

Renaissance Assoc.		Page 1
Carvers Warehouse 77 Dale Street Manchester M1 2HG		
Date 24/09/2024 16:46 File Vic House As Built Drai...	Designed by HenryWilkinson Checked by	
Innovyze	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	100	PIMP (%)	100
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.359	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.101	4-8	0.032

Total Area Contributing (ha) = 0.133

Total Pipe Volume (m³) = 2.409

Network Design Table for Storm

- Indicates pipe length does not match coordinates

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	2.015	0.025	80.0	0.082	5.00	0.0	0.600	o	225	Pipe/Conduit	
S2.000	5.877	0.073	80.0	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	20.443	0.290	70.5	0.003	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	5.02	47.625	0.082	0.0	0.0	0.0	1.46	58.2	11.1
S2.000	50.00	5.09	47.748	0.000	0.0	0.0	0.0	1.12	19.9	0.0
S1.001	50.00	5.31	47.600	0.085	0.0	0.0	0.0	1.56	62.0	11.5

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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design	
S3.000	11.566	0.140	82.6	0.005	5.00	0.0	0.600	o	150	Pipe/Conduit		
S4.000	4.207	0.125	33.7	0.007	5.00	0.0	0.600	o	150	Pipe/Conduit		
S1.002	8.663	0.108	80.0	0.004	0.00	0.0	0.600	o	225	Pipe/Conduit		
S5.000	3.621	0.045	80.0	0.007	5.00	0.0	0.600	o	150	Pipe/Conduit		
S1.003	3.164#	0.030	105.5	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit		
S1.004	4.781#	0.040	119.5	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit		
S1.005	5.732	0.059	97.2	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit		
S6.000	2.170	0.027	80.0	0.002	5.00	0.0	0.600	o	150	Pipe/Conduit		
S6.001	1.885	0.088	21.4	0.016	0.00	0.0	0.600	o	150	Pipe/Conduit		
S1.006	2.755	0.217	12.7	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit		
Network Results Table												
PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)		
S3.000	50.00	5.17	47.525	0.005	0.0	0.0	0.0	1.11	19.6	0.7		
S4.000	50.00	5.04	47.510	0.007	0.0	0.0	0.0	1.74	30.8	0.9		
S1.002	50.00	5.40	47.310	0.101	0.0	0.0	0.0	1.46	58.2	13.7		
S5.000	50.00	5.05	47.312	0.007	0.0	0.0	0.0	1.12	19.9	0.9		
S1.003	50.00	5.45	46.530	0.108	0.0	0.0	0.0	1.27	50.6	14.6		
S1.004	50.00	5.51	46.500	0.108	0.0	0.0	0.0	1.19	47.5	14.6		
S1.005	50.00	5.58	46.460	0.115	0.0	0.0	0.0	1.33	52.7	15.6		
S6.000	50.00	5.03	46.591	0.002	0.0	0.0	0.0	1.12	19.9	0.3		
S6.001	50.00	5.05	46.564	0.018	0.0	0.0	0.0	2.19	38.6	2.4		
S1.006	50.00	5.60	46.401	0.133	0.0	0.0	0.0	3.69	146.8	18.0		
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<div>Online Controls for Storm</div> <div>Hydro-Brake® Optimum Manhole: S1.06, DS/PN: S1.006, Volume (m³): 1.9</div> <table><tr><td>Unit Reference</td><td>MD-SFP-0142-1100-1390-1100</td></tr><tr><td>Design Head (m)</td><td>1.390</td></tr><tr><td>Design Flow (l/s)</td><td>11.0</td></tr><tr><td>Flush-Flo™</td><td>Calculated</td></tr><tr><td>Objective</td><td>Future Proof</td></tr><tr><td>Application</td><td>Surface</td></tr><tr><td>Sump Available</td><td>Yes</td></tr><tr><td>Diameter (mm)</td><td>142</td></tr><tr><td>Invert Level (m)</td><td>46.401</td></tr><tr><td>Minimum Outlet Pipe Diameter (mm)</td><td>225</td></tr><tr><td>Suggested Manhole Diameter (mm)</td><td>1200</td></tr></table> <table><tr><td>Control Points</td><td>Head (m)</td><td>Flow (l/s)</td></tr><tr><td>Design Point (Calculated)</td><td>1.390</td><td>11.0</td></tr><tr><td>Flush-Flo™</td><td>0.350</td><td>11.0</td></tr><tr><td>Kick-Flo®</td><td>0.813</td><td>8.6</td></tr><tr><td>Mean Flow over Head Range</td><td>-</td><td>9.4</td></tr></table> <p>The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated</p> <table><tr><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td></tr><tr><td>0.100</td><td>5.4</td><td>1.200</td><td>10.3</td><td>3.000</td><td>15.8</td><td>7.000</td><td>23.7</td></tr><tr><td>0.200</td><td>10.4</td><td>1.400</td><td>11.0</td><td>3.500</td><td>17.0</td><td>7.500</td><td>24.5</td></tr><tr><td>0.300</td><td>10.9</td><td>1.600</td><td>11.8</td><td>4.000</td><td>18.1</td><td>8.000</td><td>25.3</td></tr><tr><td>0.400</td><td>10.9</td><td>1.800</td><td>12.4</td><td>4.500</td><td>19.2</td><td>8.500</td><td>26.0</td></tr><tr><td>0.500</td><td>10.7</td><td>2.000</td><td>13.1</td><td>5.000</td><td>20.2</td><td>9.000</td><td>26.8</td></tr><tr><td>0.600</td><td>10.4</td><td>2.200</td><td>13.7</td><td>5.500</td><td>21.1</td><td>9.500</td><td>27.5</td></tr><tr><td>0.800</td><td>8.8</td><td>2.400</td><td>14.2</td><td>6.000</td><td>22.0</td><td></td><td></td></tr><tr><td>1.000</td><td>9.4</td><td>2.600</td><td>14.8</td><td>6.500</td><td>22.9</td><td></td><td></td></tr></table>			Unit Reference	MD-SFP-0142-1100-1390-1100	Design Head (m)	1.390	Design Flow (l/s)	11.0	Flush-Flo™	Calculated	Objective	Future Proof	Application	Surface	Sump Available	Yes	Diameter (mm)	142	Invert Level (m)	46.401	Minimum Outlet Pipe Diameter (mm)	225	Suggested Manhole Diameter (mm)	1200	Control Points	Head (m)	Flow (l/s)	Design Point (Calculated)	1.390	11.0	Flush-Flo™	0.350	11.0	Kick-Flo®	0.813	8.6	Mean Flow over Head Range	-	9.4	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	0.100	5.4	1.200	10.3	3.000	15.8	7.000	23.7	0.200	10.4	1.400	11.0	3.500	17.0	7.500	24.5	0.300	10.9	1.600	11.8	4.000	18.1	8.000	25.3	0.400	10.9	1.800	12.4	4.500	19.2	8.500	26.0	0.500	10.7	2.000	13.1	5.000	20.2	9.000	26.8	0.600	10.4	2.200	13.7	5.500	21.1	9.500	27.5	0.800	8.8	2.400	14.2	6.000	22.0			1.000	9.4	2.600	14.8	6.500	22.9		
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<div>Storage Structures for Storm</div> <div>Cellular Storage Manhole: S1.04, DS/PN: S1.004</div> <div>Invert Level (m) 46.500 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00000</div> <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>22.5</td><td>0.0</td><td>1.076</td><td>0.0</td><td>0.0</td></tr><tr><td>1.075</td><td>22.5</td><td>0.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	22.5	0.0	1.076	0.0	0.0	1.075	22.5	0.0			
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Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000																																																																																																																																								
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<table><tr><th rowspan="2">PN</th><th rowspan="2">US/MH Name</th><th rowspan="2">Event</th><th rowspan="2">US/CL (m)</th><th>Water</th><th>Surcharged</th><th>Flooded</th><th rowspan="2">Volume (m³)</th><th rowspan="2">Flow / Cap.</th></tr><tr><th>Level (m)</th><th>Depth (m)</th><th></th></tr><tr><td>S1.000</td><td>S1.00</td><td>15 minute 1 year Winter I+0%</td><td>48.950</td><td>47.714</td><td>-0.136</td><td></td><td>0.000</td><td>0.33</td></tr><tr><td>S2.000</td><td>S13</td><td>15 minute 1 year Summer I+0%</td><td>48.960</td><td>47.748</td><td>-0.150</td><td></td><td>0.000</td><td>0.00</td></tr><tr><td>S1.001</td><td>S1.01</td><td>15 minute 1 year Winter I+0%</td><td>48.960</td><td>47.665</td><td>-0.160</td><td></td><td>0.000</td><td>0.18</td></tr><tr><td>S3.000</td><td>S2.00</td><td>15 minute 1 year Winter I+0%</td><td>48.875</td><td>47.543</td><td>-0.132</td><td></td><td>0.000</td><td>0.03</td></tr><tr><td>S4.000</td><td>S3.00</td><td>15 minute 1 year Winter I+0%</td><td>48.860</td><td>47.529</td><td>-0.131</td><td></td><td>0.000</td><td>0.04</td></tr><tr><td>S1.002</td><td>S1.02</td><td>15 minute 1 year Winter I+0%</td><td>48.935</td><td>47.388</td><td>-0.147</td><td></td><td>0.000</td><td>0.26</td></tr><tr><td>S5.000</td><td>S4.00</td><td>15 minute 1 year Winter I+0%</td><td>48.775</td><td>47.337</td><td>-0.125</td><td></td><td>0.000</td><td>0.06</td></tr><tr><td>S1.003</td><td>S1.03</td><td>15 minute 1 year Winter I+0%</td><td>48.920</td><td>46.634</td><td>-0.121</td><td></td><td>0.000</td><td>0.43</td></tr><tr><td>S1.004</td><td>S1.04</td><td>15 minute 1 year Winter I+0%</td><td>48.000</td><td>46.602</td><td>-0.123</td><td></td><td>0.000</td><td>0.29</td></tr><tr><td>S1.005</td><td>S1.05</td><td>15 minute 1 year Winter I+0%</td><td>48.170</td><td>46.595</td><td>-0.090</td><td></td><td>0.000</td><td>0.26</td></tr><tr><td>S6.000</td><td>S5.00</td><td>15 minute 1 year Winter I+0%</td><td>47.980</td><td>46.606</td><td>-0.135</td><td></td><td>0.000</td><td>0.02</td></tr><tr><td>S6.001</td><td>S5.01</td><td>15 minute 1 year Winter I+0%</td><td>48.080</td><td>46.596</td><td>-0.118</td><td></td><td>0.000</td><td>0.10</td></tr><tr><td>S1.006</td><td>S1.06</td><td>15 minute 1 year Winter I+0%</td><td>47.900</td><td>46.588</td><td>-0.038</td><td></td><td>0.000</td><td>0.16</td></tr></table>								PN	US/MH Name	Event	US/CL (m)	Water	Surcharged	Flooded	Volume (m³)	Flow / Cap.	Level (m)	Depth (m)		S1.000	S1.00	15 minute 1 year Winter I+0%	48.950	47.714	-0.136		0.000	0.33	S2.000	S13	15 minute 1 year Summer I+0%	48.960	47.748	-0.150		0.000	0.00	S1.001	S1.01	15 minute 1 year Winter I+0%	48.960	47.665	-0.160		0.000	0.18	S3.000	S2.00	15 minute 1 year Winter I+0%	48.875	47.543	-0.132		0.000	0.03	S4.000	S3.00	15 minute 1 year Winter I+0%	48.860	47.529	-0.131		0.000	0.04	S1.002	S1.02	15 minute 1 year Winter I+0%	48.935	47.388	-0.147		0.000	0.26	S5.000	S4.00	15 minute 1 year Winter I+0%	48.775	47.337	-0.125		0.000	0.06	S1.003	S1.03	15 minute 1 year Winter I+0%	48.920	46.634	-0.121		0.000	0.43	S1.004	S1.04	15 minute 1 year Winter I+0%	48.000	46.602	-0.123		0.000	0.29	S1.005	S1.05	15 minute 1 year Winter I+0%	48.170	46.595	-0.090		0.000	0.26	S6.000	S5.00	15 minute 1 year Winter I+0%	47.980	46.606	-0.135		0.000	0.02	S6.001	S5.01	15 minute 1 year Winter I+0%	48.080	46.596	-0.118		0.000	0.10	S1.006	S1.06	15 minute 1 year Winter I+0%	47.900	46.588	-0.038		0.000	0.16
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S3.000	S2.00	15 minute 1 year Winter I+0%	48.875	47.543	-0.132		0.000	0.03																																																																																																																																
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S1.002	S1.02	15 minute 1 year Winter I+0%	48.935	47.388	-0.147		0.000	0.26																																																																																																																																
S5.000	S4.00	15 minute 1 year Winter I+0%	48.775	47.337	-0.125		0.000	0.06																																																																																																																																
S1.003	S1.03	15 minute 1 year Winter I+0%	48.920	46.634	-0.121		0.000	0.43																																																																																																																																
S1.004	S1.04	15 minute 1 year Winter I+0%	48.000	46.602	-0.123		0.000	0.29																																																																																																																																
S1.005	S1.05	15 minute 1 year Winter I+0%	48.170	46.595	-0.090		0.000	0.26																																																																																																																																
S6.000	S5.00	15 minute 1 year Winter I+0%	47.980	46.606	-0.135		0.000	0.02																																																																																																																																
S6.001	S5.01	15 minute 1 year Winter I+0%	48.080	46.596	-0.118		0.000	0.10																																																																																																																																
S1.006	S1.06	15 minute 1 year Winter I+0%	47.900	46.588	-0.038		0.000	0.16																																																																																																																																
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Renaissance Assoc.		Page 7																																																																																
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		Pipe																																																																																
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Climate Change (%) 0, 0, 0, 40																																																																																																																																								
<table><tr><th rowspan="2">PN</th><th rowspan="2">US/MH Name</th><th rowspan="2">Event</th><th rowspan="2">US/CL (m)</th><th>Water</th><th>Surcharged</th><th>Flooded</th><th rowspan="2">Volume (m³)</th><th rowspan="2">Flow / Cap.</th></tr><tr><th>Level (m)</th><th>Depth (m)</th><th></th></tr><tr><td>S1.000</td><td>S1.00</td><td>15 minute 2 year Winter I+0%</td><td>48.950</td><td>47.728</td><td>-0.122</td><td></td><td>0.000</td><td>0.43</td></tr><tr><td>S2.000</td><td>S13</td><td>15 minute 2 year Summer I+0%</td><td>48.960</td><td>47.748</td><td>-0.150</td><td></td><td>0.000</td><td>0.00</td></tr><tr><td>S1.001</td><td>S1.01</td><td>15 minute 2 year Winter I+0%</td><td>48.960</td><td>47.674</td><td>-0.151</td><td></td><td>0.000</td><td>0.23</td></tr><tr><td>S3.000</td><td>S2.00</td><td>15 minute 2 year Winter I+0%</td><td>48.875</td><td>47.545</td><td>-0.130</td><td></td><td>0.000</td><td>0.04</td></tr><tr><td>S4.000</td><td>S3.00</td><td>15 minute 2 year Winter I+0%</td><td>48.860</td><td>47.531</td><td>-0.129</td><td></td><td>0.000</td><td>0.05</td></tr><tr><td>S1.002</td><td>S1.02</td><td>15 minute 2 year Winter I+0%</td><td>48.935</td><td>47.400</td><td>-0.135</td><td></td><td>0.000</td><td>0.33</td></tr><tr><td>S5.000</td><td>S4.00</td><td>15 minute 2 year Winter I+0%</td><td>48.775</td><td>47.341</td><td>-0.121</td><td></td><td>0.000</td><td>0.08</td></tr><tr><td>S1.003</td><td>S1.03</td><td>15 minute 2 year Winter I+0%</td><td>48.920</td><td>46.651</td><td>-0.104</td><td></td><td>0.000</td><td>0.56</td></tr><tr><td>S1.004</td><td>S1.04</td><td>15 minute 2 year Winter I+0%</td><td>48.000</td><td>46.646</td><td>-0.079</td><td></td><td>0.000</td><td>0.30</td></tr><tr><td>S1.005</td><td>S1.05</td><td>15 minute 2 year Winter I+0%</td><td>48.170</td><td>46.642</td><td>-0.043</td><td></td><td>0.000</td><td>0.27</td></tr><tr><td>S6.000</td><td>S5.00</td><td>15 minute 2 year Winter I+0%</td><td>47.980</td><td>46.637</td><td>-0.104</td><td></td><td>0.000</td><td>0.03</td></tr><tr><td>S6.001</td><td>S5.01</td><td>15 minute 2 year Winter I+0%</td><td>48.080</td><td>46.637</td><td>-0.077</td><td></td><td>0.000</td><td>0.13</td></tr><tr><td>S1.006</td><td>S1.06</td><td>15 minute 2 year Winter I+0%</td><td>47.900</td><td>46.635</td><td>0.009</td><td></td><td>0.000</td><td>0.16</td></tr></table>								PN	US/MH Name	Event	US/CL (m)	Water	Surcharged	Flooded	Volume (m³)	Flow / Cap.	Level (m)	Depth (m)		S1.000	S1.00	15 minute 2 year Winter I+0%	48.950	47.728	-0.122		0.000	0.43	S2.000	S13	15 minute 2 year Summer I+0%	48.960	47.748	-0.150		0.000	0.00	S1.001	S1.01	15 minute 2 year Winter I+0%	48.960	47.674	-0.151		0.000	0.23	S3.000	S2.00	15 minute 2 year Winter I+0%	48.875	47.545	-0.130		0.000	0.04	S4.000	S3.00	15 minute 2 year Winter I+0%	48.860	47.531	-0.129		0.000	0.05	S1.002	S1.02	15 minute 2 year Winter I+0%	48.935	47.400	-0.135		0.000	0.33	S5.000	S4.00	15 minute 2 year Winter I+0%	48.775	47.341	-0.121		0.000	0.08	S1.003	S1.03	15 minute 2 year Winter I+0%	48.920	46.651	-0.104		0.000	0.56	S1.004	S1.04	15 minute 2 year Winter I+0%	48.000	46.646	-0.079		0.000	0.30	S1.005	S1.05	15 minute 2 year Winter I+0%	48.170	46.642	-0.043		0.000	0.27	S6.000	S5.00	15 minute 2 year Winter I+0%	47.980	46.637	-0.104		0.000	0.03	S6.001	S5.01	15 minute 2 year Winter I+0%	48.080	46.637	-0.077		0.000	0.13	S1.006	S1.06	15 minute 2 year Winter I+0%	47.900	46.635	0.009		0.000	0.16
PN	US/MH Name	Event	US/CL (m)	Water	Surcharged	Flooded	Volume (m³)					Flow / Cap.																																																																																																																												
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Date 24/09/2024 16:46 File Vic House As Built Drai...	Designed by HenryWilkinson Checked by	
Innovyze	Network 2020.1.3	
<u>2 year Return Period Summary of Critical Results by Maximum Level (Rank 1)</u> <u>for Storm</u>		

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<div>100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm</div>							
<div>Simulation Criteria</div>							
<div>Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000</div>							
<div>Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000</div>							
<div>Hot Start Level (mm) 0 Inlet Coefficient 0.800</div>							
<div>Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000</div>							
<div>Foul Sewage per hectare (l/s) 0.000</div>							
<div>Number of Input Hydrographs 0 Number of Storage Structures 1</div>							
<div>Number of Online Controls 1 Number of Time/Area Diagrams 0</div>							
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<div>Synthetic Rainfall Details</div>							
<div>Rainfall Model FSR Ratio R 0.357</div>							
<div>Region England and Wales Cv (Summer) 0.750</div>							
<div>M5-60 (mm) 18.000 Cv (Winter) 0.840</div>							
<div>Margin for Flood Risk Warning (mm) 400.0</div>							
<div>Analysis Timestep 2.5 Second Increment (Extended)</div>							
<div>DTS Status OFF</div>							
<div>DVD Status ON</div>							
<div>Inertia Status ON</div>							
<div>Profile(s) Summer and Winter</div>							
<div>Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360</div>							
<div>Return Period(s) (years) 1, 2, 30, 100</div>							
<div>Climate Change (%) 0, 0, 0, 40</div>							
<div>Water Surcharged Flooded</div>							
<div>US/MH US/CL Level Depth Volume Flow /</div>							
<div>PN Name Event (m) (m) (m) (m³) Cap.</div>							
<div>S1.000 S1.00 15 minute 100 year Winter I+40% 48.950 47.912 0.062 0.000 1.45</div>							
<div>S2.000 S13 15 minute 100 year Winter I+40% 48.960 47.752 -0.146 0.000 0.00</div>							
<div>S1.001 S1.01 15 minute 100 year Winter I+40% 48.960 47.761 -0.064 0.000 0.79</div>							
<div>S3.000 S2.00 30 minute 100 year Winter I+40% 48.875 47.576 -0.099 0.000 0.12</div>							
<div>S4.000 S3.00 30 minute 100 year Winter I+40% 48.860 47.574 -0.086 0.000 0.13</div>							
<div>S1.002 S1.02 60 minute 100 year Winter I+40% 48.935 47.572 0.037 0.000 0.63</div>							
<div>S5.000 S4.00 60 minute 100 year Winter I+40% 48.775 47.563 0.101 0.000 0.15</div>							
<div>S1.003 S1.03 60 minute 100 year Winter I+40% 48.920 47.562 0.807 0.000 1.01</div>							
<div>S1.004 S1.04 60 minute 100 year Winter I+40% 48.000 47.558 0.833 0.000 0.33</div>							
<div>S1.005 S1.05 60 minute 100 year Winter I+40% 48.170 47.554 0.869 0.000 0.30</div>							
<div>S6.000 S5.00 60 minute 100 year Winter I+40% 47.980 47.548 0.807 0.000 0.03</div>							
<div>S6.001 S5.01 60 minute 100 year Winter I+40% 48.080 47.547 0.834 0.000 0.25</div>							
<div>S1.006 S1.06 60 minute 100 year Winter I+40% 47.900 47.546 0.920 0.000 0.17</div>							
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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

		Pipe		
	US/MH	Overflow	Flow	
PN	Name	(l/s)	(l/s)	Status
S1.000	S1.00		43.4	SURCHARGED
S2.000	S13		0.0	OK
S1.001	S1.01		44.6	OK
S3.000	S2.00		2.1	OK
S4.000	S3.00		3.0	OK
S1.002	S1.02		29.4	SURCHARGED
S5.000	S4.00		2.0	SURCHARGED
S1.003	S1.03		30.1	SURCHARGED
S1.004	S1.04		9.7	SURCHARGED*
S1.005	S1.05		10.1	SURCHARGED
S6.000	S5.00		0.4	SURCHARGED
S6.001	S5.01		4.6	SURCHARGED
S1.006	S1.06		10.9	FLOOD RISK