FUNCTIONAL SERVICING & PRELIMINARY STORMWATER MANAGEMENT REPORT

1108 & 1094 EGLINTON AVENUE EAST

CITY OF MISSISSAUGA REGION OF PEEL

PREPARED FOR:

ALI MOTORS

PREPARED BY:

C.F. CROZIER & ASSOCIATES INC. 2800 HIGH POINT DRIVE, SUITE 100 MILTON, ON L9T 6P4

MARCH 2021

CFCA FILE NO. 1277-4440

The material in this report reflects best judgment in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. C.F. Crozier & Associates Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.



Revision Number	Date	Comments
Rev.0	April 2017	Issued for First Submission
Rev.1	December 2018	Issued for Second Submission (additional property added)
Rev.2	March 2021	Issued for Third Submission

TABLE OF CONTENTS

1.0		Introduction	1
2.0		Site Description	1
3.0		Water Servicing	2
	3.1 3.2 3.3	Existing Water Servicing Design Water Demand Proposed Water Servicing	2 2 2
4.0		Sanitary Servicing	3
	4.1 4.2 4.3	Existing Sanitary Servicing Design Sanitary Flow Proposed Sanitary Servicing	3 3 3
5.0		Drainage Conditions	4
	5.1 5.2	Existing Drainage Proposed Drainage	4 4
6.0		Stormwater Management	5
	6.1 6.2 6.3	Stormwater Quantity Control Stormwater Quality Control Water Balance	5 6 7
7.0		Erosion and Sediment Controls During Construction	8
8.0		Conclusions and Recommendations	8

LIST OF TABLES

Table 1:	Estimated Domestic Water Demand
Table 2:	Estimated Sanitary Design Flows
Table 3:	Pre-Development and Post-Development RC Comparison
Table 4:	Post-Development Target Flow Rates
Table 5:	Post-Development Controlled Peak Flow Rates
Table 6:	Required Storage and Provided Storage
Table 7:	Water Quality Summary
Table 8:	Site Water Balance Summary

LIST OF APPENDICES

Appendix A:	Water Demand Calculations
Appendix B:	Sanitary Design Flow Calculations
Appendix C:	Stormwater Management Calculations

LIST OF DRAWINGS

- Drawing C01: Site Servicing Plan
- Drawing C02: Site Grading Plan
- Figure 1: Pre-Development Drainage Plan
- Figure 2: Post-Development Drainage Plan

1.0 Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by Ali Motors to prepare a Functional Servicing & Preliminary Stormwater Management Report in support of the Zoning By-Law (ZBA) for a proposed commercial development at 1094 and 1108 Eglinton Avenue East in the City of Mississauga, Region of Peel. The Zoning By-Law in effect (0225-2007) classifies the existing zoning for 1108 and 1094 Eglinton Avenue East as Development (D) and Commercial (C3-64), respectively.

The purpose of this report is to demonstrate that the proposed site can be developed in accordance with the City of Mississauga and Region of Peel guidelines from a functional servicing & preliminary stormwater management perspective.

The following reports and design standards were referenced during the preparation of this report:

- Region of Peel Public Works Design, Specifications & Procedures Manual, July 2009
- City of Mississauga Transportation and Works Department Development Requirements
 Manual, 2016
- Ministry of Environment (MOE) Stormwater Management Planning and Design Manual, 2003
- Greater Golden Horseshoe Area Conservation Authorities Erosion & Sediment Control Guidelines for Urban Construction, 2006

2.0 Site Description

The subject property, comprising of the adjacent properties 1108 and 1094 Eglinton Avenue East, covers a combined area of approximately 0.51 ha. The property is located in a commercial/industrial neighbourhood with some mixed residential units in the area. The properties currently consist of a detached dwelling, compacted gravel parking area, and landscaped area.

The property is bounded by:

- Eglinton Avenue East to the north
- A treed lot and commercial development to the south
- A detached dwelling to the east
- Little Etobicoke Creek to the west

The proposed Site Plan (Brian Luey Architect Inc., March 5, 2021) consists of:

- Two proposed 1-storey commercial buildings with an approximate gross floor area of 526 m² and 325 m² respectively
- An entrance driveway off Eglinton Avenue East
- Parking areas and landscaped areas
- 3.5 m ROW widening from Eglinton Avenue East

3.0 Water Servicing

The Region of Peel is responsible for the operation and maintenance of the public water and treatment system in the City of Mississauga, and any local servicing will have to connect to this public system.

3.1 Existing Water Servicing

A review of the Region of Peel as-constructed drawing 28461-D dated March 2002 indicates that:

- There is an existing 300 mm watermain (local watermain) along Eglinton Avenue East. The watermain runs on the north side of Eglinton Avenue, approximately 35 m away from the property line.
- The subject properties are currently serviced by an existing water service connection connecting to the 300 mm watermain.
- There is also an existing 600 mm watermain (local transmission feedermain) along Eglinton Avenue. This watermain runs approximately 9 m away from the property line.

3.2 Design Water Demand

To estimate the proposed water demand, Region of Peel design criteria was considered and used to determine the maximum flows generated by the proposed development. A summary of the results is presented below in Table 1, and detailed domestic water demand calculations are provided in Appendix A.

Design	Average Day	Max Day	Peak Hour	Standard
Criteria	(L/s)	(L/s)	(L/s)	
Region of Peel	0.21	0.29	0.63	Region of Peel Standards – Public Works Sanitary Sewer Design Criteria (Revised July 2009)

Table 1: Estimated Domestic Water Demand

For this application, there is one individual domestic service sized to convey a peak hour demand rate of 0.63 L/s, as determined by Region of Peel Standards.

3.3 Proposed Water Servicing

The development is proposed to be serviced by a 50 mm diameter water service. The proposed 50 mm diameter water service will connect to the existing 300 mm diameter watermain using a tapping sleeve and valve. A valve & box per City standards is proposed at the property line.

The proposed Water Servicing Plan is shown on the Site Servicing Plan (Drawing C01).

4.0 Sanitary Servicing

The Region of Peel is responsible for the operation and maintenance of the public sewage collection and treatment system in the City of Mississauga, and any local sewage services will have to connect to this public system.

4.1 Existing Sanitary Servicing

A review of the Region of Peel as-constructed drawing 28461-D dated March 2002 indicates that there is an existing 450 mm sanitary sewer along Eglinton Avenue East approximately 38 m away from the property line. The sanitary sewer flows westward from the property at a 1.72% slope. The existing residential house on the site is not shown to be connected to this sanitary line.

4.2 Design Sanitary Flow

To estimate the proposed sanitary design flows, Region of Peel design criteria has been considered and used to determine the design flows generated by the development. A summary of the results is presented below in Table 2, and detailed sanitary demand calculations are provided in Appendix B.

Design	Average Day	Peak Flow	Peak Flow +	Standard
Criteria	(L/s)	(L/s)	Infiltration Flow (L/s)	
Region of Peel	0.21	0.90	1.00	Region of Peel Public Works Design Criteria Manual – Sanitary Sewer July 2009

Table 2: Estimated Sanitary Design F	ows
--------------------------------------	-----

Based on the Region of Peel Standard Drawing 2-9-2, the minimum flow rate for a population of less than 1000 people shall be 13 L/s. As such, sanitary services will be sized to meet the requirement of 13 L/s.

4.3 Proposed Sanitary Servicing

A proposed sanitary service will be constructed as shown on the Site Servicing Plan (Drawing C01) in accordance with City of Mississauga and Region of Peel criteria. The proposed sanitary service, a 150 mm diameter sanitary sewer installed at 1% slope, will discharge to the 450 mm diameter sanitary sewer flowing westward along Eglinton Avenue. The proposed sewer service will have a capacity of 15 L/s which is sufficient to service the development.

The Site Servicing Plan (Drawing C01) illustrates the location of the sanitary sewer and all connections. The internal sanitary system of the building will be designed per the mechanical engineer's details and specifications.

5.0 Drainage Conditions

The drainage conditions for the site in both pre-development and post-development conditions have been outlined separately below.

5.1 Existing Drainage

The subject properties currently consist of a detached dwelling, compacted gravel parking area, and landscaped area.

A review of topographic survey indicates that under existing conditions, the site drains uncontrolled via sheet flow towards Little Etobicoke Creek. The majority of the site runoff flows and discharges south-west towards Little Etobicoke Creek, as shown in the Pre-Development Drainage Plan (Figure 1).

Upon review of Section 2 – Design Requirements of the City of Mississauga Transportation and Works Department Development Requirements Manual (2016) and discussions with City of Mississauga engineering staff, it was concluded that a pre-development runoff coefficient of 0.50 be used for the site area envisioned for development. Refer to Section 6.0 for a discussion on stormwater management and the application of the pre-development runoff coefficient.

5.2 Proposed Drainage

Upon development of the subject property, drainage will be collected and conveyed via an internal storm sewer system. Major flow will discharge towards Little Etobicoke Creek through an existing headwall; the major overland flow route of the site is proposed to remain consistent with existing conditions with drainage flowing southwest toward Little Etobicoke Creek.

The Post-Development Drainage Plan (Figure 2) illustrates the proposed drainage of the site. Table 3 below provides a runoff coefficient comparison for the developable area of the site under pre- and post-development conditions. Detailed stormwater management calculations are provided in Appendix C.

Conditions	Catchment	Area (ha)	RC	
Pre-Development	101	0.38	0.50	
	201	0.25	0.84	
	202	0.05	0.90	
Best Dovelenment	UC01	0.03	0.28	
Posi-Development	UC02	0.05	0.25	
	UC03	0.002	0.25	
	Total Post-Dev	0.38	0.73	

Table 3: Pre-Development and Post-Development RC Comparison

The stormwater runoff from catchment 201 will be controlled by a 75 mm orifice tube and the storage will be provided through underground storage chamber. The roof runoff from Building B (catchment 202) will be restricted with roof flow control devices and discharge towards Little Etobicoke Creek.

6.0 Stormwater Management

Stormwater management design criteria were established with the City of Mississauga, Region of Peel, Toronto Region Conservation Authority (TRCA), and Ministry of Environment. The following criteria are applicable for the subject property:

- Stormwater Quantity Control Design Criteria: City of Mississauga criteria dictate that a control for all design storms (2, 5, 10, 25, 50, and 100-year) to 2-year pre-development control, using a pre-development runoff coefficient of 0.50. Per TRCA's 'Stormwater Management Criteria' (August 2012), post-development release rates are required to meet the mandated Etobicoke Creek stormwater unit flow control release rates. The more stringent of the two shall govern.
- Stormwater Quality Control Design Criteria: Enhanced Level of runoff water quality protection equivalent to 80% total suspended solids removal as specified in 'Stormwater Management Criteria' (August 2012).
- Water Balance: The TRCA requires the on-site retention of the first 5 mm of every rainfall event.
- **Erosion:** Best efforts to reduce erosion and sediment during construction, additionally, first 5 mm of every rainfall event is to be retained on site.

6.1 Stormwater Quantity Control

The Modified Rational Method was used to determine the pre-development and post-development runoff peak flows for the proposed development, based on the City of Mississauga intensityduration-frequency (IDF) rainfall data and an initial time of concentration of 15 minutes. These peak flows were used to determine the volume of storage required on-site in accordance with City of Mississauga stormwater management criteria.

The TRCA Stormwater Management Criteria report (August 2012) was used to obtain unit release rates for discharge to Little Etobicoke Creek. The release rates are calculated based on the developable area of the site (0.38 ha) and compared to the City of Mississauga peak flow for 2-year pre-development, as shown in Table 4.

Storm	TRCA Unit Flow (L/s/ha)	TRCA Target ¹ (L/s)	City of Mississauga 2-year Target ² (L/s)
2-year	31.1	12.0	
5-year	45.2	17.4	
10-year	56.0	21.5	
25-year	69.3	26.6	22.1
50-year	82.1	31.6	
100-year	93.0	35.8	

Table 4: Post-Develop	oment Targe	Flow Rates
-----------------------	-------------	------------

Note: 1. TRCA target flow rates = Developable Site Area (0.38ha) x Unit Flow Rates (L/s/ha) 2. City of Mississauga Target = 2-year Pre-development Peak Flow – 100-year Uncontrolled Peak Flow As shown in Table 4, the target flow rate that are calculated based on the City of Mississauga stormwater guidelines, provide higher release rates under post-development conditions than the TRCA flow targets. Hence, City of Mississauga peak flow is used to determine the required on-site detention storage.

Storm	City of Mississauga 2- year Target (L/s)	Controlled Qorifice-201 (L/s)	Controlled QROOF-202 (L/S)	Controlled Qtotal (L/s)
2-year				
5-year				
10-year	20.1	17.1	2.2	10.2
25-year	22.1	10.1	2.2	10.5
50-year				
100-year				

Table 5: Post-Development Controlled Peak Flow Rates

To meet the City of Mississauga stormwater quantity control, orifice control device is proposed for Catchment 201 and rooftop flow control devices are proposed for Catchment 202. The total controlled flow for the entire development will be 18.3 L/s, lower than the target flow rate of 22.1 L/s as shown in Table 5.

Stormwater runoff generated from Catchment 201 will be controlled by a 75 mm diameter orifice tube and a storage volume of approximately 114 m³ is required to meet the City of Mississauga criteria of controlling the 100-year post-development peak flow down to the 2-year predevelopment peak flow. The underground storm chamber (Triton S29 or equivalent) will provide 133 m³, which will meet the required storage volume for catchment 201.

Rooftop runoff generated from Building B (Catchment 202) will be controlled by rooftop control devices at a unit rate of 42 L/s/ha and a storage volume of 26 m³ is required. Building B will provide a ponding depth of 10 cm with available storage volume of 53 m³. See table below and Appendix C for details.

Cato	hment 201	Catchment 202 – Building B Roof		
Required Volume (m ³)	Provided Underground Storage Volume(m ³)	Required Volume (m ³)	Provide Roof Ponding Volume(m ³)	
114	133	26	53	

Table 6: Required Storage and Provided Storage

As shown in Table 6, sufficient storage volumes are provided for catchment 201 and 202, which satisfy the required storage volumes.

6.2 Stormwater Quality Control

Stormwater quality controls for the site must incorporate measures to provide an Enhanced Level of Protection (Level 1) according to the MOE (March 2003) guidelines. Enhanced water quality protection involves the removal of at least 80% of the total suspended solids (TSS) from 90% of the annual runoff volume.

A treatment train approach was used to achieve the quality control criteria. The treatment train includes CB shields at each catchbasin structures and an oil-grit-separator (model EFO). The oil-grit-separator (OGS) will be located upstream of the underground storage chamber provides pretreatment prior to infiltration and details will be provided in detail design stage. TSS removal performance of the proposed SWM treatment train based on the individual removal rates obtained from the MECP SWM Planning and Design Manual (2003) is summarized in Table 7.

Table	7:	Water	Quality	Summarv
	•••		~~~,	••••

Treatment Train	TSS Removal Rate	Total Removal Rate %
CB Shields	50%	90
OGS (model EFO)	60%	80

As shown in Table 7, the treatment train approach provides the TSS removal rate of 80%, achieving the required TSS removal rate.

6.3 Water Balance

The water balance criteria for the site based on City of Mississauga design criteria is to retain the first 5 mm of runoff on site by infiltration, evapotranspiration, and/or reuse. The water balance volume requirements for the site are listed in Table 8. Detailed calculations are presented in Appendix C.

Table 8: Site Water Balance Summary

Developable Site Area	Water Balance Criteria	Volume Required
(m²)		(m ³)
3,845	Retain first 5 mm	19.2

Open Bottom Underground Storage Chamber

One option to retain stormwater runoff on site for water balance purposes is to provide the required storage volume within a small underground storage chamber system complete with an open bottom. This system would be designed to infiltrate storage rainwater into the underlying native soils. With the footprint of 190.20 m² and 300 mm stone depth underneath the chamber, 22.8 m³ will be provided for infiltration, which meets the water balance requirement.

<u>On-Site Reuse</u>

One alternative to infiltration to retain the first 5 mm of rainfall is to store the runoff volume within an on-site cistern or reservoir to reuse for irrigation purposes.

Further review and design of the chosen option for meeting the water balance criteria will be completed during detailed design.

7.0 Erosion and Sediment Controls During Construction

Erosion and sediment controls will be installed prior to the commencement of any construction activities and will be maintained until the site is stabilized or as directed by the Site Engineer and/or the City of Mississauga. Controls are to be inspected after each significant rainfall event and maintained in proper working condition. A Removals & Erosion and Sediment Control Plan will be prepared at the detailed design stage.

The following sediment and erosion control options will be incorporated at detailed design:

Heavy Duty Silt Fencing

Heavy duty silt fence will be installed on the perimeter of the site to intercept sheet flow. Additional silt fence may be added based on field decisions by the Site Engineer and Owner, prior to, during and following construction.

Rock Mud Mat

A rock mud mat will be installed at the entrance to the construction zone in order to prevent mud tracking from the site onto the surrounding lands and perimeter roadway network. All construction traffic will be restricted to this access only.

Double Wrapped Catchbasins

The existing storm sewer catchbasins located in the vicinity of the site on Eglinton Avenue East shall be double wrapped in filter cloth during construction.

8.0 Conclusions and Recommendations

Based on the information contained within this Functional Servicing and Preliminary Stormwater Management Report, we offer the following conclusions:

- 1. The proposed development can be serviced through connections to the existing water and sanitary infrastructure located within Eglinton Avenue East ROW.
- 2. The water demand for the proposed development will be met using a new 50 mm diameter water service connection, which will connect to the existing 300 mm municipal watermain along Eglinton Avenue.
- 3. The sanitary flow for the proposed development will be met using a new 150 mm diameter PVC sanitary sewer connection, which will connect to the existing 450 mm sanitary sewer along Eglinton Avenue.
- 4. Drainage will be collected and conveyed via an internal storm sewer system that will connect into an existing storm outfall to Little Etobicoke Creek. The internal storm sewer will be sized in accordance with City of Mississauga design requirements.
- 5. Stormwater management quantity control for the proposed development will control the 100-year post-development peak flow rate to the 2-year pre-development peak flow in accordance with the City of Mississauga's requirements for stormwater quantity control. Stormwater quantity control will be provided through approximately 133 m³ of underground storage in a Triton system or equivalent.

- 6. Stormwater quality control for the proposed development will be achieved by treatment train approach, including catchbasin shields and oil-arit-separator. Detailed sizing for the oilgrit-separator will be provided during detailed design.
- 7. Per the City of Mississauga's design criteria for water balance, the first 5 mm of runoff on site must be retained by infiltration, evapotranspiration, and/or reuse. As such, a storage volume of 19.2 m³ will be provided through an open-bottom underground storage chamber or approved equivalent.
- 8. Erosion and sediment controls, such as silt fences and rock mud mat, are proposed to be installed prior to the commencement of any construction activities. A Removals & Erosion and Sediment Control Plan will be prepared at the detailed design stage.

As such, we recommend approval of the Zoning By-Law for the development of the subject lands from the perspective of site servicing and stormwater management requirements.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.

Shiying (Heaven) Lin, E.I.T.

Land Development

C.F. CROZIER & ASSOCIATES INC.

or Project Manager

HL/stm

1200\1277-Ali Rafaqat\4440-1108 Eglinton Ave E\Reports\2021.03.04 FSR_SWM\2021.03.24 FSR & SWM.docx

APPENDIX A

Water Demand Calculations



Project: 1108 & 1094 Eglinton Avenue Project No.: 1277-4440 Date: 2021-03-21 Created By: KR Checked By: HL/TE

WATER DEMAND CALCULATIONS 1108 & 1094 EGLINTON AVENUE EAST CITY OF MISSISSAUGA, REGION OF PEEL

Region of Peel

Site Area = Occupancy =	0.51 Commercial	ha
Population Density =	50	persons/ha
Population =	60	persons
Commercial Water Demand		
Average Daily Demand = Max Day Factor = Peak Hour Factor =	300 1.4 3.0	L/employee/d - -
Average Day = Max Day = Peak Hour =	0.21 0.29 0.63	L/s L/s L/s

Design	Average Daily Water	Max Day	Peak Hourly
Criteria	Demand (L/s)	Demand (L/s)	Demand (L/s)
Region of Peel	0.21	0.29	0.63

	Keterences
	Site Area taken from Site Plan prepared by Brian Luey Architect Inc. (March 2021)
ersons/ha	Population density for commercial buildings per Section 2.1 of Region of Peel - Public Works Sanitary Sewer Design Criteria (July 2009)
ersons	Assume population to be 60 persons as per the Site Plan area and the number of parking spaces (47)
employee/d - -	Average Daily Demand and Peak Factors per Section 2.3 of Region of Peel - Public Works Watermain Design Criteria (Revised June 2010)
s	Average Day = (Average Daily Demand * Population) / 86400 seconds

Max Day = Average Day Demand *Max Day Peak Hour = Average Day Demand * Peak Hour

APPENDIX B

Sanitary Design Flow Calculations



Project: 1108 & 1094 Eglinton Avenue Project No.: 1277-4440 Date: 2021-03-21 Created By: KR Checked By: HL/TE

SANITARY FLOW CALCULATIONS 1108 & 1094 EGLINTON AVENUE EAST CITY OF MISSISSAUGA, REGION OF PEEL						
Region of Peel			References			
Site Area = Occupancy = Co	0.51 ommer	ha rcial	Site Area taken from Site Plan prepared by Brian Luey Architect Inc. (March 2021)			
Population Density =	50	persons/ha	Population density for commercial buildings per Section 2.1 of Region of Peel - Public Works Sanitary Sewer Design Criteria (Revised July 2009)			
Population =	60	persons	Assume population to be 60 persons per the Site Plan area and the number of parking spaces (47)			
Commercial Sanitary Design Flow						
Harmon Peak Factor (M) = where: P is	1 + s popu	$-\frac{14}{4 + P^{(0.5)}}$	Peaking Factor per Section 2.2 of Region of Peel - Public Works Sanitary Sewer Design Criteria (Revised July 2009)			
M =	4.30					
Average Daily Demand = 3 =	302.8 0.21	L/cap/d L/s	Average Daily Demand per Section 2.4 and Standard Drawing 2-9- 2 of Region of Peel - Public Works Sanitary Sewer Criteria (Revised June 2009)			
Infiltration Flow =	0.20	L/s/ha	Infiltration Flow per Section 2.3 of Region of Peel - Public Works Sanitary Sewer Criteria (Revised June 2009)			
Peak Flow = Total Infiltration Flow =	0.90 0.1	L/s L/s	Peak Flow = Harmon Factor * Average Daily Demand Total Infiltration Flow = Site Area * Infiltration Flow			
Total Design Flow =	1.00	L/s	Total Design Flow = Peak Flow + Total Infiltration Flow			



Stormwater Management Calculations



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Input Parameters

Storm Data: City of Mississauga

Time of Concentre	ation:	T _c =	15	min	(per City of Mississauga standards)
Return Period	А	В	с	l (mm/hr)	
2 yr	610	4.6	0.78	59.89	7
5 yr	820	4.6	0.78	80.51	
10 yr	1010	4.6	0.78	99.17	7
25 yr	1160	4.6	0.78	113.89	
50 yr	1300	4.7	0.78	127.13	7
100 yr	1450	4.9	0.78	140.69]

Pre - Development Conditions (101)					
Land Use	Area (ha)	Area (m²)	с	Weighted Average C	
Total Site	0.38	3845	-	0.50	

Post - Development Conditions (201)					
Land Use	Area (ha)	Area (m²)	с	Weighted Average C	
Pervious	0.02	211	0.25	0.02	
Impervious	0.23	2273	0.90	0.82	
Total Site	0.25	2484	-	0.84	

Post - Development Conditions (202)					
	Area	Area	c	Weighted	
Land Use	(ha)	(m²)	C	Average C	
Pervious	0.00	0	0.25	0.00	
Impervious	0.05	526	0.90	0.90	
Total Site	0.05	526	-	0.90	

Post - Development Conditions (UC01)					
	Area	Area	C	Weighted	
Land Use	(ha)	(m ²)	J	Average C	
Pervious	0.03	290	0.25	0.24	
Impervious	0.002	15	0.90	0.04	
Total Site	0.03	305	-	0.28	

Post - Development Conditions (UC02)					
Land Use	Area (ha)	Area (m²)	с	Weighted Average C	
Pervious	0.05	515	0.25	0.25	
Impervious	0.00	0.00	0.90	0.00	
Total Site	0.05	515	-	0.25	
	Post - Dev	elopment Condit	ions (UC03)		
Land Use	Area (ha)	Area (m²)	с	Weighted Average C	
Pervious	0.00	15	0.25	0.25	
Impervious	0.00	0.00	0.90	0.00	
Total Site	0.00	15	-	0.25	
Equations:	Peak Q _{post} = 0.0028 •	Flow C _{post} • i(T _d) • A	Intensity		



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

Return Period	Pre-development Peak Flow (L/s)		Post-development Peak Flow (L/s)			
	C _{pre}	Q _{pre}	C _{post}	Q _{UC01}	Q _{UC02}	Q _{target}
2 yr	0.50	32.2	0.25	1.3	2.2	28.8
5 yr	0.50	43.3	0.25	1.7	2.9	38.7
10 yr	0.50	53.4	0.25	2.1	3.6	47.7
25 yr	0.50	61.3	0.28	2.7	4.5	54.1
50 yr	0.50	68.4	0.03	0.3	0.5	67.6
100 yr	0.50	75.7	0.31	3.8	6.3	65.6

Return Period TRCA Unit Flow (L/s/ha)	TRCA Unit Flow Target (L/s) Mississauga	Mississauga 2-year Target	Post-development Peak Flow (L/s)			
		(L/S)	Q _{201-controlled}	Q _{202-controlled}	Qcontrolled 201+202	
2 yr	31.1	12.0			2.2	18.3
5 yr	45.2	17.4		16.1		
10 yr	56.0	21.5	22.1			
25 yr	69.3	26.6				
50 yr	82.1	31.6				
100 yr	93.0	35.8				

Poturn Poriod	Stormwater Storage (m ³)				
Reform Fellou	201 Storage Required	UG Tank Provided	202 Storage Required	Rooftop Provided	
2 yr	19	100	6		
5 yr	33		10	53	
10 yr	47		14		
25 yr	68	133	19		
50 yr	92		23		
100 yr	114		26		



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - 100-year Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target 22.1 L/s TRCA Peak Flow

100-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
1.06	140.69	0.25	0.10	102.59
	Q _{post} =	16.1	L/s	

Catchment 201 - Storage Volume Determination					
T _d	i	T _d	Q _{Uncont}	S _d	
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)	
10	176.31	600	0.129	65.6	
20	118.12	1200	0.087	87.2	
30	90.77	1800	0.067	98.3	
40	74.58	2400	0.055	105.0	
50	63.75	3000	0.047	109.1	
60	55.95	3600	0.041	111.8	
70	50.03	4200	0.037	113.4	
80	45.38	4800	0.033	114.2	
90	41.60	5400	0.031	114.4	
100	38.47	6000	0.028	114.1	
110	35.84	6600	0.026	113.5	
120	33.58	7200	0.025	112.5	
130	31.62	7800	0.023	111.3	
140	29.90	8400	0.022	109.8	
150	28.39	9000	0.021	108.1	
160	27.04	9600	0.020	106.3	
170	25.82	10200	0.019	104.3	
180	24.73	10800	0.018	102.1	
190	23.73	11400	0.017	99.9	
200	22.82	12000	0.017	97.5	
210	21.99	12600	0.016	95.1	
220	21.22	13200	0.016	92.5	
230	20.52	13800	0.015	89.8	
240	19.86	14400	0.015	87.1	
250	19.25	15000	0.014	84.3	
260	18.68	15600	0.014	81.5	
270	18.15	16200	0.013	78.6	
280	17.65	16800	0.013	75.6	
290	17.18	17400	0.013	72.5	
300	16.74	18000	0.012	69.5	
310	16.32	18600	0.012	66.3	
320	15.93	19200	0.012	63.2	
330	15.56	19800	0.011	60.0	
340	15.20	20400	0.011	56.7	
350	14.87	21000	0.011	53.4	
360	14.55	21600	0.011	50.1	
equired Store	age Volume:			114.4	

Uncontrolled Flow

Peak Flow Q_{uncont} = Q_{uncont 201 +} Q_{uncont external}

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
1.00	140.69	0.05	0.02	20.34
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

C	Catchment 202 - Storage Volume Determination					
T _d	i	T _d	Q _{Uncont}	S _d		
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)		
10	176.31	600	0.026	13.8		
20	118.12	1200	0.017	18.3		
30	90.77	1800	0.013	20.8		
40	74.58	2400	0.011	22.5		
50	63.75	3000	0.009	23.6		
60	55.95	3600	0.008	24.4		
70	50.03	4200	0.007	25.0		
80	45.38	4800	0.007	25.5		
90	41.60	5400	0.006	25.8		
100	38.47	6000	0.006	26.1		
110	35.84	6600	0.005	26.2		
120	33.58	7200	0.005	26.4		
130	31.62	7800	0.005	26.4		
140	29.90	8400	0.004	26.4		
150	28.39	9000	0.004	26.4		
160	27.04	9600	0.004	26.3		
170	25.82	10200	0.004	26.2		
180	24.73	10800	0.004	26.1		
190	23.73	11400	0.003	26.0		
200	22.82	12000	0.003	25.8		
210	21.99	12600	0.003	25.6		
220	21.22	13200	0.003	25.4		
230	20.52	13800	0.003	25.2		
240	19.86	14400	0.003	24.9		
250	19.25	15000	0.003	24.7		
260	18.68	15600	0.003	24.4		
270	18.15	16200	0.003	24.1		
280	17.65	16800	0.003	23.8		
290	17.18	17400	0.003	23.5		
300	16.74	18000	0.002	23.2		
310	16.32	18600	0.002	22.9		
320	15.93	19200	0.002	22.6		
330	15.56	19800	0.002	22.2		
340	15.20	20400	0.002	21.9		
350	14.87	21000	0.002	21.5		
360	14.55	21600	0.002	21.2		
Required Stor	age Volume			26.4		

Storage $S_d = Q_{post} \bullet T_d - Q_{target} (T_d + T_c) / 2$

 $Q_{post} = 0.0028 \cdot C_{post} \cdot i(T_d) \cdot A$



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target TRCA Peak Flow 22.1 L/s

50-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
1.01	127.13	0.25	0.09	89.00
	Q _{post} =	16.1	L/s	

Catchment 201 - Storage Volume Determination					
T _d	i	T _d	Q _{Uncont}	S _d	
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)	
10	159.75	600	0.113	55.5	
20	106.57	1200	0.075	73.3	
30	81.75	1800	0.058	82.1	
40	67.10	2400	0.047	87.0	
50	57.32	3000	0.040	89.9	
60	50.28	3600	0.035	91.5	
70	44.95	4200	0.032	92.1	
80	40.76	4800	0.029	92.1	
90	37.36	5400	0.026	91.6	
100	34.54	6000	0.024	90.7	
110	32.17	6600	0.023	89.5	
120	30.14	7200	0.021	87.9	
130	28.38	7800	0.020	86.2	
140	26.84	8400	0.019	84.3	
150	25.48	9000	0.018	82.1	
160	24.26	9600	0.017	79.9	
170	23.17	10200	0.016	77.5	
180	22.19	10800	0.016	75.0	
190	21.29	11400	0.015	72.3	
200	20.48	12000	0.014	69.6	
210	19.73	12600	0.014	66.8	
220	19.04	13200	0.013	63.9	
230	18.41	13800	0.013	61.0	
240	17.82	14400	0.013	58.0	
250	17.27	15000	0.012	54.9	
260	16.76	15600	0.012	51.8	
270	16.28	16200	0.011	48.6	
280	15.83	16800	0.011	45.3	
290	15.41	17400	0.011	42.1	
300	15.01	18000	0.011	38.7	
310	14.64	18600	0.010	35.4	
320	14.29	19200	0.010	32.0	
330	13.95	19800	0.010	28.5	
340	13.64	20400	0.010	25.1	
350	13.34	21000	0.009	21.5	
360	13.05	21600	0.009	18.0	
equired Store	ge Volume:			92.1	

Uncontrolled Flow

 $\mathbf{Q}_{uncont} = \mathbf{Q}_{uncont \ 201 \ +} \ \mathbf{Q}_{uncont \ external}$

Peak Flow $\mathbf{Q}_{post} = \mathbf{0.0028} \cdot \mathbf{C}_{post} \cdot \mathbf{i}(\mathbf{T}_{d}) \cdot \mathbf{A}$

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
1.00	127.13	0.05	0.02	18.38
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

	Catchment 202 -	Storage Volun	ne Determinati	on
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m³/s)	(m ³)
10	159.75	600	0.023	12.3
20	106.57	1200	0.016	16.3
30	81.75	1800	0.012	18.5
40	67.10	2400	0.010	19.8
50	57.32	3000	0.008	20.8
60	50.28	3600	0.007	21.4
70	44.95	4200	0.007	21.9
80	40.76	4800	0.006	22.3
90	37.36	5400	0.005	22.5
100	34.54	6000	0.005	22.6
110	32.17	6600	0.005	22.7
120	30.14	7200	0.004	22.8
130	28.38	7800	0.004	22.7
140	26.84	8400	0.004	22.7
150	25.48	9000	0.004	22.6
160	24.26	9600	0.004	22.4
170	23.17	10200	0.003	22.3
180	22.19	10800	0.003	22.1
190	21.29	11400	0.003	21.9
200	20.48	12000	0.003	21.7
210	19.73	12600	0.003	21.5
220	19.04	13200	0.003	21.2
230	18.41	13800	0.003	20.9
240	17.82	14400	0.003	20.6
250	17.27	15000	0.003	20.4
260	16.76	15600	0.002	20.0
270	16.28	16200	0.002	19.7
280	15.83	16800	0.002	19.4
290	15.41	17400	0.002	19.1
300	15.01	18000	0.002	18.7
310	14.64	18600	0.002	18.4
320	14.29	19200	0.002	18.0
330	13.95	19800	0.002	17.6
340	13.64	20400	0.002	17.2
350	13.34	21000	0.002	16.9
360	13.05	21600	0.002	16.5
Required St	orage Volume:			22.8



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target TRCA Peak Flow 22.1 L/s

25-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.93	113.89	0.25	0.07	73.09
	Q _{post} =	16.1	L/s	

Catchment 201 - Storage Volume Determination				
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)
10	143.31	600	0.093	43.5
20	95.40	1200	0.062	57.1
30	73.11	1800	0.047	63.4
40	59.98	2400	0.039	66.5
50	51.22	3000	0.033	68.0
60	44.92	3600	0.029	68.4
70	40.15	4200	0.026	68.0
80	36.40	4800	0.024	67.1
90	33.36	5400	0.022	65.8
100	30.85	6000	0.020	64.2
110	28.73	6600	0.019	62.3
120	26.91	7200	0.017	60.2
130	25.34	7800	0.016	57.9
140	23.96	8400	0.015	55.4
150	22.74	9000	0.015	52.8
160	21.66	9600	0.014	50.0
170	20.69	10200	0.013	47.2
180	19.81	10800	0.013	44.3
190	19.01	11400	0.012	41.2
200	18.28	12000	0.012	38.1
210	17.61	12600	0.011	35.0
220	17.00	13200	0.011	31.7
230	16.43	13800	0.011	28.4
240	15.90	14400	0.010	25.1
250	15.41	15000	0.010	21.7
260	14.96	15600	0.010	18.3
270	14.53	16200	0.009	14.8
280	14.13	16800	0.009	11.2
290	13.75	17400	0.009	7.7
300	13.40	18000	0.009	4.1
310	13.07	18600	0.008	0.5
320	12.75	19200	0.008	-3.2
330	12.45	19800	0.008	-6.9
340	12.17	20400	0.008	-10.6
350	11.90	21000	0.008	-14.4
360	11.65	21600	0.008	-18.1
equired Stor	aae Volume:		•	68.4

Uncontrolled Flow
$\mathbf{Q}_{uncont} = \mathbf{Q}_{uncont \ 201 \ +} \ \mathbf{Q}_{uncont \ external}$

 $\begin{aligned} & \text{Peak Flow} \\ \mathbf{Q}_{\text{post}} = \mathbf{0.0028} \bullet \mathbf{C}_{\text{post}} \bullet \mathbf{i}(\mathbf{T}_{\text{d}}) \bullet \mathbf{A} \end{aligned}$

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.99	113.89	0.05	0.02	16.30
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

Catchment 202 - Storage Volume Determination				
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m³/s)	(m ³)
10	143.31	600	0.021	10.8
20	95.40	1200	0.014	14.2
30	73.11	1800	0.011	16.0
40	59.98	2400	0.009	17.1
50	51.22	3000	0.007	17.9
60	44.92	3600	0.006	18.4
70	40.15	4200	0.006	18.7
80	36.40	4800	0.005	19.0
90	33.36	5400	0.005	19.1
100	30.85	6000	0.004	19.1
110	28.73	6600	0.004	19.1
120	26.91	7200	0.004	19.1
130	25.34	7800	0.004	19.0
140	23.96	8400	0.003	18.9
150	22.74	9000	0.003	18.7
160	21.66	9600	0.003	18.5
170	20.69	10200	0.003	18.3
180	19.81	10800	0.003	18.1
190	19.01	11400	0.003	17.8
200	18.28	12000	0.003	17.5
210	17.61	12600	0.003	17.2
220	17.00	13200	0.002	16.9
230	16.43	13800	0.002	16.6
240	15.90	14400	0.002	16.3
250	15.41	15000	0.002	16.0
260	14.96	15600	0.002	15.6
270	14.53	16200	0.002	15.3
280	14.13	16800	0.002	14.9
290	13.75	17400	0.002	14.5
300	13.40	18000	0.002	14.1
310	13.07	18600	0.002	13.7
320	12.75	19200	0.002	13.3
330	12.45	19800	0.002	12.9
340	12.17	20400	0.002	12.5
350	11.90	21000	0.002	12.1
360	11.65	21600	0.002	11.7
auirod S	torage Volume:			10 1



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target TRCA Peak Flow 22.1 L/s

10-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.84	99.17	0.25	0.06	57.85
	Q _{post} =	16.1	L/s	

Catchment 201 - Storage Volume Determination				
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)
10	124.77	600	0.073	31.9
20	83.06	1200	0.049	41.7
30	63.66	1800	0.037	45.6
40	52.22	2400	0.031	47.1
50	44.60	3000	0.026	47.3
60	39.11	3600	0.023	46.6
70	34.96	4200	0.021	45.3
80	31.69	4800	0.019	43.6
90	29.05	5400	0.017	41.6
100	26.86	6000	0.016	39.3
110	25.01	6600	0.015	36.7
120	23.43	7200	0.014	34.1
130	22.06	7800	0.013	31.2
140	20.86	8400	0.012	28.3
150	19.80	9000	0.012	25.2
160	18.86	9600	0.011	22.0
170	18.01	10200	0.011	18.8
180	17.24	10800	0.010	15.4
190	16.55	11400	0.010	12.0
200	15.92	12000	0.009	8.6
210	15.33	12600	0.009	5.1
220	14.80	13200	0.009	1.5
230	14.30	13800	0.008	-2.1
240	13.85	14400	0.008	-5.8
250	13.42	15000	0.008	-9.5
260	13.02	15600	0.008	-13.2
270	12.65	16200	0.007	-16.9
280	12.30	16800	0.007	-20.7
290	11.98	17400	0.007	-24.6
300	11.67	18000	0.007	-28.4
310	11.38	18600	0.007	-32.3
320	11.10	19200	0.007	-36.2
330	10.84	19800	0.006	-40.1
340	10.60	20400	0.006	-44.1
350	10.36	21000	0.006	-48.0
360	10.14	21600	0.006	-52.0
eauired Store	age Volume:			47.3

Uncontrolled Flow

 $\mathbf{Q}_{uncont} = \mathbf{Q}_{uncont \ 201 \ +} \ \mathbf{Q}_{uncont \ external}$

 $\begin{aligned} & \text{Peak Flow} \\ \mathbf{Q}_{\text{post}} = \mathbf{0.0028} \bullet \mathbf{C}_{\text{post}} \bullet \mathbf{i}(\mathbf{T}_{\text{d}}) \bullet \mathbf{A} \end{aligned}$

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.90	99.17	0.05	0.01	12.90
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

Catchment 202 - Storage Volume Determination				
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m³/s)	(m ³)
10	124.77	600	0.016	8.2
20	83.06	1200	0.011	10.8
30	63.66	1800	0.008	12.1
40	52.22	2400	0.007	12.8
50	44.60	3000	0.006	13.3
60	39.11	3600	0.005	13.5
70	34.96	4200	0.005	13.7
80	31.69	4800	0.004	13.7
90	29.05	5400	0.004	13.7
100	26.86	6000	0.004	13.6
110	25.01	6600	0.003	13.4
120	23.43	7200	0.003	13.3
130	22.06	7800	0.003	13.1
140	20.86	8400	0.003	12.8
150	19.80	9000	0.003	12.5
160	18.86	9600	0.002	12.3
170	18.01	10200	0.002	12.0
180	17.24	10800	0.002	11.6
190	16.55	11400	0.002	11.3
200	15.92	12000	0.002	10.9
210	15.33	12600	0.002	10.6
220	14.80	13200	0.002	10.2
230	14.30	13800	0.002	9.8
240	13.85	14400	0.002	9.4
250	13.42	15000	0.002	9.0
260	13.02	15600	0.002	8.6
270	12.65	16200	0.002	8.2
280	12.30	16800	0.002	7.8
290	11.98	17400	0.002	7.3
300	11.67	18000	0.002	6.9
310	11.38	18600	0.001	6.4
320	11.10	19200	0.001	6.0
330	10.84	19800	0.001	5.5
340	10.60	20400	0.001	5.1
350	10.36	21000	0.001	4.6
360	10.14	21600	0.001	4.1
auired 9	Storage Volume:			137



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target TRCA Peak Flow 22.1 L/s

5-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.84	80.51	0.25	0.05	46.97
	Q _{post} =	16.1	L/s	

Catchment 201 - Storage Volume Determination				
T _d	i	T _d	Q _{Uncont}	\$ _d
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)
10	101.30	600	0.060	23.7
20	67.43	1200	0.040	30.7
30	51.68	1800	0.030	33.0
40	42.40	2400	0.025	33.3
50	36.21	3000	0.021	32.5
60	31.76	3600	0.019	31.0
70	28.38	4200	0.017	29.1
80	25.73	4800	0.015	26.8
90	23.58	5400	0.014	24.2
100	21.81	6000	0.013	21.4
110	20.31	6600	0.012	18.5
120	19.02	7200	0.011	15.4
130	17.91	7800	0.011	12.2
140	16.94	8400	0.010	8.9
150	16.08	9000	0.009	5.5
160	15.31	9600	0.009	2.0
170	14.62	10200	0.009	-1.5
180	14.00	10800	0.008	-5.1
190	13.44	11400	0.008	-8.8
200	12.92	12000	0.008	-12.5
210	12.45	12600	0.007	-16.3
220	12.01	13200	0.007	-20.1
230	11.61	13800	0.007	-23.9
240	11.24	14400	0.007	-27.8
250	10.90	15000	0.006	-31.7
260	10.57	15600	0.006	-35.6
270	10.27	16200	0.006	-39.6
280	9.99	16800	0.006	-43.6
290	9.72	17400	0.006	-47.6
300	9.47	18000	0.006	-51.6
310	9.24	18600	0.005	-55.7
320	9.01	19200	0.005	-59.8
330	8.80	19800	0.005	-63.9
340	8.60	20400	0.005	-68.0
350	8.41	21000	0.005	-72.1
360	8.23	21600	0.005	-76.2
eauired Stor	age Volume:			33.3

Uncontrolled Flow

 $\mathbf{Q}_{uncont} = \mathbf{Q}_{uncont 201 +} \mathbf{Q}_{uncont external}$

Peak Flow $Q_{post} = 0.0028 \cdot C_{post} \cdot i(T_d) \cdot A$

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.90	80.51	0.05	0.01	10.47
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

(Catchment 202 -	Storage Volur	ne Determinati	on
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)
10	101.30	600	0.013	6.3
20	67.43	1200	0.009	8.3
30	51.68	1800	0.007	9.2
40	42.40	2400	0.006	9.7
50	36.21	3000	0.005	10.0
60	31.76	3600	0.004	10.1
70	28.38	4200	0.004	10.1
80	25.73	4800	0.003	10.0
90	23.58	5400	0.003	9.8
100	21.81	6000	0.003	9.6
110	20.31	6600	0.003	9.4
120	19.02	7200	0.002	9.1
130	17.91	7800	0.002	8.8
140	16.94	8400	0.002	8.5
150	16.08	9000	0.002	8.2
160	15.31	9600	0.002	7.8
170	14.62	10200	0.002	7.4
180	14.00	10800	0.002	7.0
190	13.44	11400	0.002	6.6
200	12.92	12000	0.002	6.2
210	12.45	12600	0.002	5.8
220	12.01	13200	0.002	5.4
230	11.61	13800	0.002	4.9
240	11.24	14400	0.001	4.5
250	10.90	15000	0.001	4.1
260	10.57	15600	0.001	3.6
270	10.27	16200	0.001	3.1
280	9.99	16800	0.001	2.7
290	9.72	17400	0.001	2.2
300	9.47	18000	0.001	1.7
310	9.24	18600	0.001	1.2
320	9.01	19200	0.001	0.7
330	8.80	19800	0.001	0.2
340	8.60	20400	0.001	-0.3
350	8.41	21000	0.001	-0.8
360	8.23	21600	0.001	-1.3
aquired Sto	rage Volume:			10.1



Created By: HL Checked By: TE Updated: 2021-03-19

Modified Rational Calculations - Peak Flow Summary

MUNICIPALITY: City of Mississauga

2-year Peak Flow Target TRCA Peak Flow 22.1 L/s

2-yr Post-Development Peak Flow

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.84	59.89	0.25	0.03	34.94
	Q _{post} =	16.1	L/s	

С	atchment 201 -	Storage Volur	ne Determinatio	on
T _d	i	T _d	Q _{Uncont}	\$ _d
(min)	(mm/hr)	(sec)	(m ³ /s)	(m ³)
10	75.36	600	0.044	14.5
20	50.16	1200	0.029	18.5
30	38.45	1800	0.023	19.0
40	31.54	2400	0.019	18.0
50	26.94	3000	0.016	16.1
60	23.62	3600	0.014	13.8
70	21.12	4200	0.012	11.1
80	19.14	4800	0.011	8.2
90	17.54	5400	0.010	5.1
100	16.22	6000	0.010	1.8
110	15.11	6600	0.009	-1.7
120	14.15	7200	0.008	-5.2
130	13.33	7800	0.008	-8.8
140	12.60	8400	0.007	-12.5
150	11.96	9000	0.007	-16.3
160	11.39	9600	0.007	-20.1
170	10.88	10200	0.006	-24.0
180	10.42	10800	0.006	-27.9
190	10.00	11400	0.006	-31.9
200	9.61	12000	0.006	-35.9
210	9.26	12600	0.005	-39.9
220	8.94	13200	0.005	-43.9
230	8.64	13800	0.005	-48.0
240	8.36	14400	0.005	-52.2
250	8.11	15000	0.005	-56.3
260	7.87	15600	0.005	-60.5
270	7.64	16200	0.004	-64.6
280	7.43	16800	0.004	-68.8
290	7.23	17400	0.004	-73.1
300	7.05	18000	0.004	-77.3
310	6.87	18600	0.004	-81.5
320	6.71	19200	0.004	-85.8
330	6.55	19800	0.004	-90.1
340	6.40	20400	0.004	-94.4
350	6.26	21000	0.004	-98.7
360	6.13	21600	0.004	-103.0
eavired Stor	age Volume:	•		19.0

Uncontrolled Flow

 $\mathbf{Q}_{uncont} = \mathbf{Q}_{uncont \ 201 \ +} \ \mathbf{Q}_{uncont \ external}$

Peak Flow $\mathbf{Q}_{post} = \mathbf{0.0028} \cdot \mathbf{C}_{post} \cdot \mathbf{i}(\mathbf{T}_{d}) \cdot \mathbf{A}$

С	i (mm/hr)	A (ha)	Q (m3/s)	Qpost(L/s)
0.90	59.89	0.05	0.01	7.79
Roof	Control Rate:	42	L/s/ha	
		2.2	L/s	

	Catchment 202 -	Storage Volum	ne Determinati	on
T _d	i	T _d	Q _{Uncont}	S _d
(min)	(mm/hr)	(sec)	(m³/s)	(m³)
10	75.36	600	0.010	4.3
20	50.16	1200	0.007	5.6
30	38.45	1800	0.005	6.1
40	31.54	2400	0.004	6.3
50	26.94	3000	0.004	6.3
60	23.62	3600	0.003	6.2
70	21.12	4200	0.003	6.1
80	19.14	4800	0.003	5.8
90	17.54	5400	0.002	5.5
100	16.22	6000	0.002	5.2
110	15.11	6600	0.002	4.9
120	14.15	7200	0.002	4.5
130	13.33	7800	0.002	4.1
140	12.60	8400	0.002	3.7
150	11.96	9000	0.002	3.3
160	11.39	9600	0.001	2.9
170	10.88	10200	0.001	2.4
180	10.42	10800	0.001	2.0
190	10.00	11400	0.001	1.5
200	9.61	12000	0.001	1.0
210	9.26	12600	0.001	0.5
220	8.94	13200	0.001	0.1
230	8.64	13800	0.001	-0.4
240	8.36	14400	0.001	-0.9
250	8.11	15000	0.001	-1.4
260	7.87	15600	0.001	-1.9
270	7.64	16200	0.001	-2.5
280	7.43	16800	0.001	-3.0
290	7.23	17400	0.001	-3.5
300	7.05	18000	0.001	-4.0
310	6.87	18600	0.001	-4.5
320	6.71	19200	0.001	-5.1
330	6.55	19800	0.001	-5.6
340	6.40	20400	0.001	-6.1
350	6.26	21000	0.001	-6.7
360	6.13	21600	0.001	-7.2
equired S	torage Volume:		•	63



 Project:
 1108 & 1094 Eglinton Ave

 Project No.:
 1346-4573 (R.01)

 Created By:
 HL

 Checked By:
 TE

 Date:
 2020-03-19

 Updated:
 2021-03-19

300mm Dia. Orifice Tube Design Summary

Orifice Type =	Orifice Tube	
Invert Elevation =	138.96	m
Diameter of Orifice =	75	mm
Area of Orifice (A) =	0.004	sq.m
Orifice Coefficient (Cd) =	0.82	
		-
Calculation of Head		_
Centroid Elevation =	139.00	m
Water Elevation =	140.00	m
Upstream Head*, (h) =	1.00	m
		-
Qa =	(Cd)(A)(2gh)^0.5	
Actual Controlled Discharge, Qa =	0.02	cms
	16	_ L/s

*Head is based upon orifice area @ orifice face not Vena Contracta



Created By: HL Checked By: TE Updated: 2021-03-19

Water Balance Calculation

Description	Initital Abstraction	Area	Volume
	(mm)	(ha)	(m ³)
Developable Site Area	5.0	0.38	19.2
Site Total	-	0.38	19.2
Requi	ired Water Balance Volu	ume	19.2

Provided Underground Storage Chamber Footprint	190.2
Provided Stone Depth under the Chamber	0.3
Provide Water Balance Volume	22.8



Project: 1108 & 1094 Eglinton Project No.: 1277-4440 Prepared By: HL Reviewed By: TE Created Date: 2021.03.19 Revised Date: 2021.03.19

WATER QUALITY - TREATMENT TRAIN

WATER	QUALITY CALCULAT	IONS (TREATMENT	TRAIN)
Catchment ID	LID	TSS removal	Total
201	OGS (EFO system)	60	<u>000</u>
201	CB Shields	50	00.0

Treatment Train Approach:

R = A + B - [(A X B) / 100] (Equati

(Equation 4-1)

Where:

s services ■ department unitable 9000

R = Total TSS Removal Rate

A = TSS Removal Rate of the First or Upstream BMP

B = TSS Removal Rate of the Second or Downstream BMP

*As per 'New Jersey Stormwater Best Management Practices Manual' Equation 4-1 (February 2004)

TSS Removal:		
OGS (EFO system) (Rate 1) =	60.0	%
CB Shields (Rate 2) =	50	%

Removal at end of treatment train:

R₃ = Rate 1 + Rate 2 - [(Rate 1 x Rate 2)/100]

R_{total} = 80.0 %

DRAWINGS



N		L'NY
	44 Marco -	
CONS		
		ller a
	Studio.89 0	Tenne .
1		**
	1 Jan J	SCALE: N.T.S.
	LEGEND	
		& MANHOLE
	PROPOSED WATERMAIN & G	ATE VALVE
	PROPOSED WATER SERVICE	LATERAL (50mmø)
		& GATE VALVE
		& MANHOLE
	LIMIT AS ESTABLISHED BY	TORONTO AND
	REGION CONSERVATION AUT JANUARY 3, 2008.	HORITY ON
	REVISED REGIONAL FLOODPI SITE RESTORATION COMPLET	LAIN @ 139.91 UPON
	5.0m BUFFER FROM REGION	AL FLOODPLAIN
6 193		
	2 ISSUED FOR 3RD SUBMISSION	2021/MAR/24
Implication CVV LVRIL SUBJECT TEXTS ALSO AURIL TEXTS TEXTS 2 TEXTS ALSO AURIL TEXTS TEXTS 4 TEXTS TEXTS TEXTS 5 TEXTS TEXTS TEXTS	0 ISSUED FOR 1ST SUBMISSION	2018/0EC/20 2017/APR/20
	-	2017/ALK/20
4 BUTWER SUDATION 1 1 86. 3 CONTRACTOR SUDATION 1 1 86. 4 CONTRACTOR SUDATION 1 1 86. 4 CONTRACTOR SUDATION 1 1 86. 4 CONTRACTOR SUDATION 1 2 86. 4 EXEMPTION 1 2 86.	No. ISSUE / REVISION	YYYY/MMM/DD
• Vieta and Vieta Control 1 8 • Sector Vieta 2 8	No. ISSUE / REVISION ELEVATION NOTE:	YYYY/MMM/DD
2 Other products 1 0 2 State and the state	No. ISSUE / REVISION ELEVATION NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CH BENCHMARK NO. 1031	YYYY/MMM/DD
- Vertile and the set of t	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENORMARK NO. 1031 ELEVATION = 142.555m LOCAL BENCHMARK	YYYY/MMM/DD TY OF MISSISSAUGA
2 Vehic product 1 6 4 Vehic product 1 6 4 Strand product 1 6 4 Strand product 1 6 5 Strand product 1 6 6 Strand product 1 8 7 Strand product 1 8	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHMARK No. 1031 ELEVATION = 142.565m LOCAL BENCHMARK; ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUCA BEE PEND. A LABLET SET HENDROTIALLY AT THE BASE OF A 700	TY OF MISSISSAUGA
4 With grant 1 4 5 4 With grant 2 4 6 4 With grant 2 6 6 4 With grant 2 6 6 5 With State 1 6 6	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHMARK No. 1031 ELEVATION = 142.555m LOCAL BENCHMARK: ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BEE BEING A TABLET SET HORIZONTALLY AT THE BASE OF A 7500 TRAFFIC POLE AT THE SOUTHEAST SUDE OF THE INTERSECTION AND ECUINTON AVENUE EAST (MODUE POLE BASE SOUTH SUDE	TY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHMARK No. 1031 ELEVATION = 142.555m LOCAL BENCHMARK: ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BEN BEING A TABLET SET MORIZONTALLY AT THE BASE OF A 750m TRAFRIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND ECRINTON AVENUE EAST (MODLE POLE BASE SOUTH SIDE ELEVATION OF 142.565 m.	TY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK No. 1031 ELEVATION = 142.555m LOCAL BENCHMARK; ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BED BENG A TABLET SET HORIZONTALLY AT THE BASE OF A 750n TRAFRIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND ECRINTON AVENUE EAST (MODILE POLE BASE SOUTH SOUT ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMI	TY OF MISSISSAUGA ITY OF
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK NO. 1031 ELEVATION = 142.565m LOCAL BENCHMARK; ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BED BENG A FABLET SET HORIZONTALLY AT THE BASE OF A 750n TRAFFIC FOLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND SEINTON AGADUE BAST (MODUE POLE BASE SOUTH SOD ELEVATION of 142.995 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY COMPLETIO BY DAVID B. SEARLES SURVEY, (2015/OC	TY OF MISSISSAUGA YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CL BENCIMARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK; ELEVATION ARE REFERED TO THE CITY OF MISSISSAUGA BED BENCA FARGET SET HORIZONTALLY AT THE BASE OF A 750 MAD BELINTON AVENUE EAST (MIDDLE PO'NE BASE SOUTH SOE ELEVATION IN THE SET STOMOLOGICAL DATUME THE SASE OF THE SOUTH SOE ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INOT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARNICS ARE UTM CRED. DERIVED FROM RTN OBSERVATIONS	TY OF MISSISSAUGA YYYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISS
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1031 ELEVATION 142.555m LOCAL BENCHMARK: ELEVATION ARE REFERED TO THE CITY OF MISSISSAUCA BEI THAPRO PLAN ARE REFERED TO THE SATE OF A 7500 THAPRO PLAN AT THE SASE OF A 7500 AND BELIEVATION ACTURESAT SIDE OF THE INTERNASE OF A 7500 AND BELIEVATION ACTURESAT SIDE OF THE INTERNASE (INC) 1978 SOUTHERN ONTARIO READJUSTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 BEARNICS ARE GORUNG AND CAN BE CONVERTED TO GRID B' DISTANCES ARE GORUNG AND CAN BE CONVERTED TO GRID B'	YYYY/MM/DD YYYY/MM/DD ITY OF MISSISSAUGA ICHMARK No. 1031, nm DIAMETER CONCRETE OF MANGATE DRIVE J, HAVING AN ENT) T/30) Y MULTIPLYING BY THE
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1031 ELEVATION = 142,565m LOCAL BENCHMARK: ELEVATION = 142,565m LOCAL BENCHMARK: ELEVATION SAR RE REFERED TO THE CITY OF MISSISSAUCA BENEREN A TABLET SET HYDROTIALLY AT THE DASE OF A 7500 NAD BECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION SAR THE STUTIEST SIDE OF THE INTERRET FOR AND BECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142,565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BERANICA ARE CUMO GRO DERIVED FROM RIN OBSERVATIONS UTM ZONE 17, NADAS (GSRS) (2010.0) DETANCES ARE COROUND AND CAN BE CONVERTED TO GRID B'C COMENDE SCALE FACTOR OF 0.9996781 SURVEY NOTES: UTM ZONE 17, NADAS (GSRS) (2010.0) DETANCES ARE COROUND AND CAN BE CONVERTED TO GRID B'C COMENDE SCALE FACTOR OF 0.9996781	YYYY/MM/DD YYYY/MM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MANGATE DRIVE OF MANGATE DRIVE OF MANGATE DRIVE (), HAVING AN ENT) T/30) Y MULTIPLYING BY THE
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCHUARK NO. 1031 ELEVATION = 142.565m IDENCHUARKS LEVATION = ABE REFERED TO THE OTY OF MISSISSAUCA BER BENCK AT ABE TO STATUTISATI SUCO THE INTERSECTION AND ECINITON AVENUE EAST (MIDDLE POLE BASE SOUTH SUE ELEVATION = AT THE SOUTHEAST SIDE OF THE INTERSECTION AND ECINITON AVENUE EAST (MIDDLE POLE BASE SOUTH SUE ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READUISTMI SURVEY NOMELTED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO.: 139-0-150 FROM RTN OBSERVATIONS UTM ZONE 17, NABBA (GRS) (2010.0) DETANCES ARE UTM GRD, DERIVED FROM RTN OBSERVATIONS UTM ZONE 17, NABBA (GRS) (2010.0) DETANCES ARE COULD AND CAN BE CONVERTED TO GRID B' COMBIND SCALE FACTOR OF 0.5996781 SIET PLAN NOTES: DESTOR ELEVENTS ARE BASED ON STE PLAN BY BRIAN LUEY DATUMES 7, 2021	YYYY/MM/DD YYYY/MM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MANGATE DRIVE OF MANGATE DRIVE OF MANGATE DRIVE OF MANGATE DRIVE OF MANGATE DRIVE OF MANGATE DRIVE AND AND AND AND AND AND AND AND AND AND AND AND AND AND AND AND AND AND AND
	No. ISSUE / REVISION ELEVATION_NOTE; ELEVATION_S SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK No. 1031 ELEVATION = 142.555m LOCAL BENCHMARK; ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUCA BEN BEING A TABLET SET MORIZONTALLY AT THE BASE OF A 750n TRAFRIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND EQILITON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN CEODETIC DATUM, 1928 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE No: 139-0-15 BERARINGS ARE UTM GRID, DERIVED FROM RTIN OBSERVATIONS UM ZONE T: NABB3 (CSSS) (2010.0) DISTANCES ARE GOUND AND CAN BE CONVERTED TO GRID B: COMBINED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES; DESCIN ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021	YYYY/MMM/DD YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MANGATE ORVE OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMMARK No. 1031 ELEVATION = 142.555m LOCAL BENCHMARK: ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BENERING ARE REFERENT SIDE OF THE INTERSECTION AND ECRINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SOF ELEVATION OF 142.555 m. VERTICAL DATUM: CANADIAN CEODETIC DATUM. 1928 (NOT 1978 SOUTHERN ONTARIO READ.USTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BERARINGS ARE OTM GRID, DERIVED FROM RIN OBSERVATIONS UM ZONE 1.7. NAB33 (GSRS) (2010.0) DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID B' COMMEND SOLE FACTOR 0.9996781 SITE PLAN NOTES: DESCIN ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION:	YYYY/MMM/DD YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MISSISSAU
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMMARK No. 1031 ELEVATION 142.555m LOCAL BENCHMARK; ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BENERING A BET SET MORIZONTALLY AT THE BASE OF A 750n TRAFRIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND COLINITON AVENUE EAST (MODUE POLE BASE SOUTH SOUT ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY CONDIESTS UNIVEY NOTES: SURVEY COMPLETID BY DAVID B. SEARLES SURVEY, (2015/OC REFERENCE NO: 139–0–15 BEARINGS ARE UTM GRID, DERIVED FROM R'IN OBSERVATIONS UIM ZONE 17, NABB3 (GSRS) (2010.0) DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR 0.9996781 SITE PLAN NOTES: DEGION ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR: 5.2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION ONTES: DEAMING NOTES: DEAMING NOTES: DEAMING NOTES: DATE MAR NOTES: DEAMING NOTES: DEAMING NOTES: DEAMING NOTES:	YYYY/MMM/DD YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MISSISSAU
	No. ISSUE / REVISION ELEVATION_NOTE: ELEVATION_NOTE: ELEVATIONS_SHOWN ON THIS PLAN ARE DERIVED FROM THE CID BENCIMARK NO. 1031 ELEVATION = 142.555m LOCAL_BENCHMARK: ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BENERIC A TABLET SET MORIZONTALLY AT THE BASE OF A 750n TRAFRIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION AND CERNITON OF 142.565 m. VERTICAL_DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTM SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING SARE UTM CRD, DERIVED FROM RIN OBSERVATIONS UM ZONE 17, NADAG (GRS) (2010.0) DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.59986781 SILE FLAN.NOTES: DESIGN LEMENTS ARE BASED ON STE PLAN BY BRIAN LUEY DATED MAR 5, 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION OF FEEL DRAWING 28461-0 (CIRCA MARCH, 2002) - SIRA AND ASSOCIATES STORM SEVER EASEMENT (CIRCA MARCH, 2002) - SIRA AND ASSOCIATES STORM SEVER EASEMENT (CIRCA MARCH, 2002) DEMANNC 15: THE EXCLUSIVE PROPERTY OF C.F. CROZER DEAMING AND THES: DEMANNG 15: THE EXCLUSIVE PROPERTY OF C.F. CROZER	YYYY/MM/DD YYYY/MM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA OF MISSISSAUGA OF MISSISSAUGA OF MISSISSAUGA OF MISSISSAUGA ITY OF MISSISSAUGA OF MISSISSAUGA OF MISSISSAUGA ITY OF
	No. ISSUE / REVISION ELEVATION_NOTE: ELEVATION_NOTE: ELEVATION_SHOWN ON THIS PLAN ARE DERIVED FROM THE CIDENCMARK No. 1031 ELEVATION = 142.565m LOCAL_BENCHMARK: ELEVATION = 142.565m LOCAL_BENCHMARK: ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BEDENG A TABLET SET MORIZONTALLY AT THE BASE OF A 750n VERTICAL_DATUM FORZONTALLY AT THE BASE OF A 750n VERTICAL_DATUM CANDEL SACE TACTON OF TATUM SURVEY_COMPLETOD BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 1370–015 SURVEY_COMPLETO BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 1370–015 BEGANICS ARE GORUND AND CAN BE CONVERTED TO GRID B' GOMBINED SCALE FACTOR OF 0.9996781 DESIGN LEDVENTS ARE BASED ON STE PLAN BY BRIAN LUEY DATED MARE 5. 2021 AS CONSTRUCTED INFORMATION TAKEN REPORT AS CONSTRUCTED INFORMATION TAKEN REPORT SEGON OF PEEL DRAWING 2861-D (CIRCA M	2017) ANNY 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ON TO ANY
	No. ISSUE / REVISION ELEVATION_NOTE: ELEVATION_NOTE: ELEVATION_SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK NO. 1031 ELEVATION = 142.565m LOCAL_BENCHMARK: ELEVATION = 142.565m LOCAL_BENCHMARK: ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BED BEING A FABELT SET MORIZONTALLY AT THE BASE OF A 750n TRAFRC POLE AT THE SOUTHEAST SUE OF THE INTERSECTION AND EQLINION OF 142.395 m. VERTICAL_DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY, (2015/OC REFERENCE NO: 139-0-15 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY, (2015/OC REFERENCE NO: 139-0-15 DEGANOL RARE GROUND AND CAN BE CONVERTED TO GRID BY COMBINED SCALE FACTOR OF 0.9996781 SITE_PLAN_NOTES; DEGION LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION OF PEEL DRAWING 28461-D (DRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMENT (GRCA M AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION OF PEEL DRAWING 28461-D (INCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMENT (GRCA M ARCH, 2002) SEMENSION OF PEEL DRAWING 28461-D (INCOR MARCH, 2002) SEMENSIONES; DEAMING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUTION OF ANY PART OF IT WITHOUT PRIOR WRIT OFFICE IS STRUCT, PROMENTED. DEAMING IS TO THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUTION SEARCH AND INTEGRETIONS TO THING OFFICE DAVANDES OF TO THING OFFICE DAVA	2017) ANNY 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK; ELEVATION 142.565m LOCAL BENCHMARK; ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BEE BEING A TABELT SET HORIZONTALLY AT THE BASE OF A 750n TRATRC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION ELEVATION SARE REFERRED TO THE CITY OF MISSISSAUGA BEE BEING A TABELT SET HORIZONTALLY AT THE BASE OF A 750n TRATRC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INOT 1978 SOUTHERN ONTARIO READUSTMI SURVEY COMELS) SURVEY COMPLETO BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARINGS ARE GROUND AND CAN BE CONVERTED TO GRID B' COMENED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DESCIN LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAKEN RROM: - REGION OF PEEL DRAWING 28461-D (DRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMET CIRCA MARCH OFFICE IS STRICTLY PROHEMED. DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZER THE ORPROVICTION FAIL NEARY PART OF IT WHOUT PRIOR WIT OFFICE IS STRICTLY PROHEMED. DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZER THE ORPROVICTION SALVERY ALL DIMENSIONS, LEVELS, ANI REPORT ANY DISCEPANCES OF OMISSIONS TO THIS OFFICE J. THE CORTAIN SIG STORE SALVERY ALL DIMENSIONS IN CONJUNC PLANS AND DOCUMENTS APPLICABLE TO THIS PROVICT. DANY DESCREPANCES OF OMISSIONS TO T	2017) ANNY 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK No. 1031 ELEVATION 142.565m LOCAL BENCHMARK; ELEVATION ARE REFERED TO THE CITY OF MISSISSAUGA BENERIC A TABLET SET MORIZONTALLY AT THE BASE OF A 750m DENCA TABLET SET MORIZONTALLY AT THE BASE OF A 750m VERTICAL BENCHMARK; ELEVATION SARE REFERENCE TO THE OF MISSISSAUGA BENERIC A TABLET SET MORIZONTALLY AT THE BASE OF A 750m VERTICAL DETURIC SEAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION A VERUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INOT 1978 SOUTHERN ONTARIO READUUSTMI SURVEY CONTES) SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARINGS ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 DESCINE LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION TAKEN ROM: - REGION OF PEEL DRAWING 28461-D (URCA MARCH, 2002) - SKRA AND ASSOCIATES STOM SEWER EASENTED (CRICA M DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZER THE DRAWING IS THE EXCLUSIVE READ AND UNDERSTODD IN CONJUNC THE	2017) ANNO 20 YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CL BENCIMARK No. 1031 ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION ARE REFERED TO THE CITY OF MISSISSAUGA BED BENGA FAREE SET MODIZIOTALLY AT THE PERSON PROFESSION BENGA FAREE SET MODIZIOTALLY AT THE PERSON PROFE THAD BECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION IN CANADIAN GEODETIC DATUM, 1928 (INOT 1978 SOUTHERN ONTARIO READUISTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DESIGN LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: - RECION OF PEEL DRAWING 28461-D (URCA MARCH, 2002) - SKRA AND ASSOCHTES STORM SEWER EASEMENT (CRCA M DRAWING IN THE EXCLUSIVE PROPERTY OF C.F. CROZER THE DRAWING IS TO HE EXCLUSIVE PROPERTY OF C.F. CROZER THE DRAWING IS TO HE EXCLUSIVE PROPERTY OF C.F. CROZER THE DRAWING IS TO HE EXCLUSIVE PROPERTY OF C.F. CROZER THE DRAWING IS TO BE EACL AND UNDERSTOOD IN COMUNIC OFTICE IS STRUCT.Y PROMENTED. THE CONTRACTOR SHALL VERTY ALL DIMENSIONS, LEVELS, ANI REPORT ANY DESCREPANCES OR OMISSIONS TO THIS OFTICE DIN ALL EXISTING IS TO BE CAD AND UNDERSTOOD IN CONJUCT PLANG AND DOCUMENTS APPLICABLE TO THE VERTIFIED IN THE CO	2017) ANY 22 YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK No. 1031 ELEVATION 142.555m LOCAL BENCHMARK: ELEVATION 142.555m LOCAL BENCHMARK: ELEVATION ARE REFEREND TO THE CITY OF MISSISSAUCA BENERIC OF A 250- BENCE ACIE AT THE SOUTHEAST SIDE THE INTERACT SALE ELEVATION 142.555 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INOT 1978 SOUTHERN ONTARIO READUSTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID D' COMENDE SCALE FACTOR OF 0.9996781 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID D' COMENDE SCALE FACTOR OF 0.9996781 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE CONVERTED TO GRID D' COMENDE SCALE FACTOR OF 0.9996781 SURVEY COMPLETED INFORMATIONI. AS CONSTRUCTED INFORMATIONI. BEARING AND ASSOCHES STORM SEWER EASEMENT (URIC	2017) ANY 23 YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION SHOW ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK No. 1031 ELEVATION 1142.55m LOCAL BENCHMARK: ELEVATION 1142.55m LEVATION 1142.55m DE UP THE INTERPRET INTERPRET PLANTARY INTERPRET VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READUISTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID B' COMEND SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DESIGN LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DAEDD MAR 5. 2021 AS CONSTRUCTED INFORMATION: - RECION OF PEEL DRAWNG 28461-D (DRCA MARCH, 2002) - SIRRA AND ASSOCHES: STORM SEWER EASUENT (CRCA M PREDENT SARE BASED ON SITE PLAN BY BRIAN LUEY DAEDD MAR 5. 2021 MIS DRAWNG IS THE PLAN MARCH 2001 PRIOR WIT OFFICE IS STOCHES PROPERTY OF C.F. CROZER THIS DRAWNG IS TO PEORE STORM SEWER EASUENT INCOMPUTE OFFICE STOCHES PROPERTION TAKEN FROM: - RECON TAKEN PROPERTION FOR THE MERCON WIT DRAWNG DOCUMENTS ARE DROUNDERSTOND IN CONTARY ON THE PLANS AND DOCUMENTS ARE DROUGES TO M	2017) ANY 23 YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION SHOW ON THIS PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1033 ELEVATION 1142,555m LOCAL BENCHMARK: ELEVATION TALKS THE PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1033 ELEVATION ARE TEST HORDOTALLY AT THE PLASS OF A 7500 THAPPIC POLE AT THE SOUTHEAST SIDE OF THE INTERPACE AND AND BECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142.655 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 BELARING ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DEGION ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATEOD MAR 5. 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAKEN FROM: CONTRACTOR PRIOR TO CONSTRUCTION	2017) ANNY 20 YYYY/MMM/DD TY OF MISSISSAUGA ITY OF MISSISSAUGA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION SHOW ON THIS PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1037 ELEVATION 1142,555m LOCAL BENCHMARK: ELEVATION ARE ARE REPERTED TO THE CITY OF MISSISSAUCA BENERN ON TABLET SET HYDROTITALLY AT THE DASE OF A 7500 THAPPIC POLE AT THE SOUTHEAST SIDE OF THE INTERPECT AND ADD ECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142,555 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READJUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 BERARIOS ARE CUMORADO DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 DETANCES ARE CONUDA TO DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 DETANCES ARE CONUDA DAVID B. CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9998781 SITE PLAN.NOTES: DESIGN ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: TAKEN FROM: - REGION OF PELI DRAWING 2861-D (ORCA MARCH, 2002) - SIERA AND ASSOCIATES STORM SEWER EASEMENT (ORCA MARCH, 2002) - SIERA AND ASSOCIATES STORM SEWER EASEMENT (ORCA MARCH, 2002) - SIERA AND ASSOCIATES STORM SEWER EASEMENT (ORCA MARCH, 2002) - SIERA NO DASCENTES OR MISSIONS TO THIS OFTER, SIENCE, PARIP THE DRAWING IS TO E ENCLUSIVE PROPERTY OF C.F. CROZER THE REPRODUCTION OF ANY PART OF IT WITHOUT PROR WRIT OFFICE IS STELLY PROPHEDED.	2017) ANNY 20 YYYY/MMM/DD TY OF MISSISSAUGA ICHMARK No. 1031, ITH OF MISSISSAUGA ICHMARK No. 1031, ITH OF MISSISSAUGA ICHMARGATE CONCRETE OF MAINGATE CONCRETE OF MAINGATE CONCRETE OF MAINGATE ORVE), HAVING AN T/30) Y MULTIPLYING BY THE ARCHITECT INC. IARCH, 2014) & ASSOCIATES INC. AND TEN CONSENT OF THIS D DATUMS ON SITE AND RICK TO CONSENT OF THIS D DATUMS ON SITE AND ITH S DRAWING. FIELD BY THE EAST GA
Image: second	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION SHOW ON THIS PLAN ARE DERIVED FROM THE CI BENCHWARK NO. 1031 ELEVATION 1142,555m LOCAL BENCHMARK: ELEVATION ARE ARE REPED TO THE CITY OF MISSISSAUCA BENERN ON TAUET SET HORONTALLY AT THE DASE OF A 7500 THAFFIC POLE AT THE SOUTHEAST SIDE OF THE INTERPED AND ADD ECINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE ELEVATION OF 142,555 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTAND READJUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BERARIOS ARE CUMORED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 DETANCES ARE CONUDA TOOL DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 DETANCES ARE CONDUCATION CAN BE CONVERTED TO GRID B' COMENED SCALE FACTOR OF 0.9998781 SITE PLAN.NOTES: DESIGN ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: TAKEN FROM: - REGION OF PELI DRAWING 2861-D (ORCA MARCH, 2002) - SIGEA AND ASSOCIATES STORM SEWER EASEMENT (ORCA MA - REGION OF FALL VERFY ALL DIMENSIONS TO THE OFTER MARCH - REGION OF FALL VERFY ALL DIMENSIONS TO THE OFTER MARCH - REGION DOCUMENTS ARE DASED ON UNDERSTOOD N. CONJUNC - REPERICAL PROPIDIEDD. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZER THE REPRODUCTION OF ANY PART OF IT WITHOUT PROR WRIT OFTICE IS STICLY PROPHEDED. THIS DRAWING IS TO BE READ AND UNDERSTOOD N. CONJUNC PLANS AND DOCUMENTS APPLICABLE TO THIS FROJECT, AND PLANS AND DOCUMENTS APREDICAD. <	2017) ANNY 20 YYYY/MMM/DD TY OF MISSISSAUGA ICHMARK No. 1031, ITH OF MISSISSAUGA ICHMARK No. 1031, ITH OF MISSISSAUGA ICHMARGATE CONCRETE OF MAINGATE CONCRETE OF MAINGATE CONCRETE OF MAINGATE ORVE), HAVING AN T/30) Y MULTIPLYING BY THE ARCHITECT INC. IARCH, 2014) & ASSOCIATES INC. AND TEN CONSENT OF THIS D DATUMS ON SITE AND RICK TO CONSERTION. FIELD BY THE EAST GA
	No. ISSUE / REVISION ELEVATION NOTE: ELEVATION NOTE: ELEVATION NOTE: ELEVATION 142555m LOCAL BENCHMARK: ELEVATION = 142.565m UCOLD = AT THE SOUTHEAST SIDE OF THE INTERSECTION AND BECINTON AVENUE EAST (MODIE POLE BASE SOUTH SIDE ELEVATION OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INC1 1978 SOUTHERN ONTARIO READJUSTMI SURVEY NOTES: SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE No: 139-0-15 DELANCES ARE UM GRID. DERIVED FROM RIN OBSERVATIONS UM ZONG 17, NABB3 (GSRS) (2010.0) DETANCES ARE GROUDA BAD CAN BE CONVERTED TO GRID B' COMBIND SCALE FACTOR OF 0.5996781 SITE PLAN NOTES: DESCON ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 DESCON ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 DESCON ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 DESCONSTRUCTED INFORMATION TAKEN FROM: - REGION OF PELL DANNER 28461-0 (DRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMENT (GRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEVER EASEMENT (GRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEVER FASEMENT (GRCA MARCH, 2002) - SKRA AND ASSOCI	2017) ANNO 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA
Image: A state of the stat	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATION. SHOWN ON THIS PLAN ARE DERIVED FROM THE CLEVATION 142.565m LOCAL BENCHMARK: ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION ARE REFERRED TO THE CITY OF MISSISSAUGA BEDENCE AT ABLET SET MORIZONTALLY AT THE BASE OF A 750n VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHEAST SIDE OF THE INTERSECTION AND EQUINO, 142.059 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHEAN ONTARIO READUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY, (2015/OC REFERENCE NO: 139–0-15 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY, (2015/OC REFERENCE NO: 139–0-15 DEGANCIES ARE GOUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DESIGN ELEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION TAKEN FROM: - REGON OF PEEL DAWING 28461-D (GRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMENT (GRCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASEMETO (GRCA MARCH, 2002) - SKRA AND ASSOCIATES OF MISSIONS TO THIS OFFICE MAR STRUCTED RADIA DARA TO IT WITHOUT PRIOR WITH OFFICE IS STRUCT PROMPITED. DESAMING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUTION OF ANY PART OF IT WITHOUT PRIOR WITH OFFICE IS STRUCT PROMPITED. THE CONTRACTOR SHALL YEARY ALL DIMENSIONS. LOUGH OFFICE IS STRUCT PROMPITED. DESAMING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUTION OF ANY PART OF IT WITHOUT PRIOR WITH OFFICE IS STRUCT PROMPITES. <th>2017) ANNO 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA</th>	2017) ANNO 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA
Image: second	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATION. NOTE: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CI BENCIMARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION THE SOLVMEAST SOL OF THE INTERSECTOM BENCE AT ABLET SET MORIZONTALLY AT THE BASE OF A 750n TRAFFIC FOLE AT THE SOUTHEAST SOL OF THE INTERSECTOM ADD SEINTON AND/OLE SATE SOLVMEAST SOL OF THE INTERSECTOM UND SEINTON OF 142.995 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READUSTMI SURVEY CONTES) SURVEY NOTES: DEGAN TARE REPORT OF DY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139–0-15 BEARINGS ARE ORUNG AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SURVEY CONTES: DESCIN LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTITUCTED INFORMATION TAKEN RROM: - RECONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SITE PLAN NOTES: DESCIN LEVENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTITUCTED INFORMATION TAKEN RROM: - RECION OF PEEL DRAWING 28461-D (URCA MARCH, 2002) - SKRA AND ASSOCIATES STOM SEWER EASENTED IN CONCERN OFFICIE IS STRUCT. PROMBITED. THE ORDING NOTES: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUCTION OF ANY PART OF THE OTHS FORDER (URCROM VIEWERS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NI AREPORT ANY DISCERPANCES OR OMISSIONS TO THE OFFICE PLAN DECONTRACTOR PRIOR TO CONSTRUCTION.	2017) ANNY 20 YYYY/MMM/DD ITY OF MISSISSAUGA ITY OF MISSISSAUGA
Image: second	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CL BENCIMAARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION THE SECTO TO THE CITY OF MISSISSAUGA BEE BENCA TARGET SET HORIZONTALLY AT THE BASE OF A 750n TRATIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTOM EVENDIN OF 142.565 m. VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (INCT 1978 SOUTHERN ONTARIO READUSTMI SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 DEGANICATE ARE ORDUND AND CAN BE CONVERTED TO GRID B' COMENED SCALE FACTOR OF 0.9996781 SURVEY COMENTS ARE BASED ON SITE PLAN BY BRIAN LUEY DATED MAR 5. 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAREN RROM: - REGION OF PEEL DRAWING 28461-D (URCA MARCH, 2002) - SKRA AND ASSOCIATES STORM SEWER EASENTO ON RT DECONNETED INFORMATION THE RENT OR COMPLET INFORMING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE REPROPOUTION OF ANY PART OF IT WHOUT PRIOR WIT OFFICE IS STRICT. PROHEMED. AS CONSTRUCTED INFORMATION THAREN REVICE AND SOURSIONS TO THIS OFFICE NOR MISSION STORM SEVER EASENTO ON SUBSIONS TO THIS OFFICE NOR HE PERPROPOUTION OF ANY PART OF IT WHOUT PRIOR WIT OFFICE IS STRICT. PROHEMED. THE CONTRACTOR SHALL VERTY ALL DIMENSIONS, LEVELS, AN REPORT ANY DISCEPANCES OF OMISSIONS TO THIS OFFICE NOR HEODITA ANY DISCEPANCES OF OMISSIONS TO THIS OFFICE NOR HEODITARY DIMENTS APPLICABLE TO THIS PROJECT. DO NO ALL EXISTING IN ONE READ AD UNDERSTOOD IN CONJUCT PLANK AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NO ALL EXISTING UNDER	2017) ANNO 20 YYYY/MMM/DD ITY OF MISSISSAUGA ACHMARK No. 1031, ITY OF MISSISSAUGA ACHMARK No. 1031, ITY OF MISSISSAUGA ITY OF MISSISSAUGA CHMARK No. 1031, ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA ITY OF MISSISSAUGA AND ITY OF MISSISSAUGA AND ITY OF MISSISSAUGA AND ITY OF MISSISSAUGA AND ITY OF MISSISSAUGA ITY OF MISSISSAUGA IT
Image: second	No. ISSUE / REVISION ELEVATION. NOTE: ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CL BENCIMAARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION SHOWN ON THIS PLAN ARE DERIVED FROM THE CL BENCHMARK NO. 1031 ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION 142.565m LOCAL BENCHMARK: ELEVATION 142.565m VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READUSTMI SURVEY CONDETS) SURVEY CONDUCTION AVENUES SURVEY CONDETSD BY DAVD B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 SURVEY CONDETSD BY DAVD B. SEARLES SURVEY. (2015/OC REFERENCE NO: 139-0-15 BEARING ARE GROUND AND CAN BE CONVERTED TO GRID B' COMBINED SCALE FACTOR OF 0.9996781 SURVEY CONDENTS ARE DASED ON SITE PLAN BY BRIAN LUEY DATEO MARK 5. 2021 AS CONSTRUCTED INFORMATION: AS CONSTRUCTED INFORMATION TAKEN RROM: - REGION OF PEEL DRAWING 28461-D (URCA MARCH, 2002) - SKRA AND ASSOCIATES STOM SEWER EASENED (CRCA M DRAWING IS THE EXCLUSIVE PROPERTY OF CF. CROZER The REPRODUCTION OF ANY PART OF IT WHOUT PRIOR WIT OFFICE IS STRICTLY PROHEMED. DEAMING IS THE EXCLUSIVE PROPERTY OF CF. CROZER The REPRODUCTION STRA PART OF IT WHOUT PRIOR WIT OFFICE IS STRICTLY PROHEMED. DRAWING IS THE EXCLUSIVE PROPERTY OF CF. CROZER The REPRODUCTION STAMP AREA ON UNDERSTOOD IN CONUM VID OFFICE IS STRICTLY PROHEMED. DRAWING IS THE EXCLUSIVE PROPERTY OF CF. CROZER THE	2017) ANY 22 YYYY/MMM/DD ITY OF MISSISSAUGA ACHMARK No. 1031, ITY OF MISSISSAUGA ANGATE CONCRETE OF MANGATE ORVE J. HAVING AN ENT) T/30) Y MULTIPLYING BY THE ARCHITECT INC. IARCH, 2014) & ASSOCIATES INC. AND INC. TO CONSTRUCTION. TO CONSTRUCTION. T





	2	ISSUED FOR 3RD SUBMISSION	2021/MAR/24		
	1	ISSUED FOR 2ND SUBMISSION	2018/DEC/20		
	0	ISSUED FOR 1ST SUBMISSION	2017/APR/20		
	No.	ISSUE / REVISION	YYYY/MMM/DD		
	ELE	ELEVATION NOTE:			
	ELE BEN	ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CITY OF MISSISSAUGA BENCHMARK No. 1031			
	ELE	ELEVATION = 142.565m			
	LOC	LOCAL BENCHMARK:			
	ELE BEII TRA ANO ELE	ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BENCHMARK NO. 1031, DENIGA I ABLET SET HORIZONTALLI AT THE BASE OF A 750mm DIAVERE CONCRETE TRAFFIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION OF MANIGATE DRIVE AND EGLINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE), HAVING AN ELEVATION OF 142.565 m.			
	VER	VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMENT)			
	SU	SURVEY NOTES:			
	SUP	SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/0CT/30) REFERENCE No.: 139-0-15			
	BEA UTA	BEARINGS ARE UTM GRID, DERIVED FROM RTN OBSERVATIONS UTM ZONE 17, NADB3 (GSRS) (2010.0)			
	DIS COM	DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBNED SCALE FACTOR OF 0.9996781			
	SITE PLAN NOTES:				
	DES	DESIGN ELEMENTS ARE BASED ON SITE PLAN BY BRIAN LUEY ARCHITECT INC. DATED MAR 5, 2021			
	AS CONSTRUCTED INFORMATION:				
	AS - F - S	AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION OF PEEL DRAWING 28451-D (URCA MARCH, 2002) - SKIRA AND ASSOCIATES STORM SEVER EASEMENT (URCA MARCH, 2014)			
	DR	DRAWING NOTES:			
	THE	THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART OF IT WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRUCT VEROMENTED.			
	THE	THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCHART OF CONSTRUCTION			
	THE	THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS ADDIVATION FOR THIS PROFESSION OF THIS DRAWING			
	ALL	PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT, DO NOT SCALE THIS DRAWING. ALL EXISTING UNDERGROUND UTLITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.			
	Proje	Project			
		1108 EGLINTON AVENUE FAST			
		CITY OF MISSISSAUGA			
	Drawi	Drawing			
		PRE-DEVELOPMENT DRAINAGE	PLAN		
FOR CONSTRUCTIO	N				
Engineer		<u>~</u>			
A ELIAS		CROZIER &ASSOCIATES Consulting Engineers 2800 High F Suite Mitton, ON 905 875- www.cfcro	Point Drive 100 L9T 6P4 0026 T 4915 F bzier.co		
W 24 21 21 00	Drawn	M.I.M. Design M.C.B. Project No. 127	7-4440		
CE OF ON	Check	S.C.S. Check K.J.F. Scale 1: 300 Dwg.	FIG 1		





	JANUARY 3, 2008.	ON		
	REVISED REGIONAL FLOODPLAIN @ 139.91 UPON SITE RESTORATION COMPLETED SUMMER 2020			
	5.0m BUFFER FROM REGIONAL FLO	DODPLAIN		
	2 ISSUED FOR 3RD SUBMISSION	2021/MAR/24		
	0 ISSUED FOR 1ST SUBMISSION	2018/DEC/20 2017/APR/20		
	No. ISSUE / REVISION	YYYY/MMM/DD		
	ELEVATION NOTE:			
	ELEVATIONS SHOWN ON THIS PLAN ARE DERIVED FROM THE CITY OF I BENCHMARK No. 1031	MISSISSAUGA		
	ELEVATION = 142.565m			
	LOCAL BENCHMARK: ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSALICA REMOVANCE	K No. 1031		
	ELEVATION OF REFERENCE TO THE CITY OF MOSISSAUGA BERNINARA NO. DOI: BEING A TABLET SET HORIZONTALLY AT THE BASE OF A 750mm DIAMETER CONCRETE TRAFTIC POLE AT THE SOUTHEAST SIDE OF THE INTERSECTION OF MAINGARE DRIVE AND EGUINTON AVENUE EAST (MIDDLE POLE BASE SOUTH SIDE), HAVING AN ELEVATION OF 142.565 m.			
	VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMENT)			
	SURVEY NOTES:			
	SURVEY COMPLETED BY DAVID B. SEARLES SURVEY. (2015/OCT/30) REFERENCE No.: 139-0-15			
	BEARINGS ARE UTM GRID, DERIVED FROM RTN OBSERVATIONS UTM ZONE 17, NAD83 (GSRS) (2010.0)			
	DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTI COMBINED SCALE FACTOR OF 0.9996781	PLYING BY THE		
	SITE PLAN_NOTES:			
	DESIGN ELEMENTS ARE BASED ON SITE PLAN BY BRIAN LUEY ARCHITECT INC. DATED MAR 5, 2021			
	AS CONSTRUCTED INFORMATION:			
	AS CONSTRUCTED INFORMATION TAKEN FROM: - REGION OF PEEL DRAWING 28461-D (GIRCA MARCH, 2002) - SKIRA AND ASSOCIATES STORM SEWER EASEMENT (CIRCA MARCH, 2014)			
	DRAWING NOTES: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZER # ASSO	CLATES INC. AND		
	THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART OF IT WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.			
	THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATU REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO	MS ON SITE AND CONSTRUCTION.		
	THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WI PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NOT SCAL	TH ALL OTHER LE THIS DRAWING.		
	ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD E CONTRACTOR PRIOR TO CONSTRUCTION.	BY THE		
	Project			
	1108 EGLINTON AVENUE EAST			
	CITY OF MISSISSAUGA			
	Drawing			
	POST-DEVELOPMENT DRAINAGE	e plan		
FOR CONSTRUCTION				
OFESSION		oint Drive		
1.8m × 2	Suite 1	100 L9T 6P4		
A FLIAS	&ASSOCIALES 905 875-0 905 875-	0026 T 4915 F		
Nu 211/21	Lonsuming Engineers www.cfcro.	zier.ca		
VCC of ONUMB	M.I.M. Design M.C.B. Project No. 1277	/-4440		
	Check S.C.S. Check K.J.F. Scole 1: 300 Dwg.	FIG 2		



