STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for HIGHWAY DRAIN.SWS

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	1	PIMP (%)	100
M5-60 (mm)	19.000	Add Flow / Climate Change (%)	0
Ratio R	0.365	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	0.000
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)	0.75
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for HIGHWAY DRAIN.SWS

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
1.000	62.809	1.547	40.6	0.088	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.001	14.143	0.249	56.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.002	11.068	0.111	100.0	0.040	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.000	26.657	1.240	21.5	0.041	5.00	0.0	0.600	o	150	Pipe/Conduit	
2.001	26.314	1.288	20.4	0.029	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.002	13.774	0.567	24.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.003	9.120	0.054	170.0	0.026	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)
1.000	47.09	5.66	58.726	0.088	0.0	0.0	0.0	1.58	28.0	11.2
1.001	46.45	5.84	57.179	0.088	0.0	0.0	0.0	1.34	23.6	11.2
1.002	45.80	6.02	56.930	0.128	0.0	0.0	0.0	1.00	17.8	15.9
2.000	48.85	5.20	59.914	0.041	0.0	0.0	0.0	2.18	38.6	5.4
2.001	48.08	5.40	58.674	0.070	0.0	0.0	0.0	2.24	39.6	9.1
2.002	47.65	5.51	57.386	0.070	0.0	0.0	0.0	2.05	36.2	9.1
1.003	45.28	6.17	56.744	0.224	0.0	0.0	0.0	1.00	39.8	27.5

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