

**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**SERVICEABILITY REPORT  
REPORT No. R-824-74A**

**T.L. MAK ENGINEERING CONSULTANTS LTD.**

**NOVEMBER 2025**

**REFERENCE FILE NUMBER 824-74**

## **Introduction**

The developer of this property is proposing to redevelop the existing residential lot described as Part of Lot 72 Registered Plan 526 City of Ottawa by constructing a four (4) storey residential apartment building consisting of eighteen (18)-units, including seven (2)-bedroom units and eleven (1)-bedroom units.

The municipal address of this property is referenced as 222 Baseline Road and it is located in the City Ward (16 - River). The site is situated on the south side of Baseline Road, east of Lexington Street and west of Morley Boulevard, see site plan and legal survey plan in Appendix A for details.

The area of this property is ±0.0692 hectares. In addition to the four (4) storey residential building, the other development features will comprise of an interlock walkway access along the north, west and south side of the building to the bike racks and waste storage which are located at the building. Soft landscaped areas are proposed at the front yard, side yards and rear yard including an amenity area at the rear yard, etc., to meet the City of Ottawa's site plan requirements.

A site geotechnical report was prepared by the owner's soils engineer Paterson Group entitled "Geotechnical Investigation – Proposed Residential Development" 222 Baseline Road (Project No. PG6324-1) dated September 23, 2022 for this proposed development property.

This serviceability report will provide the City of Ottawa with our serviceability brief to address the proposed servicing scheme for this site.

## **Existing Site Conditions and Servicing**

This property is presently occupied by a one and one half (1 ½) storey brick sided residential building. The existing house is located near the front centre on this property facing Baseline Road with an existing framed car port structure addition, attached garage and asphalt driveway at the northeast corner of the property which currently provides vehicle access and parking for this lot. For additional details of the site's pre-development conditions, refer to the coloured Google Image (2024) and aerial photography from (GeoOttawa 2022) in Appendix B.

Approximately 70.0% of this site is currently permeable surface covered and consisting of grass/landscaped areas with the remaining areas being roof areas, asphalt driveway, concrete steps and deck. Currently, most of the landscape areas are concentrated at the rear of lot and along the west side yard.

The topography of the land is found to be graded primarily to drain from front to the rear of the lot (west to east). The existing gradient of the property is sloping approximately 1.7% from front to back.

The existing house water and sanitary service lateral currently servicing the existing dwelling on 222 Baseline Road will be removed. The existing water services shall be blanked at the main and the existing house laterals shall be capped at the front property line for re-development of this lot.

As for the availability of underground municipal services, there are existing municipal services along Baseline Road in front of this property consisting of a 1500mm diameter storm sewer, a 225mm diameter sanitary sewer, and a 200mm diameter watermain for development of this property. Refer to the City of Ottawa Baseline Road and Lexington Street UCC drawing and As-Built plan and profile drawing included in Appendix C for details.

Because the site will be connecting to and outletting into the separated Baseline Road storm sewer located within the Baseline Road road right of way in the City of Ottawa, therefore, the approval exemption under Ontario Regulations 525/98 would apply since storm water discharges from this site will outlet flow into a downstream storm sewer. Thus, an Environmental Compliance Approval (ECA) application will not be required to be submitted to the Ministry.

## **Proposed Residential Apartment Building Site**

There is a vehicle laneway proposed for accessing to (2) parking spaces in the building located at the southwest quadrant of the property. Interlock pavers are proposed along the north, west and south side of the new building for pedestrian access including accessing to the waste disposal and bicycle parking located in the rear accessory building.

### **A. Water Supply**

The proposed building located within Pressure Zone 2W at 222 Baseline Road is a 4-storey residential building. The building will contain eighteen (18) units in total, including seven (7) 2-bedroom units and eleven (11) 1-bedroom units.

On average, each floor covers an area of around 3,649 ft<sup>2</sup> (339 m<sup>2</sup>) for a gross floor area of 14,607 ft<sup>2</sup> (1,357 m<sup>2</sup>). The building is to be serviced by the 200 mm diameter watermain along Baseline Road. The ground elevation at 222 Baseline Road is approximately 81.3 m.

## Demand Projections

The domestic demands were calculated using the City of Ottawa’s Water Design Guidelines, where the residential consumption rate of 280 L/cap/d was used to estimate average day demands (AVDY). Persons per unit (PPU) for each unit were estimated based on the City of Ottawa’s Water Design Guidelines.

Following discussions with the City, peaking factors are to be estimated from Table 3-3 of the MECP Design Guidelines for Drinking-Water Systems, given that the proposed development population is less than 500 people. Maximum day (MXDY) demands were calculated by multiplying AVDY demands by a factor of 9.5. Peak hour (PKHR) demands were calculated by multiplying AVDY by a factor of 14.3. **Table 1** shows the estimated domestic demands of the proposed building.

*Table 1: Estimated Domestic Demands*

Unit Type	Unit Count	PPU	Population	Consumption	AVDY		MXDY		PKHR	
					L/d	L/s	L/d	L/s	L/d	L/s
Apartment, 2-Bedroom	7	2.1	15	280	4,116	0.05	39,086	0.45	58,835	0.68
Apartment, 1-Bedroom	11	1.4	15	280	4,312	0.05	40,947	0.47	61,637	0.71
<b>Total</b>	<b>18</b>	<b>-</b>	<b>30</b>	<b>-</b>	<b>8,428</b>	<b>0.10</b>	<b>80,034</b>	<b>0.93</b>	<b>120,472</b>	<b>1.39</b>

As per the City of Ottawa’s Water Design Guidelines (and Technical Bulletin IWSTB-2024-05), the Fire Underwriter Survey (FUS) method is to be used for fire flow requirements affecting municipal watermain sizing; with regards to fire protection on private property and not requiring new watermains, these are covered by the Ontario Building Code (OBC), using the OBC’s Office of the Fire Marshal (OFM) method. If the required flow using the OBC/OFM method yields 9,000 L/min for the property, Technical Bulletin IWSTB-2024-05 specifies the FUS method to be used instead.

The proposed building is wood-frame construction, with fire separations and fire-resistance ratings in accordance with the Ontario Building Code (OBC). It is understood that the building will have a sprinkler system. It is also understood that the building will not have a basement, and will be slab on grade construction. The resulting total required fire flow is 5,400 L/min (90 L/s) for a duration of 40 minutes. Details are provided in Appendix D under **Fire Flow Calculations**. Furthermore, **Figure 1** in Appendix D provides separation distances for the OFM calculations. The proposed **Site Plan** attached in Appendix D was used to determine distances from the proposed building to the property lines.

In summary, the estimated water demands for the proposed building are as follows:

- AVDY = 8,428 L/d (0.10 L/s)
- MXDY = 80,034 L/d (0.93 L/s);
- PKHR = 120,472 L/d (1.39 L/s); and,
- Fire Flow = 5,400 L/min (90 L/s)

### Boundary Conditions

The hydraulic gradeline (HGL) boundary conditions for 222 Baseline Road, as presented in **Table 2**, were provided by the City on October 28, 2025 (see attached **Water Boundary Conditions Email** in Appendix D).

*Table 2: Boundary Conditions*

<b>Demand Scenario</b>	<b>Head (m)</b>
Minimum HGL (Peak Hour)	125.1
Maximum HGL (Average Day)	131.8
Maximum Day + Fire Flow (90 L/s)	120.4

### Hydraulic Analysis

#### **Peak Hour & Average Day**

During peak hour demands, the resulting minimum hydraulic gradeline of 125.1 m corresponds to a peak hour pressure of 429 kPa (62 psi). This value is above the minimum pressure objective of 276 kPa (40 psi) for residential buildings up to two storeys. Adding 5 psi<sup>1</sup> per floor above two stories, to account for headloss due to elevation and pipe losses, a minimum pressure of 345 kPa (50 psi) would be required for the fourth floor. The peak hour pressure at ground level is above this objective.

During average day demands, the resulting maximum hydraulic gradeline of 131.8 m corresponds to a maximum pressure of 495 kPa (72 psi). This value is below the maximum pressure objective of 552 kPa (80 psi) and therefore considered acceptable.

**Supporting hydraulic calculations** are attached in Appendix D.

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<sup>1</sup> It is noted that the design of the building's plumbing system could have an impact on the anticipated pressures on the higher floors.

## Maximum Day + Fire Flow

A maximum day plus fire flow (5,400 L/min) hydraulic gradeline of 120.4 m corresponds to a residual pressure of 383 kPa (56 psi) at this location, which is above the minimal residual pressure requirement of 140 kPa (20 psi).

Based on Table 1 of Appendix I of the City of Ottawa Technical Bulletin ISTB-2018-02 and a desktop review (i.e., Google Street View) to confirm hydrant class, three (3) hydrants are located in the vicinity of the proposed building. Two (2) hydrants are Class AA hydrants is within 75 m, both with a capacity contribution of up to 5,700 L/min. One (1) other Class AA hydrant is within 150 m from the site, with a capacity contribution of up to 3,800 L/min. The combined hydrant flow coverage for 222 Baseline Road is therefore 15,200 L/min, which is above the OFM required fire flow of 5,400 L/min.

The hydrant coverage is illustrated in **Figure 2** attached in Appendix D. A breakdown of the hydrant coverage is summarized in **Table 3**.

Table 3: Fire Hydrant Coverage

Building	Fire Flow Demand (L/min)	Fire Hydrants				Combined Hydrant Flow Coverage (L/min)	
		Hydrant Class	Within 75 m		Between 75 m and 150 m		
			Quantity	Max Contrib. to RFF	Quantity		Max Contrib. to RFF
222 Baseline Road	5,400	AA	2	5,700	1	3,800	15,200
		A					
		B					
		C					

In conclusion, based on the boundary condition provided, the local watermain network along Baseline Road provides adequate fire flow capacity, as per the Office of the Fire Marshall (OFM) method, to the proposed building at 222 Baseline Road. Resulting pressures during anticipated demand flows meet the pressure objectives during average and peak demand conditions, as per the City of Ottawa's Drinking Water Design Guidelines.

### B. Sanitary Flow

The peak sanitary flow for the 18 units, which comprise of seven (2)-bedroom and eleven (1)-bedroom units, is estimated at  $Q = 0.34$  L/s with an infiltration rate of 0.02 L/s. Refer to Appendix E sheet 1 of 1 regarding sanitary flow calculations. This flow will enter the existing 225mm diameter sanitary sewer on Baseline Road via the proposed 150 mm diameter PVC sanitary service lateral from the four (4)-storey residential apartment building.

The existing peak sanitary flow of the site from the single detached dwelling unit is  $Q = 0.06$  L/s with an infiltration rate of 0.02 L/s. The net increase in flow from this proposed development is 0.30 L/s which is not expected to negatively impact the existing 225mm dia. sanitary sewer.

Waste water from the Baseline Road 225mm dia. sanitary sewer then in turn outlets east then south and further east along Sanford Avenue and then into the existing downstream 600mm dia. concrete sanitary collector sewer located along the Prince of Wales Drive corridor which further direct sewage flow northward.

### C. Storm Flow

The storm-water outlet for the proposed development property will be the existing 1500mm diameter concrete storm sewer located on Baseline Road. Stormwater attenuation on site will be accomplished by means of rooftop storage with controlled roof drains that regulate flow off site.

The building foundation weeping-tile drainage system shall have its own separate pipe for gravity flow where weeping-tile water is outletted via a 150mm diameter storm pipe to the existing 1500mm diameter storm sewer. The storm-water outlet for the rooftop water from roof drains will be a separately designated proposed 150mm diameter PVC pipe that will also be outletted directly into the existing 1500mm diameter storm sewer. The 150mm dia. roof water drain pipe will “wye” into the 150mm dia. weeping tile storm lateral on private property and outlet to the existing Baseline Road storm sewer.

Three (3) roof drains are proposed for this apartment building to restrict flow at a rate of 0.95 L/s each or  $3 \times 0.95$  L/s = 2.85 L/s into the Baseline Road storm sewer. The maximum allowable flow rate off-site is estimated at 8.02 L/s.

Based on the residential site plan from the owner’s architect, the average post-development runoff coefficient is estimated at  $C = 0.78$  and  $A = 0.0692$  hectares.

An estimation of the pre-development flow condition was carried out using the criteria accepted by the City of Ottawa. If post-development  $C$  value exceeds the lesser of the  $C_{pre} = 0.40$  or  $C_{allow} = 0.5$  (max) then SWM is required. So from our calculations, the  $C_{pre} = 0.4$  value will be used at  $t_c = 10$  minutes for pre-development allowable flow calculation off-site.

The pre-development calculated flow rate into the 1500mm dia. storm sewer for this residential area is the lesser of either the five (5)-year storm event where  $C_{allow} = 0.5$  (max.) runoff value or the average  $C_{pre}$  value which is 0.40 using  $t_c = 10$  minutes. Because this site  $C_{post} = 0.78$  and  $C_{pre} = 0.4$  then SWM measures are required.

Therefore, based on our calculation, on-site retention is required for this proposed development site, because the site post-development C value of 0.78 is greater than the  $C_{pre} = 0.4$ .

The storage volume for the five (5)-year and up to the 100-year storm event will be stored by means of flat rooftop at the top of the 4-storey apartment building. Also refer to the site Stormwater Management Brief (Report No. R-824-74) for further details.

## Conclusion

At this proposed residential site and to develop this lot to house a 18 unit apartment building on a 0.0692 ha. parcel of land, the estimated allowable flow off-site is calculated at 8.02 L/s based on City of Ottawa Drainage and Stormwater Management (SWM) criteria of 5-Year pre-development flow at  $C_{pre} = 0.40$ . For on-site SWM attenuation, the flat roof top of the proposed apartment building will be utilized and (3) controlled roof drains are incorporated each with a controlled maximum release rate of 0.95 L/s (15.0 U.S. gal/min.) under a maximum head of 150 mm. The controlled flow from this site at the 5-Year event totals to 2.61 L/s and 2.85 L/s for the 100-Year event for the post development condition. The uncontrolled 5-Year post development flow from the remainder of the site is estimated at 6.63 L/s and 12.90 L/s for the 100-year event respectively.

During the five (5)-year storm event for the flat rooftop storage, the ponding depth of rooftop area 1, 2 and 3 is estimated at 125 mm at the drain and 0mm at the roof perimeter, assuming a 1.6% minimum roof pitch to the drain. The rooftop storage available at Roof Area 1 is 3.30 m<sup>3</sup>, at Roof Area 2 is 2.06 m<sup>3</sup> and the rooftop storage available at Roof Area 3 is 2.73 m<sup>3</sup>, for a total of 8.09 m<sup>3</sup>, which is greater than the required volume of 4.57 m<sup>3</sup>.

During the 100-year storm event for the flat rooftop storage, the ponding depth of Roof Area 1, 2 and 3 is estimated at 150 mm at the drain and 0mm at the roof perimeter, assuming a 1.6% minimum roof pitch to the drain. The rooftop storage available at Roof Area 1 is 6.12 m<sup>3</sup>, at Roof Area 2 is 3.36 m<sup>3</sup> and the rooftop storage available at Roof Area 3 is 4.91 m<sup>3</sup>, for a total of 14.39 m<sup>3</sup>, which is greater than the required volume of 11.01 m<sup>3</sup>.

Therefore, by means of flat building rooftop storage and grading the site to the proposed grades as shown on the Proposed Grading and Servicing Plan and Proposed Rooftop Stormwater Management Plan Dwg. 824-74 G-1 and 824-74 SWM-1 respectively, the desirable five (5)-Year storm and 100-Year storm event detention volume of 8.09 m<sup>3</sup> and 14.39 m<sup>3</sup> respectively will be available on site. Refer to Appendix D for detailed calculations of available storage volumes.

Thus for this development site, the 5-Year maximum post development flow draining off-site is the controlled roof top flow plus the uncontrolled flow from the remainder of the site totals to 9.24 L/s (2.61 L/s + 6.63 L/s) which is slightly above the allowable 8.02 L/s. For storm events up to and including 100-Year, the estimated maximum post development flow draining off-site is 15.75 L/s (2.85 L/s + 12.90 L/s) which exceeds the site allowable of 8.02 L/s by 7.73 L/s for this site.

In comparing the pre-development flow of the current site conditions to the post development flow, the SWM regulated flow plus uncontrolled flow from the proposed site under the post development conditions at the 5-Year event = 9.24 L/s and the 100 year event = 15.75 L/s where both of the post development flow events are approximately equal to the current pre-development flow estimate for the site at 5-Year<sub>pre</sub> = 8.02 L/s and 100-Year<sub>pre</sub> = 16.15 L/s. Therefore with this proposed development, stormwater flow is slightly above that of the existing condition for the 5-Year event and is improved at the 100-Year event under the proposed post-development conditions.

Flow estimation of the uncontrolled area draining to the Lexington Street and Baseline Road road right-of-way for the post-development conditions are summarized and found in Table A of the Stormwater Management Brief (Report No. R-824-74). The 5-Year flow draining out to the Lexington Street (ROW) is estimated at 3.10 L/s and 6.0 L/s for 100-Year event. Approximately 44.0% of the pre-development existing site is currently draining out to the Lexington Street road right-of-way at the 5Yr<sub>pre</sub> event flow is  $0.44 \times 8.02 \text{ L/s} = 3.53 \text{ L/s}$  and the 100Yr<sub>pre</sub> event flow is  $0.44 \times 16.15 \text{ L/s} = 7.11 \text{ L/s}$ . We observed that the post-development flow to the Lexington Street (ROW) is improved from that of the existing site conditions.

The building weeping tile drainage will outlet via its separate 150mm diameter PVC storm lateral. The roof drains will be outletted also via a separate 150mm PVC storm lateral from the apartment building which “wye” into the proposed 150mm dia. weeping tile storm lateral, whereupon both laterals are outletting to the existing Baseline Road 1500mm diameter storm sewer with only one (1) connection. The City of Ottawa recommends that pressurized drain pipe material be used in the building for the roof drain leader pipe in the event of surcharging on the City storm sewer system. Refer to the proposed site grading and servicing plan Dwg. 824-74 G-1 for details.

## **Erosion and Sediment Control**

The contractor shall implement Best Management Practices to provide for protection of the receiving storm sewer during construction activities. These practices are required to ensure no sediment and/or associated pollutants are released to the receiving watercourse. These practices include installation of a “siltsack” catch basin sediment control device or equal in

catch basins as recommended by manufacturer on-site and off-site within the Baseline Road and Lexington Street road right-of-way adjacent to this property. Siltsack shall be inspected every 2 to 3 weeks and after every major storm. The deposits will be disposed of as per the requirements of the contract. See Dwg. No. 824-74 ESC-1 for details.

Refer to Appendix G for the summary of the Development Servicing Study Checklist that is applicable to this development.

The pre-consultation feedback from the application PC2023-0371 is included with this report for reference. See Appendix H, page 3 for engineering details.

**PREPARED BY T.L. MAK ENGINEERING CONSULTANTS LTD.**



**TONY L. MAK, P.ENG**



**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**APPENDIX A  
SITE PLAN AND LEGAL SURVEY PLAN**

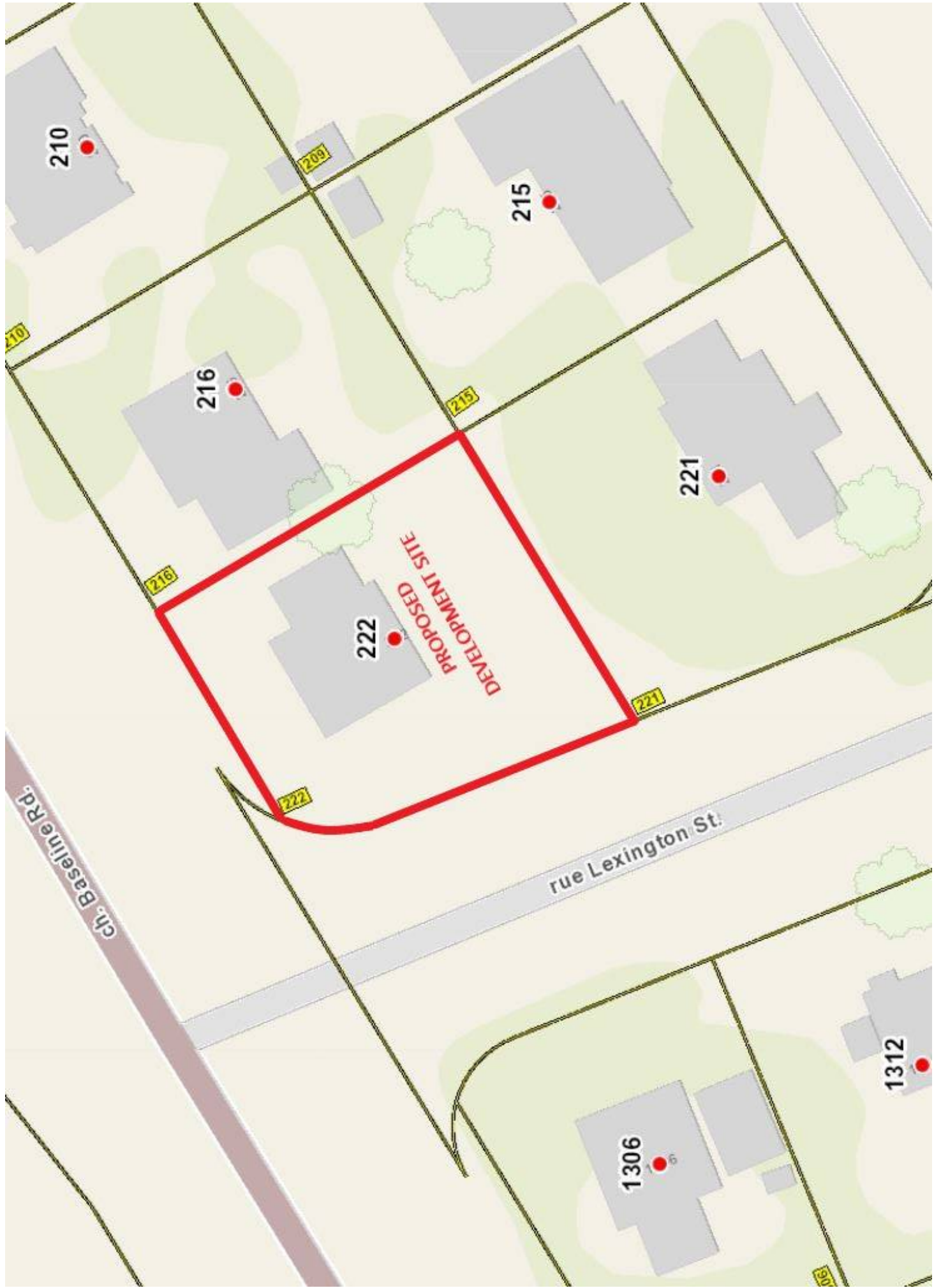




**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**APPENDIX B  
SITE PRE-DEVELOPMENT CONDITION  
GOOGLE IMAGE (2024)  
AND  
AERIAL PHOTOGRAPHY 2022 (GEOOTTAWA)**







**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**APPENDIX C  
BASELINE ROAD AND LEXINGTON STREET  
CITY OF OTTAWA  
PLAN AND PROFILE  
AND  
UCC DRAWINGS**

B A S S E L

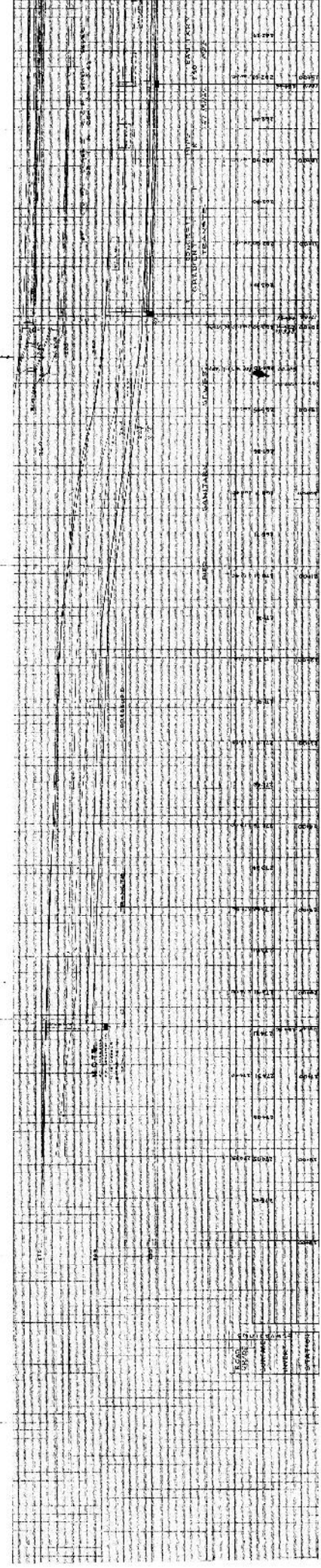
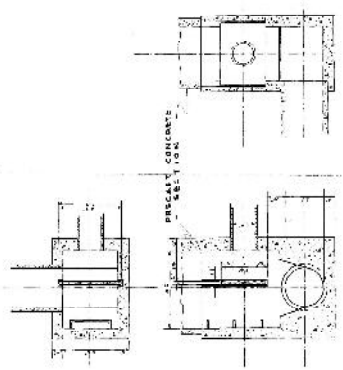
CENTRAL

LEXINGTON ST. S-4

AUTO-SKY  
DRIVE-IN  
THEATRE

AVE. ROAD

FISHER





**Regional Municipality  
of  
Ottawa-Carleton  
Works Department**

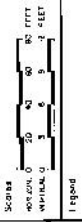
FEATERS  
Works Commissioner  
W. L. KAY  
Director, Planning, Control  
& Administration

Engineer in Charge of  
Design & Construction  
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Project Officer  
Date  
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Drawn by  
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Date

Notes



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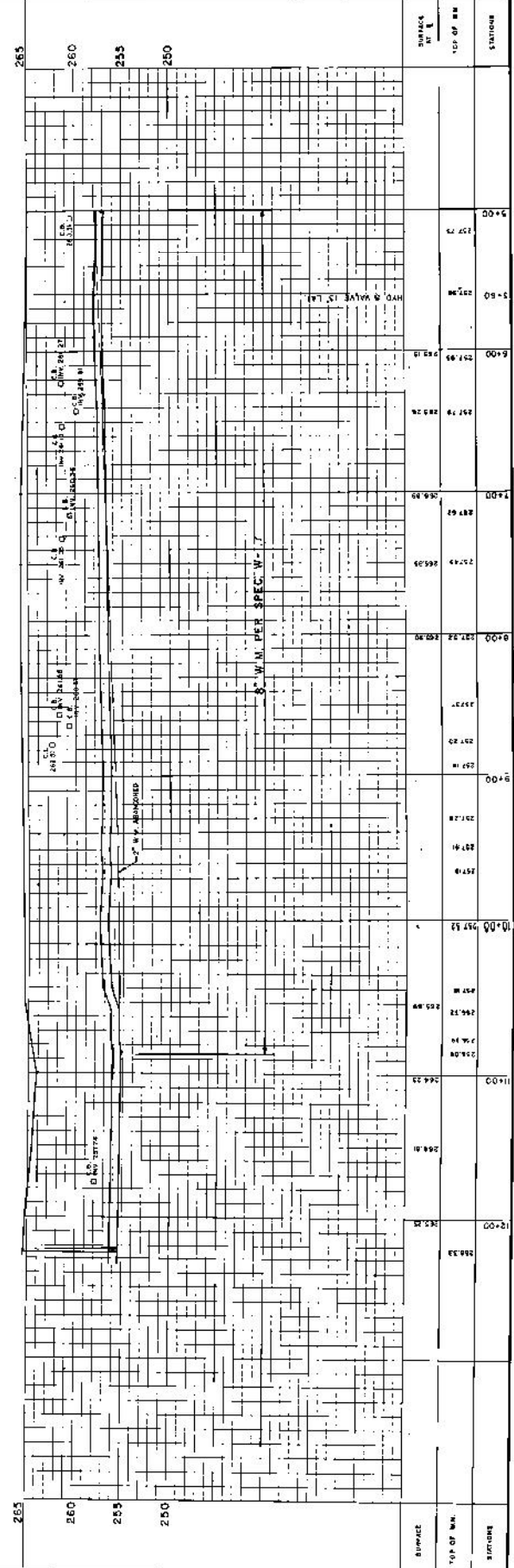
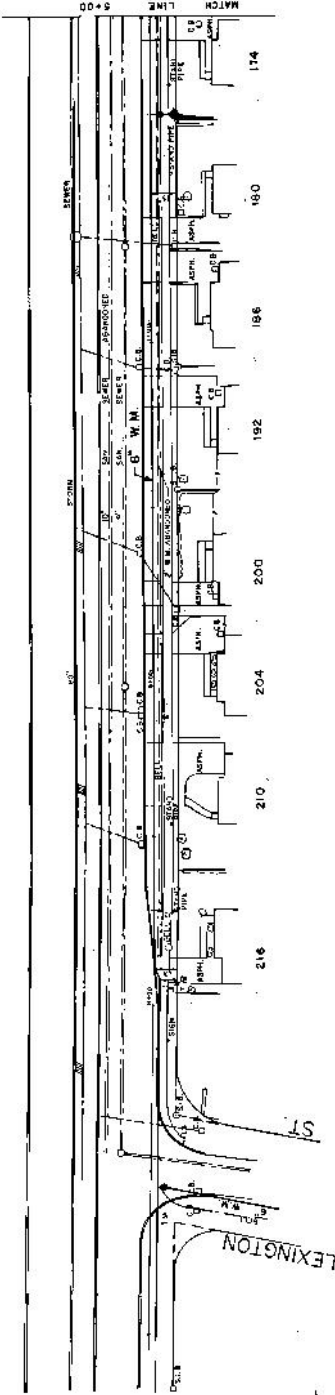
Revisions  
1. AS BUILT, FROM ACCESS RIBB PRINT  
AND NOTES FOR 1974 APPROVED BY W. L. KAY

Project Title  
**8' W. M. IN  
BASE LINE RD.**

Running Time  
**LEXINGTON ST.  
TO 200E OF  
MORLEY BLVD.**

Drawing No. **898-P**  
Sheet **1**

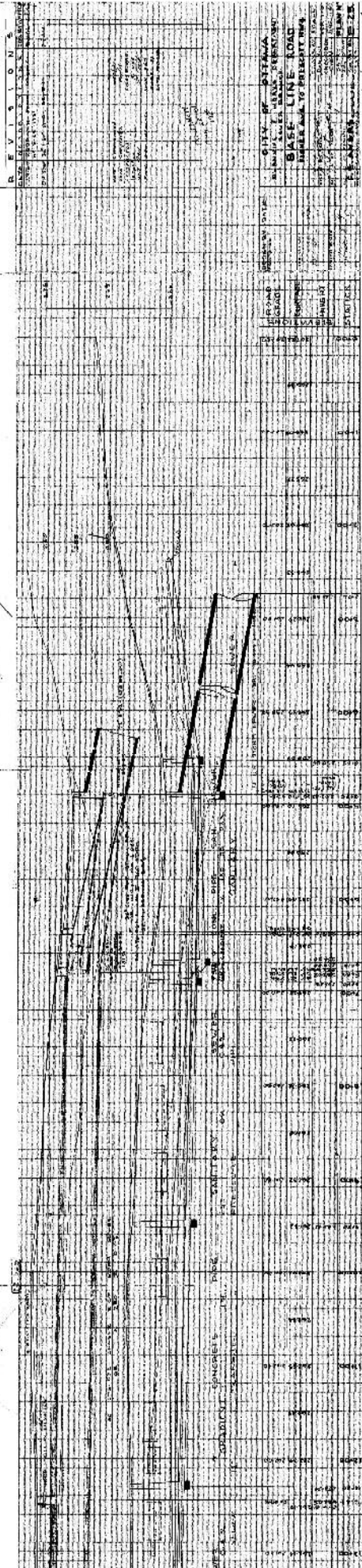
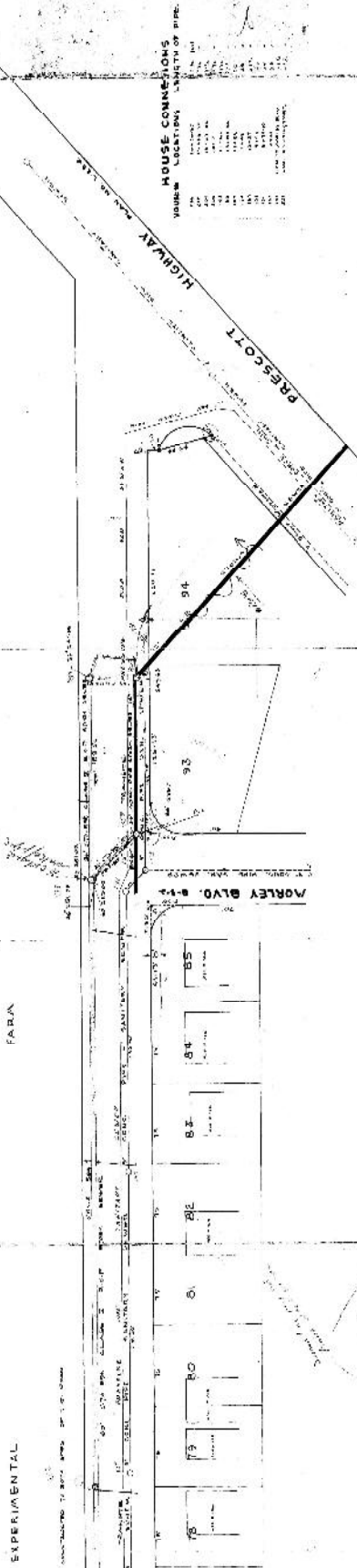
**BASE LINE RD.**



# I N E R R D.

## NOTES

1. THIS PLAN IS FOR THE DESIGN OF THE  
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OBTAINING ALL NECESSARY PERMITS AND FOR  
OBTAINING ALL NECESSARY INFORMATION FROM THE  
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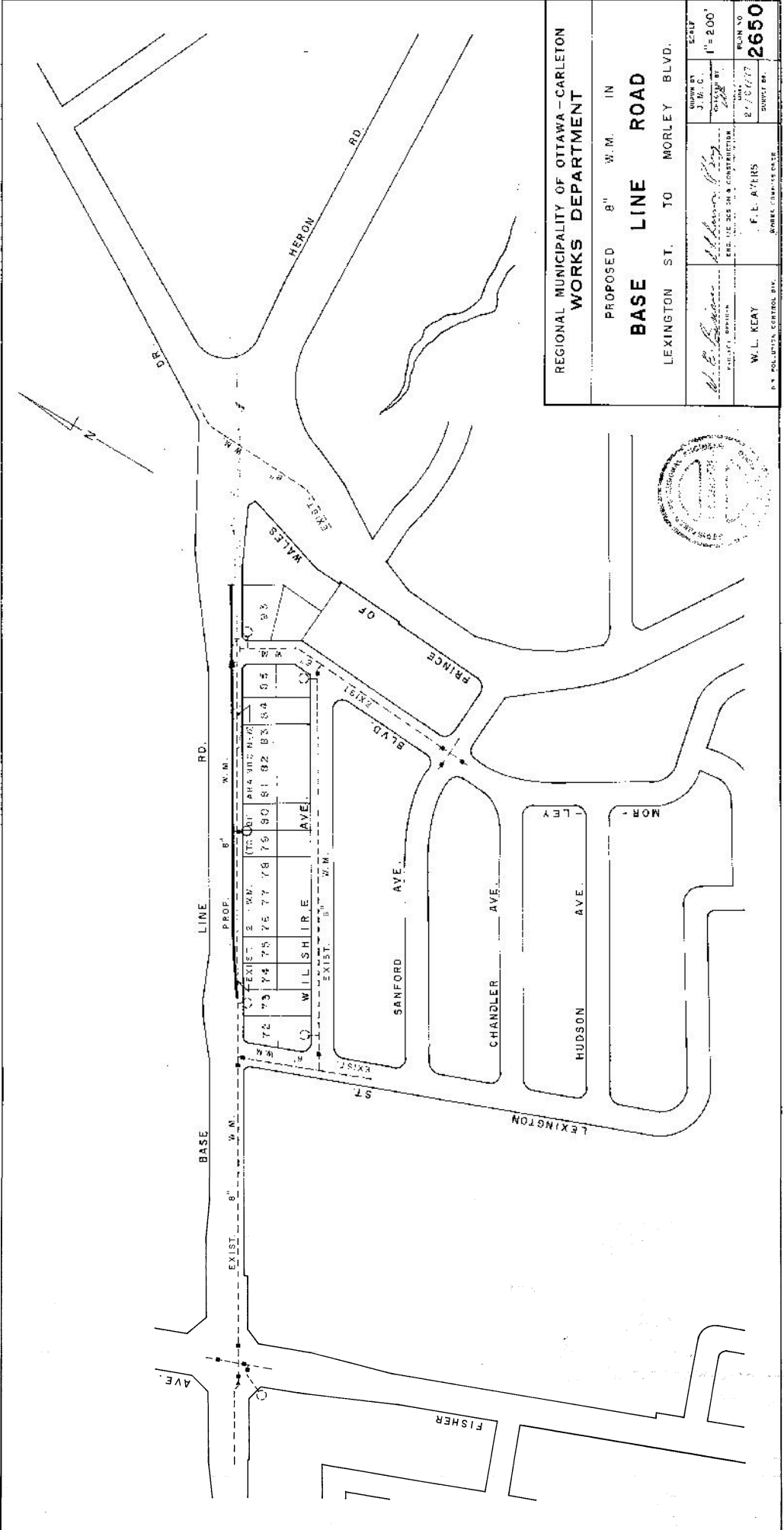
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REGIONAL MUNICIPALITY OF OTTAWA - CARLETON  
**WORKS DEPARTMENT**

PROPOSED 8" W.M. IN  
**BASE LINE ROAD**  
 LEXINGTON ST. TO MORLEY BLVD.

DRAWN BY: J.M.C.  
 CHECKED BY: [Signature]  
 PROJECT: [Signature]  
 DATE: 2/2/77

SCALE: 1" = 200'

PLANNED BY: F.L. AVERS  
 DATE: 2/2/77  
 SHEET NO: 2650

P.T. POLUNDA, CHIEF ENGINEER







**PROPOSED**  
**FOUR (4) STOREY APARTMENT BUILDING SITE**  
**PART OF LOT 72**  
**R-PLAN 526**  
**222 BASELINE ROAD**  
**CITY OF OTTAWA**

**APPENDIX D**  
**CITY OF OTTAWA**

- **SITE PLAN AND ARCHITECTURAL DRAWINGS**
- **WATER BOUNDARY CONDITIONS E-MAIL**
- **FIRE FLOW CALCULATION – OFM**
- **OFM EXPOSURE DISTANCES – FIGURE 1**
- **SUPPORTING HYDRAULIC CALCULATIONS**
- **HYDRANT SPACING – FIGURE 2**

**ATTACHMENT 1 : SITE PLAN AND ARCHITECTURAL DRAWINGS**





CONSTRUCTION NORTH



TRUE NORTH

NO	DESCRIPTION	DATE
3	Issued for Site Plan Application-Revised	11.07.2025
2	Issued for Site Plan Application	09.02.2024
1	Issued for Site Plan Application-Draft	03.04.2024

**BRYDEN ERBSON ARCHITECTS INCORPORATED**  
 1908 Somerset Street West, Suite 201, Ottawa, Ontario, K1N 4T3  
 Telephone: 613.724.6914, Email: architecture@brydenerbson.ca

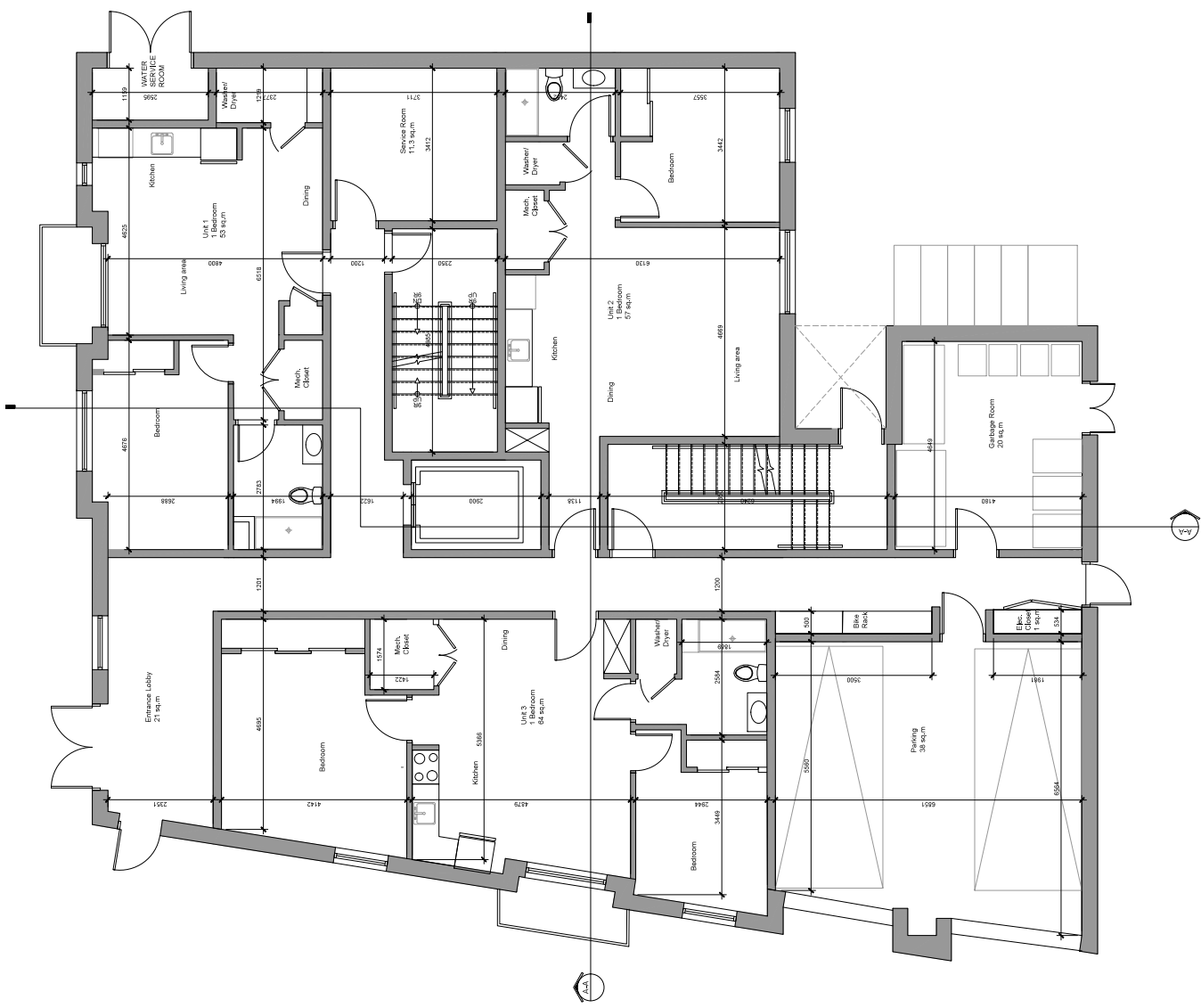
PROJECT NAME: **222 Baseline Rd Mid-Rise Apartments**  
 LOCATION: **Ottawa, ON**  
 TITRE DU DESSIN: **Ground Floor Plan**

NO DE PROJET	DATE
207-23	JUNE 2025

SCALE	ESCALE	PROJETING SCALE	ESCALE IMPRESSION
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		REVISION	REVISIONS
		DRAWN BY	DESINÉ PAR
		CHECKED BY	VÉRIFIÉ PAR
		ARCHITECT'S STAMP	DESIGN IN CHARGE

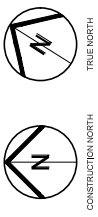
# A2.1

REVISION NO: 1  
DESIGNER: BRYDEN ERBSON ARCHITECTS



A-A

A-A



3	Issued for Site Plan Application-Revised	11.07.2025
2	Issued for Site Plan Application	09.06.2025
1	Issued for Site Plan Application-Draft	03.04.2024
NO	NO PREVIOUS EDITIONS	DATE
DRAWN BY: <b>EMISSOURE GIBSON</b>		DATE: 11.07.2025

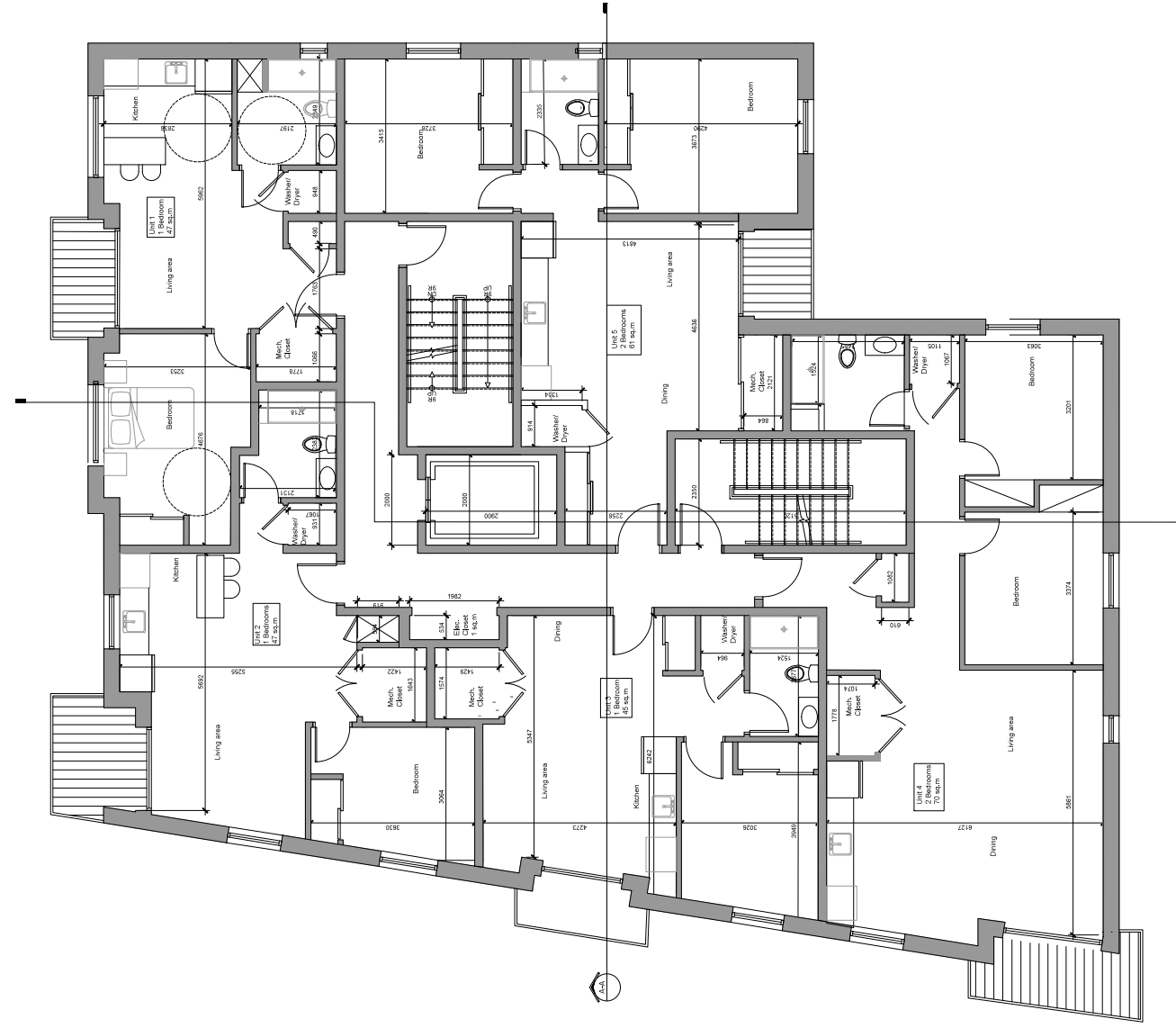
**BRYDEN GIBSON ARCHITECTS INCORPORATED**  
 1908 Somerset Street West, Suite 200, Ottawa, Ontario, K1V 4T3  
 Telephone: 613.724.6944, Email: architecture@brydengibson.ca

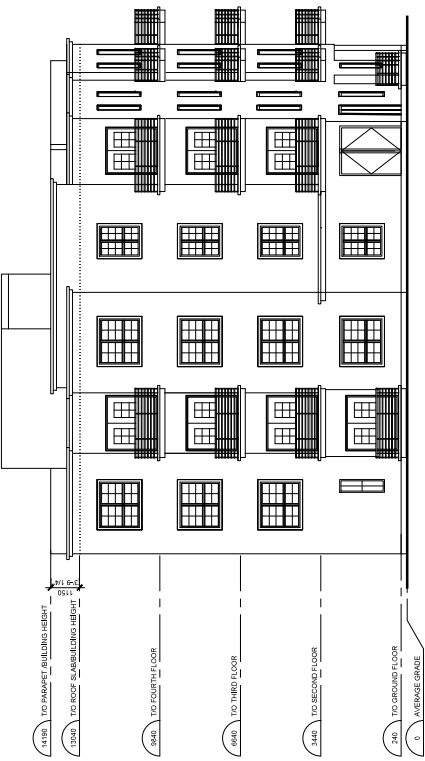
PROJECT NAME: **222 Baseline Rd Mid-Rise Apartments**  
 LOCATION: **Ottawa, ON**

TITRE DU PROJET: **Ground Floor Plan**

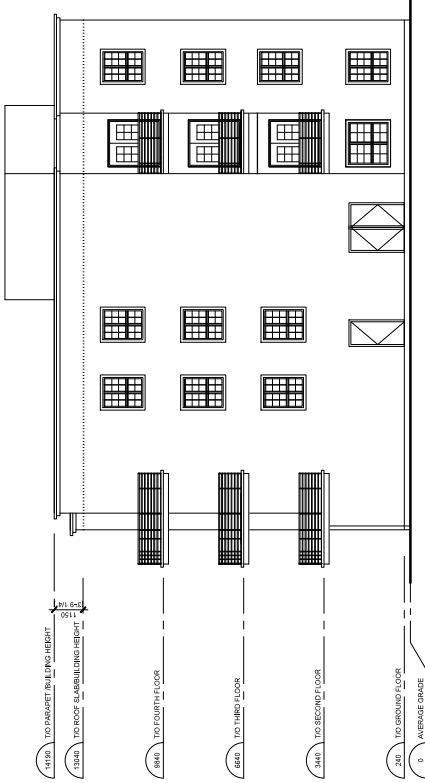
NO. DE PROJET:	DATE:
109-23	JUNE 2025
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CONÇU PAR:	CONÇU PAR:
RK	RK
DRAWN BY:	DESIGNÉ PAR:
SB	SB
CHECKED BY:	VÉRIFIÉ PAR:
SG	SG
ARCHITECTE/ÉCRIVAIN:	DESIGNER:

**A2.2**  
 REVISION NO: 1  
 ESCAUX ARCHITECTE

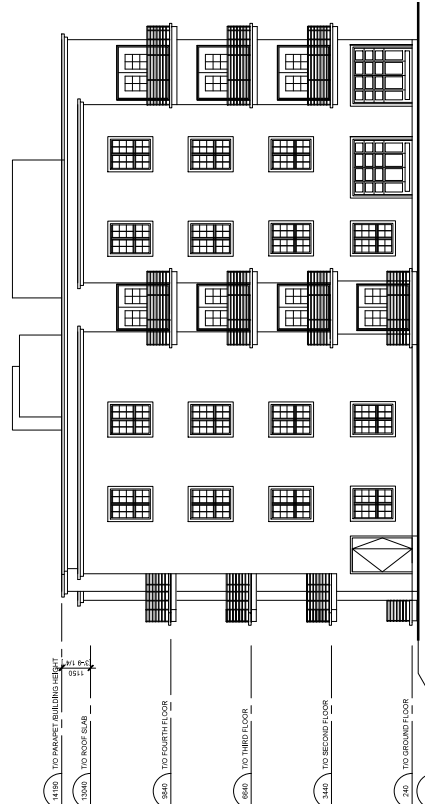




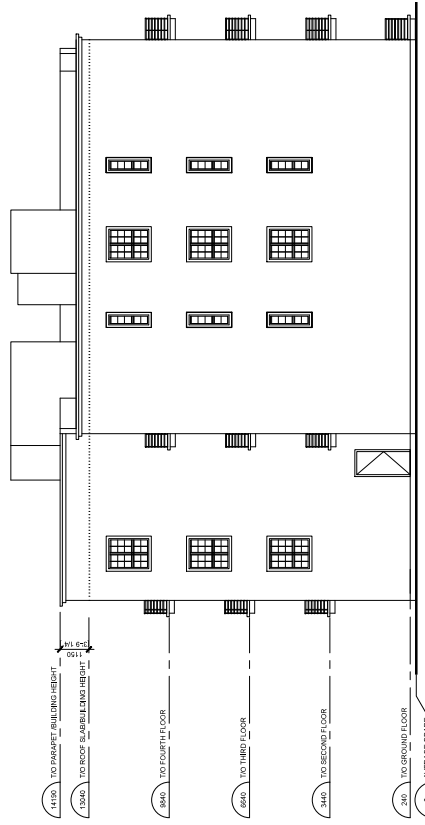
1 North Side Elevation (Facing Baseline Road)  
A3 Scale = 1/100



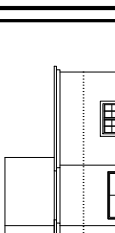
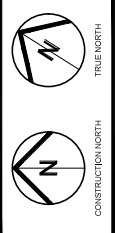
2 South Side Elevation (Back Side)  
A3 Scale = 1/100



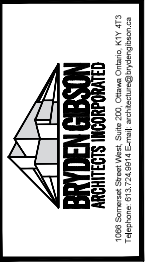
3 West Side Elevation (Facing Lexington Road)  
A3 Scale = 1/100



4 East Side Elevation (Facing Lexington Road)  
A3 Scale = 1/100



3	Issued for Site Plan Application- Revised	11.07.2025
2	Issued for Site Plan Application	09.02.2025
1	Issued for Site Plan Application- Draft	03.04.2024
	DESIGNED BY	DATE
	EMISSIO/VERISON	VERSION



PROJECT NAME  
**222 Baseline Rd  
Mid-Rise Apartments**

LOCATION  
Ottawa, ON

TITRE DU DESSIN  
**Ground Floor Plan**

NO. DE PROJET  
17423

DATE  
JUNE 2025

SCALE  
1/75

PROJETING SCALE  
ESCALE IMPRESSION

CONCEPTION BY  
CONCEPT PAR  
RK

IF THIS PLAN IS NOT  
FROM THIS FLOOR  
FOR ANY PURPOSES

DRAWN BY  
DESINÉ PAR  
SB

CHECKED BY  
VÉRIFIÉ PAR  
SG

81 CITE LA RUE BÉGIN  
PAR 2200, ALBERTVILLE  
ESCALE IMPRESSION

DRAWING NO  
DESSIN N°

REVISION NO  
RÉVISION N°

1

ESCAU ARCHITECTE

A2.2

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1. Issued for Site Plan Application-Revised	1.07.2025
NO. OF REVISIONS	DATE
REVISIONS	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE



**BRYDEN GIBSON ARCHITECTS INCORPORATED**  
 1906 Somerset Street West, Suite 200, Ottawa, Ontario, K1V 4T3  
 Telephone: 613.724.6914 Email: architecture@brydengibson.ca

PROJECT NAME  
**222 Baseline Apartment**

PROJECT TITLE  
**222 Baseline Rd, Ottawa, ON K2C 0A2**

SECTION TITLE  
**Section AA**

SCALE	N° DE PROJET	DATE
AS NOTED	707-24	July 2025
CONCEPT BY	ESCHÈLE	PROJETÉ PAR
RK		CONCEPTEUR
DESIGNED BY	ESCHÈLE	PROJETÉ PAR
CT		CONCEPTEUR
CHECKED BY	ESCHÈLE	PROJETÉ PAR
SG		CONCEPTEUR

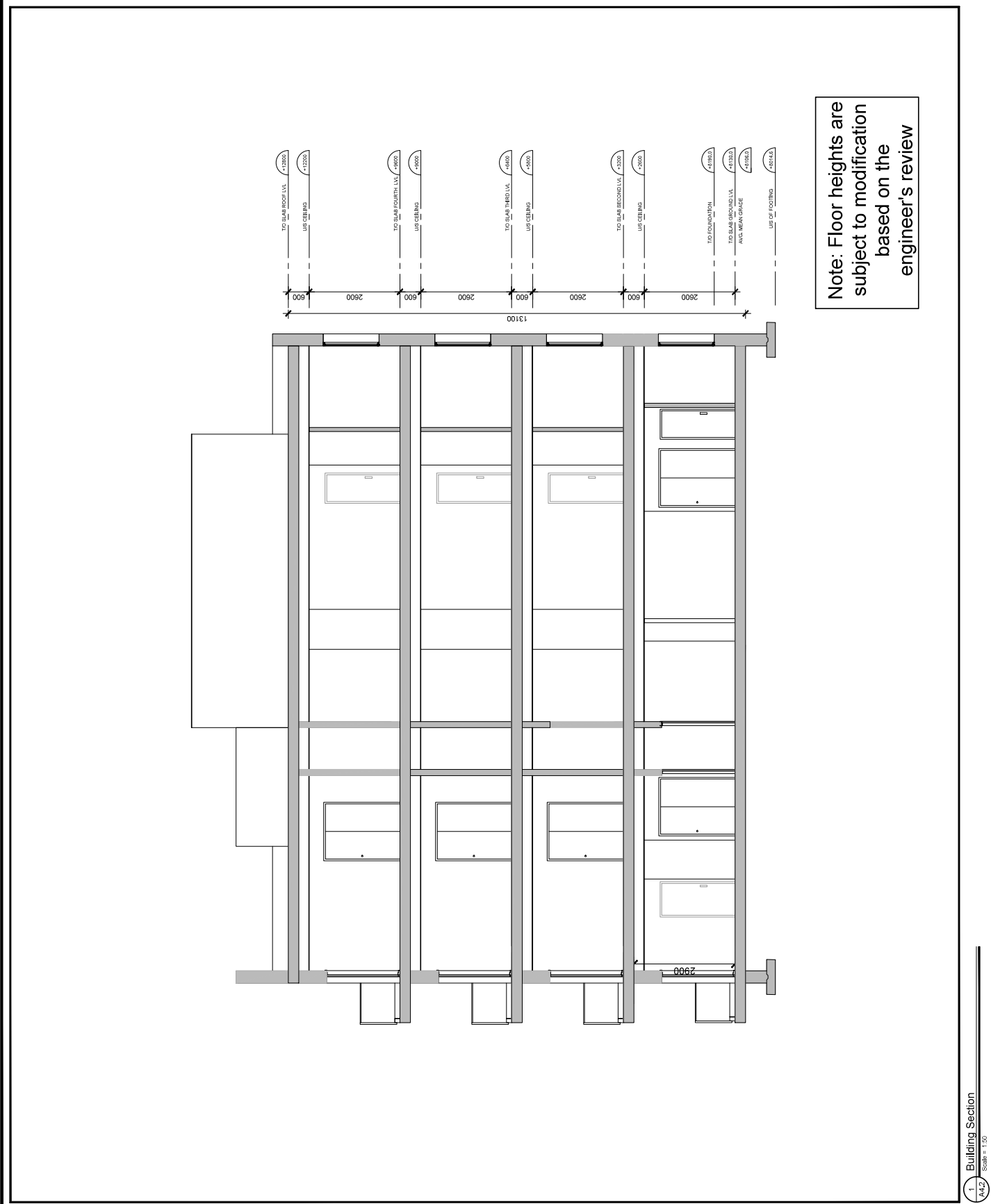
ARCHITECT'S STAMP

DRAWING NO. DESIGN NO.

**A4.1**

REVISION HP  
 MODIFIER VV

ESCAU ARCHITECTE





**ATTACHMENT 2 : WATER BOUNDARY CONDITIONS E-MAIL**

## Mineault-Guitard, Alexandre

---

**From:** Tony Mak <tlmakecl@bellnet.ca>  
**Sent:** Tuesday, October 28, 2025 12:41 PM  
**To:** Mineault-Guitard, Alexandre  
**Subject:** FW: 222 Baseline Road - Water Boundary Conditions Request  
**Attachments:** 222 Baseline Road October 2025.pdf

Hi Alex,

Attached please find the water boundary conditions received from the City of Ottawa today for your calculation use.

Thank you,

Tony Mak, P. Eng.

T.L. Mak Engineering Consultants Ltd.  
1455 Youville Drive, Suite 218  
Ottawa, ON. K1C 6Z7  
Tel. 613-837-5516 | Fax: 613-837-5277  
E-mail: tlmakecl@bellnet.ca

---

**From:** Cassidy, Tyler [mailto:tyler.cassidy@ottawa.ca]  
**Sent:** October 28, 2025 10:28 AM  
**To:** tlmakecl  
**Cc:** peter.hume  
**Subject:** RE: 222 Baseline Road - Water Boundary Conditions Request

Hi Tony,

Please find below the boundary condition results for the proposed development at 222 Baseline Road.

The following are boundary conditions, HGL, for hydraulic analysis at 222 Baseline Road (zone 2W2C) assumed to be connected via the 203 mm watermain on Baseline Road. (see attached PDF for location).

Minimum HGL = 125.1 m  
Maximum HGL = 131.8 m  
Max Day + Fire Flow (90.0 L/s) = 120.4 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.*

Thank you,

**Tyler Cassidy, P.Eng**

Infrastructure Project Manager,  
Planning, Development and Building Services department (PDBS)/ Direction générale des services de la  
planification, de l'aménagement et du bâtiment (DGSPAB) - South 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 12977, [Tyler.Cassidy@ottawa.ca](mailto:Tyler.Cassidy@ottawa.ca)

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

**From:** Cassidy, Tyler  
**Sent:** October 17, 2025 2:50 PM  
**To:** 'Tony Mak' <[tlmakecl@bellnet.ca](mailto:tlmakecl@bellnet.ca)>  
**Cc:** peter.hume <[peter.hume@hpurban.ca](mailto:peter.hume@hpurban.ca)>  
**Subject:** RE: 222 Baseline Road - Water Boundary Conditions Request

Hi Tony,

Your boundary conditions have been provided to our water resources group. Results should be provided within the next 7 business days.

Thank you,

**Tyler Cassidy, P.Eng**  
Infrastructure Project Manager,  
Planning, Development and Building Services department (PDBS)/ Direction générale des services de la  
planification, de l'aménagement et du bâtiment (DGSPAB) - South 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 12977, [Tyler.Cassidy@ottawa.ca](mailto:Tyler.Cassidy@ottawa.ca)

---

**From:** Tony Mak <[tlmakecl@bellnet.ca](mailto:tlmakecl@bellnet.ca)>  
**Sent:** October 15, 2025 11:17 AM  
**To:** Thakur, Roshni <[roshni.thakur@ottawa.ca](mailto:roshni.thakur@ottawa.ca)>; Cassidy, Tyler <[tyler.cassidy@ottawa.ca](mailto:tyler.cassidy@ottawa.ca)>  
**Cc:** peter.hume <[peter.hume@hpurban.ca](mailto:peter.hume@hpurban.ca)>  
**Subject:** RE: 222 Baseline Road - Water Boundary Conditions Request

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Hi Roshni,

Thank you for the update and good luck on your new role with the City of Ottawa.

[Tyler](#),

Could you please forward our request to the appropriate City Department regarding our water boundary request in order for us to complete the serviceability report. Thank you for your help.

Regards,

Tony Mak, P. Eng.

T.L. Mak Engineering Consultants Ltd.  
1455 Youville Drive, Suite 218  
Ottawa, ON. K1C 6Z7  
Tel. 613-837-5516 | Fax: 613-837-5277  
E-mail: [tlmakecl@bellnet.ca](mailto:tlmakecl@bellnet.ca)

---

**From:** Thakur, Roshni [<mailto:roshni.thakur@ottawa.ca>]  
**Sent:** October 15, 2025 11:12 AM  
**To:** tlmakecl; Cassidy, Tyler  
**Cc:** peter.hume  
**Subject:** FW: 222 Baseline Road - Water Boundary Conditions Request

Hi Tony,

I've moved to a new role and team, looping in [@Cassidy, Tyler](#) to assist with the request below.

Thank you!

Best Regards,

**Roshni Thakur, M.Eng**

**Project Coordinator, Stage 2 Handover**

Rail Construction Program | Programme de construction du train léger  
Transportation Services Department | Direction générale des transports  
City of Ottawa | Ville d'Ottawa  
141 Laurier Avenue W., Suite 300 | 141, avenue Laurier O., bureau 300  
613-580-2424 x15380 | Mobile : 613-868-3711

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

**From:** Tony Mak <[tlmakecl@bellnet.ca](mailto:tlmakecl@bellnet.ca)>  
**Sent:** Wednesday, October 15, 2025 10:52 AM  
**To:** Thakur, Roshni <[roshni.thakur@ottawa.ca](mailto:roshni.thakur@ottawa.ca)>  
**Cc:** peter.hume <[peter.hume@hpurban.ca](mailto:peter.hume@hpurban.ca)>  
**Subject:** 222 Baseline Road - Water Boundary Conditions Request

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Hi Roshni,

Regarding this site at 222 Baseline Road, we are requesting for water boundary conditions from the City of Ottawa to be provided for our hydraulic analysis. The particulars are as follows:

The proposed building is planned to be located within Pressure Zone 2W at 222 Baseline Road is a 4-storey residential apartment building. The building will contain seven 2-bedroom units, and eleven 1-bedroom units. Each floor covers an

area of 3,649 ft<sup>2</sup> (339 m<sup>2</sup>) for a gross floor area of 14,607 ft<sup>2</sup> (1,357 m<sup>2</sup>). The building is to be serviced by the 200 mm diameter watermain along Baseline Road.

The domestic demands were calculated using the City of Ottawa’s Water Design Guidelines, where the residential consumption rate of 280 L/cap/d was used to estimate average day demands (AVDY). Peaking factors are from Table 3-3 of the MECP Design Guidelines for Drinking Water Systems. Maximum day (MXDY) demands were calculated by multiplying AVDY demands by a factor of 9.5. Peak hour (PKHR) demands were calculated by multiplying AVDY by a factor of 14.3. Persons per unit (PPU) for each unit were estimated based on the City of Ottawa’s Water Design Guidelines. **Table 1** shows the estimated domestic demands of the proposed building.

**Table 1: Estimated Domestic Demand**

Unit Type	Unit Count	PPU	Population	Consumption	AVDY		MXDY		PKHR	
					L/d	L/s	L/d	L/s	L/d	L/s
Apartment, 2-Bedroom	7	2.1	15	280	4,116	0.05	39,086	0.45	58,835	0.41
Apartment, 1-Bedroom	11	1.4	15	280	4,312	0.05	40,947	0.47	61,637	0.43
<b>Total</b>	<b>18</b>		<b>30</b>		<b>8,428</b>	<b>0.10</b>	<b>80,034</b>	<b>0.93</b>	<b>120,472</b>	<b>1.39</b>

Given the proposed building is located on a private property within the urban areas, the fire flow required was determined following the OFM Fire Flow Calculation method and is provided in the attached worksheet. The proposed building is wood-frame construction, with fire separations and fire-resistance ratings in accordance with the Ontario Building Code (OBC). It is understood that the building will have a sprinkler system. It is also understood that the building will not have a basement, and will be slab on grade construction. The resulting total required fire flow is 5,400 L/min (90 L/s) for a duration of 40 minutes.

In summary:

- AVDY = 8,428 L/d (0.10 L/s);
- MXDY = 80,034 L/d (0.93 L/s);
- PKHR = 120,472 L/d (1.39 L/s); and,
- Fire Flow = 5,400 L/min (90 L/s).

The City is requested to provide boundary conditions for the Average Day, Maximum Day, Peak Hour and Fire Flow conditions indicated above.

Thank you for your prompt attention to this matter. Please forward the boundary conditions as soon as possible.

Have a good day.

Regards,

Tony Mak, P. Eng.

T.L. Mak Engineering Consultants Ltd.  
 1455 Youville Drive, Suite 218  
 Ottawa, ON. K1C 6Z7  
 Tel. 613-837-5516 | Fax: 613-837-5277  
 E-mail: [tlmakecl@bellnet.ca](mailto:tlmakecl@bellnet.ca)

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# Boundary Conditions for 222 Baseline Road

N



Connection



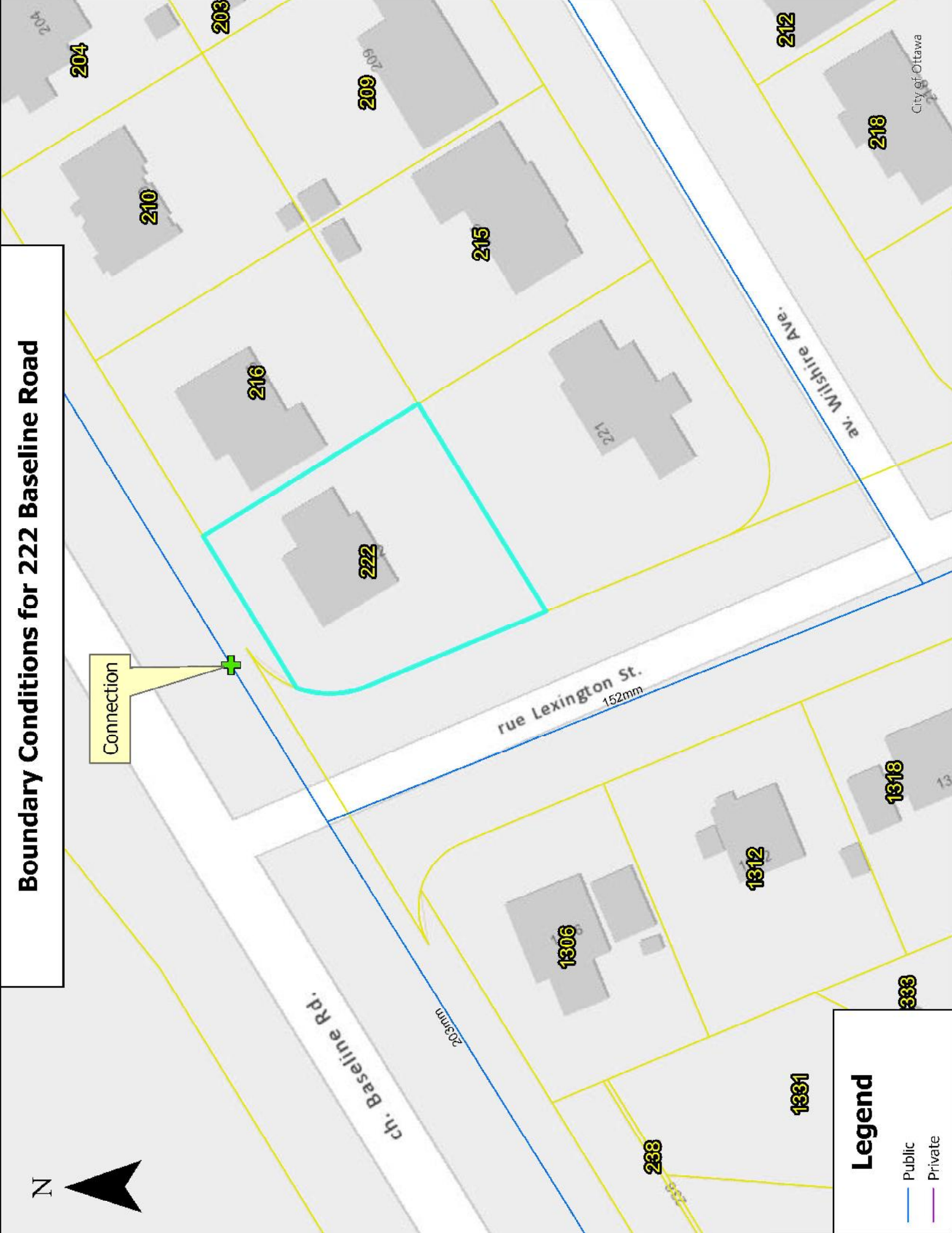
ch. Baseline Rd.  
203mm

rue Lexington St.  
152mm

av. Wilshire Ave.

## Legend

- Public
- Private



**ATTACHMENT 3 : FIRE FLOW CALCULATION – OFM**

# Fire Flow Calculations as per the Ontario Building Code (OBC)



## OFM Fire Flow Calculation

Calculations based on *Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code* by the Office of the Fire Marshal (OFM 1999)

Stantec Project: 163401084  
 Project Name: 222 Baseline Road  
 Date: 10/10/2025  
 Fire Flow Calc 1  
 Description: Residential

Data inputted by: Andrew Buckley P.Eng.  
 Data reviewed by: Alexandre Mineault-G, P.Eng.

**Notes:** 222 Baseline Road comprises of a 4-storey residential apartment building. The 18-unit apartment building has seven 2-bedroom units, and eleven 1-bedroom units. The proposed building is wood frame construction, with fire separations and fire resistance ratings in accordance with the Ontario Building Code. It is understood that the building will have a sprinkler system, and will not have a basement.

Office of the Fire Marshal Determination of Required Fire Protection Water Supply								
Step	Task	Notes	Multiplier Associated with Option	Value Used				
<b>1 General Building Details</b>								
1.1	Enter Number of Storeys	Number of Floors/Storeys in the Unit (incl. basement):		4	4	Storeys		
1.2	Choose Type of Housing (if TH, Enter Number of Units Per TH Block)	Type of Housing	Single Family	0	<b>Other (Comm, Ind, Apt etc.)</b>	18		
			Townhouse - indicate # of units	0				
			Other (Comm, Ind, Apt etc.)	18				
1.3	Choose Presence of Sprinklers	Sprinklers?		Yes	Yes	N/A		
1.4	Choose Presence of Firewalls	Firewall separations?		Yes	Yes	N/A		
1.5	Choose Presence of Stand-Pipe System	Stand-pipe system?		None	None	N/A		
<b>2 Determining Water Supply Coefficient K</b>								
2.1	Choose Type of Construction	Type of Construction	Type of Construction				N/A	N/A
			Non-combustible construction + fire separations + fire-resistance ratings in accordance with Section 3.2.2 of OBC	Type I	<b>Type III</b>			
			Non-combustible construction + fire separations + no fire-resistance rating	Type II				
			Combustible construction + fire separations + fire-resistance ratings in accordance with Section 3.2.2 of OBC	Type III				
			Combustible construction + fire separations + no fire-resistance rating	Type IV				
2.2	Choose Classification	Occupancy Classification (OBC)	Building Classification				C	A-2, B-1, B-2, B-3, C, D
			A-2, B-1, B-2, B-3, C, D	18				
			A-4, F-3	22				
			A-1, A-3	25				
			E, F-2	31				
2.3	Water Supply Coefficient (K)	Water Supply Coefficient K			18	N/A		
<b>3 Determining Building Volume V</b>								
3.1	Enter Ground Floor Area of One Unit	Floor Space Area				339	Area in Square Meters (m <sup>2</sup> )	
		Average Floor Area (A) :		339	Square Metres (m <sup>2</sup> )			
3.2	Building Height (h)	Building Height				14.0	Height in Meters (m)	
		Bottom Elevation :		0.0	Meters (m)			
		Top Elevation :		14.0	Meters (m)			
3.3	Building Volume (V)	Building Volume V = A * h			4,740	Volume in Meters Cube (m <sup>3</sup> )		
<b>4 Determining Spatial Coefficient S</b>								
4.1	Choose Exposure Distances from Building to Property Line	Exposure Distance from Building to Property Line in Meters (m)	North Side		1.00	Distance in Meters (m)		
			Property Line to Street Centreline (Street Facing)				2.2	
			Total Exposure Distance				9.2	
			East Side				1.5	
			Property Line to Street Centreline (Street Facing)				0	
			Total Exposure Distance				1.5	
			South Side				1.2	
			Property Line to Street Centreline (Street Facing)				0	
			Total Exposure Distance				1.2	
			West Side				2.7	
Property Line to Street Centreline (Street Facing)		9.9						
Total Exposure Distance		12.6						
4.2	Total Spatial Coefficient (S <sub>tot</sub> )	Total Spatial Coefficient S <sub>tot</sub> = 1 + Σ S <sub>x</sub>			2.00	N/A		
<b>5 Determining Required Minimum Supply of Water Q and Fire Flow</b>								
5.1	Obtain Required Fire Volume, Flow & Duration	Minimum Supply of Water, rounded to nearest 1,000 L; Q = K*V*S <sub>tot</sub>			171,000 L			
		Required Minimum Water Supply Flow Rate (L/min)			5,400 L/min			
		Required Minimum Water Supply Flow Rate (L/s)			90 L/s			
		Required Minimum Duration of Fire Flow (min)			40 min			

**ATTACHMENT 4 : FIGURE 1 – FUS EXPOSURE DISTANCES**



**Figure 1: OFM Exposure Distances (Property Line to Street Center)**

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## **ATTACHMENT 5 : SUPPORTING HYDRAULIC CALCULATIONS**



### Supporting Hydraulic Calculations

Stantec Project #: 163401084

Project Name: 222 Baseline Road

Date: October 29, 2025

Data inputted by: Alexandre Mineault-G, P.Eng.

Data reviewed by: Alexandre Mineault-G, P.Eng.

#### Boundary Conditions provided by the City:

Scenario 1: Peak Hour (Min HGL): 125.1 m;

Scenario 2: Average Day (Max HGL): 131.8 m; and

Scenario 3: Maximum Day plus Fire Flow: 120.4 m.

#### Sample Calculations

$$HGL(m) = hp + hz \quad (1)$$

where: hp = Pressure Head (m); and hz = Elevation Head (m), estimated from topography.

For Scenario 1, we have:

$$HGL(m) = 125.1 \text{ and } hz(m) = 81.3.$$

Rearranging Equation 1, we can calculate the Pressure Head (hp) as follow:

$$hp(m) = HGL - hz$$

$$\therefore hp = 125.1 - 81.3 \text{ m} = 43.8 \text{ m}.$$

To convert from Pressure Head (m) to a pressure value (kPa), the following equation can be used:

$$P(\text{kPa}) = (\rho * g * hp) / 1000 \quad (2)$$

where:  $\rho$  = density of water = 1000 kg/m<sup>3</sup>; and g = gravitational acceleration = 9.81 m/s<sup>2</sup>.

Using Equation 2, we can calculate the Pressure Head (hp) as follow:

$$P(\text{kPa}) = (1000 * 9.81 * 43.8) / 1000$$

$$\therefore P = 429 \text{ kPa}.$$

Considering that 1 kPa = 0.145 psi, the pressure under Scenario 1 is equal to:

$$P = 62 \text{ psi}.$$

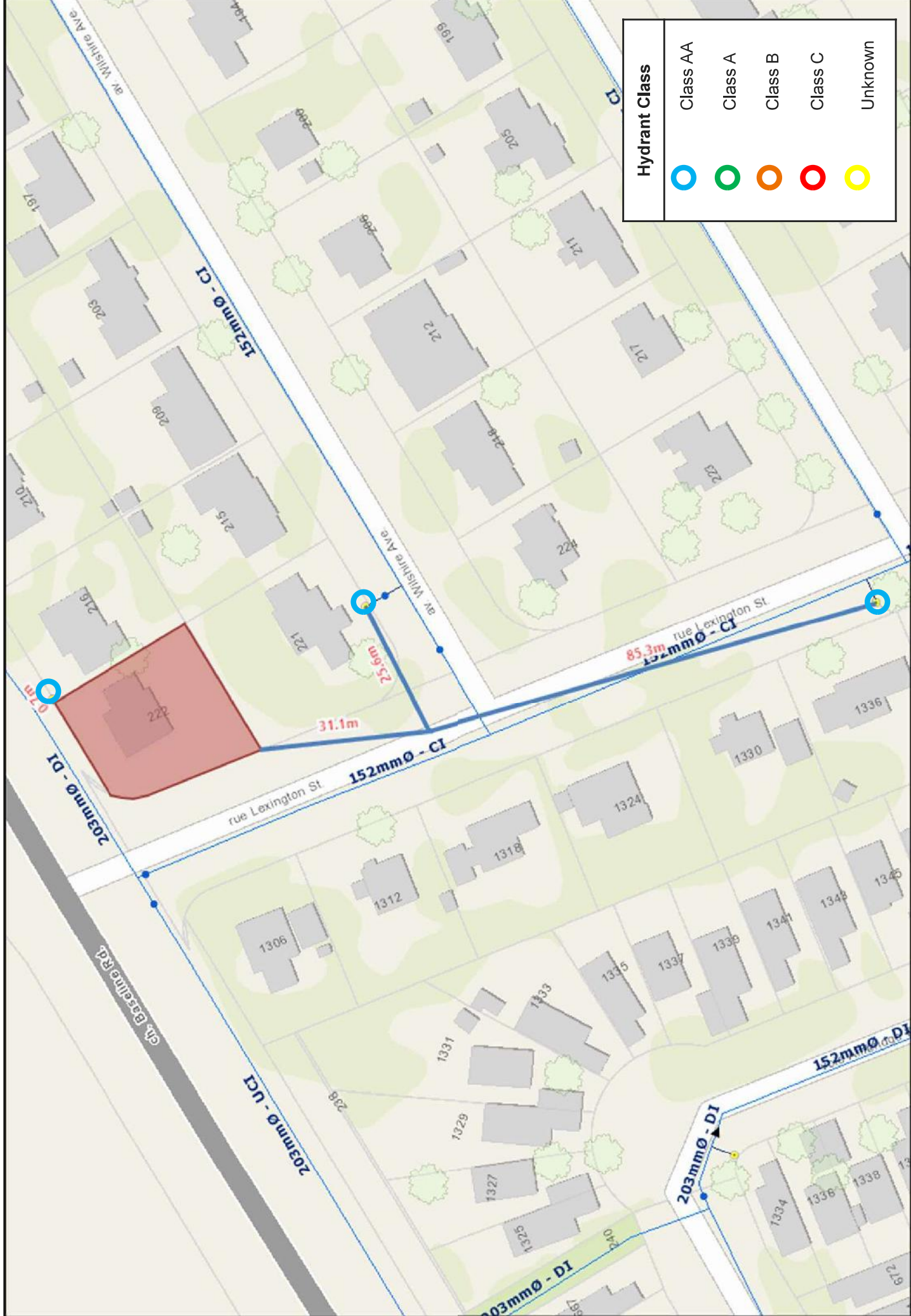
Applying the same procedures, the pressures under Scenario 2 and Scenario 3 are calculated as follows:

Scenario 2: P = 72 psi; and Scenario 3: P = 56 psi.

To summarize:

Scenario 1: Minimum Pressure under Peak Hour Demand: 429 kPa (62 psi)
Scenario 2: Maximum Pressure under Average Day Demand: 495 kPa (72 psi)
Scenario 3: Minimum Pressure under Maximum Day + Fire Flow Demand: 383 kPa (56 psi)

**ATTACHMENT 6 : FIGURE 2 – HYDRANT SPACING**



**Figure 2: Hydrant Spacing**

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**PROPOSED**  
**FOUR (4) STOREY APARTMENT BUILDING SITE**  
**PART OF LOT 72**  
**R-PLAN 526**  
**222 BASELINE ROAD**  
**CITY OF OTTAWA**

**APPENDIX E**  
**CITY OF OTTAWA**  
**SANITARY SEWER DESIGN SHEET**  
**SHEET No. 1 OF 1**



**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**APPENDIX F  
DEVELOPMENT SERVICING STUDY CHECKLIST SUMMARY**

## Servicing study guidelines for development applications

### 4. Development Servicing Study Checklist

The following section describes the checklist of the required content of servicing studies. It is expected that the proponent will address each one of the following items for the study to be deemed complete and ready for review by City of Ottawa Infrastructure Approvals staff.

The level of required detail in the Servicing Study will increase depending on the type of application. For example, for Official Plan amendments and re-zoning applications, the main issues will be to determine the capacity requirements for the proposed change in land use and confirm this against the existing capacity constraint, and to define the solutions, phasing of works and the financing of works to address the capacity constraint. For subdivisions and site plans, the above will be required with additional detailed information supporting the servicing within the development boundary.

#### 4.1 General Content

- Executive Summary (for larger reports only).
- Date and revision number of the report.
- Location map and plan showing municipal address, boundary, and layout of proposed development.
- Plan showing the site and location of all existing services.
- 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.
- Summary of Pre-consultation Meetings with City and other approval agencies.
- 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 defensible design criteria.
- Statement of objectives and servicing criteria.
- Identification of existing and proposed infrastructure available in the immediate area.
- 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).
- 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.
- 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.
- Proposed phasing of the development, if applicable.

- Reference to geotechnical studies and recommendations concerning servicing.
  
- 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

#### **4.2 Development Servicing Report: Water**

- Confirm consistency with Master Servicing Study, if available
- Availability of public infrastructure to service proposed development
- Identification of system constraints
- Identify boundary conditions
- Confirmation of adequate domestic supply and pressure
- 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.
- 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.
- Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design
- Address reliability requirements such as appropriate location of shut-off valves
- Check on the necessity of a pressure zone boundary modification.
- 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

- 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.
- Description of off-site required feeder mains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.
- Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.
- Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.

#### **4.3 Development Servicing Report: Wastewater**

- 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).
- Confirm consistency with Master Servicing Study and/or justifications for deviations.
- 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.
- Description of existing sanitary sewer available for discharge of wastewater from proposed development.
- 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)
- Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.
- Description of proposed sewer network including sewers, pumping stations, and forcemains.
- 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).
- Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.
- Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.
- Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.
- Special considerations such as contamination, corrosive environment etc.

#### 4.4 Development Servicing Report: Stormwater Checklist

- Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)
- Analysis of available capacity in existing public infrastructure.
- A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.
- 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.
- Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.
- Description of the stormwater management concept with facility locations and descriptions with references and supporting information.
- Set-back from private sewage disposal systems.
- Watercourse and hazard lands setbacks.
- Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.
- Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.
- Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5 year return period) and major events (1:100 year return period).
- Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.
- 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.
- Any proposed diversion of drainage catchment areas from one outlet to another.
- Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.
- 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.
- Identification of potential impacts to receiving watercourses
- Identification of municipal drains and related approval requirements.
- Descriptions of how the conveyance and storage capacity will be achieved for the development.
- 100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.

- Inclusion of hydraulic analysis including hydraulic grade line elevations.
- Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.
- 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.
- Identification of fill constraints related to floodplain and geotechnical investigation.

#### 4.5 Approval and Permit Requirements: Checklist

The Servicing Study shall provide a list of applicable permits and regulatory approvals necessary for the proposed development as well as the relevant issues affecting each approval. The approval and permitting shall include but not be limited to the following:

- 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.
- Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.
- Changes to Municipal Drains.
- Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)

#### 4.6 Conclusion Checklist

- Clearly stated conclusions and recommendations
- 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.
- All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario

**PROPOSED  
FOUR (4) STOREY APARTMENT BUILDING SITE  
PART OF LOT 72  
R-PLAN 526  
222 BASELINE ROAD  
CITY OF OTTAWA**

**APPENDIX H  
PRE-CONSULTATION FEEDBACK  
FROM  
APPLICATION PC 2023-0371**



Peter Hume  
HP Urban Inc.  
Via email: Peter.hume@HPurban.ca

**Subject: Pre-Consultation: Meeting Feedback  
Proposed Site Plan Control Application – 222 Baseline Road**

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

**Pre-Consultation Preliminary Assessment**

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>
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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](mailto: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 number(s) 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](http://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 proposal aligns with the relevant zoning provisions and Official Plan policies.
2. Please consider the reduction of the front walkway (Baseline Rd) frontage in order to provide additional area for soft landscaping and tree planting (of an appropriate size, provided there are overhead wires.)
3. The proposed site plan appears to be an earlier version of the site plan developed through the Zoning By-law Amendment application. The plan submitted should include elements closer to those submitted through the previous application, including parking areas at the rear of the property satisfying the minimum visitor parking requirement.
4. Please look to consolidate parking areas with the City's preference to have one access road for vehicles located on the lower tier roadway.
5. The Carleton Heights Secondary Plan limits the creation and expansion of driveways in Section 3.2 of the Plan, however, the interpretation section of the Plan allows for some flexibility in location of driveways contingent on the appropriate stormwater management plans demonstrating that the relocated driveways will not negatively impact the property or the existing stormwater management facilities.
6. Section 37 requirements / Community Benefits Charge
  - a. The former Section 37 regime has been replaced with a "Community Benefits Charge", [By-law No. 2022-307](#), of 4% of the land value. This charge will be required for ALL buildings that are 5 or more storeys and 10 or more units and will be required at the time of building permit unless the development is subject to an existing registered Section 37 agreement. Questions regarding this change can be directed to [Ranbir.Singh@ottawa.ca](mailto:Ranbir.Singh@ottawa.ca).

### **Urban Design**

Comments:

7. This proposal does not run along or does not meet the threshold in one of the City's Design Priority Areas and need not attend the City's UDRP. Staff will be responsible for evaluating the Urban Design Brief and providing design direction.
8. Materiality: As the first redevelopment project to the block and of such a change in scale we recommend the design attempt to 'fit' into the neighbourhood by employing similar materials found within the community. We recommend the use of corrugated metal be restricted to facades NOT facing any public right of ways.
9. We will provide additional design comments as the design develops.
10. An Urban Design Brief is a required submittal. The Urban Design Brief should be structured by generally following the headings highlighted under Section 3 – Contents of these Terms of Reference. Please see the Urban Design Brief Terms of Reference provided.

Note. The Urban Design Brief submittal should have a section which addresses these pre-consultation comments.

11. This is an exciting project in an area full of potential. We look forward to helping you achieve its goals with the highest level of design resolution. We are happy to assist and answer any questions regarding the above. Good luck.

Please contact Christopher Moise, Urban Designer for further questions as Christopher.moise@ottawa.ca.

## **Engineering**

Comments:

12. The Stormwater Management Criteria, for the subject site, is to be based on the following:
  - a. The 5-yr storm event using the IDF information derived from the Meteorological Services of Canada rainfall data, taken from the MacDonald Cartier Airport, collected 1966 to 1997.
  - b. The pre-development runoff coefficient or a maximum equivalent 'C' of 0.5, whichever is less (§ 8.3.7.3).
  - c. A calculated time of concentration (Cannot be less than 10 minutes).
  - d. Flows to the storm sewer in excess of the 5-year pre-development storm release rate, up to and including the 100-year storm event, must be detained on site.
  - e. Ensure no overland flow for all storms up to and including the 100-year event.

- f. There may be area specific subwatershed studies which may apply; please verify.
  - g. Please note that there is a roadside stormwater ditch fronting the property along Lexington which will need to be preserved.
  - h. All overland flow should be directed to the Baseline Road right-of-way to avoid the roadside ditch system in the Carlington Heights neighbourhood.
13. Deep Services (Storm, Sanitary & Water Supply)

Storm:

- 1500 mm dia. STM (concrete) – Baseline Road

Sanitary:

- 225 mm dia. SAN (concrete) – Lexington Street

Water:

- 200 mm dia. Watermain (ductile iron) – Baseline Road
- 200 mm dia. Watermain (cast iron) – Lexington Street

\*There are often water supply issues associated with older cast iron watermains. Given the age and type of pipes in this area, it is recommended that boundary conditions be requested early on to identify potential supply constraints.

- a. Sewer connections to be made above the springline of the sewermain as per:
  - i. Std Dwg S11.1 for flexible main sewers – connections made using approved tee or wye fittings.
  - ii. Std Dwg S11 (For rigid main sewers) – lateral must be less than 50% the diameter of the sewermain,
  - iii. Std Dwg S11.2 (for rigid main sewers using bell end insert method) – for larger diameter laterals where manufactured inserts are not available; lateral must be less than 50% the diameter of the sewermain,
  - iv. Connections to manholes permitted when the connection is to rigid main sewers where the lateral exceeds 50% the diameter of the sewermain. – Connect obvert to obvert with the outlet pipe unless pipes are a similar size.
  - v. No submerged outlet connections.

14. Water Boundary condition requests must include the location of the service (map or plan with connection location(s) indicated) and the expected loads required by the proposed development, including calculations. Please provide the following information:

- a. Location of service
- b. Type of development and the amount of fire flow required (as per FUS).
- c. Average daily demand: \_\_\_ l/s.
- d. Maximum daily demand: \_\_\_ l/s.
- e. Maximum hourly daily demand: \_\_\_ l/s.

15. An MECP Environmental Compliance Approval **Municipal/Private Sewage Works** may be required for the proposed development. Please contact the Ministry of the Environment, Conservation and Parks, Ottawa District Office to arrange a pre-submission consultation:

- a. Charlie Primeau at (613) 521-3450, ext. 251 or  
Charlie.Primeau@ontario.ca

16. Watermain frontage fees will apply to this application.

17. A sanitary monitoring maintenance hole is required, please locate it as close to the property line as possible.

Feel free to contact Tyler Cassidy, P. Eng., Infrastructure Project Manager, for follow-up questions.

### **Noise**

Comments:

18. Ensure the Noise Study assesses the proposed BRT on Baseline.

Feel free to contact Neeti Paudel, Transportation Project Manager, for follow-up questions.

### **Transportation**

Comments:

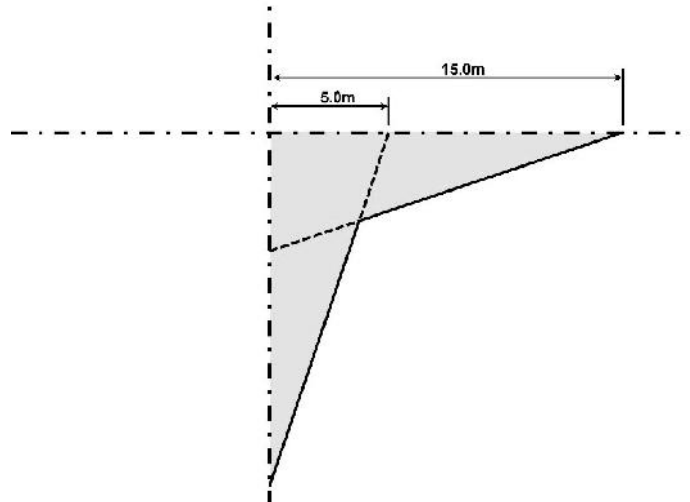
19. Access is preferred on the lower tier road- Lexington avenue.

20. Improve the existing bus stop on Baseline by adding an accessible loading zone (2.4m depth x 1.5m length) at the downstream edge of the bus stop where the

flag is located, which could possibly be achieved with the proposed pedestrian path between the building entrance and the sidewalk.

21. The City requires a 3 metre x 9 metre triangle, with the longer portion located on, the higher order road segment for intersections with the following characteristics:

- *local road to arterial road*
- *The overlapping triangle concept is illustrated in the attached figure.*



22. Right of way for the EA should be protected per the PDF and CAD files provided by the EA group.

- a. [Files can be accessed here](#). Please contact Craig Hamilton for further access.

Feel free to contact Neeti Paudel, Transportation Project Manager, for follow-up questions.

### **Planning Forestry**

Comments:

23. There do not appear to be any protected trees on the subject site. Any adjacently owned trees with a critical root zone extending into the development site must have a protection plan presented. This information could be combined with the Landscape Plan instead of submitting a separate TCR.

24. It's expected that tree planting be provided along Baseline, Lexington, and the interior yard

25. The Landscape Plan Terms of reference is now active and must be adhered to: [https://documents.ottawa.ca/sites/documents/files/landscape\\_tor\\_en.pdf](https://documents.ottawa.ca/sites/documents/files/landscape_tor_en.pdf)

26. TCR requirements

- The TCR must list all trees on site, as well as off-site trees if the CRZ extends into the developed area, by species, diameter and health condition
- Please identify trees by ownership – private onsite, private on adjoining site, city owned, boundary (trees on a property line)
- If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained
- All retained trees must be shown, and all retained trees within the area impacted by the development process must be protected as per City guidelines available at [Tree Protection Specification](#) or by searching Ottawa.ca
- The location of tree protection fencing must be shown on the plan
- The City encourages the retention of healthy trees; if possible, please seek opportunities for retention of trees that will contribute to the design/function of the site.
- For more information on the process or help with tree retention options, contact Hayley Murray [hayley.murray@ottawa.ca](mailto:hayley.murray@ottawa.ca) or on [City of Ottawa](#)

## 27. LP tree planting requirements

### Minimum Setbacks

- Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.
- Maintain 2.5m from curb
- Coniferous species require a minimum 4.5m setback from curb, sidewalk or MUP/cycle track/pathway.
- Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

### Tree specifications

- Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
- Maximize the use of large deciduous species wherever possible to maximize future canopy coverage
- Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and include watering and warranty as described in the specification (can be provided by Forestry Services).
- Plant native trees whenever possible
- No root barriers, dead-man anchor systems, or planters are permitted.
- No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

### Hard surface planting

- Curb style planter is highly recommended
- No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
- Trees are to be planted at grade

### Soil Volume

- Please document on the LP that adequate soil volumes can be met:

Tree Type/Size	Single Tree Soil Volume (m3)	Multiple Tree Soil Volume (m3/tree)
Ornamental	15	9
Columnar	15	9
Small	20	12
Medium	25	15
Large	30	18
Conifer	25	15

- \*\* Please note that these soil volumes are not applicable in cases with Sensitive Marine Clay \*\*
- Please follow the City's 2017 Tree Planting in Sensitive Marine Clay guidelines for trees in the Right of Way

### Tree Canopy

- The landscape plan shall show how the proposed tree planting will replace and increase canopy cover on the site over time, to support the City's 40% urban forest canopy cover target.
- At a site level, efforts shall be made to provide as much canopy cover as possible, through tree planting and tree retention, with an aim of 40% canopy cover at 40 years, as appropriate. Indicate on the plan the projected future canopy cover at 40 years for the site.

Feel free to contact Hayley Murray, Forester, for follow-up questions.

### **Environment and Trees**

28. No comments at this time.



Feel free to contact Mark Elliott, Environmental Planner, or Hayley Murray, Forester, for follow-up questions.

**Parkland**

Comments:

- 29. The applicant is proposing to redevelop 222 Baseline Road with a 4-storey, low-rise apartment building containing 17 dwelling units. The existing single-detached dwelling will be demolished. The proposed development would result in a net increase of 16 dwelling units. The lot area on geoOttawa is 691.18 m<sup>2</sup>.
- 30. The parkland dedication requirement for the proposed development does not meet the minimum size requirement for the conveyance of parkland to the City. It is noted that the property is located within 400m of Lexington Park, which contains a softball diamond, mini soccer fields, a playground and tennis/pickleball courts.
- 31. Cash-in-lieu of parkland dedication will be required as a condition of site plan approval. Below is a preliminary draft of the condition:

*Prior to registration of the Site Plan Agreement, the Owner acknowledges and agrees to pay cash-in-lieu of conveyance of parkland as referenced in Schedule "B" herein. Pursuant to the City's Parkland Dedication By-law, being By-law No. 2022-280, as amended, 40% of said funds collected shall be directed to City wide funds, and 60% shall be directed to Ward 16 funds. The Owner shall also pay the parkland appraisal fee of \$800.00 plus H.S.T. of \$104.00, as referenced in Schedule "B" herein.*

**Cash-in-lieu of Parkland Conveyance Requirement Table**

<b>Development Type</b>	<b>Rate</b>	<b>Number of Net Residential Units</b>	<b>Conveyance Requirement</b>
<i>Low-rise Apartment Building</i>	<i>1 ha per 1,000 net residential units to a maximum of 10% of gross land area</i>	16	69 m <sup>2</sup>
<i>Total requirement:</i>			69 m <sup>2</sup>
<i>Conveyance of Parkland:</i>			
<i>Cash-in-lieu of Conveyance of Parkland:</i>			69 m <sup>2</sup>

Feel free to contact Burl Walker, Parks Planner, for follow-up questions.

**Heritage**

Comments:

32. n/a

### **Community issues**

Comments:

33. n/a

### **Other**

34. 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](http://ottawa.ca/HPDS) for more information.

### **Submission Requirements and Fees**

1. 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](http://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,  
Craig Hamilton

c.c. Reed Adams



Neeti Paudel  
Christopher Moise  
Mark Elliott  
Hayley Murray  
Burl Walker  
Stream Shen