	8.750	0.600	14.166	14.108	0.058	150.9	225	5.14	50.0
4.000	7	8	7.045	0.600	14.800	14.183	0.617	11.4	150	5.04	50.0
1.004	8	10	16.341	0.600	14.108	14.008	0.100	163.4	225	6.92	50.0
5.000	9	10	4.131	0.600	14.550	14.083	0.467	8.8	150	5.02	50.0
1.005	10	13	4.953	0.600	13.933	13.904	0.029	170.8	300	6.99	50.0
6.000	11	13	9.477	0.600	14.550	14.054	0.496	19.1	150	5.07	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)
1.000	1.146	45.6	3.9	1.334	1.251	0.029	0.0
1.001	1.127	44.8	8.0	1.251	1.200	0.059	0.0
1.002	1.305	51.9	12.2	1.200	1.201	0.090	0.0
2.000	0.983	17.4	1.4	1.274	1.203	0.010	0.0
1.003	2.866	113.9	16.4	1.201	1.485	0.121	0.0
3.000	1.062	42.2	2.3	1.336	1.485	0.017	0.0
4.000	2.998	53.0	0.3	0.823	1.485	0.002	0.0
1.004	1.020	40.6	22.2	1.485	1.586	0.164	0.0
5.000	3.408	60.2	2.4	1.152	1.586	0.018	0.0
1.005	1.200	84.8	24.7	1.586	1.660	0.182	0.0
6.000	2.315	40.9	7.5	1.222	1.660	0.055	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)
7.000	12	13	6.322	0.600	14.400	14.054	0.346	18.3	150	5.04	50.0
1.006	13	15	4.954	0.600	13.904	13.875	0.029	170.8	300	7.07	50.0
8.000	14	15	3.251	0.600	14.550	14.025	0.525	6.2	150	5.01	50.0
1.007	15	18	38.886	0.600	13.875	13.667	0.208	187.0	300	7.64	50.0
9.000	16	18	6.533	0.600	14.050	13.817	0.233	28.0	150	5.06	50.0
10.000	17	18	4.210	0.600	13.950	13.817	0.133	31.7	150	5.04	50.0
1.008	18	20	6.718	0.600	13.592	13.529	0.063	106.6	375	7.70	50.0
11.000	19	20	3.420	0.600	14.050	13.754	0.296	11.6	150	5.02	50.0
1.009	20	22	16.231	0.600	13.529	13.368	0.161	100.8	375	7.85	50.0
12.000	21	22	6.777	0.600	13.640	13.593	0.047	144.2	150	5.14	50.0
1.010	22	23	6.166	0.600	13.368	13.308	0.060	102.8	375	7.94	50.0
1.011	23	25	7.966	0.600	13.308	13.283	0.025	318.6	375	8.07	50.0
13.000	24	25	4.637	0.600	13.605	13.508	0.097	47.8	150	5.05	50.0
1.012	25	26	10.959	0.600	13.283	13.249	0.034	322.3	375	8.25	50.0
1.013	26	30	13.287	0.600	13.249	13.208	0.041	324.1	375	8.47	50.0
14.000	27	28	3.990	0.600	13.545	13.505	0.040	99.7	150	5.07	50.0
14.001	28	30	12.750	0.600	13.505	13.432	0.073	174.7	150	5.35	50.0
15.000	29	30	6.778	0.600	13.720	13.432	0.288	23.5	150	5.05	50.0
1.014	30	31	6.852	0.600	13.207	13.186	0.021	326.3	225	8.63	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)
7.000	2.367	41.8	3.0	1.415	1.660	0.022	0.0
1.006	1.200	84.8	35.1	1.660	1.731	0.259	0.0
8.000	4.075	72.0	0.8	1.231	1.731	0.006	0.0
1.007	1.146	81.0	38.4	1.731	1.467	0.283	0.0
9.000	1.908	33.7	2.7	1.445	1.467	0.020	0.0
10.000	1.795	31.7	4.3	1.409	1.467	0.032	0.0
1.008	1.754	193.7	45.4	1.467	1.404	0.335	0.0
11.000	2.980	52.7	2.3	1.087	1.404	0.017	0.0
1.009	1.804	199.3	47.7	1.404	1.242	0.352	0.0
12.000	0.835	14.7	7.6	1.317	1.242	0.056	0.0
1.010	1.787	197.4	55.3	1.242	1.209	0.408	0.0
1.011	1.009	111.5	55.3	1.209	1.201	0.408	0.0
13.000	1.459	25.8	1.1	1.157	1.201	0.008	0.0
1.012	1.004	110.8	64.0	1.201	1.296	0.472	0.0
1.013	1.001	110.5	64.0	1.296	1.480	0.472	0.0
14.000	1.006	17.8	5.0	1.598	1.534	0.037	0.0
14.001	0.757	13.4	5.0	1.534	1.481	0.037	0.0
15.000	2.084	36.8	6.4	1.272	1.481	0.047	0.0
1.014	0.718	85.7	77.5	1.631	1.739	0.572	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	36.615	129.8	225	PH1	17.032	15.473	1.334	16.667	15.191	1.251
1.001	21.470	134.2	225	PH1	16.667	15.191	1.251	16.456	15.031	1.200
1.002	59.508	100.4	225	PH1	16.456	15.031	1.200	15.864	14.438	1.201
2.000	4.070	104.3	150	PH1	15.974	14.550	1.274	15.864	14.511	1.203
1.003	6.940	21.0	225	PH1	15.864	14.438	1.201	15.818	14.108	1.485
3.000	8.750	150.9	225	PH1	15.727	14.166	1.336	15.818	14.108	1.485
4.000	7.045	11.4	150	PH1	15.773	14.800	0.823	15.818	14.183	1.485
1.004	16.341	163.4	225	PH1	15.818	14.108	1.485	15.819	14.008	1.586
5.000	4.131	8.8	150	PH1	15.852	14.550	1.152	15.819	14.083	1.586
1.005	4.953	170.8	300	PH1	15.819	13.933	1.586	15.864	13.904	1.660
6.000	9.477	19.1	150	PH1	15.922	14.550	1.222	15.864	14.054	1.660

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	3	1200	Manhole	Adoptable
1.002	3	1200	Manhole	Adoptable	5	1200	Manhole	Adoptable
2.000	4	600	Manhole	Adoptable	5	1200	Manhole	Adoptable
1.003	5	1200	Manhole	Adoptable	8	1200	Manhole	Adoptable
3.000	6	1200	Manhole	Adoptable	8	1200	Manhole	Adoptable
4.000	7	600	Manhole	Adoptable	8	1200	Manhole	Adoptable
1.004	8	1200	Manhole	Adoptable	10	1200	Manhole	Adoptable
5.000	9	600	Manhole	Adoptable	10	1200	Manhole	Adoptable
1.005	10	1200	Manhole	Adoptable	13	1200	Manhole	Adoptable
6.000	11	600	Manhole	Adoptable	13	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)
7.000	6.322	18.3	150	PH1	15.965	14.400	1.415	15.864	14.054	1.660
1.006	4.954	170.8	300	PH1	15.864	13.904	1.660	15.906	13.875	1.731
8.000	3.251	6.2	150	PH1	15.931	14.550	1.231	15.906	14.025	1.731
1.007	38.886	187.0	300	PH1	15.906	13.875	1.731	15.434	13.667	1.467
9.000	6.533	28.0	150	PH1	15.645	14.050	1.445	15.434	13.817	1.467
10.000	4.210	31.7	150	PH1	15.509	13.950	1.409	15.434	13.817	1.467
1.008	6.718	106.6	375	PH1	15.434	13.592	1.467	15.308	13.529	1.404
11.000	3.420	11.6	150	PH1	15.287	14.050	1.087	15.308	13.754	1.404
1.009	16.231	100.8	375	PH1	15.308	13.529	1.404	14.985	13.368	1.242
12.000	6.777	144.2	150	PH1	15.107	13.640	1.317	14.985	13.593	1.242
1.010	6.166	102.8	375	PH1	14.985	13.368	1.242	14.892	13.308	1.209
1.011	7.966	318.6	375	PH1	14.892	13.308	1.209	14.859	13.283	1.201
13.000	4.637	47.8	150	PH1	14.912	13.605	1.157	14.859	13.508	1.201
1.012	10.959	322.3	375	PH1	14.859	13.283	1.201	14.920	13.249	1.296
1.013	13.287	324.1	375	PH1	14.920	13.249	1.296	15.063	13.208	1.480
14.000	3.990	99.7	150	PH1	15.293	13.545	1.598	15.189	13.505	1.534
14.001	12.750	174.7	150	PH1	15.189	13.505	1.534	15.063	13.432	1.481
15.000	6.778	23.5	150	PH1	15.142	13.720	1.272	15.063	13.432	1.481
1.014	6.852	326.3	225	Triple	15.063	13.207	1.631	15.150	13.186	1.739

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
7.000	12	600	Manhole	Adoptable	13	1200	Manhole	Adoptable
1.006	13	1200	Manhole	Adoptable	15	1200	Manhole	Adoptable
8.000	14	600	Manhole	Adoptable	15	1200	Manhole	Adoptable
1.007	15	1200	Manhole	Adoptable	18	1200	Manhole	Adoptable
9.000	16	600	Manhole	Adoptable	18	1200	Manhole	Adoptable
10.000	17	600	Manhole	Adoptable	18	1200	Manhole	Adoptable
1.008	18	1200	Manhole	Adoptable	20	1200	Manhole	Adoptable
11.000	19	600	Manhole	Adoptable	20	1200	Manhole	Adoptable
1.009	20	1200	Manhole	Adoptable	22	1200	Manhole	Adoptable
12.000	21	600	Manhole	Adoptable	22	1200	Manhole	Adoptable
1.010	22	1200	Manhole	Adoptable	23	1350	Manhole	Adoptable
1.011	23	1350	Manhole	Adoptable	25	1350	Manhole	Adoptable
13.000	24	600	Manhole	Adoptable	25	1350	Manhole	Adoptable
1.012	25	1350	Manhole	Adoptable	26	1350	Manhole	Adoptable
1.013	26	1350	Manhole	Adoptable	30	1350	Manhole	Adoptable
14.000	27	600	Manhole	Adoptable	28	1200	Manhole	Adoptable
14.001	28	1200	Manhole	Adoptable	30	1350	Manhole	Adoptable
15.000	29	600	Manhole	Adoptable	30	1350	Manhole	Adoptable
1.014	30	1350	Manhole	Adoptable	31	1350	Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
1	507453.240	104484.843	17.032	1.559	1200		0	1.000	15.473	225
2	507417.319	104477.750	16.667	1.476	1200		1	1.000	15.191	225
							0	1.001	15.191	225
3	507399.830	104490.204	16.456	1.425	1200		1	1.001	15.031	225
							0	1.002	15.031	225
4	507339.123	104491.209	15.974	1.424	600		0	2.000	14.550	150
5	507340.391	104487.342	15.864	1.426	1200		1	2.000	14.511	150
							2	1.002	14.438	225
							0	1.003	14.438	225
6	507331.769	104489.462	15.727	1.561	1200		0	3.000	14.166	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
7	507329.084	104481.541	15.773	0.973	600		0	4.000	14.800	150
8	507336.121	104481.871	15.818	1.710	1200		1 2 3 0	4.000 3.000 1.003 1.004	14.183 14.108 14.108 14.108	150 225 225 225
9	507340.862	104466.670	15.852	1.302	600		0	5.000	14.550	150
10	507336.886	104465.548	15.819	1.886	1200		1 2 0	5.000 1.004 1.005	14.083 14.008 13.933	150 225 300
11	507343.353	104458.983	15.922	1.372	600		0	6.000	14.550	150
12	507330.921	104466.806	15.965	1.565	600		0	7.000	14.400	150
13	507334.188	104461.394	15.864	1.960	1200		1 2 3 0	7.000 6.000 1.005 1.006	14.054 14.054 13.904 13.904	150 150 300 300
14	507330.135	104455.588	15.931	1.381	600		0	8.000	14.550	150
15	507329.947	104458.834	15.906	2.031	1200		1 2 0	8.000 1.006 1.007	14.025 13.875 13.875	150 300 300
16	507293.649	104462.611	15.645	1.595	600		0	9.000	14.050	150
17	507291.370	104452.382	15.509	1.559	600		0	10.000	13.950	150
18	507291.126	104456.585	15.434	1.842	1200		1 2 3 0	10.000 9.000 1.007 1.008	13.817 13.817 13.667 13.592	150 150 300 375
19	507282.875	104456.445	15.287	1.237	600		0	11.000	14.050	150
20	507284.929	104459.179	15.308	1.779	1200		1 2 0	11.000 1.008 1.009	13.754 13.529 13.529	150 375 375
21	507274.156	104475.338	15.107	1.467	600		0	12.000	13.640	150
22	507271.953	104468.929	14.985	1.617	1200		1 2 0	12.000 1.009 1.010	13.593 13.368 13.368	150 375 375
23	507265.987	104470.486	14.892	1.584	1350		1 0	1.010 1.011	13.308 13.308	375 375
24	507260.975	104464.438	14.912	1.307	600		0	13.000	13.605	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
25	507258.340	104468.254	14.859	1.576	1350		1 13.000 2 1.011	13.508 13.283	150 375
26	507249.323	104462.026	14.920	1.671	1350		0 1.012 1 1.012	13.283 13.249	375 375
27	507235.992	104466.629	15.293	1.748	600		0 1.013	13.249	375
28	507232.996	104463.994	15.189	1.684	1200		0 14.000 1 14.000	13.545 13.505	150 150
29	507246.274	104453.729	15.142	1.422	600		0 14.001	13.505	150
30	507239.530	104453.046	15.063	1.856	1350		1 15.000 2 14.001 3 1.013 0 1.014	13.432 13.432 13.208 13.207	150 150 375 225
31	507235.200	104447.736	15.150	1.964	1350		1 1.014	13.186	225

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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

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

Node 31 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.16272	Porosity	0.95
Side Inf Coefficient (m/hr)	0.16272	Invert Level (m)	12.786
Safety Factor	5.0	Time to half empty (mins)	257

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	545.5	545.5	0.401	306.5	595.1	0.801	0.0	595.1
0.400	545.5	595.1	0.800	306.5	595.1			

Node 31 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	14.750
Safety Factor	5.0	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	14.8	0.0	0.400	94.4	0.0

Node 31 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	13.586
Safety Factor	5.0	Time to half empty (mins)	

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	14.8	0.0	1.164	14.8	0.0	1.165	0.0	0.0

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 98.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	18	15.545	0.072	10.3	0.1085	0.0000	OK
30 minute summer	2	18	15.304	0.113	20.9	0.1736	0.0000	OK
30 minute summer	3	18	15.163	0.132	31.8	0.2067	0.0000	OK
30 minute summer	4	18	14.600	0.049	3.5	0.0209	0.0000	OK
30 minute summer	5	20	14.578	0.140	42.7	0.1994	0.0000	OK
30 minute summer	6	20	14.531	0.365	6.0	0.4920	0.0000	SURCHARGED
30 minute summer	7	18	14.812	0.012	0.7	0.0039	0.0000	OK
30 minute summer	8	20	14.529	0.421	52.9	0.5947	0.0000	SURCHARGED
30 minute summer	9	18	14.583	0.033	6.4	0.0185	0.0000	OK
30 minute summer	10	19	14.324	0.391	57.0	0.4420	0.0000	SURCHARGED
30 minute summer	11	18	14.623	0.073	19.5	0.0791	0.0000	OK
30 minute summer	12	18	14.444	0.044	7.8	0.0248	0.0000	OK
30 minute summer	13	19	14.296	0.392	83.3	0.4429	0.0000	SURCHARGED
30 minute summer	14	18	14.568	0.018	2.1	0.0065	0.0000	OK
30 minute summer	15	19	14.238	0.363	90.3	0.4747	0.0000	SURCHARGED
30 minute summer	16	17	14.100	0.050	7.1	0.0267	0.0000	OK
30 minute summer	17	17	14.021	0.071	11.3	0.0490	0.0000	OK
30 minute summer	18	19	13.967	0.375	105.2	0.4243	0.0000	SURCHARGED
30 minute summer	19	17	14.088	0.038	6.0	0.0210	0.0000	OK
30 minute summer	20	19	13.929	0.400	107.0	0.4525	0.0000	SURCHARGED
30 minute summer	21	19	13.959	0.319	19.8	0.3339	0.0000	SURCHARGED
30 minute summer	22	19	13.858	0.490	124.5	0.5546	0.0000	SURCHARGED
30 minute summer	23	19	13.802	0.494	124.2	0.7065	0.0000	SURCHARGED
30 minute summer	24	19	13.741	0.136	2.8	0.0549	0.0000	OK
30 minute summer	25	19	13.738	0.455	144.6	0.9755	0.0000	SURCHARGED
30 minute summer	26	19	13.637	0.388	144.3	0.5558	0.0000	SURCHARGED
30 minute summer	27	18	13.670	0.125	13.1	0.0882	0.0000	OK
30 minute summer	28	18	13.633	0.128	13.1	0.1448	0.0000	OK
30 minute summer	29	18	13.799	0.079	16.6	0.0746	0.0000	OK
30 minute summer	30	19	13.507	0.300	177.1	0.4811	0.0000	SURCHARGED
240 minute winter	31	240	13.186	0.000	47.0	207.2484	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute summer	1	1.000	2	10.3	0.669	0.226	0.5658
30 minute summer	2	1.001	3	20.8	0.946	0.464	0.4738
30 minute summer	3	1.002	5	31.8	1.463	0.612	1.4319
30 minute summer	4	2.000	5	3.5	0.731	0.201	0.0243
30 minute summer	5	1.003	8	39.2	1.188	0.344	0.2279
30 minute summer	6	3.000	8	6.4	0.214	0.150	0.3480
30 minute summer	7	4.000	8	0.7	0.585	0.013	0.0644
30 minute summer	8	1.004	10	52.3	1.314	1.289	0.6499
30 minute summer	9	5.000	10	6.4	1.760	0.106	0.0423
30 minute summer	10	1.005	13	57.4	0.815	0.677	0.3488
30 minute summer	11	6.000	13	19.5	1.988	0.477	0.1237
30 minute summer	12	7.000	13	7.8	1.449	0.186	0.0692
30 minute summer	13	1.006	15	81.8	1.162	0.965	0.3489
30 minute summer	14	8.000	15	2.1	1.442	0.029	0.0304
30 minute summer	15	1.007	18	86.8	1.327	1.071	2.7373
30 minute summer	16	9.000	18	7.1	1.435	0.212	0.0717
30 minute summer	17	10.000	18	11.3	1.497	0.356	0.0511
30 minute summer	18	1.008	20	102.2	1.316	0.528	0.7407
30 minute summer	19	11.000	20	6.0	1.849	0.114	0.0350
30 minute summer	20	1.009	22	107.4	1.061	0.539	1.7902
30 minute summer	21	12.000	22	18.5	1.054	1.258	0.1193
30 minute summer	22	1.010	23	124.2	1.126	0.629	0.6801
30 minute summer	23	1.011	25	124.4	1.128	1.116	0.8786
30 minute summer	24	13.000	25	2.8	0.756	0.107	0.0797
30 minute summer	25	1.012	26	144.3	1.308	1.302	1.2087
30 minute summer	26	1.013	30	144.0	1.385	1.303	1.3587
30 minute summer	27	14.000	28	13.1	0.840	0.736	0.0632
30 minute summer	28	14.001	30	13.0	0.882	0.971	0.1867
30 minute summer	29	15.000	30	16.6	1.892	0.451	0.0595
30 minute summer	30	1.014	31	176.9	1.484	2.064	0.7908
240 minute winter	31	Infiltration		5.4			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	21	15.811	0.338	17.4	0.5077	0.0000	SURCHARGED
30 minute summer	2	21	15.795	0.604	35.3	0.9288	0.0000	SURCHARGED
30 minute summer	3	21	15.748	0.717	52.1	1.1224	0.0000	SURCHARGED
30 minute summer	4	21	15.479	0.929	6.0	0.3928	0.0000	SURCHARGED
30 minute summer	5	21	15.475	1.037	57.8	1.4785	0.0000	SURCHARGED
30 minute summer	6	20	15.390	1.224	10.2	1.6506	0.0000	SURCHARGED
30 minute summer	7	20	15.390	0.590	5.0	0.1912	0.0000	SURCHARGED
30 minute summer	8	20	15.389	1.281	62.6	1.8083	0.0000	SURCHARGED
30 minute summer	9	20	15.124	0.574	10.8	0.3210	0.0000	SURCHARGED
30 minute summer	10	20	15.111	1.178	72.2	1.3323	0.0000	SURCHARGED
30 minute summer	11	19	15.329	0.779	32.9	0.8448	0.0000	SURCHARGED
30 minute summer	12	20	15.096	0.696	13.2	0.3927	0.0000	SURCHARGED
30 minute summer	13	20	15.069	1.165	101.3	1.3180	0.0000	SURCHARGED
30 minute summer	14	20	14.975	0.425	3.6	0.1573	0.0000	SURCHARGED
30 minute summer	15	20	14.973	1.098	112.1	1.4368	0.0000	SURCHARGED
30 minute summer	16	20	14.521	0.471	12.0	0.2517	0.0000	SURCHARGED
30 minute summer	17	20	14.544	0.594	19.1	0.4114	0.0000	SURCHARGED
30 minute summer	18	20	14.496	0.904	135.6	1.0223	0.0000	SURCHARGED
30 minute summer	19	20	14.437	0.387	10.2	0.2161	0.0000	SURCHARGED
30 minute summer	20	20	14.425	0.896	144.0	1.0134	0.0000	SURCHARGED
30 minute summer	21	19	14.575	0.935	33.5	0.9780	0.0000	SURCHARGED
360 minute winter	22	352	14.348	0.980	37.3	1.1089	0.0000	SURCHARGED
360 minute winter	23	352	14.348	1.040	37.3	1.4888	0.0000	SURCHARGED
360 minute winter	24	352	14.348	0.743	0.7	0.3011	0.0000	SURCHARGED
360 minute winter	25	352	14.348	1.065	43.1	2.2819	0.0000	SURCHARGED
360 minute winter	26	352	14.348	1.099	43.0	1.5730	0.0000	SURCHARGED
360 minute winter	27	352	14.348	0.803	3.4	0.5670	0.0000	SURCHARGED
360 minute winter	28	352	14.348	0.843	3.4	0.9536	0.0000	SURCHARGED
360 minute winter	29	352	14.348	0.628	4.3	0.5930	0.0000	SURCHARGED
360 minute winter	30	352	14.348	1.141	52.2	1.8303	0.0000	SURCHARGED
360 minute winter	31	352	14.348	1.162	53.0	327.5232	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute summer	1	1.000	2	17.4	0.746	0.382	1.4562
30 minute summer	2	1.001	3	33.6	1.015	0.750	0.8539
30 minute summer	3	1.002	5	41.6	1.449	0.801	2.3667
30 minute summer	4	2.000	5	5.1	0.760	0.295	0.0717
30 minute summer	5	1.003	8	52.9	1.329	0.464	0.2760
30 minute summer	6	3.000	8	10.5	0.318	0.250	0.3480
30 minute summer	7	4.000	8	-3.8	0.710	-0.072	0.1240
30 minute summer	8	1.004	10	67.9	1.706	1.673	0.6499
30 minute summer	9	5.000	10	9.7	1.790	0.161	0.0727
30 minute summer	10	1.005	13	76.0	1.080	0.897	0.3488
30 minute summer	11	6.000	13	29.0	1.943	0.708	0.1668
30 minute summer	12	7.000	13	10.9	1.425	0.260	0.1113
30 minute summer	13	1.006	15	102.9	1.461	1.213	0.3489
30 minute summer	14	8.000	15	4.7	1.442	0.065	0.0572
30 minute summer	15	1.007	18	114.2	1.621	1.409	2.7383
30 minute summer	16	9.000	18	10.7	1.499	0.319	0.1150
30 minute summer	17	10.000	18	16.8	1.558	0.531	0.0741
30 minute summer	18	1.008	20	136.6	1.314	0.705	0.7410
30 minute summer	19	11.000	20	9.2	1.938	0.175	0.0602
30 minute summer	20	1.009	22	145.6	1.320	0.731	1.7902
30 minute summer	21	12.000	22	31.4	1.786	2.132	0.1193
360 minute winter	22	1.010	23	37.3	0.819	0.189	0.6801
360 minute winter	23	1.011	25	37.3	0.710	0.334	0.8786
360 minute winter	24	13.000	25	0.7	0.622	0.027	0.0816
360 minute winter	25	1.012	26	43.0	0.849	0.388	1.2087
360 minute winter	26	1.013	30	43.0	0.958	0.389	1.4655
360 minute winter	27	14.000	28	3.4	0.640	0.191	0.0702
360 minute winter	28	14.001	30	3.4	0.623	0.253	0.2245
360 minute winter	29	15.000	30	4.3	1.350	0.117	0.1193
360 minute winter	30	1.014	31	52.1	0.844	0.609	0.8175
360 minute winter	31	Infiltration		5.4			

Design Settings

Rainfall Methodology FSR
Return Period (years) 5
Additional Flow (%) 0
FSR Region England and Wales
M5-60 (mm) 19.500
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) 0.200
Preferred Cover Depth (m) 1.200
Include Intermediate Ground ✓
Enforce best practice design rules ✓

Nodes

Name	Area (ha)	Cover Level (m)	Easting (m)	Northing (m)	Depth (m)
1	0.111	17.950	507542.696	104515.962	1.700

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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

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

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	17.550
Safety Factor	5.0	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	39.1	0.0	0.400	234.6	0.0

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.06070	Porosity	0.30
Side Inf Coefficient (m/hr)	0.06070	Invert Level (m)	16.250
Safety Factor	5.0	Time to half empty (mins)	758

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	241.9	241.9	0.400	241.9	308.0	1.000	241.9	308.0	1.001	0.0	308.0

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 98.69%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	236	16.786	0.536	9.0	39.6082	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)					
240 minute winter	1	Infiltration	1.0					

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.69%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	352	17.173	0.923	10.2	68.2215	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)
360 minute winter	1	Infiltration	1.0

Design Settings

Rainfall Methodology FSR
Return Period (years) 5
Additional Flow (%) 0
FSR Region England and Wales
M5-60 (mm) 19.500
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) 0.200
Preferred Cover Depth (m) 1.200
Include Intermediate Ground ✓
Enforce best practice design rules ✓

Nodes

Name	Area (ha)	Cover Level (m)	Easting (m)	Northing (m)	Depth (m)
1	0.118	17.850	507580.244	104485.628	1.850

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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

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

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	17.450
Safety Factor	5.0	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	37.5	0.0	0.400	224.7	0.0

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.02012	Porosity	0.30
Side Inf Coefficient (m/hr)	0.02012	Invert Level (m)	16.000
Safety Factor	5.0	Time to half empty (mins)	2613

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	337.3	337.3	0.350	337.3	411.7	1.100	337.3	411.7	1.101	0.0	411.7

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 99.57%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	1	705	16.525	0.525	4.0	53.8401	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)
720 minute winter	1	Infiltration	0.5

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.57%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
960 minute winter	1	945	16.873	0.873	4.9	89.4989	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)
960 minute winter	1	Infiltration	0.5

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) 9.990
Preferred Cover Depth (m) 1.200
Include Intermediate Ground ✓
Enforce best practice design rules ✓

Nodes

Name	Area (ha)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.096	14.650	1200	507319.782	104517.785	1.750

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

30	120	240	480	720	1440	2880	5760	8640
60	180	360	600	960	2160	4320	7200	10080

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

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.17485	Porosity	0.95
Side Inf Coefficient (m/hr)	0.17485	Invert Level (m)	12.900
Safety Factor	5.0	Time to half empty (mins)	382

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	90.2	90.2	0.401	57.4	112.6	0.801	0.0	112.6
0.400	90.2	112.6	0.800	57.4	112.6			

Results for 10 year +40% CC Critical Storm Duration. Lowest mass balance: 98.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	232	13.278	0.378	7.8	32.8244	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)					
240 minute winter	1	Infiltration	1.1					

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	236	13.694	0.794	12.2	56.6257	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)
240 minute winter	1	Infiltration	1.1