

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.000
CV	1.000	Preferred Cover Depth (m)	1.350
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)
Network3_1	0.026	5.00	14.181	1200	516629.247	105329.364	1.579
Network3_2	0.012	5.00	13.960	1200	516615.191	105312.907	1.575
Network3_3	0.043	5.00	13.817	1200	516614.727	105299.068	1.575
Network3_4	0.078	5.00	13.608	1200	516590.068	105299.843	1.513
Network3_SA2_3			13.500	1200	516589.491	105284.080	2.300
Network3_6			13.420	1200	516588.968	105268.807	2.220
Network3_5			13.500	1200	516589.573	105285.317	1.500

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	Network3_1	Network3_2	21.643	0.600	12.602	12.385	0.217	99.7	225	5.28	50.0
1.001	Network3_2	Network3_3	13.847	0.600	12.385	12.242	0.143	96.8	225	5.45	50.0
1.002	Network3_3	Network3_4	24.671	0.600	12.242	12.095	0.147	167.8	225	5.86	50.0
1.003	Network3_4	Network3_5	14.534	0.600	12.095	12.000	0.095	153.0	225	6.09	50.0
1.004	Network3_5	Network3_SA2_3	1.240	0.600	12.000	12.000	0.000	0.0	225	6.11	50.0
1.005	Network3_SA2_3	Network3_6	15.282	0.600	11.200	11.200	0.000	0.0	225	6.36	50.0

Name	US Node	DS Node	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	Network3_1	Network3_2	1.309	52.0	4.7	1.354	1.350	0.026	0.0	45	0.816
1.001	Network3_2	Network3_3	1.329	52.8	6.9	1.350	1.350	0.038	0.0	55	0.926
1.002	Network3_3	Network3_4	1.006	40.0	14.6	1.350	1.288	0.081	0.0	94	0.928
1.003	Network3_4	Network3_5	1.054	41.9	28.7	1.288	1.275	0.159	0.0	137	1.133
1.004	Network3_5	Network3_SA2_3	1.000	39.8	28.7	1.275	1.275	0.159	0.0	0	∞
1.005	Network3_SA2_3	Network3_6	1.000	39.8	28.7	2.075	1.995	0.159	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	21.643	99.7	225	Circular	14.181	12.602	1.354	13.960	12.385	1.350
1.001	13.847	96.8	225	Circular	13.960	12.385	1.350	13.817	12.242	1.350
1.002	24.671	167.8	225	Circular	13.817	12.242	1.350	13.608	12.095	1.288
1.003	14.534	153.0	225	Circular	13.608	12.095	1.288	13.500	12.000	1.275
1.004	1.240	0.0	225	Circular	13.500	12.000	1.275	13.500	12.000	1.275
1.005	15.282	0.0	225	Circular	13.500	11.200	2.075	13.420	11.200	1.995

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	Network3_1	1200	Manhole	Adoptable_Type A1	Network3_2	1200	Manhole	Adoptable_Type A1
1.001	Network3_2	1200	Manhole	Adoptable_Type A1	Network3_3	1200	Manhole	Adoptable_Type A1
1.002	Network3_3	1200	Manhole	Adoptable_Type A1	Network3_4	1200	Manhole	Adoptable_Type A1
1.003	Network3_4	1200	Manhole	Adoptable_Type A1	Network3_5	1200	Manhole	Adoptable_Type A1
1.004	Network3_5	1200	Manhole	Adoptable_Type A1	Network3_SA2_3	1200	Manhole	Adoptable_Type A1
1.005	Network3_SA2_3	1200	Manhole	Adoptable_Type A1	Network3_6	1200	Manhole	Adoptable_Type A1

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
Network3_1	516629.247	105329.364	14.181	1.579	1200				
Network3_2	516615.191	105312.907	13.960	1.575	1200		0 1.000	12.602	225
Network3_3	516614.727	105299.068	13.817	1.575	1200		0 1.001	12.385	225
Network3_4	516590.068	105299.843	13.608	1.513	1200		0 1.002	12.242	225
Network3_SA2_3	516589.491	105284.080	13.500	2.300	1200		0 1.003	12.095	225
Network3_6	516588.968	105268.807	13.420	2.220	1200		0 1.004	12.000	225
Network3_5	516589.573	105285.317	13.500	1.500	1200		0 1.005	11.200	225
							0 1.005	11.200	225
							0 1.003	12.000	225
							0 1.004	12.000	225

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	2880	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 | 2160

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
2	0	0	0
30	0	0	0
100	40	0	0

Node Network3_SA2_3 Online Depth/Flow Control

Flap Valve	x	Replaces Downstream Link	x
Downstream Link	1.005	Invert Level (m)	11.200

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.001	0.000	5.000	0.000

Node Network3_SA2_3 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	11.200	Depth (m)	1.500
Side Inf Coefficient (m/hr)	0.20160	Time to half empty (mins)	960	Inf Depth (m)	1.500
Safety Factor	2.0	Pit Width (m)	11.250	Number Required	1
Porosity	0.95	Pit Length (m)	10.000		

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Network3_1	10	12.639	0.037	3.1	0.0417	0.0000	OK
15 minute summer	Network3_2	11	12.429	0.044	4.5	0.0497	0.0000	OK
15 minute summer	Network3_3	11	12.316	0.074	9.5	0.0833	0.0000	OK
15 minute summer	Network3_4	11	12.207	0.112	18.5	0.1268	0.0000	OK
2160 minute summer	Network3_SA2_3	1500	11.525	0.325	1.6	35.0596	0.0000	SURCHARGED
15 minute summer	Network3_6	1	11.200	0.000	0.0	0.0000	0.0000	OK
15 minute summer	Network3_5	11	12.138	0.138	18.5	0.1561	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Network3_1	1.000	Network3_2	3.1	0.639	0.059	0.1042	
15 minute summer	Network3_2	1.001	Network3_3	4.4	0.540	0.084	0.1157	
15 minute summer	Network3_3	1.002	Network3_4	9.4	0.609	0.235	0.3827	
15 minute summer	Network3_4	1.003	Network3_5	18.5	0.815	0.440	0.3290	
2160 minute summer	Network3_SA2_3	1.005	Network3_6	0.0	0.000	0.000	0.0000	0.0
2160 minute summer	Network3_SA2_3	Infiltration		0.4				
15 minute summer	Network3_5	1.004	Network3_SA2_3	18.5	0.814	0.465	0.0281	

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Network3_1	10	12.648	0.046	4.9	0.0522	0.0000	OK
15 minute summer	Network3_2	10	12.440	0.055	7.1	0.0624	0.0000	OK
15 minute summer	Network3_3	11	12.336	0.094	15.1	0.1065	0.0000	OK
15 minute summer	Network3_4	11	12.251	0.156	29.5	0.1766	0.0000	OK
1440 minute winter	Network3_SA2_3	1080	11.603	0.403	1.8	43.4883	0.0000	SURCHARGED
15 minute summer	Network3_6	1	11.200	0.000	0.0	0.0000	0.0000	OK
15 minute summer	Network3_5	11	12.179	0.179	29.2	0.2024	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Network3_1	1.000	Network3_2	4.9	0.727	0.093	0.1447	
15 minute summer	Network3_2	1.001	Network3_3	7.0	0.614	0.133	0.1609	
15 minute summer	Network3_3	1.002	Network3_4	14.9	0.659	0.372	0.5567	
15 minute summer	Network3_4	1.003	Network3_5	29.2	0.920	0.696	0.4599	
1440 minute winter	Network3_SA2_3	1.005	Network3_6	0.0	0.000	0.000	0.0000	0.0
1440 minute winter	Network3_SA2_3	Infiltration		0.5				
15 minute summer	Network3_5	1.004	Network3_SA2_3	29.3	0.962	0.736	0.0375	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Network3_1	12	12.828	0.226	12.8	0.2554	0.0000	SURCHARGED
15 minute summer	Network3_2	12	12.814	0.429	17.5	0.4848	0.0000	SURCHARGED
15 minute summer	Network3_3	11	12.794	0.552	34.5	0.6241	0.0000	SURCHARGED
15 minute summer	Network3_4	11	12.668	0.573	70.0	0.6479	0.0000	SURCHARGED
600 minute summer	Network3_SA2_3	600	11.986	0.786	10.4	84.8965	0.0000	SURCHARGED
15 minute summer	Network3_6	1	11.200	0.000	0.0	0.0000	0.0000	OK
15 minute summer	Network3_5	11	12.318	0.318	69.2	0.3599	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Network3_1	1.000	Network3_2	14.5	0.879	0.278	0.8602	
15 minute summer	Network3_2	1.001	Network3_3	22.7	0.679	0.430	0.5507	
15 minute summer	Network3_3	1.002	Network3_4	36.1	0.907	0.902	0.9812	
15 minute summer	Network3_4	1.003	Network3_5	69.2	1.739	1.650	0.5780	
600 minute summer	Network3_SA2_3	1.005	Network3_6	0.0	0.000	0.000	0.0000	0.0
600 minute summer	Network3_SA2_3	Infiltration		0.9				
15 minute summer	Network3_5	1.004	Network3_SA2_3	68.9	1.734	1.734	0.0485	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	Network3_1	11	13.956	1.354	22.5	1.5309	0.0000	FLOOD RISK
15 minute summer	Network3_2	11	13.897	1.512	32.6	1.7097	0.0000	FLOOD RISK
15 minute summer	Network3_3	11	13.817	1.575	68.1	1.7813	0.9693	FLOOD
15 minute summer	Network3_4	11	13.515	1.420	116.8	1.6065	0.0000	FLOOD RISK
600 minute winter	Network3_SA2_3	585	12.547	1.347	12.4	145.4644	0.0000	SURCHARGED
15 minute summer	Network3_6	1	11.200	0.000	0.0	0.0000	0.0000	OK
720 minute winter	Network3_5	660	12.548	0.548	10.8	0.6200	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	Network3_1	1.000	Network3_2	22.5	0.896	0.433	0.8608	
15 minute summer	Network3_2	1.001	Network3_3	32.6	0.819	0.617	0.5507	
15 minute summer	Network3_3	1.002	Network3_4	59.7	1.501	1.492	0.9812	
15 minute summer	Network3_4	1.003	Network3_5	117.4	2.951	2.800	0.5780	
600 minute winter	Network3_SA2_3	1.005	Network3_6	0.0	0.000	0.000	0.0000	0.0
600 minute winter	Network3_SA2_3	Infiltration		1.6				
720 minute winter	Network3_5	1.004	Network3_SA2_3	10.8	0.685	0.272	0.0493	