

MEMORANDUM



TO: Patrick Leo Dupont
Armco Capital Inc.
6848 Newman, Lasalle
QC H8N 9G7

FROM: James Fookes, P.Eng.
Morrison Hershfield

PROJECT No.: MH ref. 210292799

RE: 1376 Carling Avenue Development – Phase 2
Site Servicing and Storm Water Management for
the Future City Park

DATE: 12/20/2021

X:\PROJ\2021\210292700-1356 CARLING AVE PH2-CIVIL\12. DELIVERABLES\SPA THIRD SUBMISSION 2021.12.20\12.20\PARK\MEMO_1354 CARLING AVE SITE SERVICING DESIGN BRIEF PARK REV 1.DOCX

1. Introduction

1.1. Site Description and Proposed Development

This memo describes the site servicing and stormwater management design and calculations pertaining to the new park development to be constructed at 1376 Carling Avenue. The redevelopment 1376 Carling Avenue consists of multi-storey residential and commercial units. An Urban Design Review Panel (UDRP) review in 2017 found that the proposed development and the surrounding neighborhood lacked parkland and amenity spaces. The URDP recommend incorporating a larger park in a location that would be accessible from outside the site to help address these concerns. As a result, the proposed development was modified to include a park within the southwestern limits of the subject property accessible from Meath Street. The proposed park area will be separated from the main property parcel into new property parcel to be owned by the City.

Existing infrastructure in the vicinity of the site is described in **Section 1.4** below. Design drawings for proposed site servicing, grading, and erosion control are provided in **Appendix A**.

1.2. Location Map and Plan

The location of the site is illustrated in **Figure 1**. A detailed site layout is illustrated on the drawings in **Appendix A**.

The proposed park development at 1376 Carling Ave. is entirely within the existing property parcels. The site is located within ward 16, occupied by Councillor Riley Brockington.

Figure 1 - Key Plan



1.3. Consultation and Permits

The Planning Committee of the City of Ottawa amended zoning by-law regulations in anticipation for the new development for 1376 Carling Avenue. The amendment consists of zoning the proposed park location to O-1 Parks and Open Space Zone.

1.4. Available Existing Infrastructure

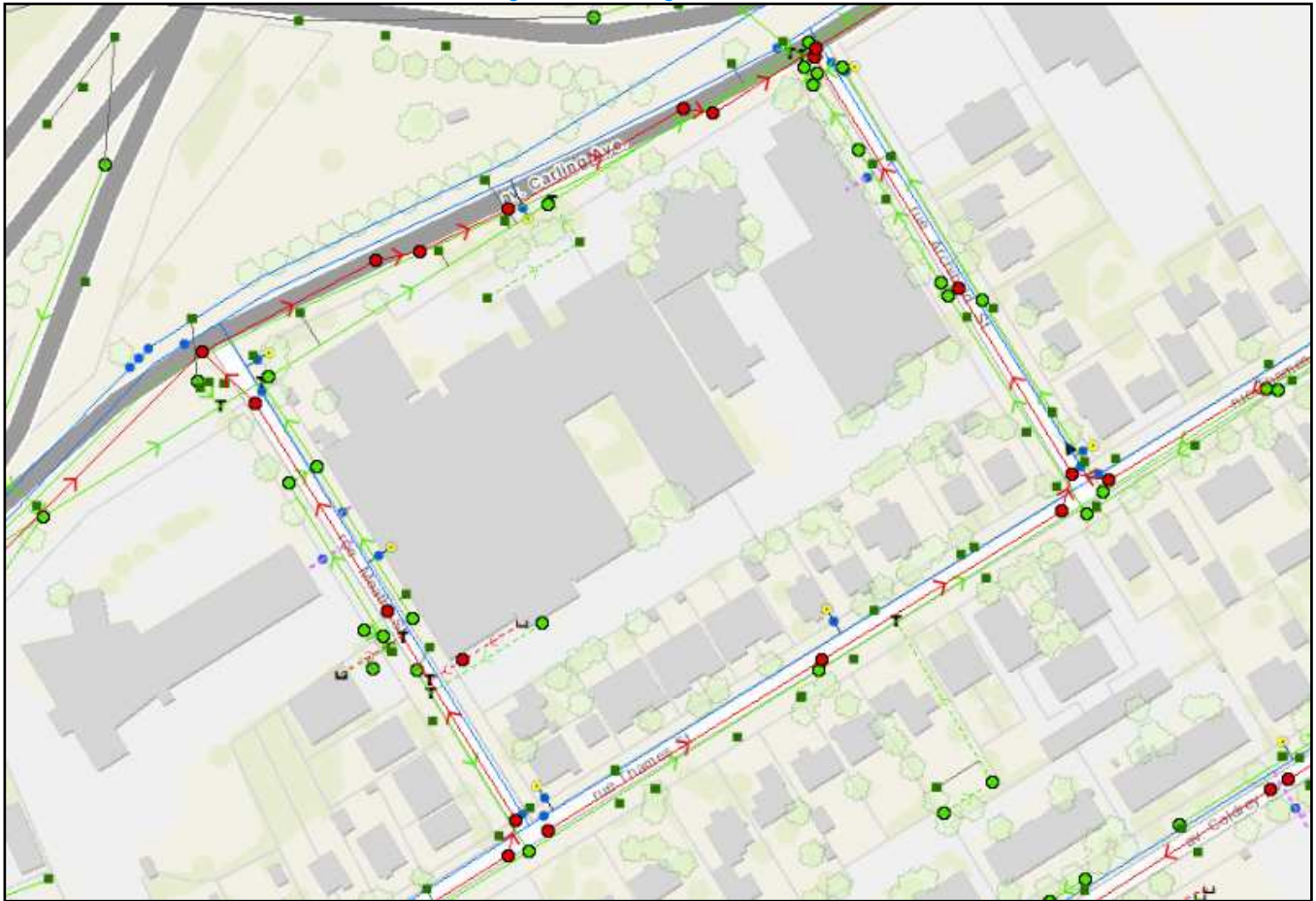
Sewer mapping collected from the City of Ottawa, and related documentation pertaining to the development of phase 1, indicate that the following infrastructure exists in and surrounding the subject site.

Meath Street

- 300mm diameter concrete storm sewer
- 400mm diameter PVC storm sewer
- 525mm diameter PVC storm sewer
- 300mm diameter concrete sanitary sewer
- 150mm diameter PVC watermain

Corresponding structures and services can be found in **Figure 2**.

Figure 2 - Existing Infrastructure



Existing infrastructure and utilities are shown in detail on Plan C801 found in **Appendix A**.

2. Storm Servicing and Stormwater Management

2.1. Background

The existing drainage is overland westward towards an existing catch basin located on Meath Street, at the intersection of the existing rear laneway.

The City of Ottawa's Sewer Design Guidelines require the 100-year post-development storm flow to be restricted to the 5-year pre-development runoff with an assumed pre-development coefficient no greater than 0.5.

For the proposed part development, quantity control meeting the City of Ottawa requirements is proposed to be provided through the use of on-site detention. Flow control is to be provided by an ICD and surface storage within the proposed park.

An existing trunk sewer located on Carling Ave currently receives water runoff from the existing site and will be the main sewer that collects water runoff from the new developed stormwater management system that is proposed.

Maximum Runoff Coefficient 0.5
 Time of Concentration 10 Minutes

Table 3– Allowable Release Rate

Return Period (Years)	Intensity, I (mm/hr)	Area (ha)	Runoff Coefficient, R	Runoff Rate, Q (L/s)
5	104.2	0.14	0.50	20.7

The allowable release rate for the site has been calculated to be 20.7 L/s.

The project will result in the existing area being partially covered with impervious surfaces. The post-development runoff coefficients are indicated in **Table 4**:

Table 4– Overall Post-Development Runoff Coefficients

	Overall Post-Development Runoff Coefficients	
Storm Event	5-Year Storm	100-Year Storm
Areas Description	proposed park site	proposed park site
Project Area (in ha)	0.14	0.14
Weighted Runoff Coefficient	0.43	0.54

2.4.2. Stormwater Management Concept

The subject property limits are bounded by easements and zoning regulations and as a result stormwater runoff will be maintained within the property limits of the park.

Table 5 provides a summary of the characteristics of the post-development peak flow rates.

Table 5– Post-Development Peak Flow Rates

	Post-Development Peak Flow Rates	
Storm Event	5-Year Storm	100-Year Storm
Drainage area (ha)	0.14	0.14
Runoff Coefficient	0.43	0.54
Peak Flow (L/s)	17.7	34.5

As a result, the post-development 100-year flow rate is required to be reduced by **17.7 L/s** to meet the allowable release rate of 20.7 L/s.

All stormwater within the proposed park site will be directed to a central manhole catch basin. An ICD will be installed on the manhole catch basin lead to control the flow to the allowable release rate. As indicated by the proposed storage calculations, the required surface storage was calculated to be 6.2 m³. Storage will be provided through surface storage above the manhole catch basin to a maximum ponding depth of 200mm. The extents of surface ponding are indicated on drawing C802 in **Appendix A**.

Summary

Design calculations for the new storm service are provided in **Appendix B**.

Table 6 summarizes the proposed release rates and confirms that the total release rate does not exceed the allowable release rate.

Table 6 – Post-Development Controlled Peak Flows



	Post-Development Controlled Peak Flows (L/s)
Allowable Release Rate	17.7
Release Rate from Uncontrolled Drainage Areas	0
Release Rate from Controlled Drainage Areas	17.7
Total Release Rate	17.7

2.5. 100 Year Flood Levels and Major Flow Routing

The site is not within a 100-year floodplain. A figure of the Ottawa river floodplain overlay extracted from the City's GeoOttawa resource is included in **Appendix C**.

2.6. Grading

The proposed grading plan is shown in Drawing C802 in **Appendix A**. The development will be tied into the existing grades on Meath St, phase 2 development, and the existing easement along the southern project limits.

3. Conclusions

In conclusion the proposed development meets all required servicing constraints and associated design criteria/requirements as well as the additional City of Ottawa requirements identified in the pre-consultation phase. It is recommended that this report be submitted to the City of Ottawa in support of the application for site plan approval.

Sincerely,

Morrison Hershfield Limited



James Fookes, P.Eng., C.Eng.
Senior Municipal Engineer

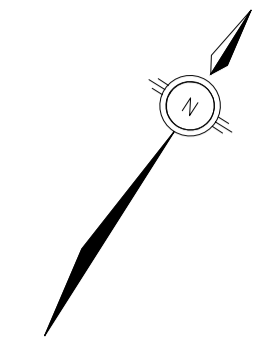
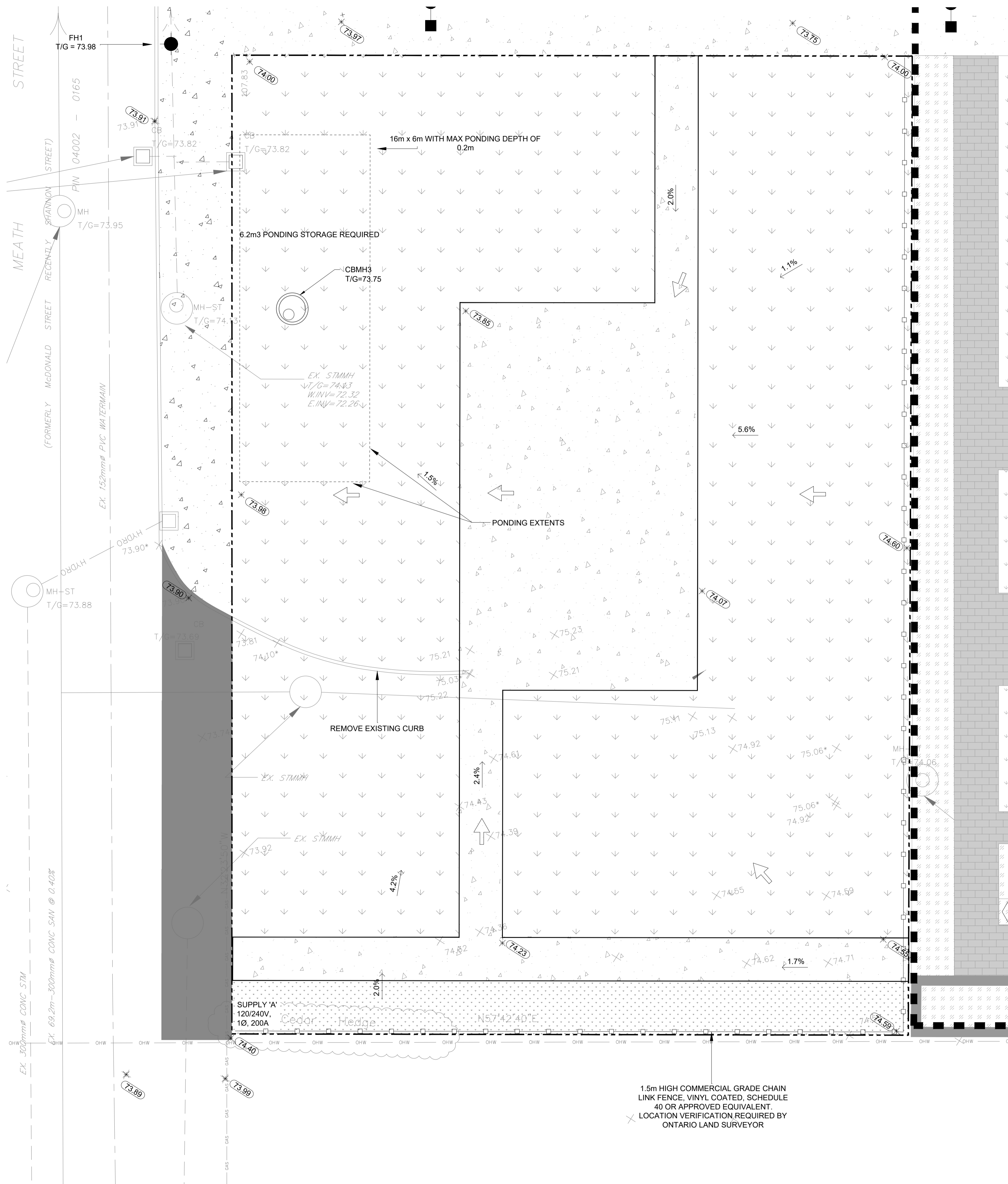
Dillon O'Neil, EIT
Municipal Engineer-in-Training

4. Appendices

- Appendix A Site Servicing, Grading and Erosion and Sediment Control, Catchments Plans,
- Appendix B Storm Sewer Design Calculations
- Appendix C GeoOttawa 1-100 Year Floodplain and Correspondence

Appendix A

Site Servicing, Grading, Catchments Plans and Details



LEGEND

- NEW CATCH BASIN MANHOLE
- PROPOSED ELEVATION
- EXISTING ELEVATION
- PROPOSED SLOPE DIRECTION
- DIRECTION OF MAJOR OVERLAND FLOW
- PONDING EXTENTS
- PROPERTY EXTENTS
- UNDERGROUND PARKING GARAGE EXTENTS
- NEW MONOLITHIC CURB AND SIDEWALK (CITY STD DET SC2)
- NEW 1.5m HIGH COMMERCIAL GRADE CHAIN LINK FENCE

OWNER

Holloway LODGING
 145 HOBSONS LAKE DRIVE SUITE 106
 HALIFAX, NOVA SCOTIA
 B3S 0H9
 (902)494-3499

3	2021-12-15	ISSUED FOR SITE PLAN CONTROL R3
2	2021-10-04	ISSUED FOR SITE PLAN CONTROL R2
1	2021-06-16	ISSUED FOR SITE PLAN CONTROL
No.	YYYY-MM-DD	ISSUED FOR SCHEMATIC DESIGN

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 J.G. FOOKES
 Dec 20, 2021
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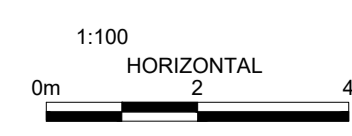


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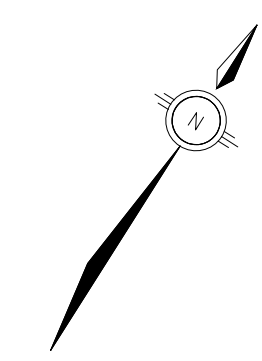
PROJECT
**1354 & 1376 CARLING AVENUE
 DEVELOPMENT - PROPOSED CITY PARK**

DRAWING
GRADING PLAN

PLAN NUMBER 18501	APPLICATION NUMBER D07-12-21-0092	
DESIGN DO	DATE 2021-10-04	SCALE 1:100
DRAWN SC	PROJECT NO. 210292799	
CHECKED NC	DRAWING NO. C802	VERSION
APPROVED JF		



1.5m HIGH COMMERCIAL GRADE CHAIN LINK FENCE, VINYL COATED, SCHEDULE 40 OR APPROVED EQUIVALENT
 X LOCATION VERIFICATION REQUIRED BY ONTARIO LAND SURVEYOR



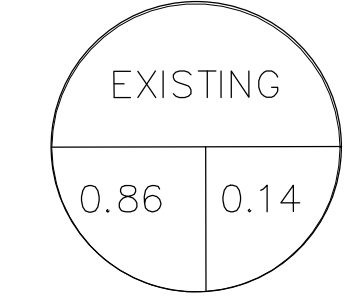
LEGEND

AREA ID	DRAINAGE AREA CHARACTERISTICS
	% AREA ha

RUNOFF COEFFICIENT

--- EXISTING CATCHMENTS

PROPOSED CITY PARK PROPERTY LIMITS



OWNER

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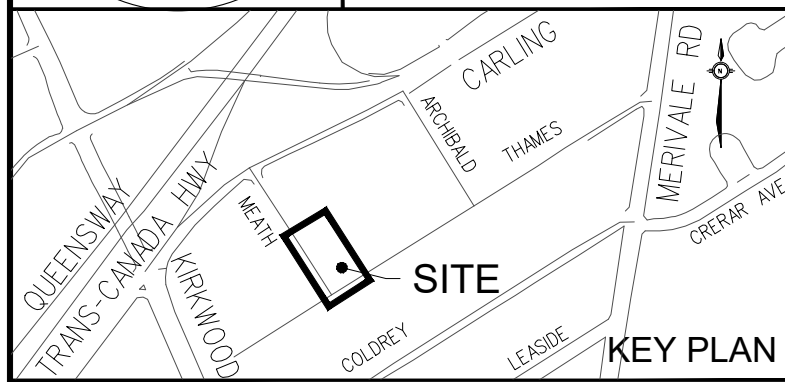
LICENSED PROFESSIONAL ENGINEER

J.G. FOKES

Dec 20, 2021

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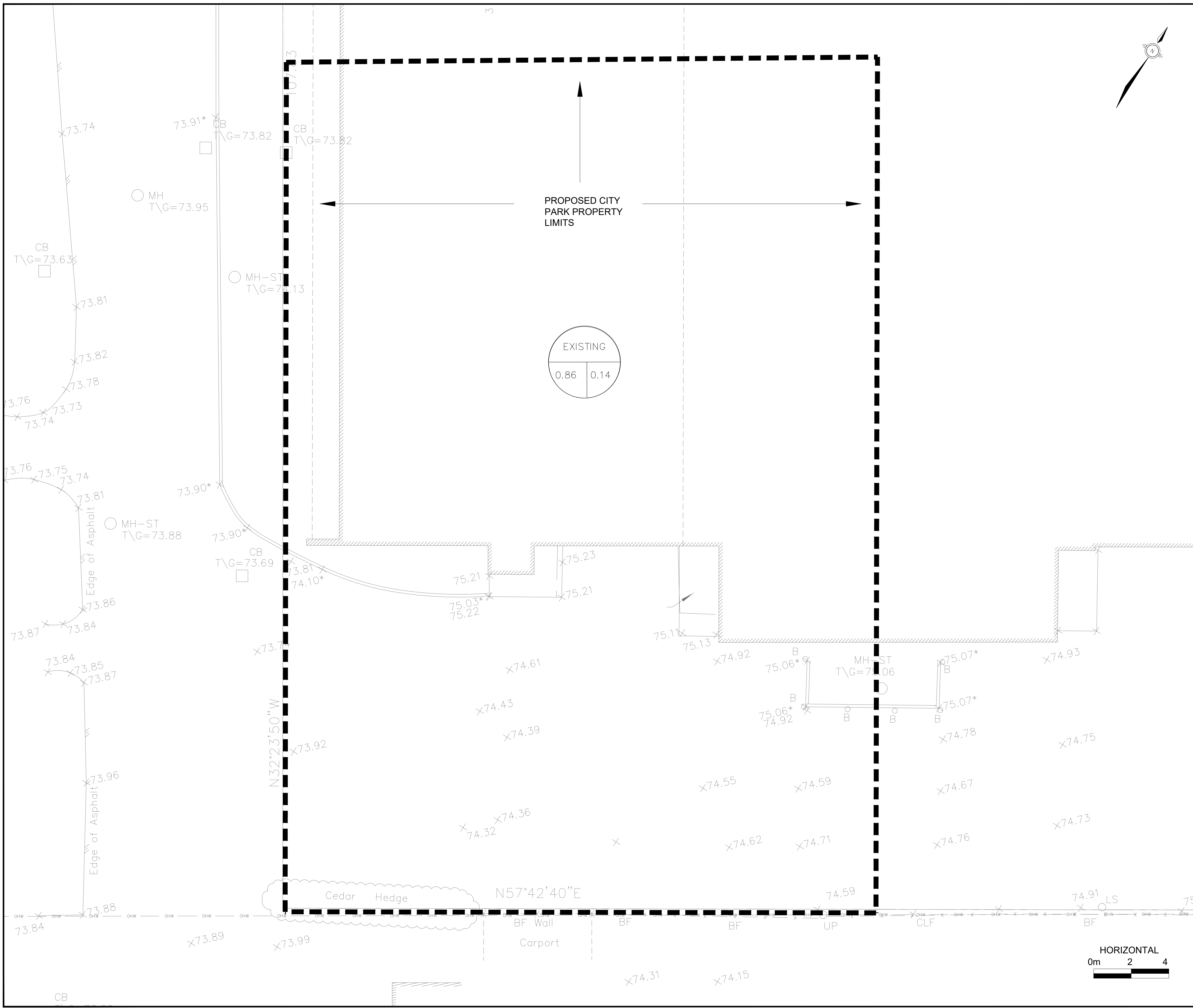
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PROJECT 1354 & 1376 CARLING AVENUE
DEVELOPMENT - PROPOSED CITY PARK

DRAWING EXISTING STORM DRAINAGE AREA PLAN

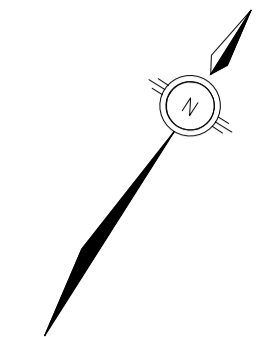
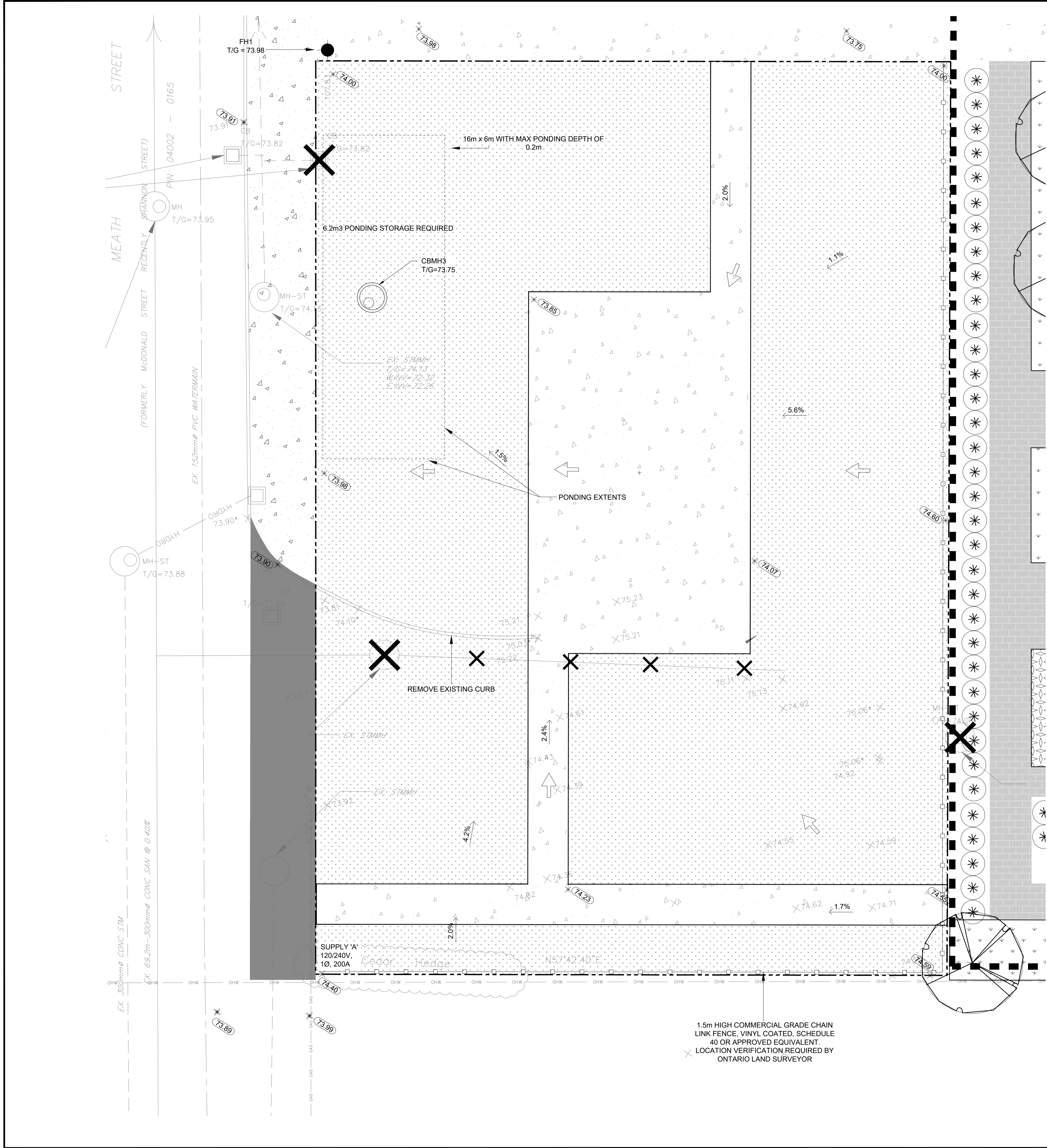
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Appendix B

Storm Sewer Design Calculations



LEGEND

- NEW CATCH BASIN MANHOLE
- PROPOSED ELEVATION
- EXISTING ELEVATION
- PROPOSED SLOPE DIRECTION
- DIRECTION OF MAJOR OVERLAND FLOW
- PONDING EXTENTS
- PROPERTY EXTENTS
- UNDERGROUND PARKING GARAGE EXTENTS
- NEW MONOLITHIC CURB AND SIDEWALK (CITY STD DET SC2)
- NEW 1.5m HIGH COMMERCIAL GRADE CHAIN LINK FENCE

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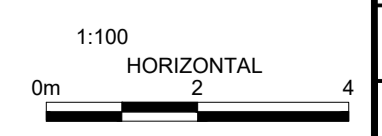
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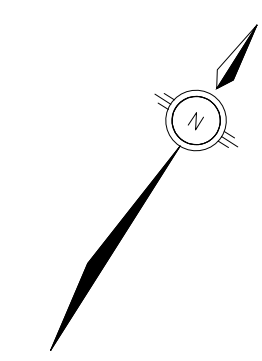


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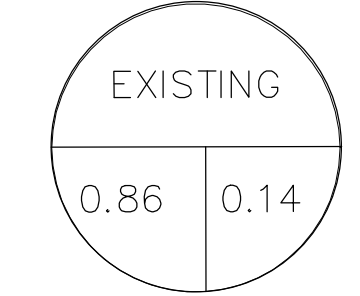


LEGEND

AREA ID		DRAINAGE AREA CHARACTERISTICS
RUNOFF COEFFICIENT	%	AREA ha

--- EXISTING CATCHMENTS

PROPOSED CITY PARK PROPERTY LIMITS



OWNER

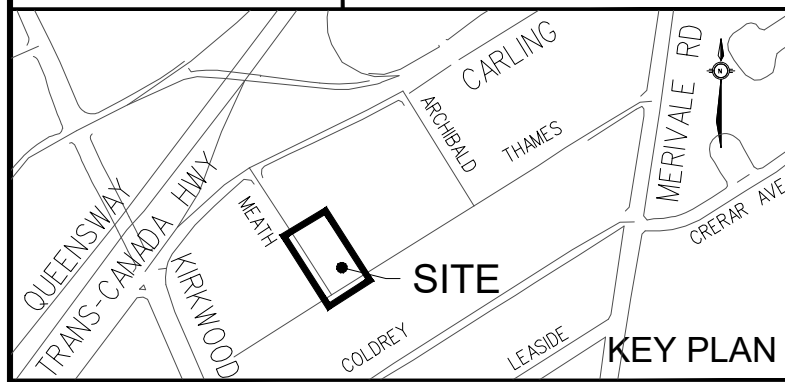
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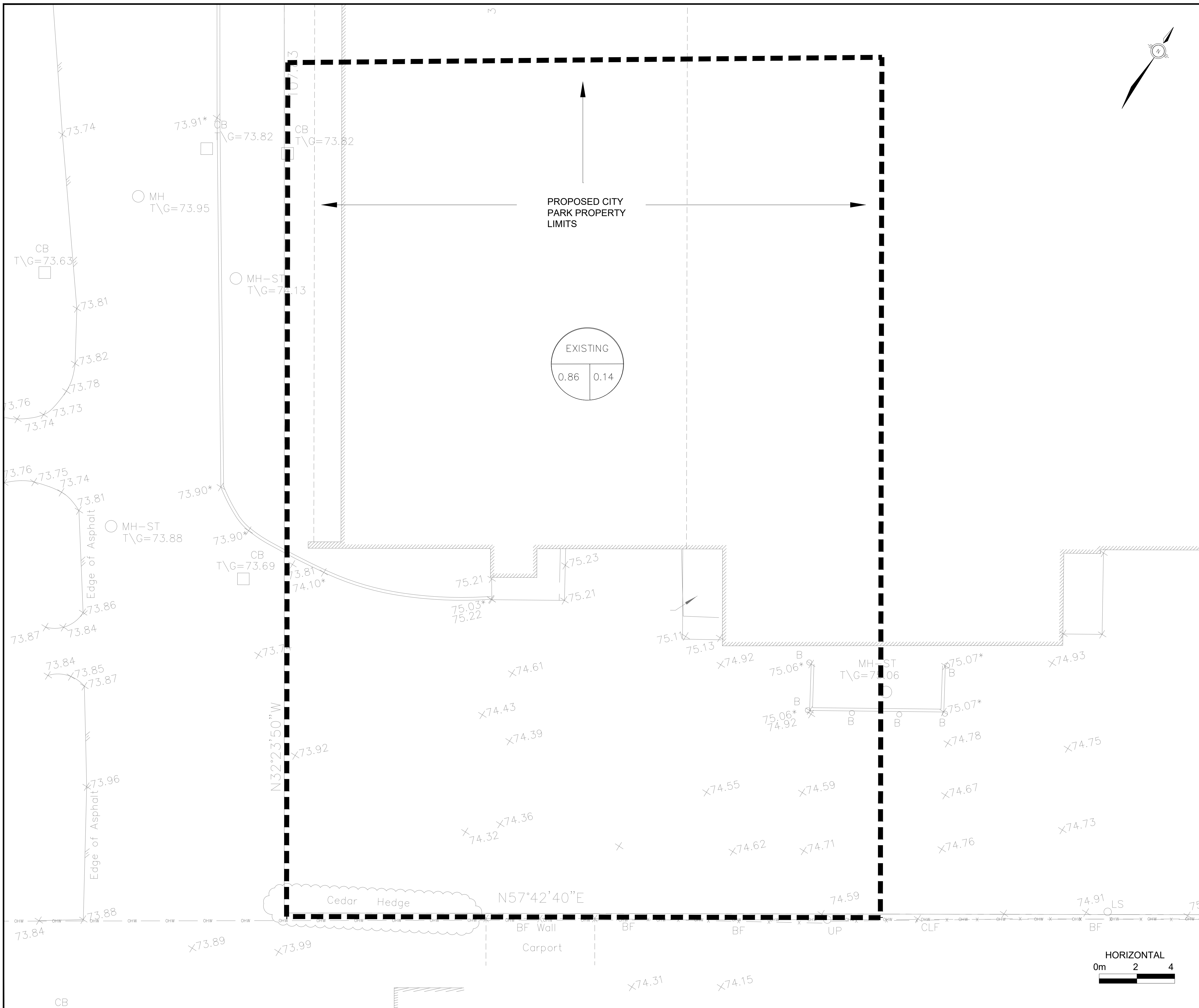
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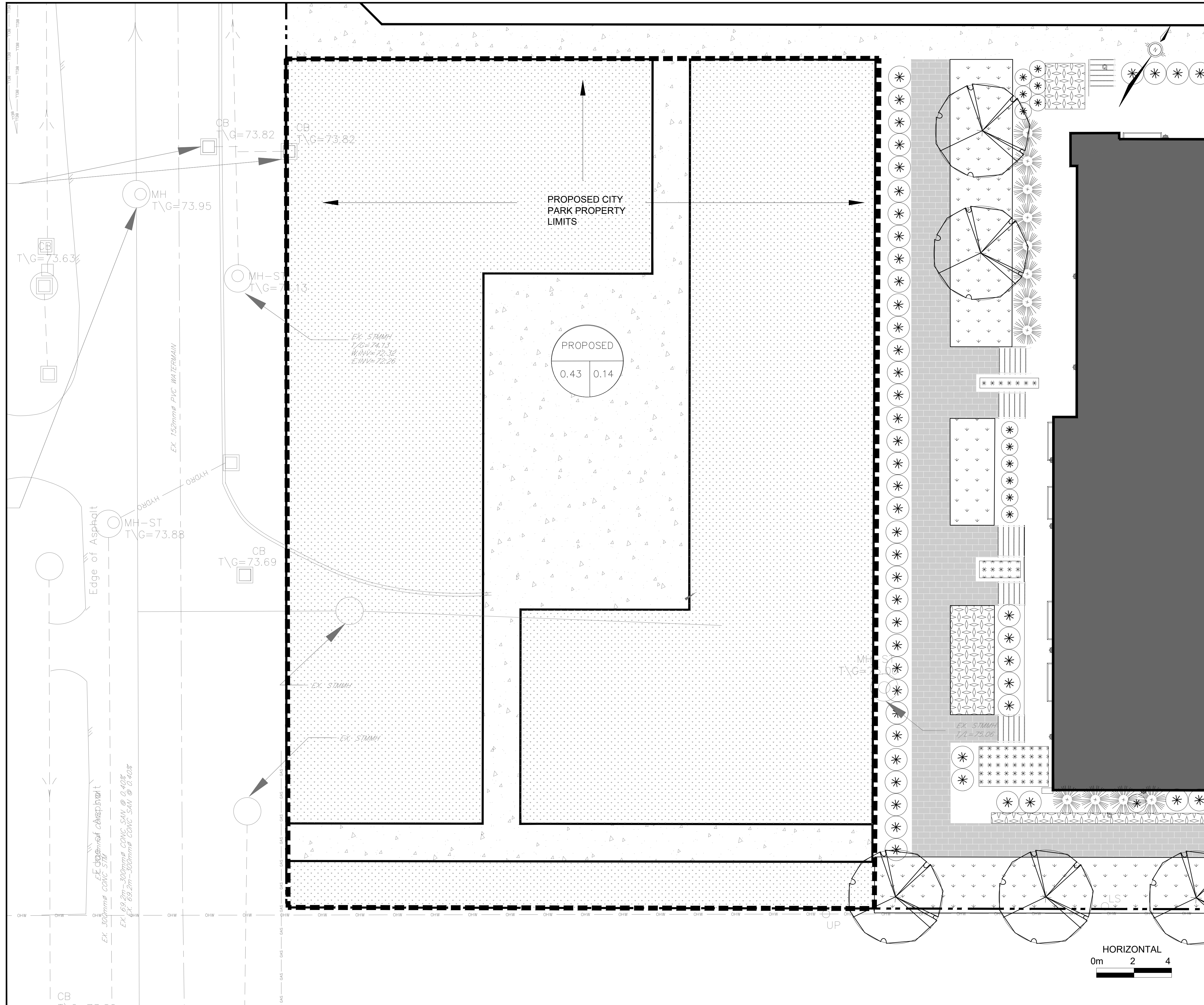
PROJECT 1354 & 1376 CARLING AVENUE
DEVELOPMENT - PROPOSED CITY PARK

DRAWING EXISTING STORM DRAINAGE AREA PLAN


PLAN NUMBER 18501	APPLICATION NUMBER D07-12-21-0092
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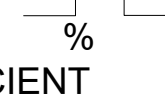
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LEGEND

AREA ID  DRAINAGE AREA CHARACTERISTICS

RUNOFF COEFFICIENT %  AREA ha

 PROPOSED CATCHMENTS

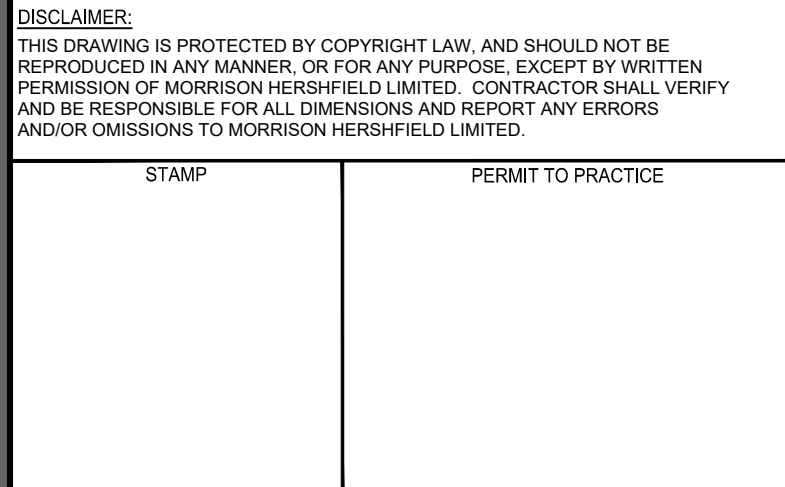
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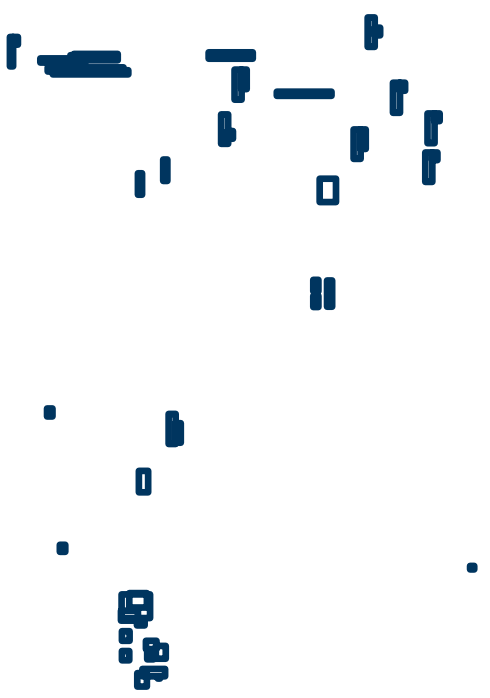
DRAWING
PROPOSED STORM DRAINAGE AREA PLAN

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Appendix C

Correspondence and Floodplain



Alison Gosling

From: Diamond, Emily (MOECC) <Emily.Diamond@ontario.ca>
Sent: Tuesday, March 28, 2017 5:53 PM
To: Alison Gosling
Subject: RE: 1354-1376 Carling Avenue - ECA Requirement

Hi Alison,

Yes, I agree with your assumption that this project will meet the exemption set out under Ontario Regulation 525/98 section 3 once the parcels are amalgamated into one.

Regards,

Emily Diamond

Environmental Officer
Ministry of the Environment and Climate Change

Ottawa District Office
2430 Don Reid Drive
Ottawa, Ontario, K1H 1E1
Tel: 613-521-3450 ext 238
Fax: 613-521-5437
e-mail: emily.diamond@ontario.ca

From: Alison Gosling [mailto:AGosling@dse1.ca]
Sent: March-24-17 10:41 AM
To: Diamond, Emily (MOECC)
Cc: Robert Freel
Subject: 1354-1376 Carling Avenue - ECA Requirement

Good morning Emily,

We just wanted to touch base with you regarding a proposed development we are working on located at 1354-1376 Carling Avenue.

Currently comprised of two parcels of land, the existing 1.9ha site currently consists of two lodging buildings and is zoned Arterial Main Street and Residential Fourth Density. Please note that the parcels will be amalgamated into one parcel of land prior to construction.

The phased development proposes to construct four residential/commercial buildings with incremental demolition of the existing buildings. The full build-out will consist of approximately 2,437 m² of commercial space and 914 residential units.

It appears that the existing stormwater management system currently directs flow towards the municipal infrastructure within Meath Street and Archibald Street.

Proposed stormwater controls will use subsurface storage, and surface ponding to attenuated the release rate to City of Ottawa requirements.

As the proposed sewage works and stormwater management facility will be servicing a single parcel of land which will be owned and operated by a single entity, does not discharge to a combined sewer system, and is not proposed to be used for industrial purposes, it is assumed this falls within the exemption requirements for an Environmental Compliance Approval as per O.Reg 525/98, Section 3 (a) & Ontario Water Resources Act Section 53. 6 (c).

I hope you could comment on my assumption that this property would be exempt from requiring an ECA. Please feel free to call to discuss this further.



Thank you,

Alison Gosling, E.I.T.
Project Coordinator / Junior Designer

DSEL

david schaeffer engineering ltd.

120 Iber Road, Unit 103
Stittsville, ON K2S 1E9

phone: (613) 836-0856 ext.542

fax: (613) 836-7183

email: agosling@DSEL.ca

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Alison Gosling

From: Jocelyn Chandler <jocelyn.chandler@rvca.ca>
Sent: Thursday, October 27, 2016 3:49 PM
To: Alison Gosling
Subject: RE: 1376 Carling Ave - RVCA

Follow Up Flag: Follow up
Flag Status: Completed

Hello Alison,

Our records concur with the information you have provided. Given that the stormwater from this site will travel greater than 2 km before outletting to the receiver (the Ottawa River), the RVCA advises that we will not be requiring water quality controls on the stormwater management design for the redevelopment of this site.

Jocelyn

Jocelyn Chandler M.Pl. MCIP, RPP
Planner, RVCA

t) 613-692-3571 x1137

f) 613-692-0831

jocelyn.chandler@rvca.ca

www.rvca.ca

mail: Box 599 3889 Rideau Valley Dr., Manotick, ON K4M 1A5

courier: 3889 Rideau Valley Dr., Nepean, ON K2C 3H1

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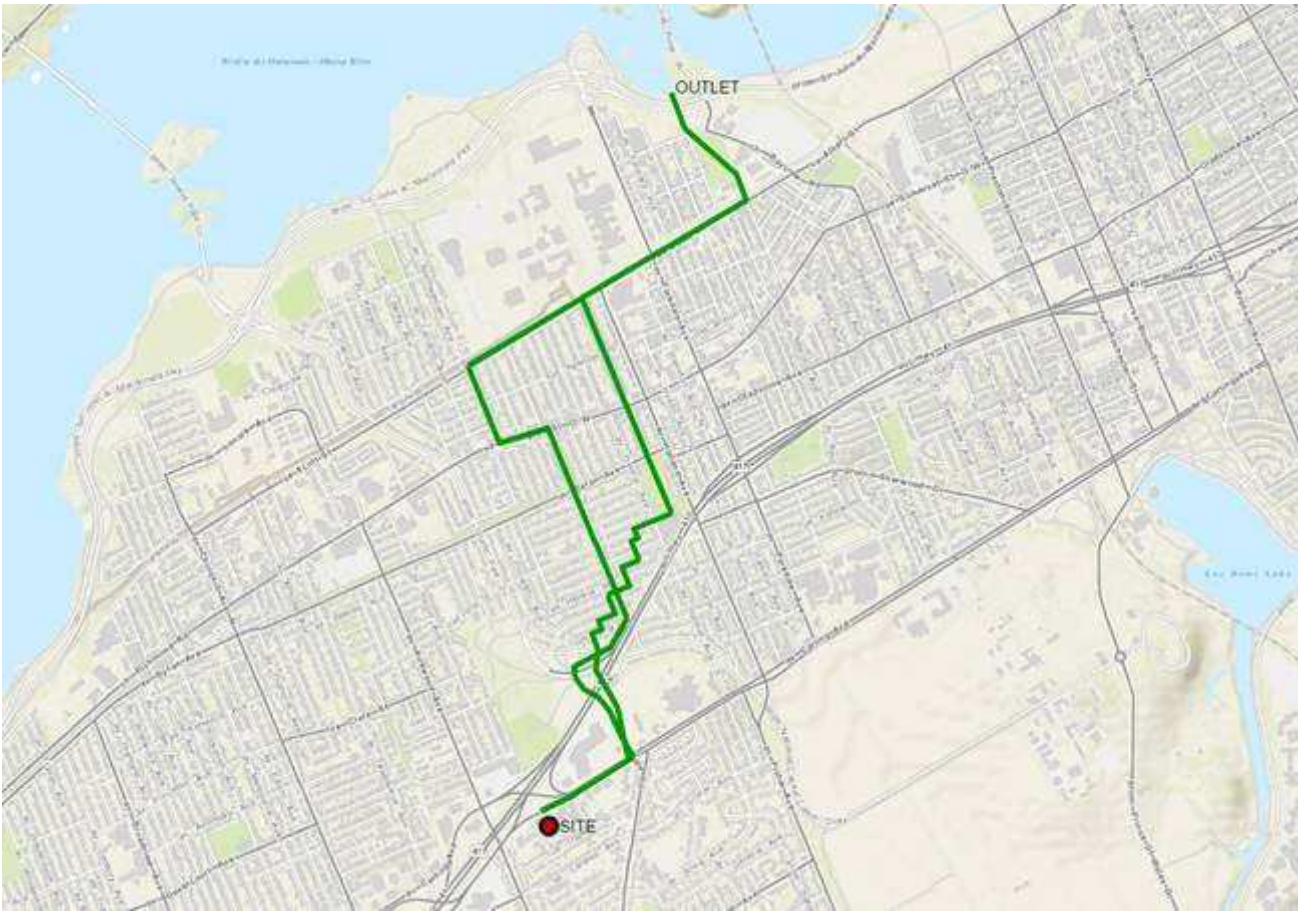
From: Alison Gosling [mailto:AGosling@dsel.ca]
Sent: Thursday, October 27, 2016 3:26 PM
To: Jocelyn Chandler <jocelyn.chandler@rvca.ca>
Cc: Robert Freel <RFreel@dsel.ca>
Subject: 1376 Carling Ave - RVCA

Good afternoon Jocelyn,

We wanted to touch base with you regarding a mixed-use development at 1376 Carling Avenue. The development proposes residential towers and at grade commercial units.

The existing stormwater on site discharges to the Carling Avenue storm sewer. Based on the information available, the existing storm sewers servicing the site travels 3.5-3.8 km to an outlet into the Ottawa River, as shown by the figure below.

Can you provide a comment regarding quality controls that maybe required for the site?



Please feel free to call if you have any questions or you would like to discuss.

Thanks in advance,

Alison Gosling, E.I.T.
Project Coordinator / Junior Designer

DSEL

David Schaeffer Engineering Ltd.

120 Iber Road, Unit 103
Stittsville, ON K2S 1E9

phone: (613) 836-0856 ext.542

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Fig 1: Sanitary

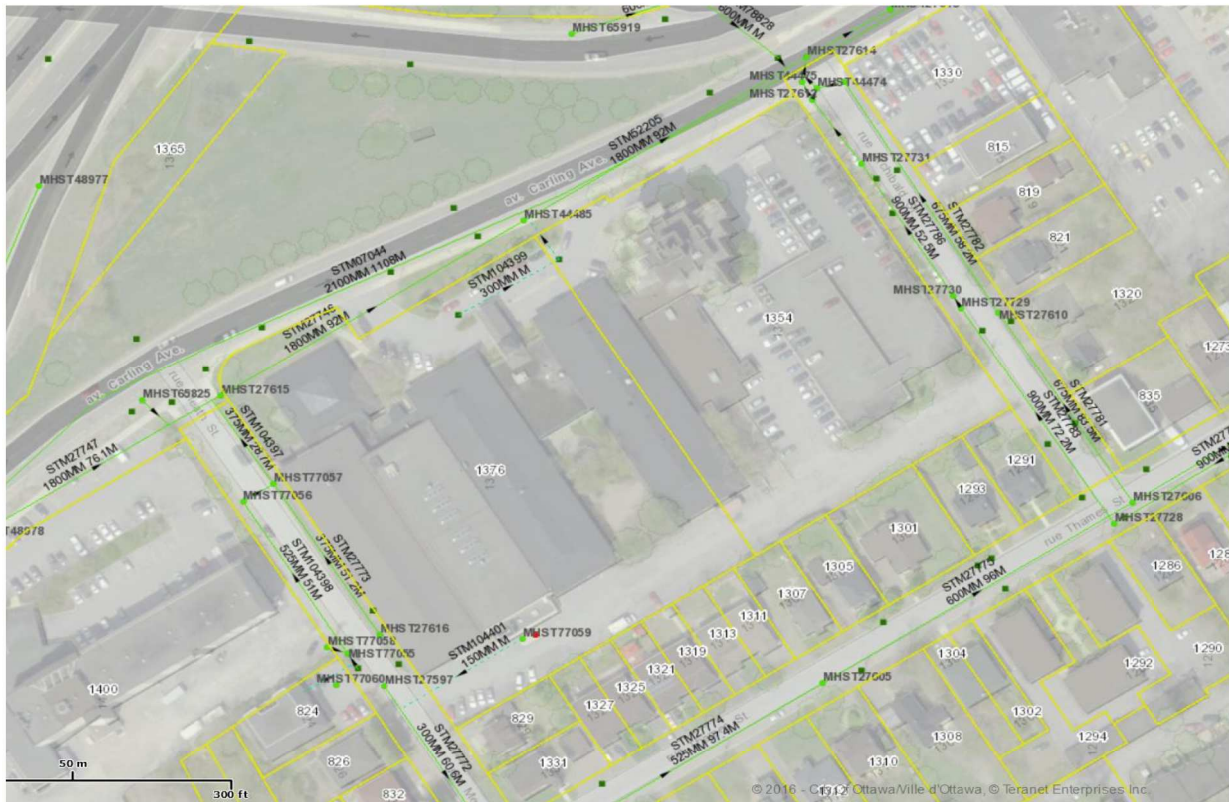




Fig 2: Storm

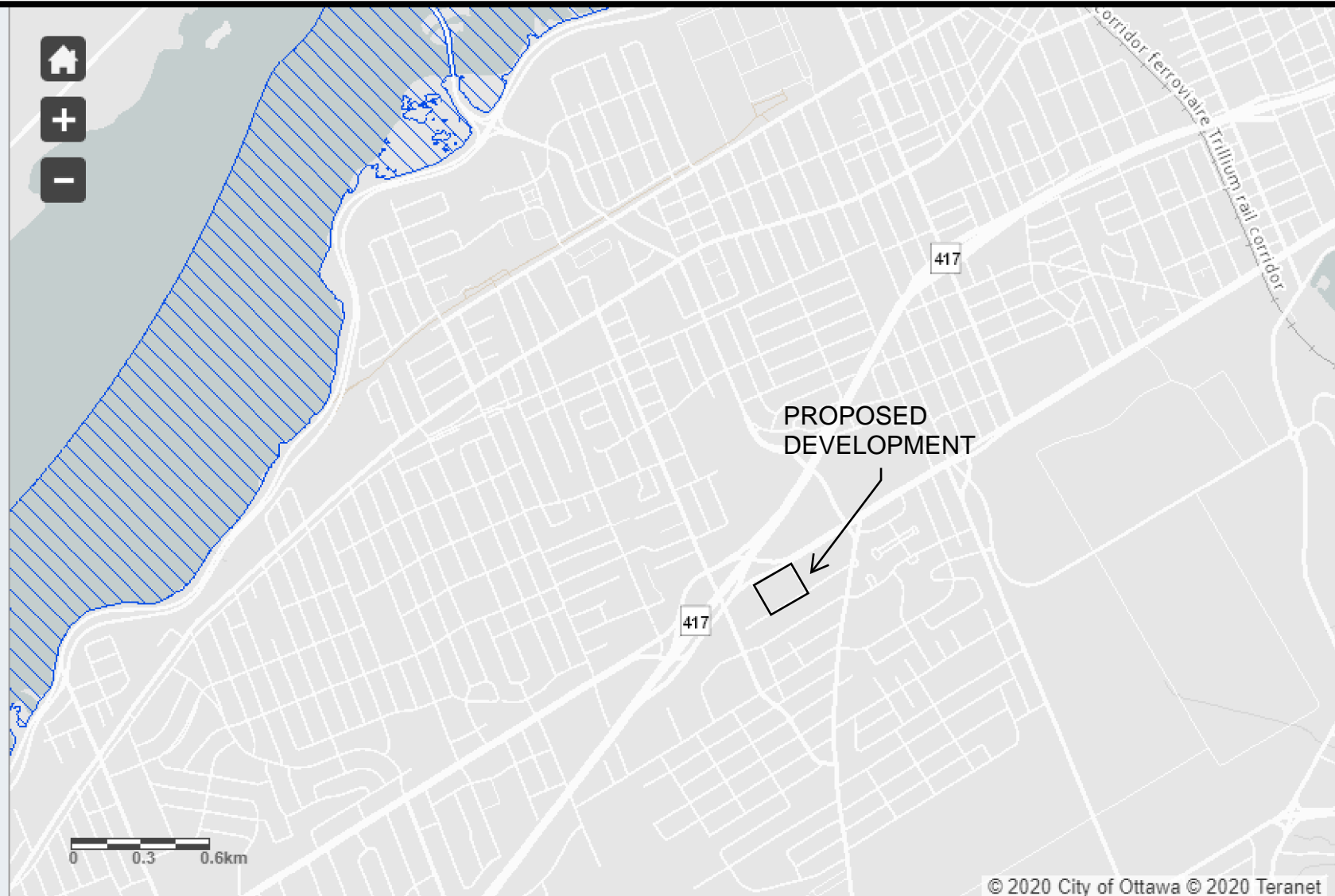


Fig 3: Water

Existing Flood Plain Overlay / Zone
sous-jacente de plaine inondable
actuel

Flood Plain Overlay (Section 58) / Zone
sous-jacente de plaine inondable
(article 58)

-  Flood Plain (Section 58) /
Plaine inondable (Article 58)
-  Flood Plain - Area-Specific
Provisions (Section 58(4)) /
Plaine inondable - Dispositions
propres à des emplacements
(art. 58 (4))



0 0.3 0.6km