Katasa Groupe + Développement

Servicing Report Assessment

For: Site Plan Control Amendment Application

265 Carling Ave, Ottawa,
Ontario, K1S 2E1

CIMA+ file number: A001518 (370)
November 22nd, 2024

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1. Introduction

CIMA+ was retained by Katasa Groupe + Développement to prepare an Assessment of Adequacy of Public Services Report for the proposed conversion of a commercial 8-storey building into a multi-use development tower located at 265 Carling Avenue in Ottawa, Ontario. The proposed plan entails the creation of 70 residential units spanning from the 2nd to the 8th story, with the ground floor designated for commercial use and amenity space.

The purpose of this assessment is to confirm that the proposed development can be adequately serviced by the existing municipal infrastructure (water and sewer) surrounding the site. This assessment shall be used in support of a Zoning By-law Amendment (ZBLA), to allow for multi-use development, on the site which is currently zoned for Minor Institutional.

1.1 Site Description and Proposed Development

The site is located along the south side of the Queensway at the intersection of Carling Avenue and Bronson Avenue (refer to **Figure 1** below). 265 Carling Avenue is currently owned by the Katasa Groupe + Développement. The site area (265 Carling Avenue) measures approximately 0.17 ha.

Generally, the site is bounded by Clemow Ave to the North, Bronson Ave to the East, Cambridge St S. to the West and Carling Ave to the South.

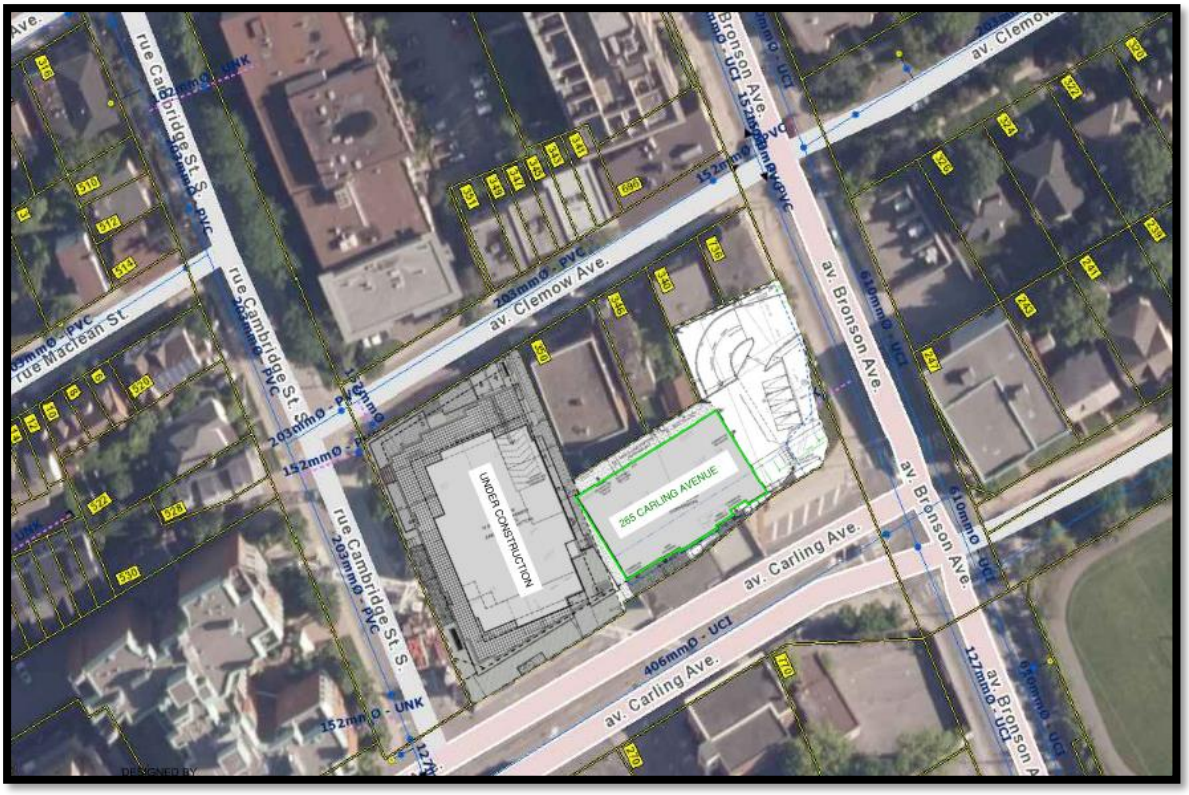


Figure 1: Site Location - Plan View.

The proposed plan is for an 8-storey, multi-use development tower with 70 residential units, expected to accommodate approximately 108 residents. It includes commercial space on the ground floor and one underground parking level covering the entire site area. The total amenity and commercial spaces measure approximately 420 m² and 352 m² respectively. Refer to **Figure 2** for a conceptual site plan of the proposed development (prepared by Roderick Lahey Architect Inc + FOTENN).

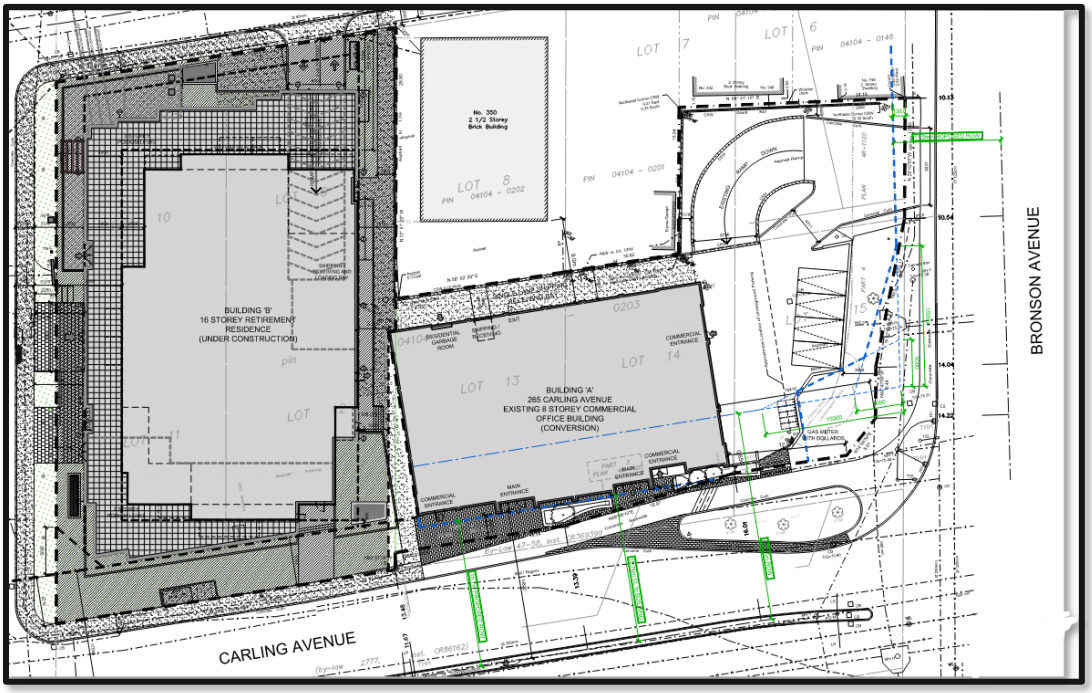


Figure 2: Conceptual Site Plan.

1.2 Review of Available Background Documentation

The following design guidelines have been used to estimate the theoretical servicing requirements for the proposed development; while geoOttawa and the available utility drawings provided by the City of Ottawa Information Centre have been used to determine the existing municipal services fronting the site. Refer to **Appendix A** for available engineering and utility plans provided by the City.

It was noted that the sanitary and storm services to the building were absent from the records of the City of Ottawa Information Centre. Consequently, Clean Water Works (CWW) was enlisted to conduct a CCTV inspection to survey and locate the sanitary and storm connections. Refer to **Section 5** for inspection information and results.

- Ottawa Sewer Design Guidelines (October 2012), including
  - Technical Bulletins ISTB-2018-01.
- Ottawa Design Guidelines – Water Distribution (2010), including
  - Technical Bulletins ISTB-2021-03, ISTB-2018-02, ISDTB-2014-02 and ISD 2010-02.
- Ministry of the Environment Design Guidelines for Sewage Works (2008).

- Ministry of the Environment Stormwater Management Planning and Design Manual (2003).
- Ministry of the Environment Design Guidelines for Drinking-Water Systems (2008); and
- Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection (2020).

1.3 Existing Infrastructure

As identified using geoOttawa and the available Utility Record Drawings provided by the City of Ottawa Information Centre, the following municipal infrastructure is available within the right-of-way fronting the proposed development site (refer to **Appendix A** for Existing Conditions Plan).

Bronson Avenue

- 127 mm diameter UCI watermain **(existing Watermain connection point).**
- 375 mm diameter Concrete combined sewer **(existing Sanitary & Storm connection point).**

Carling Avenue

- 406 mm diameter UCI watermain.
- 300 mm diameter Concrete combined sewer.

1.4 Consultation and Permits

In response to the pre-consultation requirements defined in the City's Pre-Consultation: Meeting Feedback, the following agencies were consulted in support of the preparation of this report. The Pre-Consultation: Meeting Feedback, the Development Servicing Study Checklist as well as all relevant correspondence with the consulted agencies can be found in **Appendix B**.

City of Ottawa

The City of Ottawa Information Centre was contacted by CIMA+ to obtain any Reports, Studies, Engineering, and/or Utility Plans including sanitary sewer, storm sewer, watermain, gas, etc. within or adjacent to the site location. The available engineering plans and utility plans were provided and can be found in **Appendix A**.

CIMA+ also contacted Nishant Jhamb from the City of Ottawa's Planning, Real Estate and Economic Development Department to obtain the criteria relevant to the Assessment of Adequacy of Public Services are referenced within the appropriate sections of this report.

Ministry of the Environment, Conservation and Parks (MECP)

The proposed development will maintain the existing combined sewer connections. CIMA+ has determined that an Environmental Compliance Approval (ECA) is not required as the development does not bring any modifications to the existing services.

2. Water Servicing

2.1 Water Supply Design Criteria

The design criteria for determining the water demand requirements for the proposed development follow the parameters outlined in the Ottawa Design Guidelines – Water Distribution (2010) and associated technical bulletins, as well as the MOE Design Guidelines for Drinking-Water Systems (2008). Namely, the following parameters have been used in determining the water demands:

Table 2-1: Water Supply Design Criteria

Design Criterion[1]	Residential Areas	Commercial Areas
Average Day Demand	280 L/capita/day	28,000 L/gross hectare/day
Maximum Daily Demand	3.0 × average daily demand[1]	1.5 × average daily demand
Maximum (Peak) Hour Demand	4.5 × average daily demand[1]	1.8 × maximum daily demand
Populations – 1 Bedroom Apartment (including Bachelor Studio)	1.4 Persons Per Unit	N/A
Populations – 2 Bedroom Apartment	2.1 Persons Per Unit	N/A
Desired Operating Pressure under Normal Operating Conditions	50 to 70 psi	
Minimum Operating Pressure under Normal Operating Conditions	40 psi	
Maximum Operating Pressure under Normal Operating Conditions	80 psi	
Minimum Operating Pressure under Maximum Daily Demand + Fire Flow	20 psi	

In addition to those design criteria identified in **Table 2-1**, the following comments and criteria identified by the City as part of the pre-consultation must be considered in the water supply servicing strategy:

- The subject site is located within the 1W pressure zone.
- Given the basic day demand is less than 50 m³/day (0.57 L/s), two separate connections are not required.
- Fire flow demand requirements shall be based on the Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection 2020 and Technical Bulletins ISTB-2021-03 & ISTB-2018-02.

[1] Note that residential peaking factors were selected from **Table 3-3** of the MECP Design Guidelines for Drinking-Water Systems for 0 to 500 persons.

- A primary fire hydrant is required to be within 45 m of the Siamese connection and within 90 m (travel path not radius) of the front door of each building as per OBC and Ottawa Fire Services requirements.
- Exposure separation distances shall be defined on a figure to support the FUS calculation and required fire flow (RFF).
- Hydrant capacity shall be assessed if relying on any public hydrants to provide fire protection, particularly if high design fire flows are being proposed, to demonstrate the Required Fire Flow (RFF) can be achieved. Identification of which hydrants are being considered to meet the RFF on a fire hydrant coverage figure is required as part of the boundary conditions request.

2.2 Current Water Supply Servicing and Calculations

Water Demands

The water supply demands for the proposed development are presented in **Table 2-2** below. The demands were developed utilizing the development statistics (i.e., residential units and commercial floor area) provided by Roderick Lahey Architect Inc and those design criteria identified in *Section 2.1*. Refer to **Appendix C** for detailed calculations.

Table 2-2: Water Demands

Demand Type	Average Daily Demand (L/s)	Maximum Daily Demand (L/s)	Maximum (Peak) Hour Demand (L/s)
Residential	0.35	1.05	1.575
Commercial	0.011	0.017	0.031
Total	**0.36**	**1.07**	**1.61**

Given the basic day demand is less than 50 m³/day (0.57 L/s), two separate connections are not required.

Primary Hydrant and Siamese Location

The Fire Department (Siamese) Connection will be maintained southeast corner of the building. The nearest hydrant is located south of the intersection of Carling Avenue and Bronson Avenue on the east side of Bronson Avenue, approximately 70 m from the from the proposed Siamese location and is within 90 m of the front door. Refer to **Appendix C** (Hydrant Coverage) for location of existing hydrant.

Required Fire Flow (RFF)

The required fire flow for the site was developed using the Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection 2020 and associated City of Ottawa Technical Bulletins.

In our calculations for this project, we've utilized a coefficient (C) of 0.8, as mandated by the recent updates in the FUS Water Supply for Public Fire Protection document. Consequently, all RFF calculations submitted to the City for boundary condition request and hydrant coverage confirmation have been based on the coefficient of 0.8. The results are as follows:

- Utilizing a coefficient (C) value of 0.8, it was determined that an RFF of **4,000 L/min (66.67 L/s)** would be required to provide adequate protection.

It was assumed that multiple municipal hydrants would be required to meet the fire flow requirements and a fire hydrant coverage figure was prepared in support of the boundary conditions request from the City. From the hydrant coverage plan, it was confirmed that the aggregate flow of hydrants in the area would be sufficient to meet the required fire flow demands. The maximum flow to be considered from each hydrant has been determined in accordance with the City of Ottawa Technical Bulletin IST-2018-02 Appendix I Table 1. Refer to **Table 2-3** below for a summary of hydrants considered as well as the individual and aggregate flow of the contributing hydrants.

Table 2-3: Hydrant Coverage Summary

Hydrant No./Location	Hydrant Class	Distance to Building (m)	Contributing Flow (L/min)
1 (Bronson at Carling)	AA	< 75	5,700
2 (Carling at Cambridge)	AA	< 75	5,700
3 (Clemow at Bronson)	AA	> 75 and ≤ 150	3,800
Total Contributing Flow (L/min)			15,200

Refer to **Appendix C** for detailed calculations, including supporting figures for exposure distances and hydrant coverage.

Municipal Boundary Conditions

Using the proposed demands, RFF and supporting figures the City provided boundary conditions for hydraulic analysis for current conditions, based on computer model simulation. The boundary conditions are as follows:

Table 2-4: Watermain Boundary Conditions

Hydraulic Condition (HGL = Hydraulic Grade Line)	Boundary Condition (Head) (m)
	Bronson Ave. 127 mm dia.
Minimum HGL	106.3m
Maximum HGL	115.1m
Maximum Day + Fire Flow (67.73 L/s)	Not provided by City

Hydraulic Analysis – Water Supply Adequacy

A hydraulic analysis was completed utilizing the boundary condition information provided by the City for the proposed development to confirm that there is adequate flow and pressure in the water distribution system to meet the required water demands. The following Tables summarize the available flow and pressure in the system under each demand scenario:

Table 2-5: Water Supply Adequacy - Hydraulic Analysis – Carling Connection

Demand Type	Proposed Demand (L/s)	Available Flow/Pressure		Desired Flow/Pressure Objective	Flow/Pressure Objective Achieved?
		Design Operating Pressure (Relative Head) (m)	Design Operating Pressure (psi)		
Average Daily Demand	0.36	39.8	56.6	50 to 70 psi	Yes
Maximum Day + Fire Flow	67.73	Unknown	Unknown	≥ 20 psi	The City confirmed that the fire protection is adequate
Maximum (Peak) Hour Demand	1.61	31.0	44.1	40 to 70 psi	Yes

NOTES:

1. Boundary conditions at connections assume a ground elevation of 75.3 m.

Additionally, the City of Ottawa Water Resources department conducted a multi-hydrant analysis using three (3) existing hydrants located within 150 meters of the property. The City confirmed that the total aggregate flow, assuming all three identified hydrants are operating simultaneously, meets the required fire flow + maximum daily demand of 67.73 L/s for the site while maintaining a 20 PSI operating pressure at the connection for the Maximum Daily Demand. This ensures that the property has adequate fire protection in compliance with city standards. Please refer to **Appendix B** for supporting correspondence.

2.3 Water Supply Summary and Conclusions

The water supply design for the proposed development follows the parameters outlined in the Ottawa Design Guidelines – Water Distribution (2010) and associated technical bulletins, as well as the MOE Design Guidelines for Drinking-Water Systems (2008).

There is adequate flow and pressure in the water distribution system to meet the required water demands as well as a sufficient number of contributing hydrants within the area to meet the demands for each fire flow scenario for the proposed development.

3. Sanitary Servicing

3.1 Sanitary Servicing Design Criteria

The design criteria for determining the sanitary peak flow rates for the proposed development follow the parameters outlined in the City of Ottawa Sewer Design Guidelines, 2012 and City of Ottawa Technical Bulletin ISTB-2018-01. Namely, the following parameters have been used in determining the peak sanitary flow rates:

Table 3-1: Sanitary Peak Flow Determination Design Criteria

Design Criterion	Residential Areas	Commercial Areas
Base Flow	280 L/capita/day	28,000 L/gross hectare/day
Populations – 1 Bedroom Apartment	1.4 Persons Per Unit	N/A
Populations – 2 Bedroom Apartment	2.1 Persons Per Unit	N/A
Populations – 3 Bedroom Apartment	3.1 Persons Per Unit	N/A
Peaking Factor	Determined by Harmon Equation $P.F. = 1 + \left[\frac{1}{4 + \left(\frac{P}{1{,}000}\right)^{\frac{1}{2}}}\right] \times 0.8$ (P = population; P.F. = peaking factor) Maximum P.F. = 4.0 Minimum P.F. = 2.0	1.5 if Commercial Contribution > 20% 1.0 if Commercial Contribution < 20%
Dry Weather Infiltration Rate	0.05 L/s/effective gross hectare (for all areas)	
Wet Weather Infiltration	0.28 L/s/effective gross hectare (for all areas)	
Total Infiltration Allowance	0.33 L/s/effective gross hectare (for all areas)	

3.2 Sanitary Servicing and Calculations

Sanitary Peak Flows

The estimated peak flows from the proposed development based on the design criteria listed in **Table 3-1** are outlined in the following Table.

Table 3-2: Peak Sanitary Flows

Flow Type	Total Flow Rate (L/s)
Total Estimated Average Dry Weather Flow Rate	0.36
Total Estimate Peak Dry Weather Flow Rate	1.27
Total Estimate Peak Wet Weather Flow Rate	1.32

Refer to **Appendix D** for detailed calculations.

The current existing sanitary service lateral is measured at 100 mm in diameter. A hydraulic calculation was conducted using the above new wet weather peak flow. The result confirms that existing sanitary service lateral has sufficient capacity the handle new anticipated flow rates. Refer to **Appendix D** for hydraulic calculations.

3.3 Sanitary Servicing Summary and Conclusions

The sanitary servicing design for the proposed development conforms to the requirements of the City of Ottawa Sewer Design Guidelines, 2012, and Technical Bulletin ISTB-2018-01.

Peak wastewater demands were provided to the City, who confirmed that there is adequate residual capacity in the city system to accommodate the proposed wastewater flow (refer to **Appendix B**).

4. Storm Servicing and Stormwater Management

4.1 Storm Project Requirements

The Pre-Consultation: Meeting Feedback indicates that storm water quantity control is not required if Storm water runoff is not increased from the site.

4.2 Storm Servicing Summary

The proposed project will be maintaining the current roof design without any alterations. Additionally, there are no intended modifications to any impermeable and permeable surfaces adjacent to the building. This approach ensures that the stormwater flow patterns will remain unaffected by the construction activities, thereby ensuring no disruptions to the city system and surrounding environments.

5. Existing Service Laterals

5.1 Project Requirements

The City has requested that the existing buildings service lateral require a CCTV inspection to ensure existing services to be re-used are in good working order and meet current minimum size requirements.

5.2 Video Inspections (CCTV)

As mentioned in **Section 1.2** the sanitary and storm services to the building were absent from the records of the City of Ottawa Information Centre. As a result, CIMA+ has enlisted the services of Clean Water Works (CWW) to conduct a CCTV inspection to survey and locate the sanitary and storm connections.

Since only the service laterals were required for this inspection, a drain CCTV inspection was conducted from inside the building. The inspection took place on April 29th, 2024, and a total of 120.8 m were surveyed. This comprehensive inspection ensured that all service laterals within the specified range were thoroughly examined for any potential issues. The detailed findings and observations from the CCTV inspection are documented in the inspection report, which can be found in **Appendix E**. Media files can also be available upon request.

5.3 Results and Recommendations

CIMA+ reviewed the digital recordings produced by CWW and found that the storm and sanitary services are in good condition, with no structural deficiencies requiring immediate corrective action. However, the cast iron pipes show superficial corrosion deposits on the walls, which is typical given their age. To prevent potential blockages from this corrosion, which could lead to water retention issues, CIMA+ recommends an annual cleaning program using a low-profile mini-pressure unit.

6. Conclusion

The purpose of this assessment is to confirm that the proposed development can be adequately serviced using the existing municipal infrastructure (water and sewer) surrounding the site and the existing services laterals. This assessment shall be used in support of a Zoning By-law Amendment (ZBLA) to allow for the conversion of one 8-storey commercial building into multi-use residential-commercial development tower.

The important information and findings as a result of this assessment are as follows:

- The proposed residential building is expected to include 77 residential units with a population of approximately 108 residents and a ground floor's amenity and commercial spaces measure approximately 420 m². The existing one (1) level of underground parking spanning the entirety of the site area will be maintained.
- The anticipated water demands for the proposed site are **0.36 L/s** (average day), **1.07 L/s** (max day), **1.61 L/s** (peak hourly), and **66.67 L/s** (fire flow). The boundary conditions and communications received from the City of Ottawa indicate that the existing watermain network can provide the required water demands for the proposed site. From the hydrant coverage

plan it was confirmed that the aggregate flow of hydrants in the area would be sufficient to meet the required fire flow demands for each scenario.

- The estimated sanitary flow for the proposed development is **0.36 L/s** (average dry weather), **1.27 L/s** (peak dry weather), and **1.32 L/s** (peak wet weather). The City of Ottawa has indicated that the existing sanitary sewer network near the proposed site can accept the peak wet weather sanitary flow of the proposed development. Additionally, the existing service lateral will have sufficient capacity to handle the new proposed peak wet weather flow.
- Existing storm runoff and quality control will not be altered and will be unaffected by the construction activities, thereby ensuring no disruptions to the surrounding environment.
- CIMA+ conducted an assessment of the digital recordings from CWW and determined that the storm and sanitary services are in satisfactory condition without any immediate structural concerns. However, they observed surface-level corrosion buildup on the cast iron pipes, attributed to their age. To mitigate the risk of blockages and water retention issues, CIMA+ suggests instituting an annual cleaning regimen utilizing a compact, low-pressure unit.
- As a result of the conclusions drawn by the previous points, it is expected that the proposed development can be serviced by the existing municipal services network surrounding the site.

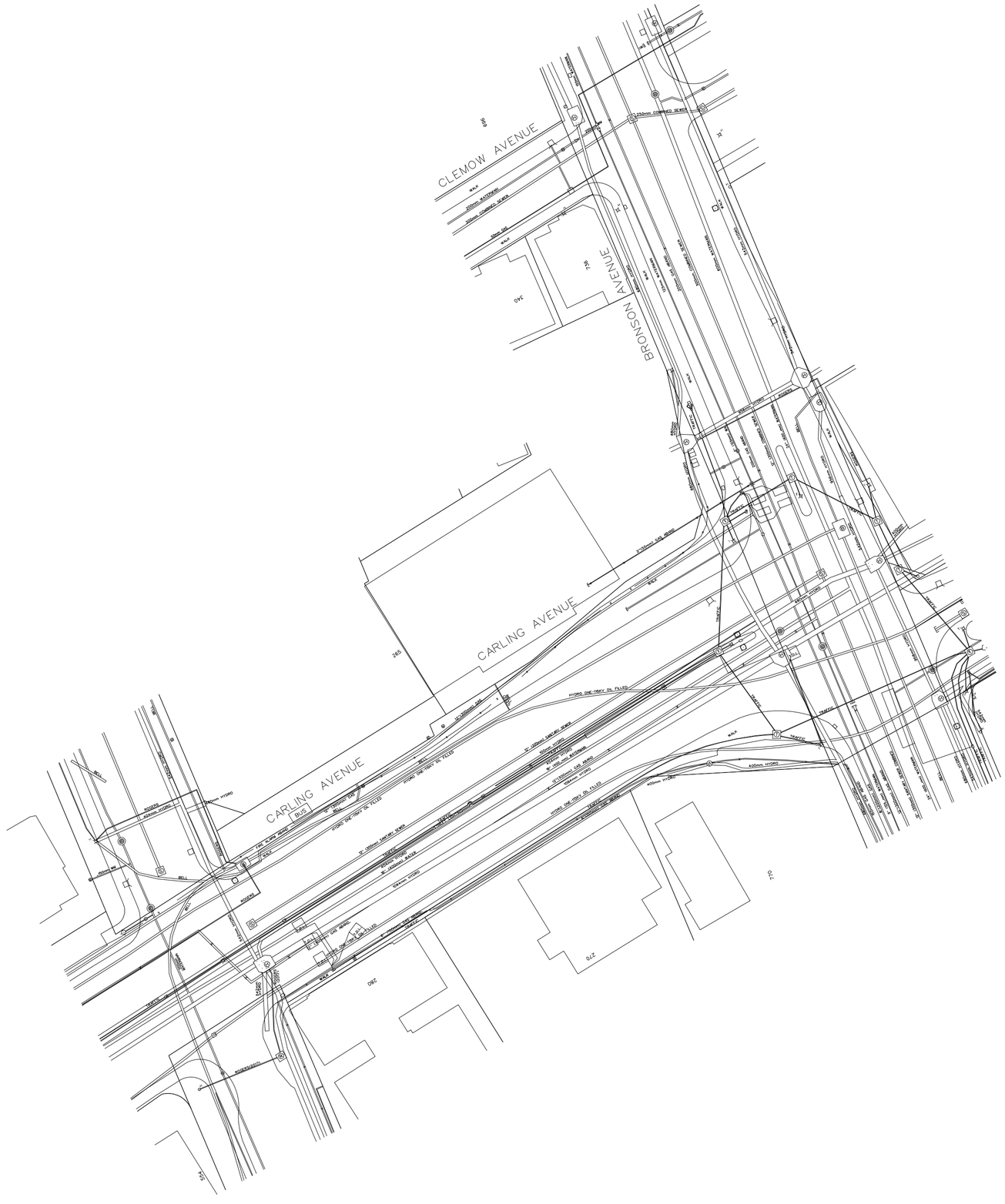
We trust this Servicing Report Assessment for Site Plan Control Amendment Application is to your satisfaction. If you have any questions regarding this report, please do not hesitate to contact any of the signatories.

A

Appendix A
Existing Conditions Plans

Appendix A

1 - ENGINEERING AND UTILITY PLANS PROVIDED BY THE CITY



LEGEND

Water Valve, Valve Chamber, Fire Hydrant	⊗ ◎
Sewer Manhole, Catch Basin Manhole	Ⓢ ▢
Catch Basin / Drainage, Wing Wall, Head Wall	☐ ▯ ⊞ ⊖
Pole, Pole w/ light, Decorative, Lawn Light	○UP ☼H ☼ ☼
Power Supply, Panel, Pedestal, Transformer, Tower, Regulator	P/S B PED ⊠ ⊠ GR
Amp, Hand Hole, Vault, Gas Valve	AMP ▯ ◫ ⊘
OC Transpo: Bus Shelter-No Power, Energized, Isolated	BUS BUS BUS
Streetscape: Planter Box, Grate Square, Eng. Soil	▣ TGS ▨
Traffic Connect Box / Disconnect Box, SL Disconnect	TCB TDB SDB
Red Light Hand Hole, Red Light Camera	○THH
Scada: Handhold, Monitoring Panel	S M

Reducer	▷
Pipe, Duct, Conduit, Lateral	
Culvert	
Abandoned	
Capped	
Buried Cable	
Property Line	
Install Year	(2015)

TELECOM GLOSSARY

A	Allstream	P	Primus
AT	Atria	P2P	Canadian P2P Fibre
B	Bell	R	Rogers
BH	Birch Hill	S	Sprint
F	Fibre Noir	SL	Street Lighting
G	Globility	T	Traffic
GT	Group Telecom	TO	Telecom Ottawa
H	Hydro Ottawa	TU	Telus
H1	Hydro One	V	Videotron
L / L3	Level 3	Z	Zayo

GLOSSARY - OTHER

DD	Dept. of Defence	PED	Pedestal (owner unknown)
MH	Manhole (owner unknown)	PW	Public Works
O/OC	OCTranspo	UP	Utility Pole (owner unknown)
SCD	Scada		

CAUTION/ATTENTION

Although utility locations are established using the best available informaiton, they cannot be guaranteed. Property Lines were compiled from plans and documents recorded in the Land Registry System and are for indexing purposes only.

Bien que l'emplacement des services publics soient établis en utilisant la meilleure information disponible, ils ne peuvent pas être garantis. Des lignes de propriété ont été compilées en utilisant des plans et des documents enregistrés dans le système de cadastre et sont pour l'indexation seulement.

GEOGRAPHIC COORDINATE SYSTEM

Projection: MTM9 (EPSG:32189)

Horizontal Datum: NAD83 (Original)

supertest station
pumps
Wire fence
8" SEWER
LEBRETON ST.
6" WATER MAIN
EXISTING STREET LINE
F. D. C.
291
12" GAS MAIN
16" WATER MAIN
H.E. POWER LINE
12 INCH SEWER
2" SEWER
NEW STREET LINE
306 304 302 300
OPEONGO RD.
BELL ST.
8" WATER MAIN
F.D.C. parking Lot
S.R. Comm. garage
sunken Stone wall
steel fence in Conc.
Ottawa Sub'n Roads Comm
EXISTING STEEL HYDRO TOWERS
296 294 292 290 288 286
CAMBRIDGE STREET
275 273 271 267
12 INCH SEWER
280
Central Morg. & Housing Corp.
conc. comp.
6" CAST IRON
BRONSON AVENUE
20" WATER
15" SEWER

NOTE
EXISTING STEEL HYDRO TOWERS TO BE REMOVED BY OTHERS.
ROAD CONTRACTOR TO REMOVE EXISTING CONCRETE BASES – APPROX 7'0" IN DEPTH

- SCALES -
Hor. 1"rep. 40'
Vert. 1"rep. 20'

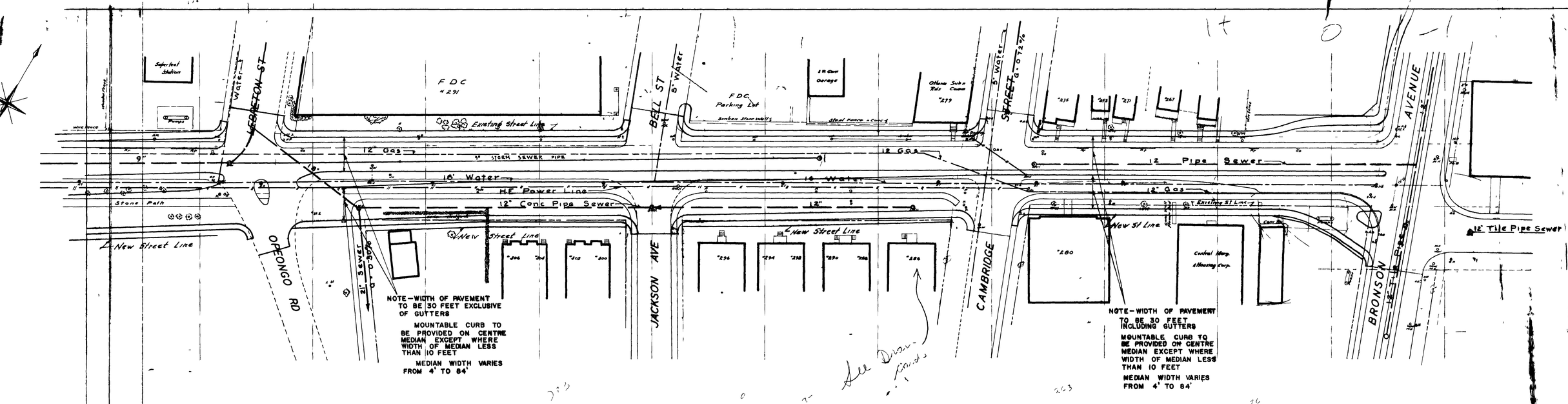
Sewer South Side
Sewer North Side
APPROXIMATE ROCK LINE
12" SEWER @ 0.50%
12" SEWER @ 1%
205.07
204.47
200.01
205.42
243.27
240.20
238.37
STATION
0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00
200 210 220 230 240 250 260 270 280

REGISTERED PROFESSIONAL ENGINEER CIVIL F. E. AYERS PROVINCE OF ONTARIO
REGISTERED PROFESSIONAL ENGINEER CIVIL L. W. L. PILLAR PROVINCE OF ONTARIO

CITY OF OTTAWA
PLANNING AND WORKS DEPT.
DESIGN & SPECIAL PROJECTS BRANCH
CARLING AVENUE
GENERAL LAYOUT
RECONSTRUCTION & WIDENING
From BRONSON AVE. TO KIRKWOOD AVE.
CONTRACT No 56-28

Engineer i/c Special Projects
Director of Planning & Works
Drawn By C.R.W.
Checked By F.M.
Date March 14, 1956

PLAN No R-1000-71


Substation
Water
JEFFERSON ST
FDC
#291
Existing Street Line
BELL ST
5" Water
FDC
Parking Lot
Sunken Stone Walls
Steel Fence + Conc's
3 Car Garage
Offices Sales Rms Caisse
#279
5" Water
STREET
G. 0.72%
#275
#273
#271
#267
AVENUE
12" Pipe Sewer
12" Gas
9"
4" STORM SEWER PIPE
16" Water
H.E. Power Line
12" Conc Pipe Sewer
12"
Stone Path
New Street Line
OPEONGO RD
21" Sewer
0.30%
New Street Line
#306
#304
#302
#300
JACKSON AVE
New Street Line
#296
#294
#292
#290
#288
#286
CAMBRIDGE
New St Line
#280
Central Mtge. & Housing Corp.
Ex. Easement St Line
12" Gas
12" Tile Pipe Sewer
BRONSON
NOTE—WIDTH OF PAVEMENT TO BE 30 FEET EXCLUSIVE OF GUTTERS
MOUNTABLE CURB TO BE PROVIDED ON CENTRE MEDIAN EXCEPT WHERE WIDTH OF MEDIAN LESS THAN 10 FEET
MEDIAN WIDTH VARIES FROM 4' TO 84'
NOTE—WIDTH OF PAVEMENT TO BE 30 FEET INCLUDING GUTTERS
MOUNTABLE CURB TO BE PROVIDED ON CENTRE MEDIAN EXCEPT WHERE WIDTH OF MEDIAN LESS THAN 10 FEET
MEDIAN WIDTH VARIES FROM 4' TO 84'
See Drawing
255
250
245
240
235
230
225
220
215
210
Rock Line
Rock Line
SMH
SMH
SMH
9" Conc Pipe Sewer Grade = 1.50%
10" Conc Pipe Sewer Grade = 0.55%
12" Concrete Pipe Sewer Grade = 0.50%
12" Concrete Pipe Sewer Grade = 1.00%
10+00
9+73
9+53
9+00
8+59
8+00
7+00
6+00
5+00
4+00
3+70
3+00
2+86
2+63
2+00
1+00
0+00
-0+48
-0+65
-0+74
-1+00
SEWERS & DRAINAGE
J-29
#1
CITY OF OTTAWA
DEPARTMENT OF PLANNING & WORKS
J29

J29-1

BRONSON AVE.
ARLINGTON AVE
CATHARINE ST.
C. A. RY.
Imperial
POWELL AVE
CLEMOW AVE
CARLING AVE
ERNEST ST
CRAWFORD ST
CARLING AVE
Foreman - J. Purdy
Comenced - July 28.1905
Completed - Jan. 9.1906
Scales -
Horizontal 40-1
Vertical 6-1
Grade 0.75%
Foreman S. Rogers
Commenced June 16-08.
Completed June 26-08.
15" T.P. Grade 1.00%
15" T.P. Grade 1.00%
15" T.P. Grade 1.60%
24"
A16-2
A16-1

Appendix A

2 - EXISTING CONDITION PLAN

TITLEBLOCK 24x36 VERT ENG 3.0

EXISTING	LEGEND
MH-ST	Maintenance Hole (Storm)
MH-S	Maintenance Hole (Sanitary)
MH-T	Maintenance Hole (Traffic)
VC	Valve Chamber (Watermain)
ST	Underground Storm Sewer
S	Underground Sanitary Sewer
WM	Underground Water
COMB	Underground Combined Sewer
P	Underground Power
GAS	Underground Gas
B	Underground Bell
TV	Underground Cable
OHW	Overhead Wires
UP	Utility Pole
AN	Anchor
LS	Light Standard
CB	Catch Basin
FH	Fire Hydrant
WV	Water Valve
GV	Gas Valve
GM	Gas Meter
TB-B	Bell Terminal Box
TSP	Traffic Signal Post
TSL	Traffic Light
B	Bollard
S	Sign
	Gate
TEL	Telephone Booth
ø	Diameter
CLF	Chain Link Fence
BF	Board Fence
MF	Metal Fence
CRW	Concrete Retaining Wall
SRW	Stone Retaining Wall
Inv.	Invert
T/G	Top of Grate
U/Eave	Underside of Eave
TpFdn	Top of Foundation
C/L	Centreline
+65.00	Location of Elevations
+*65.00*	Top of Concrete Curb / Retaining Wall Elevation
	Drainage Direction
	Property Line
	Easement
	Concrete Curb
	Depressed Concrete Curb/Sidewalk
	Retaining Wall
	Shrub
	Deciduous Tree
	Coniferous Tree
	Underground Parking Lot Limit
MW17-1	Borehole (Loc. Approx.)
	Overland Flow

1:150
0 1.5 3 6 9m

No.	Date	Description	By
2	2024-11-22	SITE PLAN CONTROL AMENDMENT REV.1	É.P.
1	2024-06-06	SITE PLAN CONTROL AMENDMENT	É.P.

STAMPS:

DESIGNED BY APPROVED BY

ENGINEER:

CIMA+

CLIENT:

KATASA
GROUPE + DÉVELOPPEMENT

PROJECT NAME:

265 CARLING AVE.
MULTI-USE DEVELOPMENT TOWER
CONVERSION

SHEET TITLE:

EXISTING CONDITION PLAN

DISCIPLINE:

CIVIL

DRAFTER: G.DICAIRE	**SCALE:** 1:150
DESIGNER: M.FRÉCHETTE	**DATE:** 2024-11-22
APPROVER: É.POTVIN	**APPROVER:** É.POTVIN
PROJECT No: A001518	**DRAWING No:** C01
SHEET No: 1 of 1	

#19132 D07-XX-XX-XXXX

NOTE OF CAUTION

THE GEODETIC COORDINATES OF EVERY ITEM INCLUDED AS PART OF THIS DOCUMENT ARE **ARBITRARY**

THE UNDERGROUND FEATURES AND INFORMATION THAT APPEAR ON THE DRAWINGS WERE OBTAINED FROM THE PUBLIC UTILITY COMPANIES AND/OR FROM THE CITY EACH RESPECTIVELY.

ALL INFORMATION UNDER THE LEGEND 'EXISTING' IS FOR INFORMATION ONLY. COMPLETE OR EXACT LOCATION AND ELEVATION OF UNDERGROUND SERVICES ARE NOT GUARANTEED.

CERTAIN UNDERGROUND FEATURES ON PRIVATE PROPERTY ARE NOT SHOWN ON THE CURRENT DRAWING.

ANYONE WHO PROCEEDS WITH EXCAVATION WORK SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND FEATURES, BY EXPLORATORY EXCAVATIONS, AND SHALL ASSUME FULL RESPONSIBILITY IF THERE IS ANY DAMAGE THAT OCCURS DURING WORK.

THE CONTRACTOR WILL HAVE THE RESPONSIBILITY AND THE OBLIGATION TO VALIDATE, BY EXPLORATORY EXCAVATION, THE SIZE OF THE PUBLIC UTILITIES UNDERGROUND SERVICES AND TO WARN THE ENGINEER OF ANY CONFLICT WITH THE PROJECTED WORK.

TOPOGRAPHIC SURVEY
COMPLETED BY:

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

DATE: JANUARY 13, 2012

PRINT DATE: 2024/11/25 / PAPER SIZE: ARCH full bleed D (36.00 x 24.00 Inches)
PATH: Z:\Cima-C10\Ott_Projects\A\A001500-A001999\A001518_Katasa – 265 Carling – Bldg floors 2-4 use change\310_Dwg\C1_EXIST.dwg / LAYOUT: C1

B

Appendix B
Pre-consultation Correspondences

Appendix B

1 - PRE-CONSULTATION WITH CITY

File No.: PC2023-0301

Jacob Bolduc
FoTenn Planning and Design
Via email: bolduc@fotenn.com

Subject: **Pre-Consultation: Meeting Feedback**
Proposed Site Plan Control Amendment Application – 265 Carling Avenue

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on November 21, 2023.

Pre-Consultation Preliminary Assessment

1 ☐	**2** ☐	**3** ☐	**4** ☒	**5** ☐

One (1) indicates that considerable major revisions are required while five (5) suggests that the proposal appears to meet the City's key land use policies and guidelines. This assessment is purely advisory and does not consider technical aspects of the proposal or in any way guarantee application approval.

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. Please proceed to complete a Phase 3 Pre-consultation Application Form and submit it together with the necessary studies and/or plans to planningcirculations@ottawa.ca.

2. In your subsequent pre-consultation submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed must be included with the submission materials. Please coordinate the numbering of your responses within the cover letter with the comment numbers herein.

3. Please note, if your development proposal changes significantly in scope, design, or density before the Phase 3 pre-consultation, you may be required to complete or repeat the Phase 2 pre-consultation process.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.

    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline

the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

1. You are encouraged to consult with technical agencies early in the development process and throughout the development of your project concept. A list of technical agencies and their contact information is enclosed.

Planning

Comments:

1. The site designation in the Official Plan is Downtown Core Transect, Mainstreet Corridor.

2. Please note the report that went to Council November 8th Report (escribemeetings.com) indicates:

3. The process for this application will be as a standard site plan revision.

4. Staff are anticipating that in Q1 – 2024 (targeting February) - omnibus zoning will proceed for office to residential conversions. This may not impact this subject development as the required setbacks are no more restrictive for residential land use than for the existing office use. However, it may impact amenity space requirements. Please Mitchell.Lesage@ottawa.ca for further information and updates on timing of this report.

5. The report references a scoped list of required materials, which has been reflected in the SPIL attached to this email.

6. No Community Benefits Charges apply.

7. As per Table 3a of the Official Plan, staff would encourage a minimum 5% proportion of large-household dwellings with three or more bedrooms or an equivalent floor area.

8. Please ensure submitted site plan reflects changes to parking requirements from office to residential land use.

Urban Design

Comments:

9. As there are no exterior changes proposed outside of some minor window changes, an Urban Design Brief will not be required nor review by the Urban Design Review Panel.

Engineering

Comments:

1. Provide the proposed Sanitary sewer release rate to confirm there is sufficient capacity in the City's combined sewer system.

2. Strom water quantity control is not required if Storm water runoff is not increased from the site but it is strongly recommended to look at ways to control storm water flow on site which will help create capacity in the combined sewer system for increase in sanitary flows from this development and other potential neighboring developments.

3. Water Supply Redundancy: Residential buildings with a basic day demand greater than 50m3/day (0.57 L/s) are required to be connected to a minimum of two water services separated by an isolation valve to avoid a vulnerable service area as per the Ottawa Design Guidelines - Water Distribution, WDG001, July 2010 Clause 4.3.1 Configuration. The basic day demand for this site not expected to exceed 50m3/day.

4. The proposal is to convert commercial space on floors 2,3 and 4 into 33 residential units. Is there a possibility that more commercial space will be converted to residential in future? If yes, it is recommended to plan and design the service laterals for a potential future increase in demand.

5. Existing buildings service lateral require a CCTV inspection and report to ensure existing services to be re-used are in good working order and meet current minimum size requirements. Located services to be placed on existing condition plan.

6. Please review Technical Bulletin ISTB-2018-02, maximum fire flow hydrant capacity is provided in Section 3 Table 1 of Appendix I. A hydrant coverage figure shall be provided and demonstrate there is adequate fire protection for the proposal. Two or more public hydrants are anticipated to be required to handle fire flow.

7. Boundary conditions are required to confirm that the required fire flows can be achieved as well as availability of the domestic water pressure on the City street in front of the development. Use Table 3-3 of the MOE Design Guidelines for Drinking-Water System to determine Maximum Day and Maximum Hour peaking factors for 0 to 500 persons and use Table 4.2 of the Ottawa Design Guidelines, Water Distribution for 501 to 3,000 persons. Please provide the following information to the City of Ottawa via email to request water distribution network boundary conditions for the subject site. Please note that once this information has been provided to the City of Ottawa it takes approximately 5-10 business days to receive boundary conditions.

- Type of Development and Units

- Site Address
- A plan showing the proposed water service connection location.
- Average Daily Demand (L/s)
- Maximum Daily Demand (L/s)
- Peak Hour Demand (L/s)
- Fire Flow (L/min)

[Fire flow demand requirements shall be based on ISTB-2021-03]

Exposure separation distances shall be defined on a figure to support the FUS calculation and required for flow (RFF).

Hydrant capacity shall be assessed to demonstrate the RFF can be achieved. Please identify which hydrants are being considered to meet the RFF on a fire hydrant coverage plan as part of the boundary conditions request.

- **List of required reports and plans**

PLANS:

- Existing Conditions and Removals Plan
- Site Servicing Plan (if new services are proposed)
- Road Reinstatement Plan (if new services are proposed)
- Topographical survey

REPORTS:

- RSC
- Site Servicing Report
- Noise Control Study
- Phase I ESA (include discussions on RSC requirement)
- Phase II ESA (Depending on recommendations of Phase I ESA)

Feel free to contact Nishant Jhamb, Infrastructure Project Manager, for follow-up questions.

Noise

Comments:

10. A **Transportation Noise Assessment** is required as the subject development is located within 100 **metres from the right-of-way of:** an existing or proposed arterial, collector or major collector road identified on

Or 500 metres from the right-of-way of: a 400-series provincial highway

A **Stationary Noise Assessment** is required in order to assess the noise impact of the proposed sources of stationary noise (mechanical HVAC system/equipment) of the

development onto the surrounding residential area to ensure the noise levels do not exceed allowable limits specified in the City Environmental Noise Control Guidelines.

Feel free to contact Nishant Jhamb IPM for follow-up questions.

Transportation

Comments:

11. As the development is proposing to convert existing office building to residential apartments inside the walls of the existing building. The following Carling Avenue ROW protection limits of 44.5 m, Bronson Avenue ROW protection limits of 23.0 metres, and site triangle (5 m x 5 m) at the intersection of Carling Avenue and Bronson Avenue are only partially applicable as the existing building is proposed to be retained.

    - Carling Avenue is designated as an Arterial Road within the City's Official Plan with a ROW protection limit of 44.5 metres between Richmond Road and Bronson Avenue. The ROW protection limit and the offset distance 22.25 metres. However, staff recognize that there is an existing building within that distance so will not require conveyance where there is an existing building or underground foundation. Please identify on the plan where conveyance is outside of existing building.

    - Bronson Avenue is designated as an Arterial Road within the City's Official Plan with a ROW protection limit of 23.0 metres between Albert Street and Colonel By Drive. The ROW protection limit and the offset distance 11.5 metres. Staff are requiring conveyance on Bronson where it does not conflict with the existing building and underground foundations. Please identify on the plan where conveyance is outside of existing building.

    - Regarding the corner triangle, the development proponent should protect the corner triangle to accommodate protected intersections per Schedule C16 policies 2.1.1 (e) & (f). The shape of the triangle should consist of two overlapping 5 metres x 15 metres. This is illustrated in the attached document.

12. The Screening Form has indicated that TIA Triggers have been met. Please proceed with the TIA Step 2 – Scoping Report – but will a narrowed scope. Given that the location trigger has been met, we would appreciate a transportation report with a VERY small scope. Primarily, we'd be interested in any potential modifications to the site frontages (i.e., Boundary Street), and ensuring we are dedicated any ROW that is protected (and feasible given that it is a conversion).

13. During the Analysis, ensure that both TDM checklists are filled out and appropriate measures are taken to achieve the target modal shares. In the future,

please contact Tim Wei (tim.wei@ottawa.ca) to obtain a local snapshot of the Long-Range Transportation model to help inform background growth rates.

14. Road works along Bronson Avenue are targeted to start within 3-5 years. Carling Avenue reconstruction including a draft plan of the Carling/Bronson intersection is attached.

15. Ensure that potential tenants who are not assigned a parking space are aware that on street parking is not a viable option for tenants.

16. All underground and above ground building footprints and permanent walls need to be shown on the plan to confirm that any permanent structure does not extend either above or below into the sight triangles and/or future road widening protection limits.

17. Permanent structures such as curbing, stairs, retaining walls, and underground parking foundation also bicycle parking racks are not to extend into the City's right-of-way limits.

18. The Owner shall be required to enter into maintenance and liability agreement for all pavers, plant and landscaping material placed in the City right-of-way along Bronson Avenue (a Maintenance and Liability Agreement exists already for works within the right-of-way along Carling and Cambridge) and the Owner shall assume all maintenance and replacement responsibilities in perpetuity.

19. Bicycle parking spaces are required as per Section 111 of the Ottawa Comprehensive Zoning By-law. Bicycle parking spaces should be in safe, secure places near main entrances and preferably protected from the weather.

20. Should the property Owner wish to use a portion of the City's Road allowance for construction staging, prior to obtaining a building permit, the property Owner must obtain an approved Traffic Management Plan from the Manager, Traffic Management, Transportation Services Department. The city has the right for any reason to deny use of the Road Allowance and to amend the approved Traffic Management Plan as required.

Feel free to contact Wally Dubyk, Transportation Project Manager, for follow-up questions.

Environment and Trees

Comments:

21. Tree preservation / distinctive trees – If there is space, please consider additional tree planting on the site to address the urban heat island effect and to provide a contribution towards the urban tree canopy.

22. Environmental impact study – there are no natural features on or adjacent to the site that would trigger an environmental impact study.

23. Bird-Safe Design Guidelines | City of Ottawa - guidelines should be considered where external changes are being made to the building, for example to windows, mechanical, and etc.

Feel free to contact Matthew Hayley, Environmental Planner for follow-up questions.

Parkland

Comments:

24. Cash-in-lieu of parkland / parkland dedication

    a. Parkland Dedication By-law No. 2022-280

25. Unless the applicant can find proof that Cash-In-Lieu of Parkland has been provided previously on the property, it will be calculated for the portion of the building being converted and applied as a condition of Site Plan Control Approval.

Feel free to contact Mike Russett, Parks Planner, for follow-up questions.

Community issues

Comments:

26. General support for increased residential and commercial units in the area.

27. Requested information on timing and phasing to ensure minimal disturbance on surrounding community.

28. Would encourage large-household dwellings.

29. Please consult with Glebe Annex Community Association prior to application submission - suestefko@hotmail.com

Other

30. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design. The HPDS was passed by Council on April 13, 2022.

    a. At this time, the HPDS is not in effect and Council has referred the 2023 HPDS Update Report back to staff with direction to bring forward an updated report to Committee with recommendations for revised phasing

timelines, resource requirements and associated amendments to the Site Plan Control By-law by no later than Q1 2024.

b. Please refer to the HPDS information attached and ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. Outlines the application type/subtype required and the associated fees
    a. Additional information regarding fees related to planning applications can be found here.
2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.
3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,
Erin O'Connell

cc.
John Wu
Nishant Jhamb
Wally Dubyk
Mike Russett
Sue Stefko
Matthew Hayley
Amy MacPherson

Appendix B

2A - WATER DEMANDS BOUNDARY CONDITIONS

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: June 4, 2024 3:41 PM
To: Martin Fréchette; Éric Potvin
Cc: Pardis Parsa; Fadi Bou Sleiman; Azimi, Farbod; Wu, John
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

EXTERNAL EMAIL

Hello Martin

I just spoke to the Water Resource Engineer and can confirm that the statement in the email below is correct.

Thanks
Nishant

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: June 03, 2024 4:12 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

As per our discussion, the total aggregate flow from the hydrants provides the required fire flow of 66.67 L/s for the site while maintaining a 20 PSI operating pressure at the connection for the Maximum Daily Demand.

Please advise if there are any misunderstandings.

Thank you for your time.

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

From: Martin Fréchette
Sent: Friday, May 31, 2024 1:29 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

Firstly, thank you for the fire flow confirmation.

However, I am writing to request clarification on the boundary conditions for the Max Day + Fire Flow, specifically regarding the conversion to meters (see highlighted). Could you provide the equivalent measurements in metres for the following parameters:

Minimum HGL: 106.3 m (previously provided)
Maximum HGL: 115.1 m (previously provided)
Max Day+Fire Flow (67.73 L/s): ≥89.4m*?, assuming ground elevation of 75.3 m

*89.4 min - 75.3 = 14.1m min. (=20 PSI min.)

Thank you,

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: Friday, May 31, 2024 11:56 AM
To: Martin Fréchette <Martin.Frechette@cima.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

EXTERNAL EMAIL

Hi Martin

Please see response below from Water Resources

"A multi-hydrant analysis was performed with three existing hydrants within 150 m of the property. The total aggregate flow assuming the three identified hydrants running simultaneously provides the required fire flow of 66.67 L/s for the site."

Thanks
Nishant

From: Jhamb, Nishant
Sent: May 24, 2024 3:10 PM
To: 'Martin Fréchette' <Martin.Frechette@cima.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Martin

There are no concerns with the proposed 1.61L/s peak sanitary discharge.

I will follow up about the Multi hydrant analysis and will let you know as soon as I hear back.

Thanks
Nishant

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: May 24, 2024 3:02 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

Could you please let me know when we can expect to receive an answer for the Multi Hydrant analysis?

Additionally, we submitted a request to confirm the wastewater capacity of the city system. I've attached the email for your reference. When can we expect to receive an answer for this as well?

Thank you.

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

Engineering for people

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From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: Friday, May 17, 2024 11:58 AM
To: Éric Potvin <Eric.Potvin@cima.ca>; Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: Re: 265 Carling Avenue: - Boundary Condition Request

EXTERNAL EMAIL

Thanks for clarification,

We will request the Multi Hydrant analysis result and let you know as soon as we hear back

Thanks
Nishant

From: Éric Potvin <Eric.Potvin@cima.ca>
Sent: Friday, May 17, 2024 11:32 AM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

For your "multi-hydrant analysis" comment, we had sent a multi-hydrant sketch for this purpose. See "240418_Fig3_Fire Hydrant Coverage.pdf" of the attached email.

Also, for your connection details comment (150mmØ x 127mmØ), it's an existing connection. The information comes from your GeoOttawa website. We were not planning to construct any new water services.

We just want to validate that the water demand + fire protection will still be adequate with the change in occupancy of this building for office use to mix-use (i.e. commercial & residential). The water demand will go up sightly with the residential units, but the fire flow portion (which is the biggest portion of the flow) shouldn't change. So the current building is not fully protected?

We can have a call/meeting early next week to discuss further if needed.

Regards,

ERIC POTVIN, P.Eng., ing. (PEO, OIQ, APEY)
Project Manager / Infrastructure
Chargé de projet / Infrastructures

M 613-863-7340 **F** 613-860-1870
600–1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

Engineering for people

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De : Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Envoyé : 16 mai 2024 15:21
À : Martin Fréchette <Martin.Frechette@cima.ca>
Cc : Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Objet : Re: 265 Carling Avenue: - Boundary Condition Request

Hello Martin

The Fire Flow requirements cannot be met as per the BC results. We can provide a multi-hydrant analysis if the applicant requests. The applicant would need to identify the hydrants to use along with distance from entrance to the building. Also. For the 150mm service connection to the 127mm UCI watermain, it needs to be approved by the City. Connection details will be required with the Site plan application

The following are boundary conditions, HGL, for hydraulic analysis at 265 Carling Avenue (zone 1W) assumed connected to the 127mm watermain on Bronson Avenue (see attached PDF for location).

Minimum HGL: 106.3 m

Maximum HGL: 115.1 m

Available Fire Flow at 20 (psi): 40.0 L/s, assuming ground elevation of 75.3 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.

Thanks

Nishant

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: Friday, April 19, 2024 1:14 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

As discussed, we would like to kindly request boundary conditions for the proposed development at **265 Arlington Avenue**. Please find the proposed development information below, along with our detailed calculations and associated figures attached. These include Water Demand Calculations, Fire Flow Calculations (Coefficient = 0.8), Location of Service (Figure 1), Exposure Separation Distances (Figure 2), Fire Hydrant Coverage (Coefficient = 0.8, Figure 3), and the Architectural Site Plan for reference.

1. **Type of Development and Units:** The proposed development involves the conversion of the existing 8-storey commercial office building into an 8-storey mixed-use building (residential and commercial space). The ground floor will be maintained as a retail/office floor and floor 2 through 8 will be converted into residential floors for a total of **70 residential units.** The 1-storey underground parking garage will also be maintained which covers the extend of the building.

1. **Site Address:** 265 Carling Avenue

2. **Location of Services:** Please see attached Figure 1. As per GeoOttawa there is a Ø152 mm connection on Bronson Avenue. Please note that we did not propose a

redundant watermain connection as our basic day demand calculation was less than 50 m^3/day (0.57 L/s).

3. **Average Daily Demand:** 0.36 L/s
4. **Maximum Daily Demand:** 1.07 L/s
5. **Peak Hour Demand:** 1.61 L/s
6. **Required Fire Flow (RFF) (C = 0.8):** 4,000 L/min

If you have any questions or concerns, please do not hesitate to contact me.

Best regards,

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: Friday, April 19, 2024 9:18 AM
To: Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>
Subject: RE: 265 Carling Avenue: - Wastewater Capacity Confirmation - Boundary Condition Request

Hello Martin,

Yes that will be me

Thanks

Nishant Jhamb, P.Eng

Project Manager |Gestionnaire de projet

Planning, Real Estate and Economic Development Department

Development Review - Central Branch

City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1

613.580.2424 ext./poste 23112, nishant.jhamb@ottawa.ca

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: April 18, 2024 4:31 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>
Subject: 265 Carling Avenue: - Wastewater Capacity Confirmation - Boundary Condition Request

Hi Nishant,

My name is Martin Fréchette, and I'm involved in the civil aspects of the **265 Carling Avenue** project.

I obtained your contact information from the pre-consultation meeting regarding File No.: PC2023-0301. Could you please confirm whether you will be our point of contact for coordinating the following items, or if you could direct us to the person responsible for this coordination?

- Wastewater capacity in the city system
- Water boundary conditions

Thank you,

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

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Appendix B

2B - FIRE FLOW HYPOTHESES BACKUP FROM ARCHITECT

From: Robert Verch <rverch@rlaarchitecture.ca>
Sent: March 1, 2024 12:03 PM
To: Fadi Bou Sleiman; Éric Potvin
Cc: Martin Fréchette; ddy Jeannot; Sam Chowieri
Subject: 2316: 265 Carling Avenue - Required Building Information

EXTERNAL EMAIL

Fadi / ric: we are now doing a full conversion of the building for our SPC application. Ground floor will be commercial and amenity space. 2nd to 8th will be 100% units. 11 per floor x 7 floors + 77 units, exterior roof will be amenity. Unit breakdown will be on the revised site plan.

The building will be "Noncombustible Construction" with a minimum of 1 hour rating between floors and units. The building will be fully sprinklered with a fully supervised system.
The soft surface at the exterior will be hard surface walk for access to the new buildings service areas.
There are no plans to retain any water on the roof or in the building.
No change to the structure of the building.

Please let me know if I missed anything.
Rob

From: Fadi Bou Sleiman <fadi@katasa.ca>
Sent: March-01-24 9:42 AM
To: Robert Verch <rverch@rlaarchitecture.ca>; Éric Potvin <ric.Potvin@cima.ca>
Cc: Martin Fréchette <Martin.Frechette@cima.ca>; ddy Jeannot <ejeannot@rlaarchitecture.ca>; Sam Chowieri <sam@katasa.ca>
Subject: R: 265 Carling Avenue - Required Building Information

Hi Rob,
Can you please answer the civil engineer's questions? See below,
@Éric Potvin the building as is right now is only sprinklered In the garage. We gave the mandate to Vipond to add a firepump and do all windows sprinkler (for code issues) for the elevation facing the 275 Carling. But we are planning to fully sprinkler the buildings once it will be turned to residential.
Thanks

KATASA
GROUPE + DÉVELOPPEMENT

FADI **BOU SLEIMAN**
Gestionnaire de projet
\\\ Project manager

T 819.771.2787 x 231
F 819.412.0310

fadi@katasa.ca
\\\ katasa.ca

69, rue Jean-Proulx unité #301
Gatineau (Québec) J8Z 1W2

From: Éric Potvin <ric.Potvin@cima.ca>
Sent: Thursday, February 29, 2024 3:42 PM
To: Fadi Bou Sleiman <fadi@katasa.ca>
Cc: Martin Fréchette <Martin.Frechette@cima.ca>
Subject: R: 265 Carling Avenue - Required Building Information

Bonjour Fadi,

Je fais un suivi pour à savoir si vous avez reçu des réponses aux questions ci-dessous.

Merci,

ÉRIC POTVIN, ing., P.Eng. (PEO, OIQ, APEY)
Chargé de projet / Infrastructures
Project Manager / Infrastructure

M 613-863-7340 **F** 613-860-1870
600–1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

De : Éric Potvin
Envoyé : 13 février 2024 17:00
À : Fadi Bou Sleiman <fadi@katasa.ca>
Cc : Christian Lavoie-Lebel <Christian.Lavoie-Lebel@cima.ca>; Martin Fréchette <Martin.Frechette@cima.ca>
Objet : 265 Carling Avenue - Required Building Information

Hello,

In order to complete our servicing report for the SPA amendment, we will need a few information from the project architect. Could you please forward him the questions below?

Also please note that it will take a few days (maybe up to a week) to calculate the fire flow and water demands calculations once we receive the information to our questions below, and then the City will most likely require ten (10) business days to confirm capacities. It's also important to note that if the site plan changes, we will need to redo these calculations and restart the process with the City (i.e., every site plan change, however small, can set us back three (3) weeks in the process).

Questions to Architect:

- **Site Data:**

  To develop the sewer and water demands for the site, we require the final architectural **Site Plan, massing statistics, and floor plans**. Final meaning the building footprint, number of rooms/beds, any commercial or additional building areas will not change. The hard and soft services at the exterior of the building should also remain unchanged.

  Will there be any modifications to the building itself from a stormwater management perspective, such as roof retention, cistern storage, or any other measures? We understand that no stormwater control is required if no changes are made to the building itself. However, since we will be connecting to a combined sewer, any additional capacity we can obtain will help mitigate the increase in sanitary flows.

- **Required Fire Flow:**

  Will there be any changes to the structural components of the building?

  Can you confirm the building is of Fire Resistive Construction as defined in Fire Underwriters Survey (FUS) 2020:

  - Fire Resistive Construction: when all structural elements, walls, arches, floors, and roofs are constructed with a minimum 2-hour fire-resistance rating, and all materials used in the construction of the structural elements, walls, arches, floors, and roofs are constructed with non-combustible materials? If there are changes, will this impact the above?

- Fire Resistive Construction also assumes all vertical openings and exterior vertical communications (ex. Interconnected floor spaces, atria, elevators, escalators, etc.) are **properly protected** in accordance with the National Building Code (NBC). That is (i.) nclosures have walls of masonry or other limited or noncombustible construction with a fire-resistance rating of not less than one hour, (ii.) openings including doors shall be protected with automatic closing devices and (iii.) elevator doors shall be of metal or metal-covered construction, so arranged that the doors must normally be closed for the operation of the elevator.

- Noncombustible Construction: where all structural elements, walls, arches, floors, and roofs are constructed with a minimum 1-hour fire-resistance rating and are constructed with noncombustible materials.
    - Noncombustible Construction assumes any vertical openings in the building are **unprotected**. That is any opening through horizontal separations that are unprotected or otherwise have closures that do not meet the minimum requirements for protected openings, above.

Can you confirm that the building is sprinklered or will have a sprinkler protection system installed? If so, could you also confirm if the following criteria are applicable according to FUS 2020

- Automatic sprinkler system conforming to NFPA standards?
- Fully supervised system?
    - For a fully supervised system a supervisory signal is required to ensure that malfunctions of the automatic sprinkler system will be discovered and corrected promptly, while a water flow alarm is required to notify emergency services of the fire as soon as the automatic sprinkler system activates. Some additional information as follows:

Regards,

ERIC POTVIN, P.Eng., ing.
Project Manager / Infrastructure
Chargé de projet / Infrastructures

M 613-863-7340 **F** 613-860-1870
600–1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

Appendix B

3 - SANITARY CAPACITY CONFIRMATION

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: May 24, 2024 3:10 PM
To: Martin Fréchette; Éric Potvin
Cc: Pardis Parsa; Fadi Bou Sleiman; Azimi, Farbod; Wu, John
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

EXTERNAL EMAIL

Hi Martin

There are no concerns with the proposed 1.61L/s peak sanitary discharge.

I will follow up about the Multi hydrant analysis and will let you know as soon as I hear back.

Thanks
Nishant

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: May 24, 2024 3:02 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Éric Potvin <Eric.Potvin@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

Could you please let me know when we can expect to receive an answer for the Multi Hydrant analysis?

Additionally, we submitted a request to confirm the wastewater capacity of the city system. I've attached the email for your reference. When can we expect to receive an answer for this as well?

Thank you.

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: Friday, May 17, 2024 11:58 AM
To: Éric Potvin <Eric.Potvin@cima.ca>; Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: Re: 265 Carling Avenue: - Boundary Condition Request

EXTERNAL EMAIL

Thanks for clarification,

We will request the Multi Hydrant analysis result and let you know as soon as we hear back

Thanks
Nishant

From: Éric Potvin <Eric.Potvin@cima.ca>
Sent: Friday, May 17, 2024 11:32 AM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>; Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Pardis Parsa <pardis.parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

For your “multi-hydrant analysis” comment, we had sent a multi-hydrant sketch for this purpose. See “240418_Fig3_Fire Hydrant Coverage.pdf” of the attached email.

Also, for your connection details comment (150mmØ x 127mmØ), it’s an existing connection. The information comes from your GeoOttawa website. We were not planning to construct any new water services.

We just want to validate that the water demand + fire protection will still be adequate with the change in occupancy of this building for office use to mix-use (i.e. commercial & residential). The water demand will go up sightly with the residential units, but the fire flow portion (which is the biggest portion of the flow) shouldn’t change. So the current building is not fully protected?

We can have a call/meeting early next week to discuss further if needed.

Regards,

ERIC POTVIN, P.Eng., ing. (PEO, OIQ, APEY)
Project Manager / Infrastructure
Chargé de projet / Infrastructures

M 613-863-7340 **F** 613-860-1870
600–1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

De : Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Envoyé : 16 mai 2024 15:21
À : Martin Fréchette <Martin.Frechette@cima.ca>
Cc : Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>; Azimi, Farbod <farbod.azimi@ottawa.ca>; Wu, John <John.Wu@ottawa.ca>
Objet : Re: 265 Carling Avenue: - Boundary Condition Request

Hello Martin

The Fire Flow requirements cannot be met as per the BC results. We can provide a multi-hydrant analysis if the applicant requests. The applicant would need to identify the hydrants to use along with distance from entrance to the building. Also. For the 150mm service connection to the 127mm UCI watermain, it needs to be approved by the City. Connection details will be required with the Site plan application

The following are boundary conditions, HGL, for hydraulic analysis at 265 Carling Avenue (zone 1W) assumed connected to the 127mm watermain on Bronson Avenue (see attached PDF for location).

Minimum HGL: 106.3 m

Maximum HGL: 115.1 m

Available Fire Flow at 20 (psi): 40.0 L/s, assuming ground elevation of 75.3 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.

Thanks

Nishant

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: Friday, April 19, 2024 1:14 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>; Fadi Bou Sleiman <fadi@katasa.ca>
Subject: RE: 265 Carling Avenue: - Boundary Condition Request

Hi Nishant,

As discussed, we would like to kindly request boundary conditions for the proposed development at **265 Arlington Avenue**. Please find the proposed development information below, along with our detailed calculations and associated figures attached. These include Water Demand Calculations, Fire Flow Calculations (Coefficient = 0.8),

Location of Service (Figure 1), Exposure Separation Distances (Figure 2), Fire Hydrant Coverage (Coefficient = 0.8, Figure 3), and the Architectural Site Plan for reference.

1. **Type of Development and Units:** The proposed development involves the conversion of the existing 8-storey commercial office building into an 8-storey mixed-use building (residential and commercial space). The ground floor will be maintained as a retail/office floor and floor 2 through 8 will be converted into residential floors for a total of **70 residential units.** The 1-storey underground parking garage will also be maintained which covers the extend of the building.
1. **Site Address:** 265 Carling Avenue
2. **Location of Services:** Please see attached Figure 1. As per GeoOttawa there is a Ø152 mm connection on Bronson Avenue. Please note that we did not propose a redundant watermain connection as our basic day demand calculation was less than 50 m^3/day (0.57 L/s).
3. **Average Daily Demand:** 0.36 L/s
4. **Maximum Daily Demand:** 1.07 L/s
5. **Peak Hour Demand:** 1.61 L/s
6. **Required Fire Flow (RFF) (C = 0.8):** 4,000 L/min

If you have any questions or concerns, please do not hesitate to contact me.

Best regards,

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: Friday, April 19, 2024 9:18 AM
To: Martin Fréchette <Martin.Frechette@cima.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>
Subject: RE: 265 Carling Avenue: - Wastewater Capacity Confirmation - Boundary Condition Request

Hello Martin,

Yes that will be me

Thanks

Nishant Jhamb, P.Eng

Project Manager |Gestionnaire de projet

Planning, Real Estate and Economic Development Department

Development Review - Central Branch

City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1

613.580.2424 ext./poste 23112, nishant.jhamb@ottawa.ca

From: Martin Fréchette <Martin.Frechette@cima.ca>
Sent: April 18, 2024 4:31 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Cc: Éric Potvin <Eric.Potvin@cima.ca>; Pardis Parsa <Pardis.Parsa@cima.ca>
Subject: 265 Carling Avenue: - Wastewater Capacity Confirmation - Boundary Condition Request

Hi Nishant,

My name is Martin Fréchette, and I'm involved in the civil aspects of the **265 Carling Avenue** project.

I obtained your contact information from the pre-consultation meeting regarding File No.: PC2023-0301. Could you please confirm whether you will be our point of contact for

coordinating the following items, or if you could direct us to the person responsible for this coordination?

- Wastewater capacity in the city system
- Water boundary conditions

Thank you,

MARTIN FRÉCHETTE, EIT, CPI
Infrastructure

M 819-955-1204
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

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Appendix B

4 - DEVELOPMENT SERVICING STUDY CHECKLIST

Servicing Study Guidelines for Development Applications

4. Development Servicing Study Checklist

4.1 General Content

Required Content		Reference Location
☐	Executive Summary (for larger reports only).	N/A
☑	Date and revision number of the report.	Cover Sheet
☑	Location map and plan showing municipal address, boundary, and layout of proposed development.	Report Figures
☑	Plan showing the site and location of all existing services.	Appendix A
☑	Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.	Section 1.1
☑	Summary of Pre-consultation Meetings with City and other approval agencies.	Section 1.4
☑	Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.	Section 1.2 & 1.4
☑	Statement of objectives and servicing criteria.	Section 1.0, 2.1, 3.1 & 4.2
☑	Identification of existing and proposed infrastructure available in the immediate area.	Section 1.3 & Appendix A
☐	Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	N/A
☐	Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.	N/A
☐	Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	N/A
☐	Proposed phasing of the development, if applicable.	N/A
☐	Reference to geotechnical studies and recommendations concerning servicing.	N/A
☐	All preliminary and formal site plan submissions should have the following information: - Metric scale; - North Arrow (including construction North); - Key Plan; - Name and contact information of applicant and property owner; - Property limits including bearings and dimensions; - Existing and proposed structures and parking areas; - Easements, road widening and rights-of-way; - Adjacent street names.	N/A

Servicing Study Guidelines for Development Applications

4.2 Development Servicing Report: Water

Required Content		Reference Location
☐	Confirm consistency with Master Servicing Study, if available	N/A
☑	Availability of public infrastructure to service proposed development	Section 1.3 & Appendix A
☑	Identification of system constraints	Section 2.1 & 2.2
☑	Identify boundary conditions	Section 2.2
☑	Confirmation of adequate domestic supply and pressure	Section 2.2 & 2.3
☑	Confirmation of adequate fire flow protection and confirmation that fire flow is calculated as per the Fire Underwriter's Survey. Output should show available fire flow at locations throughout the development.	Section 2.2 & 2.3
☐	Provide a check of high pressures. If pressure is found to be high, an assessment is required to confirm the application of pressure reducing valves.	N/A
☐	Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design	N/A
☑	Address reliability requirements such as appropriate location of shut-off valves	Section 2.2 & Appendix C
☐	Check on the necessity of a pressure zone boundary modification.	N/A
☑	Reference to water supply analysis to show that major infrastructure is capable of delivering sufficient water for the proposed land use. This includes data that shows that the expected demands under average day, peak hour and fire flow conditions provide water within the required pressure range	Table 2-5
☐	Description of the proposed water distribution network, including locations of proposed connections to the existing system, provisions for necessary looping, and appurtenances (valves, pressure reducing valves, valve chambers, and fire hydrants) including special metering provisions.	N/A
☐	Description of off-site required feedermains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.	N/A
☑	Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.	Section 2.3
☐	Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.	N/A

Servicing Study Guidelines for Development Applications

4.3 Development Servicing Report: Wastewater

Required Content		Reference Location
☑	Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).	Section 3.1
☐	Confirm consistency with Master Servicing Study and/or justifications for deviations.	N/A
☑	Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.	Section 3.3, Appendix B, D & E
☑	Description of existing sanitary sewer available for discharge of wastewater from proposed development	Section 1.3, 3.2 & Appendix A
☑	Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)	Section 3.3
☑	Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.	Section 3.2 & Appendix D
☑	Description of proposed sewer network including sewers, pumping stations, and forcemains.	Section 3.2
☐	Discussion of previously identified environmental constraints and impact on servicing (environmental constraints are related to limitations imposed on the development in order to preserve the physical condition of watercourses, vegetation, soil cover, as well as protecting against water quantity and quality).	N/A
☐	Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.	N/A
☐	Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.	N/A
☐	Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.	N/A
☐	Special considerations such as contamination, corrosive environment etc.	N/A

Servicing Study Guidelines for Development Applications

4.4 Development Servicing Report: Stormwater Checklist

	Required Content	Reference Location
☑	Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)	Section 4.1
☐	Analysis of available capacity in existing public infrastructure.	N/A
☐	A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.	N/A
☐	Water quantity control objective (e.g. controlling post-development peak flows to pre-development level for storm events ranging from the 2 or 5 year event (dependent on the receiving sewer design) to 100 year return period); if other objectives are being applied, a rationale must be included with reference to hydrologic analyses of the potentially affected subwatersheds, taking into account long-term cumulative effects.	N/A
☐	Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.	N/A
☐	Description of the stormwater management concept with facility locations and descriptions with references and supporting information.	N/A
☐	Set-back from private sewage disposal systems.	N/A
☐	Watercourse and hazard lands setbacks.	N/A
☐	Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.	N/A
☐	Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.	N/A
☐	Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5 year return period) and major events (1:100 year return period).	N/A
☐	Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.	N/A
☐	Calculate pre and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.	N/A
☐	Any proposed diversion of drainage catchment areas from one outlet to another.	N/A
☐	Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.	N/A
☐	If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100 year return period storm event.	N/A
☐	Identification of potential impacts to receiving watercourses	N/A
☐	Identification of municipal drains and related approval requirements.	N/A
☑	Descriptions of how the conveyance and storage capacity will be achieved for the development.	Section 4.2
☐	100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.	N/A
☐	Inclusion of hydraulic analysis including hydraulic grade line elevations.	N/A
☐	Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.	N/A
☐	Identification of floodplains – proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions.	N/A
☐	Identification of fill constraints related to floodplain and geotechnical investigation.	N/A

4.5 Approval and Permit Requirements: Checklist

Required Content		Reference Location
☐	Conservation Authority as the designated approval agency for modification of floodplain, potential impact on fish habitat, proposed works in or adjacent to a watercourse, cut/fill permits and Approval under Lakes and Rivers Improvement Act. The Conservation Authority is not the approval authority for the Lakes and Rivers Improvement Act. Where there are Conservation Authority regulations in place, approval under the Lakes and Rivers Improvement Act is not required, except in cases of dams as defined in the Act.	N/A
☐	Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.	N/A
☐	Changes to Municipal Drains.	N/A
☐	Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)	N/A

4.6 Conclusion Checklist

Required Content		Reference Location
☑	Clearly stated conclusions and recommendations	Section 6.0
☐	Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the responsible reviewing agency.	N/A
☑	All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario	Cover Sheet

C

Appendix C
Water Supply Design Calculations

PROJECT NAME:	265 Carling Avenue Residential Conversion
CIMA+ PROJECT NUMBER:	A001518
CLIENT:	Katasa Groupe + Développement
PROJECT STATUS:	Preliminary Design (Assessment of Adequacy of Public Services)

WATER CONSUMPTION CALCULATIONS

APPLICABLE DESIGN GUIDELINES:

1. Ottawa Design Guidelines - Water Distribution (2010)
2. City of Ottawa Technical Bulletin ISTB-2021-03, ISTB-2018-02, ISDTB-2014-02 and ISD-2010-02
3. MOE Design Guidelines for Drinking-Water Systems

RESIDENTIAL AND COMMERCIAL WATER DEMANDS:

RESIDENTIAL DESIGN CRITERIA:

Residential Average Day Demand:	280	L/c/day
Maximum Day Peaking Factor:	3.0	x Average Daily Demand
Maximum (Peak Hour) Peaking Factor:	4.5	x Average Daily Demand

Per Unit Populations:

Table 4.1 Per Unit Populations

Unit Type	Persons Per Unit
Single Family	3.4
Semi-detached	2.7
Duplex	2.3
Townhouse (row)	2.7
Apartments:	
Bachelor	1.4
1 Bedroom	1.4
2 Bedroom	2.1
3 Bedroom	3.1
Average Apt.	1.8

EQUIVALENT POPULATION :

Unit Type	Number of Units	Persons Per Unit	Population
Bachelor Apartments (Studio)	42	1.4	59
1-Bedroom Apartments	14	1.4	20
2-Bedroom Apartments	14	2.1	29
Total	**70**		**108**

COMMERCIAL DESIGN CRITERIA:

Contributing Commercial Area:	0.035	gross ha (including activities room, gym and yoga)
Commercial Average Day Demand:	28,000	L/gross ha/d
Maximum Day Peaking Factor:	1.5	x Average Daily Demand
Maximum (Peak Hour) Peaking Factor:	1.8	x Maximum Daily Demand

WATER DEMANDS:

Demand Type	Average Daily Demand (L/s)	Maximum Daily Demand (L/s)	Maximum (Peak) Hour Demand (L/s)
Residential	0.350	1.050	1.575
Commercial	0.011	0.017	0.031
Total	**0.36**	**1.07**	**1.61**

NOTES:

1. Maximum Day and Maximum Hour residential peaking factors determined using Table 3-3 of the MOE Design Guidelines for Drinking-Water System for 0 to 500 persons.

2. Given the basic day demand is less than 50 m³/day (0.57 L/s), two connections, is not needed.

Prepared by: Martin Fréchette Date: 2024-04-09

Verified by: Éric Potvin Date: 2024-04-09
PEO# 100208490

PROJECT NAME:	Redevelopment of 384 Arlington Ave
CIMA+ PROJECT NUMBER:	A001272
CLIENT:	Windmill Development Group Ltd.
PROJECT STATUS:	Preliminary Design (Assessment of Adequacy of Public Services)

FIRE FLOW ASSESSMENT

APPLICABLE DESIGN GUIDELINES:

1. Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection, 2020
2. Ottawa Design Guidelines - Water Distribution (2010) including Appendix H per ISTB-2018-02
3. City of Ottawa Technical Bulletin ISTB-2021-03 and ISTB-2018-02
4. MOE Design Guidelines for Drinking-Water Systems

STEP A - DETERMINE THE TYPE OF CONSTRUCTION

Type of Construction	Coefficient (C)	Value Selected (C)
Fire-resistive Construction (> 2 hours)	0.6	**0.8**
Non-combustible Construction	**0.8**	
Ordinary Construction	1.0	
Wood Frame Construction	1.5	

STEP B - DETERMINE THE FLOOR AREA

Floor/Level	Floor Area Per Level (sq. ft.)	Floor Area Per Level (m^2)	Fire Resistive Building (> 2 hours)	Protected Openings	Area of Structure Considered (m^2)	Percent of Floor Area Considered
Gross Floor Area (GFA) Ground Level:	5,377	499.5	NO	NO	499.5	100%
GFA Level 2:	5,377	499.5			499.5	100%
GFA Level 3:	5,377	499.5			249.8	50%
GFA Level 4:	5,377	499.5			249.8	50%
GFA Level 5:	5,377	499.5			249.8	50%
GFA Level 6:	5,377	499.5			249.8	50%
GFA Level 7:	5,377	499.5			249.8	50%
GFA Level 8:	5,377	499.5			249.8	50%
TOTAL FLOOR AREA (A):	**43,013**	**3,996.0**			**2,498**	

STEP C - DETERMINE THE HEIGHT IN STOREYS

Floor/Level	Number of Storeys	Percent of Floor Area Considered
Ground Level:	1	100%
Level 2:	1	100%
Level 3:	1	50%
Level 4:	1	50%
Level 5:	1	50%
Level 6:	1	50%
Level 7:	1	50%
Level 8:	1	50%
HEIGHT IN STOREYS:	**8**	

STEP D - DETERMINE BASE FIRE FLOW (ROUND TO NEAREST 1,000 L/min)

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

Where:

F is the required fire flow in L/min

C is the coefficient related to the type of construction, and;

A is the total floor area of the building in m^2

Coefficient Related to Type of Construction (C) = **0.8**

Floor Area Considered (A) = **2,498** **m^2**

REQUIRED (BASE) FIRE FLOW (F) =	**9,000**	**L/min** (Rounded to Nearest 1,000 L/min)

PROJECT NAME:	Redevelopment of 384 Arlington Ave
CIMA+ PROJECT NUMBER:	A001272
CLIENT:	Windmill Development Group Ltd.
PROJECT STATUS:	Preliminary Design (Assessment of Adequacy of Public Services)

FIRE FLOW ASSESSMENT

STEP E - DETERMINE THE INCREASE OR DECREASE FOR OCCUPANCY AND APPLY TO STEP D (STEP D x STEP E, DO NOT ROUND)

Occupancy Class	Occupancy Factor	Value Selected (C)
Non-combustible	0.75	
Limited combustible	**0.85**	
Combustible	1.00	**0.85**
Free burning	1.15	
Rapid burning	1.25	

REQUIRED (BASE) FIRE FLOW (F) =	**7,650**	**L/min** (Not rounded)

STEP F - DETERMINE THE DECREASE, IF ANY, FOR AUTOMATIC SPRINKLER PROTECTION AND APPLY TO VALUE IN STEP D ABOVE (DO NOT ROUND)

Sprinkler System Design	Sprinkler Design Charge	Value Selected (C)	Total Charge
Automatic sprinkler system conforming to NFPA standards	-30%	Yes	-30%
Standard water supply	-10%	Yes	-10%
Fully supervised system	-10%	Yes	-10%
TOTAL CHARGE FOR SPRINKLER SYSTEM			**-50%**

DECREASE FOR SPRINKLER PROTECTION =	**-4,500**	**L/min** (Not rounded)

STEP G - DETERMINE THE TOTAL INCREASE FOR EXPOSURES AND APPLY TO VALUE IN STEP D ABOVE (DO NOT ROUND)

Façade	Separation Distance (m)	Length-height Factor of Exposed Wall (m-storeys)	Assumed Construction of Exposed Wall of Adjacent Structure	Adjustment Factors - AUTOMATIC SPRINKLER PROTECTION SYSTEM	Total Charge
North Façade	3.8	14	Type III	1	10%
East Façade	>30	-	-		0%
South Façade	29.9	33	Type III	1	1%
West Façade	3.3	159	Type III	0	15%
TOTAL CHARGE FOR EXPOSURES				**11%**	

INCREASE FOR EXPOSURES =	**990**	**L/min** (Not rounded)

STEP H - DETERMINE FIRE FLOW INCLUDING ALL INCREASES AND REDUCTIONS ((STEP E + STEP F + STEP G, ROUND TO NEAREST 1,000 L/min)

TOTAL REQUIRED FIRE FLOW (RFF) =	**4,000**	**L/min** (Rounded to Nearest 1,000 L/min)
	66.67	**L/s**
	1,057	**USGPM**

PROJECT NAME:	Redevelopment of 384 Arlington Ave
CIMA+ PROJECT NUMBER:	A001272
CLIENT:	Windmill Development Group Ltd.
PROJECT STATUS:	Preliminary Design (Assessment of Adequacy of Public Services)

FIRE FLOW ASSESSMENT

NOTES/COMMENTS:

STEP A - DETERMINE THE TYPE OF CONSTRUCTION

1. No notes or comments

STEP B - DETERMINE THE FLOOR AREA

1. Assumed some vertical openings in the building are unprotected, thus only the area of the two largest adjoining floors plus 50% of all floors immediately above them to a maximum of eight (8) floors accounted for per Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection, 2020

STEP C - DETERMINE THE HEIGHT IN STOREYS

1. One level of underground parking is not considered as it is at least 50% below grade (Fire Underwriters Survey (FUS) Water Supply for Public Fire Protection, 2020)

STEP D - DETERMINE BASE FIRE FLOW (ROUND TO NEAREST 1,000 L/min)

1. No notes or comments.

STEP E - DETERMINE THE INCREASE OR DECREASE FOR OCCUPANCY AND APPLY TO STEP D (STEP D x STEP E, DO NOT ROUND)

1. Occupancy selected as a residential establishment will fall under C-2 occupancy type.

STEP F - DETERMINE THE DECREASE, IF ANY, FOR AUTOMATIC SPRINKLER PROTECTION AND APPLY TO VALUE IN STEP D ABOVE (DO NOT ROUND)

1. Sprinkler system will be fully supervised (Confirmed by Architect).

STEP G - DETERMINE THE TOTAL INCREASE FOR EXPOSURES AND APPLY TO VALUE IN STEP D ABOVE (DO NOT ROUND)

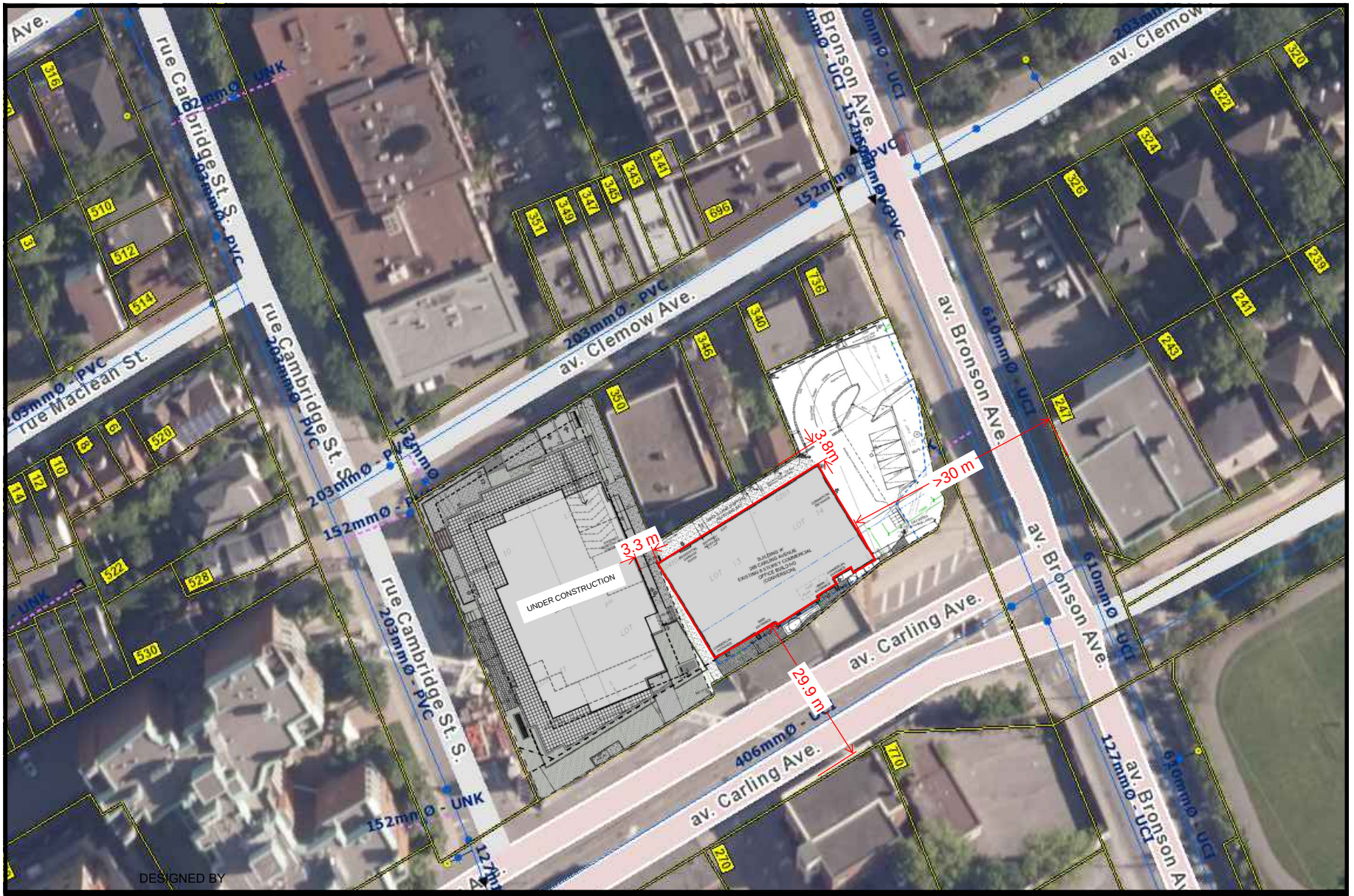
1. No notes or comments.

STEP H - DETERMINE FIRE FLOW INCLUDING ALL INCREASES AND REDUCTIONS ((STEP E + STEP F + STEP G, ROUND TO NEAREST 1,000 L/min)

1. No notes or comments.

Prepared by: Martin Fréchette Date: 2024-04-09

Verified by: Éric Potvin Date: 2024-04-09
PEO# 100208490

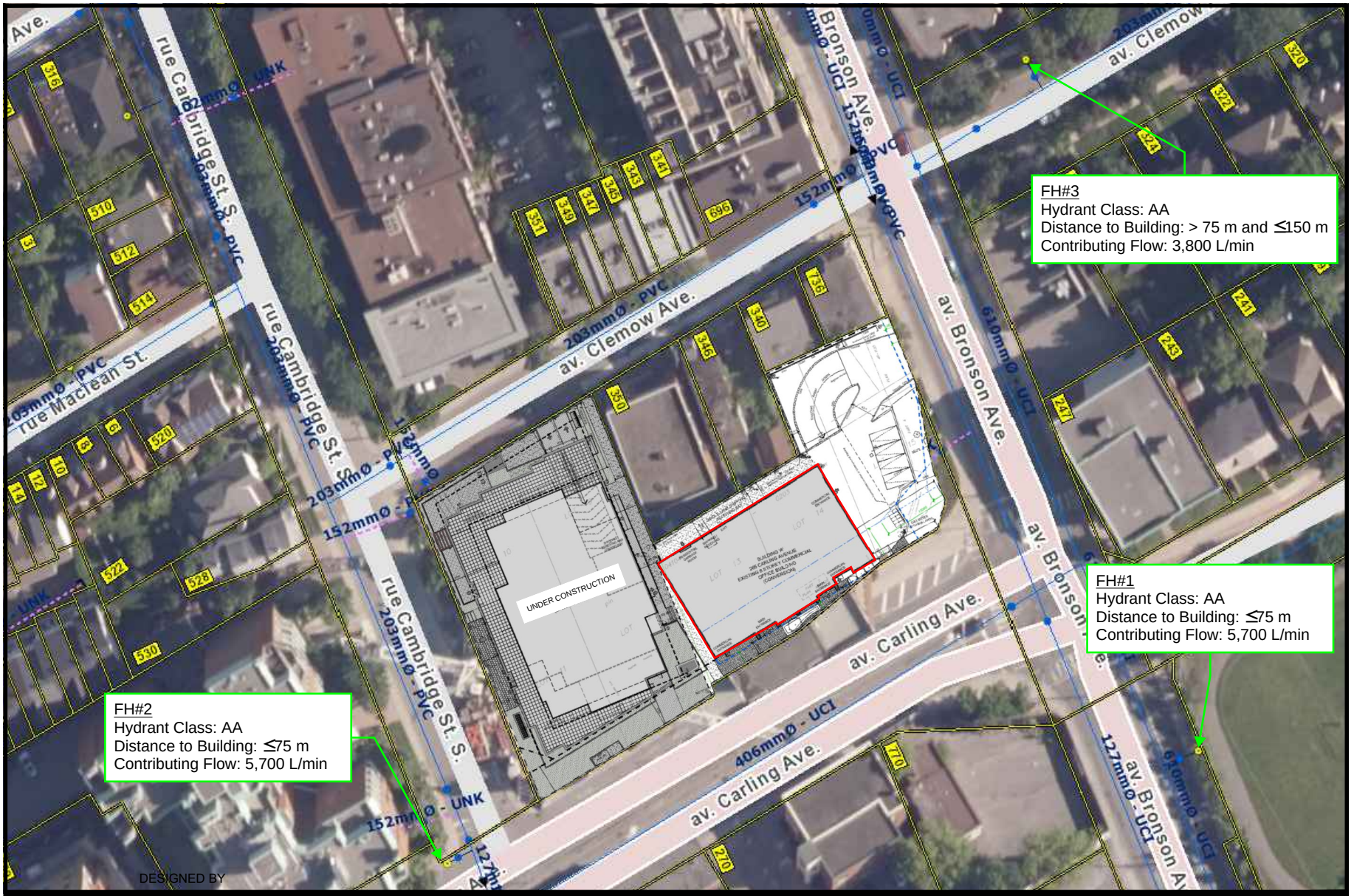


CIMA+

T: 613-860-2462
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

EXPOSURE SEPARATION DISTANCE

DRAWN & DESIGNED BY:	APPROVED BY:	SCALE:	DATE:	PROJECT No:	SHEET No:	FIGURE No:
M.Frechette ----	E.Potvin	NTS	2024-04-18	A001518	1 of 1	002



DESIGNED BY

T: 613-860-2462
600-1400 Blair Towers Place, Ottawa, ON K1J 9B8 CANADA

FIRE HYDRANT COVERAGE

DRAWN & DESIGNED BY:	APPROVED BY:	SCALE:	DATE:	PROJECT No:	SHEET No:	FIGURE No:
M.Frechette ----	E.Potvin	NTS	2024-04-18	A001518	1 of 1	003

D

Appendix D
Sanitary Servicing Design Calculations

PROJECT NAME: 265 Carling Avenue Residential Conversion
CIMA+ PROJECT NUMBER: A001518
CLIENT: Katasa Groupe + Développement
PROJECT STATUS: Preliminary Design (Assessment of Adequacy of Public Services)

WASTEWATER PEAK FLOW DETERMINATION

APPLICABLE DESIGN GUIDELINES:

1. City of Ottawa Sewer Design Guidelines, 2012
2. City of Ottawa Technical Bulletin ISTB-2018-01

BUILDING STATISTIC:

Gross Floor Area (GFA): 0.40 ha

DOMESTIC CONTRIBUTIONS:

RESIDENTIAL DESIGN CRITERIA:

Residential Average Flow: (1) 280 L/c/day
Residential Peak Factor (P.F.): Harmon Equation (Min 2.0 and Max 4.0)

$$P.F. = 1 + \left(\frac{14}{4 + \left(\frac{P}{1000} \right)^{\frac{1}{2}}} \right) * K$$

where:
P=Population
K=Correction Factor =0.8

Per Unit Populations:

Table 4.2 Per Unit Populations

Unit Type	Persons Per Unit
Single Family	3.4
Semi-detached	2.7
Duplex	2.3
Townhouse (row)	2.7
Apartments:	
Bachelor	1.4
1 Bedroom	1.4
2 Bedroom	2.1
3 Bedroom	3.1
Average Apt.	1.8

AVERAGE FLOW - DOMESTIC:

Unit Type	Number of Units	Persons Per Unit	Population	Average Flow (L/s)
Bachelor Apartments (Studio)	42	1.4	59	0.19
1-Bedroom Apartments	14	1.4	20	0.06
2-Bedroom Apartments	14	2.1	29	0.09
Total	70		108	**0.35**

For the design of new systems, the average residential flow of 280 L/capita per day (as noted in Figure 4.3) shall be used. The peaking factor shall be derived from the Harmon Formula with the minimum permissible peaking factor being 2.0 and the maximum being 4.0. A correction factor of 0.8 shall then be applied to the Harmon Peaking factor.

- Infiltration Allowance (Dry weather): 0.05 L/s/effective gross ha (for all areas)
- Infiltration Allowance (Wet weather): 0.28 L/s/effective gross ha (for all areas)
- Infiltration Allowance (Total I/I): 0.33 L/s/effective gross ha (for all areas)

EXTRANEOUS FLOWS (Typical values for Partially Separated Sewers):
Local Street Level Analysis (less than or equal to 10 ha):
Wet Weather Extraneous Flow: 5.0 L/s/gross ha (rare event)
Annual event to be determined at design

Neighborhood Level Analysis (between 10 ha and 100 ha):
Wet Weather Extraneous Flow: 3.0 L/s/gross ha (rare event)
Annual event to be determined at design

Large Drainage area – Collector Level Analysis (greater than 100 ha):
Wet Weather Extraneous Flow: 2.0 L/s/gross ha (rare event)
Annual event to be determined at design

PEAK FLOW - DOMESTIC:

Population: (2) 108 persons
Average Dry Weather Flow: (3) = (1) x (2) 0.35 L/s
Peaking Factor (P.F.): (4) 3.59
Peak Domestic Flow: (5) = (3) x (4) 1.26 L/s

COMMERCIAL & INSTITUTIONAL CONTRIBUTIONS:

COMMERCIAL AND INSTITUTIONAL DESIGN CRITERIA:

Commercial Average Flow: (6) 28,000 L/gross ha/d
Commercial Peak Factor: 1.5 if commercial contribution >20%, otherwise use 1.0

AVERAGE FLOW - COMMERCIAL:

Contributing Commercial Area: (7) 0.035 gross ha (including activities room, gym and yoga)
Average Dry Weather Flow: (8) = (6) x (7) 0.01 L/s

PEAK FLOW - COMMERCIAL:

Percent Commercial Area Contribution: 8.82% (Percent Commercial Area Contribution/GFA)
Peaking Factor: (9) 1.00
Peak Commercial Flow: (10) = (8) x (9) 0.01 L/s

EXTRANEOUS FLOW CONTRIBUTION - INFLOW AND INFILTRATION:

EXTRANEOUS DESIGN CRITERIA:

Dry Weather Infiltration: 0.05 L/s/effective gross ha (for all areas)
Wet Weather Infiltration: 0.28 L/s/effective gross ha (for all areas)

PEAK FLOW - EXTRANEOUS:

Effective Gross Area: (11) 0.17 ha
Total Infiltration Allowance: (12) 0.33 L/s/effective gross ha (for all areas)
Peak Extraneous Flow: (13) = (11) x (12) 0.06 L/s

Total Estimated Avg. Dry Weather Flow Rate:	**0.36**	**L/s**
Total Estimated Peak Dry Weather Flow Rate:	**1.27**	**L/s**
Total Estimated Peak Wet Weather Flow Rate:	**1.32**	**L/s**

PROJECT NAME:	265 Carling Avenue Residential Conversion
CIMA+ PROJECT NUMBER:	A001518
CLIENT:	Katasa Groupe + Développement
PROJECT STATUS:	Preliminary Design (Assessment of Adequacy of Public Services)

WASTEWATER PEAK FLOW DETERMINATION

NOTES:

1. Base sanitary flow, population densities, and infiltration rate are based on City of Ottawa design guidelines.
2. Harmon Equation has been used to calculate the residential peak factor for sanitary flows (see above) - maximum value of 4.0.
3. Population densities per City of Ottawa Sewer Design Guidelines, 2012, Section 4.3, Table 4.2 Per Unit Populations.

Prepared by: Martin Fréchette Date: 2024-04-09

Verified by: Éric Potvin Date: 2024-04-09
PEO# 100208490

E

Appendix E
CCTV Results and Analysis

Ottawa (Head Office)
1800 Bantree Street
Ottawa, Ontario K1B 5L6
☎ 613.745.2444
613.745.9994

www.cwwcanada.com
1.866.695.0155

Montreal
7562, Côte-de-Liesse
St-Laurent, Quebec H4T 1E7
☎ 514.738.2666
514.738.9762

CLEAN WATER WORKS INC.

INTEGRATED SEWER SOLUTIONS

Cima +

265 Carling
Ottawa, Ontario

DRAIN CCTV INSPECTION REPORT

Report ID
137764

Sewer Use
Sanitary & Storm

Completion Date
April 29 2024

Inspected Length
120.8 ~~22~~ meters

Note: Corrections incorporated by CIMA+ based on direct conversation with CWW.

Please be advised that any corrections or amendments made to the report are based on information provided during phone conversations. While we strive to accurately capture and reflect the details discussed, discrepancies may occur due to factors such as miscommunication or misunderstanding.

Index of pipes

4 items

Inspected length : ~~90.10~~ 120.8
Total length : 0.00

Pipe	Start/End	Direction	Road	Date	Inspected	Total	Page	
265 Carling _137764_Basement Parking Lot 1	Cleanout --> Mainline	Direction of flow	265 Carling	29/04/2024, 11:18 AM	~~22.4~~		3	29.2
265 Carling _137764_Basement Parking Lot 2	Cleanout --> Mainline	Direction of flow	265 Carling	29/04/2024, 11:11 AM	~~22.4~~		6	39.2
265 Carling _137764_Basement Parking Lot 3	Cleanout --> Mainline	Direction of flow	265 Carling	29/04/2024, 11:33 AM	~~22.4~~		9	30.0
265 Carling _137764_Cleanout	Cleanout --> Mainline	Direction of flow	265 Carling	29/04/2024, 11:54 AM	~~22.9~~		12	22.4

Pipe summary and condition details

Pipe identification

Pipe:	265 Carling _137764_Basement Parking Lot 1	**Direction of inspection:**	Cleanout --> Mainline
Direction of flow:	Cleanout --> Mainline	**Direction:**	Direction of flow

Pipe location

Road:	265 Carling		UPSTREAM	DOWNSTREAM
Drainage Area:		**Easting (X):**		
City:	Ottawa	**Northing (Y):**		
Location:		**Elevation (Z):**		
Owner:	Cima +	**Vertical Datum:**		

Pipe characteristics

Category:	Sanitary	**Size:**	100
Material:	Cast iron	**Width:**	
Lining:		**Total length:**	
Type:	Lateral	**Pipe unit length:**	
Invert (upstream):		**Year laid:**	
Depth (upstream):		**Invert (downstream):**	
Cover level (upstream):		**Depth (downstream):**	
		Cover level (downstream):	

Additional details

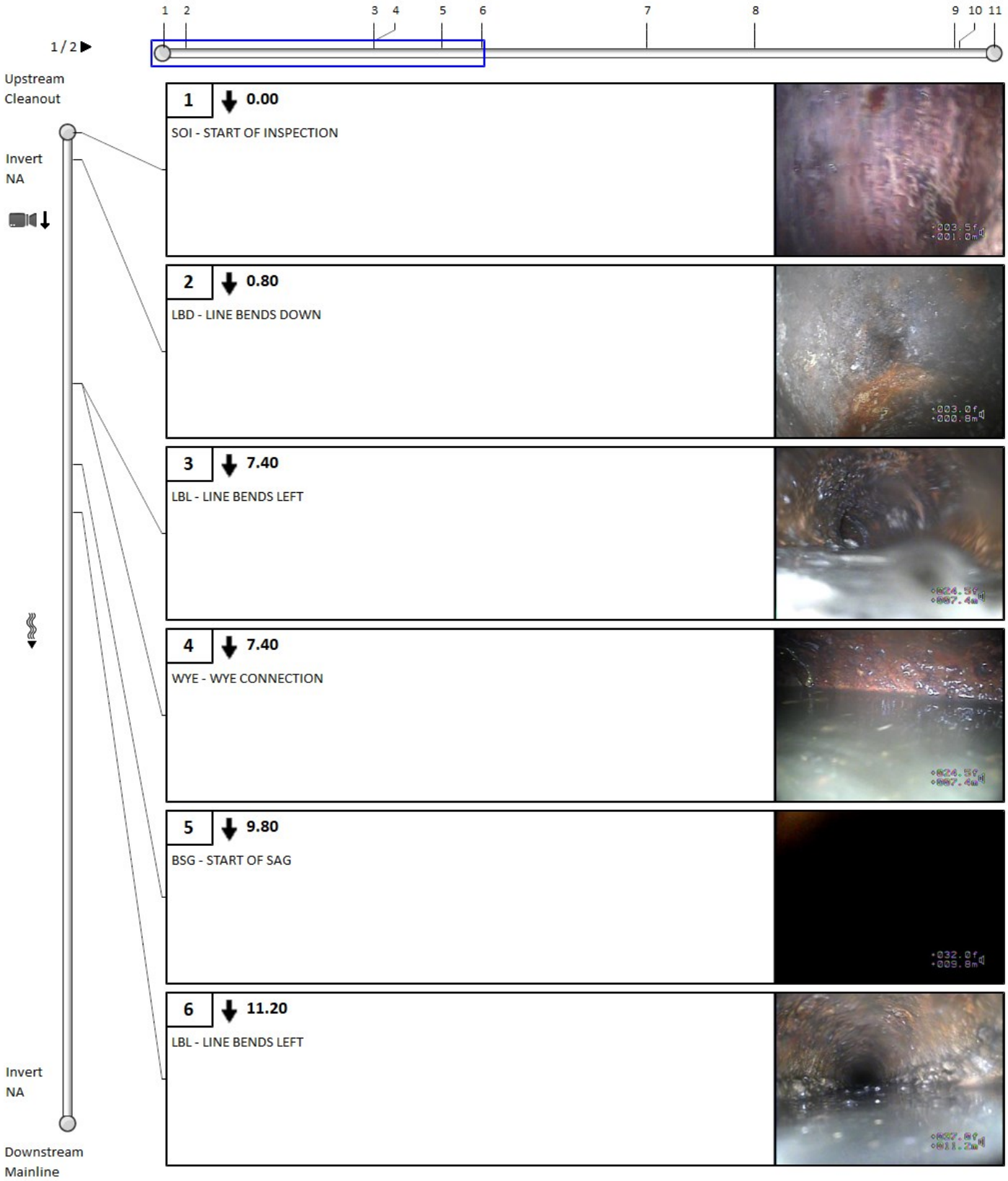
Date:	29/04/2024, 11:18 AM	**Survey Abandoned:**	
Project Number:		**Inspected length:**	~~22.4~~ 29.2
Contractor project #:		**Pre-cleaning:**	☐
Client:	MISC_265 Carling _WO137764	**Blocked flow:**	☐
Purpose:		**Regular CCTV:**	☐
Operator:	Andrew	**Reinspect with ZOOM:**	☐
Analyst:		**Medium #:**	
		Start position:	
		End position:	

Comments

Other information

Date:	April 29 2024	**Information 7:**	
Work Order#:	137764	**Information 8:**	
Start of Location:		**Information 9:**	
End of Location:		**Information 10:**	
Location:		**PI5 (MAMR):**	0
Information 6:		**PI6 (MAMR):**	0

Pipe summary and condition details

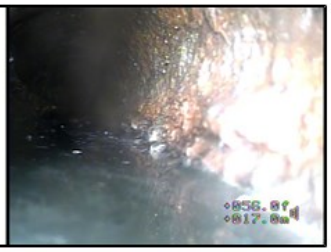
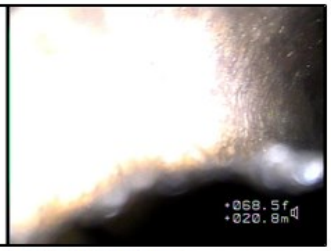


Pipe summary and condition details

◀ 2 / 2

Upstream
Cleanout

Invert
NA

7	17.00 LBL - LINE BENDS LEFT	
8	20.80 LBR - LINE BENDS RIGHT	
9	27.80 SC - SERVICE CONNECTION, at 9 o'clock	
10	28.00 SC - SERVICE CONNECTION, at 12 o'clock	
11	29.20 MAIN - MAIN SEWER IN BUILDING	

Invert
NA

Downstream
Mainline

Pipe summary and condition details

Pipe identification

Pipe:	265 Carling _137764_Basement Parking Lot 2	**Direction of inspection:**	Cleanout --> Mainline
Direction of flow:	Cleanout --> Mainline	**Direction:**	Direction of flow

Pipe location

			UPSTREAM	DOWNSTREAM
Road:	265 Carling	**Easting (X):**		
Drainage Area:		**Northing (Y):**		
City:	Ottawa	**Elevation (Z):**		
Location:		**Vertical Datum:**		
Owner:	Cima +			

Pipe characteristics

Category:	~~Sanitary~~ Storm	**Size:**	~~100~~ 150
Material:	Cast iron	**Width:**	
Lining:		**Total length:**	
Type:	Lateral	**Pipe unit length:**	
Invert (upstream):		**Year laid:**	
Depth (upstream):		**Invert (downstream):**	
Cover level (upstream):		**Depth (downstream):**	
		Cover level (downstream):	

Additional details

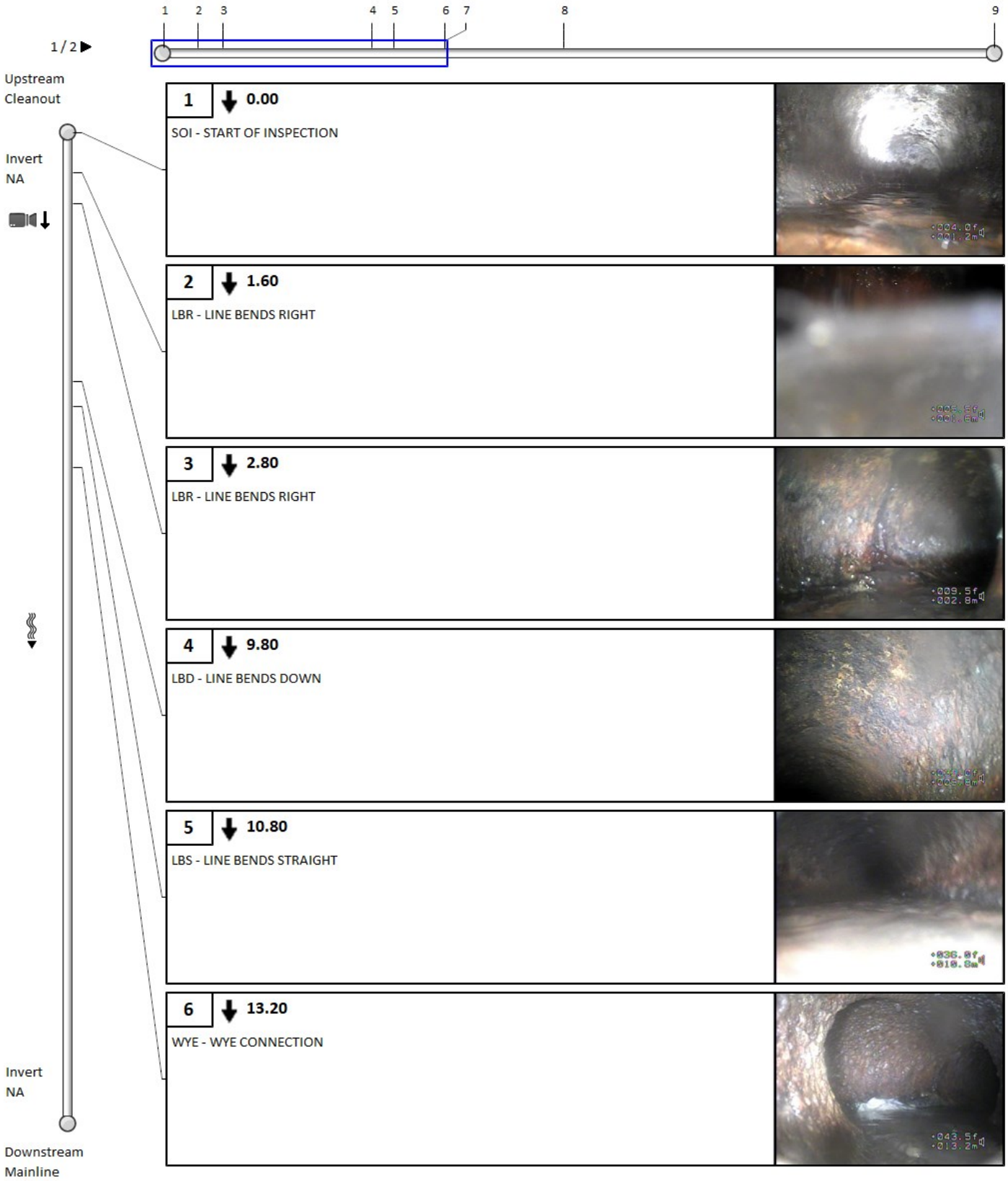
Date:	29/04/2024, 11:11 AM	**Survey Abandoned:**	
Project Number:		**Inspected length:**	~~22.4~~ 39.2
Contractor project #:		**Pre-cleaning:**	☐
Client:	MISC_265 Carling _WO137764	**Blocked flow:**	☐
Purpose:		**Regular CCTV:**	☐
Operator:	Andrew	**Reinspect with ZOOM:**	☐
Analyst:		**Medium #:**	
		Start position:	
		End position:	

Comments

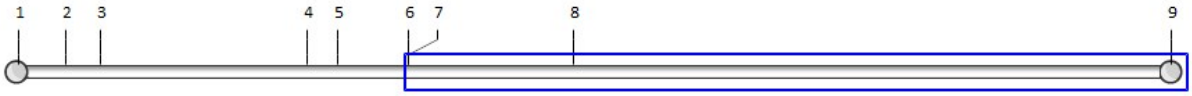
Other information

Date:	April 29 2024	**Information 7:**	
Work Order#:	137764	**Information 8:**	
Start of Location:		**Information 9:**	
End of Location:		**Information 10:**	
Location:		**PI5 (MAMR):**	0
Information 6:		**PI6 (MAMR):**	0

Pipe summary and condition details



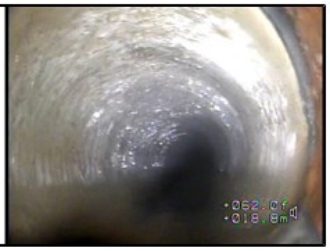
Pipe summary and condition details



◀ 2 / 2

Upstream
Cleanout

Invert
NA

7	13.20 LBR - LINE BENDS RIGHT	
8	18.80 MC - MATERIAL CHANGE, Cast to Trans	
9	39.00 MAIN - MAIN SEWER ~~IN BUILDING~~ ON BRONSON AVE.	

Invert
NA

Downstream
Mainline

Pipe summary and condition details

Pipe identification

Pipe:	265 Carling _137764_Basement Parking Lot 3	**Direction of inspection:**	Cleanout --> Mainline
Direction of flow:	Cleanout --> Mainline	**Direction:**	Direction of flow

Pipe location

Road:	265 Carling		UPSTREAM	DOWNSTREAM
Drainage Area:		**Easting (X):**		
City:	Ottawa	**Northing (Y):**		
Location:		**Elevation (Z):**		
Owner:	Cima +	**Vertical Datum:**		

Pipe characteristics

Category:	Sanitary	**Size:**	100
Material:	Cast iron	**Width:**	
Lining:		**Total length:**	
Type:	Lateral	**Pipe unit length:**	
Invert (upstream):		**Year laid:**	
Depth (upstream):		**Invert (downstream):**	
Cover level (upstream):		**Depth (downstream):**	
		Cover level (downstream):	

Additional details

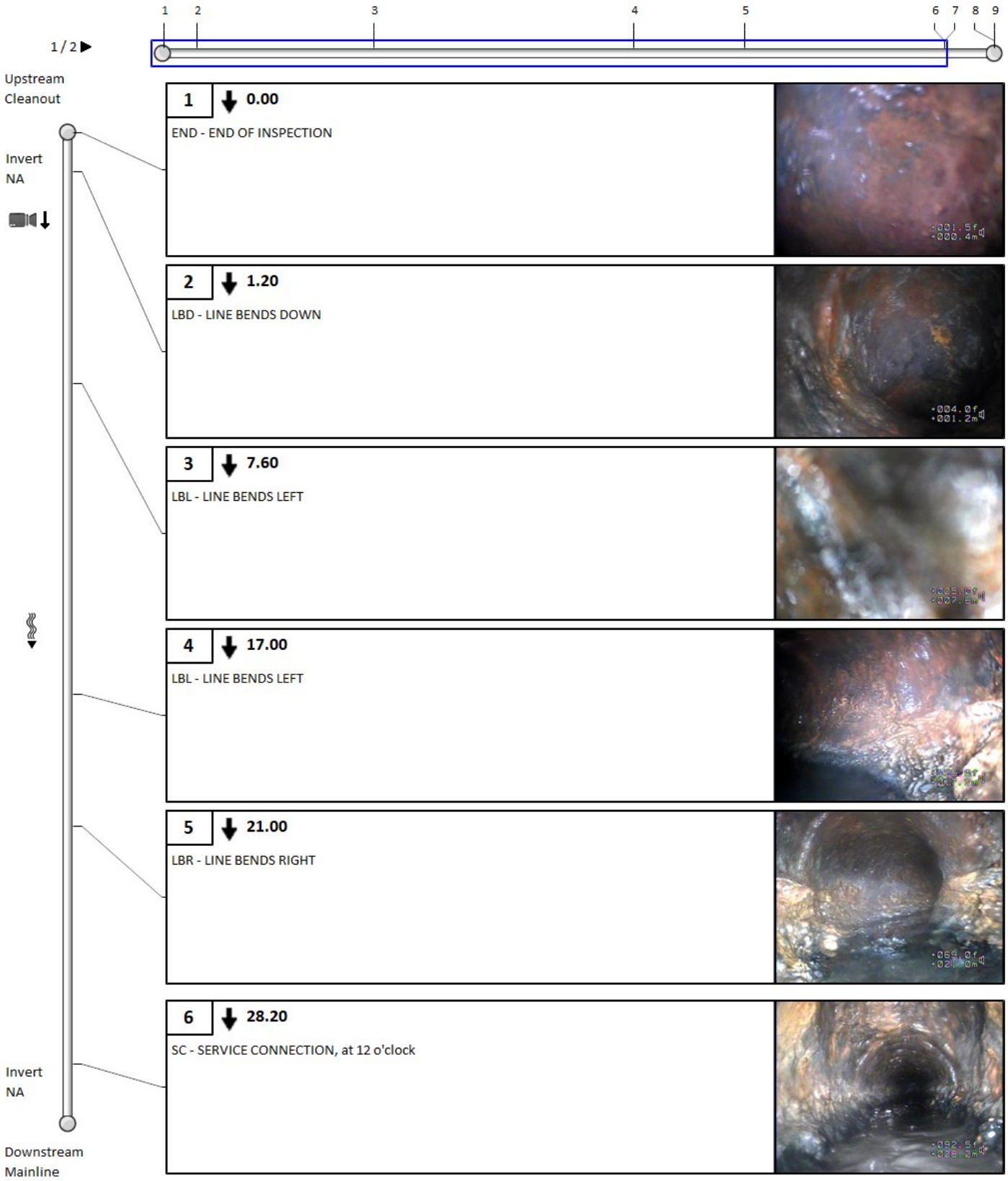
Date:	29/04/2024, 11:33 AM	**Survey Abandoned:**	
Project Number:		**Inspected length:**	~~22.4~~ 30.0
Contractor project #:		**Pre-cleaning:**	☐
Client:	MISC_265 Carling _WO137764	**Blocked flow:**	☐
Purpose:		**Regular CCTV:**	☐
Operator:	Andrew	**Reinspect with ZOOM:**	☐
Analyst:		**Medium #:**	
		Start position:	
		End position:	

Comments

Other information

Date:	April 29 2024	**Information 7:**	
Work Order#:	137764	**Information 8:**	
Start of Location:		**Information 9:**	
End of Location:		**Information 10:**	
Location:		**PI5 (MAMR):**	0
Information 6:		**PI6 (MAMR):**	0

Pipe summary and condition details



Pipe summary and condition details

◀ 2 / 2

Upstream
Cleanout

Invert
NA

7	28.20 SC - SERVICE CONNECTION, at 9 o'clock	
8	30.00 SOI - START OF INSPECTION	
9	30.00 MAIN - MAIN SEWER ~~IN BUILDING~~ ON BRONSON AVE.	

Invert
NA

Downstream
Mainline

Pipe summary and condition details

Pipe identification

Pipe:	265 Carling _137764_Cleanout	**Direction of inspection:**	Cleanout --> Mainline
Direction of flow:	Cleanout --> Mainline	**Direction:**	Direction of flow

Pipe location

Road:	265 Carling		UPSTREAM	DOWNSTREAM
Drainage Area:		**Easting (X):**		
City:	Ottawa	**Northing (Y):**		
Location:		**Elevation (Z):**		
Owner:	Cima +	**Vertical Datum:**		

Pipe characteristics

Category:	Sanitary	**Size:**	100
Material:	Concrete	**Width:**	
Lining:		**Total length:**	
Type:	Lateral	**Pipe unit length:**	
Invert (upstream):		**Year laid:**	
Depth (upstream):		**Invert (downstream):**	
Cover level (upstream):		**Depth (downstream):**	
		Cover level (downstream):	

Additional details

Date:	29/04/2024, 11:54 AM	**Survey Abandoned:**	
Project Number:		**Inspected length:**	~~22.9~~ 22.4
Contractor project #:		**Pre-cleaning:**	☐
Client:	MISC_265 Carling _WO137764	**Blocked flow:**	☐
Purpose:		**Regular CCTV:**	☐
Operator:	Andrew	**Reinspect with ZOOM:**	☐
Analyst:		**Medium #:**	
		Start position:	
		End position:	

Comments

Other information

Date:	April 29 2024	**Information 7:**	
Work Order#:	137764	**Information 8:**	
Start of Location:		**Information 9:**	
End of Location:		**Information 10:**	
Location:		**PI5 (MAMR):**	0
Information 6:		**PI6 (MAMR):**	0

Pipe summary and condition details

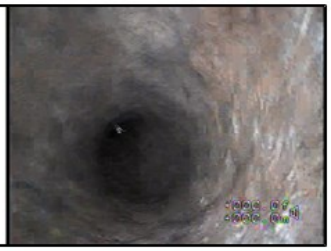
1 / 1

Upstream
Cleanout

Invert
NA

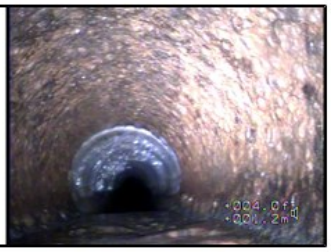
1 **0.00**

SOI - START OF INSPECTION



2 **1.20**

MC - MATERIAL CHANGE, Cast to Trans



3 **1.60**

DC - DIAMETER CHANGE

Invert
NA

4 **22.40**

MAIN - MAIN SEWER IN BUILDING

Downstream
Mainline