Functional Serviceability Report

Official Plan Amendment and Zoning By-law Amendment
Proposed Industrial Development
322 Waverly Street, Ottawa ON

Prepared for:

Serco Realty Group
9 Capella Court
Unit 200, Ottawa ON.
K2E 8A7

Attention: Loredena Parcari

LRL File No.: 190523

May 13, 2021

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1 INTRODUCTION AND SITE DESCRIPTION

LRL. Associates LTD. was retained by Serco Realty Group to prepare a functional serviceability report to support the Official Plan Amendment and Zoning By-law amendment application for the property located at 322 Waverly Street within the City of Ottawa.

The subject site is within the Somerset Ward, located on the south side of Waverly street and has an approximate area of 0.06 ha, east of O'Connor street and west of Metcalf street. The land is currently occupied by a two-storey brick dwelling and a large asphalt parking area with a small area of short grass in front of the dwelling. The subject site can be seen below in figure 1.

Figure 1: Arial View of Subject Lands

Under the City of Ottawa Zoning by-law, the existing land is currently split zoned with the west portion of the site zoned Residential Fourth Density, Subzone UD, Exception 479 (R4UD, [479]) and the east portion of the property zoned Residential Fourth Density, Subzone UD, Exception 478 (R4UD, [478]). This servicing study has been prepared to support an amendment to rezone to Residential Fifth Density which is further expanded in in the planning documentation accompanying the submission.

The serviceability review summarized in this document has been completed to further investigate the potential for this property to be redeveloped to accommodate a six-storey residential building with approximately 32 units. The concept site plan prepared by Chmiel Architects, illustrating the proposed development can be found in appendix A at the back of this report.

Following the Official Plan Amendment and Zoning By-law amendment application, a detailed design will advance with intentions for full Site Plan Control application submission.

2 EXISTING SITE AND AVAILABLE SERVICES

J. D. Barnes Limited prepared a topographic survey of the subject property in September of 2020 which has been included in appendix B for reference. Based on the topography information available, the general elevation of the land is slightly higher in the rear of the property with an existing retaining wall located at the rear property line.

Utilizing the GeoOttawa mapping portal as well as plan and profile drawings provided by the City of Ottawa indicate the following services are running along Waverly Street within the right-of-way in front of the property boundary.

- 200mm diameter PVC watermain
- 900mm diameter Combined Concrete Sewer @ 0.25% Slope
- 750mm x 900mm Combined Brick Sewer @ 0.25% Slope

The existing dwelling located central on the site is currently serviced to meet the domestic demands of the home; however, these will be abandoned to accommodate the proposed development of a greater population.

3 WATER SUPPLY SERVICING

The site is intended to be services through a new 150mm diameter water service connecting to the existing 200mm PVC watermain within Waverly Street.

Bases on the location and available data form the city, the subject property lies within the 1W pressure zone of the water distribution system.

3.1 Domestic Water Demands

Proposed populations have been interpreted from the architectural drawings. Based on the number of residential units within the building combined with the City of Ottawa design guidelines for population projection, the number of units translates to approximately 58 residents. Table 1 below summarizes the proposed population count as interpreted using table 4.1 of the City of Ottawa design guidelines.

Table 1: Development Residential Population Estimate

Proposed Unit Type	Persons Per Unit	Number of Units	Total Population
Residential Average Apartment	1.8	32	58

Table 2 below summarizes the water supply guidelines which must be employed during detailed design and sizing of the service to the building.

Table 2: Water Supply Guidelines

Design Parameter	Value
Residential Average Dailey Demand	280 L/person/Day
Maximum Dailey Peaking Factor (As per MOE Table 3-3)	7.3
Peak Hour Factor (As per MOE Table 3-3)	10.9
Minimum Depth of Cover	2.4m

Desired operating pressure range during normal operating conditions	350 kPa and 480 kPa
During normal operating conditions pressure must not drop below	275 kPa
During normal operating conditions pressure shall not exceed	552 kPa
During fire flow operating conditions pressure must not drop below	140 kPa

The required water supply requirements for the residential units in the proposed building have been calculated using the following formula:

Where:

$$Q = (q \times P \times M)$$

q = average water consumption (L/capita/day)
P = design population (capita)
M = Peak factor

Using a calculated Maximum Day Factor and Peak Hour factor of *7.3* and *10.9* respectively as per Table 3-3 in the *MOE Design Guidelines*, anticipated demands were calculated as follows:

- Average daily domestic water demand is **0.19** L/s,
- Maximum daily demand is **1.35** L/s, and
- Maximum hourly demand is **14.76** L/s.

Based on maximum hourly rate of 14.76 L/s a minimum of 150 mm dia. servicing is required. Refer to *Appendix C* for water demand calculations.

During the detailed design which will take place during the site plan control process, it is recommended that the City of Ottawa is contacted to obtain boundary conditions associated with the final calculated water demands. At that time, further review will take place to ensure that pressures of the water network remain within the pressure ranges outlined in Table 2 above.

3.2 Fire Protection

The estimated fire flow for the proposed buildings was calculated in accordance with *ISTB-2018-02*. The following parameters were assumed during this functional serviceability review, with detailed input from the building Architect to be requested during the Site Plan Design stage.

- Type of construction – Wood Frame Construction.
- Occupancy type – Limited Combustibility; and
- Sprinkler Protection – Standard Sprinkler System.

The estimated fire flow demand was estimated to be **10,000 L/min**, see *Appendix C* for details

There are three (3) existing fire hydrants in close proximity to the proposed buildings that are available to provide fire flow demands of approximately 17 000 L/min. Refer to *Appendix C* for fire

hydrant locations. Table 3 below summarizes the aggregate fire flow of the contributing hydrants in close proximity to the proposed development based on Table 18.5.4.3 of *ISTB-2018-02*.

Table 3: Fire Protection Summary Table

Building	Fire Flow Demand (L/min)	Fire Hydrants(s) within 75m	Available Combined Fire Flow (L/min)
Proposed 6 Storey Building	TBD During Detailed Design (assumed 10 000 L/min)	3	(3 x 5678) = 17 000

The total available fire flow from contributing hydrants is equal to approximately 17,000 L/min which is sufficient to provide adequate fire flow for the proposed development. A certified fire protection system specialist will need to be employed to design the building's fire suppression system and confirm the actual fire flow demand.

4 SANITARY SERVICE

There is an existing 900mm combined sewer and a 750mm x 900mm Combined Sewer within Waverly Street running across the frontage of the subject site ultimately conveying flow in the easterly direction.

The post development total sanitary effluent was calculated to be is **0.77 L/s** as a result of proposed residential population and a small portion of infiltration. Refer to Appendix *D* for further information on the calculated sanitary flows.

Based on existing as-built information (Refer to Appendix E), the existing 900mm dia. Combined sewer is sloped at 0.25% and is calculated to have a maximum capacity of approximately 905 L/s. The proposed increase in total wastewater flow from the increased population represents less than 0.1% of existing maximum capacity in the single combined sewer. Therefore, it is anticipated that the existing local sewer network has sufficient capacity to accommodate the proposed development.

5 STORMWATER MANAGEMENT

The existing site has a large portion of impervious area which will be slightly increased in post development conditions.

At the time of detailed design, stormwater quantity will be dealt with to ensure that the post-development runoff discharge from the site is controlled to no exceed the 2-year storm release rate. During the pre consultation meeting, it was commented on that strict stormwater management principles will be required for this site.

In order to control the quantity of runoff from the site, storage within the building (cistern) or the rooftop is intended.

Additionally, it is noted that the proposed site plan results in only a slightly higher runoff coefficient than that in the pre development conditions. This is summarized in table 4 below.

Table 4: Pre-Development and Post-Development Runoff Coefficients

Pre-Development Conditions			Post-Development Conditions		
Grass Area (C=0.2)	Building Area/Asphalt (C=0.9)	Combined C Value	Grass Area (C=0.2)	Building Area/Asphalt (C=0.9)	Combined C Value
55 sqm	556 sqm	0.837	25 sqm	586	0.871

6 CONCLUSIONS AND SERVICEABILITY CONSIDERATIONS

This evaluation is limited to assessing the technical feasibility of servicing the site described within this document to support an Official Plan Amendment and Zoning By-law Amendment.

Based on the forgoing the conclusions in relation to the serviceability of the site are as follows:

- Water:
  - Domestic demands from the proposed 32-unit apartment building are expected to be in the range of **0.19** L/s for the Average daily demand, 1.36 L/s for the maximum daily and 14.76 L/s for maximum hourly.
  - 3 fire hydrants within 75m are expected to provide the required fire flow.
  - During detailed design, pressures available along Waverly street are to be investigated as it will be serviced from the existing 200mm PVC watermain.
- Sanitary Sewage:
  - The post development total sanitary effluent was calculated to be is **0.77 L/s** because of proposed residential population and a small portion of infiltration.
  - The flow from this development would make up a very small percentage (Less than 0.1%) of the flow capacity of the existing 900mm combined sewer in Waverly street.
- Stormwater
  - The small increase in impervious area along with strict quantity control requirements outlined by the City of Ottawa will require the site to implement a stormwater quantity management system.
  - Storage could be achieved via a cistern or rooftop storage on site to ensure flow is regulated to not release more than the allowable release rate.

7 CLOSURE

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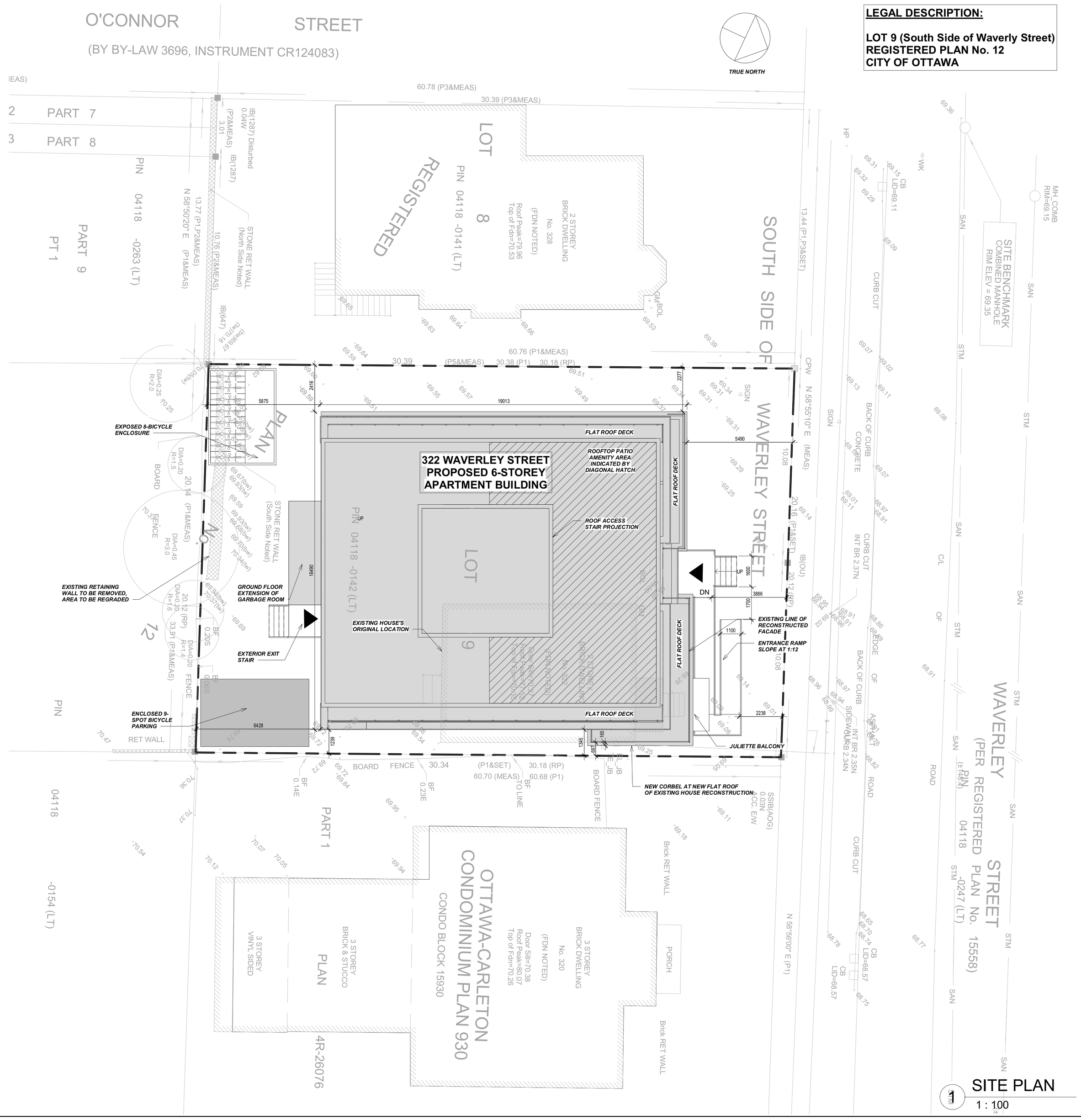
Prepared by:

LRL Associates Ltd.

Virginia Johnson, P. Eng.

APPENDIX A

Concept Site Plan



NOTE: THIS DRAWING IS THE PROPERTY OF THE ARCHITECT AND MAY NOT BE REPRODUCED OR USED WITHOUT THE EXPRESSED CONSENT OF THE ARCHITECT. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

DO NOT SCALE THE DRAWINGS

RELEASE / REVISION RECORD

No.	Description	Date
1	ISSUED FOR PRECONSULATION	19-10-21
2	ISSUED FOR COORDINATION	20-07-23
3	ISSUED FOR COORDINATION	20-10-22
4	ISSUED FOR COORDINATION	21-04-29

PROJECT NORTH

MAY NOT BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

chmielarchitects
200 - 109 Bank Street
Ottawa ON K1P 5N5
t (613) 234-3585
f (613) 234-6224

WAVERLEY APARTMENTS

322 WAVERLEY STREET

PROJECT NO.	DRAWN
19-1805	MA
SCALE	CHECKED
1 : 100	RC

DRAWING TITLE

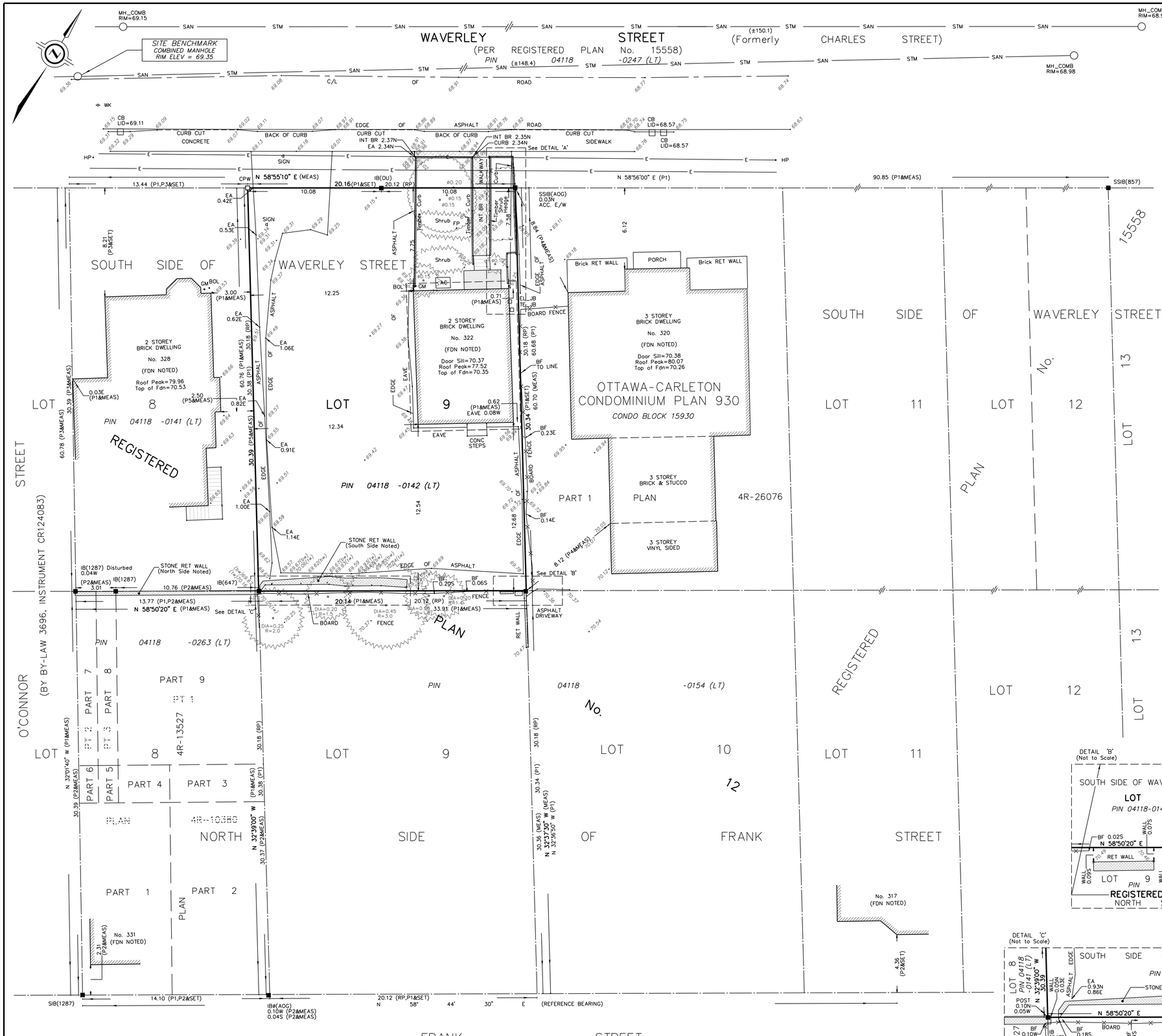
SITE PLAN

DRAWING NO.

SP-01

APPENDIX B

Topography Survey



SURVEYOR'S REAL PROPERTY REPORT
WITH TOPOGRAPHIC DETAILS
PART 1 - PLAN SHOWING

LOT 9 (South Side of Waverley Street) REGISTERED PLAN No. 12 CITY OF OTTAWA

J.D. BARNES LIMITED

SCALE 1 : 150

2.5 0 2.5 5 10 metres

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE MTM GRID, AND REFERRED TO THE NORTHERLY LIMIT OF FRANK STREET AS SHOWN ON PLAN 4R-26076

DISTANCES ARE GROUND.

COMPLIANCE WITH ONTARIO BUILDING CODE SETBACK REQUIREMENTS ARE NOT VERIFIED BY THIS SURVEY.

NOTES ON TREES
- TREE DIMENSIONS ARE SHOWN +/- HEREON
- DIAMETER OF TREES TAKEN AT 1.2m ABOVE GRADE
- RADIUS DENOTES MEASUREMENT OF CROWN FROM CENTER OF TREE

PART 2 - SURVEY REPORT

- **DESCRIPTION**

LOT 9 (South Side of Waverley Street) ON REGISTERED PLAN No. 12, BEING ALL OF PIN 04118-0142 (LT), IN THE CITY OF OTTAWA

- **REGISTERED EASEMENTS AND/OR RIGHTS-OF-WAY**

NONE

- **BOUNDARY FEATURES**

NOTE LOCATION OF THE RETAINING WALLS AND THE BOARD FENCE ALONG THE SOUTHERLY LIMIT OF THE SUBJECT PROPERTY

NOTE LOCATION OF THE EDGE OF ASPHALT AND THE STONE RETAINING WALLS ALONG THE WESTERLY LIMIT OF THE SUBJECT PROPERTY

NOTE LOCATION OF THE BOARD FENCE, THE TIMBER CURB, THE EAVE AND THE EDGE OF ASPHALT ALONG THE EASTERLY LIMIT OF THE SUBJECT PROPERTY

NOTE LOCATION OF THE INTERLOCK BRICK WALKWAY, THE TIMBER CURBS AND THE EDGE OF ASPHALT ALONG THE NORTHERLY LIMIT OF THE SUBJECT PROPERTY

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
IB	DENOTES	IRON BAR
IBø	DENOTES	ROUND IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
CPW	DENOTES	CONCRETE PIN & WASHER
ACC.	DENOTES	ACCEPTED
MEAS	DENOTES	MEASURED
857	DENOTES	FAIRHALL, MOFFATT & WOODLAND LIMITED
PT	DENOTES	PART
AOG	DENOTES	ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
647	DENOTES	H.R. FARLEY, O.L.S.
1287	DENOTES	FARLEY, SMITH & MURRAY SURVEYING LTD.
RP	DENOTES	REGISTERED PLAN No. 12
P1	DENOTES	PLAN 4R-26076
P2	DENOTES	PLAN 4R-10380
P3	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY FARLEY, SMITH & MURRAY SURVEYING LTD, DATED AUGUST 12, 1992
P4	DENOTES	OTTAWA-CARLETON CONDOMINIUM PLAN 930
P5	DENOTES	PLAN OF SURVEY BY S.E. FARLEY DATED JUNE 15, 1967

N=NORTH / S=SOUTH / E=EAST / W=WEST

TOPOGRAPHIC LEGEND

RET	DENOTES RETAINING WALL
EA	DENOTES EDGE OF ASPHALT
FDN	DENOTES FOUNDATION
CONC	DENOTES CONCRETE
BF	DENOTES BOARD FENCE
INT BR	DENOTES INTERLOCK BRICK
C/L	DENOTES CENTERLINE
HP	DENOTES HYDRO POLE
FP	DENOTES FLAG POLE
BOL	DENOTES BOLLARD
OHC	DENOTES OVERHEAD HYDRO CABLE
AC	DENOTES AIR CONDITIONER
GM	DENOTES GAS METER
WK	DENOTES WATER KEY
CB	DENOTES CATCH BASIN
MH_COM	DENOTES COMBINED MANHOLE
EL_JB	DENOTES HYDRO JUNCTION BOX
TE_JB	DENOTES TELEPHONE JUNCTION BOX
SAN	DENOTES UNDERGROUND SANITARY SEWER
STM	DENOTES UNDERGROUND STORM SEWER
TW	DENOTES TOP OF WALL
BW	DENOTES BOTTOM OF WALL
DIA/ø	DENOTES DIAMETER
R	DENOTES RADIUS
	DENOTES DECIDUOUS TREE
	DENOTES CONIFEROUS TREE

ELEVATION NOTE:

1. ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF OTTAWA CONTROL POINT 2011-0007 HAVING A PUBLISHED ELEVATION OF 80.55m

2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE SITE BENCHMARKS HAVE NOTE BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON SEPTEMBER 10, 2020.

SEPTEMBER 17, 2020
DATE

GEORGE ZERVOS
ONTARIO LAND SURVEYOR

J.D.BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
62 STEACIE DRIVE, SUITE 103, KANATA, ON K2K 2A9
T: (613) 731-7244 F: (613) 254-8659 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
RP	GZ	20-10-109-00
PLOTTED: 9/18/2020		DATED: 09/17/20

PREPARED FOR: SERCO REALTY GROUP

FILE: G:\20-10-109\00\Drawing\SRPR-TOPO\20101095RPR-TOPO.dgn

APPENDIX C

Water Servicing Calculations

Water Supply Calculations

LRL File No.	190523
Date	May 10, 2021
Prepared by	Virginia Johnson

Residential Demand based on the City of Ottawa Design Guidelines-Water Distribution, 2010

Unit Type	Persons Per Unit	Number of Units	Population
Average Residential Apartment	1.8	32	57.6
-	-		
	Total	**32**	**57.6**

Average Water Consumption Rate	280	L/c/d		
Average Day Demand	**16,128**	**L/d**	**0.19**	**L/s**
Maximum Day Factor	7.3		(MOE Table 3-3)	
Maximum Daily Demand	**116,966**	**L/d**	**1.35**	**L/s**
Peak Hour Factor	10.9		(MOE Table 3-3)	
Maximum Hour Demand	**1,275,636**	**L/d**	**14.76**	**L/s**

Water Service Pipe Sizing

Q = VA

Where: V = velocity
A = area of pipe
Q = flow rate

Assuming a maximum velocity of 1.8m/s, the diameter of pipe is calculated as:

Minimum pipe diameter (d) =	$(4Q/\pi V)^{1/2}$	
=	0.102	m
=	102	mm
Proposed pipe diameter (d) =	**150**	mm
=	**6**	Inches

Fire Flow Calculations

LRL File No. 190523
Date May 10th, 2021
Method Fire Underwriters Survey (FUS)
Prepared by Virginia Johnson

Step	Task	Term	Options	Multiplier	Choose:	Value	Unit	Fire Flow
Structural Framing Material								
1	Choose frame used for building	Coefficient C related to the type of construction	Wood Frame	1.5	Ordinary Construction	1		
			Ordinary Construction	1.0				
			Non-combustible construction	0.8				
			Fire resistive construction <2 hrs	0.7				
			Fire resistive construction >2 hrs	0.6				
Floor Space Area (A)								
2	Total area (ASSUMED BASED ON PRELIMINARY ARCH DWGS)					**1,200**	m^2	
3	Obtain fire flow before reductions	Required fire flow	Fire Flow = 220 x C x $A^{0.5}$				L/min	**7,621**
Reductions or surcharge due to factors affecting burning								
4	Choose combustibility of contents	Occupancy hazard reduction or surcharge	Non-combustible	-25%	Limited combustible	**-15%**	L/min	**6,478**
			Limited combustible	-15%				
			Combustible	0%				
			Free burning	15%				
			Rapid burning	25%				
5	Choose reduction for sprinklers	Sprinkler reduction	Full automatic sprinklers	-30%	False	**0%**	L/min	**5,830**
			Water supply is standard for both the system and fire department hose lines	-10%	True	**-10%**		
			Fully supervised system	-10%	False	**0%**		
6	Choose separation	Exposure distance between units	North side	20.1 to 30m	10%		L/min	**9,911**
			East side	3.1 to 10m	20%			
			South side	3.1 to 10m	20%			
			West side	3.1 to 10m	20%	**70%**		
Net required fire flow								
7	Obtain fire flow, duration, and volume				Minimum required fire flow rate (rounded to nearest 1000)		L/min	**10,000**
					Minimum required fire flow rate		L/s	**166.7**
					Required duration of fire flow		hr	**2**

Fire Hydrant Locations Figure

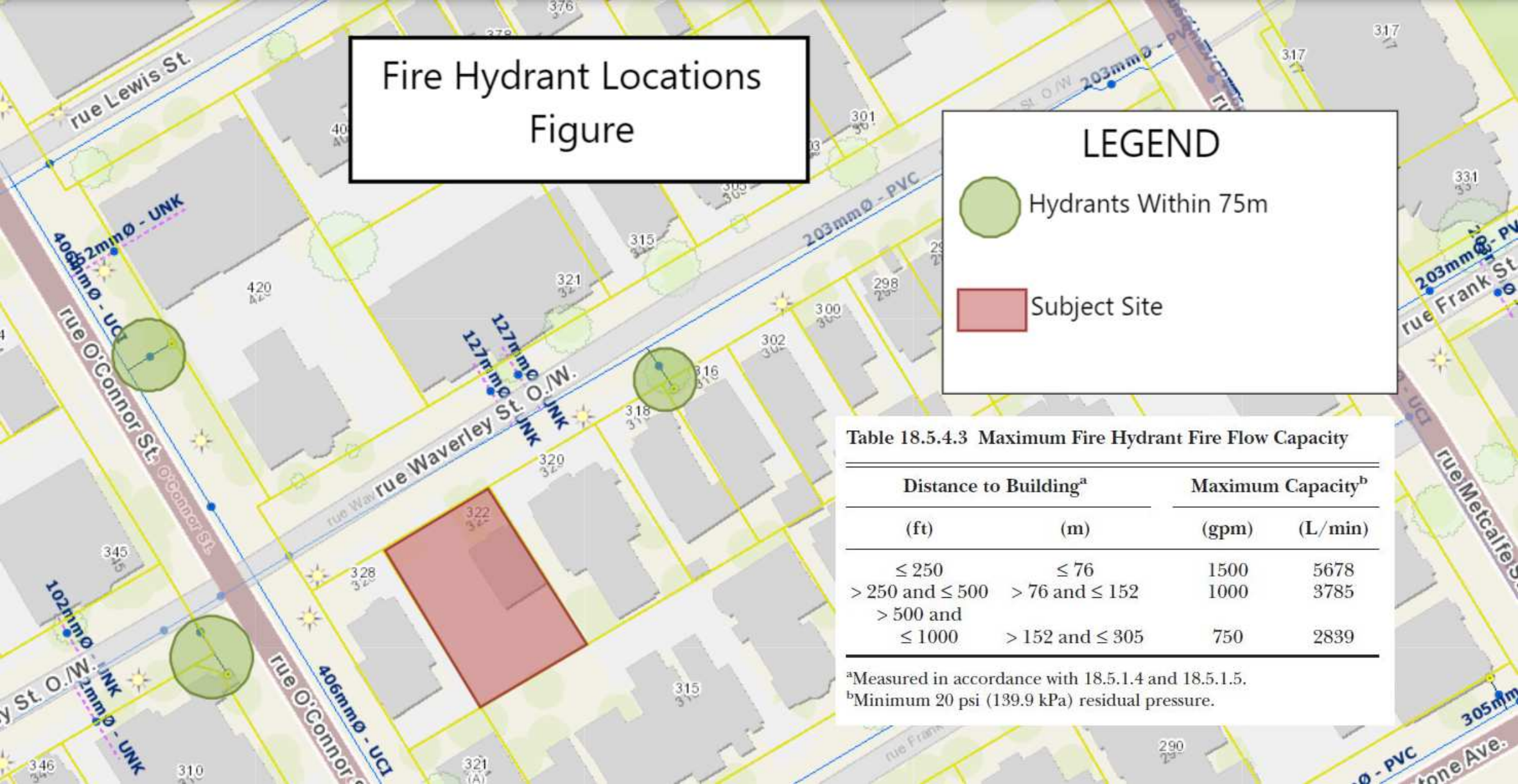


Table 18.5.4.3 Maximum Fire Hydrant Fire Flow Capacity

Distance to Building[a]		Maximum Capacity[b]	
(ft)	(m)	(gpm)	(L/min)
≤ 250	≤ 76	1500	5678
> 250 and ≤ 500	> 76 and ≤ 152	1000	3785
> 500 and ≤ 1000	> 152 and ≤ 305	750	2839

[a]Measured in accordance with 18.5.1.4 and 18.5.1.5.
[b]Minimum 20 psi (139.9 kPa) residual pressure.

APPENDIX D

Sanitary Service Calculations

LRL File No. 190523
Project: Apartment Building
Location: 322 Waverly
Date: May 10, 2021

Sanitary Design Parameters

Average Daily Flow = 280 L/p/day
Commercial & Institutional Flow = 50000 L/ha/day
Light Industrial Flow = 35000 L/ha/day
Heavy Industrial Flow = 55000 L/ha/day
Maximum Residential Peak Factor = 4.0
Commercial & Institutional Peak Factor = 1.5
Industrial Peak Factor = as per Appendix 4-B = 7
Extraneous Flow = 0.33L/s/gross ha

Pipe Design Parameters

Minimum Velocity = 0.60 m/s
Manning's n = 0.013

LOCATION			RESIDENTIAL AREA AND POPULATION						COMMERCIAL		INDUSTRIAL			INSTITUTIONAL		C+I+I	INFILTRATION			TOTAL FLOW (l/s)	PIPE					
STREET	FROM MH	TO MH	AREA (Ha)	POP.	CUMMULATIVE AREA (Ha)	CUMMULATIVE POP.	PEAK FACT.	PEAK FLOW (l/s)	AREA (Ha)	ACCU. AREA (Ha)	AREA (Ha)	ACCU. AREA (Ha)	PEAK FACT.	AREA (Ha)	ACCU. AREA (Ha)	PEAK FLOW (l/s)	TOTAL AREA (Ha)	ACCU. AREA (Ha)	INFILT. FLOW (l/s)		LENGTH (m)	DIA. (mm)	SLOPE (%)	MATERIAL	CAP. (FULL) (l/s)	VEL. (FULL) (m/s)
SITE	PROP. BLDG	EX. SAN	0.060	58.0	0.06	58.0	4.0	0.75	0.000	0.000	0.00	0.00	7.0	0.0	0.0	0.00	0.06	0.06	0.02	0.77	10.0	150	2.00%	PVC	21.54	1.22

NOTES: Existing inverts and slopes are estimated. They are to be confirmed on-site.

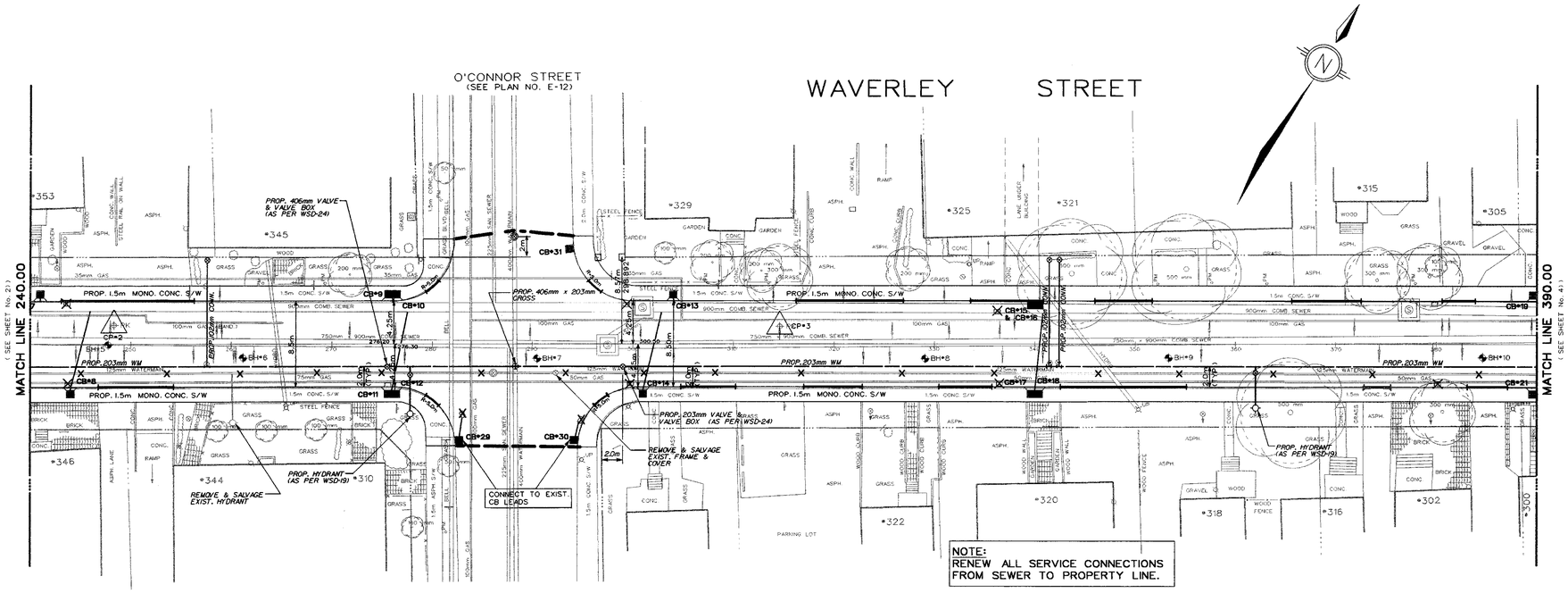
Designed: VJ	PROJECT: Apartment Building		
Checked: VJ	LOCATION: 322 Waverly		
Dwg. Reference: N/A	File Ref.: 190523	Date: 2021-05-10	Sheet No. 1 of 1

APPENDIX E

Waverly Street Plan and Profile Drawing

3225 WAVERLEY STREET (3)

3225



*This drawing was created using Microstation 95 V.5.05.01.65 (Contract Sheet Revision Date 971001)

Revisions:

No.	Date	Description	Drawn By	Approved By

Design:

Designed By: Z. RANA	Date	Checked By: P. SAUVE	Date
Survey Detail By	Date	Field Checked By	Date
Drafting By: J. SODJA, A. SCAFFIDI	Date	Checked By: P. SAUVE	Date

LICENCED PROFESSIONAL ENGINEER — ZAFAR I. RANA — 2000/2/29 — PROVINCE OF ONTARIO — ROAD & SEWER

LICENCED PROFESSIONAL ENGINEER — S.P. HARISH — 29/2/2000 — PROVINCE OF ONTARIO — WATER ONLY

Chief Design & Construction Engineer
H. V. Pascoe, P.Eng. H.V. Pascoe

Final Measurements:

Construction Type		Inspector	
Work Commenced		Project Manager	
Work Completed		Field Book *	
Contractor		Date	
Drafting Revisions	Date	Checked By	

Tender Notes:

1. Soil information shown is not guaranteed and contractors are advised to collect additional soils information as deemed necessary.
2. Soil information taken from : REPORT NO. 10699
3. Date of television inspection : 2-95-085, 2-98-011, 2-92-183, 2-95-013, 2-99-011, 2-89-008
4. This plan supercedes (in whole or in part) plan *F-15, F-05-A, X-038
5. While illustrations and utilities shown are taken from the best available information, they cannot be guaranteed.
6. The contractor is requested to check with all utility companies.

Watermain Notes:

1. All watermain materials and construction methods shall be in accordance with the latest edition of the Region of Ottawa Carleton (Region), Environment Section Standard Specifications and Standard Drawings.

Regional Municipality of Ottawa-Carleton Environmental & Transportation Department / Municipalité régionale d'Ottawa-Carleton Service de l'environnement et des transports

Approved

Date 29/02/2000

WATER WORKS

REGIONAL Drawing No.

Legal Survey Notes:

Boundary information shown hereon has been compiled and calculated from Teranet data and not based on an actual survey.

Distances shown to survey monuments are for reference purposes only, survey monuments may not define property boundaries.

THIS IS NOT A PLAN OF SURVEY

This plan was compiled from plans and documents recorded in the Land Registry System and has been prepared for property indexing purposes only.

City of Ville d' **Ottawa**

Department of Urban Planning & Public Works
Engineering Branch
Design And Construction Division
111 SUSSEX DRIVE, SUSSEX PAVILION, 7TH FLOOR, OTTAWA, ONTARIO. K1N 5A1

E.M. Robinson, Commissioner	W.R. Cole, P.Eng., Branch Director

WAVERLEY STREET

FROM STA. 240.000 TO STA. 390.000

Contract No:	Survey Books:	Scales: (See note)	Plan No:
00C3225		HOR. 1:250 VERT. 1:50	3225 Sheet 3 of 7

Filename: 322552.DGN
Reference: 3225B.DGN
OTTBDR.DGN