

City of Guelph IDF Curves

A = 1593

B = 11

C = .8789

Intensity =  $A / (t + B)^C$

Flow (Q) = CiA (m<sup>3</sup>/s)

PVC, Concrete pipe, n = 0.013

CSP pipe, n = 0.024

# CLEAN WATER COLLECTOR (CWC) SEWER DESIGN

5 Year Design

City of Guelph

Sheet 1 of 1

Reach No.	Location			Area (ha)	Runoff Coefficient	A x C	Cumulative A x C	Time of Conc. (min.)	Intensity (mm/hr)	Flow (m <sup>3</sup> /s)	Proposed Sewer							
	Street	From	To								Length (m)	Pipe Size (mm)	Type of Pipe (Mannings n)	Grade %	Capacity (m <sup>3</sup> /s)	Full Flow Velocity (m/s)	Actual Velocity	Time of Flow (min.)
	STREET 1	CWC MH.1	CWC MH.2	0.11	0.90	0.10	0.10	5.00	139.29	0.038	67.8	300	0.013	3.25	0.174	2.47	2.06	0.46
		CWC MH.2	CWC MH.3	0.21	0.90	0.19	0.29	5.46	135.87	0.109	67.8	375	0.013	0.50	0.124	1.12	1.25	1.01
		CWC MH.3	CWC MH.4	0.05	0.90	0.05	0.33	6.46	128.97	0.119	25.4	375	0.013	3.98	0.350	3.17	3.00	0.13
	STREET 3	CWC MH.13	CWC MH.12	0.04	0.90	0.04	0.04	5.00	139.29	0.014	59.4	300	0.013	0.70	0.081	1.14	0.88	0.86
		CWC MH.12	CWC MH.11	0.00	0.00	0.00	0.04	5.86	132.99	0.013	13.7	300	0.013	0.70	0.081	1.14	0.87	0.20
		CWC MH.11	CWC MH.10	0.00	0.00	0.00	0.07	6.06	131.62	0.026	13.9	300	0.013	0.70	0.081	1.14	1.07	0.20
		DCB.113	CWC.MH.10	1.27	0.55	0.70	0.81	6.27	130.27	0.292	14.2	450	0.013	1.50	0.349	2.20	2.45	0.11
		CWC MH.10	CWC MH.9	0.06	0.90	0.05	0.93	6.27	130.27	0.337	43.5	600	0.013	0.70	0.514	1.82	1.96	0.40
		CWC MH.9	CWC MH.8	0.15	0.90	0.14	1.10	6.67	127.68	0.391	67.6	600	0.013	0.70	0.514	1.82	2.00	0.62
	STREET 1	CWC MH.8	CWC MH.4	0	0.00	0.00	1.10	7.29	123.86	0.380	84.0	600	0.013	0.50	0.434	1.54	1.72	0.91
	STREET 3	CWC MH.13	CWC MH.14	0.16	0.90	0.14	0.14	5.00	139.29	0.056	90.0	300	0.013	3.55	0.182	2.58	2.37	0.58
		CWC MH.14	CWC MH.15	0.05	0.90	0.05	0.19	5.58	134.98	0.071	27.5	300	0.013	4.44	0.204	2.88	2.74	0.16
		CWC MH.15	CWC MH.16	0.21	0.90	0.19	0.38	5.74	133.86	0.141	58.8	300	0.013	7.33	0.262	3.70	3.85	0.26
		CWC MH.16	CWC MH.17	0.08	0.90	0.07	0.45	6.01	132.02	0.165	61.9	375	0.013	1.60	0.222	2.01	2.20	0.51
	STREET 1	CWC MH.17	CWC MH.18	0.09	0.90	0.08	0.53	6.52	128.61	0.190	65.9	375	0.013	3.85	0.344	3.11	3.26	0.35
		CWC MH.18	CWC MH.19	0.00	0.00	0.00	0.53	6.87	126.38	0.186	8.3	375	0.013	2.00	0.248	2.25	2.47	0.06

Date: APRIL 2023

Project: 105172

Designed By: SG

CITYVIEW DRIVE, Guelph

Checked By: SZ