

MARIO POLLA

# FUNCTIONAL SERVICING REPORT

## 904 MISSISSAUGA HEIGHTS DRIVE

MARCH 19, 2021



wsp





# FUNCTIONAL SERVICING REPORT

## 904 MISSISSAUGA HEIGHTS DRIVE, MISSISSAUGA

MARIO POLLA

PROJECT NO.: 20M-01451  
DATE: MARCH 2021

WSP  
100 COMMERCE VALLEY DRIVE WEST  
THORNHILL, ON, CANADA L3T 0A1

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## SIGNATURES

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REVIEWED BY

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Senior Project Manager



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# TABLE OF CONTENTS

1	INTRODUCTION .....	1
1.1	Site Description .....	1
2	WATER SUPPLY AND APPURTENANCES .....	5
2.1	Existing Conditions .....	5
2.2	Water Demands .....	5
2.2.1	Fire Water Demands .....	5
2.2.2	Domestic Water Demands .....	5
2.3	Hydrant Flow Test .....	6
3	SANITARY SERVICING .....	8
3.1	Existing Conditions .....	8
3.1.1	Existing Sewage Flows .....	8
3.2	Post-Development Sewage Flow .....	8
3.3	Sanitary Service .....	8
4	STORM DRAINAGE .....	10
4.1	Existing Conditions .....	10
4.2	Minor Storm Drainage System .....	10
4.3	Major Storm Drainage System .....	10
5	CONCLUSION .....	13
5.1	Water Servicing .....	13
5.2	Sanitary Servicing .....	13
5.3	Storm Servicing .....	13



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## ***FIGURES***

Figure No. 1	Location Plan
Figure No. 2	Pre-Development Plan
Figure No. 3	Proposed Development Plan
Figure No. 4	Proposed Water Servicing Plan
Figure No. 5	Proposed Sanitary Servicing Plan
Figure No. 6	Proposed Storm Servicing Plan
Figure No. 7	Conceptual Grading Plan

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## ***APPENDICES***

Appendix A	Fire Flow Calculations
Appendix B	Water Demand
Appendix C	Hydrant Flow Test
Appendix D	Sanitary Flows

# 1 INTRODUCTION

WSP Canada Inc. (WSP) has been retained by Mario Polla to prepare a Functional Servicing Report to assess the servicing requirements relating to the proposed development at 904 Mississauga Heights Drive, Mississauga, ON, L5C 1A6. The site is located on the south side of The Queensway and west of Mavis Road. This report has been prepared to support the rezoning application. It provides the conceptual framework for water distribution, sanitary sewage, storm drainage for the development of this site. A Stormwater Management Report outlining the proposed stormwater quality and quantity controls for this site has been prepared under a separate cover, also by WSP Canada Inc.

The site will be serviced by existing local municipal sanitary sewers and watermain within the adjoining Mississauga Heights Drive right-of-way. Services are proposed to be shared within the Common Element Condominium right-of-way, with independent connections to each lot.

In preparing this report, WSP staff secured and reviewed available City of Mississauga and Region of Peel drawings. In addition, WSP has used the latest Site Plan prepared by Sajecki Planning, and the site survey prepared by TMK Surveyors.

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## 1.1 SITE DESCRIPTION

The site area is approximately 1.25 ha with one existing detached dwelling. The adjacent properties consist of residential buildings to the north, east and west and the Mississauga Golf and Country Club to the south. Refer to **Figure 1** for the site location plan and **Figure 2** for the Predevelopment Plan.

The proposed development includes five lots for single detached dwellings, served by a private Common Element Condominium (CEC) road. The existing house will remain, on Lot D; the rest of the site will be divided into four additional lots with a single family detached home per lot (Lots A,B,C,E). Refer to **Figure 3** for an illustration of the Proposed Development Plan.

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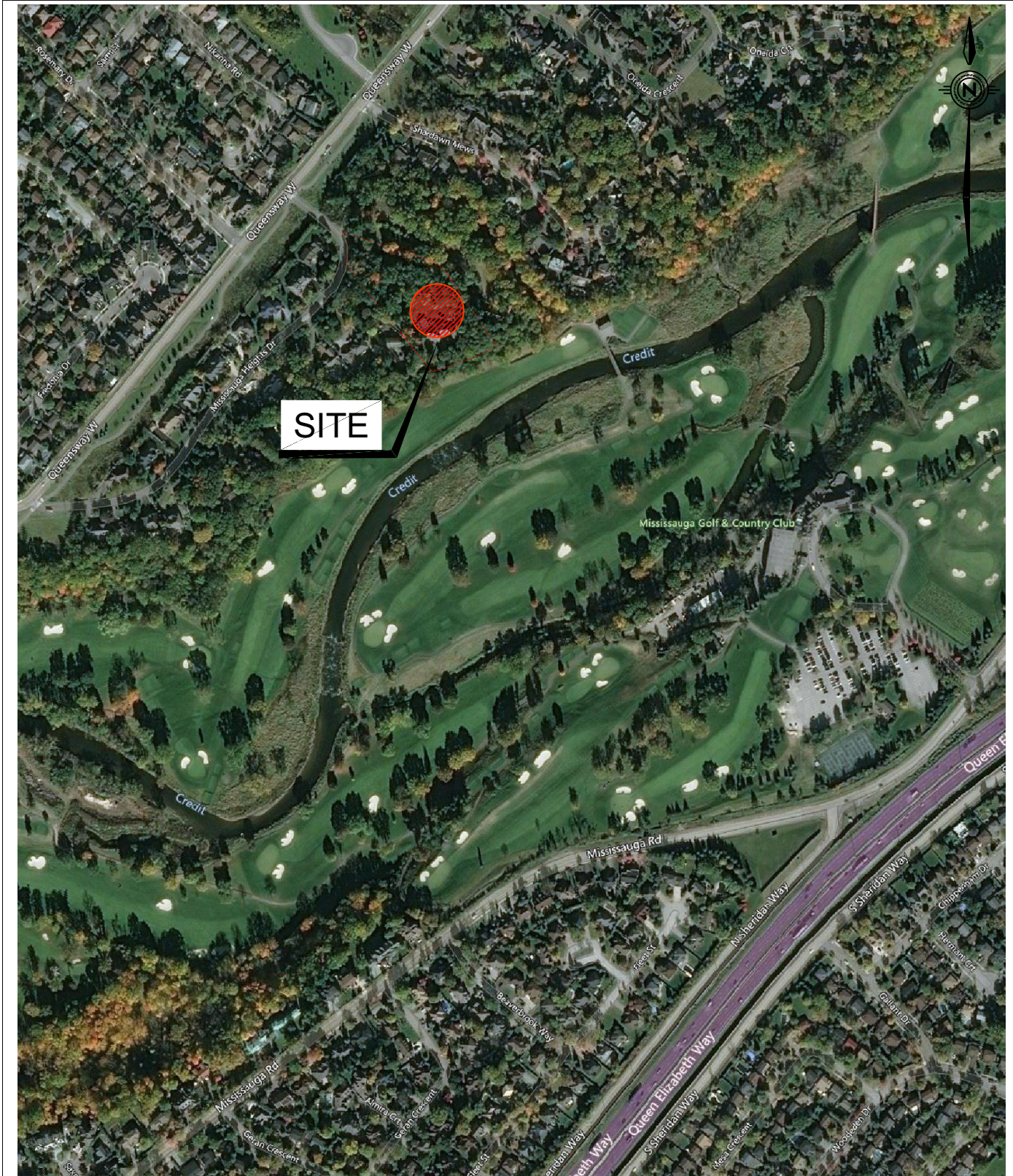
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CLIENT

MARIO POLLA

TITLE

904 MISSISSAUGA HEIGHTS DRIVE

## LOCATION PLAN



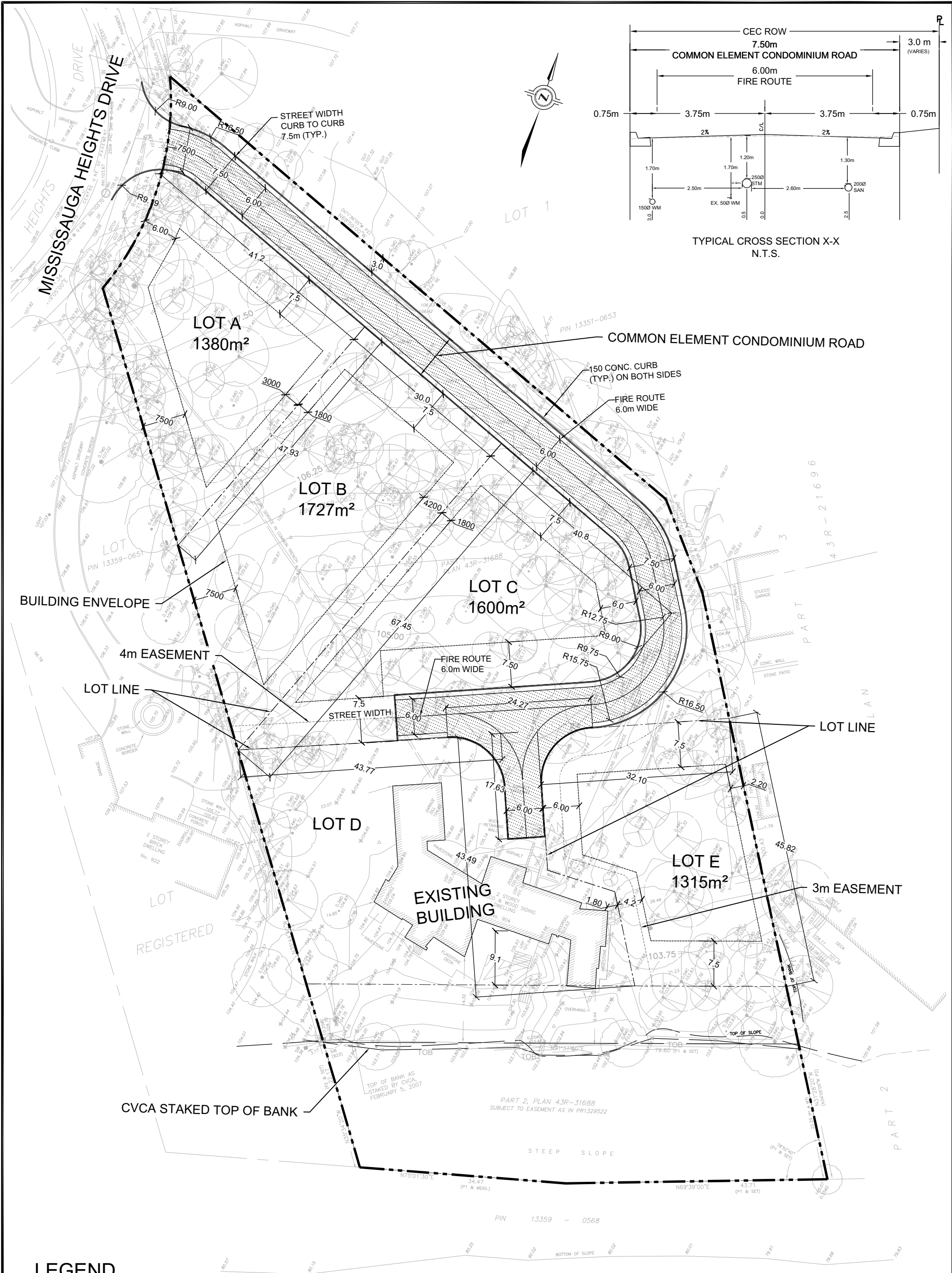
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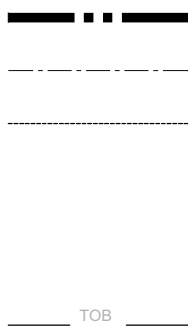




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## LEGEND



- LIMIT OF PROPERTY
- LOT LINE
- POTENTIAL BUILDING ENVELOPE BASED ON ZONING
- CVCA STAKED TOP OF BANK

CLIENT	MARIO POLLA
TITLE	904 MISSISSAUGA HEIGHTS DRIVE PROPOSED DEVELOPMENT PLAN

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## 2 WATER SUPPLY AND APPURTENANCES

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### 2.1 EXISTING CONDITIONS

Locally, there is an existing 50 mm diameter watermain under the driveway connecting the existing building to the 150mm water main along Mississauga Heights Drive.

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### 2.2 WATER DEMANDS

Water service to the development will be provided from the existing 150mm diameter watermain on Mississauga Heights Drive.

A 150mm watermain will connect the development to the existing 150mm diameter watermain on Mississauga Heights Drive. Independent 25mm water services will be provided for each lot. The dead-end 150mm shared watermain will be looped in conformance with Region Standard 1-7-4 and include a private hydrant for fire protection.

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#### 2.2.1 FIRE WATER DEMANDS

The estimated fire flow has been calculated using the recommendations of the Fire Underwriters Survey. The fire flow calculation indicates that the recommended fire flow is 16,886 L/min (4,455 US GPM) given the residential dwellings, and proximity to other buildings. The detailed calculations are included in **Appendix A**.

There is currently 1 existing hydrant in the vicinity of the proposed development, approximately 20m north of the site entrance on Mississauga Heights Drive. An additional private hydrant is proposed in front of Lot C in accordance with Region Standard 1-7-4 and 1-6-1. The proposed water servicing and the hydrants locations are shown on **Figure 4**.

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#### 2.2.2 DOMESTIC WATER DEMANDS

Based on the unit count and the Region of Peel's population equivalents listed on page 4 of the Public Works Watermain Design Criteria manual, the proposed development will generate an equivalent population of 62.5 people based on the 1.25ha site area and 50 people per hectare for single family homes. Recognizing the proposed lots are large, we recommend applying a density of 4.15 people per unit to the 5 lots, generating a more realistic population of **21** people in this scenario. The existing site generates an average day demand of 0.01L/s and a peak hour demand of 0.04L/s. Applying a per capita flow of 280 l/cap/day and a peaking factor per the Region's criteria, the proposed site generates an average day demand of 0.07L/s and a peak hour demand of 0.20L/s as shown on the table below. The 4 additional proposed dwellings increase the average day demand by 0.06L/s and the peak hour demand by 0.16L/s. For detailed calculations, see **Appendix B**.



**Table 2.2.2 - Estimated Domestic Water Demand**

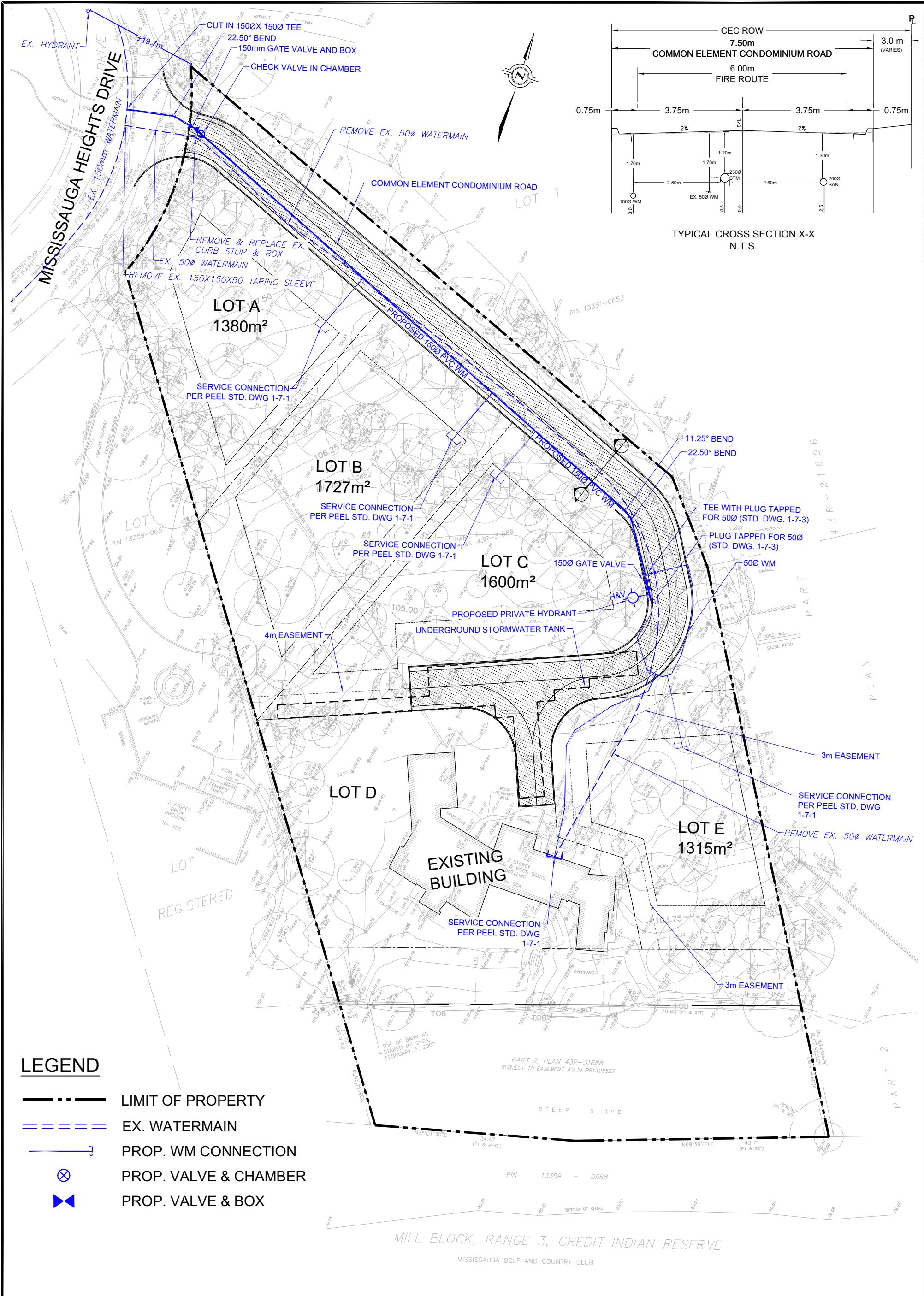
	Existing	Proposed
Residential Water Demand Rate	280 litres/person/day	280 litres/person/day
Total Residential Units	1 Detached Dwellings (4.15 ppu) <b>1 Unit Total</b>	5 Detached Dwellings (4.15 ppu) <b>5 Units Total</b>
Total Residential Population	4.15 people	21 people
Peaking Factors	Residential: Max. Day = 2.0, Peak Hour = 3.0	Residential: Max. Day = 2.0, Peak Hour = 3.0
Average Water Demand from Site	0.01 L/s	0.07 L/s
Peak Water Demand from Site	Max. Day = 0.03 L/s, Peak Hour = 0.04L/s	Max. Day = 0.13 L/s, Peak Hour = 0.20L/s

## 2.3 HYDRANT FLOW TEST

The required fire flow rate of the proposed development was calculated to be 16,886 L/min (281 L/s) in accordance with the Fire Underwriters Survey (FUS) recommendations. The maximum day demand for the proposed development was calculated to be 0.13 L/s. The total maximum day plus fire flow is therefore  $281 + 0.13 = 281.13$  L/s. Refer to **Appendix A and B** for detailed domestic and FUS fire flow calculations.


Hydrant flow tests were conducted in the vicinity of the site on Mississauga Heights Drive. A flow of 4900 USGPM (309L/s) could be achieved while maintaining a water pressure of 20 psi on Mississauga Heights Drive. Therefore, we can conclude that the watermain adjacent to the site have adequate capacity to support the domestic and fire water demands of the proposed development. Refer to **Appendix C** for hydrant flow test results.

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LEGEND

- LIMIT OF PROPERTY
- === EX. WATERMAIN
- PROP. WM CONNECTION
- ⊗ PROP. VALVE & CHAMBER
- ⊗ PROP. VALVE & BOX

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TITLE	904 MISSISSAUGA HEIGHTS DRIVE  WATER SERVICING PLAN	Checked T.C.	Drawn A.G.T.
		Date MAR 2021	Proj. No. 20M-01451
		Scale 1:600	Figure No. 4

## 3 SANITARY SERVICING

### 3.1 EXISTING CONDITIONS

Locally, there is an existing 250 mm sanitary sewer on Mississauga Heights Drive. An existing 65 mm sanitary forcemain connects the existing dwelling to the 250mm sanitary sewer on Mississauga Heights Drive.

#### 3.1.1 EXISTING SEWAGE FLOWS

The existing property contains a single family detached home. The residential building has a 65mm sanitary forcemain connection to the 250mm diameter sanitary sewer within Mississauga Heights Drive.

An estimate of the pre-development sanitary sewage flows from the site to the downstream sanitary sewer system has been calculated using the Region of Peel Design Criteria:

- Existing Sanitary Flow = 0.10 L/s

Detailed calculations of the pre-development flows are included in **Appendix D**.

### 3.2 POST-DEVELOPMENT SEWAGE FLOW

The proposed development will connect to the existing 250mm diameter sanitary sewer on Mississauga Heights Drive. This sewer then connects to the 900m sanitary sewer on The Queensway West, where it runs east.

Refer to **Figure 5** for the proposed sanitary servicing. Recognizing the proposed lots are large, we recommend applying a density of 4.15 people per unit to the 5 lots, generating a more realistic population of 21 people in this scenario. An estimate of the post-development sanitary sewage flows from the site to the downstream sanitary sewer system is based on the development statistics provided by Sajecki Planning, and has been calculated using the Region of Peel Design Criteria listed below:

**Table 3.2.1 – Estimated Sanitary Flow**

Sanitary Demand Rate	302.8 litres/person/day (STD. 2-9-2)
Total Residential Population	21 people
Average Residential Flow	0.07 L/s
Harmon Peaking Factor	M = 4.38
Peak Sanitary Residential Flow	0.318 L/s
Infiltration Flow	0.16 L/s
Total Sanitary Peak Flow	0.48 L/s

Refer to **Appendix D** for site statistics and detailed post-development flow calculations.

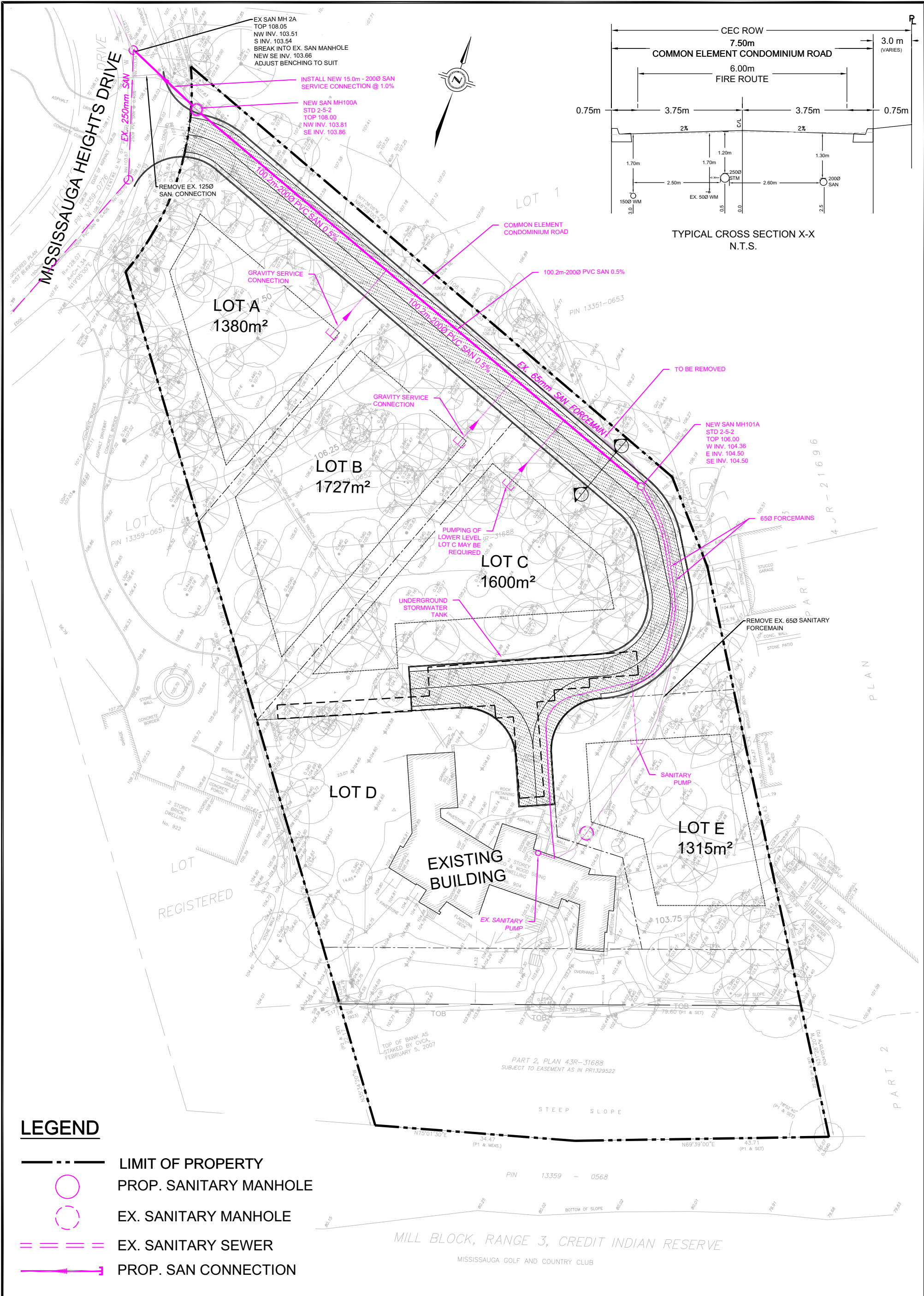
The approximate peak sanitary flow to The Queensway sanitary sewer for the pre- and post-development condition are 0.10 L/s and 0.48 L/s, respectively. Consequently, the increase in peak sanitary design flow resulting from this development to the combined sewer is 0.38 L/s.

### 3.3 SANITARY SERVICE

A 200mm shared sanitary sewer is proposed along the shared private CEC road to the 250mm diameter on Mississauga Heights Drive. Lots A to C will connect to the forcemain via gravity service connections. Lots D and E will require sanitary pumps. The proposed sanitary service connection to the site within the existing municipal road allowance will be designed to Region of Peel Standards. The sanitary pumps within the buildings will be designed by the site mechanical consultant during the Detailed Design phase in accordance with Ontario Plumbing Code Standards. As per the Region's requirements a control manhole is proposed to be placed immediately inside the property line, replacing the existing control manhole. The proposed sanitary servicing plan is shown on **Figure 5**.




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## LEGEND

- LIMIT OF PROPERTY
- PROP. SANITARY MANHOLE
- EX. SANITARY MANHOLE
- == EX. SANITARY SEWER
- PROP. SAN CONNECTION

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## 4 STORM DRAINAGE

A Stormwater Management Report for this development has been prepared under a separate cover. The Report is in compliance with the City and CVCA's Stormwater Management Requirements and identifies the stormwater quantity and quality controls under which this site will operate.

Described below is the existing storm sewer system based on the information provided by the City and Owner to-date.

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### 4.1 EXISTING CONDITIONS

The site currently sheet drains south from Mississauga Heights Drive to the south property limit and down the slope to the Mississauga Golf and Country Club and into the Credit River. There is generally a 2.5% slope from north to south, involving a 4.0m fall. Properties north of Mississauga Heights Drive, including the roadway drain towards the north and connect to the existing 375mm diameter storm sewer on Mississauga Heights Drive and the Queensway to a 1500mm Storm sewer that outlets to the Credit River.

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### 4.2 MINOR STORM DRAINAGE SYSTEM

Storm drainage from the development will continue to follow existing drainage patterns and be conveyed to the Credit River to the south. The proposed 250mm storm sewer system will capture the 10 year flows and direct the storm drainage to the stormwater detention tank.

In accordance with the Stormwater Management Report (prepared by WSP under separate cover) a stormwater system will be installed to meet the City and CVCA's Storm Drainage Guidelines. This system will include a storage/infiltration tank that will capture stormwater flows from the CEC road, Lots A, B, C and part of Lots D and E, controlling to 10 year pre-development. From the tank outlet, stormwater will be treated through a water quality unit. Uncontrolled flow from Lot D and E will continue to sheet drain towards the south property line and into the Credit River per existing conditions.

Please refer to the Stormwater Management Report for further details. Refer to **Figure 6** for the Storm Drainage Plan.

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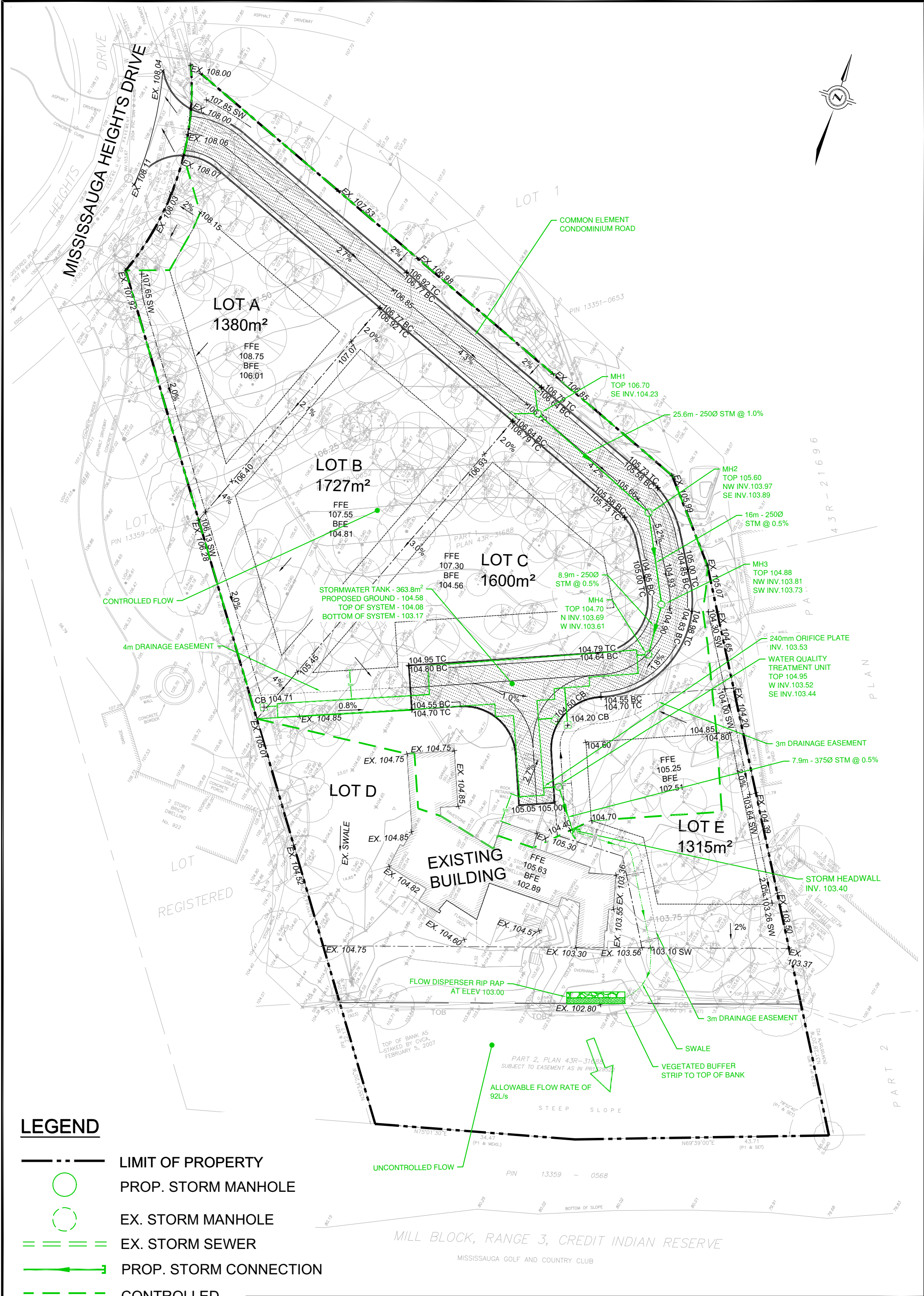
### 4.3 MAJOR STORM DRAINAGE SYSTEM

The major storm system is a conveyance system for flows in excess of the minor system flows.

For the development of the site, the grading design will be prepared such that the surface (i.e. roadway and lot areas) grades will direct surface drainage away from the buildings to the approved outlet. The proposed grading of the subject site will ensure that existing grade elevations will be met along the property limits. For major storm events exceeding the 100-year storm and the capacity of the cistern, an overland flow route will be designed to direct excess flows to the south property line. Refer to **Figure 7** for the Conceptual Grading Plan.



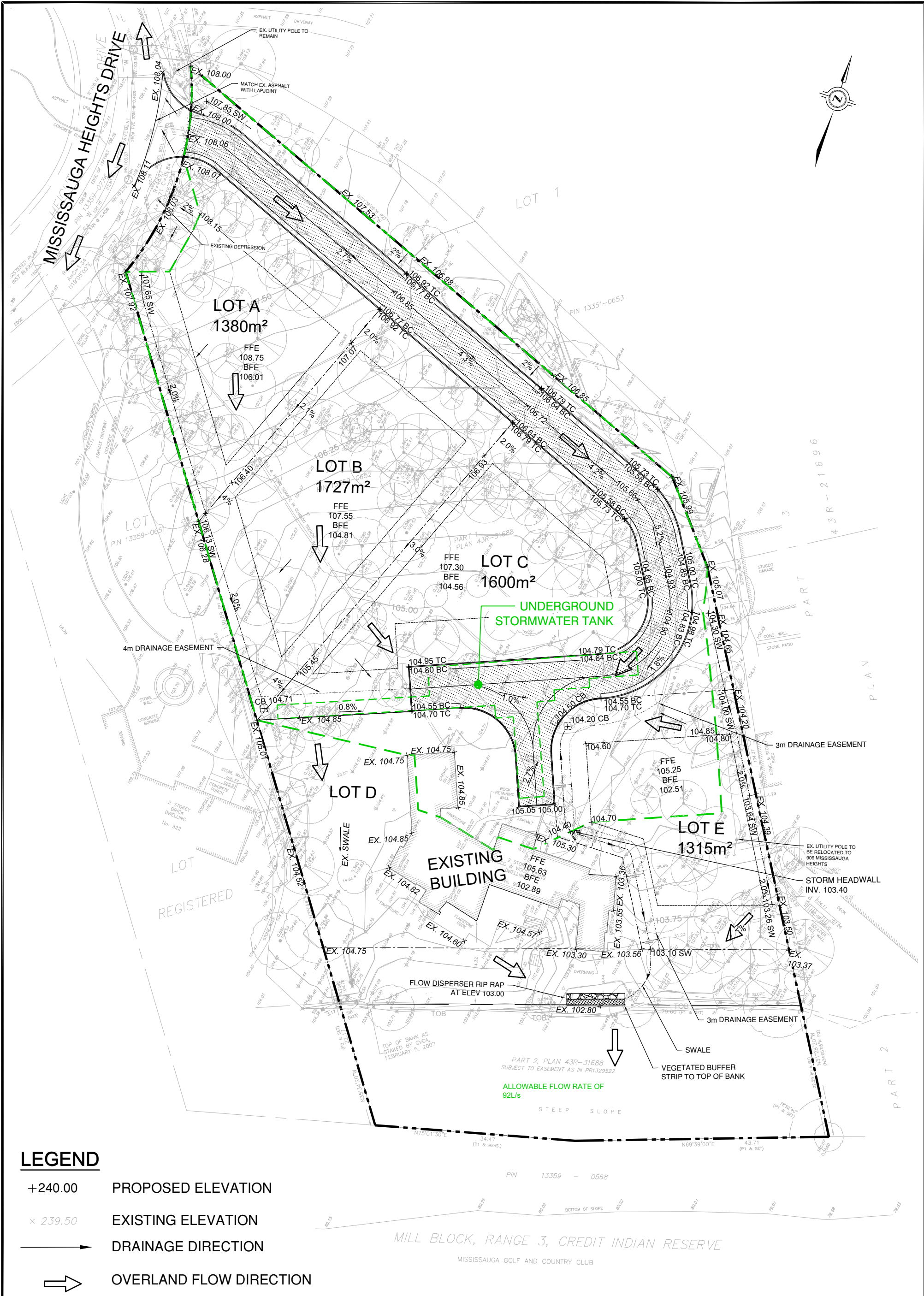
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FILENAME: X:\DIV\1020M-01451 904 Mississauga Heights DriveMunFigures20M-01451 Figures.dwg  
PLOTDATE: Mar 18, 2021 - 4:49pm, CAAAT070389



LEGEND

- +240.00 PROPOSED ELEVATION
- × 239.50 EXISTING ELEVATION
- DRAINAGE DIRECTION
- ⇨ OVERLAND FLOW DIRECTION
- - - CONTROLLED FLOW AREA

CLIENT	MARIO POLLA
TITLE	904 MISSISSAUGA HEIGHTS DRIVE CONCEPTUAL GRADING PLAN



100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
t: 905.882.1100 f: 905.882.0055 www.wsp.com

Checked	T.C.	Drawn	A.G.T.
Date	MAR 2021	Proj. No.	20M-01451
Scale	1:600	Figure No.	7

# 5 CONCLUSION

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## 5.1 WATER SERVICING

The proposed development will be serviced from the City's existing 150 mm diameter watermain on Mississauga Heights Drive. The development will be connected through a 150mm diameter watermain under the shared CEC road. Service connections to each lot will be 25mm and installed in accordance with Peel Standard Drawing 1-7-1. There is 1 existing hydrant on Mississauga Heights Drive approximately 20m north from the site entrance, and a proposed private hydrant in front of Lot C. At the end of the CEC roadway, the watermain will be looped in general accordance with Region Standard Drawing 1-7-4.

---

## 5.2 SANITARY SERVICING

The proposed development sanitary sewage will be conveyed to the existing 250 mm diameter sanitary sewer along Mississauga Heights Drive.

Sanitary service design within the City's Right-Of-Way will be designed to meet the standards and specification of the Region of Peel and City of Mississauga. A gravity sewer will be provided to the greatest extent possible, serving Lots A, B and C, while Lots D and E will require private pump with forcemains to direct the sanitary flow to the shared gravity sewer.

---

## 5.3 STORM SERVICING

The proposed development storm flows, including up to 100-year storm events, will be directed to the stormwater tank and controlled to the allowable levels, as described in the Stormwater Management Report. The site will be graded towards the south property limit, matching existing drainage patterns.


The proposed storm sewer network will connect to a stormwater storage unit and undergo water quality control, before outletting to a swale between Lots D and E. The swale will terminate at a rip rap flow disperser and flow over a vegetated buffer upstream of the top of slope in order to slow and spread out the flow before it spills over and down the bank to the Credit River. Refer to the Stormwater Management Report under a separate cover for additional details of the SWM system.





# APPENDIX

## A FIRE FLOW CALCULATION



## FIRE FLOW CALCULATIONS

Project: 904 Mississauga Heights Drive  
Job No.: 20M-001451

### Largest Building B

Fire flow required for a given area based on Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection (1999)

$$F = 220C\sqrt{A}$$

where

F = Fire flow in Litres per minute (Lpm)  
C = coefficient related to the type of construction  
A = total floor area in square metres

### Calculations per FUS

- Estimate of Fire Flow*  
C = 1.5 for wood frame construction  
A = 1520 m<sup>2</sup> (largest GFA plus 25% of GFA for two immediately adjoining floors)

$$F(f) = 12,866 \text{ Lpm}$$

- Occupancy Reduction*  
25% reduction based on being of low hazard occupancy.

$$F(occ) = 3,216 \text{ Lpm}$$

- Sprinkler Reduction*  
0% reduction for NFPA Sprinkler System

$$F(spr) = 0 \text{ Lpm}$$

- Separation Charge*

Face	Distance (m)	Charge
N Side	7.5	20%
E Side	6	20%
S Side	7.5	20%
W Side	4.8	20%
Total		80%

$$\text{FUS Limits Separation Charge to 75\% Maximum: } F(\text{sep}) = 9,649 \Rightarrow 7,237$$

$$\begin{aligned} F &= F(f) - F(occ) - F(spr) + F(\text{sep}) = 16,886 \text{ Lpm} & (F > 2,000 \text{ Lpm; OK}) \\ F &= 4,455 \text{ US GPM} \\ F &= 0.2814 \text{ cubic m/s} \\ F &= 281 \text{ L/s} \end{aligned}$$

# APPENDIX

## B WATER DEMAND

## APPENDIX B

### THEORETICAL DOMESTIC WATER DEMAND CALCULATIONS

PRE-DEVELOPMENT

Project: 904 Mississauga Heights Drive

Job No.: 20M-01451 FSR

#### Proposed Development

Unit Type	Unit Quantity	Population per Unit <sup>1</sup>	Total Population	Average Daily Water Demand <sup>2</sup> (280 L/cap/d)		Maximum Day Demand Peaking Factor <sup>3</sup>	Maximum Day Demand (L/s)	Maximum Hour Demand Peaking Factor <sup>4</sup>	Peak Hour Demand (L/s)
				(L/s)	(m <sup>3</sup> /day)				
Residential	1	4.15	4	0.01	1.16	2.00	0.03	3.00	0.04

Note 1: Population Densities per Region of Peel Public Works Design Criteria Manual

4.15 pop/acre assumed instead of 50pop/hectare due to large size of lots

Note 2: Average Day Domestic Demand per Region of Peel Public Works Watermain Design Criteria, June 2010, page 4

280 L/cap/day

Note 3 & 4: Maximum Demand Peaking Factors per Region of Peel Public Works Watermain Design Criteria, June 2010, page 4

Maximum Day Demand Factor = 2.0 and Peak Hour Demand Factor = 3.0

## APPENDIX B

### THEORETICAL DOMESTIC WATER DEMAND CALCULATIONS

POST-DEVELOPMENT

**Project:** 904 Mississauga Heights Drive

**Job No.:** 20M-01451 FSR

#### Proposed Development

Unit Type	Unit Quantity	Population per Unit <sup>1</sup>	Total Population	Average Daily Water Demand <sup>2</sup> (280 L/cap/d)		Maximum Day Demand Peaking Factor <sup>3</sup>	Maximum Day Demand (L/s)	Maximum Hour Demand Peaking Factor <sup>4</sup>	Peak Hour Demand (L/s)
				(L/s)	(m <sup>3</sup> /day)				
Residential	5	4.15	21	0.07	5.81	2.00	0.13	3.00	0.20

Note 1: Population Densities per Region of Peel Public Works Design Criteria Manual

4.15 pop/acre assumed instead of 50pop/hectare due to large size of lots

Note 2: Average Day Domestic Demand per Region of Peel Public Works Watermain Design Criteria, June 2010, page 4

280 L/cap/day

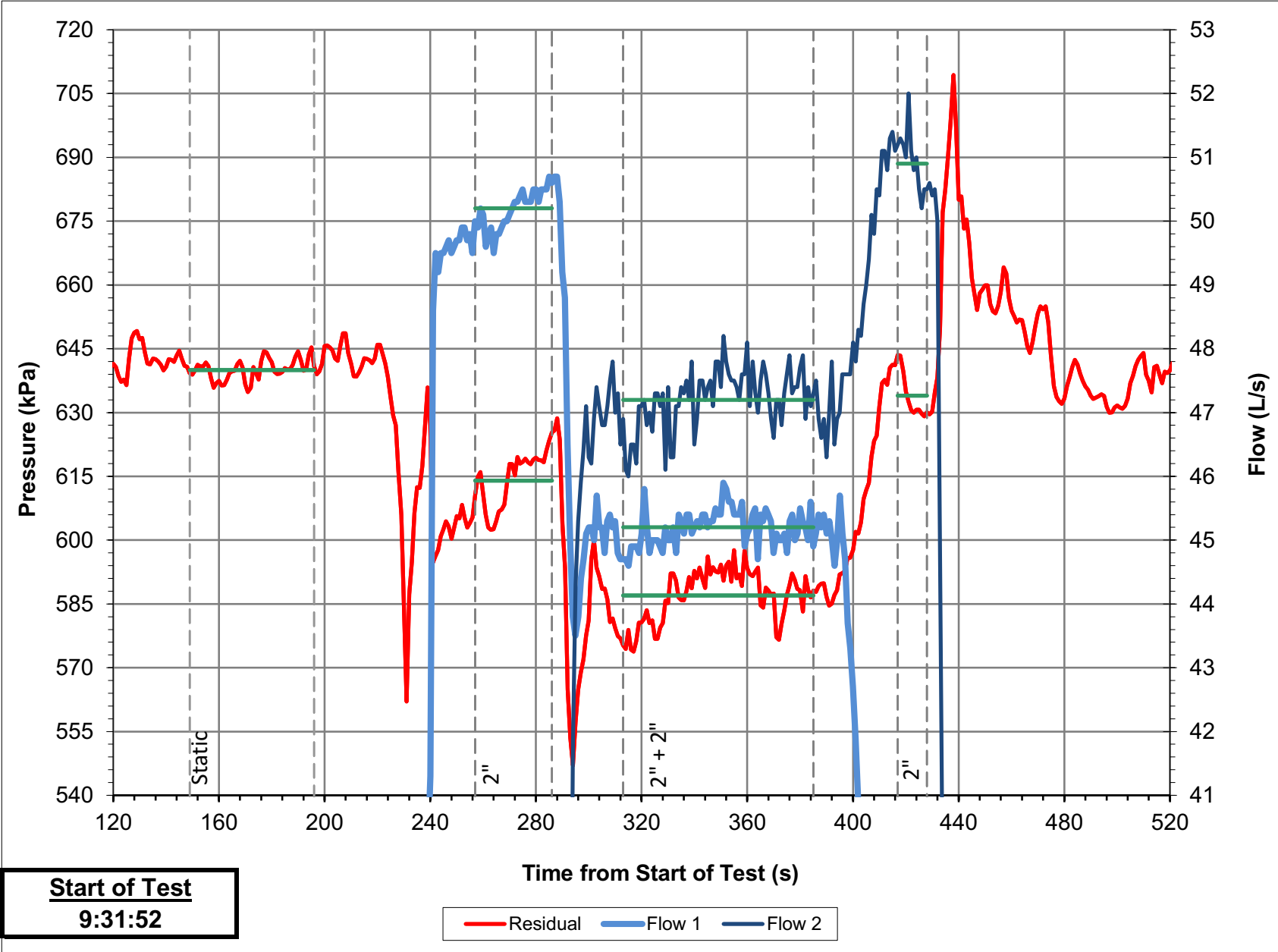
Note 3 & 4: Maximum Demand Peaking Factors per Region of Peel Public Works Watermain Design Criteria, June 2010, page 4

Maximum Day Demand Factor = 2.0 and Peak Hour Demand Factor = 3.0

# APPENDIX

## C HYDRANT FLOW TEST

Test 1 - 904 Mississauga Height



Subject Watermain Details			
Diameter:	150 mm	Material:	PVC
Area:	0.018 m2		

Subject Hydrant & Valve Details	
Residual Hydrant:	
Flow Hydrant:	

TABLE A: TESTED PRESSURES AND FLOWS

Point	Time		Residual		Flow Hydrant ( )				Total Flow		Velocity
			on Residual Hydra		Port 1 (S1)		Port 2 (S2)				
	Start	Finish	(kPa)	(psi)	(L/s)	(GPM)	(L/s)	(GPM)	(L/s)	(GPM)	(m/s)
Static	149	196	640	92.8	0.0	0	0.0	0	0.0	0	0.0
2"	257	286	614	89.1	50.2	796	0.0	0	50.2	796	2.8
2"	417	428	634	92.0	0.0	0	50.9	807	50.9	807	2.9
1" + 2"			0	0.0	0.0	0	0.0	0	0.0	0	0.0
2" + 2"	313	385	587	85.1	45.2	716	47.2	748	92.4	1465	5.2





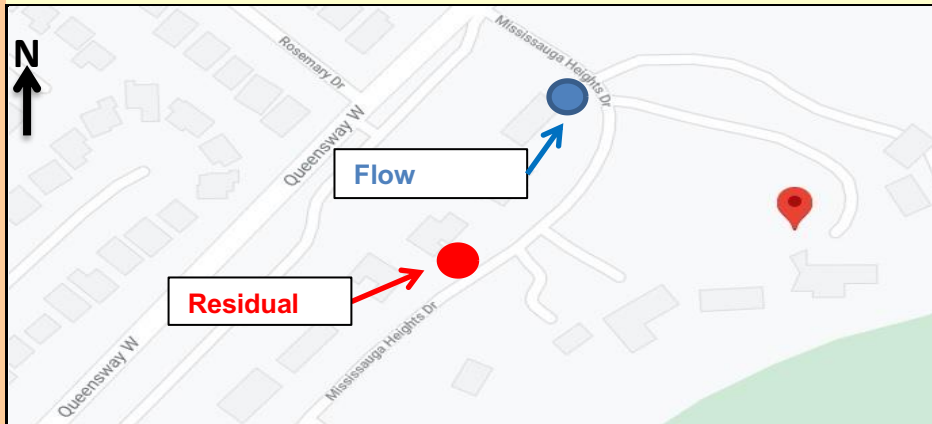
# 904 Mississauga Height

## HYDRANT FLOW TEST RESULTS

Date: 26-Nov-20  
Tested By: Sen

Time: 9:31  
(hh/mm)

Municipality: City of Mississauga  
Operator: 0  
Test No: 1



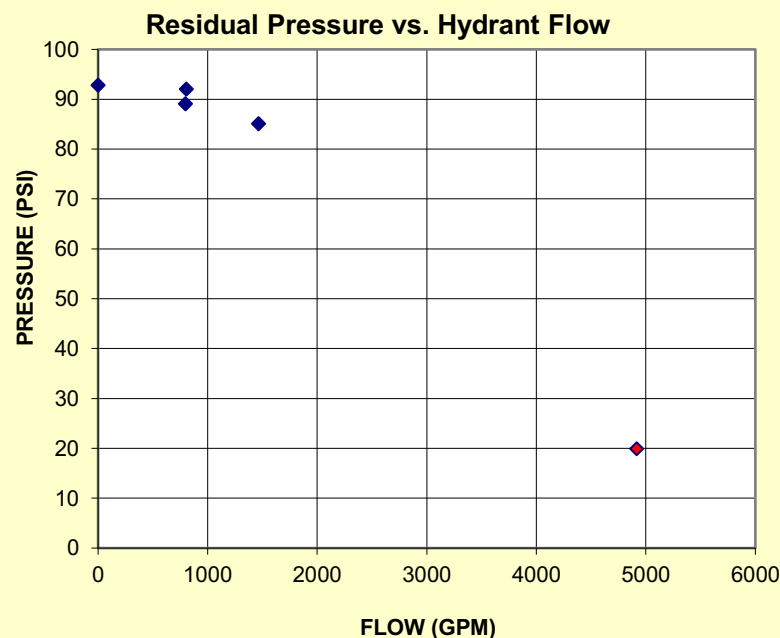
### Conditions before Test (STATIC)

Residual Hydrant: 92.8 psi 640 kPa  
Hydrant that will Flow: 92.8 psi 640 kPa  
 $\Delta$  pressure: 0.0 psi 0 kPa  
Elevation Difference: 0.0 ft 0.0 m  
(Flow El. - Residual El.)

Test Notes:

TEST		TEST FLOW		RESIDUAL PRESSURE (psi)		Minimum Residual P <sub>r</sub> (psi)	Fire Flow at Minimum Residual, Q <sub>r</sub> (USGPM)	Fire Flow at Minimum Residual, Q <sub>r</sub> (L/s)	8% Pressure Drop Achieved?
Port Size (in)	Nozzle Pressure (psi)	(USGPM)	(L/s)	Monitoring Hydrant	Flow Hydrant (Corrected) *				
STATIC	n/a	0	0	92.8	92.8				
Single Port Tests									
2	26.0	796.0	50.2	89.1	89.1	20	3964	250	NO
2	26.8	807.0	50.9	92	92.0	20	9075	573	NO
Two Port Test									
1						20			
2									
Two Port Test									
2	21.1	716.0	45.2	85.1	85.1	20	4917	310	YES
2	23	748.0	47.2						

\* Pressure correction is equal to the elevation difference. Column 2 (and Table A) show the nozzle pressure while flowing.



Results			
Static Pressure		Flow at 20 psi (140kPa)*	
(psi)	(kPa)	(gpm)	(L/s)
92.8	640	4900	309

\* Results carried to nearest 50 gpm or 100 gpm if over 1000 gpm

Hydrant Classification as per NFPA 291			
Class	AA	Color	BLUE

Water Discharged During Test:	15300 L
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Rounded up to closest 100L

### DISCLAIMER FOR FIRE FLOW TESTS

While WSP makes every effort to ensure that the information contained herein is accurate and up to date, WSP is not responsible for unintended or incorrect use of the data and information described and/or contained herein. The user must make his/her own determination as to its accuracy and suitability. The information is representative for a dynamic water system that may change over time.

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# APPENDIX

## D SANITARY FLOWS

**APPENDIX D**  
**904 Mississauga Heights Drive**  
**Pre-Development Site Statistics**

**Residential Units**

Unit Type	Quantity	Lot Area (hectares)	Pop./Unit	Population
Single Family Detached (greater than 10m frontage)	1	0.1956	4.15	4
<b>Total</b>				<b>4</b>

**Sanitary Flow**

Res Population =	4
Avg Day Res Flow =	0.015 L/s (assumes 302.8 L/cap/d)
Res Peak Factor =	4.44 (Harmon Formula)
Peak Res Flow =	0.065 L/s
Infiltration Flow =	0.039 L/s
<b>Total Peak San Flow =</b>	<b>0.10 L/s</b>

**APPENDIX D**  
**904 Mississauga Heights Drive**  
**Post-Development Site Statistics**

**Residential Units**

Unit Type	Quantity	Lot Area (hectares)	Pop./Unit	Population
Single Family Detached (greater than 10m frontage)	5	0.7978	4.15	21
			<b>Total</b>	<b>21</b>

**Sanitary Flow**

Res Population =	21
Avg Day Res Flow =	0.073 L/s (assumes 302.8 L/cap/d)
Res Peak Factor =	4.38 (Harmon Formula)
Peak Res Flow =	0.318 L/s
Infiltration Flow =	0.160 L/s
<b>Total Peak San Flow =</b>	<b>0.48 L/s</b>



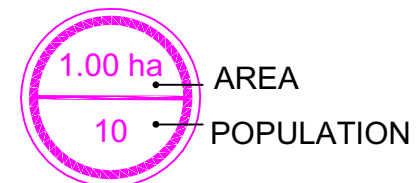
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PLOTDATE: Mar 18, 2021 - 5:29pm, CAA7070389



@2019 Google Maps @2019 First Base Solutions @2019 Tele Atlas

## LEGEND

- LIMIT OF PROPERTY
- SANITARY DRAINAGE BOUNDARY
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- OVERALL DRAINAGE DIRECTION



CLIENT

MARIO POLLÁ

TITLE

904 MISSISSAUGA HEIGHTS DRIVE  
EXTERNAL SANITARY  
DRAINAGE PLAN

**wsp**

100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
t: 905.882.1100 f: 905.882.0055 www.wsp.com

Checked	T.C.	Drawn	G.W.
Date	MAR 2021	Proj. No.	20M-01451
Scale	NTS	Figure No.	SA1



**THE REGIONAL MUNICIPALITY OF PEEL  
SANITARY DESIGN CHART  
EXISTING CONDITIONS  
904 Mississauga Heights Drive**

**CONSULTANT:**  
**WSP Canada Inc.**

**\* DESIGN FLOWS AS PER REGION OF  
PEEL SANITARY SEWER DESIGN FLOW**

DATE: 16-Mar-21

DESIGNED BY: A.T.

CHECKED BY: T.C.

DRAINAGE AREA PLAN NO.:

Manning's n= 0.013

[illegible]

**THE REGIONAL MUNICIPALITY OF PEEL  
SANITARY DESIGN CHART  
PROPOSED CONDITIONS  
904 Mississauga Heights Drive**

**CONSULTANT:**  
**WSP Canada Inc.**

**\* DESIGN FLOWS AS PER REGION OF  
PEEL SANITARY SEWER DESIGN FLOW**

DATE: 16-Mar-21

DESIGNED BY: A.T.

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DRAINAGE AREA PLAN NO.:

Manning's n= 0.013

[illegible]