

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.01
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	40	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.000
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
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		5.00	4.169	600	524182.014	326346.200	1.596
2	0.034	5.00	4.251	600	524179.130	326334.400	1.374
3			4.213	600	524186.582	326337.322	1.683
4	0.035	5.00	4.232	600	524185.466	326327.923	1.374
5			4.065	600	524191.233	326334.142	1.559
6	0.036	5.00	4.113	600	524206.395	326327.657	1.328
7			3.952	600	524207.432	326336.003	1.518
8			3.887	600	524212.991	326343.933	1.494
9			3.838	600	524216.679	326346.948	1.466
10	0.033	5.00	4.019	600	524221.895	326341.490	1.598
11			3.780	600	524229.007	326348.608	1.460
12			3.975	600	524234.074	326343.161	1.647
13			3.751	600	524233.242	326349.178	1.449
14	0.036	5.00	3.817	600	524264.938	326348.899	1.627
15			3.696	600	524264.325	326353.363	1.525
16		5.00	4.195	600	524181.925	326346.859	1.570
17	0.037	5.00	4.236	600	524178.160	326362.823	1.203
18			4.086	600	524188.035	326361.325	1.530
19	0.036	5.00	4.125	600	524198.240	326369.503	1.419
20			4.002	600	524200.096	326364.469	1.500
21			3.912	600	524211.190	326357.305	1.486
22			3.863	600	524215.517	326355.368	1.458
23	0.035	5.00	3.966	600	524234.485	326365.200	1.426
24			3.722	600	524236.502	326358.188	1.406
25		5.00	3.910	600	524254.034	326364.446	1.704
26			3.904	600	524256.016	326364.712	1.706
27			3.537	600	524258.208	326361.116	1.357
28	0.012	5.00	3.518	1500	524267.111	326358.952	1.408
28_OUT			3.558	1350	524271.719	326366.997	1.478
10_2			3.988	600	524229.835	326342.579	1.601
29	0.034	5.00	3.952	600	524242.026	326344.252	1.590



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	3	10.155	0.600	2.573	2.530	0.043	236.2	300	5.17	50.0
2.000	2	3	8.004	0.600	2.877	2.796	0.081	98.8	150	5.13	50.0
1.001	3	5	5.664	0.600	2.530	2.506	0.024	236.0	300	5.26	50.0
3.000	4	5	8.481	0.600	2.858	2.772	0.086	98.6	150	5.14	50.0
1.002	5	7	17.115	0.600	2.506	2.434	0.072	237.7	300	5.54	50.0
4.000	6	7	8.410	0.600	2.785	2.700	0.085	98.9	150	5.14	50.0
1.003	7	8	9.840	0.600	2.434	2.393	0.041	240.0	300	5.70	50.0
1.004	8	9	5.020	0.600	2.393	2.372	0.021	239.0	300	5.78	50.0
1.005	9	11	12.439	0.600	2.372	2.320	0.052	239.2	300	5.99	50.0
5.000	10	10_2	8.014	0.600	2.421	2.387	0.034	235.7	300	5.13	50.0
5.001	10_2	11	6.086	0.600	2.387	2.361	0.026	234.0	300	5.23	50.0
1.006	11	13	4.273	0.600	2.320	2.302	0.018	237.4	300	6.06	50.0
6.000	29	12	8.026	0.600	2.362	2.328	0.034	236.1	300	5.13	50.0
6.001	12	13	6.074	0.600	2.328	2.302	0.026	234.0	300	5.23	50.0
1.007	13	15	31.363	0.600	2.302	2.171	0.131	239.4	300	6.58	50.0
7.000	14	15	4.506	0.600	2.190	2.171	0.019	237.2	300	5.07	50.0
1.008	15	28	6.245	0.600	2.171	2.144	0.027	231.3	300	6.68	50.0
8.000	16	18	16.415	0.600	2.625	2.556	0.069	237.9	300	5.27	50.0
9.000	17	18	9.988	0.600	3.033	2.706	0.327	30.5	150	5.09	50.0
8.001	18	20	12.805	0.600	2.556	2.502	0.054	237.1	300	5.48	50.0
10.000	19	20	5.365	0.600	2.706	2.652	0.054	99.4	300	5.06	50.0
8.002	20	21	13.616	0.600	2.502	2.426	0.076	179.2	300	5.67	50.0
8.003	21	22	4.993	0.600	2.426	2.405	0.021	237.7	300	5.76	50.0
8.004	22	24	21.174	0.600	2.405	2.316	0.089	237.9	300	6.10	50.0
11.000	23	24	7.296	0.600	2.540	2.466	0.074	98.6	300	5.08	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.019	72.0	0.9	1.296	1.383	0.005	0.0	24	0.360
2.000	1.011	17.9	6.5	1.224	1.267	0.034	0.0	62	0.931
1.001	1.019	72.0	8.0	1.383	1.259	0.042	0.0	67	0.677
3.000	1.012	17.9	6.7	1.224	1.143	0.035	0.0	64	0.940
1.002	1.015	71.8	16.6	1.259	1.218	0.087	0.0	98	0.829
4.000	1.010	17.8	6.7	1.178	1.102	0.036	0.0	64	0.942
1.003	1.010	71.4	25.8	1.218	1.194	0.136	0.0	125	0.931
1.004	1.012	71.6	28.1	1.194	1.166	0.148	0.0	130	0.953
1.005	1.012	71.5	29.4	1.166	1.160	0.155	0.0	134	0.964
5.000	1.020	72.1	6.2	1.298	1.301	0.033	0.0	59	0.628
5.001	1.023	72.3	6.2	1.301	1.119	0.033	0.0	59	0.630
1.006	1.016	71.8	36.7	1.160	1.149	0.194	0.0	152	1.021
6.000	1.019	72.0	6.4	1.290	1.347	0.034	0.0	60	0.635
6.001	1.023	72.3	6.4	1.347	1.149	0.034	0.0	60	0.638
1.007	1.012	71.5	44.7	1.149	1.225	0.236	0.0	172	1.065
7.000	1.016	71.8	6.8	1.327	1.225	0.036	0.0	62	0.644
1.008	1.029	72.8	51.5	1.225	1.074	0.271	0.0	187	1.113
8.000	1.015	71.7	1.7	1.270	1.230	0.009	0.0	32	0.428
9.000	1.828	32.3	7.0	1.053	1.230	0.037	0.0	47	1.461
8.001	1.016	71.8	10.0	1.230	1.200	0.053	0.0	75	0.721
10.000	1.577	111.5	6.8	1.119	1.050	0.036	0.0	50	0.878
8.002	1.171	82.8	18.7	1.200	1.186	0.098	0.0	96	0.951
8.003	1.015	71.8	21.5	1.186	1.158	0.113	0.0	112	0.890
8.004	1.015	71.7	23.2	1.158	1.106	0.122	0.0	117	0.907
11.000	1.583	111.9	6.7	1.126	0.956	0.035	0.0	50	0.882



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)
8.005	24	27	21.903	0.600	2.316	2.224	0.092	238.1	300	6.46	50.0
12.000	25	26	2.000	0.600	2.206	2.198	0.008	250.0	300	5.03	50.0
12.001	26	27	4.211	0.600	2.198	2.180	0.018	233.9	300	5.10	50.0
8.006	27	28	9.162	0.600	2.180	2.142	0.038	241.1	300	6.61	50.0
1.009	28	28_OUT	9.271	0.600	2.110	2.080	0.030	309.0	375	6.83	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)
8.005	1.014	71.7	31.6	1.106	1.013	0.167	0.0	139	0.983
12.000	0.990	70.0	0.0	1.404	1.406	0.000	0.0	0	0.000
12.001	1.023	72.3	0.0	1.406	1.057	0.000	0.0	0	0.000
8.006	1.008	71.2	31.6	1.057	1.076	0.167	0.0	140	0.978
1.009	1.025	113.2	85.4	1.033	1.103	0.450	0.0	244	1.122

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	10.155	236.2	300	SW Perforated	4.169	2.573	1.296	4.213	2.530	1.383
2.000	8.004	98.8	150	SW Perforated	4.251	2.877	1.224	4.213	2.796	1.267
1.001	5.664	236.0	300	SW Perforated	4.213	2.530	1.383	4.065	2.506	1.259
3.000	8.481	98.6	150	SW Perforated	4.232	2.858	1.224	4.065	2.772	1.143
1.002	17.115	237.7	300	SW Perforated	4.065	2.506	1.259	3.952	2.434	1.218
4.000	8.410	98.9	150	SW Perforated	4.113	2.785	1.178	3.952	2.700	1.102
1.003	9.840	240.0	300	SW Perforated	3.952	2.434	1.218	3.887	2.393	1.194
1.004	5.020	239.0	300	SW Perforated	3.887	2.393	1.194	3.838	2.372	1.166
1.005	12.439	239.2	300	SW Perforated	3.838	2.372	1.166	3.780	2.320	1.160
5.000	8.014	235.7	300	SW Perforated	4.019	2.421	1.298	3.988	2.387	1.301
5.001	6.086	234.0	300	Circular	3.988	2.387	1.301	3.780	2.361	1.119
1.006	4.273	237.4	300	SW Perforated	3.780	2.320	1.160	3.751	2.302	1.149
6.000	8.026	236.1	300	Circular	3.952	2.362	1.290	3.975	2.328	1.347
6.001	6.074	234.0	300	Circular	3.975	2.328	1.347	3.751	2.302	1.149
1.007	31.363	239.4	300	SW Perforated	3.751	2.302	1.149	3.696	2.171	1.225
7.000	4.506	237.2	300	Circular	3.817	2.190	1.327	3.696	2.171	1.225

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	600	Manhole	Adoptable	3	600	Manhole	Adoptable
2.000	2	600	Manhole	Adoptable	3	600	Manhole	Adoptable
1.001	3	600	Manhole	Adoptable	5	600	Manhole	Adoptable
3.000	4	600	Manhole	Adoptable	5	600	Manhole	Adoptable
1.002	5	600	Manhole	Adoptable	7	600	Manhole	Adoptable
4.000	6	600	Manhole	Adoptable	7	600	Manhole	Adoptable
1.003	7	600	Manhole	Adoptable	8	600	Manhole	Adoptable
1.004	8	600	Manhole	Adoptable	9	600	Manhole	Adoptable
1.005	9	600	Manhole	Adoptable	11	600	Manhole	Adoptable
5.000	10	600	Manhole	Adoptable	10_2	600	Manhole	Adoptable
5.001	10_2	600	Manhole	Adoptable	11	600	Manhole	Adoptable
1.006	11	600	Manhole	Adoptable	13	600	Manhole	Adoptable
6.000	29	600	Manhole	Adoptable	12	600	Manhole	Adoptable
6.001	12	600	Manhole	Adoptable	13	600	Manhole	Adoptable
1.007	13	600	Manhole	Adoptable	15	600	Manhole	Adoptable
7.000	14	600	Manhole	Adoptable	15	600	Manhole	Adoptable

Pipeline Schedule

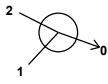
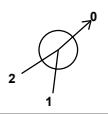
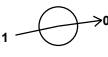
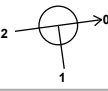
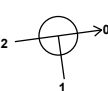
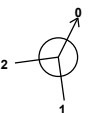
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.008	6.245	231.3	300	Circular	3.696	2.171	1.225	3.518	2.144	1.074
8.000	16.415	237.9	300	SW Perforated	4.195	2.625	1.270	4.086	2.556	1.230
9.000	9.988	30.5	150	SW Perforated	4.236	3.033	1.053	4.086	2.706	1.230
8.001	12.805	237.1	300	SW Perforated	4.086	2.556	1.230	4.002	2.502	1.200
10.000	5.365	99.4	300	SW Perforated	4.125	2.706	1.119	4.002	2.652	1.050
8.002	13.616	179.2	300	SW Perforated	4.002	2.502	1.200	3.912	2.426	1.186
8.003	4.993	237.7	300	SW Perforated	3.912	2.426	1.186	3.863	2.405	1.158
8.004	21.174	237.9	300	SW Perforated	3.863	2.405	1.158	3.722	2.316	1.106
11.000	7.296	98.6	300	Circular	3.966	2.540	1.126	3.722	2.466	0.956
8.005	21.903	238.1	300	SW Perforated	3.722	2.316	1.106	3.537	2.224	1.013
12.000	2.000	250.0	300	Circular	3.910	2.206	1.404	3.904	2.198	1.406
12.001	4.211	233.9	300	Circular	3.904	2.198	1.406	3.537	2.180	1.057
8.006	9.162	241.1	300	Circular	3.537	2.180	1.057	3.518	2.142	1.076
1.009	9.271	309.0	375	Circular	3.518	2.110	1.033	3.558	2.080	1.103

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.008	15	600	Manhole	Adoptable	28	1500	Manhole	Adoptable
8.000	16	600	Manhole	Adoptable	18	600	Manhole	Adoptable
9.000	17	600	Manhole	Adoptable	18	600	Manhole	Adoptable
8.001	18	600	Manhole	Adoptable	20	600	Manhole	Adoptable
10.000	19	600	Manhole	Adoptable	20	600	Manhole	Adoptable
8.002	20	600	Manhole	Adoptable	21	600	Manhole	Adoptable
8.003	21	600	Manhole	Adoptable	22	600	Manhole	Adoptable
8.004	22	600	Manhole	Adoptable	24	600	Manhole	Adoptable
11.000	23	600	Manhole	Adoptable	24	600	Manhole	Adoptable
8.005	24	600	Manhole	Adoptable	27	600	Manhole	Adoptable
12.000	25	600	Manhole	Adoptable	26	600	Manhole	Adoptable
12.001	26	600	Manhole	Adoptable	27	600	Manhole	Adoptable
8.006	27	600	Manhole	Adoptable	28	1500	Manhole	Adoptable
1.009	28	1500	Manhole	Adoptable	28_OUT	1350	Manhole	Adoptable

Manhole Schedule

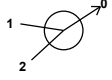
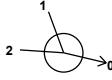
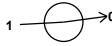
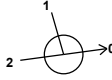
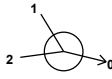
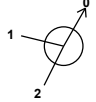
Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	524182.014	326346.200	4.169	1.596	600		0	1.000	2.573 300
2	524179.130	326334.400	4.251	1.374	600		0	2.000	2.877 150
3	524186.582	326337.322	4.213	1.683	600		1 2	2.000 1.000	2.796 150 2.530 300
4	524185.466	326327.923	4.232	1.374	600		0	3.000	2.858 150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
5	524191.233	326334.142	4.065	1.559	600		1 2 0	3.000 1.001 1.002	2.772 2.506 2.506	150 300 300
6	524206.395	326327.657	4.113	1.328	600		0	4.000	2.785	150
7	524207.432	326336.003	3.952	1.518	600		1 2 0	4.000 1.002 1.003	2.700 2.434 2.434	150 300 300
8	524212.991	326343.933	3.887	1.494	600		1 0	1.003 1.004	2.393 2.393	300 300
9	524216.679	326346.948	3.838	1.466	600		1 0	1.004 1.005	2.372 2.372	300 300
10	524221.895	326341.490	4.019	1.598	600		0	5.000	2.421	300
11	524229.007	326348.608	3.780	1.460	600		1 2 0	5.001 1.005 1.006	2.361 2.320 2.320	300 300 300
12	524234.074	326343.161	3.975	1.647	600		1 0	6.000 6.001	2.328 2.328	300 300
13	524233.242	326349.178	3.751	1.449	600		1 2 0	6.001 1.006 1.007	2.302 2.302 2.302	300 300 300
14	524264.938	326348.899	3.817	1.627	600		0	7.000	2.190	300
15	524264.325	326353.363	3.696	1.525	600		1 2 0	7.000 1.007 1.008	2.171 2.171 2.171	300 300 300
16	524181.925	326346.859	4.195	1.570	600		0	8.000	2.625	300
17	524178.160	326362.823	4.236	1.203	600		0	9.000	3.033	150



Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
18	524188.035	326361.325	4.086	1.530	600		1 9.000 2 8.000	2.706 2.556	150 300
							0 8.001	2.556	300
19	524198.240	326369.503	4.125	1.419	600		0 10.000	2.706	300
20	524200.096	326364.469	4.002	1.500	600		1 10.000 2 8.001	2.652 2.502	300 300
							0 8.002	2.502	300
21	524211.190	326357.305	3.912	1.486	600		1 8.002	2.426	300
							0 8.003	2.426	300
22	524215.517	326355.368	3.863	1.458	600		1 8.003	2.405	300
							0 8.004	2.405	300
23	524234.485	326365.200	3.966	1.426	600		0 11.000	2.540	300
24	524236.502	326358.188	3.722	1.406	600		1 11.000 2 8.004	2.466 2.316	300 300
							0 8.005	2.316	300
25	524254.034	326364.446	3.910	1.704	600		0 12.000	2.206	300
26	524256.016	326364.712	3.904	1.706	600		1 12.000	2.198	300
							0 12.001	2.198	300
27	524258.208	326361.116	3.537	1.357	600		1 12.001 2 8.005	2.180 2.224	300 300
							0 8.006	2.180	300
28	524267.111	326358.952	3.518	1.408	1500		1 8.006 2 1.008	2.142 2.144	300 300
							0 1.009	2.110	375
28_OUT	524271.719	326366.997	3.558	1.478	1350		1 1.009	2.080	375
10_2	524229.835	326342.579	3.988	1.601	600		1 5.000	2.387	300
							0 5.001	2.387	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
29	524242.026	326344.252	3.952	1.590	600				

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	1 year (l/s)	1.1
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	3.3
Summer CV	0.750	Additional Storage (m³/ha)	0.0	100 year (l/s)	4.7
Winter CV	0.840	Starting Level (m)		Check Discharge Volume	✓
Analysis Speed	Detailed	Check Discharge Rate(s)	✓	100 year 360 minute (m³)	295

Storm Durations

15	60	180	360	600	960	2160
30	120	240	480	720	1440	2880

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

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	2.55
Greenfield Method	FEH	Growth Factor 100 year	3.56
Positively Drained Area (ha)	1.473	Betterment (%)	0
SAAR (mm)	562	QMed	1.2
Host	1	QBar	1.3
BFIHost	0.680	Q 1 year (l/s)	1.1
Region	5	Q 30 year (l/s)	3.3
QBar/QMed conversion factor	1.124	Q 100 year (l/s)	4.7
Growth Factor 1 year	0.87		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)	1.473	Storm Duration (mins)	360
Soil Index	2	Betterment (%)	0
SPR	0.30	PR	0.257
CWI	84.741	Runoff Volume (m³)	295

Node 28 Online Hydro -Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	2.110	Product Number	CTL-SHE-0101-5000-1300-5000
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node 17 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.506	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.600
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node 18 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.556	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 20 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.001
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.502	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 19 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.410	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.600
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	9.000		

Node 21 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.002
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.426	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 22 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.003
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.405	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 24 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.004
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.316	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 27 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	8.005
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.224	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 23 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.235	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	16	Depth (m)	0.600
Safety Factor	2.0	Width (m)	8.000	Inf Depth (m)	
Porosity	0.30	Length (m)	8.000		

Node 3 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.530	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.521	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.600
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	9.000		

Node 10 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.163	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	24	Depth (m)	0.600
Safety Factor	2.0	Width (m)	8.500	Inf Depth (m)	
Porosity	0.30	Length (m)	8.500		

Node 5 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.001
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.506	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 7 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.002
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.434	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 4 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.495	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.600
Safety Factor	2.0	Width (m)	8.000	Inf Depth (m)	
Porosity	0.30	Length (m)	8.000		

Node 8 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.003
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.393	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 9 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.004
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.372	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 11 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.005
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.320	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 13 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.006
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.302	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 15 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	1.007
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	2.171	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)		Diameter (mm)	1000

Node 14 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.177
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	70.0	0.0	0.800	70.0	0.0	0.801	0.0	0.0

Node 29 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.362
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	40.0	0.0	0.800	40.0	0.0	0.801	0.0	0.0

Node 25 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.206
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	46.5	0.0	1.000	46.5	0.0	1.001	0.0	0.0

Node 6 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.380	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.600
Safety Factor	2.0	Width (m)	8.000	Inf Depth (m)	
Porosity	0.30	Length (m)	8.000		

Node 23 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.540
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	31.5	0.0	0.800	31.5	0.0	0.801	0.0	0.0

Node 14 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.086	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	128	Depth (m)	0.600
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	9.000		

Node 29 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	3.222	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	24	Depth (m)	0.600
Safety Factor	2.0	Width (m)	8.000	Inf Depth (m)	
Porosity	0.30	Length (m)	8.000		

Node 10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.421
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	30.0	0.0	0.800	30.0	0.0	0.801	0.0	0.0

Node 19 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.706
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	40.0	0.0	0.800	40.0	0.0	0.801	0.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	12	2.576	0.003	0.0	0.0009	0.0000	OK
15 minute winter	1.000:50%	11	2.576	0.024	0.4	0.0192	0.0000	OK
15 minute winter	2	10	2.917	0.040	2.8	0.0115	0.0000	OK
15 minute winter	3	11	2.576	0.046	3.1	0.0590	0.0000	OK
15 minute winter	1.001:50%	11	2.570	0.052	3.3	0.0332	0.0000	OK
15 minute winter	4	10	2.900	0.042	2.9	0.0118	0.0000	OK
15 minute winter	5	11	2.567	0.061	6.1	0.0568	0.0000	OK
15 minute winter	1.002:50%	11	2.537	0.067	7.0	0.1055	0.0000	OK
15 minute winter	6	10	2.828	0.043	3.0	0.0122	0.0000	OK
15 minute winter	7	11	2.517	0.083	9.8	0.1620	0.0000	OK
15 minute winter	1.003:50%	11	2.494	0.081	10.7	0.0844	0.0000	OK
15 minute winter	8	11	2.477	0.084	10.7	0.1122	0.0000	OK
15 minute winter	1.004:50%	12	2.468	0.085	11.5	0.0488	0.0000	OK
15 minute winter	9	12	2.459	0.087	11.4	0.0743	0.0000	OK
15 minute winter	1.005:50%	12	2.445	0.099	11.9	0.1293	0.0000	OK
30 minute winter	10	22	2.449	0.028	2.0	0.8041	0.0000	OK
15 minute winter	11	12	2.429	0.109	12.9	0.1727	0.0000	OK
15 minute winter	1.006:50%	13	2.414	0.103	13.1	0.0499	0.0000	OK
15 minute winter	12	13	2.391	0.063	1.5	0.0179	0.0000	OK
15 minute winter	13	13	2.391	0.089	13.1	0.0690	0.0000	OK
180 minute winter	1.007:50%	136	2.357	0.120	6.2	0.3254	0.0000	OK
180 minute winter	14	136	2.357	0.167	3.6	11.1512	0.0000	OK
180 minute winter	15	136	2.357	0.186	6.1	0.6040	0.0000	OK
15 minute summer	16	1	2.625	0.000	0.0	0.0000	0.0000	OK
15 minute winter	8.000:50%	10	2.612	0.021	0.8	0.0144	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	1.000:50%	0.0	-0.040	-0.001	0.0070	
15 minute winter	1	1.000	3	0.4	0.114	0.006	0.0240	
15 minute winter	2	2.000	3	2.8	0.732	0.155	0.0303	
15 minute winter	3	1.001	1.001:50%	3.1	0.413	0.043	0.0212	
15 minute winter	3	1.001	5	3.3	0.363	0.046	0.0262	
15 minute winter	4	3.000	5	2.9	0.732	0.161	0.0333	
15 minute winter	5	1.002	1.002:50%	6.2	0.565	0.086	0.0940	
15 minute winter	5	1.002	7	6.9	0.503	0.097	0.1181	
15 minute winter	6	4.000	7	2.9	0.726	0.165	0.0341	
15 minute winter	7	1.003	1.003:50%	9.7	0.622	0.136	0.0769	
15 minute winter	7	1.003	8	10.7	0.681	0.150	0.0772	
15 minute winter	8	1.004	1.004:50%	10.6	0.654	0.148	0.0407	
15 minute winter	8	1.004	9	11.4	0.694	0.160	0.0417	
15 minute winter	9	1.005	1.005:50%	11.4	0.630	0.159	0.1155	
15 minute winter	9	1.005	11	11.9	0.576	0.166	0.1346	
30 minute winter	10	5.000	10_2	1.3	0.367	0.018	0.0309	
15 minute winter	11	1.006	1.006:50%	12.7	0.576	0.177	0.0473	
15 minute winter	11	1.006	13	13.1	0.680	0.182	0.0415	
15 minute winter	12	6.001	13	1.8	0.205	0.024	0.0860	
15 minute winter	13	1.007	1.007:50%	12.4	0.726	0.174	0.2681	
15 minute winter	13	1.007	15	12.8	0.615	0.179	0.3459	
180 minute winter	14	7.000	15	-2.7	0.282	-0.037	0.1947	
180 minute winter	15	1.008	28	3.4	0.299	0.047	0.3110	
15 minute summer	16	8.000	8.000:50%	0.0	0.000	0.000	0.0087	
15 minute summer	16	8.000	18	0.7	0.165	0.010	0.0364	

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	17	10	3.065	0.032	3.1	0.0089	0.0000	OK
15 minute winter	18	11	2.603	0.047	3.8	0.0770	0.0000	OK
15 minute winter	8.001:50%	11	2.582	0.053	4.3	0.0645	0.0000	OK
30 minute winter	19	22	2.730	0.024	2.2	0.9167	0.0000	OK
15 minute winter	20	12	2.556	0.054	5.2	0.0820	0.0000	OK
15 minute winter	8.002:50%	12	2.519	0.055	5.9	0.0635	0.0000	OK
15 minute winter	21	12	2.488	0.062	5.9	0.0921	0.0000	OK
15 minute winter	8.003:50%	12	2.479	0.064	6.9	0.0364	0.0000	OK
15 minute winter	22	12	2.469	0.064	6.9	0.0544	0.0000	OK
15 minute winter	8.004:50%	12	2.429	0.068	7.5	0.1222	0.0000	OK
15 minute winter	23	13	2.566	0.026	2.9	0.7836	0.0000	OK
15 minute winter	24	13	2.391	0.075	8.9	0.1619	0.0000	OK
180 minute winter	8.005:50%	136	2.357	0.087	4.3	0.1735	0.0000	OK
180 minute winter	25	136	2.357	0.151	3.3	6.7311	0.0000	OK
180 minute winter	26	136	2.357	0.159	3.4	0.0451	0.0000	OK
180 minute winter	27	136	2.357	0.177	4.3	0.3352	0.0000	OK
180 minute winter	28	136	2.357	0.247	4.7	0.4370	0.0000	OK
180 minute winter	28_OUT	136	2.128	0.048	4.6	0.0000	0.0000	OK
15 minute winter	10_2	13	2.431	0.044	1.3	0.0123	0.0000	OK
15 minute winter	29	15	2.393	0.031	2.9	1.1825	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	17	9.000	18	3.1	1.147	0.095	0.0267	
15 minute winter	18	8.001	8.001:50%	3.8	0.491	0.052	0.0490	
15 minute winter	18	8.001	20	4.3	0.523	0.060	0.0535	
30 minute winter	19	10.000	20	1.3	0.528	0.012	0.0136	
15 minute winter	20	8.002	8.002:50%	5.2	0.593	0.063	0.0596	
15 minute winter	20	8.002	21	5.9	0.609	0.071	0.0662	
15 minute winter	21	8.003	8.003:50%	5.9	0.557	0.083	0.0267	
15 minute winter	21	8.003	22	6.9	0.638	0.097	0.0271	
15 minute winter	22	8.004	8.004:50%	6.9	0.608	0.097	0.1210	
15 minute winter	22	8.004	24	7.4	0.586	0.104	0.1350	
15 minute winter	23	11.000	24	1.6	0.564	0.014	0.0209	
15 minute winter	24	8.005	8.005:50%	9.0	0.655	0.126	0.1504	
15 minute winter	24	8.005	27	9.4	0.700	0.131	0.1465	
180 minute winter	25	12.000	26	-3.3	-0.471	-0.047	0.0737	
180 minute winter	26	12.001	27	-3.4	0.223	-0.047	0.1714	
180 minute winter	27	8.006	28	1.9	0.255	0.026	0.4466	
180 minute winter	28	1.009	28_OUT	4.6	0.526	0.041	0.0817	51.5
15 minute winter	10_2	5.001	11	1.5	0.352	0.021	0.0551	
15 minute winter	29	6.000	12	1.5	0.324	0.020	0.0574	

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	176	2.811	0.238	0.2	0.0672	0.0000	OK
180 minute winter	1.000:50%	176	2.810	0.259	0.6	0.2839	0.0000	OK
15 minute winter	2	10	2.984	0.107	14.8	0.0302	0.0000	OK
180 minute winter	3	176	2.811	0.281	3.9	0.3885	0.0000	OK
180 minute winter	1.001:50%	176	2.811	0.293	4.2	0.1842	0.0000	OK
15 minute winter	4	10	2.972	0.114	15.4	0.0324	0.0000	OK
180 minute winter	5	176	2.811	0.305	7.6	0.2802	0.0000	SURCHARGED
180 minute winter	1.002:50%	176	2.811	0.341	8.6	0.6467	0.0000	SURCHARGED
15 minute winter	6	10	2.905	0.120	15.5	0.0341	0.0000	OK
180 minute winter	7	176	2.811	0.377	11.6	0.8451	0.0000	SURCHARGED
180 minute winter	1.003:50%	176	2.810	0.397	12.5	0.4661	0.0000	SURCHARGED
180 minute winter	8	176	2.811	0.418	12.1	0.6151	0.0000	SURCHARGED
180 minute winter	1.004:50%	176	2.810	0.428	12.9	0.2648	0.0000	SURCHARGED
180 minute winter	9	176	2.811	0.439	12.6	0.3970	0.0000	SURCHARGED
180 minute winter	1.005:50%	176	2.811	0.465	13.0	0.7102	0.0000	SURCHARGED
180 minute winter	10	176	2.811	0.390	4.6	11.2126	0.0000	SURCHARGED
180 minute winter	11	176	2.811	0.491	13.0	0.8979	0.0000	SURCHARGED
180 minute winter	1.006:50%	176	2.811	0.500	13.2	0.2720	0.0000	SURCHARGED
180 minute winter	12	176	2.810	0.482	3.7	0.1365	0.0000	SURCHARGED
180 minute winter	13	176	2.810	0.508	13.0	0.4214	0.0000	SURCHARGED
180 minute winter	1.007:50%	176	2.810	0.573	12.4	2.2061	0.0000	SURCHARGED
180 minute winter	14	176	2.810	0.620	10.2	41.3934	0.0000	SURCHARGED
180 minute winter	15	176	2.810	0.639	11.5	2.7019	0.0000	SURCHARGED
180 minute winter	16	176	2.810	0.185	0.3	0.0525	0.0000	OK
180 minute winter	8.000:50%	176	2.810	0.219	0.9	0.3713	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)
180 minute winter	1	1.000	1.000:50%	-0.2	-0.055	-0.003	0.3159	
180 minute winter	1	1.000	3	0.5	0.092	0.007	0.3379	
15 minute winter	2	2.000	3	14.6	1.113	0.819	0.1052	
180 minute winter	3	1.001	1.001:50%	3.9	0.421	0.054	0.1961	
180 minute winter	3	1.001	5	4.1	0.371	0.057	0.1988	
15 minute winter	4	3.000	5	15.2	1.098	0.850	0.1174	
180 minute winter	5	1.002	1.002:50%	7.6	0.571	0.105	0.6026	
180 minute winter	5	1.002	7	8.2	0.503	0.114	0.6026	
15 minute winter	6	4.000	7	15.3	1.070	0.856	0.1199	
180 minute winter	7	1.003	1.003:50%	11.3	0.608	0.158	0.3465	
180 minute winter	7	1.003	8	12.1	0.654	0.170	0.3465	
180 minute winter	8	1.004	1.004:50%	11.8	0.620	0.165	0.1768	
180 minute winter	8	1.004	9	12.6	0.653	0.177	0.1768	
180 minute winter	9	1.005	1.005:50%	12.3	0.570	0.172	0.4380	
180 minute winter	9	1.005	11	12.6	0.479	0.176	0.4380	
180 minute winter	10	5.000	10_2	2.1	0.389	0.030	0.5643	
180 minute winter	11	1.006	1.006:50%	12.7	0.515	0.177	0.1505	
180 minute winter	11	1.006	13	13.0	0.576	0.181	0.1505	
180 minute winter	12	6.001	13	-3.7	-0.118	-0.051	0.4277	
180 minute winter	13	1.007	1.007:50%	11.9	0.611	0.167	1.1043	
180 minute winter	13	1.007	15	11.5	0.437	0.161	1.1043	
180 minute winter	14	7.000	15	-7.1	-0.290	-0.099	0.3173	
180 minute winter	15	1.008	28	5.9	0.255	0.081	0.4398	
180 minute winter	16	8.000	8.000:50%	-0.3	-0.045	-0.004	0.4144	
180 minute winter	16	8.000	18	0.9	0.178	0.013	0.4881	

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	17	10	3.109	0.076	16.0	0.0216	0.0000	OK
180 minute winter	18	176	2.810	0.254	4.6	0.5084	0.0000	OK
180 minute winter	8.001:50%	176	2.810	0.281	5.3	0.3869	0.0000	OK
180 minute winter	19	176	2.810	0.104	3.6	3.9944	0.0000	OK
180 minute winter	20	176	2.810	0.308	8.6	0.5193	0.0000	SURCHARGED
180 minute winter	8.002:50%	176	2.810	0.346	9.6	0.5242	0.0000	SURCHARGED
180 minute winter	21	176	2.810	0.384	9.7	0.7104	0.0000	SURCHARGED
180 minute winter	8.003:50%	176	2.810	0.394	11.0	0.2377	0.0000	SURCHARGED
180 minute winter	22	176	2.810	0.405	10.9	0.3614	0.0000	SURCHARGED
180 minute winter	8.004:50%	176	2.810	0.449	11.5	1.1317	0.0000	SURCHARGED
180 minute winter	23	176	2.810	0.270	5.6	8.1657	0.0000	OK
180 minute winter	24	176	2.810	0.494	12.9	1.4153	0.0000	SURCHARGED
180 minute winter	8.005:50%	176	2.810	0.540	12.8	1.4671	0.0000	SURCHARGED
180 minute winter	25	176	2.810	0.604	6.8	26.8644	0.0000	SURCHARGED
180 minute winter	26	176	2.810	0.612	6.9	0.1733	0.0000	SURCHARGED
180 minute winter	27	176	2.810	0.630	12.0	1.7959	0.0000	SURCHARGED
180 minute winter	28	176	2.810	0.700	6.5	1.2372	0.0000	SURCHARGED
15 minute winter	28_OUT	15	2.130	0.050	5.0	0.0000	0.0000	OK
180 minute winter	10_2	176	2.811	0.424	2.1	0.1199	0.0000	SURCHARGED
180 minute winter	29	176	2.810	0.448	6.1	17.1693	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	17	9.000	18	15.9	1.795	0.492	0.0884	
180 minute winter	18	8.001	8.001:50%	4.6	0.507	0.064	0.4237	
180 minute winter	18	8.001	20	5.3	0.466	0.073	0.4452	
180 minute winter	19	10.000	20	3.5	0.696	0.032	0.1596	
180 minute winter	20	8.002	8.002:50%	8.6	0.661	0.104	0.4794	
180 minute winter	20	8.002	21	9.7	0.653	0.117	0.4794	
180 minute winter	21	8.003	8.003:50%	9.5	0.592	0.133	0.1758	
180 minute winter	21	8.003	22	10.9	0.680	0.152	0.1758	
180 minute winter	22	8.004	8.004:50%	10.6	0.626	0.148	0.7455	
180 minute winter	22	8.004	24	10.7	0.546	0.149	0.7455	
180 minute winter	23	11.000	24	3.5	0.670	0.031	0.5008	
180 minute winter	24	8.005	8.005:50%	11.9	0.604	0.166	0.7712	
180 minute winter	24	8.005	27	12.0	0.532	0.168	0.7712	
180 minute winter	25	12.000	26	-6.8	-0.453	-0.097	0.1408	
180 minute winter	26	12.001	27	-6.9	-0.191	-0.095	0.2965	
180 minute winter	27	8.006	28	4.7	0.261	0.066	0.6452	
180 minute winter	28	1.009	28_OUT	5.0	0.534	0.044	0.0868	113.3
180 minute winter	10_2	5.001	11	1.9	0.330	0.027	0.4286	
180 minute winter	29	6.000	12	-3.3	0.240	-0.045	0.5652	



Results for 100 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	236	3.005	0.432	0.3	0.1223	0.0000	SURCHARGED
240 minute winter	1.000:50%	236	3.005	0.453	0.6	0.5666	0.0000	SURCHARGED
15 minute winter	2	10	3.016	0.139	19.3	0.0394	0.0000	OK
240 minute winter	3	236	3.005	0.475	3.6	0.7344	0.0000	SURCHARGED
240 minute winter	1.001:50%	236	3.005	0.487	3.7	0.3489	0.0000	SURCHARGED
15 minute winter	4	10	3.028	0.170	20.1	0.0481	0.0000	SURCHARGED
240 minute winter	5	236	3.005	0.499	6.8	0.4999	0.0000	SURCHARGED
240 minute winter	1.002:50%	236	3.005	0.535	7.6	1.1457	0.0000	SURCHARGED
240 minute winter	6	236	3.005	0.220	3.7	0.0623	0.0000	SURCHARGED
240 minute winter	7	236	3.005	0.571	10.6	1.3997	0.0000	SURCHARGED
240 minute winter	1.003:50%	236	3.005	0.591	11.4	0.7540	0.0000	SURCHARGED
240 minute winter	8	236	3.005	0.612	11.2	0.9571	0.0000	SURCHARGED
240 minute winter	1.004:50%	236	3.005	0.622	12.2	0.4107	0.0000	SURCHARGED
240 minute winter	9	236	3.005	0.633	12.0	0.5985	0.0000	SURCHARGED
240 minute winter	1.005:50%	236	3.005	0.659	12.5	1.0738	0.0000	SURCHARGED
240 minute winter	10	236	3.005	0.584	4.2	16.8095	0.0000	SURCHARGED
240 minute winter	11	236	3.005	0.685	12.3	1.3151	0.0000	SURCHARGED
240 minute winter	1.006:50%	236	3.005	0.694	11.9	0.3968	0.0000	SURCHARGED
240 minute winter	12	236	3.005	0.677	2.8	0.1916	0.0000	SURCHARGED
240 minute winter	13	236	3.005	0.703	11.8	0.6009	0.0000	SURCHARGED
240 minute winter	1.007:50%	236	3.004	0.768	11.3	3.1199	0.0000	SURCHARGED
240 minute winter	14	236	3.005	0.815	9.6	52.5663	0.0000	SURCHARGED
240 minute winter	15	236	3.005	0.834	10.8	3.6726	0.0000	SURCHARGED
240 minute winter	16	236	3.005	0.380	0.3	0.1076	0.0000	SURCHARGED
240 minute winter	8.000:50%	236	3.005	0.414	0.9	0.8019	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)
240 minute winter	1	1.000	1.000:50%	-0.3	-0.025	-0.003	0.3576	
240 minute winter	1	1.000	3	0.4	0.094	0.005	0.3576	
15 minute winter	2	2.000	3	19.0	1.151	1.063	0.1316	
240 minute winter	3	1.001	1.001:50%	3.4	0.416	0.047	0.1994	
240 minute winter	3	1.001	5	3.6	0.364	0.050	0.1994	
15 minute winter	4	3.000	5	19.7	1.123	1.099	0.1426	
240 minute winter	5	1.002	1.002:50%	6.7	0.559	0.093	0.6026	
240 minute winter	5	1.002	7	7.1	0.488	0.099	0.6026	
240 minute winter	6	4.000	7	3.7	0.773	0.207	0.1481	
240 minute winter	7	1.003	1.003:50%	10.0	0.584	0.141	0.3465	
240 minute winter	7	1.003	8	11.2	0.628	0.156	0.3465	
240 minute winter	8	1.004	1.004:50%	10.9	0.593	0.152	0.1768	
240 minute winter	8	1.004	9	12.0	0.628	0.168	0.1768	
240 minute winter	9	1.005	1.005:50%	11.8	0.549	0.165	0.4380	
240 minute winter	9	1.005	11	12.3	0.459	0.171	0.4380	
240 minute winter	10	5.000	10_2	1.8	0.390	0.025	0.5643	
240 minute winter	11	1.006	1.006:50%	11.4	0.490	0.159	0.1505	
240 minute winter	11	1.006	13	11.8	0.556	0.165	0.1505	
240 minute winter	12	6.001	13	-2.8	0.120	-0.039	0.4277	
240 minute winter	13	1.007	1.007:50%	10.6	0.568	0.148	1.1043	
240 minute winter	13	1.007	15	10.8	0.423	0.151	1.1043	
240 minute winter	14	7.000	15	-6.2	-0.288	-0.086	0.3173	
240 minute winter	15	1.008	28	5.9	0.292	0.081	0.4398	
240 minute winter	16	8.000	8.000:50%	-0.3	-0.090	-0.004	0.5780	
240 minute winter	16	8.000	18	0.9	0.178	0.013	0.5780	

Results for 100 year Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	17	10	3.123	0.090	20.9	0.0256	0.0000	OK
240 minute winter	18	236	3.005	0.449	4.6	1.0163	0.0000	SURCHARGED
240 minute winter	8.001:50%	236	3.005	0.476	5.1	0.7531	0.0000	SURCHARGED
240 minute winter	19	236	3.005	0.299	5.0	11.4482	0.0000	OK
240 minute winter	20	236	3.005	0.503	8.2	0.9464	0.0000	SURCHARGED
240 minute winter	8.002:50%	236	3.005	0.541	8.8	0.9218	0.0000	SURCHARGED
240 minute winter	21	236	3.005	0.579	8.2	1.1632	0.0000	SURCHARGED
240 minute winter	8.003:50%	236	3.005	0.589	9.2	0.3836	0.0000	SURCHARGED
240 minute winter	22	236	3.005	0.600	8.9	0.5621	0.0000	SURCHARGED
240 minute winter	8.004:50%	236	3.004	0.644	9.4	1.7493	0.0000	SURCHARGED
240 minute winter	23	236	3.005	0.465	4.5	14.0457	0.0000	SURCHARGED
240 minute winter	24	236	3.005	0.689	11.9	2.0873	0.0000	SURCHARGED
240 minute winter	8.005:50%	236	3.005	0.735	11.9	2.1072	0.0000	SURCHARGED
240 minute winter	25	236	3.005	0.799	6.3	35.5155	0.0000	SURCHARGED
240 minute winter	26	236	3.005	0.807	6.4	0.2283	0.0000	SURCHARGED
240 minute winter	27	236	3.005	0.825	11.4	2.4905	0.0000	SURCHARGED
240 minute winter	28	236	3.005	0.895	7.0	1.5810	0.0000	SURCHARGED
15 minute winter	28_OUT	13	2.130	0.050	5.0	0.0000	0.0000	OK
240 minute winter	10_2	236	3.005	0.618	1.8	0.1749	0.0000	SURCHARGED
240 minute winter	29	236	3.005	0.643	5.7	24.6167	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	17	9.000	18	20.8	1.909	0.643	0.1086	
240 minute winter	18	8.001	8.001:50%	4.4	0.497	0.061	0.4509	
240 minute winter	18	8.001	20	5.0	0.452	0.069	0.4509	
240 minute winter	19	10.000	20	3.8	0.702	0.034	0.3776	
240 minute winter	20	8.002	8.002:50%	7.9	0.642	0.095	0.4794	
240 minute winter	20	8.002	21	8.2	0.625	0.099	0.4794	
240 minute winter	21	8.003	8.003:50%	7.8	0.572	0.108	0.1758	
240 minute winter	21	8.003	22	8.9	0.659	0.124	0.1758	
240 minute winter	22	8.004	8.004:50%	8.5	0.598	0.119	0.7455	
240 minute winter	22	8.004	24	8.7	0.520	0.121	0.7455	
240 minute winter	23	11.000	24	3.2	0.636	0.028	0.5138	
240 minute winter	24	8.005	8.005:50%	11.0	0.546	0.154	0.7712	
240 minute winter	24	8.005	27	11.4	0.523	0.159	0.7712	
240 minute winter	25	12.000	26	-6.3	-0.460	-0.089	0.1408	
240 minute winter	26	12.001	27	-6.4	-0.184	-0.088	0.2965	
240 minute winter	27	8.006	28	4.5	0.261	0.063	0.6452	
240 minute winter	28	1.009	28_OUT	5.0	0.534	0.044	0.0868	118.5
240 minute winter	10_2	5.001	11	1.6	0.338	0.022	0.4286	
240 minute winter	29	6.000	12	-2.5	0.252	-0.034	0.5652	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	352	3.461	0.888	0.2	0.2512	0.0000	SURCHARGED
360 minute winter	1.000:50%	352	3.460	0.909	0.6	1.2596	0.0000	SURCHARGED
360 minute winter	2	352	3.461	0.584	3.6	0.1652	0.0000	SURCHARGED
360 minute winter	3	352	3.461	0.931	3.8	1.5567	0.0000	SURCHARGED
360 minute winter	1.001:50%	352	3.461	0.943	3.8	0.7358	0.0000	SURCHARGED
360 minute winter	4	352	3.461	0.603	3.8	0.1705	0.0000	SURCHARGED
360 minute winter	5	352	3.461	0.955	7.5	1.0156	0.0000	SURCHARGED
360 minute winter	1.002:50%	352	3.461	0.991	8.3	2.3155	0.0000	SURCHARGED
360 minute winter	6	352	3.461	0.676	3.8	1.5869	0.0000	SURCHARGED
360 minute winter	7	352	3.461	1.027	11.6	2.6983	0.0000	SURCHARGED
360 minute winter	1.003:50%	352	3.460	1.047	12.5	1.4248	0.0000	SURCHARGED
360 minute winter	8	352	3.461	1.068	12.3	1.7577	0.0000	SURCHARGED
360 minute winter	1.004:50%	352	3.460	1.078	13.3	0.7539	0.0000	SURCHARGED
360 minute winter	9	352	3.461	1.089	13.2	1.0705	0.0000	SURCHARGED
360 minute winter	1.005:50%	352	3.461	1.115	13.8	1.9241	0.0000	SURCHARGED
360 minute winter	10	352	3.461	1.040	5.4	29.3740	0.0000	SURCHARGED
360 minute winter	11	352	3.461	1.141	13.5	2.2942	0.0000	SURCHARGED
360 minute winter	1.006:50%	352	3.460	1.149	13.7	0.6886	0.0000	SURCHARGED
360 minute winter	12	352	3.460	1.132	3.1	0.3205	0.0000	SURCHARGED
360 minute winter	13	352	3.460	1.158	13.6	1.0218	0.0000	FLOOD RISK
360 minute winter	1.007:50%	352	3.460	1.223	13.3	5.2626	0.0000	SURCHARGED
360 minute winter	14	352	3.460	1.270	9.0	61.5709	0.0000	SURCHARGED
360 minute winter	15	352	3.460	1.289	12.7	5.9426	0.0000	FLOOD RISK
360 minute winter	16	352	3.460	0.835	0.3	0.2364	0.0000	SURCHARGED
360 minute winter	8.000:50%	352	3.460	0.869	1.0	1.9236	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)
360 minute winter	1	1.000	1.000:50%	-0.2	-0.019	-0.003	0.3576	
360 minute winter	1	1.000	3	0.4	0.098	0.005	0.3576	
360 minute winter	2	2.000	3	3.6	0.782	0.203	0.1409	
360 minute winter	3	1.001	1.001:50%	3.5	0.400	0.048	0.1994	
360 minute winter	3	1.001	5	3.7	0.347	0.051	0.1994	
360 minute winter	4	3.000	5	3.8	0.785	0.212	0.1493	
360 minute winter	5	1.002	1.002:50%	7.2	0.534	0.100	0.6026	
360 minute winter	5	1.002	7	8.0	0.460	0.111	0.6026	
360 minute winter	6	4.000	7	3.7	0.761	0.207	0.1481	
360 minute winter	7	1.003	1.003:50%	11.1	0.538	0.155	0.3465	
360 minute winter	7	1.003	8	12.3	0.574	0.172	0.3465	
360 minute winter	8	1.004	1.004:50%	12.0	0.542	0.168	0.1768	
360 minute winter	8	1.004	9	13.2	0.581	0.184	0.1768	
360 minute winter	9	1.005	1.005:50%	13.0	0.516	0.182	0.4380	
360 minute winter	9	1.005	11	13.5	0.424	0.189	0.4380	
360 minute winter	10	5.000	10_2	-3.3	0.354	-0.046	0.5643	
360 minute winter	11	1.006	1.006:50%	13.1	0.445	0.182	0.1505	
360 minute winter	11	1.006	13	13.6	0.497	0.189	0.1505	
360 minute winter	12	6.001	13	4.6	0.123	0.063	0.4277	
360 minute winter	13	1.007	1.007:50%	12.5	0.540	0.174	1.1043	
360 minute winter	13	1.007	15	12.7	0.397	0.177	1.1043	
360 minute winter	14	7.000	15	-5.5	-0.264	-0.077	0.3173	
360 minute winter	15	1.008	28	9.1	0.217	0.124	0.4398	
360 minute winter	16	8.000	8.000:50%	-0.3	-0.031	-0.005	0.5780	
360 minute winter	16	8.000	18	0.7	0.168	0.010	0.5780	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	17	352	3.460	0.427	4.0	0.1209	0.0000	SURCHARGED
360 minute winter	18	352	3.460	0.904	4.2	2.2663	0.0000	SURCHARGED
360 minute winter	8.001:50%	352	3.460	0.931	4.6	1.6272	0.0000	SURCHARGED
360 minute winter	19	352	3.460	0.754	5.9	29.8830	0.0000	SURCHARGED
360 minute winter	20	352	3.460	0.958	7.0	1.9502	0.0000	SURCHARGED
360 minute winter	8.002:50%	352	3.460	0.996	7.4	1.8518	0.0000	SURCHARGED
360 minute winter	21	352	3.460	1.034	7.0	2.2220	0.0000	SURCHARGED
360 minute winter	8.003:50%	352	3.460	1.044	8.2	0.7247	0.0000	SURCHARGED
360 minute winter	22	352	3.460	1.055	8.0	1.0316	0.0000	SURCHARGED
360 minute winter	8.004:50%	352	3.460	1.099	8.8	3.1980	0.0000	SURCHARGED
360 minute winter	23	352	3.460	0.920	5.0	28.3872	0.0000	SURCHARGED
360 minute winter	24	352	3.460	1.144	9.3	3.6615	0.0000	FLOOD RISK
360 minute winter	8.005:50%	352	3.460	1.190	9.3	3.6026	0.0000	SURCHARGED
360 minute winter	25	352	3.460	1.254	6.2	44.5520	0.0000	SURCHARGED
360 minute winter	26	352	3.460	1.262	6.4	0.3572	0.0000	SURCHARGED
360 minute winter	27	352	3.460	1.280	8.9	4.1158	0.0000	FLOOD RISK
360 minute winter	28	352	3.460	1.350	10.2	2.3856	0.0000	FLOOD RISK
60 minute winter	28_OUT	28	2.130	0.050	5.0	0.0000	0.0000	OK
360 minute winter	10_2	352	3.461	1.074	3.4	0.3038	0.0000	SURCHARGED
360 minute winter	29	352	3.460	1.098	5.6	35.1555	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)
360 minute winter	17	9.000	18	4.0	1.202	0.124	0.1758	
360 minute winter	18	8.001	8.001:50%	3.8	0.478	0.053	0.4509	
360 minute winter	18	8.001	20	4.3	0.425	0.060	0.4509	
360 minute winter	19	10.000	20	3.6	0.668	0.032	0.3778	
360 minute winter	20	8.002	8.002:50%	6.4	0.614	0.078	0.4794	
360 minute winter	20	8.002	21	7.0	0.572	0.084	0.4794	
360 minute winter	21	8.003	8.003:50%	6.7	0.513	0.093	0.1758	
360 minute winter	21	8.003	22	8.0	0.590	0.112	0.1758	
360 minute winter	22	8.004	8.004:50%	7.9	0.545	0.110	0.7455	
360 minute winter	22	8.004	24	8.4	0.465	0.117	0.7455	
360 minute winter	23	11.000	24	-3.1	0.578	-0.027	0.5138	
360 minute winter	24	8.005	8.005:50%	8.6	0.497	0.121	0.7712	
360 minute winter	24	8.005	27	8.9	0.519	0.124	0.7712	
360 minute winter	25	12.000	26	-6.2	-0.437	-0.089	0.1408	
360 minute winter	26	12.001	27	-6.4	-0.185	-0.088	0.2965	
360 minute winter	27	8.006	28	-5.6	0.254	-0.078	0.6452	
360 minute winter	28	1.009	28_OUT	5.0	0.534	0.044	0.0868	159.6
360 minute winter	10_2	5.001	11	-3.4	0.341	-0.047	0.4286	
360 minute winter	29	6.000	12	3.1	0.262	0.043	0.5652	