

Project Information

10045 Highway 26 Commercial Development	122093
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Drawing Reference

Storm Drainage Plan STM-1	Nov/24
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Prepared By

KRL	November 01/24
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Reviewed By

AO	November 01/24
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Municipality

Town of Collingwood

Runoff Coefficient Adjustment

Equation	3	
Year	A	B
10	1.00	0.00
25	1.10	0.00
50	1.20	0.00
100	1.25	0.00

Time of Concentration

10 mins

IDF Curve Coefficients

Year	A	B	C
2	807.44	6.75	0.83
5	1135.40	7.50	0.84
10	1387.00	7.97	0.85
25	1676.20	8.30	0.86
50	1973.10	9.00	0.87
100	2193.10	9.04	0.87

Manning's Coefficient

Material	Value
CSP	0.024
Concrete	0.013
PVC	0.013

Notes

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Version Date: November 1, 2024

Version Number: 2

Engineer Stamp

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Street Name	Area ID / Label	Upstream Maintenance Hole	Downstream Maintenance Hole	Area (ha)	5 Year Runoff Coefficient (C)	Design Storm (Year)	Adjusted Runoff Coefficient (C)	Area x Runoff Coefficient	Cumulative Area (ha)	Cumulative Area x Adjusted Runoff Coefficient	Time of Concentration (min)	Rainfall Intensity (mm/hr)	Peak Flow (m ³ /s)	Manning's Roughness Coefficient	Sewer Length (m)	Sewer Slope (%)	Actual Sewer Diameter (mm)	Full Flow Velocity (m/s)	Full Flow Capacity (L/s)	Actual Velocity (m/s)	Travel Time (min)	Calculated Sewer Diameter (mm)	Percentage of Full Flow Capacity (%)	Total Time of Travel (min)
	A1	CB1	CB2	0.05	0.86	5	0.86	0.04	0.05	0.04	10.00	102.27	0.012	0.013	22.3	0.9%	300	1.30	0.092	0.85	0.44	141	13.3%	10.44
	A2	CB2	CBMH1	0.14	0.86	5	0.86	0.12	0.19	0.16	10.44	100.17	0.045	0.013	21.9	0.8%	300	1.22	0.086	1.16	0.31	236	52.6%	10.75
	A3	CB3	CBMH1	0.09	0.86	5	0.86	0.08	0.09	0.08	10.00	102.27	0.022	0.013	26.9	2.0%	300	1.93	0.137	1.34	0.34	151	16.1%	10.34
	A4	CBMH1	CBMH2	0.06	0.86	5	0.86	0.05	0.34	0.29	10.75	98.71	0.080	0.013	27.6	0.9%	300	1.30	0.092	1.30	0.35	285	87.4%	11.11
	A5	CBMH2	STM MH1	0.13	0.86	5	0.86	0.11	0.47	0.40	11.11	97.13	0.109	0.013	39.7	0.5%	375	1.12	0.124	1.12	0.59	357	88.0%	11.70
	A6	CB4	CB5	0.11	0.86	5	0.86	0.09	0.11	0.09	10.00	102.27	0.027	0.013	83.9	1.2%	300	1.50	0.106	1.17	1.20	179	25.4%	11.20
		CB5	STM MH1	-	0.86	5	0.86	0.00	0.11	0.09	11.20	96.74	0.025	0.013	15.7	0.6%	300	1.06	0.075	0.89	0.29	200	33.9%	11.49
		STM MH1	CBMH3	-	0.86	5	0.86	0.00	0.58	0.50	11.70	94.61	0.131	0.013	21.5	1.0%	375	1.59	0.175	1.59	0.23	336	74.8%	11.92
	A7	CBMH3	STM MH2	0.13	0.86	5	0.86	0.11	0.71	0.61	11.92	93.69	0.159	0.013	17.2	1.0%	375	1.59	0.175	1.59	0.18	361	90.6%	12.10
	A8	CB6	CB7	0.03	0.86	5	0.86	0.03	0.03	0.03	10.00	102.27	0.007	0.013	28.1	0.5%	300	0.97	0.068	0.59	0.79	130	10.7%	10.79
	A9	CB7	STM MH4	0.14	0.86	5	0.86	0.12	0.17	0.15	10.79	98.56	0.040	0.013	12.7	1.9%	300	1.89	0.133	1.54	0.14	191	30.0%	10.92