Attachment 5 -
Note: Memo #1 is attached hereto

November 18, 2022

Our File: 2022-5239

Cold Creek Development Ltd.
1090 Dundas Street East
Mississauga, ON
L4Y 2B8

SCHAEFFERS
CONSULTING ENGINEERS

6 Ronrose Drive, Vaughan, Ontario L4K 4R3
Tel: (905) 738-6100 Fax: (905) 738-6875
Tor. Line: (416) 213-5590 E-mail: general@schaeffers.com

Attention: Mr. Ray DiBattista

Re: Memo #2: Water and Wastewater Servicing Analysis
Cold Creek Development

1 Introduction

On July 19th, 2022, Schaeffers & Associates Ltd. (Schaeffers) was retained to review the capacity of the existing water and wastewater systems for future service of the proposed Cold Creek Development. In August 2022, Schaeffers prepared a technical memorandum "Memo #1: Water and Wastewater Servicing Capacity Review – Cold Creek Development" which discussed potential constraints in the existing water and wastewater systems, as identified in the Region of Peel (Region) Water and Wastewater Master Plan for the Lake Based System (2020). This technical memorandum forms the second part of the overall assignment, to complete and document the findings of a desktop sanitary and water supply analysis for the proposed Cold Creek Development. This memorandum reveals that the subject site is adjacent to the existing subdivision and there is existing water and wastewater infrastructure proximate to the subject site that can be used to provide service. Furthermore, this memorandum shows that there are engineering solutions available to support servicing of the proposed Cold Creek Development; these solutions shall be developed during detailed design.

2 Background

The subject site is located north-east of the intersection of Mount Hope Road and Columbia Way in North Bolton. Per the preliminary concept plan provided by Cold Creek Development Ltd., the Cold Creek Development comprises 3 areas – 2 areas south of the valley and 1 area north of the valley. The proposed development area south of the valley ('South Development') comprises 244-

units (9.35 ha, measured from Google Earth) while the area north of the valley ('North Development') comprises 131-units (5.64 ha, measured from Google Earth).

It is proposed to service the Cold Creek Development via connections to the existing infrastructure south of, and along Columbia Way. As such, to service the South Development, it will be required to extend the existing infrastructure northwards along Mount Hope Road. Given this requirement for the South Development, it is reasonable to continue the proposed service extension northwards such that the North Development can also be serviced.

3 Water Servicing

3.1 Boundary Conditions

The following boundary condition was assumed for the water supply analysis:

- The boundary condition utilized in the hydraulic model was sourced from a hydrant test completed by EBAL Engineering Ltd. on September 29th, 2022. The hydrant test, performed at Mount Hope Road and Columbia Way, yielded a static pressure of 58 psi. The boundary condition was modelled as a fixed-head reservoir with a head of 299.79 m, calculated as the sum of the ground elevation at the residual hydrant of 259 m (based on Google Earth) and the measured static pressure of 58 psi (40.79 m head). Refer to **Appendix A** for hydrant test results.

3.2 Design Criteria

The Region's Design, Specifications & Procedures Manual – Watermain Design Criteria (June 2010) and Ministry of Environment, Conservation and Parks (MECP) Design Guidelines for Drinking Water Systems (2019) were utilized in the design of the subject site's water distribution system. For fire flow demands, the Region's design guidelines do not provide a minimum fire flow demand for single family and semi-detached developments. Furthermore, building footprint data was not available, so Fire Underwriter Survey (FUS) methods could not be utilized to determine fire flow demands. In the absence of criteria specific to the site, the City of Vaughan Engineering Design Criteria & Standard Drawings (December 2020) were referred to for fire flow demand requirements.

- Population of 70 persons per hectare for single family and semi-detached houses;
- The system shall be designed to provide sufficient flow and pressure to meet the greater of the Fire Flow plus Maximum Day Demand, or the Peak Hourly Demand;
- The minimum pressure under any non-fire demand scenario shall not be less than 275 kPa (40 psi). The minimum residual pressure during the Fire Flow plus Maximum Day Demand scenario shall not be less than 140 kPa (20 psi) at any location in the water distribution system;
- Average Day Demand of 280 L/capita/day for residential developments;
- Minimum Fire Flow Demand of 117 L/s for single family and semi-detached developments per City of Vaughan Engineering Design Criteria & Standard Drawings (December 2020)
- For residential land use, the Maximum Day Demand and Peak Hour Demand peaking factors shall be 2.0 and 3.0, respectively;
- Hazen-William's coefficients per below table:

Pipe Diameter (mm dia.)	Hazen-Williams 'C' Coefficient
150	100
200-250	110
300-600	120
Over 600	130

3.3 Existing Water Servicing Infrastructure

The subject site is located in the Region's Pressure District 6B (PD6B). Within the vicinity of the Cold Creek development, there is an existing 300 mm diameter PVC watermain along Columbia Way. There is no existing infrastructure north of Columbia Way.

3.4 Proposed Water Servicing Plan

The proposed North Development and South Development are proposed to be serviced by connecting to the existing 300 mm diameter watermain along Columbia Way. A 300 mm diameter watermain is proposed to extend from Columbia Way along Mount Hope Road up to the North Development. The North Development is proposed to be serviced via 300 mm diameter watermain with 200 mm diameter watermains along Street "6" and Street "7". For the South Development, a

300 mm diameter watermain will be installed along Street "1", connecting to the proposed 300 mm diameter watermain along Mount Hope Road and existing 300 mm diameter watermain along Columbia Way. A 300 mm diameter watermain will also be installed along Street "4" and part of Street "5", while the remainder of the South Development will be serviced by 200 mm diameter watermains. Refer to **Appendix C** for figures depicting the proposed watermain layout.

Water demands for the subject site were calculated based on the preliminary concept plan for the proposed development. **Table 1** below summarizes the demands of various design scenarios. Refer to the detailed water demand calculations provided in **Appendix B.**

Table 1: Water Supply Demand

Development Area	Land Use	Equivalent Population	Demand			
			Average Day	Max Day	Peak Hour	Fire Flow
			L/s	*L/s*	*L/s*	*L/s*
South Development	Semi-Detached Housing (Residential)	655	2.12	4.25	6.37	117
North Development	Semi-Detached Housing (Residential)	395	1.28	2.56	3.84	117

3.5 InfoWater Modelling and Results

The InfoWater model was prepared using elevation data from Google Earth. Demands were assigned to the nearest junction within the proposed development.

The InfoWater model was used to analyze the post-development system under the following demand scenarios: Average Day Demand, Maximum Day Demand, Peak Hour Demand, and Maximum Day + Fire Flow Demand. The modelling results demonstrate the water supply system can provide sufficient pressure and flow to the proposed development under the normal operational scenarios and fire flow scenario in accordance with MECP and Region design guidelines.

Table 2 below summarizes the range of pressures observed under each demand scenario. Detailed model outputs are provided in **Appendix C**.

Table 2: Summary of Modelled System Pressures

Scenario	Minimum Pressure (psi)	Maximum Pressure (psi)
Average Day	49.45	55.14
Maximum Day	49.45	55.14
Peak Hour	49.44	55.13

Fire flow (Maximum Day plus Fire Flow Demand) scenario modelling showed that a minimum residual pressure of 20 psi could be maintained for all nodes in the system proximate to the subject site. Furthermore, extrapolation of the hydrant test results shows that at a residual pressure of 20 psi, a hydrant flow of 191 L/s can be achieved. Thus, the theoretical available hydrant flow is sufficient to meet the required fire flow of 117 L/s under Maximum Day conditions. **Table 3** below summarizes the pressure range under the Maximum Day plus Fire Flow Demand scenario.

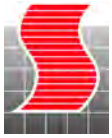
Table 3: Pressure Range (MDD plus Fire Flow Scenario)

Range	Minimum Pressure (psi)	Maximum Pressure (psi)
Node ID (Min/Max Location)	J54	J46
Residual Pressure	23.47	47.51

3.6 Water Age Analysis

A water age analysis was performed to ensure the proposed system is compliant with water age guidelines. Water turnover was calculated for each of the proposed watermains which terminate at a dead end.

To be conservative, reduced occupancy and a minimum consumption rate (70% of the average day demand) were assumed for the purposes of calculating water age. For the South Development, the proposed watermain along Street "4" and the southerly end of Street "5" was determined to be the critical case for the water age analysis with a water age of 2.71 days at an occupancy of 25%. For the North Development, the proposed watermain along Mount Hope Road and Street "6" requires



a minimum occupancy of 60%, while the watermain along Street "7" requires a minimum occupancy of 30% to achieve water ages of 2.82 days and 2.94 days, respectively. Per "Effects of Water Age on Distribution System Water Quality" (AWWA, 2002), a maximum water turnover rate of 3 days was observed in distribution systems, thus the proposed system is sufficient. Refer to the water age analysis in **Appendix D**.

3.7 Conclusion – Water Servicing

Hydraulic modelling shows that there is sufficient pressure to service the post-development scenario and water age requirements can be met at minimum occupancy rates ranging from 25% to 60% and a minimum consumption rate of 70% of the average day demand.

4 Wastewater Servicing

4.1 Existing Wastewater Servicing Infrastructure

Within the vicinity of the Cold Creek development, there is an existing 250 mm diameter PVC gravity sewer along Mount Hope Road which drains southwards. There is no existing infrastructure north of Columbia Way. The North Bolton catchment drains to the Bolton Sewage Pumping Station (SPS), with a firm capacity of 380 L/s. The Bolton SPS currently discharges to the Coleraine Drive sewer and Albion Vaughan trunk sewer, Brampton-Bolton trunk sewer, finally discharging to the McVean SPS, with a firm capacity of 1,400 L/s.

4.2 Design Criteria

The Region's Design, Specifications & Procedures Manual – Sanitary Sewer Design Criteria (July 2009) was used to determine if the existing sanitary system has sufficient capacity to service the proposed Cold Creek development. These criteria are summarized below.

- Population estimates: 70 persons per hectare for single family (less than 10 m frontage) and semi-detached houses and light industrial areas, 175 persons per hectare for row dwellings, 200 students for junior public schools, 450 students for senior public schools, 1000 students for secondary schools ;
- Average dry weather sanitary flow of 302.8 L/capita/day;
- Peak flows shall be calculated using the Harmon Peaking Factor;
- Infiltration allowance of 0.0002 $m^3/s/ha$ for all types of land use; and,
- Design flows shall be equal to the peak dry weather sanitary flow plus infiltration allowance.

4.3 Proposed Sanitary Servicing Plan

The Cold Creek Development is proposed to be serviced by extending the existing 250 mm diameter gravity sewer on Mount Hope Road northwards to the North Development.

Sanitary demands for the subject site were calculated based on the preliminary concept plan for the proposed development. **Table 4** below summarizes the calculation of peak sanitary flow rates per the Region's design criteria.

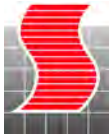
Table 4: Sanitary Demands

Development Area	Land Use	Population	Avg Flow (L/s)	Harmon's Peaking Factor	Peak Flow (L/s)	Area (ha)	I/I (L/s)	Total Peak Flow (L/s)
South Development	Residential, Semi-Detached	655	2.30	3.91	8.98	9.35	1.87	10.85
North Development	Residential, Semi-Detached	395	1.38	4.00	5.54	5.64	1.13	6.67

4.4 Downstream Sewer Capacity

A sanitary capacity analysis was conducted for the catchment area draining to the Bolton SPS to confirm that there is sufficient capacity in all downstream sewers and at Bolton SPS itself. Data was collected from the Region's External Peel Asset Locator (EPAL) and from Google Earth. Analyses were conducted for the existing condition and for the proposed condition where the Cold Creek Development has been constructed.

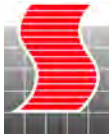
The analysis confirms that there is sufficient capacity in the downstream sewers and Bolton SPS to support the South Development. Furthermore, there is sufficient capacity to support the South Development and a maximum additional 0.63 ha of development area (equivalent population of 44 persons at a density of 70 persons per hectare for semi-detached homes). To support full buildout of the South Development and North Development, downstream sewers of total length 298.2 m are required to be upsized to meet capacity requirements. The sewers required to be upsized include two reaches of 250 mm diameter sewer along Guardhouse Drive (MH308704 to



MH308703 and MH308703 to MH 308702), a 300 mm diameter sewer along Culpepper Court (MH309617 to MH308457) and a triplex siphon system comprising 150 mm, 200 mm and 300 mm diameter sewers (MH308504 to MH1646495). Refer to **Appendix E** for the sanitary capacity analysis results and figures from EPAL depicting the locations of the sewers required to be upsized.

4.5 Conclusion – Sanitary Servicing

Sanitary capacity analysis shows that the sewer system downstream of the proposed Cold Creek Development to Bolton SPS, as well as Bolton SPS, have sufficient capacity under the post-development scenario of the South Development and up to 0.63 ha of additional residential semi-detached home development. To support buildout of both the South Development and North Development, 298.2 m of downstream sewers ranging from 150 mm diameter to 300 mm diameter are required to be upsized.



5 Conclusion

This report provides the Region with the necessary water supply analysis and sanitary capacity analysis to support the proposed water supply servicing design and sanitary servicing feasibility for the Cold Creek Development. The subject site is adjacent to the existing subdivision and there is existing water and wastewater infrastructure proximate to the subject site that can be used to provide service. Evidently, there are engineering solutions available to support servicing of the proposed Cold Creek Development; these solutions shall be developed during detailed design.

Since the existing water and wastewater infrastructure is located along and south of Columbia Road, adjacent to the proposed Cold Creek Development, new water and wastewater infrastructure is required to extend servicing northwards. As the North Development and South Development are located adjacent to each other and South Development is located adjacent to the existing infrastructure along Columbia Road, it is rational to extend servicing northwards to support the entirety of the Cold Creek Development. Water supply service would be provided via new 300 mm diameter watermain northwards along Mount Hope Road while sanitary service would be provided by extension of the existing 250 mm diameter gravity sewer northwards on Mount Hope Road.

Under the assumed boundary condition, hydraulic modelling shows that the post-development scenario encompassing buildout of both the North Development and South Development, will be compliant with the Region's design guidelines during all water demand scenarios and the fire protection scenario. The maximum water turnover rate of 3 days can be met at critical locations in the watermain system if minimum occupancy rates ranging from 25% to 60% (depending on the critical location) and a conservative minimum consumption rate of 70% of the average day demand.

Sanitary capacity analysis shows that the downstream sewer system up to Bolton SPS and the Bolton SPS itself have sufficient capacity under the post-development scenario to support the South Development and a maximum additional 0.63 ha of additional residential semi-detached home development. To support buildout of both the North Development and South Development, 298.2 m of downstream sewers ranging from 150 mm diameter to 300 mm diameter are required

to be upsized. Specifically, the sewers require upsizing include:

- Two (2) reaches of 250 mm diameter sewer along Guardhouse Drive (MH308704 to MH308703 and MH308703 to MH 308702);
- One (1) 300 mm diameter sewer along Culpepper Court (MH309617 to MH308457); and,
- One (1) triplex siphon system comprising 150 mm, 200 mm and 300 mm diameter sewers (MH308504 to MH1646495).

We trust that you will find this submission complete and satisfactory for your purposes. We look forward to receiving your feedback. Should you have any questions or further requirements please contact the undersigned.

Yours truly,

SCHAEFFER & ASSOCIATES LTD.

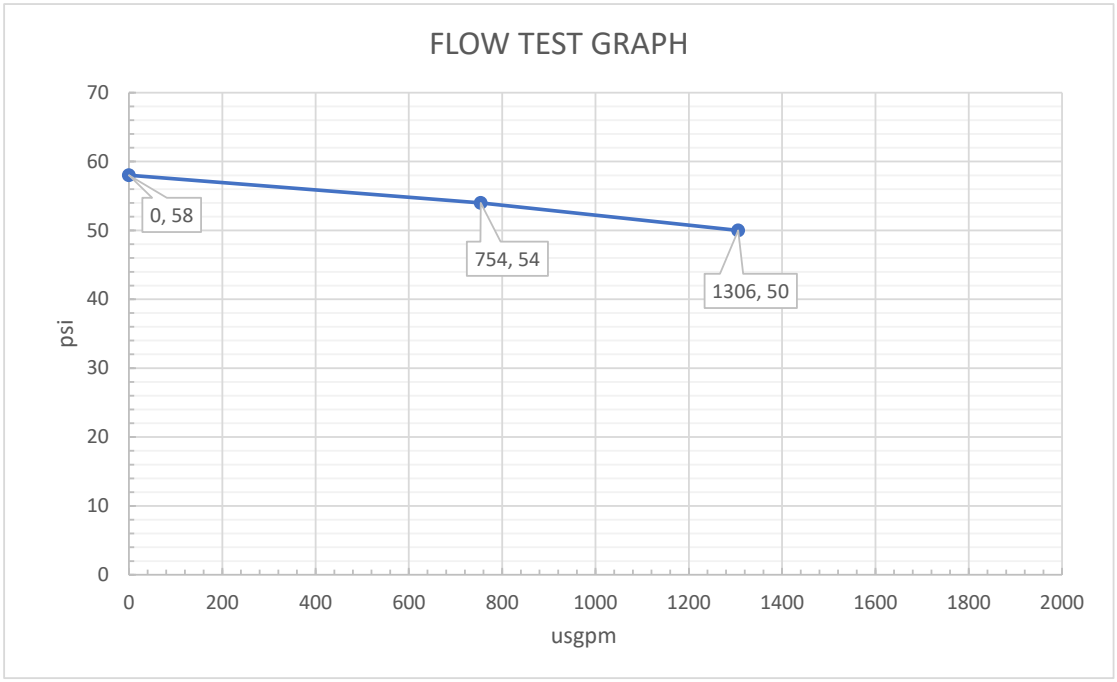
Jonathan Nishio, P.Eng.
Water Supply and Vertical Infrastructure Engineer

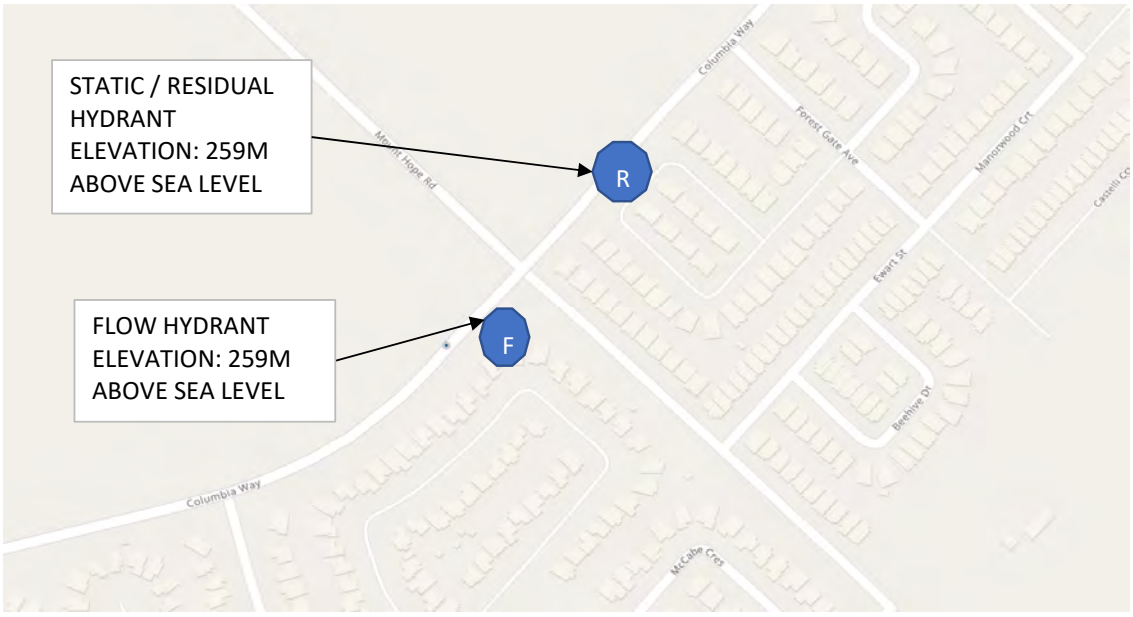
APPENDIX A

HYDRANT TEST RESULTS

FLOW TEST REPORT

Name of risk:									
Address	Mount Hope Rd and Columbia Way, Bolton								
Date:	9/29/2022			Time	10:10		Size of Main		12" PVC
Static	Pitot. 1 (2.5")	Flow 1	Res. Pres. 1	Pitot 2a (2.5")	Flow 2a	Pitot 2b (2.5")	Flow 2b	Flow 2a+2b	Res. pres. 2
58	20	**754**	**54**	15	653	15	653	**1306**	**50**





Note: Flow Test was performed as per NFPA 291.
Note: Hydrant's elevation is obtained from Google Earth.

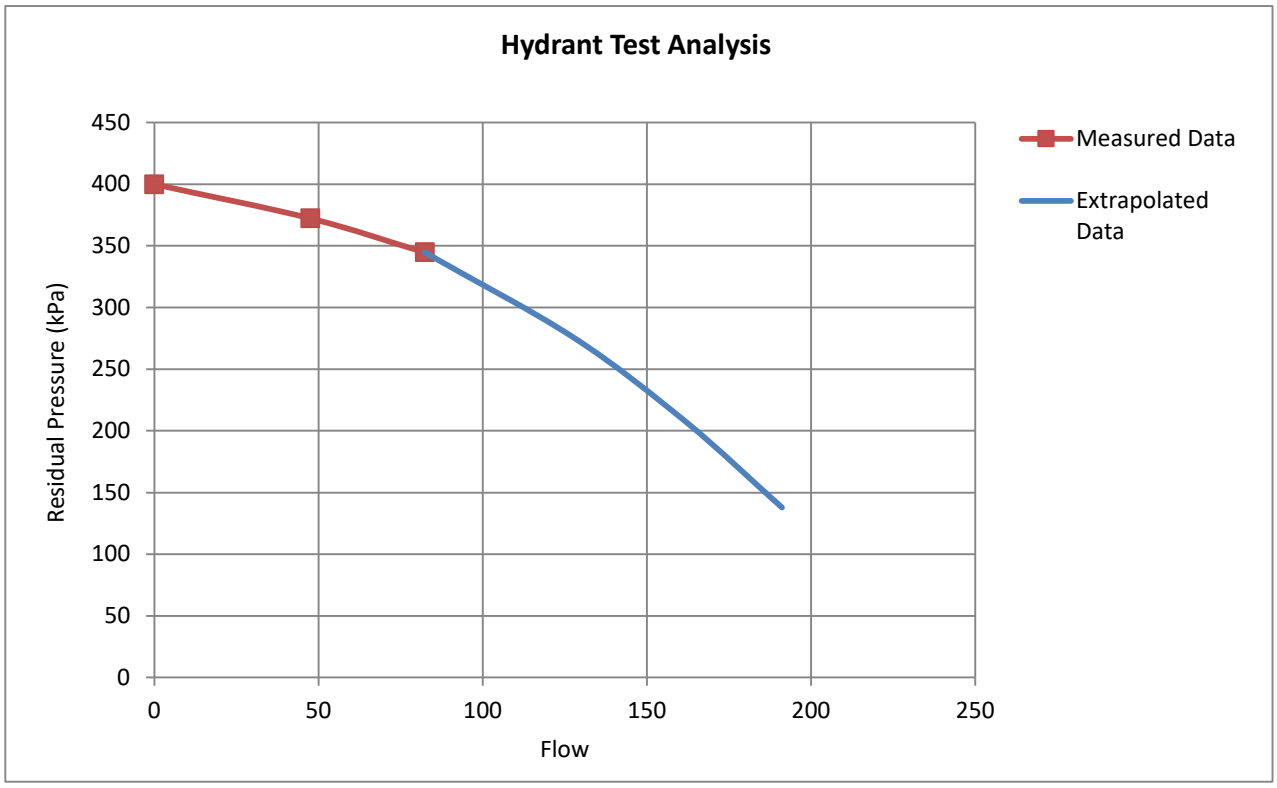
Cold Creek Development

Project No. 5239

Date of Test: 09/29/2022
Test Location: Residual: Mount Hope Rd. and Columbia Way
Flow: Mount Hope Rd. and Columbia Way

Test Results

	Flow		Residual Pressure	
	US. GPM	L/s	psi	kPa
Measured Data	0	0	58	400
	754	48	54	372
	1306	82	50	345
Extrapolated Data	2024	128	40	276
	2569	162	30	207
	3029	191	20	138



APPENDIX B

WATER DEMAND CALCULATIONS

Water Supply Calculations

Project Title: 5239 - Cold Creek Development
Last Edited: 2022-11-16

Municipality Region of Peel

Equivalent Population Parameters

Land Use	Population Density	Unit	Source
Single Family (>10m frontage)	50	ppha	Per Region of Peel Sanitary Sewer Design Criteria (July 2009)
Single Family (<10m frontage)	70	ppha	Per Region of Peel Sanitary Sewer Design Criteria (July 2009)
Semi-detached	70	ppha	Per Region of Peel Sanitary Sewer Design Criteria (July 2009)
Row dwellings	175	ppha	Per Region of Peel Sanitary Sewer Design Criteria (July 2009)
Apartments	475	ppha	Per Region of Peel Sanitary Sewer Design Criteria (July 2009)

Water Supply Parameters

Water Demand

Residential	280	L/cap./d	Per Region of Peel Watermain Design Criteria (June 2010)
ICI	300	L/emp./d	Per Region of Peel Watermain Design Criteria (June 2010)

Peaking Factors

Residential Max Day Factor	2.00	Per Region of Peel Watermain Design Criteria (June 2010)
Residential Peak Hour Factor	3.00	Per Region of Peel Watermain Design Criteria (June 2010)
ICI Max Day Factor	1.40	Per Region of Peel Watermain Design Criteria (June 2010)
ICI Peak Hour Factor	3.00	Per Region of Peel Watermain Design Criteria (June 2010)

Equivalent Population Calculation

Land Use	Land Area (ha)	Density (ppha)	Population	
Semi-detached	9.35	70	655	South area of site
Semi-detached	5.64	70	395	North area of site

Design Water Demand Calculation

Land Use	Population	Flow (L/s)			
		Average Day Demand	*Max Day Demand*	*Peak Hour Demand*	*Fire Flow*
Residential - South Area	655	2.12	4.25	6.37	117
Residential - North Area	395	1.28	2.56	3.84	117
Total	1050	3.40	6.81	10.21	

APPENDIX C

WATER SUPPLY ANALYSIS – INFOWATER MODELLING RESULTS

Figure 1: Watermain Layout - Existing and Proposed Watermains

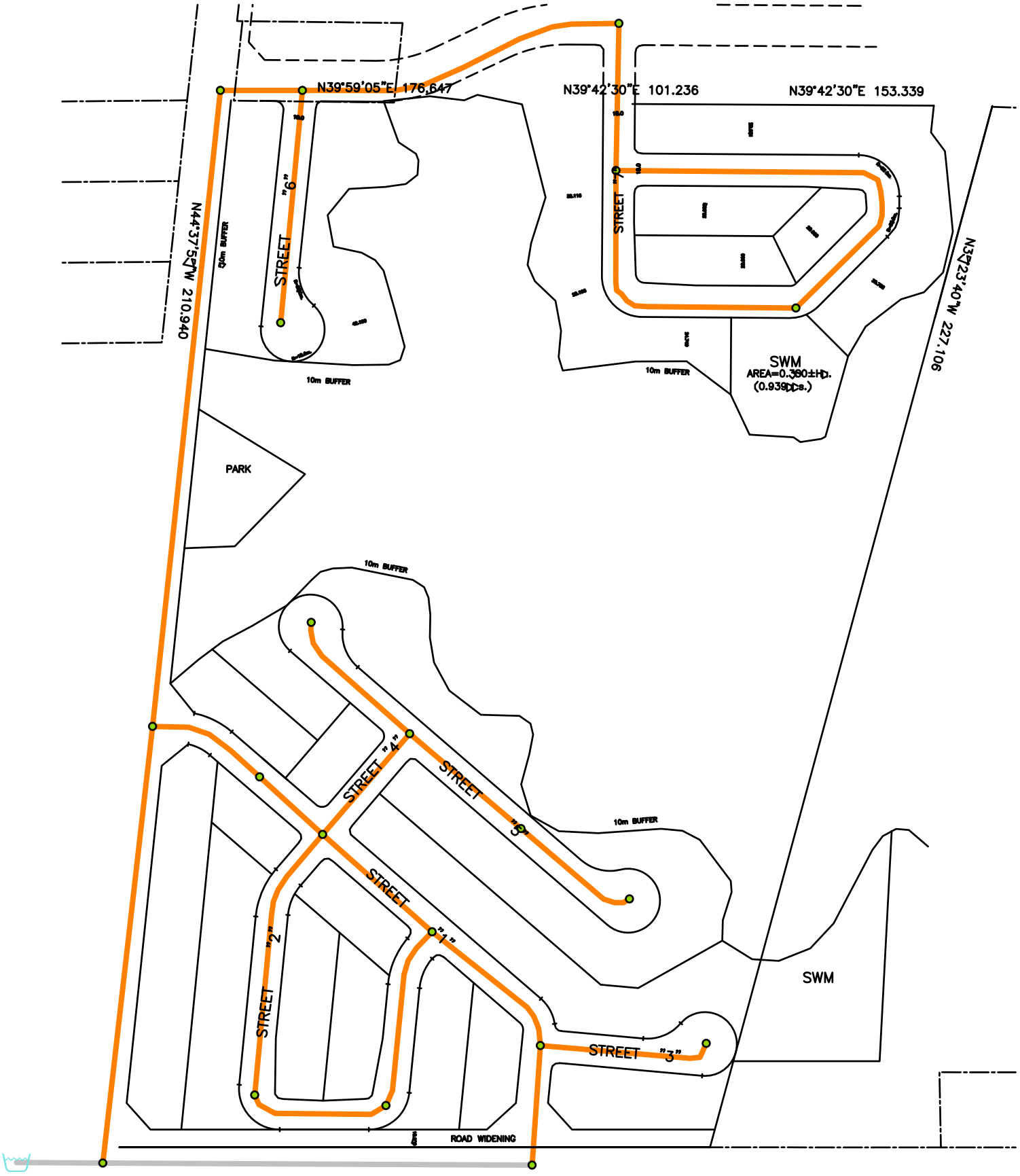
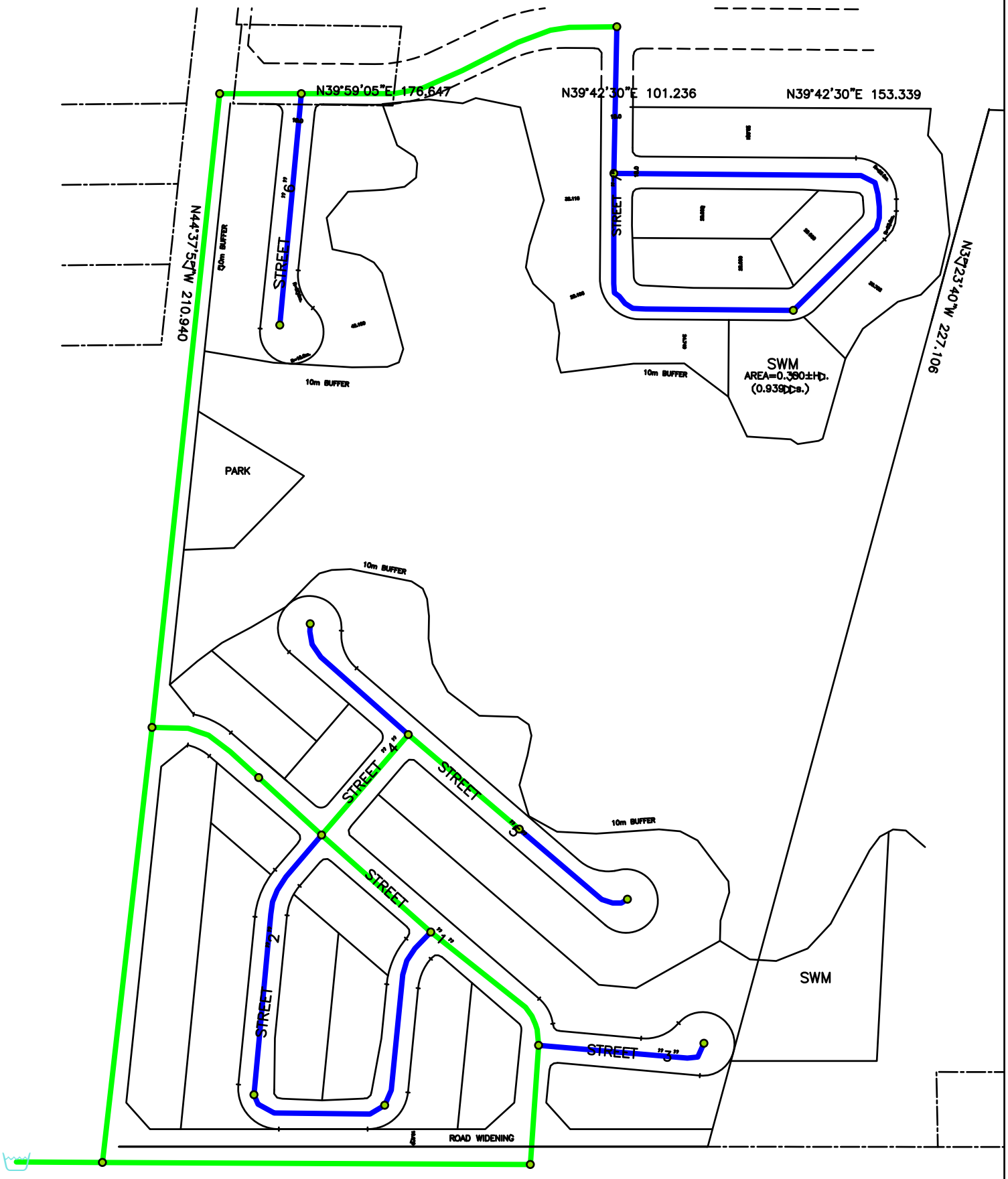
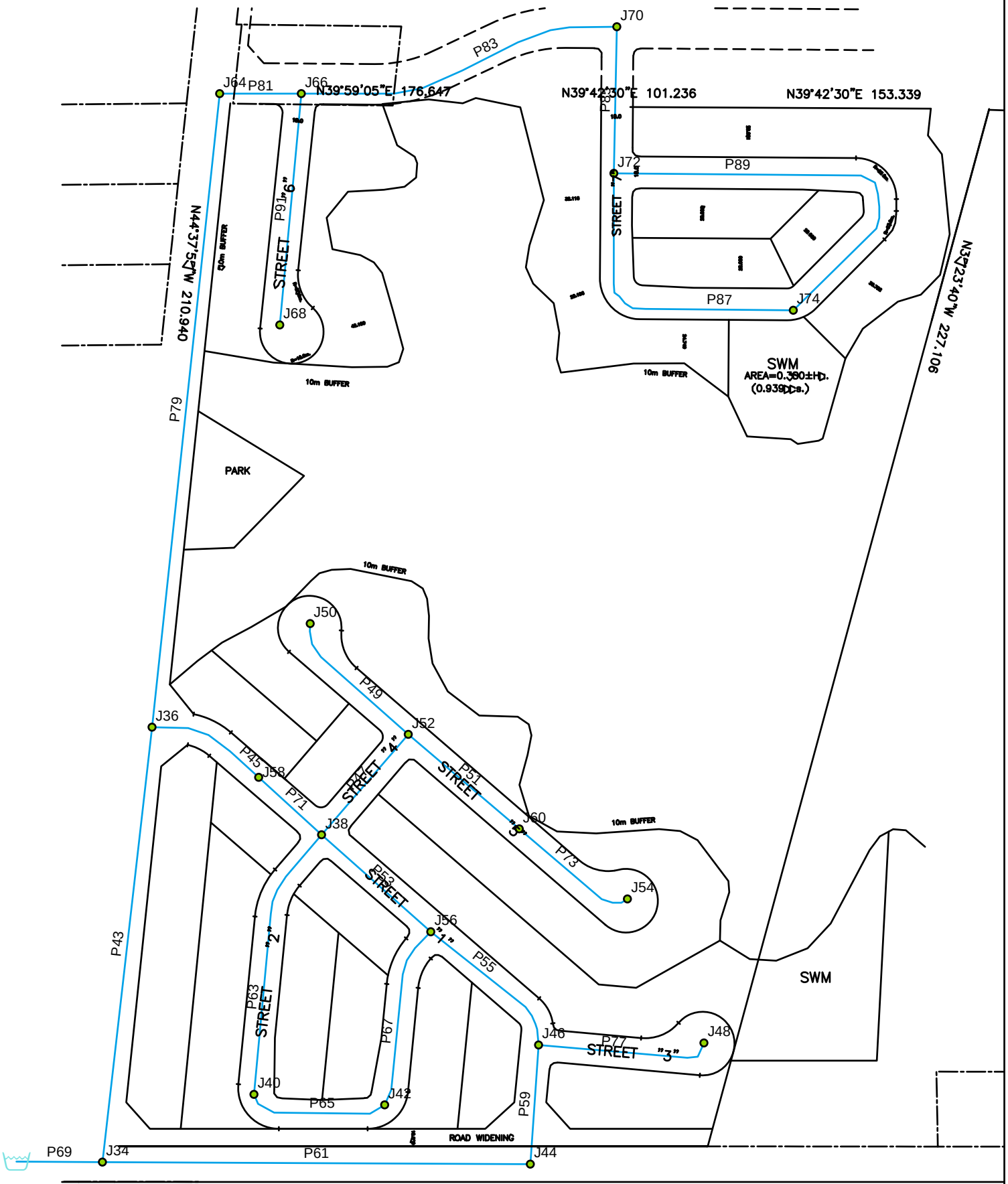


Figure 2: Watermain Layout - Pipe Diameters



	Color	Size	Break	Label
1		3.00	200.00	less than 200.00
2		3.00	300.00	greater than 200.00

Figure 3: Watermain Layout - Pipe and Junction Labels



Hydraulic Model Results: Average Day Demand

Project Title: 5239 Cold Creek Development
Last Edited: 2022-11-16
Municipality Region of Peel

Junction Pressure (ADD)

ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (psi)
J34	0	262	299.79	53.72
J36	0	261	299.79	55.14
J38	0.1	265	299.79	49.46
J40	0.37	265	299.79	49.45
J42	0.28	265	299.79	49.45
J44	0	263	299.79	52.3
J46	0.1	265	299.79	49.46
J48	0.24	265	299.79	49.46
J50	0.18	265	299.79	49.46
J52	0.07	265	299.79	49.46
J54	0.17	265	299.79	49.45
J56	0.19	265	299.79	49.46
J58	0.17	265	299.79	49.46
J60	0.24	265	299.79	49.45
J64	0	262	299.79	53.72
J66	0	262	299.79	53.72
J68	0.3	262	299.79	53.72
J70	0	262	299.79	53.72
J72	0.49	262	299.79	53.72
J74	0.49	262	299.79	53.72

Pipe Data (ADD)

ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status
P43	J34	J36	265	300	120	1.85	0.03	0	0	Open
P45	J36	J58	129	300	120	0.57	0.01	0	0	Open
P47	J38	J52	79	300	120	0.66	0.01	0	0	Open
P49	J52	J50	86	200	110	0.18	0.01	0	0	Open
P51	J52	J60	168	300	120	0.41	0.01	0	0	Open
P53	J38	J56	86	300	120	-0.63	0.01	0	0	Open
P55	J56	J46	99	300	120	-1.2	0.02	0	0	Open
P59	J46	J44	71	300	120	-1.54	0.02	0	0	Open
P61	J44	J34	257	300	120	-1.54	0.02	0	0	Open
P63	J38	J40	170	200	110	0.27	0.01	0	0	Open
P65	J40	J42	87	200	110	-0.1	0	0	0	Open
P67	J42	J56	108	200	110	-0.38	0.01	0	0	Open
P69	RES9002	J34	1	300	120	3.39	0.05	0	0.02	Open
P71	J58	J38	129	300	120	0.4	0.01	0	0	Open
P73	J60	J54	168	200	110	0.17	0.01	0	0	Open
P77	J46	J48	98	200	120	0.24	0.01	0	0	Open
P79	J36	J64	333	300	120	1.28	0.02	0	0	Open
P81	J64	J66	60	300	120	1.28	0.02	0	0	Open
P83	J66	J70	165	300	120	0.98	0.01	0	0	Open
P85	J70	J72	55	200	110	0.98	0.03	0	0.01	Open
P87	J72	J74	140	200	110	0.27	0.01	0	0	Open
P89	J72	J74	210	200	110	0.22	0.01	0	0	Open
P91	J66	J68	102	200	110	0.3	0.01	0	0	Open

Hydraulic Model Results: Maximum Day Demand

Project Title: 5239 Cold Creek Development
Last Edited: 2022-11-16
Municipality Region of Peel

Junction Pressure (MDD)

ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (psi)
J34	0	262	299.79	53.72
J36	0	261	299.79	55.14
J38	0.21	265	299.79	49.45
J40	0.73	265	299.78	49.45
J42	0.56	265	299.78	49.45
J44	0	263	299.79	52.3
J46	0.21	265	299.79	49.45
J48	0.49	265	299.79	49.45
J50	0.37	265	299.78	49.45
J52	0.14	265	299.78	49.45
J54	0.33	265	299.78	49.45
J56	0.38	265	299.79	49.45
J58	0.35	265	299.79	49.45
J60	0.49	265	299.78	49.45
J64	0	262	299.78	53.71
J66	0	262	299.78	53.71
J68	0.61	262	299.78	53.71
J70	0	262	299.78	53.71
J72	0.98	262	299.78	53.71
J74	0.98	262	299.78	53.71

Pipe Data (MDD)

ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status
P43	J34	J36	265	300	120	3.73	0.05	0	0.02	Open
P45	J36	J58	129	300	120	1.16	0.02	0	0	Open
P47	J38	J52	79	300	120	1.33	0.02	0	0	Open
P49	J52	J50	86	200	110	0.37	0.01	0	0	Open
P51	J52	J60	168	300	120	0.82	0.01	0	0	Open
P53	J38	J56	86	300	120	-1.26	0.02	0	0	Open
P55	J56	J46	99	300	120	-2.4	0.03	0	0.01	Open
P59	J46	J44	71	300	120	-3.1	0.04	0	0.01	Open
P61	J44	J34	257	300	120	-3.1	0.04	0	0.01	Open
P63	J38	J40	170	200	110	0.53	0.02	0	0	Open
P65	J40	J42	87	200	110	-0.2	0.01	0	0	Open
P67	J42	J56	108	200	110	-0.76	0.02	0	0.01	Open
P69	RES9002	J34	1	300	120	6.83	0.1	0	0.06	Open
P71	J58	J38	129	300	120	0.81	0.01	0	0	Open
P73	J60	J54	168	200	110	0.33	0.01	0	0	Open
P77	J46	J48	98	200	120	0.49	0.02	0	0	Open
P79	J36	J64	333	300	120	2.57	0.04	0	0.01	Open
P81	J64	J66	60	300	120	2.57	0.04	0	0.01	Open
P83	J66	J70	165	300	120	1.96	0.03	0	0.01	Open
P85	J70	J72	55	200	110	1.96	0.06	0	0.04	Open
P87	J72	J74	140	200	110	0.54	0.02	0	0	Open
P89	J72	J74	210	200	110	0.44	0.01	0	0	Open
P91	J66	J68	102	200	110	0.61	0.02	0	0	Open

Hydraulic Model Results: Peak Hour Demand

Project Title: 5239 Cold Creek Development
Last Edited: 2022-11-16
Municipality Region of Peel

Junction Pressure (PHD)

ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (psi)
J34	0	262	299.79	53.72
J36	0	261	299.78	55.13
J38	0.31	265	299.78	49.44
J40	1.1	265	299.78	49.44
J42	0.84	265	299.78	49.44
J44	0	263	299.78	52.29
J46	0.31	265	299.78	49.45
J48	0.73	265	299.78	49.44
J50	0.55	265	299.78	49.44
J52	0.21	265	299.78	49.44
J54	0.5	265	299.78	49.44
J56	0.57	265	299.78	49.44
J58	0.52	265	299.78	49.44
J60	0.73	265	299.78	49.44
J64	0	262	299.77	53.7
J66	0	262	299.77	53.7
J68	0.91	262	299.77	53.7
J70	0	262	299.77	53.7
J72	1.47	262	299.77	53.69
J74	1.47	262	299.77	53.69

Pipe Data (PHD)

ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status
P43	J34	J36	265	300	120	5.59	0.08	0.01	0.04	Open
P45	J36	J58	129	300	120	1.74	0.02	0	0	Open
P47	J38	J52	79	300	120	1.99	0.03	0	0.01	Open
P49	J52	J50	86	200	110	0.55	0.02	0	0	Open
P51	J52	J60	168	300	120	1.23	0.02	0	0	Open
P53	J38	J56	86	300	120	-1.89	0.03	0	0	Open
P55	J56	J46	99	300	120	-3.59	0.05	0	0.02	Open
P59	J46	J44	71	300	120	-4.63	0.07	0	0.03	Open
P61	J44	J34	257	300	120	-4.63	0.07	0.01	0.03	Open
P63	J38	J40	170	200	110	0.8	0.03	0	0.01	Open
P65	J40	J42	87	200	110	-0.3	0.01	0	0	Open
P67	J42	J56	108	200	110	-1.14	0.04	0	0.02	Open
P69	RES9002	J34	1	300	120	10.22	0.14	0	0.11	Open
P71	J58	J38	129	300	120	1.22	0.02	0	0	Open
P73	J60	J54	168	200	110	0.5	0.02	0	0	Open
P77	J46	J48	98	200	120	0.73	0.02	0	0.01	Open
P79	J36	J64	333	300	120	3.85	0.05	0.01	0.02	Open
P81	J64	J66	60	300	120	3.85	0.05	0	0.02	Open
P83	J66	J70	165	300	120	2.94	0.04	0	0.01	Open
P85	J70	J72	55	200	110	2.94	0.09	0.01	0.09	Open
P87	J72	J74	140	200	110	0.82	0.03	0	0.01	Open
P89	J72	J74	210	200	110	0.65	0.02	0	0.01	Open
P91	J66	J68	102	200	110	0.91	0.03	0	0.01	Open

Hydraulic Model Results - MDD + Fire Flow

Project Title: 5239 Cold Creek Development
Last Edited: 2022-11-16
Municipality Region of Peel

Fire Flow Data (MDD_FF)

ID	Static Demand (L/s)	Static Pressure (psi)	Static Head (m)	Fire-Flow Demand (L/s)	Residual Pressure (psi)	Hydrant Available Flow (L/s)	Hydrant Pressure at Available Flow (psi)	Junctions with Pressure Violation
J38	0.21	49.45	299.79	117	47.28	493.87	20	0
J40	0.73	49.45	299.78	117	41.29	236.67	20	0
J42	0.56	49.45	299.78	117	42.08	250.06	20	0
J46	0.21	49.45	299.79	117	47.51	523	20	0
J48	0.49	49.45	299.79	117	37.43	190.94	20	0
J50	0.37	49.45	299.78	117	35.76	177.89	20	0
J52	0.14	49.45	299.78	117	46.14	389.05	20	0
J54	0.33	49.45	299.78	117	23.47	125.57	20	0
J56	0.38	49.45	299.79	117	47.33	499.45	20	0
J58	0.35	49.45	299.79	117	47.37	504.9	20	0
J60	0.49	49.45	299.78	117	43.73	287.29	20	0
J68	0.61	53.71	299.78	117	33.79	156.52	20	0
J72	0.98	53.71	299.78	117	36.93	172.59	20	0
J74	0.98	53.71	299.78	117	31.2	146.99	20	0

APPENDIX D

WATER AGE ANALYSIS

Water Turnover Calculations

Project Title: 5239 - Cold Creek Development
Last Edited: 2022-11-16

Municipality Region of Peel

Average Consumption: 0.28 L/cap/day (Residential Land Use)
Minimum Consumption: 0.196 L/cap/day[1] (Residential Land Use)

South Development

Turnover Rate Calculation									
Service	**Length**	**Diameter**	**Area**	**Volume**	**Average Consumption**	**Minimum Consumption (70% of Average Consumption)**	**Occupancy %**	**Minimum Consumption at Reduced Occupancy**	**Days for Turnover**
	(m)	**(mm)**	**(m^2)**	**(m^3)**	**(m^3/day)**	**(m^3/day)**	**-**	**(m^3/day)**	**(Day)**
Street "4" and Street "5" North	86	200	0.03	2.70	21.80	15.26	25%	3.81	2.17
	79	300	0.07	5.58					
Street "4" and Street "5" South	247	200	0.03	7.76	41.34	28.94	25%	7.23	2.71
	168	300	0.07	11.88					
Street "3"	98	200	0.03	3.08	21.05	14.73	25%	3.68	0.84

1 - Minimum consumption calculated using: average day consumption * 0.7

North Development

Turnover Rate Calculation									
Service	**Length**	**Diameter**	**Area**	**Volume**	**Average Consumption**	**Minimum Consumption (70% of Average Consumption)**	**Occupancy %**	**Minimum Consumption at Reduced Occupancy**	**Days for Turnover**
	(m)	**(mm)**	**(m^2)**	**(m^3)**	**(m^3/day)**	**(m^3/day)**	**-**	**(m^3/day)**	**(Day)**
Mount Hope Road and Street "6"	102	200	0.03	3.20	26.17	18.32	60%	10.99	2.82
	393	300	0.07	27.78					
Mount Hope Road and Street "7"	405	200	0.03	12.72	84.43	59.10	30%	17.73	2.94
	558	300	0.07	39.44					

1 - Minimum consumption calculated using: average day consumption * 0.7

APPENDIX E

SANITARY CAPACITY ANALYSIS

SCHAEFFERS
CONSULTING ENGINEERS

SANITARY SEWER DESIGN SHEET - EXISTING SCENARIO

REGION OF PEEL SANITARY SEWER DESIGN SHEET (STD. DWG. 2-9-1)
Date: November 14, 2022
File No.: 5239 Cold Creek Development

LOCATION	FROM M.H.	TO M.H.	AREA (ha.)	LAND USE	DENSITY (ppha)	POPULATION	CUMULATIVE POPULATION	PEAKING FACTOR	SEWAGE FLOW 1 (m3/sec)	INFILTRATION FLOW 2 (m3/sec)	FOUNDATION DRAIN 3 (m3/sec)	TOTAL FLOW 1+2+3 (m3/sec)	LENGTH (m)	PIPE DIAMETER (mm)	GRADIENT (%)	CAPACITY (m3/sec)	VELOCITY (m/sec)	INVERT - UPSTREAM (m)	INVERT - DOWNSTREAM (m)	DROP IN LOWER M.H. (m)	CAPACITY CHECK	REMARKS
MOUNT HOPE ROAD	MH 309148	MH 309149	0.34	Single Family (<10m frontage) / Semi-Detached	70	24	24	4.37	0.00037	0.00007	0	0.00044	74	250	0.50%	0.042	0.01	258.02	257.65	0.37	1.0%	
	MH 309149	MH 309150	0.23	Single Family (<10m frontage) / Semi-Detached	70	17	41	4.33	0.00062	0.00011	0	0.00074	110	250	0.63%	0.047	0.02	257.62	256.93	0.69	1.6%	
	MH 309150	MH 309152	20.17	Single Family (<10m frontage) / Semi-Detached	70	1412	1453	3.69	0.01879	0.00415	0	0.02294	86.24	250	0.43%	0.039	0.47	255.28	254.91	0.37	58.9%	
	MH 309152	MH 309151	0.16	Single Family (<10m frontage) / Semi-Detached	70	12	1465	3.69	0.01893	0.00418	0	0.02311	99.72	250	0.52%	0.043	0.47	254.90	254.38	0.52	53.8%	
GUARDHOUSE DRIVE	MH 309151	MH 308705	0			0	1465	3.69	0.01893	0.00418	0	0.02311	22.5	250	1.20%	0.065	0.47	254.36	254.09	0.27	35.5%	
	MH 308705	MH 308704	0			0	1465	3.69	0.01893	0.00418	0	0.02311	44.7	250	0.51%	0.043	0.47	253.99	253.76	0.23	54.2%	
	MH 308704	MH 308703	1.9	Single Family (<10m frontage) / Semi-Detached	70	133	1598	3.66	0.02049	0.00456	0	0.02505	90	250	0.42%	0.039	0.51	253.79	253.41	0.38	64.8%	
	MH 308703	MH 308702	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	1726	3.63	0.02199	0.00492	0	0.02691	93.8	250	0.38%	0.037	0.55	253.39	253.03	0.36	73.0%	
	MH 308702	MH 309613	0			0	1726	3.63	0.02199	0.00492	0	0.02691	39.5	250	0.56%	0.044	0.55	253.02	252.80	0.22	60.6%	
WESTCHESTER BOULEVARD	MH 309613	MH 309617	6.7	Single Family (<10m frontage) / Semi-Detached	70	469	2195	3.55	0.02734	0.00626	0	0.03360	101.6	250	1.32%	0.068	0.68	252.78	251.44	1.34	49.2%	
CULPEPPER COURT	MH 309617	MH 308457	15.78	Single Family (<10m frontage) / Semi-Detached	70	1105	3300	3.41	0.03940	0.00942	0	0.04882	74.8	300	0.39%	0.060	0.69	251.39	251.10	0.29	81.1%	
	MH 308457	MH 308455	0.15	Single Family (<10m frontage) / Semi-Detached	70	11	3311	3.41	0.03952	0.00945	0	0.04897	21.5	300	2.84%	0.163	0.69	251.07	250.46	0.61	30.1%	
HATHAWAY COURT	MH 308455	MH 308740	31.15	Single Family (<10m frontage) / Semi-Detached	70	2181	6335	3.15	0.06990	0.01680	0	0.08670	116.50	450	0.28%	0.152	0.55	250.27	249.94	0.33	57.1%	
			1.94	Junior Public School	-	200																
			3.67	Row Dwellings	175	643																
KINGSVIEW DRIVE	MH 308740	MH 308963	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	6463	3.14	0.07112	0.01717	0	0.08829	63.60	450	0.24%	0.138	0.56	249.84	249.69	0.15	63.8%	
	MH 308963	MH 308941	0.59	Single Family (<10m frontage) / Semi-Detached	70	42	6505	3.14	0.07152	0.01728	0	0.08881	91.00	450	0.43%	0.187	0.56	249.68	249.29	0.39	47.6%	
	MH 308941	MH 308944	0			0	6505	3.14	0.07152	0.01728	0	0.08881	53.40	450	0.15%	0.110	0.56	249.26	249.18	0.08	80.5%	
	MH 308944	MH 309037	0			0	6505	3.14	0.07152	0.01728	0	0.08881	18.70	450	0.27%	0.147	0.56	249.13	249.08	0.05	60.2%	
	MH 309037	MH 308976	10.23	Single Family (<10m frontage) / Semi-Detached	70	717	7222	3.09	0.07830	0.01933	0	0.09763	91.00	450	0.51%	0.203	0.61	249.05	248.59	0.46	48.2%	
	MH 308976	MH 308980	1.16	Single Family (<10m frontage) / Semi-Detached	70	82	7304	3.09	0.07907	0.01956	0	0.09863	90.00	450	0.51%	0.204	0.62	248.59	248.13	0.46	48.4%	
	MH 308980	MH 308979	1.32	Single Family (<10m frontage) / Semi-Detached	70	93	7397	3.08	0.07993	0.01983	0	0.09976	90.00	450	0.51%	0.204	0.63	248.13	247.67	0.46	48.9%	
	MH 308979	MH 308978	0.65	Single Family (<10m frontage) / Semi-Detached	70	46	7443	3.08	0.08036	0.01996	0	0.10032	35.00	450	0.51%	0.204	0.63	247.67	247.49	0.18	49.1%	
CRESTWOOD DRIVE	MH 308978	MH 308977	0.64	Single Family (<10m frontage) / Semi-Detached	70	45	8488	3.03	0.08999	0.02097	0	0.11096	29.00	450	0.52%	0.205	0.70	247.46	247.31	0.15	54.1%	
			4.44	Secondary School	-	1000																
	MH 308977	MH 308445	0.44	Single Family (<10m frontage) / Semi-Detached	70	31	8519	3.02	0.09027	0.02106	0	0.11133	78.00	450	0.51%	0.204	0.70	247.27	246.87	0.40	54.5%	
	MH 308445	MH 308446	0.45	Single Family (<10m frontage) / Semi-Detached	70	32	8551	3.02	0.09056	0.02115	0	0.11171	37.50	450	0.51%	0.203	0.70	246.84	246.65	0.19	55.0%	
	MH 308446	MH 308443	0.1	Single Family (<10m frontage) / Semi-Detached	70	7	8558	3.02	0.09062	0.02117	0	0.11179	23.00	450	0.52%	0.206	0.70	246.61	246.49	0.12	54.3%	
	MH 308443	MH 308441	0			0	8558	3.02	0.09062	0.02117	0	0.11179	23.50	450	0.51%	0.204	0.70	246.46	246.34	0.12	54.9%	
	MH 308441	MH 308442	2.12	Single Family (<10m frontage) / Semi-Detached	70	149	8707	3.01	0.09198	0.02159	0	0.11357	86.50	450	0.52%	0.206	0.71	246.34	245.89	0.45	55.2%	
	MH 308442	MH 308444	0			0	8707	3.01	0.09198	0.02159	0	0.11357	15.00	450	0.47%	0.195	0.71	245.89	245.82	0.07	58.3%	
MAIDSTONE COURT TO BOLTON SPS	MH 308444	MH 309053	1.5	Single Family (<10m frontage) / Semi-Detached	70	105	8812	3.01	0.09293	0.02189	0	0.11482	51.00	450	0.53%	0.207	0.72	245.68	245.41	0.27	55.4%	
	MH 309053	MH 309052	0			0	8812	3.01	0.09293	0.02189	0	0.11482	46.80	450	0.53%	0.208	0.72	245.37	245.12	0.25	55.1%	
	MH 309052	MH 308506	0			0	8812	3.01	0.09293	0.02189	0	0.11482	48.50	350	13.32%	0.532	1.19	245.06	238.60	6.46	21.6%	
	MH 308506	MH 308507	0			0	8812	3.01	0.09293	0.02189	0	0.11482	53.57	350	7.54%	0.401	1.19	238.57	234.53	4.04	28.7%	
	MH 308507	MH 308508	0			0	8812	3.01	0.09293	0.02189	0	0.11482	90.17	350	24.28%	0.719	1.19	233.53	211.64	21.89	16.0%	
	MH 308508	MH 6561078	0			0	8812	3.01	0.09293	0.02189	0	0.11482	53.19	450	0.53%	0.207	0.72	210.67	210.39	0.28	55.5%	
	MH 6561078	MH 308504	13.5	Single Family (<10m frontage) / Semi-Detached	70	945	9757	2.97	0.10140	0.02459	0	0.12599	14.69	450	0.54%	0.210	0.79	210.39	210.31	0.08	59.9%	
TRIPLEX PARALLEL SIPHONS	MH 308504	MH 1646495	-	-	-	-	9757	2.97	0.10140	0.02459	0	0.12599	39.60	150	0.88%	0.014	0.75	210.16	209.81	0.35	92.6%	
	MH 308504	MH 1646495											39.60	200	0.88%	0.031	0.91	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	300	0.88%	0.091	1.19	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	-	-	0.136	-	210.16	209.81	0.35		
MAIDSTONE COURT TO BOLTON SPS	MH 1646495	MH 308505	0			0	9757	2.97	0.10140	0.02459	0	0.12599	12.20	500	6.15%	0.936	0.64	209.82	209.07	0.75	13.5%	
	MH 308505	MH 309236	185.93	Single Family (<10m frontage) / Semi-Detached / Light Industrial	70	13016	22973	2.59	0.20870	0.06325	0	0.27195	81.00	675	0.40%	0.528	0.76	208.98	208.82	0.16	51.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
			7.36	Junior Public School	-	200																
	MH 309236	MH 309237	0			0	22973	2.59	0.20870	0.06325	0	0.27195	30.80	675	0.40%	0.528	0.76	208.82	208.80	0.02	51.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309237	MH 309235	0			0	22973	2.59	0.20870	0.06325	0	0.27195	54.50	675	0.40%	0.528	0.76	208.80	208.66	0.14	51.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309235	MH 309234	0			0	22973	2.59	0.20870	0.06325	0	0.27195	13.30	675	1.20%	0.922	0.76	208.56	208.40	0.16	29.5%	
	MH 309234	MH 309226	0			0	22973	2.59	0.20870	0.06325	0	0.27195	23.00	675	0.13%	0.304	0.76	208.32	208.29	0.03	89.6%	
	MH 309226	MH 309243	0			0	22973	2.59	0.20870	0.06325	0	0.27195	97.30	675	0.18%	0.362	0.76	208.29	208.11	0.18	75.2%	
	MH 309243	MH 309241	28.8	Single Family (<10m frontage) / Semi-Detached	70	2016	25389	2.55	0.22680	0.06995	0	0.29675	13.00	675	0.23%	0.404	0.83	208.09	208.06	0.03	73.5%	
			3.12	Junior Public School	-	200																
			1.58	Junior Public School	-	200																
	MH 309241	BOLTON SPS	44.7	Single Family (<10m frontage) / Semi-Detached	70	3129	28968	2.49	0.25301	0.07975	0	0.33276	7.20	675	0.23%	0.404	0.93	208.06	208.04	0.02	82.4%	Invert elevation data missing; slope assumed based on upstream sewer
			4.3	Senior Public School	-	450																

Bolton SPS Capacity **0.38** **m3/sec**
87.6% **% of Rated Capacity**

SCHAEFFERS CONSULTING ENGINEERS

SANITARY SEWER DESIGN SHEET - PROPOSED SCENARIO - SOUTH DEVELOPMENT

REGION OF PEEL SANITARY SEWER DESIGN SHEET (STD. DWG. 2-9-1)
Date: November 14, 2022
File No.: 5239 Cold Creek Development

LOCATION	FROM M.H.	TO M.H.	AREA (ha.)	LAND USE	DENSITY (pphа)	POPULATION	CUMULATIVE POPULATION	PEAKING FACTOR	SEWAGE FLOW 1 (m3/sec)	INFILTRATION FLOW 2 (m3/sec)	FOUNDATION DRAIN 3 (m3/sec)	TOTAL FLOW 1+2+3 (m3/sec)	LENGTH (m)	PIPE DIAMETER (mm)	GRADIENT (%)	CAPACITY (m3/sec)	VELOCITY (m/sec)	INVERT - UPSTREAM (m)	INVERT - DOWNSTREAM (m)	DROP IN LOWER M.H. (m)	CAPACITY CHECK	REMARKS
COLD CREEK DEVELOPMENT TO MOUNT HOPE RD	NEW MH	MH 309148	9.35	Semi-Detached	70	655	655	3.91	0.00898	0.00187	0	0.01085	250	250	0.50%	0.042	0.86	259.27	258.02	1.25	25.8%	Proposed Cold Creek Development
MOUNT HOPE ROAD	MH 309148	MH 309149	0.34	Single Family (<10m frontage) / Semi-Detached	70	24	679	3.90	0.00929	0.00194	0	0.01122	74	250	0.50%	0.042	0.23	258.02	257.65	0.37	26.7%	
	MH 309149	MH 309150	0.23	Single Family (<10m frontage) / Semi-Detached	70	17	696	3.90	0.00950	0.00198	0	0.01149	110	250	0.63%	0.047	0.23	257.62	256.93	0.69	24.4%	
	MH 309150	MH 309152	20.17	Single Family (<10m frontage) / Semi-Detached	70	1412	2108	3.57	0.02636	0.00602	0	0.03238	86.24	250	0.43%	0.039	0.66	255.28	254.91	0.37	83.1%	
	MH 309152	MH 309151	0.16	Single Family (<10m frontage) / Semi-Detached	70	12	2120	3.57	0.02649	0.00605	0	0.03254	99.72	250	0.52%	0.043	0.66	254.90	254.38	0.52	75.8%	
GUARDHOUSE DRIVE	MH 309151	MH 308705	0			0	2120	3.57	0.02649	0.00605	0	0.03254	22.5	250	1.20%	0.065	0.66	254.36	254.09	0.27	50.0%	
	MH 308705	MH 308704	0			0	2120	3.57	0.02649	0.00605	0	0.03254	44.7	250	0.51%	0.043	0.66	253.99	253.76	0.23	76.3%	
	MH 308704	MH 308703	1.9	Single Family (<10m frontage) / Semi-Detached	70	133	2253	3.54	0.02799	0.00643	0	0.03442	90	250	0.42%	0.039	0.70	253.79	253.41	0.38	89.1%	
	MH 308703	MH 308702	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	2381	3.53	0.02942	0.00679	0	0.03621	93.8	250	0.38%	0.037	0.74	253.39	253.03	0.36	98.3%	
	MH 308702	MH 309613	0			0	2381	3.53	0.02942	0.00679	0	0.03621	39.5	250	0.56%	0.044	0.74	253.02	252.80	0.22	81.6%	
WESTCHESTER BOULEVARD	MH 309613	MH 309617	6.7	Single Family (<10m frontage) / Semi-Detached	70	469	2850	3.46	0.03457	0.00813	0	0.04271	101.6	250	1.32%	0.068	0.87	252.78	251.44	1.34	62.5%	
CULPEPPER COURT	MH 309617	MH 308457	15.78	Single Family (<10m frontage) / Semi-Detached	70	1105	3955	3.34	0.04626	0.01129	0	0.05755	74.8	300	0.39%	0.060	0.81	251.39	251.10	0.29	95.6%	
	MH 308457	MH 308455	0.15	Single Family (<10m frontage) / Semi-Detached	70	11	3966	3.34	0.04638	0.01132	0	0.05770	21.5	300	2.84%	0.163	0.82	251.07	250.46	0.61	35.4%	
HATHAWAY COURT	MH 308455	MH 308740	31.15	Single Family (<10m frontage) / Semi-Detached	70	2181	6990	3.11	0.07612	0.01867	0	0.09479	116.50	450	0.28%	0.152	0.60	250.27	249.94	0.33	62.5%	
			1.94	Junior Public School	-	200																
			3.67	Row Dwellings	175	643																
KINGSVIEW DRIVE	MH 308740	MH 308963	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	7118	3.10	0.07732	0.01904	0	0.09636	63.60	450	0.24%	0.138	0.61	249.84	249.69	0.15	69.6%	
	MH 308963	MH 308941	0.59	Single Family (<10m frontage) / Semi-Detached	70	42	7160	3.10	0.07772	0.01915	0	0.09687	91.00	450	0.43%	0.187	0.61	249.68	249.29	0.39	51.9%	
	MH 308941	MH 308944	0			0	7160	3.10	0.07772	0.01915	0	0.09687	53.40	450	0.15%	0.110	0.61	249.26	249.18	0.08	87.8%	
	MH 308944	MH 309037	0			0	7160	3.10	0.07772	0.01915	0	0.09687	18.70	450	0.27%	0.147	0.61	249.13	249.08	0.05	65.7%	
	MH 309037	MH 308976	10.23	Single Family (<10m frontage) / Semi-Detached	70	717	7877	3.06	0.08439	0.02120	0	0.10559	91.00	450	0.51%	0.203	0.66	249.05	248.59	0.46	52.1%	
	MH 308976	MH 308980	1.16	Single Family (<10m frontage) / Semi-Detached	70	82	7959	3.05	0.08514	0.02143	0	0.10657	90.00	450	0.51%	0.204	0.67	248.59	248.13	0.46	52.3%	
	MH 308980	MH 308979	1.32	Single Family (<10m frontage) / Semi-Detached	70	93	8052	3.05	0.08600	0.02170	0	0.10769	90.00	450	0.51%	0.204	0.68	248.13	247.67	0.46	52.8%	
	MH 308979	MH 308978	0.65	Single Family (<10m frontage) / Semi-Detached	70	46	8098	3.05	0.08642	0.02183	0	0.10825	35.00	450	0.51%	0.204	0.68	247.67	247.49	0.18	52.9%	
CRESTWOOD DRIVE	MH 308978	MH 308977	0.64	Single Family (<10m frontage) / Semi-Detached	70	45	9143	2.99	0.09591	0.02284	0	0.11875	29.00	450	0.52%	0.205	0.75	247.46	247.31	0.15	57.9%	
			4.44	Secondary School	-	1000																
	MH 308977	MH 308445	0.44	Single Family (<10m frontage) / Semi-Detached	70	31	9174	2.99	0.09619	0.02293	0	0.11912	78.00	450	0.51%	0.204	0.75	247.27	246.87	0.40	58.3%	
	MH 308445	MH 308446	0.45	Single Family (<10m frontage) / Semi-Detached	70	32	9206	2.99	0.09648	0.02302	0	0.11950	37.50	450	0.51%	0.203	0.75	246.84	246.65	0.19	58.9%	
	MH 308446	MH 308443	0.1	Single Family (<10m frontage) / Semi-Detached	70	7	9213	2.99	0.09654	0.02304	0	0.11958	23.00	450	0.52%	0.206	0.75	246.61	246.49	0.12	58.1%	
	MH 308443	MH 308441	0			0	9213	2.99	0.09654	0.02304	0	0.11958	23.50	450	0.51%	0.204	0.75	246.46	246.34	0.12	58.7%	
	MH 308441	MH 308442	2.12	Single Family (<10m frontage) / Semi-Detached	70	149	9362	2.98	0.09788	0.02346	0	0.12134	86.50	450	0.52%	0.206	0.76	246.34	245.89	0.45	59.0%	
	MH 308442	MH 308444	0			0	9362	2.98	0.09788	0.02346	0	0.12134	15.00	450	0.47%	0.195	0.76	245.89	245.82	0.07	62.3%	
MAIDSTONE COURT TO BOLTON SPS	MH 308444	MH 309053	1.5	Single Family (<10m frontage) / Semi-Detached	70	105	9467	2.98	0.09881	0.02376	0	0.12258	51.00	450	0.53%	0.207	0.77	245.68	245.41	0.27	59.1%	
	MH 309053	MH 309052	0			0	9467	2.98	0.09881	0.02376	0	0.12258	46.80	450	0.53%	0.208	0.77	245.37	245.12	0.25	58.8%	
	MH 309052	MH 308506	0			0	9467	2.98	0.09881	0.02376	0	0.12258	48.50	350	13.32%	0.532	1.27	245.06	238.60	6.46	23.0%	
	MH 308506	MH 308507	0			0	9467	2.98	0.09881	0.02376	0	0.12258	53.57	350	7.54%	0.401	1.27	238.57	234.53	4.04	30.6%	
	MH 308507	MH 308508	0			0	9467	2.98	0.09881	0.02376	0	0.12258	90.17	350	24.28%	0.719	1.27	233.53	211.64	21.89	17.1%	
	MH 308508	MH 6561078	0			0	9467	2.98	0.09881	0.02376	0	0.12258	53.19	450	0.53%	0.207	0.77	210.67	210.39	0.28	59.3%	
	MH 6561078	MH 308504	13.5	Single Family (<10m frontage) / Semi-Detached	70	945	10412	2.94	0.10718	0.02646	0	0.13364	14.69	450	0.54%	0.210	0.84	210.39	210.31	0.08	63.5%	
TRIPLEX PARALLEL SIPHONS	MH 308504	MH 1646495	-	-	-	-	10412	2.94	0.10718	0.02646	0	0.13364	39.60	150	0.88%	0.014	0.80	210.16	209.81	0.35	98.2%	
	MH 308504	MH 1646495											39.60	200	0.88%	0.031	0.96	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	300	0.88%	0.091	1.26	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	-	-	0.136	-	210.16	209.81	0.35		
MAIDSTONE COURT TO BOLTON SPS	MH 1646495	MH 308505	0			0	10412	2.94	0.10718	0.02646	0	0.13364	12.20	500	6.15%	0.936	0.68	209.82	209.07	0.75	14.3%	
	MH 308505	MH 309236	185.93	Single Family (<10m frontage) / Semi-Detached / Light Industrial	70	13016	23628	2.58	0.21364	0.06512	0	0.27876	81.00	675	0.40%	0.528	0.78	208.98	208.82	0.16	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
			7.36	Junior Public School	-	200																
	MH 309236	MH 309237	0			0	23628	2.58	0.21364	0.06512	0	0.27876	30.80	675	0.40%	0.528	0.78	208.82	208.80	0.02	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309237	MH 309235	0			0	23628	2.58	0.21364	0.06512	0	0.27876	54.50	675	0.40%	0.528	0.78	208.80	208.66	0.14	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309235	MH 309234	0			0	23628	2.58	0.21364	0.06512	0	0.27876	13.30	675	1.20%	0.922	0.78	208.56	208.40	0.16	30.2%	
	MH 309234	MH 309226	0			0	23628	2.58	0.21364	0.06512	0	0.27876	23.00	675	0.13%	0.304	0.78	208.32	208.29	0.03	91.8%	
	MH 309226	MH 309243	0			0	23628	2.58	0.21364	0.06512	0	0.27876	97.30	675	0.18%	0.362	0.78	208.29	208.11	0.18	77.1%	
	MH 309243	MH 309241	28.8	Single Family (<10m frontage) / Semi-Detached	70	2016	26044	2.54	0.23165	0.07182	0	0.30347	13.00	675	0.23%	0.404	0.85	208.09	208.06	0.03	75.2%	
			3.12	Junior Public School	-	200																
			1.58	Junior Public School	-	200																
	MH 309241	BOLTON SPS	44.7	Single Family (<10m frontage) / Semi-Detached	70	3129	29623	2.48	0.25774	0.08162	0	0.33936	7.20	675	0.23%	0.404	0.95	208.06	208.04	0.02	84.0%	Invert elevation data missing; slope assumed based on upstream sewer
			4.3	Senior Public School	-	450																

Bolton SPS Capacity **0.38** **m3/sec**
89.3% **% of Rated Capacity**

SCHAEFFERS
CONSULTING ENGINEERS

SANITARY SEWER DESIGN SHEET - PROPOSED SCENARIO - NORTH AND SOUTH DEVELOPMENTS

REGION OF PEEL SANITARY SEWER DESIGN SHEET (STD. DWG. 2-9-1)
Date: November 14, 2022
File No.: 5239 Cold Creek Development

LOCATION	FROM M.H.	TO M.H.	AREA (ha.)	LAND USE	DENSITY (pphа)	POPULATION	CUMULATIVE POPULATION	PEAKING FACTOR	SEWAGE FLOW 1 (m3/sec)	INFILTRATION FLOW 2 (m3/sec)	FOUNDATION DRAIN 3 (m3/sec)	TOTAL FLOW 1+2+3 (m3/sec)	LENGTH (m)	PIPE DIAMETER (mm)	GRADIENT (%)	CAPACITY (m3/sec)	VELOCITY (m/sec)	INVERT - UPSTREAM (m)	INVERT - DOWNSTREAM (m)	DROP IN LOWER M.H. (m)	CAPACITY CHECK	REMARKS
COLD CREEK DEVELOPMENT TO MOUNT HOPE RD	NEW MH	MH 309148	14.99	Semi-Detached	70	1050	1050	3.79	0.01393	0.00300	0	0.01693	800	250	0.16%	0.024	0.48	259.27	258.02	1.25	72.0%	Proposed Cold Creek Development
MOUNT HOPE ROAD	MH 309148	MH 309149	0.34	Single Family (<10m frontage) / Semi-Detached	70	24	1074	3.78	0.01423	0.00307	0	0.01729	74	250	0.50%	0.042	0.35	258.02	257.65	0.37	41.1%	
	MH 309149	MH 309150	0.23	Single Family (<10m frontage) / Semi-Detached	70	17	1091	3.78	0.01444	0.00311	0	0.01755	110	250	0.63%	0.047	0.36	257.62	256.93	0.69	37.3%	
	MH 309150	MH 309152	20.17	Single Family (<10m frontage) / Semi-Detached	70	1412	2503	3.51	0.03077	0.00715	0	0.03792	86.24	250	0.43%	0.039	0.77	255.28	254.91	0.37	97.3%	
	MH 309152	MH 309151	0.16	Single Family (<10m frontage) / Semi-Detached	70	12	2515	3.51	0.03091	0.00718	0	0.03808	99.72	250	0.52%	0.043	0.78	254.90	254.38	0.52	88.7%	
GUARDHOUSE DRIVE	MH 309151	MH 308705	0			0	2515	3.51	0.03091	0.00718	0	0.03808	22.5	250	1.20%	0.065	0.78	254.36	254.09	0.27	58.5%	
	MH 308705	MH 308704	0			0	2515	3.51	0.03091	0.00718	0	0.03808	44.7	250	0.51%	0.043	0.78	253.99	253.76	0.23	89.3%	
	MH 308704	MH 308703	1.9	Single Family (<10m frontage) / Semi-Detached	70	133	2648	3.49	0.03237	0.00756	0	0.03993	90	250	0.42%	0.039	0.81	253.79	253.41	0.38	103.3%	
	MH 308703	MH 308702	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	2776	3.47	0.03377	0.00792	0	0.04169	93.8	250	0.38%	0.037	0.85	253.39	253.03	0.36	113.2%	
	MH 308702	MH 309613	0			0	2776	3.47	0.03377	0.00792	0	0.04169	39.5	250	0.56%	0.044	0.85	253.02	252.80	0.22	93.9%	
WESTCHESTER BOULEVARD	MH 309613	MH 309617	6.7	Single Family (<10m frontage) / Semi-Detached	70	469	3245	3.41	0.03882	0.00926	0	0.04808	101.6	250	1.32%	0.068	0.98	252.78	251.44	1.34	70.4%	
CULPEPPER COURT	MH 309617	MH 308457	15.78	Single Family (<10m frontage) / Semi-Detached	70	1105	4350	3.30	0.05032	0.01242	0	0.06273	74.8	300	0.39%	0.060	0.89	251.39	251.10	0.29	104.2%	
	MH 308457	MH 308455	0.15	Single Family (<10m frontage) / Semi-Detached	70	11	4361	3.30	0.05043	0.01245	0	0.06288	21.5	300	2.84%	0.163	0.89	251.07	250.46	0.61	38.6%	
HATHAWAY COURT	MH 308455	MH 308740	31.15	Single Family (<10m frontage) / Semi-Detached	70	2181	7385	3.08	0.07982	0.01980	0	0.09962	116.50	450	0.28%	0.152	0.63	250.27	249.94	0.33	65.7%	
			1.94	Junior Public School	-	200																
			3.67	Row Dwellings	175	643																
KINGSVIEW DRIVE	MH 308740	MH 308963	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	7513	3.08	0.08101	0.02016	0	0.10118	63.60	450	0.24%	0.138	0.64	249.84	249.69	0.15	73.1%	
	MH 308963	MH 308941	0.59	Single Family (<10m frontage) / Semi-Detached	70	42	7555	3.07	0.08140	0.02028	0	0.10169	91.00	450	0.43%	0.187	0.64	249.68	249.29	0.39	54.5%	
	MH 308941	MH 308944	0			0	7555	3.07	0.08140	0.02028	0	0.10169	53.40	450	0.15%	0.110	0.64	249.26	249.18	0.08	92.1%	
	MH 308944	MH 309037	0			0	7555	3.07	0.08140	0.02028	0	0.10169	18.70	450	0.27%	0.147	0.64	249.13	249.08	0.05	69.0%	
	MH 309037	MH 308976	10.23	Single Family (<10m frontage) / Semi-Detached	70	717	8272	3.04	0.08802	0.02233	0	0.11034	91.00	450	0.51%	0.203	0.69	249.05	248.59	0.46	54.4%	
	MH 308976	MH 308980	1.16	Single Family (<10m frontage) / Semi-Detached	70	82	8354	3.03	0.08877	0.02256	0	0.11133	90.00	450	0.51%	0.204	0.70	248.59	248.13	0.46	54.6%	
	MH 308980	MH 308979	1.32	Single Family (<10m frontage) / Semi-Detached	70	93	8447	3.03	0.08961	0.02282	0	0.11244	90.00	450	0.51%	0.204	0.71	248.13	247.67	0.46	55.2%	
	MH 308979	MH 308978	0.65	Single Family (<10m frontage) / Semi-Detached	70	46	8493	3.02	0.09003	0.02295	0	0.11299	35.00	450	0.51%	0.204	0.71	247.67	247.49	0.18	55.3%	
CRESTWOOD DRIVE	MH 308978	MH 308977	0.64	Single Family (<10m frontage) / Semi-Detached	70	45	9538	2.98	0.09945	0.02397	0	0.12342	29.00	450	0.52%	0.205	0.78	247.46	247.31	0.15	60.2%	
			4.44	Secondary School	-	1000																
	MH 308977	MH 308445	0.44	Single Family (<10m frontage) / Semi-Detached	70	31	9569	2.97	0.09972	0.02406	0	0.12378	78.00	450	0.51%	0.204	0.78	247.27	246.87	0.40	60.6%	
	MH 308445	MH 308446	0.45	Single Family (<10m frontage) / Semi-Detached	70	32	9601	2.97	0.10001	0.02415	0	0.12416	37.50	450	0.51%	0.203	0.78	246.84	246.65	0.19	61.2%	
	MH 308446	MH 308443	0.1	Single Family (<10m frontage) / Semi-Detached	70	7	9608	2.97	0.10007	0.02417	0	0.12424	23.00	450	0.52%	0.206	0.78	246.61	246.49	0.12	60.3%	
	MH 308443	MH 308441	0			0	9608	2.97	0.10007	0.02417	0	0.12424	23.50	450	0.51%	0.204	0.78	246.46	246.34	0.12	61.0%	
	MH 308441	MH 308442	2.12	Single Family (<10m frontage) / Semi-Detached	70	149	9757	2.97	0.10140	0.02459	0	0.12599	86.50	450	0.52%	0.206	0.79	246.34	245.89	0.45	61.3%	
	MH 308442	MH 308444	0			0	9757	2.97	0.10140	0.02459	0	0.12599	15.00	450	0.47%	0.195	0.79	245.89	245.82	0.07	64.7%	
MAIDSTONE COURT TO BOLTON SPS	MH 308444	MH 309053	1.5	Single Family (<10m frontage) / Semi-Detached	70	105	9862	2.96	0.10233	0.02489	0	0.12722	51.00	450	0.53%	0.207	0.80	245.68	245.41	0.27	61.3%	
	MH 309053	MH 309052	0			0	9862	2.96	0.10233	0.02489	0	0.12722	46.80	450	0.53%	0.208	0.80	245.37	245.12	0.25	61.1%	
	MH 309052	MH 308506	0			0	9862	2.96	0.10233	0.02489	0	0.12722	48.50	350	13.32%	0.532	1.32	245.06	238.60	6.46	23.9%	
	MH 308506	MH 308507	0			0	9862	2.96	0.10233	0.02489	0	0.12722	53.57	350	7.54%	0.401	1.32	238.57	234.53	4.04	31.8%	
	MH 308507	MH 308508	0			0	9862	2.96	0.10233	0.02489	0	0.12722	90.17	350	24.28%	0.719	1.32	233.53	211.64	21.89	17.7%	
	MH 308508	MH 6561078	0			0	9862	2.96	0.10233	0.02489	0	0.12722	53.19	450	0.53%	0.207	0.80	210.67	210.39	0.28	61.5%	
	MH 6561078	MH 308504	13.5	Single Family (<10m frontage) / Semi-Detached	70	945	10807	2.92	0.11064	0.02759	0	0.13823	14.69	450	0.54%	0.210	0.87	210.39	210.31	0.08	65.7%	
TRIPLEX PARALLEL SIPHONS	MH 308504	MH 1646495	-	-	-	-	10807	2.92	0.11064	0.02759	0	0.13823	39.60	150	0.88%	0.014	0.82	210.16	209.81	0.35	101.6%	
	MH 308504	MH 1646495											39.60	200	0.88%	0.031	1.00	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	300	0.88%	0.091	1.31	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	-	-	0.136	-	210.16	209.81	0.35		
MAIDSTONE COURT TO BOLTON SPS	MH 1646495	MH 308505	0			0	10807	2.92	0.11064	0.02759	0	0.13823	12.20	500	6.15%	0.936	0.70	209.82	209.07	0.75	14.8%	
	MH 308505	MH 309236	185.93	Single Family (<10m frontage) / Semi-Detached / Light Industrial	70	13016	24023	2.57	0.21661	0.06625	0	0.28286	81.00	675	0.40%	0.528	0.79	208.98	208.82	0.16	53.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
			7.36	Junior Public School	-	200																
	MH 309236	MH 309237	0			0	24023	2.57	0.21661	0.06625	0	0.28286	30.80	675	0.40%	0.528	0.79	208.82	208.80	0.02	53.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309237	MH 309235	0			0	24023	2.57	0.21661	0.06625	0	0.28286	54.50	675	0.40%	0.528	0.79	208.80	208.66	0.14	53.5%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309235	MH 309234	0			0	24023	2.57	0.21661	0.06625	0	0.28286	13.30	675	1.20%	0.922	0.79	208.56	208.40	0.16	30.7%	
	MH 309234	MH 309226	0			0	24023	2.57	0.21661	0.06625	0	0.28286	23.00	675	0.13%	0.304	0.79	208.32	208.29	0.03	93.2%	
	MH 309226	MH 309243	0			0	24023	2.57	0.21661	0.06625	0	0.28286	97.30	675	0.18%	0.362	0.79	208.29	208.11	0.18	78.2%	
	MH 309243	MH 309241	28.8	Single Family (<10m frontage) / Semi-Detached	70	2016	26439	2.53	0.23456	0.07295	0	0.30751	13.00	675	0.23%	0.404	0.86	208.09	208.06	0.03	76.2%	
			3.12	Junior Public School	-	200																
			1.58	Junior Public School	-	200																
	MH 309241	BOLTON SPS	44.7	Single Family (<10m frontage) / Semi-Detached	70	3129	30018	2.48	0.26058	0.08275	0	0.34333	7.20	675	0.23%	0.404	0.96	208.06	208.04	0.02	85.0%	Invert elevation data missing; slope assumed based on upstream sewer
			4.3	Senior Public School	-	450																

Bolton SPS Capacity **0.38** **m3/sec**
90.4% **% of Rated Capacity**

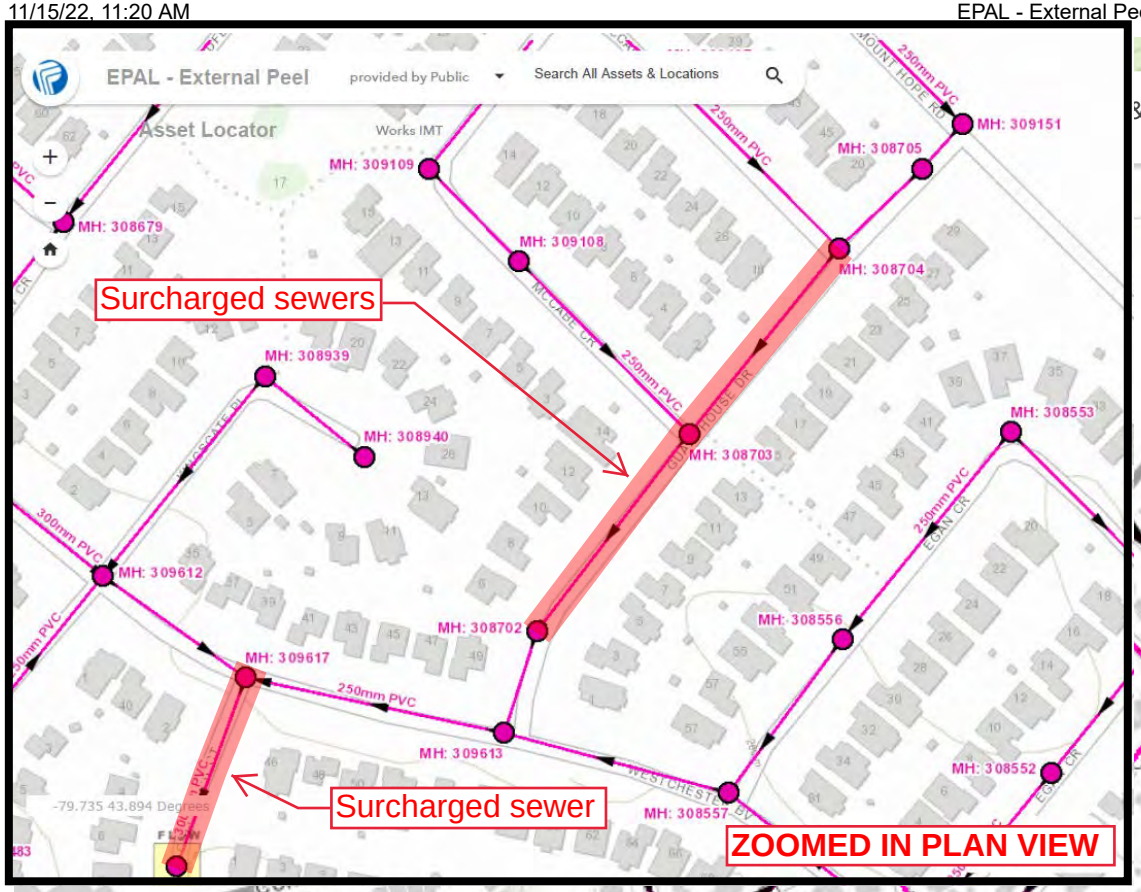
SCHAEFFERS CONSULTING ENGINEERS

SANITARY SEWER DESIGN SHEET - PROPOSED SCENARIO - SOUTH DEVELOPMENTS + ADDITIONAL DEVELOPMENT GOVERNED BY SEWER CAPACITY

REGION OF PEEL SANITARY SEWER DESIGN SHEET (STD. DWG. 2-9-1)
Date: November 14, 2022
File No.: 5239 Cold Creek Development

LOCATION	FROM M.H.	TO M.H.	AREA (ha.)	LAND USE	DENSITY (pp/ha)	POPULATION	CUMULATIVE POPULATION	PEAKING FACTOR	SEWAGE FLOW 1 (m3/sec)	INFILTRATION FLOW 2 (m3/sec)	FOUNDATION DRAIN 3 (m3/sec)	TOTAL FLOW 1+2+3 (m3/sec)	LENGTH (m)	PIPE DIAMETER (mm)	GRADIENT (%)	CAPACITY (m3/sec)	VELOCITY (m/sec)	INVERT - UPSTREAM (m)	INVERT - DOWNSTREAM (m)	DROP IN LOWER M.H. (m)	CAPACITY CHECK	REMARKS
COLD CREEK DEVELOPMENT TO MOUNT HOPE RD	NEW MH	MH 309148	9.98	Semi-Detached	70	699	699	3.89	0.00954	0.00200	0	0.01154	800	250	0.16%	0.024	0.48	259.27	258.02	1.25	49.1%	Proposed Cold Creek Development
MOUNT HOPE ROAD	MH 309148	MH 309149	0.34	Single Family (<10m frontage) / Semi-Detached	70	24	723	3.89	0.00985	0.00206	0	0.01191	74	250	0.50%	0.042	0.24	258.02	257.65	0.37	28.3%	
	MH 309149	MH 309150	0.23	Single Family (<10m frontage) / Semi-Detached	70	17	740	3.88	0.01006	0.00211	0	0.01217	110	250	0.63%	0.047	0.25	257.62	256.93	0.69	25.8%	
	MH 309150	MH 309152	20.17	Single Family (<10m frontage) / Semi-Detached	70	1412	2152	3.56	0.02686	0.00614	0	0.03300	86.24	250	0.43%	0.039	0.67	255.28	254.91	0.37	84.7%	
	MH 309152	MH 309151	0.16	Single Family (<10m frontage) / Semi-Detached	70	12	2164	3.56	0.02699	0.00618	0	0.03317	99.72	250	0.52%	0.043	0.68	254.90	254.38	0.52	77.2%	
GUARDHOUSE DRIVE	MH 309151	MH 308705	0			0	2164	3.56	0.02699	0.00618	0	0.03317	22.5	250	1.20%	0.065	0.68	254.36	254.09	0.27	50.9%	
	MH 308705	MH 308704	0			0	2164	3.56	0.02699	0.00618	0	0.03317	44.7	250	0.51%	0.043	0.68	253.99	253.76	0.23	77.8%	
	MH 308704	MH 308703	1.9	Single Family (<10m frontage) / Semi-Detached	70	133	2297	3.54	0.02848	0.00656	0	0.03504	90	250	0.42%	0.039	0.71	253.79	253.41	0.38	90.7%	
	MH 308703	MH 308702	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	2425	3.52	0.02991	0.00692	0	0.03683	93.8	250	0.38%	0.037	0.75	253.39	253.03	0.36	100.0%	Sewer governing capacity
	MH 308702	MH 309613	0			0	2425	3.52	0.02991	0.00692	0	0.03683	39.5	250	0.56%	0.044	0.75	253.02	252.80	0.22	83.0%	
WESTCHESTER BOULEVARD	MH 309613	MH 309617	6.7	Single Family (<10m frontage) / Semi-Detached	70	469	2894	3.46	0.03505	0.00826	0	0.04331	101.6	250	1.32%	0.068	0.88	252.78	251.44	1.34	63.4%	
CULPEPPER COURT	MH 309617	MH 308457	15.78	Single Family (<10m frontage) / Semi-Detached	70	1105	3999	3.33	0.04672	0.01142	0	0.05813	74.8	300	0.39%	0.060	0.82	251.39	251.10	0.29	96.6%	
	MH 308457	MH 308455	0.15	Single Family (<10m frontage) / Semi-Detached	70	11	4010	3.33	0.04683	0.01145	0	0.05828	21.5	300	2.84%	0.163	0.82	251.07	250.46	0.61	35.8%	
HATHAWAY COURT	MH 308455	MH 308740	31.15	Single Family (<10m frontage) / Semi-Detached	70	2181	7034	3.10	0.07653	0.01880	0	0.09533	116.50	450	0.28%	0.152	0.60	250.27	249.94	0.33	62.8%	
			1.94	Junior Public School	-	200																
			3.67	Row Dwellings	175	643																
KINGSVIEW DRIVE	MH 308740	MH 308963	1.82	Single Family (<10m frontage) / Semi-Detached	70	128	7162	3.10	0.07774	0.01916	0	0.09690	63.60	450	0.24%	0.138	0.61	249.84	249.69	0.15	70.0%	
	MH 308963	MH 308941	0.59	Single Family (<10m frontage) / Semi-Detached	70	42	7204	3.09	0.07813	0.01928	0	0.09741	91.00	450	0.43%	0.187	0.61	249.68	249.29	0.39	52.2%	
	MH 308941	MH 308944	0			0	7204	3.09	0.07813	0.01928	0	0.09741	53.40	450	0.15%	0.110	0.61	249.26	249.18	0.08	88.3%	
	MH 308944	MH 309037	0			0	7204	3.09	0.07813	0.01928	0	0.09741	18.70	450	0.27%	0.147	0.61	249.13	249.08	0.05	66.1%	
	MH 309037	MH 308976	10.23	Single Family (<10m frontage) / Semi-Detached	70	717	7921	3.05	0.08479	0.02133	0	0.10612	91.00	450	0.51%	0.203	0.67	249.05	248.59	0.46	52.4%	
	MH 308976	MH 308980	1.16	Single Family (<10m frontage) / Semi-Detached	70	82	8003	3.05	0.08555	0.02156	0	0.10711	90.00	450	0.51%	0.204	0.67	248.59	248.13	0.46	52.5%	
	MH 308980	MH 308979	1.32	Single Family (<10m frontage) / Semi-Detached	70	93	8096	3.05	0.08640	0.02182	0	0.10822	90.00	450	0.51%	0.204	0.68	248.13	247.67	0.46	53.1%	
	MH 308979	MH 308978	0.65	Single Family (<10m frontage) / Semi-Detached	70	46	8142	3.04	0.08682	0.02195	0	0.10878	35.00	450	0.51%	0.204	0.68	247.67	247.49	0.18	53.2%	
CRESTWOOD DRIVE	MH 308978	MH 308977	0.64	Single Family (<10m frontage) / Semi-Detached	70	45	9187	2.99	0.09631	0.02297	0	0.11928	29.00	450	0.52%	0.205	0.75	247.46	247.31	0.15	58.2%	
			4.44	Secondary School	-	1000																
	MH 308977	MH 308445	0.44	Single Family (<10m frontage) / Semi-Detached	70	31	9218	2.99	0.09659	0.02306	0	0.11964	78.00	450	0.51%	0.204	0.75	247.27	246.87	0.40	58.6%	
	MH 308445	MH 308446	0.45	Single Family (<10m frontage) / Semi-Detached	70	32	9250	2.99	0.09687	0.02315	0	0.12002	37.50	450	0.51%	0.203	0.75	246.84	246.65	0.19	59.1%	
	MH 308446	MH 308443	0.1	Single Family (<10m frontage) / Semi-Detached	70	7	9257	2.99	0.09694	0.02317	0	0.12010	23.00	450	0.52%	0.206	0.76	246.61	246.49	0.12	58.3%	
	MH 308443	MH 308441	0			0	9257	2.99	0.09694	0.02317	0	0.12010	23.50	450	0.51%	0.204	0.76	246.46	246.34	0.12	59.0%	
	MH 308441	MH 308442	2.12	Single Family (<10m frontage) / Semi-Detached	70	149	9406	2.98	0.09827	0.02359	0	0.12186	86.50	450	0.52%	0.206	0.77	246.34	245.89	0.45	59.3%	
	MH 308442	MH 308444	0			0	9406	2.98	0.09827	0.02359	0	0.12186	15.00	450	0.47%	0.195	0.77	245.89	245.82	0.07	62.6%	
MAIDSTONE COURT TO BOLTON SPS	MH 308444	MH 309053	1.5	Single Family (<10m frontage) / Semi-Detached	70	105	9511	2.98	0.09921	0.02389	0	0.12310	51.00	450	0.53%	0.207	0.77	245.68	245.41	0.27	59.3%	
	MH 309053	MH 309052	0			0	9511	2.98	0.09921	0.02389	0	0.12310	46.80	450	0.53%	0.208	0.77	245.37	245.12	0.25	59.1%	
	MH 309052	MH 308506	0			0	9511	2.98	0.09921	0.02389	0	0.12310	48.50	350	13.32%	0.532	1.28	245.06	238.60	6.46	23.1%	
	MH 308506	MH 308507	0			0	9511	2.98	0.09921	0.02389	0	0.12310	53.57	350	7.54%	0.401	1.28	238.57	234.53	4.04	30.7%	
	MH 308507	MH 308508	0			0	9511	2.98	0.09921	0.02389	0	0.12310	90.17	350	24.28%	0.719	1.28	233.53	211.64	21.89	17.1%	
	MH 308508	MH 6561078	0			0	9511	2.98	0.09921	0.02389	0	0.12310	53.19	450	0.53%	0.207	0.77	210.67	210.39	0.28	59.5%	
	MH 6561078	MH 308504	13.5	Single Family (<10m frontage) / Semi-Detached	70	945	10456	2.94	0.10757	0.02659	0	0.13416	14.69	450	0.54%	0.210	0.84	210.39	210.31	0.08	63.8%	
TRIPLEX PARALLEL SIPHONS	MH 308504	MH 1646495	-	-	-	-	10456	2.94	0.10757	0.02659	0	0.13416	39.60	150	0.88%	0.014	0.80	210.16	209.81	0.35	98.6%	
	MH 308504	MH 1646495											39.60	200	0.88%	0.031	0.97	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	300	0.88%	0.091	1.27	210.16	209.81	0.35		
	MH 308504	MH 1646495											39.60	-	-	0.136	-	210.16	209.81	0.35		
MAIDSTONE COURT TO BOLTON SPS	MH 1646495	MH 308505	0			0	10456	2.94	0.10757	0.02659	0	0.13416	12.20	500	6.15%	0.936	0.68	209.82	209.07	0.75	14.3%	
	MH 308505	MH 309236	185.93	Single Family (<10m frontage) / Semi-Detached / Light Industrial	70	13016	23672	2.58	0.21397	0.06525	0	0.27922	81.00	675	0.40%	0.528	0.78	208.98	208.82	0.16	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
			7.36	Junior Public School	-	200																
	MH 309236	MH 309237	0			0	23672	2.58	0.21397	0.06525	0	0.27922	30.80	675	0.40%	0.528	0.78	208.82	208.80	0.02	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309237	MH 309235	0			0	23672	2.58	0.21397	0.06525	0	0.27922	54.50	675	0.40%	0.528	0.78	208.80	208.66	0.14	52.8%	Invert elevation data missing; slope assumed based on MH 309237 invert
	MH 309235	MH 309234	0			0	23672	2.58	0.21397	0.06525	0	0.27922	13.30	675	1.20%	0.922	0.78	208.56	208.40	0.16	30.3%	
	MH 309234	MH 309226	0			0	23672	2.58	0.21397	0.06525	0	0.27922	23.00	675	0.13%	0.304	0.78	208.32	208.29	0.03	92.0%	
	MH 309226	MH 309243	0			0	23672	2.58	0.21397	0.06525	0	0.27922	97.30	675	0.18%	0.362	0.78	208.29	208.11	0.18	77.2%	
	MH 309243	MH 309241	28.8	Single Family (<10m frontage) / Semi-Detached	70	2016	26088	2.54	0.23197	0.07195	0	0.30392	13.00	675	0.23%	0.404	0.85	208.09	208.06	0.03	75.3%	
			3.12	Junior Public School	-	200																
			1.58	Junior Public School	-	200																
	MH 309241	BOLTON SPS	44.7	Single Family (<10m frontage) / Semi-Detached	70	3129	29667	2.48	0.25806	0.08175	0	0.33981	7.20	675	0.23%	0.404	0.95	208.06	208.04	0.02	84.2%	Invert elevation data missing; slope assumed based on upstream sewer
			4.3	Senior Public School	-	450																

Bolton SPS Capacity **0.38** **m3/sec**
89.4% **% of Rated Capacity**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Surcharged sewers
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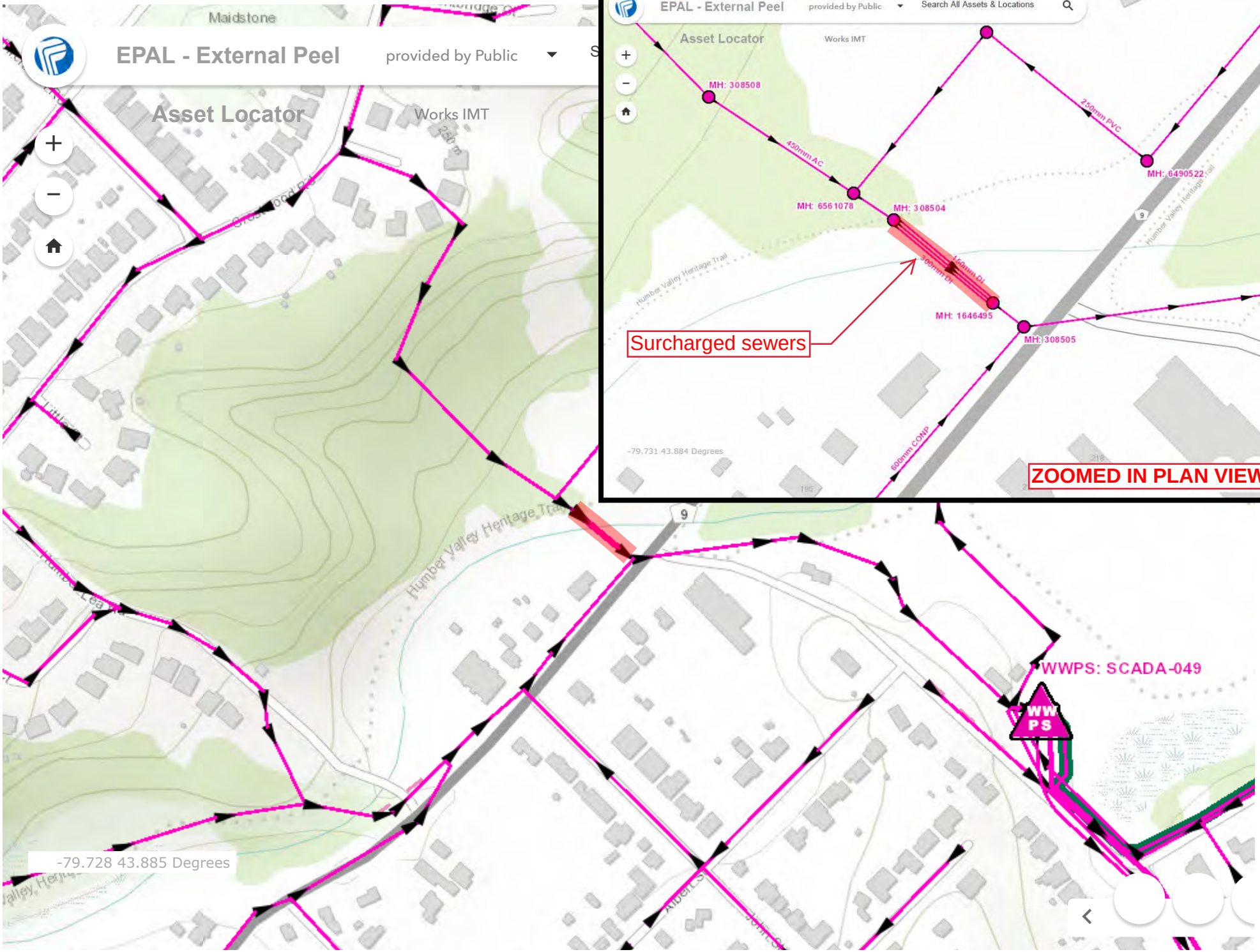
MH: 308553
MH: 309612
MH: 308702
MH: 308556
MH: 309617
MH: 309613
MH: 308552
MH: 308557
Surcharged sewer
ZOOMED IN PLAN VIEW
-79.735 43.894 Degrees

& Locations
Columbia Wy
Mount Hope Rd
-79.728 43.894 Degrees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Humber Valley Heritage Trail
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WW PS
EPAL - External Peel
provided by Public
Search All Assets & Locations
Asset Locator
Works IMT
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450mm AC
MH: 6561078
MH: 308504
250mm PVC
MH: 6490522
MH: 1646495
MH: 308505
Surcharged sewers
-79.731 43.884 Degrees
ZOOMED IN PLAN VIEW

August 24, 2022

Our File: 2022-5239

Cold Creek Development Ltd.
1090 Dundas Street East
Mississauga, ON
L4Y 2B8

SCHAEFFERS
CONSULTING ENGINEERS

6 Ronrose Drive, Vaughan, Ontario L4K 4R3
Tel: (905) 738-6100 Fax: (905) 738-6875
Tor. Line: (416) 213-5590 E-mail: general@schaeffers.com

Attention: Mr. Ray DiBattista

Re: Memo #1: Water and Wastewater Servicing Capacity Review
Cold Creek Development

1.0 Introduction

On July 19th, 2022, Schaeffer & Associates Ltd. (Schaeffers) was retained to review the capacity of the existing water and wastewater systems for future service of the proposed Cold Creek Development. The subject site is located north-east of the intersection of Mount Hope Road and Columbia Way in North Bolton. Per the preliminary draft plan provided by Cold Creek Development Ltd., the development lands comprise 3 areas – 2 areas south of the valley and 1 area north of the valley. Only the proposed 244-unit Cold Creek development areas located south of the valley are currently being considered at this stage. This memorandum represents the first step of the overall assignment, to discuss potential constraints in the existing water and wastewater systems, as identified in the Region of Peel (Region) Water and Wastewater Master Plan for the Lake Based System (2020).

2.0 Water Servicing

2.1 Existing Water Servicing Infrastructure

The subject site is located in the Region's Pressure District 6B (PD6B). Within the vicinity of the Cold Creek development, there is an existing 300 mm diameter PVC watermain along Columbia Way. The Bolton North Hill Pumping Station has a firm capacity of 9 ML/d and provides service to PD6B via PD5B. There is currently no floating storage in PD6B.

2.2 Proposed Water Servicing Infrastructure

The Region's Water and Wastewater Master Plan for the Lake-Based System – Volume 3 (2020)

(here-in referred to as Water Master Plan) was reviewed to determine capacity constraints with the existing wastewater infrastructure which would service the proposed development. Key proposed water infrastructure projects proximate to the subject site are discussed below. Proposed project completion dates are provided based on the Water Master Plan document. Refer to **Appendix A** for the proposed capital projects map and plan from the Water Master Plan.

2.2.1 North Bolton

The Water Master Plan does not identify any water pressure or volume constraints within PD6B's distribution system and the Bolton North Hill PS which services PD6B. As such, water infrastructure upgrades for PD6B were not proposed in the Water Master Plan.

2.2.2 West and Northwest Bolton

Water infrastructure upgrades are proposed within West and Northwest Bolton to support greenfield growth up to planning year 2041, and post-2041. The proposed upgrades will provide a secondary feed to west Bolton and provide floating storage via new PD6 reservoir. The following water infrastructure upgrades were proposed in West and Northwest Bolton:

- Victoria Reservoir
  (W-S-073, Projected Completion Date: 2022, Schedule C EA Completed)
- Victoria Transmission and Sub-Transition Main along Innis Lake Road and Healy Road
  (W-ST-186, W-ST-187, W-ST-185, Projected Completion Date: 2026/2031/2032)
- Several distribution projects are included in the Master Plan to extend servicing to growth areas in West and Northwest Bolton
  (W-D-023/124/188/189/190/191/192/223/234/235/236/238/239/240/241)

However, these proposed water infrastructure upgrades for West and Northwest Bolton are not required for development of the subject site as the subject site is located in North Bolton.

3.0 Wastewater Servicing

3.1 Existing Wastewater Servicing Infrastructure

Within the vicinity of the Cold Creek development, there is an existing 250 mm diameter PVC gravity sewer along Mount Hope Road. The North Bolton catchment drains to the Bolton Sewage Pumping Station (SPS), with a firm capacity of 380 L/s. The Bolton SPS currently discharges to

the Coleraine Drive sewer and Albion Vaughan trunk sewer, Brampton-Bolton trunk sewer, finally discharging to the McVean SPS, with a firm capacity of 1,400 L/s.

3.2 Proposed Wastewater Servicing Infrastructure

The Region's Water and Wastewater Master Plan for the Lake-Based System – Volume 4 (2020) (here-in referred to as Wastewater Master Plan) was reviewed to determine capacity constraints with the existing wastewater infrastructure which would service the proposed development. Key proposed wastewater infrastructure projects proximate to and downstream of the subject site are discussed below. Proposed project completion dates are provided based on the Wastewater Master Plan document. Refer to **Appendix B** for the proposed capital projects map and plan from the Wastewater Master Plan.

3.2.1 North Bolton

Within the 2041 planning horizon, projected intensification growth of approximately 4,000 people is expected in North Bolton, specifically within the catchment area of Bolton SPS. In addition, buildout growth extending beyond 2041 is anticipated north of Columbia Way. Given these growth drivers, as well as other key factors such as flexibility and optimization of existing and planned infrastructure, the following wastewater infrastructure upgrades were proposed in North Bolton:

- Bolton SPS upgrades, including installation of a new 450 mm diameter force main discharging to the Albion-Vaughan trunk sewer, directing flow away from the Coleraine Drive sewer
  (WW-FM-211, Projected Completion Date: 2021)
- Extension of the Albion-Vaughan trunk sewer towards Bolton
  (WW-T-021, WW-T-093, WW-T-094, Projected Completion Date: 2022/2020/2020)
- Construction of new growth-related sanitary sewers
  (WW-ST-095, WW-ST-096, WW-ST-097, Projected Completion Date: 2020/2021/2020)

3.2.2 West Bolton

Within the 2041 planning horizon, growth of approximately 42,000 people west of Coleraine Drive and north of Mayfield Road, including greenfield growth of approximately 18,000 people is expected in West Bolton. In addition, buildout growth extending beyond 2041 is anticipated northwest of Humber Station and King Street West in West Bolton. Given these growth drivers,

the following wastewater infrastructure upgrades were proposed in West Bolton:

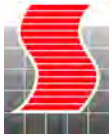
- New sanitary trunk sewer on Humber Station Road
  (WW-ST-204, WW-T-170, WW-T-005, Projected Completion Date: 2026/2024/2036)
- New sanitary sewer on Coleraine Drive, including new sewer splitting flows from Bolton between the Coleraine Drive sewer and Humber Station Road sewer
- (WW-ST-206, WW-ST-200, WW-ST-201, WW-ST-148, Projected Completion Date: 2036/2026/2026/2027)
- Construction of new growth-related sanitary sewers
  (WW-ST-197, WW-ST-198, WW-ST-199, WW-ST-202, WW-ST-205, WW-ST-207, Projected Completion Date: 2025/2032/2026/2028/2028/2036)

However, these proposed wastewater infrastructure upgrades for West Bolton are not required for development of the subject site as the subject site is located in North Bolton.

3.2.3 McVean SPS

Within the 2041 planning horizon, growth of approximately 100,000 people is expected within the McVean SPS catchment area. In addition, buildout growth extending beyond 2041 is anticipated northwest of Humber Station and King Street West, north of Columbia Way and north of Mayfield Road between Torbram Road and The Gore Road. Given the projected growth in the McVean SPS catchment area, the planned ultimate capacity of McVean SPS will potentially be exceeded. As such, it is proposed to bypass the portion of the McVean SPS catchment area north of Castlemore road with a new gravity sewer. This capital project is proposed to be completed by 2036 (WW-T-251, WW-T-252) with a Schedule C Class EA planned to commence in 2024 (WW-T-243) to determine the preferred solution for diverting flows away from the McVean SPS.

As peak flows at the McVean SPS are projected to exceed its current firm capacity of 1,400 L/s by 2026, and to support the growth prior to installation of the proposed gravity sewer diversion, the McVean SPS is currently in the detailed design phase to upgrade the station's firm capacity from 1,400 L/s to 2,100 L/s.



4.0 Conclusion and Recommendations

Based on findings from review of the Wastewater Master Plan, development of the proposed Cold Creek subdivision may be constrained by completion of the following proposed wastewater infrastructure projects, depending upon timing of the growth within the area, and construction of the proposed subdivision:

- Bolton SPS upgrades, including installation of a new 450 mm diameter force main
- Extension of the Albion-Vaughan trunk sewer towards Bolton
- McVean SPS upgrades
- McVean SPS bypass sewer

Per the Wastewater Master Plan, these wastewater infrastructure projects were projected to be completed by 2020 to 2036. It is recommended that the timeline for completion of these projects is confirmed with the Region.

Based on findings from review of the Water Master Plan, development of the proposed Cold Creek subdivision is not expected to be constrained by the existing water infrastructure. The Water Master Plan does not identify any water pressure or volume constraints for PD6B where the proposed development is to be located. However, a potential risk is the rate of development within West and Northwest Bolton (PD6) relative to the rate at which the proposed infrastructure is constructed. Since PD6B is dependent upon PD6 for water supply, if the expected significant growth in PD6 outpaces new water infrastructure to support this growth, water capacity concerns in PD6B may result.

5.0 Next Steps

The next steps of the assignment are to:

1. Receive permission from the client to contact the Region to verify the proposed timing of the aforementioned capital projects which may affect the proposed subdivision;
2. Inquire with the Region regarding any other servicing issues that were not identified in the Water and Wastewater Master Plan
3. Collect and review as-built drawings from the Region's ePAL webpage and perform

desktop sanitary analysis of conveyance to the Bolton SPS

4. Perform hydrant test to determine water pressure proximate to the subject site
5. Perform desktop watermain analysis of the water pressures for the subject development
6. Provide a second step technical report to present the findings to the client

We trust that you will find this submission complete and satisfactory for your purposes. We look forward to receiving your feedback. Should you have any questions or further requirements please contact the undersigned.

Yours truly,

SCHAEFFER & ASSOCIATES LTD.

Jonathan Nishio, P.Eng.
Water Supply and Vertical Infrastructure Engineer

Appendix A

Proposed Water Capital Projects

(From Water Master Plan)

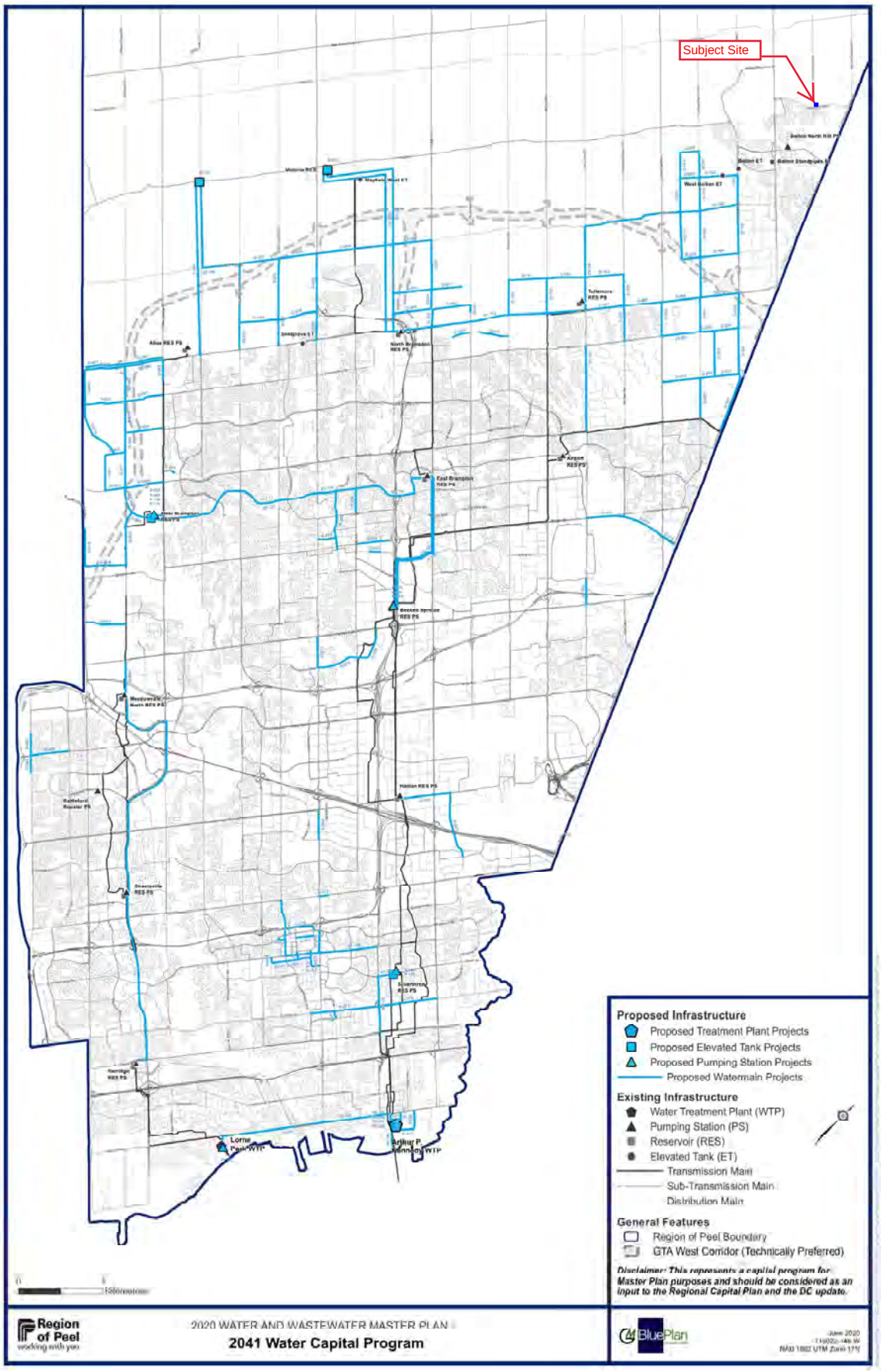


Figure 25 – Preferred water servicing strategy capital program for the lake-based system.

Table 16 – Capital program table for the preferred water servicing strategy.

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-001	400-mm Water Main - Future Financial Drive (Bram West)	Construction of a 400-mm water main on the future Financial Drive from Heritage Road to Winston Churchill Boulevard.	2023	Brampton	5	Schedule A+	WDM	400 mm	1440	$ 3,647,200
W-D-003	400-mm Water Main - Bovaird Drive West	Construction of a 400-mm water main on Bovaird Drive West from Heritage Road to a future street.	2030	Brampton	6	Schedule A+	WDM	400 mm	690	$ 1,702,400
W-D-004	600-mm Water Main - Future Sandalwood Parkway West	Construction of a 600-mm water main on the future Sandalwood Parkway West from Mississauga Road to Heritage Road.	2032	Brampton	6	Schedule A+	WDM	600 mm	1360	$ 3,701,200
W-D-005	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street from Heritage Road to 750 metres westerly.	2029	Brampton	6	Schedule A+	WDM	400 mm	750	$ 1,365,000
W-D-007	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Mississauga Road to Heritage Road.	2034	Brampton	6	Schedule A+	WDM	400 mm	1380	$ 2,809,200
W-D-008	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Winston Churchill Boulevard to Heritage Road.	2035	Brampton	6	Schedule A+	WDM	400 mm	1470	$ 2,954,100
W-D-009	400-mm Water Main - Mayfield Road	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard.	2038	Brampton	6	Schedule A+	WDM	400 mm	1460	$ 4,892,100
W-D-010	600-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Countryside Drive from Clarkway Drive to the future north-south road.	2025	Brampton	5	Schedule A+	WDM	600 mm	500	$ 2,092,300
W-D-011	600-mm Water Main - Clarkway Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Clarkway Drive from Countryside Drive to Mayfield Road.	2026	Brampton	5	Schedule A+	WDM	600 mm	1240	$ 3,230,100
W-D-012	400-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 400-mm water main on the future east-west road from The Gore Road to Clarkway Drive.	2023	Brampton	5	Schedule A+	WDM	400 mm	1400	$ 2,513,700
W-D-013	400-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 400-mm water main on the future east-west road from Coleraine Drive to the future north-south road.	2026	Brampton	5	Schedule A+	WDM	400 mm	880	$ 1,153,800
W-D-014	400-mm Water Main - New Road A (Bram West)	Construction of a 400-mm water main on New Road A (Bram West) from Winston Churchill Boulevard to Heritage Road.	2027	Brampton	5	Schedule A+	WDM	400 mm	1480	$ 2,609,600
W-D-015	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from New Road A (Bram West) to the future Bramwest Parkway.	2028	Brampton	5	Schedule A+	WDM	400 mm	1780	$ 3,451,700
W-D-021	400-mm Water Main - Heart Lake Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Heart Lake Road from Mayfield Road to Abbotside Way.	2019	Caledon	7	Schedule A	WDM	400mm	750	$ 2,500,000
W-D-023	600-mm Water Main - Future Street (Highway 427 Industrial)	Construction of a 600-mm water main on the future north-south road from the future east-west road to Countryside Drive.	2025	Brampton	5	Schedule A+	WDM	600 mm	1640	$ 4,656,100
W-D-025	400-mm Water Main - Future Inspire Boulevard (Countryside Villages)	Construction of a 400-mm water main on the future Inspire Boulevard from Bramalea Road to approximately 700 metres westerly.	2019	Brampton	6	Schedule A+	WDM	400 mm	700	$ 1,568,360
W-D-026	400-mm Water Main - Future Inspire Boulevard (Countryside Villages)	Construction of a 400-mm water main on the future Inspire Boulevard from 310 metres east of Bramalea Road to Torbram Road.	2019	Brampton	6	Schedule A+	WDM	400 mm	1100	$ 1,868,220

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-027	400-mm Water Main - Highway 50	Construction of a 400-mm water main on Highway 50 from Castlemore Road to Coleraine Drive.	2018	Brampton	5	Schedule A+	WDM	400 mm	1970	$ 3,524,390
W-D-028	400-mm Water Main - Queen Street East	Construction of a 400-mm water main on Queen Street East from Kennedy Road to Highway 410.	2031	Brampton	5	Schedule A+	WDM	400 mm	1220	$ 2,472,200
W-D-029	400-mm Water Main - Derry Road West (Ninth Line Lands)	Construction of a 400-mm water main on Derry Road West from Tenth Line West to Ninth Line.	2024	Mississauga	5	Schedule A+	WDM	400 mm	1370	$ 2,794,400
W-D-030	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to Terragar Boulevard.	2024	Mississauga	5	Schedule A+	WDM	400 mm	880	$ 2,473,800
W-D-031	400-mm Water Main - Future Clark Boulevard	Construction of a 400-mm water main on future extension of Clark Boulevard from Rutherford Road to Hansen Road South.	2022	Brampton	5	Schedule A+	WDM	400 mm	440	$ 886,700
W-D-032	600-mm Water Main - Hurontario Street	Construction of a 600-mm water main on Hurontario Street from Dougall Avenue to the future east-west road in Mayfield West Phase 2.	2021	Caledon	7	Schedule A+	WDM	600 mm	1740	$ 5,894,900
W-D-033	600-mm Water Main - Hurontario Street	Construction of a 600-mm water main on Hurontario Street from Mayfield Road to the future east-west road in Mayfield West Phase 2.	2021	Brampton Caledon	7	Schedule A+	WDM	600 mm	1050	$ 4,944,500
W-D-034	400-mm Water Main - Future East-West Road (Mayfield West Phase 2)	Construction of a 400-mm water main on the future east-west road in Mayfield West Phase 2 from Hurontario Street to McLaughlin Road.	2019	Caledon	7	Schedule A+	WDM	400 mm	1500	$ 2,520,000
W-D-035	400-mm Water Main - Future East-West Road (Mayfield West Phase 2)	Construction of a 400-mm water main on the future east-west road in Mayfield West Phase 2 from McLaughlin Road to Chinguacousy Road.	2019	Caledon	7	Schedule A+	WDM	400 mm	1360	$ 1,960,000
W-D-036	600-mm Water Main - Chinguacousy Road (Mayfield West Phase 2)	Construction of a 600-mm water main on Chinguacousy Road from Mayfield Road to the future east-west road in Mayfield West Phase 2.	2019	Caledon	7	Schedule A+	WDM	600 mm	950	$ 2,755,000
W-D-037	400-mm Water Main - McVean Drive	Construction of a 400-mm water main on McVean Drive from Countryside Drive to Mayfield Road.	2017	Brampton	5	Schedule A+	WDM	400 mm	1240	$ 3,425,200
W-D-038	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from the future east-west road to Countryside Drive.	2023	Brampton	5	Schedule A+	WDM	400 mm	1860	$ 3,100,200
W-D-039	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from Countryside Drive to Mayfield Road.	2023	Brampton	5	Schedule A+	WDM	400 mm	1250	$ 2,121,900
W-D-040	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from Mayfield Road to Wanless Drive.	2036	Brampton	6	Schedule A+	WDM	400 mm	1210	$ 1,882,000
W-D-041	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street (Heritage Heights) from Bovaird Drive northerly to a future street.	2030	Brampton	6	Schedule A+	WDM	400 mm	1310	$ 2,038,300
W-D-044	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	460	$ 5,000,000
W-D-045	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	430	$ 5,000,000
W-D-046	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	220	$ 5,000,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-047	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	530	$ 5,000,000
W-D-048	400-mm Water Main - Hurontario Street	Construction of a 400-mm water main on Hurontario Street from Matheson Boulevard to Britannia Road. In coordination with the Hurontario LRT.	2021	Mississauga	4	Schedule A+	WDM	400 mm	1110	$ 3,484,942
W-D-049	400-mm Water Main - Mississauga Road (Mount Pleasant West)	Construction of a 400-mm water main on Mississauga Road from Mayfield Road southerly to a future street.	2032	Brampton	7	Schedule A+	WDM	400 mm	760	$ 2,281,800
W-D-051	400-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard.	2038	Caledon	7	Schedule A+	WDM	400 mm	1460	$ 4,892,100
W-D-052	600-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 600-mm water main on Mayfield Road from Mississauga Road to Heritage Road.	2038	Brampton	7	Schedule A+	WDM	600 mm	1380	$ 6,768,000
W-P-061	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station.	2028	Brampton	5	Schedule A	PS	45 ML/d	-	$ 1,884,200
W-S-062	West Brampton Reservoir Expansion	Expansion of the West Brampton Reservoir with the construction of a third 20-ML reservoir cell.	2031	Brampton	4	Schedule A	RES	20 ML	-	$ 36,846,800
W-P-064	Beckett Sproule Transfer Pumping Station - Capacity Expansion	Installation of additional transfer pumping capacity at the Beckett Sproule Pumping Station.	2023	Brampton	3	Schedule A	PS	306 ML/d	-	$ 8,007,500
W-S-073	Victoria Reservoir	Construction of a new 40-ML reservoir in the vicinity of King Street and Hurontario Street to provide storage for Pressure Zone 6.	2022	Caledon	6	Schedule C Completed	RES	40 ML	-	$ 60,000,000
W-ST-075	750-mm Water Main - Bovaird Drive West (Heritage Heights)	Construction of a 750-mm water main on Bovaird Drive West from Mississauga Road to Heritage Road.	2027	Brampton	6	Schedule A+	WSTM	750 mm	1400	$ 7,274,300
W-D-077	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from Bovaird Drive northerly to a future street.	2028	Brampton	6	Schedule A+	WDM	600 mm	1300	$ 3,708,100
W-D-078	600-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 600-mm water main on Heritage Road from the future extension of Sandalwood Parkway to Wanless Drive.	2034	Brampton	6	Schedule A+	WDM	600 mm	1140	$ 4,023,000
W-ST-080	750-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 750-mm water main on Mayfield Road from Heritage Road to Mississauga Road.	2038	Brampton	6	Schedule A+	WSTM	750 mm	1380	$ 7,716,300
W-ST-083	750-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 750-mm sub-transmission main on Heritage Road from Wanless Drive to Mayfield Road.	2035	Brampton	6	Schedule A+	WSTM	750 mm	1230	$ 4,115,700
W-D-084	600-mm Water Main - Mayfield Road	Construction of a 600-mm water main on Mayfield Road from Goreway Drive to The Gore Road.	2019	Brampton	5	Schedule A+	WDM	600 mm	1400	$ 3,735,980
W-D-085	600-mm Water Main - Mayfield Road	Construction of a 600-mm water main on Mayfield Road from Goreway Drive to The Gore Road.	2019	Brampton	5	Schedule A+	WDM	600 mm	1370	$ 7,126,340
W-D-086	600-mm Water Main - Mayfield Road	Construction of a 600-mm water main on Mayfield Road from The Gore Road to Clarkway Drive.	2019	Brampton	5	Schedule A+	WDM	600 mm	1420	$ 7,568,895
W-D-087	600-mm Water Main - Mayfield Road	Construction of a 600-mm water main on Mayfield Road from Clarkway Drive to Coleraine Drive.	2020	Brampton	5	Schedule A+	WDM	600 mm	1400	$ 6,399,210
W-D-088	600-mm Water Main - Future Williams Parkway (Bram West)	Construction of a 600-mm water main on the future extension of Williams Parkway from Heritage Road to Mississauga Road.	2027	Brampton	5	Schedule A+	WDM	600 mm	1140	$ 2,772,900

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-089	600-mm Water Main - Heritage Road (Bram West)	Construction of a 600-mm water main on Heritage Road from the future extension of Williams Parkway to the New Road A.	2027	Brampton	5	Schedule A+	WDM	600 mm	1950	$ 8,306,400
W-D-090	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from a future street to the future extension of Sandalwood Parkway.	2028	Brampton	6	Schedule A+	WDM	600 mm	690	$ 3,874,900
W-ST-093	750-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 750-mm water main on Countryside Drive from The Gore Road to Clarkway Drive.	2024	Brampton	5	Schedule A+	WSTM	750 mm	1390	$ 6,582,600
W-ST-094	750-mm Water Main - Centre Street	Construction of a 750-mm sub-transmission main on Centre Street from Williams Parkway to John Street.	2026	Brampton	5	Schedule A+	WSTM	750 mm	2300	$ 13,782,200
W-D-096	600-mm Water Main - Queen Street East (Bram East)	Construction of a 600-mm water main on Queen Street East and McVean Drive from Goreway Drive to Ebenezer Road.	2022	Brampton	4	Schedule A+	WDM	600 mm	1360	$ 7,486,700
W-D-098	600-mm Water Main - Heritage Road (Bram West)	Construction of a 600-mm water main on Heritage Road from the Meadowvale North Pumping Station to Steeles Avenue West.	2018	Brampton	4	Schedule A+	WDM	600 mm	1370	$ 4,687,760
W-ST-099	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East.	2026	Mississauga	2	Schedule B	WSTM	900 mm	2480	$ 64,859,700
W-D-101	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	600 mm	310	$ 6,292,000
W-D-102	600-mm Water Main - Lakeshore Road	Construction of a 600-mm water main on Lakeshore Road from the A.P. Kennedy Water Treatment Plant to Front Street South.	2032	Mississauga	1	Schedule A+	WDM	600 mm	2470	$ 66,038,500
W-ST-103	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East.	2026	Mississauga	2	Schedule B	WSTM	1050 mm	580	$ 6,369,000
W-ST-104	900-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 900-mm sub-transmission main on Heritage Road from the West Brampton Pumping Station to Bovaird Drive.	2028	Brampton	6	Schedule A+	WSTM	900 mm	1720	$ 8,557,100
W-ST-110	750-mm Water Main - Goreway Drive	Construction of a 750-mm sub-transmission main on Goreway Drive from Castlemore Road to Countryside Drive.	2019	Brampton	5	Schedule A+	WSTM	750 mm	3150	$ 18,818,375
W-ST-112	900-mm Sub-Transmission Main - Confederation Parkway	Construction of a 900-mm sub-transmission main on Confederation Parkway from Burnhamthorpe Road West to Eglinton Avenue West.	2034	Mississauga	3	Schedule B	WSTM	900 mm	2000	$ 45,261,400
W-ST-113	Mayfield Road Sub-Transmission Main	Construction of a 900-mm sub-transmission main on Mayfield Road from Innis Lake Road to the North Brampton Reservoir.	2037	Brampton	5	Schedule A+	WSTM	900 mm	6640	$ 30,762,500
W-ST-118	Williams Parkway Sub-Transmission Main (Phase 1 and Phase 2)	Construction of a 900-mm sub-transmission main on Williams Parkway from Dixie Road to McLaughlin Road. (Section 1 of 2)	2022	Brampton	5	Schedule C Completed	WSTM	900 mm	2800	$ 22,000,000
W-ST-119	Williams Parkway Sub-Transmission Main (Phase 1 and Phase 2)	Construction of a 900-mm sub-transmission main on Williams Parkway from Dixie Road to McLaughlin Road. (Section 2 of 2)	2022	Brampton	5	Schedule C Completed	WSTM	900 mm	3050	$ 51,000,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-ST-120	Central Brampton Sub-Transmission Main	Construction of a 1200/1050/900-mm sub-transmission main from the Beckett Sproule Pumping Station to the East Brampton Pumping Station.	2024	Brampton	5	Schedule C Completed	WSTM	1200 mm	6070	$ 169,373,000
W-ST-121	Williams Parkway Sub-Transmission Main (Phase 3)	Construction of a 900-mm sub-transmission main on Williams Parkway from the West Brampton Pumping Station to McLaughlin Road.	2024	Brampton	5	Schedule C Completed	WSTM	900 mm	5000	$ 34,549,800
W-D-124	600/400-mm Water Main - Coleraine Drive (Bolton)	Construction of a 600-mm water main on Coleraine Drive from the Bolton Elevated Tank to Healey Road and a 400-mm water main on Coleraine Drive from Healey Road to George Bolton Parkway. (Section 1 of 2)	2019	Caledon	6	Schedule A+	WDM	400 mm	1750	$ 6,840,800
W-ST-128	1500-mm Sub-Transmission Main - Burnhamthorpe Road	Construction of a 1500-mm sub-transmission main on Burnhamthorpe Road from Cawthra Road to Grand Park Drive.	2021	Mississauga	3	Schedule B Completed	WSTM	1500 mm	1750	$ 125,570,000
W-T-130	East Brampton Transmission Main Twinning	Construction of a 1500-mm transmission main from the Beckett Sproule Pumping Station to East Brampton Reservoir.	2024	Brampton	4	Schedule C Completed	WTM	1500 mm	6500	$ 206,300,000
W-T-131	Streetsville Transmission Main	Construction of a 2100-mm transmission main on Erin Mills Parkway from the Herridge Pumping Station to the Streetsville Reservoir.	2028	Mississauga	2	Schedule C	WTM	2100 mm	6600	$ 199,497,800
W-T-132	Victoria Transmission Main	Construction a 900-mm transmission main and a 1200-mm sub-transmission main from the North Brampton Pumping Station to the Victoria Reservoir. (Section 1 of 2)	2022	Caledon	6	Schedule C Completed	WTM	900 mm	8750	$ 107,123,750
W-ST-133	Victoria Transmission Main	Construction a 900-mm transmission main and a 1200-mm sub-transmission main from the North Brampton Pumping Station to the Victoria Reservoir. (Section 2 of 2)	2022	Caledon	6	Schedule C Completed	WSTM	1200 mm	8470	$ 26,000,000
W-T-135	Meadowvale North Transmission Main	Construction of an 1800-mm transmission main from the Streetsville Pumping Station to the Meadowvale North Reservoir.	2031	Mississauga	3	Schedule C	WTM	1800 mm	9300	$ 289,088,200
W-TR-137	A.P. Kennedy Water Treatment Plant - Standby Power	Construction of additional standby power at the treatment facility.	2019	Mississauga		Schedule A	WTP	-	-	$ 6,500,000
W-T-150	West Caledon Transmission Main	Construction of a 750-mm transmission main from the Alloa Pumping Station to the West Caledon Elevated Tank.	2027	Caledon	7	Schedule C	WTM	750 mm	7500	$ 29,926,300
W-S-151	West Caledon Elevated Tank	Construction of a new 10-ML elevated tank in southwest Caledon.	2027	Caledon	7	Schedule C	RES	10 ML	-	$ 18,422,900
W-P-152	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station.	2036	Brampton	5	Schedule A	PS	45 ML/d	-	$ 433,600
W-P-154	Lorne Park Pumping Station - Capacity Expansion	Installation of additional PZ2W high-lift pumping capacity at the Lorne Park Water Treatment Plant.	2031	Mississauga	2	Schedule A	PS	150 ML/d	-	$ 1,579,300
W-S-164	Silverthorn Reservoir and Pumping Station Expansion	Construction of major improvements and upgrades at the Silverthorn Reservoir and Pumping Station.	2023	Mississauga	2	Schedule B Completed	RES	25 ML	-	$ 49,090,000
W-TR-165	A.P. Kennedy Water Treatment Plant - New Intake	Construction of a new intake pipe and structure at the A.P. Kennedy Water Treatment Plant.	2041	Mississauga		Schedule C	WTP	2400 mm	2000	$ 100,000,000
W-P-175	West Brampton Pumping Station - Capacity Expansion	Installation of additional high-lift pumping capacity at the West Brampton Pumping Station.	2028	Brampton	6	Schedule A	PS	31 ML/d	-	$ 1,010,400

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-ST-179	600-mm Water Main - Chinguacousy Road/Creditview Road	Construction of a 600-mm sub-transmission main on Chinguacousy Road/Creditview Road from the future West Caledon Elevated Tank to future east-west road in Mayfield West Phase 2.	2027	Caledon	7	Schedule C	WSTM	600 mm	6500	$ 20,680,000
W-D-180	400-mm Water Main - Torbram Road (Tullamore Industrial)	Construction of a 400-mm water main on Torbram Road from Mayfield Road northerly to a future street.	2036	Caledon	6	Schedule A+	WDM	400 mm	1300	$ 3,838,200
W-D-181	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street north of Mayfield Road from Torbram Road to Airport Road.	2036	Caledon	6	Schedule A+	WDM	400 mm	1360	$ 2,100,900
W-D-182	400-mm Water Main - Airport Road (Tullamore Industrial)	Construction of a 400-mm water main on Airport Road from Mayfield Road northerly to a future street.	2036	Caledon	6	Schedule A+	WDM	400 mm	1300	$ 2,202,500
W-D-183	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street north of Mayfield Road from Innis Lake Road to Centreville Creek Road.	2036	Caledon	6	Schedule A+	WDM	400 mm	1360	$ 3,235,000
W-D-184	400-mm Water Main - Centreville Creek Road (Tullamore Industrial)	Construction of a 400-mm water main on Centerville Creek Road from Mayfield Road to 1300 metres northerly.	2036	Caledon	6	Schedule A+	WDM	400 mm	1300	$ 3,838,200
W-ST-185	750-mm Water Main - Innis Lake Road	Construction of a 750-mm sub-transmission main on Innis Lake Road from the Tullamore Pumping Station to Healey Road.	2032	Caledon	6	Schedule A+	WSTM	750 mm	3000	$ 8,746,100
W-ST-186	600-mm Water Main - Healey Road (Bolton West)	Construction of a 600-mm sub-transmission main on Healy Road from Humber Station Road to Coleraine Drive.	2026	Caledon	6	Schedule A+	WSTM	600 mm	1350	$ 3,842,700
W-ST-187	600-mm Water Main - Healey Road	Construction of a 600-mm sub-transmission main on Healy Road from Innis Lake Road to Humber Station Road.	2031	Caledon	6	Schedule A+	WSTM	600 mm	4160	$ 14,992,500
W-D-188	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street north of Healey Road from West Bolton Elevated Tank to Humber Station Road.	2026	Caledon	6	Schedule A+	WDM	400 mm	810	$ 1,070,200
W-D-189	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Healey Road to a future street northerly.	2027	Caledon	6	Schedule A+	WDM	400 mm	1220	$ 2,074,900
W-D-190	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Healey Road to approximately 1200 metres northerly.	2028	Caledon	6	Schedule A+	WDM	400 mm	1200	$ 1,867,000
W-D-191	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street north of Mayfield Road from Humber Station Road to Coleraine Drive.	2026	Caledon	6	Schedule A+	WDM	400 mm	1350	$ 2,086,300
W-D-192	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Mayfield Road to Healey Road.	2026	Caledon	6	Schedule A+	WDM	400 mm	1650	$ 3,242,500
W-D-200	600-mm Water Main - Britannia Road East	Construction of a 600-mm water main on Britannia Road East from the Hanlan Pumping Station to Atlantic Drive.	2020	Mississauga	3	Schedule A+	WDM	600 mm	2000	$ 10,357,733
W-D-201	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	640	$ 3,900,000
W-D-202	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	400 mm	300	$ 5,000,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-ST-203	750-mm Water Main - Hurontario Street (Mississauga City Centre)	Construction of a 750-mm sub-transmission main on Hurontario Street from Burnhamthorpe Road to Rathburn Road.	2019	Mississauga	3	Schedule A+	WSTM	750 mm	780	$ 8,161,000
W-D-204	400-mm Water Main - The Gore Road	Construction of a 400-mm water main on The Gore Road from Mayfield Road to north of Countryside Drive.	2018	Brampton	5	Schedule A+	WDM	400 mm	1100	$ 2,687,000
W-D-205	400-mm Water Main - McLaughlin Road (Mayfield West Phase 2)	Construction of a 400-mm water main on McLaughlin Road from Mayfield Road to 1800 metres northerly to the creek.	2019	Caledon	7	Schedule A+	WDM	400 mm	1800	$ 2,699,200
W-D-206	400-mm Water Main - Kariya Drive (Mississauga City Centre)	Construction of a 400-mm water main on Kariya Drive from Webb Drive to Elm Drive West.	2024	Mississauga	3	Schedule A+	WDM	400 mm	300	$ 4,444,000
W-D-207	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from McVean Drive to the Gore Road.	2024	Brampton	4	Schedule A+	WDM	400 mm	1400	$ 4,786,100
W-D-208	400-mm Water Main - Camilla Road	Construction of a 400-mm water main on Camilla Road from Dundas Street East to King Street East.	2027	Mississauga	2	Schedule A+	WDM	400 mm	260	$ 628,400
W-D-209	400-mm Water Main - Future Square One Drive Extension	Construction of a 400-mm water main on the future extension of Square One Drive from Rathburn Road West to Confederation Parkway.	2021	Mississauga	3	Schedule A+	WDM	400 mm	320	$ 743,600
W-D-210	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard.	2028	Mississauga	3	Schedule A+	WDM	400 mm	360	$ 2,575,900
W-D-213	Growth-Related Water Mains in the Mississauga City Centre	Construction of several growth-related water mains in the Mississauga City Centre.	2019	Mississauga	3	Schedule A+	WDM	600 mm	300	$ 5,444,000
W-D-214	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from The Gore Road to Highway 50.	2028	Brampton	4	Schedule A+	WDM	400 mm	630	$ 1,763,300
W-D-215	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street from Wanless Drive southeasterly to a future street.	2030	Brampton	6	Schedule A+	WDM	400 mm	2170	$ 2,703,500
W-D-216	400-mm Water Main - Hydro Road (Inspiration Lakeview)	Construction of a 400-mm water main on Hydro Road from Lakeshore Road East to the future Street A.	2031	Mississauga	1	Schedule A+	WDM	400 mm	660	$ 969,200
W-D-217	400-mm Water Main - Future Street (Inspiration Lakeview)	Construction of a 400-mm water main on the future Street A from the future Street F to the future Street H.	2031	Mississauga	1	Schedule A+	WDM	400 mm	470	$ 718,200
W-D-218	400-mm Water Main - Lakefront Promenade (Inspiration Lakeview)	Construction of a 400-mm water main on Lakefront Promenade from Rangeview Road to the future Street A.	2031	Mississauga	1	Schedule A+	WDM	400 mm	570	$ 849,800
W-D-223	600/400-mm Water Main - Coleraine Drive (Bolton)	Construction of a 600-mm water main on Coleraine Drive from the Bolton Elevated Tank to Healey Road and a 400-mm water main on Coleraine Drive from Healey Road to George Bolton Parkway. (Section 2 of 2)	2019	Caledon	6	Schedule A+	WSTM	600 mm	1540	$ 5,329,000
W-TR-224	A.P. Kennedy Water Treatment Plant - Reservoir Expansion	Construction of a new 35-million-litre treated water reservoir at the A.P. Kennedy Water Treatment Plant.	2031	Mississauga		Schedule A+	WTP	35 ML	-	$ 68,275,000
W-TR-225	A.P. Kennedy Water Treatment Plant - Waste Building Expansion	Expansion of the Waste Building at the A.P. Kennedy Water Treatment Plant.	2036	Mississauga		Schedule A+	WTP	-	-	$ 26,450,000
W-D-226	600-mm Water Main - Clarkway Drive	Construction of a 600-mm water main on Clarkway Drive from Castlemore Road northerly to the future east-west road.	2022	Brampton	5	Schedule A+	WDM	600 mm	1450	$ 3,931,615

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-227	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Chinguacousy Road to McLaughlin Road.	2036	Caledon	7	Schedule A+	WDM	400 mm	1400	$ 4,786,100
W-D-228	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from McLaughlin Road to Hurontario Street.	2036	Caledon	7	Schedule A+	WDM	400 mm	1390	$ 2,826,500
W-D-229	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Hurontario Street to Heart Lake Road.	2036	Caledon	7	Schedule A+	WDM	400 mm	2720	$ 6,863,800
W-D-230	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Heart Lake Road to Dixie Road, north of Mayfield Road.	2031	Caledon	7	Schedule A+	WDM	400 mm	1380	$ 1,754,700
W-D-231	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Bramalea Road, north of Mayfield Road.	2033	Caledon	7	Schedule A+	WDM	400 mm	1370	$ 1,742,500
W-D-232	400-mm Water Main - Dixie Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Dixie Road from Mayfield Road to 1,340 metres northerly.	2031	Caledon	6	Schedule A+	WDM	400 mm	1340	$ 3,690,800
W-D-233	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street from Airport Road to Innis Lake Road, north of Mayfield Road.	2036	Caledon	6	Schedule A+	WDM	400 mm	1380	$ 2,122,000
W-D-234	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Healy Road to approximately 1680 metres southerly, east of Humber Station Road.	2032	Caledon	6	Schedule A+	WDM	400 mm	1680	$ 2,482,100
W-D-235	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 660 metres westerly.	2032	Caledon	6	Schedule A+	WDM	400 mm	660	$ 3,059,500
W-D-236	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Mayfield Road to 1450 metres northerly.	2024	Caledon	6	Schedule A+	WDM	400 mm	1450	$ 6,950,800
W-D-238	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Healey Road to 1220 metres northerly, west of Humber Station Road.	2036	Caledon	6	Schedule A+	WDM	400 mm	1220	$ 1,562,900
W-D-239	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 680 metres westerly, south of King Street.	2036	Caledon	6	Schedule A+	WDM	400 mm	680	$ 913,100
W-D-240	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 680 metres westerly.	2036	Caledon	6	Schedule A+	WDM	400 mm	680	$ 913,100
W-D-241	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from future street north of Healey Road to 910 metres northerly, west of Humber Station Road.	2036	Caledon	6	Schedule A+	WDM	400 mm	910	$ 1,189,500
W-D-242	400-mm Water Main - Bramalea Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Bramalea Road from north of Mayfield Road to 290 metres northerly.	2033	Caledon	6	Schedule A+	WDM	400 mm	290	$ 1,410,200
W-D-243	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Bramalea Road.	2032	Caledon	6	Schedule A+	WDM	400 mm	1360	$ 2,098,500
W-D-244	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from the future Abbotside Way to 720 metres northerly.	2021	Caledon	7	Schedule A+	WDM	400 mm	720	$ 1,272,600

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-245	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Heart Lake Road, north of Mayfield Road.	2031	Caledon	7	Schedule A+	WDM	400 mm	1400	$ 1,779,200
W-D-246	600-mm Water Main - Kennedy Road North	Construction of a 600-mm water main on Kennedy Road North from Williams Parkway to Vodden Street East.	2021	Brampton	5	Schedule A+	WDM	600 mm	900	$ 3,912,578
W-D-247	600-mm Water Main - Atlantic Drive/Creekbank Road	Construction of a 600-mm water main on Atlantic Drive and the future Creekbank Road from Britannia Road East to Sismet Road.	2027	Mississauga	3	Schedule A+	WDM	600 mm	1500	$ 12,452,700
W-D-248	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to 620 metres southerly.	2025	Mississauga	5	Schedule A+	WDM	400 mm	620	$ 2,057,600
W-D-249	600-mm Water Main - Lakeshore Road West	Construction of a 600-mm water main on Lakeshore Road West from the Lorne Park Water Treatment Plant to Front Street South.	2024	Mississauga	1	Schedule A+	WDM	600 mm	2950	$ 12,714,789
W-D-250	400-mm Water Main - McLaughlin Road (Mayfield West Phase 3)	Construction of a 400-mm water main on McLaughlin Road from Old School Road to the south side of the Etobicoke Creek.	2036	Caledon	7	Schedule A+	WDM	400 mm	1380	$ 2,809,200
W-P-251	Beckett Sproule Pumping Station - Surge Suppression System	Installation of a new surge suppression system at the Beckett Sproule Pumping Station.	2021	Brampton		Schedule A	PS	-	-	$ 10,868,800
W-ST-252	600-mm Water Main - Goreway Drive	Construction of a 600-mm water main on Goreway Drive from Intermodal Drive to Steeles Avenue East.	2026	Brampton	4	Schedule A+	WSTM	600 mm	950	$ 5,609,500
W-P-253	Beckett Sproule Pumping Station - Improvements and Upgrades	Construction of improvements and upgrades at the Beckett Sproule and East Brampton Pumping Stations.	2021	Brampton		Schedule A	PS	n/a	-	$ 38,589,700
W-D-259	600-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 600-mm water main on the future east-west road from Clarkway Drive to the future north-south road.	2025	Brampton	5	Schedule A	WDM	600 mm	500	$ 1,071,200
W-D-260	400-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Countryside Drive from Coleraine Drive to the future north-south road.	2026	Brampton	5	Schedule A	WDM	400 mm	880	$ 1,528,900
W-D-261	400-mm Water Main - Future Street (Highway 427 Industrial)	Construction of a 400-mm water main on a future street from Highway 50 to Coleraine Drive.	2024	Brampton	5	Schedule A	WDM	400 mm	200	$ 1,228,300
W-D-267	400-mm Water Main - Old School Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Old School Road from Heart Lake Road to Dixie Road.	2021	Caledon	7	Schedule A	WDM	400 mm	1390	$ 1,949,566
W-D-268	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from Old School Road to 2620 metres southerly.	2021	Caledon	7	Schedule A	WDM	400 mm	1900	$ 3,749,372
W-D-269	400-mm Water Main - Future Lagerfeld Drive (Mount Pleasant)	Construction of a 400-mm water main on the future extension of Lagerfeld Drive from Mississauga Road to Creditview Road.	2023	Brampton	6	Schedule A	WDM	400 mm	500	$ 697,800
W-D-270	600-mm Water Main - Rangeview Road (Inspiration Lakeview)	Construction of a 600-mm water main on Rangeview Road from East Avenue to Lakefront Promenade.	2031	Mississauga	1	Schedule A+	WDM	600 mm	480	$ 1,123,200
W-D-271	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street from Cawthra Road to Confederation Parkway.	2032	Mississauga	2	Schedule A+	WDM	600 mm	2470	$ 10,555,000
W-D-272	400-mm Water Main - Eglinton Avenue East	Construction of a 400-mm water main on Eglinton Avenue East from Hurontario Street to Sorrento Drive.	2021	Mississauga	4	Schedule A+	WDM	400 mm	350	$ 1,750,600

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Pressure Zone	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
W-D-273	600-mm Water Main - Hurontario Street	Construction of a 600-mm water main on Hurontario Street from Steeles Avenue to County Court Boulevard.	2039	Brampton	5	Schedule A+	WDM	600 mm	1000	$ 6,229,700
W-D-274	600-mm Water Main - County Court Boulevard and Future Street	Construction of a 600-mm water main on County Court Boulevard and a future street from Hurontario Street to the future alignment of First Gulf Boulevard.	2039	Brampton	5	Schedule A+	WDM	600 mm	2000	$ 8,441,000
W-D-275	600-mm Water Main - Future First Gulf Boulevard	Construction of a 600-mm water main on the future alignment of First Gulf Boulevard from Steeles Avenue East to a future street.	2039	Brampton	5	Schedule A+	WDM	600 mm	1000	$ 5,744,300
W-D-276	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street East from Cawthra Road to Dixie Road.	2032	Mississauga	2	Schedule A+	WDM	600 mm	2300	$ 10,054,900
W-D-277	600-mm Water Main - Church Street East	Construction of a 600-mm water main on Church Street East from Centre Street North to Main Street.	2025	Brampton	5	Schedule A+	WDM	600 mm	650	$ 14,147,500
W-D-278	400-mm Water Main - Lakefront Promenade (Inspiration Lakeview)	Construction of a 400-mm water main on Lakefront Promenade from Lakeshore Road East to Rangeview Road.	2031	Mississauga	1	Schedule A+	WDM	400 mm	260	$ 471,300
W-TR-279	A.P. Kennedy Water Treatment Plant - Yard Piping Improvements	Various yard piping improvements at the A.P. Kennedy Water Treatment Plant to facilitate new infrastructure.	2022	Mississauga		-	WTP	-	-	$ 8,000,000
Total Program - 2041										**$2,473,508,575**

Appendix B

Proposed Wastewater Capital Projects

(From Wastewater Master Plan)

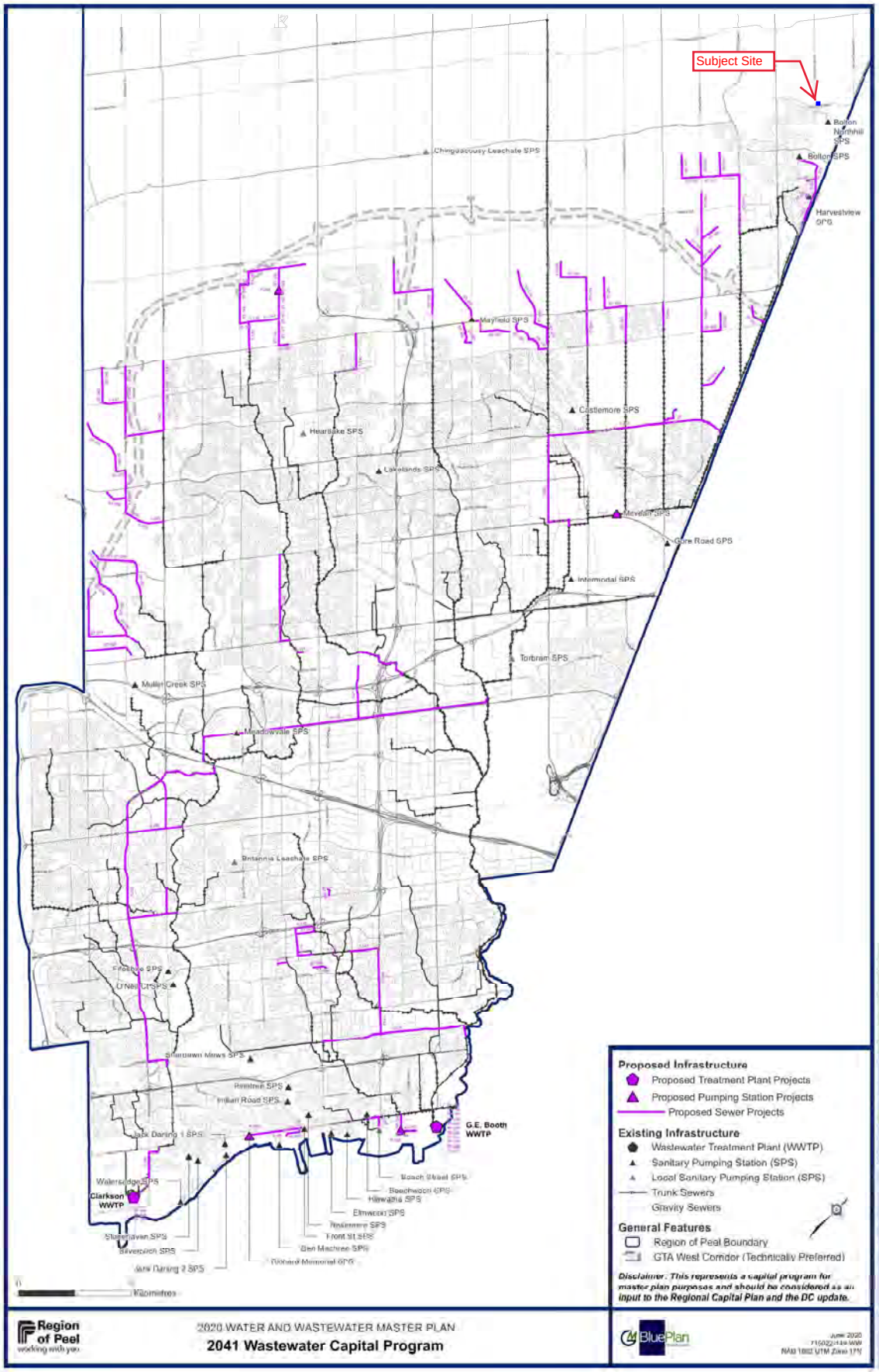


Figure 36 – Preferred wastewater servicing strategy capital program for the lake-based system.

Table 13 – Capital program table for the preferred wastewater servicing strategy.

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-ST-001	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Countryside Drive from Highway 50 to approximately 810 metres north-westerly.	2026	Caledon	Schedule A+	ST	375 mm	810	$ 3,072,000
WW-ST-002	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street west of Coleraine Drive from Countryside Drive to approximately 600 metres northerly.	2028	Brampton	Schedule A+	ST	375 mm	600	$ 576,000
WW-ST-003	525-mm Sanitary Sewer - Countryside Drive	Construction of a 525-mm sanitary sewer on Countryside Drive from Clarkway Drive to approximately 690 metres easterly.	2027	Brampton	Schedule A+	ST	525 mm	690	$ 3,747,000
WW-T-005	750-mm Sanitary Sewer - Clarkway Drive	Construction of a 750-mm sanitary sewer on Clarkway Drive from Countryside Drive to Mayfield Road.	2036	Brampton	Schedule A+	ST	750 mm	1230	$ 9,015,000
WW-ST-006	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Castlemore Road from Clarkway Drive to approximately 1060 metres north-easterly.	2023	Brampton	Schedule A+	ST	375 mm	1060	$ 4,020,500
WW-ST-009	600-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 600-mm sanitary sewer on a future street west of Airport Road from Mayfield Road to approximately 760 metres southerly.	2024	Brampton	Schedule A+	ST	600 mm	760	$ 3,383,900
WW-ST-011	600-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 600-mm sanitary sewer on a future street from Airport Road to approximately 1070 metres north-westerly, north of Countryside Drive.	2023	Brampton	Schedule A+	ST	600 mm	1070	$ 4,764,300
WW-ST-012	525-mm Sanitary Sewer - Future Inspire Boulevard (Countryside Villages)	Construction of a 525-mm sanitary sewer on the future Inspire Boulevard from Torbram Road to approximately 1050 metres westerly.	2022	Brampton	Schedule A+	ST	525 mm	1050	$ 4,271,500
WW-ST-013	375-mm Sanitary Sewer - Easement (Clarkson)	Construction of a 375-mm sanitary sewer in an easement north of Lakeshore Road and east of Winston Churchill Boulevard.	2026	Mississauga	Schedule A+	ST	375 mm	630	$ 915,100
WW-ST-017	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street from Heritage Road to approximately 2740 metres north-westerly, north of Steeles Avenue West.	2023	Brampton	Schedule A+	ST	375 mm	2740	$ 3,085,000
WW-ST-018	525-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 525-mm sanitary sewer on a future street east of Bramalea Road from Mayfield Road to approximately 400 metres southerly.	2023	Brampton	Schedule A+	ST	525 mm	400	$ 1,627,200
WW-T-021	Albion-Vaughan Road Sanitary Trunk Sewer (Phase 2)	Construction of a 900-mm sanitary trunk sewer on Albion Vaughan Road and Nunneville Road from Royalton Drive to the end of Nunneville Road. (Section 1 of 3)	2022	Caledon	Schedule A+	T	900 mm	990	$ 17,897,728
WW-FM-030	McVean Force Main Twinning	Construction of a 900-mm force main on Queen Street East from the McVean Sewage Pumping Station to Goreway Drive.	2022	Brampton	Schedule B Completed	FM	900 mm	1060	$ 4,978,000
WW-ST-045	600-mm Sanitary Sewer - Future Street (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on a future street east of Winston Churchill Boulevard from Wanless Drive to 560 metres northerly.	2036	Brampton	Schedule A+	ST	600 mm	560	$ 2,494,300
WW-ST-046	600-mm Sanitary Sewer - Future Street (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on a future street east of Winston Churchill Boulevard from Mayfield Road to 680 metres southerly.	2036	Brampton	Schedule A+	ST	600 mm	680	$ 3,027,900
WW-T-047	Northwest Brampton Sanitary Trunk Sewer (Phase 3)	Construction of a 675-mm sanitary trunk sewer on Wanless Drive from Heritage Road to 820 metres westerly.	2035	Brampton	Schedule A+	T	675 mm	820	$ 5,903,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-ST-048	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Mayfield Road to 620 metres southerly.	2035	Brampton	Schedule A+	ST	600 mm	620	$ 3,685,700
WW-ST-049	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Wanless Drive to 620 metres northerly.	2035	Brampton	Schedule A+	ST	600 mm	620	$ 3,685,700
WW-T-050	Northwest Brampton Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Heritage Road from the future Sandalwood Parkway extension to Wanless Drive.	2034	Brampton	Schedule B Completed	T	750 mm	1200	$ 8,807,500
WW-T-051	Northwest Brampton Sanitary Trunk Sewer (Phase 1)	Construction of a 825-mm sanitary trunk sewer on the future extension of Sandalwood Parkway from Heritage Road to Mississauga Road.	2032	Brampton	Schedule B Completed	T	825 mm	1350	$ 13,898,900
WW-ST-052	525-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 525-mm sanitary sewer on a future street north of Bovaird Drive, west of Heritage Road, from a future street to 830 metres northerly.	2031	Brampton	Schedule A+	ST	525 mm	830	$ 3,651,200
WW-T-053	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 630 metres northerly.	2028	Brampton	Schedule A+	T	675 mm	630	$ 4,541,600
WW-ST-054	450-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 450-mm sanitary sewer on a future street south of Wanless Drive from Winston Churchill Boulevard to 1310 metres south-easterly.	2031	Brampton	Schedule A+	ST	450 mm	1310	$ 5,429,400
WW-ST-055	600-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 600-mm sanitary sewer on a future street north of Bovaird Drive from Heritage Road to 340 metres westerly.	2029	Brampton	Schedule A+	ST	600 mm	340	$ 1,831,200
WW-ST-056	375-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 375-mm sanitary sewer on a future street south of Bovaird Drive from Heritage Road to 770 metres westerly.	2028	Brampton	Schedule A+	ST	375 mm	770	$ 2,920,800
WW-T-057	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Mayfield Road to 680 metres southerly.	2034	Brampton	Schedule A+	T	900 mm	680	$ 5,354,600
WW-T-058	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to 570 metres northerly.	2034	Brampton	Schedule A+	T	900 mm	570	$ 4,488,000
WW-T-059	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway.	2032	Brampton	Schedule A+	T	900 mm	360	$ 2,834,100
WW-T-060	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway.	2030	Brampton	Schedule A+	T	900 mm	920	$ 7,245,000
WW-T-062	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 880 metres southerly.	2028	Brampton	Schedule A+	T	675 mm	880	$ 6,912,400
WW-T-063	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road.	2026	Brampton	Schedule A+	T	750 mm	580	$ 5,895,800
WW-T-064	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road.	2026	Brampton	Schedule A+	T	750 mm	300	$ 1,882,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-T-065	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road.	2026	Brampton	Schedule A+	T	825 mm	560	$ 4,187,200
WW-ST-076	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street north of Embleton from east of Winston Churchill Boulevard Road to 440 metres west of Heritage Road.	2026	Brampton	Schedule A+	ST	375 mm	400	$ 2,092,400
WW-ST-077	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street north of Embleton from 440 metres west of Heritage Road to 540 metres west of Heritage Road.	2027	Brampton	Schedule A+	ST	450 mm	540	$ 2,126,100
WW-ST-078	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street north of Embleton from Heritage Road to 440 metres westerly.	2026	Brampton	Schedule A+	ST	450 mm	440	$ 1,732,300
WW-ST-079	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street east of Winston Churchill Boulevard from north of Embleton Road to 1580 metres south-easterly.	2024	Brampton	Schedule A+	ST	375 mm	1580	$ 6,569,000
WW-ST-080	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street south of Embleton Road from approximately 1000 metres southeast of Winston Churchill Boulevard to approximately 840 metres south-easterly.	2023	Brampton	Schedule A+	ST	450 mm	840	$ 3,306,400
WW-ST-081	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street south of Embleton Road from Heritage Road to 700 metres westerly.	2023	Brampton	Schedule A+	ST	450 mm	700	$ 2,755,500
WW-ST-082	525-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 525-mm sanitary sewer on a future street from Embleton Road north-westerly to Heritage Road.	2022	Brampton	Schedule A+	ST	525 mm	720	$ 2,928,900
WW-T-085	750-mm Sanitary Sewer - The Gore Road	Construction of a 750-mm sanitary sewer on The Gore Road from Mayfield Road to approximately 860 metres southerly.	2035	Brampton	Schedule A+	T	750 mm	860	$ 5,398,000
WW-ST-088	375-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 375-mm sanitary sewer on a future street from Bramalea Road northwesterly to Mayfield Road, north of Countryside Drive. (Section 1 of 2)	2019	Brampton	Schedule A+	ST	375 mm	610	$ 1,016,000
WW-ST-089	375-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 375-mm sanitary sewer on a future street from Bramalea Road north-westerly to Mayfield Road, north of Countryside Drive. (Section 2 of 2)	2019	Brampton	Schedule A+	ST	375 mm	380	$ 1,243,125
WW-T-093	Albion-Vaughan Road Sanitary Trunk Sewer (Phase 2)	Construction of a 900-mm sanitary trunk sewer on Albion Vaughan Road and Nunneville Road from Royalton Drive to the end of Nunneville Road. (Section 2 of 3)	2020	Caledon	Schedule A+	T	900 mm	650	$ 2,334,491
WW-T-094	Albion-Vaughan Road Sanitary Trunk Sewer (Phase 2)	Construction of a 900-mm sanitary trunk sewer on Albion Vaughan Road and Nunneville Road from Royalton Drive to the end of Nunneville Road. (Section 3 of 3)	2020	Caledon	Schedule A+	T	900 mm	360	$ 3,328,559
WW-ST-095	Growth-Related Sanitary Sewers in Bolton	Construction of several growth-related sanitary sewers in Bolton.	2020	Caledon	Schedule A+	ST	450 mm	210	$ 499,236
WW-ST-096	Growth-Related Sanitary Sewers in Bolton	Construction of several growth-related sanitary sewers in Bolton.	2021	Caledon	Schedule A+	ST	375 mm	300	$ 1,663,637
WW-ST-097	Growth-Related Sanitary Sewers in Bolton	Construction of several growth-related sanitary sewers in Bolton.	2020	Caledon	Schedule A+	ST	375 mm	200	$ 373,744

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-T-104	Lower West Sanitary Trunk Sewer Twinning	Construction of a 2400-mm sanitary trunk sewer on Southdown Road and through easements from Lakeshore Road West to the Clarkson WWTP.	2033	Mississauga	Schedule B	T	2400 mm	2380	$ 82,768,100
WW-ST-111	375-mm Sanitary Sewer - Webb Drive (Mississauga City Centre)	Construction of a 375-mm sanitary sewer on Webb Drive from Confederation Parkway to Redmond Road.	2019	Mississauga	Schedule A+	ST	375 mm	340	$ 2,411,000
WW-T-112	Upper Cooksville Creek to Burnhamthorpe Road Sanitary Trunk Sewer Diversion	Diversion from the Upper Cooksville Creek Sanitary Trunk Sewer to the Burnhamthorpe Road Sanitary Trunk Sewer - Drop Shaft at Burnhamthorpe east of Arista	2017	Mississauga	Schedule B Completed	T	-	-	$ 4,960,000
WW-P-117	McVean Sewage Pumping Station Expansion	Expansion of the McVean Sewage Pumping Station from 1400 L/s to 2100 L/s.	2023	Brampton	Schedule A+	SPS	700 L/s	-	$ 19,500,000
WW-II-119	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	n/a	Peel	-	I/I	-	-	$ 12,000,000
WW-II-120	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	n/a	Peel	-	I/I	-	-	$ 80,500,000
WW-T-130	East-to-West Diversion Sanitary Trunk Sewer	Construction of a 2400-mm sanitary trunk sewer on Derry Road from the East Trunk sewer at Spring Creek to West Trunk Sewer at Highway 401 and Creditview Road.	2025	Mississauga	Schedule C Completed	T	2400 mm	11550	$ 345,000,000
WW-T-131	Queensway East Sanitary Trunk Sewer	Construction of a 1800-mm sanitary trunk sewer on The Queensway from Hurontario Street to the East Sanitary Trunk Sewer.	2027	Mississauga	Schedule C	T	1800 mm	5300	$ 163,253,800
WW-T-133	Mississauga City Centre Sanitary Trunk Sewer	Construction of a 1200-mm sanitary trunk sewer on Duke of York Boulevard from Rathburn Road West to Burnhamthorpe Road West and on Burnhamthorpe Road West from Duke of York Boulevard to east of Kariya Gate.	2020	Mississauga	Schedule B Completed	T	1200 mm	1260	$ 27,391,000
WW-T-134	1200-mm Sanitary Sewer - Kennedy Road (Mayfield West Phase 1)	Construction of a 1200-mm sanitary sewer on Kennedy Road from Mayfield Road to Christie Drive.	2022	Brampton	Schedule A+	T	1200 mm	1970	$ 17,816,000
WW-ST-135	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Castlemore Road from The Gore Road to approx. 750 metres northeasterly.	2023	Brampton	Schedule A+	ST	375 mm	750	$ 719,200
WW-ST-136	375-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 375-mm sanitary sewer on a future street north of Countryside Drive from approximately 900 metres northwest of Airport Road to approximately 920 metres north-westerly.	2023	Brampton	Schedule A+	ST	375 mm	920	$ 1,111,000
WW-ST-137	450-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 450-mm sanitary sewer on Countryside Drive from Airport Road to Mountainash Road and on Mountainash Road northerly.	2019	Brampton	Schedule A+	ST	450 mm	900	$ 1,279,651
WW-T-138	750-mm Sanitary Sewer - Future Street (Mayfield West Phase 2)	Construction of a 750-mm sanitary trunk sewer on a future street east of Chinguacousy Road from Mayfield Road to the future east-west spine road.	2019	Caledon	Schedule A+	T	750 mm	950	$ 6,677,781
WW-T-139	675-mm Sanitary Sewer - Future East West Spine Road (Mayfield West Phase 2)	Construction of a 675-mm sanitary sewer on the future east-west spine road from a future street east of Chinguacousy Road to approximately 630 metres west of McLaughlin Road.	2019	Caledon	Schedule A+	ST	675 mm	470	$ 2,697,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-ST-140	600-mm Sanitary Sewer - Future East West Spine Road (Mayfield West Phase 2)	Construction of a 600-mm sanitary sewer on the future east-west spine road from McLaughlin Road to approximately 630 metres westerly.	2019	Caledon	Schedule A+	ST	600 mm	630	$ 3,225,000
WW-ST-141	600-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 600-mm sanitary sewer on McLaughlin Road from the future east-west spine road to approximately 350 metres northerly.	2020	Caledon	Schedule A+	ST	600 mm	350	$ 2,052,000
WW-ST-142	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 525-mm sanitary sewer on McLaughlin Road from 350 metres north of the future east-west spine road to 420 metres northerly.	2025	Caledon	Schedule A+	ST	525 mm	420	$ 633,900
WW-ST-143	450-mm Sanitary Sewer - Future East West Spine Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on the future east-west spine road from a future street east of Chinguacousy Road to Chinguacousy Road.	2019	Caledon	Schedule A+	ST	450 mm	310	$ 1,431,000
WW-ST-144	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from the future east-west spine road to approximately 820 metres northerly.	2031	Caledon	Schedule A+	ST	450 mm	820	$ 4,247,800
WW-ST-145	450-mm Sanitary Sewer - Mayfield Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on Mayfield Road from Van Kirk Drive to McLaughlin Road.	2019	Brampton	Schedule A+	ST	450 mm	330	$ 1,211,738
WW-ST-146	450-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on McLaughlin Road from Mayfield Road to approximately 510 metres northerly.	2020	Brampton	Schedule A+	ST	450 mm	510	$ 1,744,600
WW-ST-147	450-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on McLaughlin Road from approximately 510 metres north of Mayfield Road to approximately 440 metres northerly.	2020	Brampton	Schedule A+	ST	450 mm	440	$ 1,480,600
WW-ST-148	600-mm Sanitary Sewer - Coleraine Drive (Bolton West)	Construction of a 600-mm sanitary sewer on Coleraine Drive from Manchester Court to McEwan Drive.	2027	Caledon	Schedule A+	ST	600 mm	2080	$ 4,385,300
WW-ST-153	600-mm Sanitary Sewer - Innis Lake Road	Construction of a 600-mm sanitary sewer on Innis Lake Road from Mayfield Road to 1190 metres northerly.	2031	Caledon	Schedule A+	ST	600 mm	1190	$ 6,430,500
WW-T-160	Cawthra Road Sanitary Trunk Sewer (Phases 2 and 3)	Construction of a 1500-mm sanitary trunk sewer on Cawthra Road from Burnhamthorpe Road East to south of Dundas Street East to connect to the existing CPR Trunk.	2022	Mississauga	Schedule A+	T	1500 mm	2080	$ 51,675,000
WW-T-161	Cawthra Road Sanitary Trunk Sewer (Phase 4)	Construction of a 1500-mm sanitary trunk sewer on Burnhamthorpe Road East from Central Parkway East to Cawthra Road.	2026	Mississauga	Schedule C	T	1500 mm	990	$ 28,741,300
WW-T-162	Cawthra Road Sanitary Trunk Sewer (Phase 5)	Construction of a 1500-mm sanitary trunk sewer on Cawthra Road from the CPR to The Queensway.	2027	Mississauga	Schedule C	T	1500 mm	950	$ 27,579,000
WW-T-163	Lakeshore Road West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Lakeshore Road West from Front Street to the Richard's Memorial Sewage Pumping Station.	2024	Mississauga	Schedule B Completed	T	1500 mm	2000	$ 67,500,000
WW-T-164	Fletcher's Creek Sanitary Trunk Sewer Twinning	Construction of a 1050-mm sanitary trunk sewer on McLaughlin Road from Queen Street West to Steeles Avenue West.	2031	Brampton	Schedule C	T	1050 mm	3540	$ 87,664,500
WW-P-165	Inspiration Lakeview Sewage Pump Station	Construction of a new sewage pumping station within the future Inspiration Lakeview development.	2031	Mississauga	Schedule B	SPS	96 L/s	-	$ 4,098,200

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-FM-166	Inspiration Lakeview Force Main	Construction of a 300-mm force main on Lakefront Promenade from the future Inspiration Lakeview Sewage Pumping Station to Lakeshore Road East.	2031	Mississauga	Schedule B	FM	300 mm	600	$ 873,300
WW-ST-167	450-mm Sanitary Sewer - Future Street (Inspiration Lakeview)	Construction of a 450-mm sanitary sewer on the future Street A from the future Street H to the future Street F.	2031	Mississauga	Schedule A+	ST	450 mm	380	$ 436,600
WW-ST-168	600-mm Sanitary Sewer - Future Street (Inspiration Lakeview)	Construction of a 600-mm sanitary sewer on the future Street A from the future Street F to the future Inspiration Lakeview Sewage Pumping Station.	2031	Mississauga	Schedule A+	ST	600 mm	200	$ 319,300
WW-T-170	Humber Station Road Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Mayfield Road to 1600 metres northerly.	2024	Caledon	Schedule A+	T	750 mm	1600	$ 4,756,800
WW-T-171	Humber Station Road Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Healey Road to 1500 metres southerly.	2026	Caledon	Schedule A+	T	750 mm	1500	$ 4,492,900
WW-ST-178	600-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 600-mm sanitary sewer on a future street west of Airport Road from Mayfield Road to approximate 1700 metres north-westerly.	2036	Brampton	Schedule A+	ST	600 mm	1700	$ 7,568,700
WW-T-179	Kennedy Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Kennedy Road from the Etobicoke Creek Sanitary Trunk Sewer to the future East-West Sanitary Trunk Sewer Diversion.	2026	Brampton	Schedule C	T	1500 mm	2350	$ 27,543,300
WW-TR-181	G.E. Booth WWTP - New Plant 1	Major capital improvement at the treatment facility including demolition works, new inlet conduit, new odour control facility, new primary clarifiers and a new by-pass conduit to replace Plant 1 and to support future expansion of the facility.	2024	Mississauga	Schedule C	TR	-	-	$ 175,000,000
WW-TR-182	G.E. Booth WWTP - Capacity Restoration	Recovery of 40 ML/d of liquid treatment capacity to restore the G.E. Booth WWTP capacity to 518 ML/d.	2027	Mississauga	Schedule C	TR	-	-	$ 83,000,000
WW-TR-183	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d.	2038	Mississauga	Schedule C	TR	-	-	$ 487,000,000
WW-TR-184	Clarkson WWTP Expansion	Expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d.	2027	Mississauga	Schedule C	TR	-	-	$ 278,600,000
WW-ST-185	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 3)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from 820 metres north of the future east-west spine road to approximately 590 metres northerly.	2036	Caledon	Schedule A+	ST	450 mm	590	$ 2,716,400
WW-ST-186	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from Chinguacousy Road to 300 metres easterly, south of Old School Road.	2036	Caledon	Schedule A+	ST	375 mm	300	$ 287,700
WW-ST-187	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from a future street to 450 metres northerly, south of Old School Road.	2036	Caledon	Schedule A+	ST	375 mm	450	$ 431,500
WW-ST-188	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from a future street to 1000 metres easterly, south of Old School Road.	2036	Caledon	Schedule A+	ST	375 mm	1000	$ 959,000
WW-FM-189	McLaughlin Road Force Main	Construction of a 400-mm sewage force main on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to the south side of the Etobicoke Creek.	2036	Caledon	Schedule B	FM	400 mm	240	$ 747,900

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WW-ST-190	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 3)	Construction of a 525-mm sanitary sewer on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to 800 metres northerly.	2027	Caledon	Schedule A+	ST	525 mm	800	$ 1,205,900
WW-ST-191	525-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 525-mm sanitary sewer on a future street from McLaughlin Road to 950 metres easterly.	2036	Caledon	Schedule A+	ST	525 mm	950	$ 1,072,200
WW-ST-192	525-mm Sanitary Sewer - Dixie Road (Mayfield West Phase 4)	Construction of a 525-mm sanitary sewer on Dixie Road from 500 metres north of Mayfield Road to 840 metres northerly.	2031	Caledon	Schedule A+	ST	525 mm	840	$ 1,265,300
WW-ST-193	525-mm Sanitary Sewer - Future Street (Mayfield West Phase 4)	Construction of a 525-mm sanitary sewer on a future street from Dixie Road to Heart Lake Road.	2031	Caledon	Schedule A+	ST	525 mm	1380	$ 3,298,300
WW-ST-194	450-mm Sanitary Sewer - Heart Lake Road (Mayfield West Phase 4)	Construction of a 450-mm sanitary sewer on Heart Lake Road from 1200 metres north of Mayfield Road to 1240 metres northerly.	2032	Caledon	Schedule A+	ST	450 mm	1240	$ 2,095,000
WW-ST-195	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street from Innis Lake Road to 920 metres westerly, north of Mayfield Road.	2036	Caledon	Schedule A+	ST	450 mm	920	$ 962,000
WW-ST-196	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street from a future street to 570 metres northerly, east of Airport Road and north of Mayfield Road.	2036	Caledon	Schedule A+	ST	450 mm	570	$ 596,800
WW-ST-197	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 960 metres north-easterly.	2025	Caledon	Schedule A+	ST	450 mm	960	$ 1,003,900
WW-ST-198	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 750 metres north-westerly.	2032	Caledon	Schedule A+	ST	450 mm	750	$ 1,057,900
WW-ST-199	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 710 metres north-easterly, south of Healey Road.	2026	Caledon	Schedule A+	ST	450 mm	710	$ 742,700
WW-ST-200	600-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 600-mm sanitary sewer on a future street from Humber Station Road to 690 metres easterly, north of Healey Road.	2026	Caledon	Schedule A+	ST	600 mm	690	$ 998,800
WW-ST-201	600-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 600-mm sanitary sewer on a future street from Coleraine Drive to 680 metres westerly, north of Healey Road.	2026	Caledon	Schedule A+	ST	600 mm	680	$ 1,300,700
WW-ST-202	375-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 375-mm sanitary sewer on a future street from a future street east of Humber Station Road to 780 metres northerly.	2028	Caledon	Schedule A+	ST	375 mm	780	$ 747,800
WW-P-203	McLaughlin Road Sewage Pumping Station	Construction of a new sewage pumping station in the vicinity of McLaughlin Road and the Etobicoke Creek.	2036	Caledon	Schedule B	SPS	150 L/s	-	$ 6,403,500
WW-ST-204	450-mm Sanitary Sewer - Humber Station Road	Construction of a 400-mm sanitary sewer on Humber Station Road from Healey Road to 630 metres northerly.	2031	Caledon	Schedule A+	ST	450 mm	630	$ 880,200
WW-ST-205	600-mm Sanitary Sewer - Humber Station Road	Construction of a 600-mm sanitary sewer on Humber Station Road from 890 metres north of Healey Road to 790 metres northerly.	2028	Caledon	Schedule A+	ST	600 mm	790	$ 1,527,800
WW-ST-206	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 670 metres westerly.	2036	Caledon	Schedule A+	ST	450 mm	670	$ 700,900

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WW-ST-207	375-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 375-mm sanitary sewer on a future street from a future street 890 metres north of Healey Road to 800 metres northerly.	2036	Caledon	Schedule A+	ST	375 mm	800	$ 767,200
WW-ST-208	450-mm Sanitary Sewer - Future Street (Mayfield West Phase 4)	Construction of a 450-mm sanitary sewer on a future street from Mayfield Road to 2160 metres north-westerly, crossing Bramalea Road.	2031	Caledon	Schedule A+	ST	450 mm	2160	$ 2,885,100
WW-T-210	Centre View Sanitary Trunk Sewer	Construction of a 1200-mm sanitary trunk sewer on Centre View Drive from the proposed interceptor chamber to Duke of York Boulevard and on Duke of York Boulevard from Centre View Drive to Rathburn Road.	2024	Mississauga	Schedule A+	T	1200 mm	880	$ 22,566,500
WW-FM-211	Bolton Force Main Twinning	Construction of a 450-mm force main from Bolton Pumping Station to the Albion-Vaughan Road Sanitary Trunk Sewer.	2021	Caledon	Schedule A+	T	450 mm	1070	$ 2,078,700
WW-T-212	Etobicoke Creek Sanitary Trunk Sewer Diversion (Phase 2)	Construction of a 1500-mm sanitary trunk sewer on future easement from the Etobicoke Creek Sanitary Trunk Sewer to the proposed diversion on Kennedy Road.	2026	Brampton	Schedule C	T	1500 mm	590	$ 17,128,700
WW-P-213	Richard's Memorial Sewage Pumping Station Expansion	Reconstruction of the sewage pumping station with an expanded capacity to service growth in Port Credit.	2023	Mississauga	Schedule B Completed	SPS	405 L/s	-	$ 18,000,000
WW-ST-214	525-mm Sanitary Sewer - Front Street South (West Village)	Construction of a 525-mm sanitary sewer from Lakeshore Road West to Port Street.	2021	Mississauga	Schedule A+	ST	525 mm	120	$ 984,645
WW-ST-215	525-mm Sanitary Sewer - Port Street (West Village)	Construction of a 525-mm sanitary sewer from Front Street South to 310 metres westerly.	2021	Mississauga	Schedule A+	ST	525 mm	300	$ 457,078
WW-ST-216	375-mm/450-mm Sanitary Sewer - Future Street (West Village)	Construction of a 375-mm/450-mm sanitary sewer from the west end of Port Street to 385 metres westerly.	2021	Mississauga	Schedule A+	ST	450 mm	300	$ 439,204
WW-ST-220	450-mm Sanitary Sewer - Rathburn Road West	Construction of a 450-mm sanitary sewer on Rathburn Road West from Duke of York Boulevard to Station Gate Road.	2021	Mississauga	Schedule A+	ST	450 mm	85	$ 2,882,863
WW-ST-221	450-mm Sanitary Sewer - Easement at Herdmans Road (Steeles and Hurontario)	Construction of a 450-mm sanitary sewer from New London Court to the Fletcher's Creek Sanitary Trunk Sewer.	2021	Brampton	Schedule A+	ST	450 mm	285	$ 339,224
WW-TR-223	G.E. Booth WWTP Expansion - Incineration	Expansion of the G.E. Booth WWTP. Incinerator #1 & #2	2038	Mississauga	Schedule C	TR	-	-	$ 92,500,000
WW-TR-224	G.E. Booth WWTP Expansion - Incineration	Expansion of the G.E. Booth WWTP. Incinerator #1 & #2	2038	Mississauga	Schedule C	TR	-	-	$ 169,600,000
WW-TR-225	G.E. Booth WWTP Expansion - New Outfall	Construction of a new outfall at the G.E. Booth WWTP to accommodate the full site capacity.	2038	Peel	Schedule C	TR	-	-	$ 92,000,000
WW-TR-226	Clarkson WWTP - Biosolids Expansion	Expansion of the biosolids process at the Clarkson WWTP.	2023	Mississauga	Schedule C	TR	-	-	$ 30,000,000
WW-TR-236	G.E. Booth WWTP - Plant 2 Blower Replacement	Replacement of the existing three blowers at Plant 2 with six multi-stage high-efficiency blowers.	2027	Mississauga	-	TR	-	-	$ 21,000,000
WW-TR-237	G.E. Booth WWTP - Cake Exportation	Modification of the existing cake silos and pumping system to allow the exportation of cake offsite.	2022	Mississauga	-	TR	-	-	$ 7,500,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-TR-238	G.E. Booth WWTP - Odour Control Improvements	Implementation of the recommendations of the odour study with the anticipation of additional odour control necessary as redevelopment occurs in the vicinity of the treatment facility.	2026	Mississauga	-	TR	-	0	$ 215,000,000
WW-T-243	McVean Diversion Sanitary Trunk Sewer - Class Environmental Assessment	Class Environmental Assessment to determine the preferred strategy to defer flows away from the McVean Sewage Pumping Station to service future development in northeast Brampton and southeast Caledon.	2024	Brampton	Schedule C	T	-	-	$ 1,500,000
WW-T-246	Britannia West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Mississauga Road from Erin Mills Parkway to Britannia Road West and on Britannia Road West from the Credit River to Erin Mills Parkway.	2023	Mississauga	Schedule B	T	1500 mm	3700	$ 51,250,000
WW-T-247	Eglinton West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Mississauga Road from the CPR to Eglinton Avenue West and on Eglinton Avenue West from the Credit River to Erin Mills Parkway.	2023	Mississauga	Schedule B	T	1500 mm	2600	$ 51,250,000
WW-T-248	West Sanitary Trunk Sewer Twinning	Installation of a structural liner for the entire length of the new West Sanitary Trunk Sewer.	2022	Mississauga	-	T	1500 mm	-	$ 40,000,000
WW-T-249	Etobicoke Creek Sanitary Trunk Sewer Twinning	Twinning of a 2150-metre section of sanitary trunk sewer in the vicinity of the Old Brampton WWTP (near Highway 407 and Highway 410).	2024	Brampton	Schedule C	T	1500 mm	2150	$ 58,215,000
WW-T-251	Castlemore Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Castlemore Road from Highway 50 to Airport Road.	2036	Brampton	Schedule C	T	1500 mm	6230	$ 139,105,800
WW-T-252	Upper East Sanitary Trunk Sewer (Phase 1)	Construction of a 2400-mm sanitary trunk sewer on Airport Road from Castlemore Road to Queen Street and on Queen Street from Airport Road to Sun Pac Boulevard.	2036	Brampton	Schedule C	T	2400 mm	4000	$ 107,921,400
WW-ST-253	600-mm Sanitary Sewer - Goreway Drive	Construction of a 600-mm sanitary sewer on Goreway Drive from Mayfield Road to Countryside Drive.	2031	Caledon	Schedule B	ST	600 mm	1230	$ 9,645,500
WW-ST-254	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street east of Innis Lake Road from Mayfield Road to 1100 metres northerly.	2036	Caledon	Schedule A+	ST	450 mm	1100	$ 4,330,700
WW-ST-255	525-mm Sanitary Sewer - Mayfield Road	Construction of a 525-mm sanitary sewer on Mayfield Road from McVean Drive to a future street east of Innis Lake Road.	2031	Caledon	Schedule A+	ST	525 mm	750	$ 4,439,700
WW-ST-256	600-mm Sanitary Sewer - McVean Drive	Construction of a 600-mm sanitary sewer on McVean Drive from Mayfield Road to Countryside Drive.	2031	Caledon	Schedule A+	ST	600 mm	1250	$ 7,429,800
WW-ST-258	Growth-Related Sanitary Sewer in the Mississauga City Centre	Construction of several growth-related sanitary sewers in the Mississauga City Centre.	2024	Mississauga	Schedule A+	ST	375 mm	280	$ 896,829
WW-ST-259	Growth-Related Sanitary Sewer in the Mississauga City Centre	Construction of several growth-related sanitary sewers in the Mississauga City Centre.	2024	Mississauga	Schedule A+	ST	375 mm	290	$ 710,906
WW-ST-268	525-mm Sanitary Sewer - Aviation Road and Lakeshore Road East	Construction of a 525-mm sanitary sewer on Aviation Road and Lakeshore Road East for the Beach Street Sewage Pumping Station to the Beechwood Sewage Pumping Station.	2024	Mississauga	Schedule A+	ST	525 mm	940	$ 35,000,000
WW-TR-269	G.E. Booth Wastewater Treatment Plant - Ash Management Facility	Construction of a new ash management facility at the G.E. Booth Wastewater Treatment Plant.	2026	Mississauga	Schedule C	TR	-	0	$ 30,000,000

Master Plan ID	Project Name	Project Description	Year in Service	Municipality	Class EA	Project Type	Size/Capacity	Length (m)	Total Estimated Cost ($2020)
WW-OC-270	Collection System Odour and Corrosion Control Master Plan	Update of the Region's collection system odour and control Master Plan.	2022	Peel	-	OC	-	-	$ 750,000
WW-OC-272	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2026	Mississauga	-	OC	-	-	$ 14,786,600
WW-ST-280	375-mm Sanitary Sewer - Future Thornwood Drive and Future Armdale Road	Construction of a 375-mm sanitary sewer on the future extension of Thornwood Drive and Armdale Road.	2020	Mississauga	Schedule A+	ST	375 mm	200	$ 230,600
WW-TR-284	Clarkson and G.E. Booth WWTP - Standby Power Expansion	Installation of outdoor modular systems with external ehouses for switchgear systems. Clarkson includes aerial conversion for the remaining power system to buried duct and switchgear modules.	2027	Mississauga	-	TR	-	-	$ 33,000,000
Total Program - 2041									**$3,646,767,039**