SERVICING & STORMWATER MANAGEMENT REPORT 500 COVENTRY ROAD

Project No.: CCO-23-2497

Pre-Application No.: PC2202-0191

Prepared for:

Morguard Corporation
55 City Centre Drive, Suite 1000
Mississauga, ON
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Prepared by:

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Subm1: January 26th, 2023
Revised: March 14th, 2025

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1.0 PROJECT DESCRIPTION

1.1 Purpose

Egis Group (formerly McIntosh Perry) has been retained by Morguard to prepare this Servicing and Stormwater Management Report in support of the Site Plan Control process for the proposed development located at 500 Coventry Road within the City of Ottawa.

The main purpose of this report is to present a servicing and stormwater management design for the development in accordance with the recommendations and guidelines provided by the City of Ottawa (City), the Rideau Valley Conservation Authority (RVCA), and the Ministry of the Environment, Conservation and Parks (MECP). This report will address the water, sanitary and storm sewer servicing for the development, ensuring that existing and available services will adequately service the proposed development.

This report should be read in conjunction with the following drawings:

- CCO-23-2497, C101 – Lot Grading, Drainage, Erosion, and Sediment Control Plan
- CCO-23-2497, C102 – Site Servicing Plan
- CCO-23-2497, PRE – Pre-Development Drainage Area Plan (Appendix E)
- CCO-23-2497, POST – Post-Development Drainage Area Plan (Appendix F)

1.2 Site Description

Figure 1: Site Map

The subject property, herein referred to as the site, is located at 500 Coventry Road within the Rideau-Rockcliffe ward. The site covers approximately 3.46 ha and is located along Coventry Road. The site is zoned for Transit Oriented Development (TD3). See Site Location Plan in Appendix 'A' for more details.

1.3 Proposed Development and Statistics

The proposed development consists of the addition of a 28-storey apartment building located in the south-east corner of the site and containing 309 residential units. Drive aisles are proposed throughout the site, with new underground parking and existing surface parking located north of the development area. There is a 14.0 m MTO setback from the southern property line. Development is proposed within 0.45 ha of the site. Refer to Site Plan prepared by Turner Fleischer Architects and included in Appendix B for further details.

1.4 Existing Conditions and Infrastructures

The site is currently developed containing a parking lot and undeveloped dirt and gravel storage area. The site contains a dry 450 mm stormwater sewer and a catch basin system within the parking lot.

Sewer and watermain mapping collected from the City of Ottawa indicate that the following services exist across the property frontages within the adjacent municipal rights-of-way(s):

- Coventry Road
  - 305 mm diameter PVC watermain, a
  - 250 mm diameter concrete sanitary sewer, tributary to the Rideau River Collector Twin, and a
  - 1350 mm diameter concrete storm sewer, tributary to the Ottawa River approximately 1.9 km downstream.

1.5 Approvals

The proposed development is subject to the City of Ottawa site plan control approval process. Site plan control requires the City to review, provided concurrence and approve the engineering design package. Permits to construct can be requested once the City has issued a site plan agreement.

An Environmental Compliance Approval (ECA) through the Ministry of Environment, Conservation and Parks (MECP) is not anticipated to be required since the proposed storm sewer system services one parcel of land, does not propose industrial use, and does not outlet to a combined sewer.

2.0 BACKROUND STUDIES, STANDARDS, AND REFERENCES

2.1 Background Reports / Reference Information

As-built drawings of existing services, provided by the City of Ottawa Information centre, within the vicinity of the proposed site were reviewed in order to identify infrastructure available to service the proposed development.

A topographic survey (23868-23) of the site was completed by AOV and dated May 23rd, 2023.

The Site Plan (SPA005) was prepared by Turner Fleischer Architects Inc and dated October 10, 2024 (Site Plan).

2.2 Applicable Guidelines and Standards

City of Ottawa:

- Ottawa Sewer Design Guidelines, City of Ottawa, SDG002, October 2012. (Ottawa Sewer Guidelines)
  - Technical Bulletin ISTB-2014-01 City of Ottawa, February 2014. (ISTB-2014-01)
  - Technical Bulletin PIEDTB-2016-01 City of Ottawa, September 2016. (PIEDTB-2016-01)
  - Technical Bulletin ISTB-2018-01 City of Ottawa, January 2018. (ISTB-2018-01)
  - Technical Bulletin ISTB-2018-04 City of Ottawa, March 2018. (ISTB-2018-04)
  - Technical Bulletin ISTB-2019-02 City of Ottawa, February 2019. (ISTB-2019-02)
- Ottawa Design Guidelines – Water Distribution City of Ottawa, July 2010. (Ottawa Water Guidelines)
  - Technical Bulletin ISD-2010-2 City of Ottawa, December 15, 2010. (ISD-2010-2)
  - Technical Bulletin ISDTB-2014-02 City of Ottawa, May 2014. (ISDTB-2014-02)
  - Technical Bulletin ISTB-2018-02 City of Ottawa, March 2018. (ISTB-2018-02)
  - Technical Bulletin ISTB-2021-03 City of Ottawa, August 2021. (ISTB-2021-03)

Ministry of Environment, Conservation and Parks:

- Stormwater Planning and Design Manual, Ministry of the Environment, March 2003. (MECP Stormwater Design Manual)
- Design Guidelines for Sewage Works, Ministry of the Environment, 2008. (MECP Sewer Design Guidelines)

Other:

- Water Supply for Public Fire Protection, Fire Underwriters Survey, 2020. (FUS Guidelines)

3.0 PRE-CONSULTATION SUMMARY

A pre-consultation meeting was held with City staff on September 14th, 2022, regarding the proposed site servicing. Specific design parameters to be incorporated include the following:

- Pre-development and post-development flows shall be calculated using a time of concentration (Tc) no less than 10 minutes.
- Control 5 through 100-year post-development flows to the 5-year pre-development flow rate using an existing runoff coefficient no greater than 0.50.
- Confirm sanitary capacity within the municipal infrastructure with City staff.

4.0 WATERMAIN

4.1 Existing Watermain

The site is located within the 1E pressure zone, as per the Water Distribution System mapping included in Appendix C. There is one municipal fire hydrant on Coventry Road, east of the site entrance, that is available to service the development.

4.2 Proposed Watermain

It is proposed to service the new building by extending a 200 mm diameter PVC watermain from the existing 300 mm diameter PVC watermain within Coventry Road.. A new fire hydrant will be connected to the proposed watermain within the existing parking lot to provide fire flow for the development.

Refer to drawing C102 for a detailed servicing layout.

Table 1, below, summarizes the water supply design criteria obtained from the Ottawa Water Guidelines and utilized for the water analysis.

Table 1: Water Supply Design Criteria

Site Area	3.46 ha
Residential	280 L/day/person
Residential Apartment – 1 Bedroom	1.4 person/unit
Residential Apartment – 2 Bedroom & 1 Bedroom + Den	2.1 person/unit
Residential Apartment – 3 Bedroom & 2 Bedroom + Den	3.1 person/unit
Max Day Peaking Factor - Residential	2.5 x avg. day
Peak Hour Peaking Factor - Residential	2.2 x max. day

The Fire Underwriters Survey 2020 (FUS) method was utilized to estimate the required fire flow for the proposed building. Fire flow requirements were calculated per City of Ottawa Technical Bulletin ISTB-2018-02. The following parameters were coordinated with the architect.

FUS:

- Type of construction – Non-Combustible Construction
- Occupancy Type – Limited Combustible
- Sprinkler Protection – Fully Supervised Sprinkler System

The results of the FUS calculations yielded a required fire flow of 7,000 L/min (116.67 L/s). The detailed calculations can be found in Appendix C.

The City provided the estimated water pressures at both the average day scenario, peak hour scenario, and the max day plus fire flow scenario for the demands indicated by the correspondence

in Appendix C. The resulting pressures for the boundary conditions results are shown in Table 2, below.

Table 2: Summary of Estimated Water Demand

Scenario	Proposed Demands (L/S)	Connection 1 HGL (m H_2O)* / kPa
Average Day Demand	2.44	54.4 / 533.5
Maximum Daily + Fire Flow Demand (FUS)	116.67	45.2 / 443.2
Peak Hourly Demand	12.94	46.0 / 451.1
* Adjusted for an estimated top of watermain elevation of 64.1m		

The normal operating pressure range is anticipated to be 451.1 kPa to 533.5 kPa and will not be less than 275 kPa (40 psi) or exceed 689 kPa (100 psi). The proposed watermains will meet the minimum required 20 psi (140 kPa) from the Ottawa Water Guidelines at the ground level under maximum day plus fire flow conditions.

To confirm the adequacy of fire flow to protect the proposed development, existing and proposed fire hydrants within 150 m of the proposed building were analysed per City of Ottawa ISTB 2018-02 Appendix I Table 1. The results are summarized below.

Table 3: Fire Protection Confirmation

Building	Fire Flow Demand (L/min.)	Hydrant(s) within 75m (5,700 L/min)	Hydrant(s) within 150m (3,800 L/min)	Combined Fire Flow (L/min.)
500 Coventry Rd	7,000	1 Prop. Private	1 Ex. Public	9,500

Based on City guidelines (ISTB-2018-02), the existing and proposed hydrants provide adequate protection for the proposed development. A hydrant coverage figure can be found in Appendix C.

4.3 Water Model Results

A water model was completed using the EPANet modelling software and the boundary condition results provided and noted above. The results determined that the proposed 200 mm watermain can adequately service the proposed development and provide sufficient fire flow. The model determined pressures during average day, maximum day plus fire flow, and peak hour demands. The model results identify the estimated pressures at the building finished floors and at fire

hydrants during fire flow conditions. For the purposes of determining pressures during the fire flow scenario, a demand of 116.7 L/s (7,000 L/min) was assumed at the proposed private hydrant.

Table 4: Water Pressure at Junctions

Junction	Average Day (kPa)	Max. Day + Fire Flow (kPa)	Peak Hourly (kPa)
J1	517.76	277.16	421.97
BLDG	517.95	277.26	415.60
FH	517.56	233.14	422.46

The normal operating pressure range is anticipated to be 416 kPa to 518 kPa and will not be less than 275 kPa (40 psi) or exceed 689 kPa (100 psi). The proposed watermain will meet the minimum required 140 kPa (20 psi) at the ground level under maximum day demand and fire flow conditions.

Given the water demand will exceed 50 m^3 per day, measures will need to be taken to avoid the formation of a vulnerable service area. It is proposed to install a new 300 mm diameter valve on the existing 300 mm diameter watermain within Coventry Road, west of the proposed connection point. In conjunction with the existing water valve located east of the proposed connection, the additional valve will allow for isolation and ensure that continual water supply is available to the site.

5.0 SANITARY DESIGN

5.1 Existing Sanitary Sewer

There is an existing 200-300 mm sanitary sewer located within Coventry Road, tributary to the Rideau River Collector Twin. No existing sanitary services are located within the site.

5.2 Proposed Sanitary Sewer

A new 250mm diameter PVC sanitary sewer is proposed to service the development extending from the existing maintenance structure MHSA70278 to the residential building. A 250mm diameter PVC service lateral will convey effluent discharge from the residential building to the proposed sewer. It is anticipated that sanitary flow monitoring would occur at the proposed maintenance structure MH3A in accordance with the Ottawa Sewer Design Guidelines and City of Ottawa Sewer-Use By-Law 2003-514 (14). Refer to plan C102.

Table 5, below, summarizes the wastewater design criteria identified by the Ottawa Sewer Guidelines.

Table 5: Sanitary Design Criteria

Design Parameter	Value
Site Area	3.46 ha
Residential	280 L/person/day
Residential Apartment – 1 Bedroom	1.4 person/unit
Residential Apartment – 2 Bedroom	2.1 person/unit
Residential Apartment – 3 Bedroom	3.1 person/unit
Residential Peaking Factor	3.32
Commercial/Amenity Peaking Factor	1.00
Extraneous Flow Allowance	0.33 L/s/ha

Table 6 below, summarizes the estimated wastewater flow from the existing and proposed building. Refer to Appendix D for detailed calculations.

Table 6: Summary of Estimated Sanitary Flow

Design Parameter	Total Flow (L/s)
Total Estimated Average Dry Weather Flow	2.61
Total Estimated Peak Dry Weather Flow	7.87
Total Estimated Peak Wet Weather Flow	8.84

The proposed sanitary network has been designed to attain a minimum full flow target velocity (cleansing velocity) of 0.6 m/s and a full flow velocity of not more than 3.0 m/s. The capacity of the proposed 250 mm sanitary sewer with a slope of 0.24% is 29.97 L/s. During the peak total estimated wet weather flow condition, the sewer will operate at an estimated capacity of 29.5%.

Based on correspondence with the City included in Appendix C, the City has noted that anticipated wastewater volumes from the proposed development can be accommodated within the existing municipal sanitary network.

6.0 STORM SEWER DESIGN

6.1 Existing Storm Sewers

The existing development is currently serviced via a private 300-525 mm diameter PVC storm network. The network collects runoff via at grade catchbasins and catchbasin maintenance structures before discharging to the existing 1350 mm concrete sewer within Coventry Road. Runoff from the development is tributary to the Ottawa River.

6.2 Proposed Storm Sewers

A new 250mm diameter service will extend from the 450 mm diameter PVC storm sewer within the existing storm network. Runoff from the residential building roof area will be collected by roof drains and conveyed to an internal cistern located within the below-grade parking garage. Runoff from the asphalt drive aisles surrounding the building will be collected by at-grade area drains before being conveyed to the internal cistern. Runoff from the cistern will be attenuated to the required release rate via an ICD prior to discharging via the proposed 250 mm storm service. ICD and cistern details are to be provided by the Mechanical Engineer.

Runoff from the landscaped areas east and south of the proposed residential building will be collected by a rear-yard catchbasin swale system. The 250 mm HDPE perforated subdrain will convey runoff to the existing private storm network without attenuation.

Foundation drainage is proposed to discharge without flow attenuation via the 250 mm diameter storm service extending from the residential building, downstream of any cistern controls.

See C102 for a detailed servicing layout and CCO-23-2497 - POST included in Appendix F of this report for more details. The Stormwater Management design for the subject property will be outlined in Section 7.0 of this report.

7.0 PROPOSED STORMWATER MANAGEMENT

7.1 Design Criteria and Methodology

As per Section 6.2, stormwater management for the proposed development will be maintained through the use of an internal cistern and will collect runoff from the roof and the drive aisle areas within the site.

In summary, the following design criteria have been employed in developing the stormwater management design for the site as directed by the City:

Quality Control

- Based on a distance of 2.0 km from the development to the municipal sewer outlet, quality control measures are not anticipated to be required.

Quantity Control

- Pre-development time of concentration (TC) shall be calculated and be no less than 10 minutes.
- Control site post-development flows to the 5-year pre-development flows with a combined C value of no greater than 0.50.

7.2 Runoff Calculations

Runoff calculations presented in this report are derived using the Rational Method, given as:

$$Q = 2.78CIA \quad (L/s)$$

Where: C = Runoff coefficient
I = Rainfall intensity in mm/hr (City of Ottawa IDF curves)
A = Drainage area in hectares

It is recognized that the Rational Method tends to overestimate runoff rates. As a result, the conservative calculation of runoff ensures that any SWM facility sized using this method is expected to function as intended. The following coefficients were used to develop an average C for each area:

Roofs/Concrete/Asphalt	0.90
Gravel	0.60
Gravely-Soil	0.40
Undeveloped and Grass	0.20

As per the City of Ottawa - Sewer Design Guidelines, the 5-year balanced 'C' value must be increased by 25% for a 100-year storm event to a maximum of 1.0.

7.3 Pre-Development Drainage

It has been assumed that the development area contains no stormwater management controls for flow attenuation. The estimated pre-development peak flows for the 5- and 100-year events are summarized below in Table 7. See CCO-23-2497 - PRE in Appendix E and Appendix G for calculations.

Table 7: Pre-Development Runoff Summary

Drainage Area	Area (ha)	C (5/100-Year)	Q (L/s)	
			5-Year	100-Year
A1	0.45	0.55/0.65	71.54	144.86
Total	0.45		71.54	144.86

7.4 Post-Development Drainage

To meet the stormwater objectives, the development will contain flow attenuation via internal cistern storage. Table 8, below, summarizes the required restricted flow for the roof.

Table 8: Required Restricted Flow

Drainage Area	Area (ha)	C (5-Year)	Q (L/s) 5-Year
A1	0.45	0.50	64.96

Based on the criteria listed in Section 7.1, the development will be required to restrict runoff to a maximum release rate of 64.96 L/s. See Appendix G for calculations.

The proposed site drainage limits are demonstrated on the Post-Development Drainage Area Plan. See CCO-23-2497 - POST in Appendix F of this report for more details. A summary of the post-development runoff calculations can be found below.

Table 9: Post-Development Runoff Summary

Drainage Area	Area (ha)	5-year Peak Flow (L/s)	100-year Peak Flow (L/s)	100-year Storage Required (m^3)	100-year Storage Available (m^3)
B1	0.34	9.71	18.57	107.58	110.00
B2	0.11	24.23	46.39	-	-
Total	0.45	33.94	64.96	107.58	110.00

Runoff for area B1 will be collected by roof drains (uncontrolled) and surface drains before being conveyed to the internal cistern. The 110.00 m^3 internal cistern is anticipated to convey attenuated runoff to the outlet at a maximum flow rate of 9.71 L/s and 18.57 L/s for the 5 and 100-year storms,

respectively. Flows in excess of the 100-year flow will need to be directed to the existing parking lot via a cistern overflow. The Mechanical Engineer is to provide further cistern and ICD details.

Runoff considered in area B2 consists of drainage collected by the rear -yard catchbasin system and drainage north of the building directed to the existing parking lot. Drainage from area B2 will be conveyed without attenuation to the existing storm sewer system within the parking lot.

8.0 EROSION AND SEDIMENT CONTROL

8.1 Temporary Measures

Before construction begins, temporary silt fence, straw bale or rock flow check dams will be installed at all-natural runoff outlets from the property. It is crucial that these controls be maintained throughout construction and inspection of sediment and erosion control will be facilitated by the Contractor or Contract Administration staff throughout the construction period.

Silt fences will be installed where shown on the final engineering plans, specifically along the downstream property limits. The Contractor, at their discretion or at the instruction of the City, Conservation Authority or the Contract Administrator shall increase the quantity of sediment and erosion controls on-site to ensure that the site is operating as intended and no additional sediment finds its way off site. The rock flow, straw bale & silt fence check dams and barriers shall be inspected weekly and after rainfall events. Care shall be taken to properly remove sediment from the fences and check dams as required. Fibre roll barriers are to be installed at all existing curb inlet catch basins and filter fabric is to be placed under the grates of all existing catch basins and manholes along the frontage of the site and any new structures immediately upon installation. The measures for the existing/proposed structures are to be removed only after all areas have been paved. Care shall be taken at the removal stage to ensure that any silt that has accumulated is properly handled and disposed of. Removal of silt fences without prior removal of the sediments shall not be permitted.

Although not anticipated, work through winter months shall be closely monitored for erosion along sloped areas. Should erosion be noted, the Contractor shall be alerted and shall take all necessary steps to rectify the situation. Should the Contractor's efforts fail at remediating the eroded areas, the Contractor shall contact the City and/or Conservation Authority to review the site conditions and determine the appropriate course of action. As the ground begins to thaw, the Contractor shall place silt fencing at all required locations as soon as ground conditions warrant. Please see the Site Grading, Drainage and Sediment & Erosion Control Plan for additional details regarding the temporary measures to be installed and their appropriate OPSD references.

8.2 Permanent Measures

It is expected that the Contractor will promptly ensure that all disturbed areas receive topsoil and seed/sod and that grass be established as soon as possible. Any areas of excess fill shall be removed or levelled as soon as possible and must be located a sufficient distance from any watercourse to ensure that no sediment is washed out into the watercourse. As the vegetation growth within the site provides a key component to the control of sediment for the site, it must be properly maintained once established. Once the construction is complete, it will be up to the landowner to maintain the vegetation and ensure that the vegetation is not overgrown or impeded by foreign objects.

9.0 SUMMARY

- A new 28-storey residential building is proposed to be constructed at 500 Coventry Road. The development is proposed within 0.45 ha of the site.
- A new 200 mm diameter PVC watermain is proposed to service the development with a connection to the 300 mm diameter watermain within Coventry Road. Fire protection for the development will be provided by a private hydrant proposed within the existing parking lot north of the residential building.
- Sanitary servicing for the development will be provided via a proposed 250mm PVC sanitary sewer extending from the existing maintenance structure (MHSA70278) within the site.
- A new 250mm diameter storm service for rooftop, surface and foundation drainage is proposed to service the building and surrounding drive aisle area.
- A rear-yard catchbasin system is proposed to collect runoff from the landscaped area east and south of the building.
- Storage for the 5- through 100-year storm events will be provided through internal cistern attenuation.
- Quality controls are not anticipated to be required due to the distance to the outlet.

10.0 RECOMMENDATION

Based on the information presented in this report, we recommend that City of Ottawa approve this Servicing and Stormwater Management report in support of the proposed development at 500 Coventry Road.

This report is respectfully being submitted for approval.

Regards,

Egis Group (formerly McIntosh Perry)

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11.0 STATEMENT OF LIMITATIONS

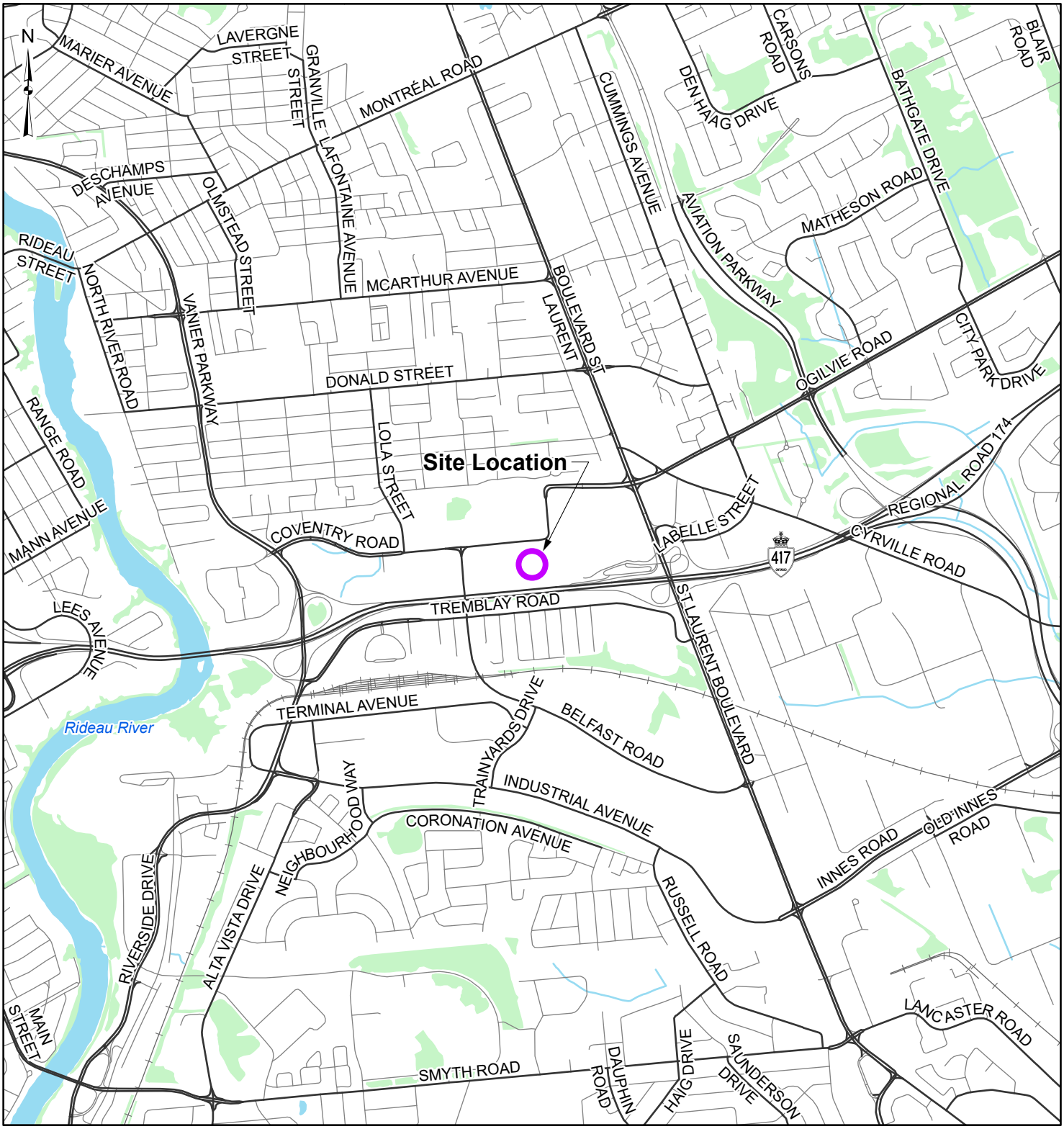
This report was produced for the exclusive use of Morguard Corporation. The purpose of the report is to assess the existing stormwater management system and provide recommendations and designs for the post-construction scenario that are in compliance with the guidelines and standards from the Ministry of the Environment, Parks and Climate Change, City of Ottawa and local approval agencies. Egis Group (formerly McIntosh Perry) reviewed the site information and background documents listed in Section 2.0 of this report. While the previous data was reviewed by Egis Group (formerly McIntosh Perry) and site visits were performed, no field verification/measures of any information were conducted.

Any use of this review by a third party, or any reliance on decisions made based on it, without a reliance report is the responsibility of such third parties. Egis Group (formerly McIntosh Perry) accepts no responsibility for damages, if any, suffered by any third party as a result of decisions or actions made based on this review.

The findings, conclusions and/or recommendations of this report are only valid as of the date of this report. No assurance is made regarding any changes in conditions subsequent to this date. If additional information is discovered or becomes available at a future date, Egis Group (formerly McIntosh Perry) should be requested to re-evaluate the conclusions presented in this report, and provide amendments, if required.

APPENDIX A
KEY PLAN

McINTOSH PERRY



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LEGEND

- Site Location
- Local Road
- Major Road
- Railroad
- Watercourse
- Waterbody
- Wooded Area

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2023.

CLIENT: MORGUARD CORPORATION

PROJECT: RESIDENTIAL BUILDING - 500 COVENTRY ROAD

TITLE: SITE LOCATION

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

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APPENDIX B
BACKGROUND DOCUMENTS

McINTOSH PERRY

Pre-Application Consultation Meeting Notes

Property Address: 500 Coventry Road
PC2022-0191
September 14, 2022; 1:30 PM – 3:00 PM – Microsoft Teams

Attendees:

City of Ottawa:

Kimberley Baldwin – *File Lead, Planner II*
Neeti Paudel – *Transportation PM*
Nishant Jhamb – *Infrastructure PM*
Randolph Wang – *Urban Designer*
Mary Ellen Wood – *Parks Planner*
Amber Chen – *Student Planner*

Applicants:

Christine Cole – *Morguard Corporation*
Paul Black – *Fotenn Consultants Inc.*
Jillian Simpson – *Fotenn Consultants Inc.*

Community Representatives:

Steven Boyle – *OCA*
Heather Amys – *OCA*

Regrets:

Mark Richardson – *Forester, City of Ottawa*

Subject: 500 Coventry Road

Meeting notes:

Opening & attendee introduction

- Introduction of meeting attendees

Overview of Proposal

- Site Plan Control Application
- 30-storey residential tower which includes 421 units, accessed via Coventry Road
- Site is currently a paid parking lot
- MTO 14m setback

Planning – Kimberley Baldwin

- What other properties does Morguard own in proximity to the site?
    - The entire 500 Coventry Road, shopping centre, and the site to the north of Coventry
- What is the rationale developing on the south end of the property in the first phase?
    - To place development on unencumbered lands and to locate it as close as possible to transit
- Zoning: TD3 [1988] S263-h1
    - See Exception 1988 - the "h1" holding symbol will not be lifted until all agreements required outlining the details of the relocation of Coventry Road to the north and west sides of 525 and 535 Coventry Road have been executed
    - Also in Exception 1988, after the holding symbol is removed, the full provisions of the TD3 zone will apply.
    - TD3 provisions, for a new building at this location:
        - On lots greater than 0.125 ha - Minimum 350 residential units/hectare
        - On lots greater than 0.125 ha - Minimum FSI for non-residential use 1.5 FSI
            - In the case of a mixed-use building, the minimums above only apply the use that occupies the most GFA.
        - In the case of a phased development, all phases must be shown on an approved site plan and:
            - must comply with the minimum densities noted above.
            - outdoor communal space requirement in Section 195(8): *for lots greater in area than 1250 m2, 2% of the total lot area must be provided as outdoor communal space located at grade anywhere on the lot and such area can also be used towards complying with any amenity area requirements*, but only for the portion of the property shown in that phase.
            - Maximum building height is 90 metres [as per Section 196 (e)]
- There are several policies applicable to this site. Please refer to the relevant policies in a Planning Rationale.
    - Official Plan - proposal should speak to both new and old OP policies.
        - 2003 OP - Property designated Mixed Use Centre.
        - New OP - Designation HUB, with an Evolving Neighbourhood Overlay
    - Tremblay, St. Laurent and Cyrville Secondary Plan - Site is within Area A - 30 storeys maximum envisioned in this area. Height of the proposal aligns with this policy.
    - Transit-Oriented Development (TOD) Plans - Lees, Hurdman, Tremblay, St. Laurent, Cyrville and Blair
        - Look for the St Laurent Policies in Section 10.4
        - See Pedestrian Network Plan (pg 87) and (pg 89) - key future pedestrian link on Coventry and two multi-use pathways
            - general location of these connection may vary due to expansion plans of the Shopping Centre; however, the route should safely connect the cycling lanes along Coventry Road to the Station. The route should be well-designed, sufficiently separate cyclists from cars, and contain few breaks and crossings. Refer to Section 8.11 of this document for details regarding the design of multi-use pathways.

        - Green Plan - identifies the need for a future private amenity area on this site
- Community Benefits Charge - The requested height and density will trigger a Community Benefits Charge (CBC). CBC is a flat 4% charge of the land value
- Staff have some concern with leaving the front parking lot as is and development beginning at the south end of the subject lands.
    - Leaving a parking lot seems counter-productive to city building goals for transit-oriented development and improving cycling and pedestrian safety in the St Laurent area.

Urban Design – Randolph Wang

- A Design Brief is required for a site plan control application and a scoped Design Brief is required for rezoning. The Terms of Reference is attached for convenience.
    - The Design Brief should document planning and design options explored and discussed and illustrate how the preferred option is recommended.
    - Please note both a wind study and a shadow study are required.
- The site is within a Design Priority Area, a visit to the City's urban design review panel for formal review is required.
- Please engage (re-engage) an architect and a landscape architect as early as possible.
- 500 Coventry Road is a very large parcel that can accommodate multiple buildings. It is extremely important to establish a clear long-term vision to guide the evolution of the property into an attractive and livable neighbourhood within the context of the TOD node and the shopping centre. The long-term vision can be articulated in a master site plan that illustrates key elements of the new neighbourhood – land use, street layout, pathway connections, parks, and other public spaces, built form. In the absence of such a master site plan, it is difficult to tell if the proposed tower is appropriate and optimal for achieving the potential of the larger site.
- With respect to the conceptual design presented at the meeting, the tower + podium approach is appropriate if a high-rise tower can be supported by policies. The building looks quite elegant with respect to general massing and proportions. However, it is difficult to tell if the location and orientation of the building is appropriate in the absence of a master site plan.
- In addition, it is crucially important that the proposed development is well connect to the LRT and the shopping mall when it is completed. It is important to follow the pedestrian desire lines.
- The attached pdf illustrates some of the above noted comments. It is mean to be self-explanatory. But if you have any questions, please feel free to reach out.

Infrastructure – Nishant Jhamb

General:

- **Sanitary sewer capacity**, **please provide the proposed sanitary sewer discharge rate asap and we will confirm the capacity. Please note that City can only commit the Sanitary sewer capacity once the SPC application is submitted.**
- Geotechnical report should address the **vibration and settlement** concern on 900mm watermain from construction. Report needs to recommend if vibration and settlement monitoring plan is required.

- It is the sole responsibility of the consultant to investigate the location of existing underground utilities in the proposed servicing area and submit a request for locates to avoid conflict(s). The location of existing utilities and services shall be documented on an **Existing Conditions Plan**.
- Any easements on the subject site shall be identified and respected by any development proposal and shall adhere to the conditions identified in the easement agreement. A **legal survey plan** shall be provided and all easements shall be shown on the engineering plans.
- A deep excavation and dewatering operations have the potential to cause damages to the neighboring adjacent buildings/ City infrastructure. Document that construction activities (excavation, dewatering, vibrations associated with construction, etc.) will not have an impact on any adjacent buildings and infrastructure.
- A **Record of Site Condition (RSC) in accordance with O.Reg.** 153/04 will be required to be filed and acknowledged by the Ministry prior to issuance of a building permit due to a change to a more sensitive property use.
- If there are any utilities being installed parallel within the existing Right of Way or a road modification within the existing Right of Way, or a shoring system with tie backs encroaching the ROW then a Municipal Consent Circulation would be required. The installation of any structure, structure footing, geo-membrane or perforated pipe encroaching into the existing ROW is not permitted without a separate Municipal Consent Approval.

- Reference documents for information purposes:
  - Ottawa Sewer Design Guidelines (October 2012)
  - Technical Bulletin PIEDTB-2016-01
  - Technical Bulletins ISTB-2018-01, ISTB-2018-02 and ISTB-2018-03.
  - Ottawa Design Guidelines - Water Distribution (2010)
  - Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa (2007)
  - City of Ottawa Slope Stability Guidelines for Development Applications (revised 2012)
  - City of Ottawa Environmental Noise Control Guidelines (January 2016)
  - City of Ottawa Accessibility Design Standards (2012) (City recommends development be in accordance with these standards on private property)
  - Ottawa Standard Tender Documents (latest version)
  - Ontario Provincial Standards for Roads & Public Works (2013)
  - Record drawings and utility plans are also available for purchase from the City (Contact the City's Information Centre by email at InformationCentre@ottawa.ca or by phone at (613) 580-424 x.44455).

Please note that this is the applicant responsibility to refer to the latest applicable guidelines while preparing reports and studies.

Stormwater Management Criteria and Information:

- **Water Quantity Control:** In the absence of area specific SWM criteria please control post-development runoff from the subject site, up to and including the **100-year storm event**, to **a 5-year pre-development level.** The pre-development runoff coefficient will need to be determined **as per existing conditions** but in no case more than 0.5. [**If 0.5 applies it needs to be clearly demonstrated in the report that the pre-development runoff coefficient is greater than 0.5**]. The time of concentration (T_c) used to

determine the pre-development condition should be calculated. *Tc should not be less than 10 min. since IDF curves become unrealistic at less than 10 min; T_c of 10 minutes shall be used for all post-development calculations*].

- Any storm events greater than the established **5-year allowable** release rate, up to and including the **100-year storm event**, shall be detained on-site. The SWM measures required to avoid impact on downstream sewer system will be subject to review.
- Please note that foundation drainage is to be independently connected to sewer main unless being pumped with appropriate back up power, sufficient sized pump and back flow prevention. **It is recommended that the foundation drainage system be drained by a sump pump connection to the storm sewer to minimize risk of basement flooding as it will provide the best protection from the uncontrolled sewer system compared to relying on the backwater valve.**
- **Water Quality Control:** Please consult with the local conservation authority regarding water quality criteria prior to submission of a Site Plan Control Proposal application to establish any water quality control restrictions, criteria and measures for the site. Correspondence and clearance shall be provided in the Appendix of the report.
- Please note that as per *Technical Bulletin PIEDTB-2016-01 section 8.3.11.1 (p.12 of 14)* **there shall be no surface ponding on private parking areas during the 5-year storm rainfall event**.
- **Underground Storage:** please note that the Modified Rational Method for storage computation in the Sewer Design Guidelines was originally intended to be used for above ground storage (i.e. parking lot) where the change in head over the orifice varied from 1.5 m to 1.2 m (assuming a 1.2 m deep CB and a max ponding depth of 0.3 m). This change in head was small and hence the release rate fluctuated little, therefore there was no need to use an average release rate.
  When underground storage is used, the release rate fluctuates from a maximum peak flow based on maximum head down to a release rate of zero. This difference is large and has a significant impact on storage requirements. **We therefore require that an average release rate equal to 50% of the peak allowable rate shall be applied to estimate the required volume. Alternatively, the consultant may choose to use a submersible pump in the design to ensure a constant release rate.**

  If there is a disagreement from the designer regarding the required storage, The City will require that the designer demonstrate their rationale utilizing dynamic modelling, that will then be reviewed by City modellers in the Water Resources Group.

  Provide information on type of underground storage system including product name and model, number of chambers, chamber configuration, confirm invert of chamber system, top of chamber system, required cover over system and details, interior bottom slope (for self-cleansing), chart of storage values, length, width and height, capacity, entry ports (maintenance) etc. UG storage to provide actual 2- and 100-year event storage requirements.

  Regarding all proposed UG storage, ground water levels (and in particular HGW levels) will need to be reviewed to ensure that the proposed system does not become surcharged and thereby ineffective.

  Modeling can be provided to ensure capacity for both storm and sanitary sewers for the proposed development by City's Water Distribution Dept. – Modeling Group, through PM and upon request.

- Post-development site grading shall match existing property line grades to minimize disruption to the adjacent residential properties. A **topographical plan of survey** shall be provided as part of the submission and a note provided on the plans.
- Please provide a **Pre-Development Drainage Area Plan** to define the pre-development drainage areas/patterns. **Existing drainage patterns shall be maintained and discussed as part of the proposed SWM solution**.
- **If rooftop control** and storage is proposed as part of the SWM solutions sufficient details (Cl. 8.3.8.4) shall be discussed and document in the report and on the plans. Roof drains are to be connected downstream of any incorporated ICDs within the SWM system and not to the foundation drain system. Provide a **Roof Drain Plan** as part of the submission.
- There must be at least **15cm of vertical clearance** between the spill elevation and the ground elevation at the building envelope that is in proximity of the flow route or ponding area. The exception in this case would be at reverse sloped loading dock locations. At these locations, a minimum of 15cm of vertical clearance must be provided below loading dock openings. Ensure to provide discussion in report and ensure grading plan matches if applicable.
- Street catchbasins are not to be located at any proposed entrances.

Storm Sewer:

- A 1350mm dia. CONC storm sewer (1967) is available within Coventry Road**.**
- A storm sewer monitoring maintenance hole is required to be installed at the property line (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) *Monitoring Devices*.

Sanitary Sewer

- A 250 mm dia. AC Sanitary sewer (1961) is available within Coventry Road**.**
- **Sanitary sewer capacity**, We can only commit the Sanitary sewer capacity once the SPC application is submitted.
- Please apply the wastewater design flow parameters *in Technical Bulletin PIEDTB-2018-01.*
- Sanitary sewer monitoring maintenance hole is required to be installed at the property line (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) *Monitoring Devices*.
- A backwater valve is required on the sanitary service for protection.
- Include correspondence from the Architect within the Appendix of the report confirming the number of residential units per building **and a unit type breakdown for each of the buildings** to support the calculated building populations.

Water:

- A 300 mm dia. CI watermain (1961) is available within Coventry Road**.**
- Existing residential service to be blanked at the main.
- **Water Supply Redundancy:** Residential buildings with a basic day demand greater than 50m^3/day (0.57 L/s) are required to be connected to a minimum of two water services separated by an isolation valve to avoid a vulnerable service area as per the *Ottawa Design Guidelines - Water Distribution, WDG001, July 2010 Clause 4.3.1 Configuration.* The basic day demand for this site not expected to exceed 50m^3/day.

- Please **review Technical Bulletin ISTB-2018-0**, maximum fire flow hydrant capacity is provided in Section 3 Table 1 of Appendix I. A **hydrant coverage figure** shall be provided and **demonstrate there is adequate fire protection for the proposal**. Two or more public hydrants are anticipated to be required to handle fire flow.
- Boundary conditions are required to confirm that the require fire flows can be achieved as well as availability of the domestic water pressure on the City street in front of the development. Use Table 3-3 of the MOE Design Guidelines for Drinking-Water System to determine Maximum Day and Maximum Hour peaking factors for 0 to 500 persons and use Table 4.2 of the Ottawa Design Guidelines, Water Distribution for 501 to 3,000 persons. Please provide the following information to the City of Ottawa via email to request water distribution network boundary conditions for the subject site. Please note that once this information has been provided to the City of Ottawa it takes approximately 5-10 business days to receive boundary conditions.
    - Type of Development and Units
    - Site Address
    - A plan showing the proposed water service connection location.
    - **Average Daily Demand** (L/s)
    - **Maximum Daily Demand** (L/s)
    - **Peak Hour Demand** (L/s)
    - **Fire Flow** (L/min)

[*Fire flow demand requirements shall be based on **Fire Underwriters Survey (FUS)** Water Supply for Public Fire Protection 1999*]

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

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

Road Reinstatement

Ensure that Road reinstatement details satisfies the City's Resurfacing policy. https://documents.ottawa.ca/sites/documents/files/road_cut_policy_scenarios_en.pdf

CCTV sewer inspection

CCTV sewer inspection required for pre and post construction conditions to ensure no damage to City Assets surrounding site.

Pre-Construction Survey

Pre-Construction (Piling/Hoe Ramming or close proximity to City Assets) and/or Pre-Blasting (if applicable) Survey required for any buildings/dwellings in proximity of 75m of site and circulation of notice of vibration/noise to residents within 150 m of site. Conditions for Pre-Construction/ Pre-Blast Survey & Use of Explosives will be applied to agreements. Refer to City's Standard S.P. No. F-1201 entitled Use of Explosives, as amended.

Required Engineering Plans and Studies:

PLANS:

- Existing Conditions and Removals Plan
- Site Servicing Plan
- Grade Control and Drainage Plan
- Erosion and Sediment Control Plan
- Roof Drainage Plan
- Foundation Drainage System Detail (if applicable)
- Topographical survey

REPORTS:

- Site Servicing and Stormwater Management Report
- Geotechnical Study/Investigation
- Slope Stability Assessment Reports (if required, please see requirements below)
- Noise Control Study
- Phase I ESA
- Phase II ESA (Depending on recommendations of Phase I ESA)
- RSC (Record of the site Conditions)
- Site lighting certificate
- Wind analysis
- Vibration and settlement monitoring plan for 900mm watermain(if recommended in geotechnical report)

Please refer to the **City of Ottawa Guide to Preparing Studies and Plans [Engineering]:**

Specific information has been incorporated into both the Guide to Preparing Studies and Plans for a site plan. The guide outlines the requirement for a statement to be provided on the plan about where the property boundaries have been derived from.

Added to the general information for servicing and grading plans is a note that an O.L.S. should be engaged when reporting on or relating information to property boundaries or existing conditions. The importance of engaging an O.L.S. for development projects is emphasized.

Phase One Environmental Site Assessment:

- A Phase I ESA is required to be completed in accordance with Ontario Regulation 153/04 in support of this development proposal to determine the potential for site contamination. Depending on the Phase I recommendations a Phase II ESA may be required.
- The Phase I ESA shall provide all the required Environmental Source Information as required by O. Reg. 153/04. ERIS records are available to public at a reasonable cost and need to be included in the ESA report to comply with O.Reg. 153/04 and the Official Plan. The City will not be in a position to approve the Phase I ESA without the inclusion of the ERIS reports.
- Official Plan Section 4.8.4:

https://ottawa.ca/en/city-hall/planning-and-development/official-plan-and-master-plans/official-plan/volume-1-official-plan/section-4-review-development-applications#4-8-protection-health-and-safety

RSC (Record of the site Conditions)

- An RSC is required when changing the land use (zoning) of a property to a more sensitive land use.

Submitting a record of site condition | Ontario.ca

Geotechnical Investigation:

- A Geotechnical Study/Investigation shall be prepared in support of this development proposal.
- Reducing the groundwater level in this area can lead to potential damages to surrounding structures due to excessive differential settlements of the ground. The impact of groundwater lowering on adjacent properties needs to be discussed and investigated to ensure there will be no short term and long term damages associated with lowering the groundwater in this area.
- Geotechnical Study shall be consistent with the **Geotechnical Investigation and Reporting Guidelines for Development Applications**.
- Geotechnical report should address the **vibration and settlement** concern on 900mm watermain from construction. Report needs to recommend if vibration and settlement monitoring plan is required.

https://documents.ottawa.ca/sites/default/files/documents/cap137602.pdf

Slope Stability Assessment Reports

- A report addressing the stability of slopes, prepared by a qualified geotechnical engineer licensed in the Province of Ontario, should be provided wherever a site has slopes (existing or proposed) steeper than 5 horizontal to 1 vertical (i.e., 11 degree inclination from horizontal) and/or more than 2 metres in height.
- A report is also required for sites having retaining walls greater than 1 metre high, that addresses the global stability of the proposed retaining walls. https://documents.ottawa.ca/en/document/slope-stability-guidelines-development-applications

Noise Study:

- A **Transportation Noise Assessment** is required as the subject development is located within 100m proximity of Coventry Road and Belfast Road and within 500 m of Hwy #417.
- A **Stationary Noise Assessment** is required in order to assess the noise impact of the proposed sources of stationary noise (mechanical HVAC system/equipment) of the development onto the surrounding residential area to ensure the noise levels do not exceed allowable limits specified in the City Environmental Noise Control Guidelines.
- **Detailed Noise Study** in Support of Class 4 Designation that verifies applicable sound level limits will be met at the new noise sensitive land use with the appropriate mitigation measures for all noise sources to achieve a Class 4 designation to include in Appendix A of Part 1 of the ENCG, pursuant to the ENCG and NPC-300.

https://documents.ottawa.ca/sites/default/files/documents/enviro_noise_guide_en.pdf

Wind analysis:

When greater than 9 storey in height Wind Study for all buildings/dwellings.

- A wind analysis must be prepared, signed and stamped by an engineer who specializes in pedestrian level wind evaluation. Where a wind analysis is prepared by a company which do not have extensive experience in pedestrian level wind evaluation, an independent peer review may be required at the expense of the proponent.

Terms of Reference: Wind Analysis (ottawa.ca)

Exterior Site Lighting:

- Any proposed light fixtures (both pole-mounted and wall mounted) must be part of the approved Site Plan. All external light fixtures must meet the criteria for Full Cut-off Classification as recognized by the Illuminating Engineering Society of North America (IESNA or IES), and must result in minimal light spillage onto adjacent properties (as a guideline, 0.5 fc is normally the maximum allowable spillage). To satisfy these criteria, the please provide the City with a **Photometric Plan and Certification (Statement) Letter** from an acceptable professional engineer stating that the design is compliant.

Vibration and settlement monitoring on Backbone Watermain:

- A 914mm dia. backbone watermain is located within Coventry Road. Please note that to ensure the integrity of the nearby watermain the applicant may be required to develop a Vibration and Settlement Monitoring Program. A Vibration and settlement Monitoring Specialist Engineer shall undertake monitoring, develop a vibration and settlement monitoring plan, and prepare a protection plan, an emergency response plan, ensure conformance and shall issue certificates of conformance. The Vibration and settlement Monitoring Specialist Engineer shall be a licensed engineer in the Province of Ontario with a minimum of five years of experience in the field of Vibration and settlement monitoring. Vibration and settlement monitors are to be to be placed directly on the watermain. The maximum peak particle velocities are to be in accordance with Table 1 of the City of Ottawa Specification F-1201.
  Note: In addition to requirement of a vibration specialist engineer required to design and monitor vibration, a certificate of liability insurance shall be submitted to the City wherein the Owner is the named insured and the City of Ottawa is an additional insured. The limits of the policy shall be in the amount of $25,000,000 and shall be kept in full force and effect for the term of the construction work.

Fourth (4th) Review Charge:

Please be advised that additional charges for each review, after the 3rd review, will be applicable to each file. There will be no exceptions.

Construction approach – Please contact the Right-of-Ways Permit Office TMconstruction@ottawa.ca early in the Site Plan process to determine the ability to construct site and copy File Lead on this request.

Please note that these comments are considered preliminary based on the information available to date and therefore maybe amended as additional details become available and presented to the City. It is the responsibility of the applicant to verify the above information. The applicant

may contact me for follow-up questions related to engineering/infrastructure prior to submission of an application if necessary.

If you have any questions or require any clarification, please let me know.

Transportation – Neeti Paudel

- Follow Traffic Impact Assessment Guidelines
    - Proceed to scoping of the TIA. Start this process as soon as possible.
    - The application will not be deemed complete until the submission of the draft step 2-4, including the functional draft RMA package (if applicable).
- The new and the current Official Plan do not appear to show a realignment of Coventry, an OPA may be needed to move forward with the realignment.
- The widening of Coventry from Belfast to St Laurent is a phase 3 project in the TMP. Note there would be no front ending possible before 2031. EA for Coventry is anticipated to start in 2023 based on budget deliberations. The EA would consider requirements for both widening and realignment.
- Modifying the bend to make it a four-legged intersection at existing Coventry and the proposed access triggers an RMA. RMA package should be provided for review with the application (this includes functional design, cost estimate). Note this is all to be developer funded.
- Please clarify what roads are to be private and public.
- For the TIA, please assess the interim as well as ultimate conditions. If the access road is to be proposed at the existing bend before modifying to the proposed ultimate intersection, ensure sight lines are assessed as part of the TIA. This triggers safety (close to the signal and at horizontal curvature).
- The TOD plan shows a MUP along the frontage of the access road and connects to the LRT station. Explore providing proper and direct connection to the LRT.
- On site plan:
- Show all details of the roads abutting the site up to and including the opposite curb; include such items as pavement markings, accesses and/or sidewalks.
- Turning templates will be required for all accesses showing the largest vehicle to access the site; required for internal movements and at all access (entering and exiting and going in both directions).
- Show all curb radii measurements; ensure that all curb radii are reduced as much as possible
- Show lane/aisle widths.
- As the site proposed is residential, AODA legislation applies for all areas accessible to the public (i.e. outdoor pathways, parking, etc.).
- Site is in a TOD area – therefore TOD measures would apply. To achieve target mode shares within TOD zones, we highly recommend developments to provide as many TDM measures as possible and to provide only the minimum number of required parking.

Parks – Mary Ellen Wood

Parkland dedication

- Please note that Parks and Facilities Planning has recently undertaken a legislated replacement of the Parkland Dedication By-law, with the new by-law approved by City Council on August 31, 2022. To ensure you are aware of parkland dedication

requirements for your proposed development, we encourage you to familiarize yourself with the staff report and By-Law that were approved by Council on August 31, 2022.

- The amount of parkland dedication that is required is to be calculated as per the City of Ottawa Parkland Dedication By-law.
- The property at 500 Coventry Road is 34,640m2.
- For residential development the parkland dedication will be calculated using the recently approved bylaw as outlined in Section 4, Table 1:

Density	Type of Development or Use	Maximum Conveyance Requirement
Residential density greater than 18 dwelling units/net hectare	Dwelling units within an apartment dwelling, high-rise (as defined by the Zoning By-law)	• Conveyance of parkland: 1 hectare per 300 dwelling units The required conveyance shall not exceed an amount equivalent to 25% of the gross land area

- The site plan proposes 421 units which would equate to 1.4ha required parkland, however the bylaw indicates the conveyance shall not exceed an amount equivalent to 25% of the gross land area. Therefore, 25% of the gross land area (34,640m2) equates to 8,660m2 (0.86ha) required parkland conveyance.
- Section 5 – Transit Oriented Development Zones indicates for residential development on lands zoned as Transit Oriented Development, pursuant to the Zoning By-law, if the required total conveyance exceeds 10% of the gross land area, conveyance in the form of parkland shall not exceed 10% of the gross land area with the remainder of the required conveyance to be provided as cash-in-lieu of parkland.
- Therefore, parkland conveyance equates to 3,464m2 with the remainder of the required conveyance (5,196m2) to be provided as cash-in-lieu of parkland.
- Please note, the required total conveyance can be provided as parkland (land conveyance) if preferred by the property owner.
- PFP will request a surveyor's certificate to confirm parkland dedication.
- Please note that the park comments are preliminary and will be finalized (and subject to change upon receipt of the development application and supporting documentation. Additionally, if the proposed land use changes, then the parkland dedication requirement will be re-evaluated accordingly.

Form of Parkland Dedication:

- PFP will be requesting **land conveyances** for parkland dedication in accordance with the Parkland Dedication By-law.
- PFP's request is for land conveyance within the initial site plan application at 500 Coventry Road.
- Requesting a Master Plan with phasing plan to demonstrate where/when parkland will be developed.
- If the Master Plan and phasing plan can demonstrate how existing and future required parkland can be consolidated with Morguard's other land holdings to create a larger park

block, PFP is open to further discussions on how consolidate parkland could be achieved.
- The City may consider the conveyance of land outside of the site being developed if the City is satisfied that the land provides a benefit to the residents of the land being developed; and the City will decide if the conveyance of land outside of the site being developed is appropriate at the time of development approval, as applicable.
- The land to be conveyed shall be free of encumbrances above and below ground, be of a usable shape, topography and size that reflects intended park use.

Shape & Location of Park Block:

- The required parkland dedication is requested in land conveyance. The proposed park block is to be the full required parkland at 3,464m2. Please confirm the size of the park block through a surveyor's certificate.
- Park location requires municipal frontage (Coventry Road) unless a new public right-of-way will be introduced internally to the site.
- The proposed park location needs to lend itself to expansion through future development.
- The proposed building heights surrounding the park block should be reviewed to ensure no impacts on the park and minimize shadow and wind impacts. Requesting a Shadow and Wind Study.
- Any proposed buildings adjacent to the park block should be reviewed with respect to Building Code setbacks from the park. Once a park block is conveyed to the City, a new property boundary will be created, consideration should be given to increase limiting distance between buildings and park property line.

Developer Requirements for Land Conveyance of a Park Block:

- Please review the following reference documents which outline the requirements for parkland dedication and park block conveyance to the City;
    - City of Ottawa Park Development Manual, 2nd edition
    - City of Ottawa Parkland Dedication By-Law
    - The standard parks conditions.

- Site plan illustrating the park block is to show high level park grading on the Preliminary Grading Plan, including key spot elevations, stormwater flow arrows and slope percentages. Park block is to be graded to the surrounding levels and needs to show positive surface drainage towards the ROW.
- Park services are to be provided as per the standard park requirement. The developer is responsible for services (hydro, water, sanitary and stormwater) to the future park block. Services are to be connected from a municipal street.

General Comments:

- Through a zoning by-law amendment, the park block is to be identified and appropriately zoned.
- PFP will provide park conditions for park development once a formal site plan control application is submitted.

TCR requirements:

1. a Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City
    a. an approved TCR is a requirement of Site Plan approval.
    b. The TCR may be combined with the LP provided all information is supplied
2. Any removal of privately-owned trees 10cm or larger in diameter, or city-owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.
3. The Planning Forester from Planning and Growth Management as well as foresters from Forestry Services will review the submitted TCR
    a. If tree removal is required, both municipal and privately-owned trees will be addressed in a single permit issued through the Planning Forester
    b. Compensation may be required for city owned trees – if so, it will need to be paid prior to the release of the tree permit
4. 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
5. please identify trees by ownership – private onsite, private on adjoining site, city owned, co-owned (trees on a property line)
6. If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained
7. 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
        a. the location of tree protection fencing must be shown on the plan
        b. show the critical root zone of the retained trees
        c. if excavation will occur within the critical root zone, please show the limits of excavation
8. 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.
9. For more information on the process or help with tree retention options, contact Mark Richardson mark.richardson@ottawa.ca or on City of Ottawa

LP tree planting requirements:

For additional information on the following please contact tracy.smith@Ottawa.ca

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.

Sensitive Marine Clay

- Please follow the City's 2017 Tree Planting in Sensitive Marine Clay guidelines

Tree Canopy Cover

- 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.

Overbrook Community Association – Steven Boyle and Heather Amys

A proposed site plan application has been presented for the redevelopment of a portion only (south east corner) of the property at 500 Coventry Road. The existing height limitation on the specific zoning Schedule S263 for this property and the need to remove by by-law the h1 holding provision both will also likely necessitate a rezoning application for this exception zone TD3[1988] S263-h1.
The following comments are initial comments and are based on the information provided to date, which is lacking as to what the full redevelopment plans are for all of the lands at 500 Coventry Road.

1 - Need concept plan for the whole property, including regard to the TOD Plan
Information was provided on the more than a decade old concept plan for the possible expansion and infill of the St. Laurent Centre site and realignment of Coventry Road, sites adjacent or across the road from this one. But no information was provided as to what is planned for the full site at 500 Coventry Road. All that was shown was a suggested Phase 2 redevelopment of the southwest corner of the property with a similar residential tower as is proposed for the southeast corner portion of the property and the reuse of a surface parking lot.

The St. Laurent TOD Plan (2014) does give guidance as to: potential new interior road patterns (figure 49), parkland dedications per development block (figure 50) and much needed improvements of connections for pedestrians and cyclists to the St. Laurent LRT station (figures 47 and 48). The first two of these should be more fully carried through in a full redevelopment plan for this property at 500 Coventry Road. If there are to be public roads, potential cul-de-sac(s), or private roads they should be known at this stage – see Annex 1. This is especially the case if future consent applications are planned or a public park dedication that would need to have legal frontage on a public street.

2 - Parkland dedication and park location
There is need for identification of a parkland dedication block on this parcel of land at 500 Coventry Road. New residents of the development of the very first portion of this site (phase 1) need such a public park space. Having a park location identified is a critical element of the overall concept plan for development of the whole of the block at 500 Coventry Road. It would also be good for marketing purposes to identify this attractive community feature.

The City and Morguard should investigate all of the following, with the third option being one the Overbrook Community Association supports:

1. **Option 1 - Piece meal dedication** – the first dedication is only a parcel of a size warranted by the development planned in the southeast corner (Phase 1 tower). Subsequent dedication would be added as other phases of land redevelopment occur.
2. **Option 2 - This site only** – an advance dedication of a single block occurs based on the development planned for the whole of 500 Coventry Road with credit noted when required for future site plan applications.
3. **Option 3 - Large dedication with credit from off-site** – this would involve #2 above but with an even larger block of parkland identified on-site with some dedicated being transferred from future redevelopment on other neighbouring Morguard lands to the east and north. The City would credit the landowner for such “over” dedication/provision of parkland on this site for when conditions of redevelopment approval occur later on those off-site parcels.

Hopefully any park location is not severely impacted by the shadow(s) of a 30 story building(s) nor the need to required frontage on a public road hopefully not directly along Coventry Road – a busy arterial roadway.

3 - Amount of car parking provided

A total of 421 dwelling units are proposed with 142 underground parking spaces and 287 surface parking spaces to the north (already existing). We were very pleased to learn that this surface parking may be reduced (hopefully almost eliminated) as further redevelopment of the rest of 500 Coventry Road occurs in future phases. Even as an interim facility the large surface parking lot needs to be improved both visually and functionally as it is more of an eye-sore now than even a normal planned parking lot with landscaping.

4 - Bicycle parking

The provision of secure indoor bicycle parking spaces is needed for apartment/condo owners/tenants and commercial/office users. The Overbrook Community Association is making a standard request that when a more detailed site plan application is presented that the bicycle parking rate not be the zoning by-law's minimum of 0.5 spaces/unit but rather 1.0 spaces/unit. We seek and see the need for more bicycle parking to provide for the active transportation needs of residents. If units will be occupied by 1, 2 or more persons then more than the 0.5 bicycle parking space/unit should be provided. Many of the residential redevelopment proposals (of all sizes low-rise to high-rise) in our community provide rates of provision of bicycle parking. We see that the two 30 towers proposed at 1209 St. Laurent Boulevard will be providing bicycle parking at the rate of 1.0 spaces/unit. We expect the same here. Do not forget about providing some exterior bicycle parking for visitors and this at prominent locations near main doors.

5 - Access to LRT station

It is very good to see proposed cycling and pedestrian connection from this site, on its south side and east side, leading to/from the St. Laurent Centre and the St. Laurent LRT station. Most of these connections would be off-site and it is not entirely clear how they would link past 1400 St. Laurent Boulevard (office building) and navigate the narrow space with the existing road around the shopping centre to reach the transit station. More work does need to be done on this. It is however imperative that a good connection be provided from day one for the first residents of the first tower at 500 Coventry Road as they want to access both to the shopping centre and transit to their east.

Although not directly related to this site plan application, we are providing Annex 2 that shows the community of Overbrook's long standing desire to have a more direct route for pedestrians and cyclists to/from the community across the St. Laurent Centre lands to the St. Laurent LRT station. The "L" shaped route would serve 500 Coventry Road but being not as direct a route (the diagonal) from Overbrook it will not be used. Both access options illustrated in Annex 2 are needed ultimately.

6 - Heat island impacts

Consider green roofs. The City of Gatineau now requires developments of larger than 2,000 m2 to have 20% of their roof as green (vegetation). Be a leader and do the same or more here. The "*City of Ottawa Urban Heat Island Map (Inside Greenbelt)*" shows the single biggest and hottest heat island in all the urban area is located right here in Overbrook – see Annex 3. This site at 500 Coventry Road is located to the immediate west of that red hot signature of the St. Laurent Centre. Design and redevelopment so to improve not worsen the heat island in our community.

7 - Loss of existing trees
It is regrettable that trees, particular mature ones, are lost when redevelopment occurs. Identify any trees along the Coventry Road frontage and along the common property line with neighbouring 1400 St. Laurent Boulevard (office building) that might be retained. New trees must be planted on site to compensate and to green the site. A community target of 40% tree canopy coverage is sought. Aim for that.

8 - Buildings and urban design
Only a rough conceptual plan of a tower and its west and north podium blocks was presented. Amenity space would be provided on the roof of the 7 story podium blocks and the underground parking garage entrance on the west side of the building would appear to be a shared one with a mirror or twin redevelopment with a residential tower on the southwest corner of this property. We need to see more detailed plans in particular for the façades, especially those at the lower ground/sidewalk level, to see how they contribute to the urban streetscape. We look forward to review of those plans by the Urban Design Review Panel.

9 - Unit mix – multi-bedrooms
We note at this rough early stage only that the average condo/apartment size proposed is 708 sq. ft. (66 m2) but we do not know the unit mix planned. The Overbrook Community Association seeks a balance mix of residential unit sizes in new buildings – not just all small bachelor and one bedroom units. Families and bigger households should be provided for too. Please consider inclusion of a fair number of 2 and especially 3 bedroom units.

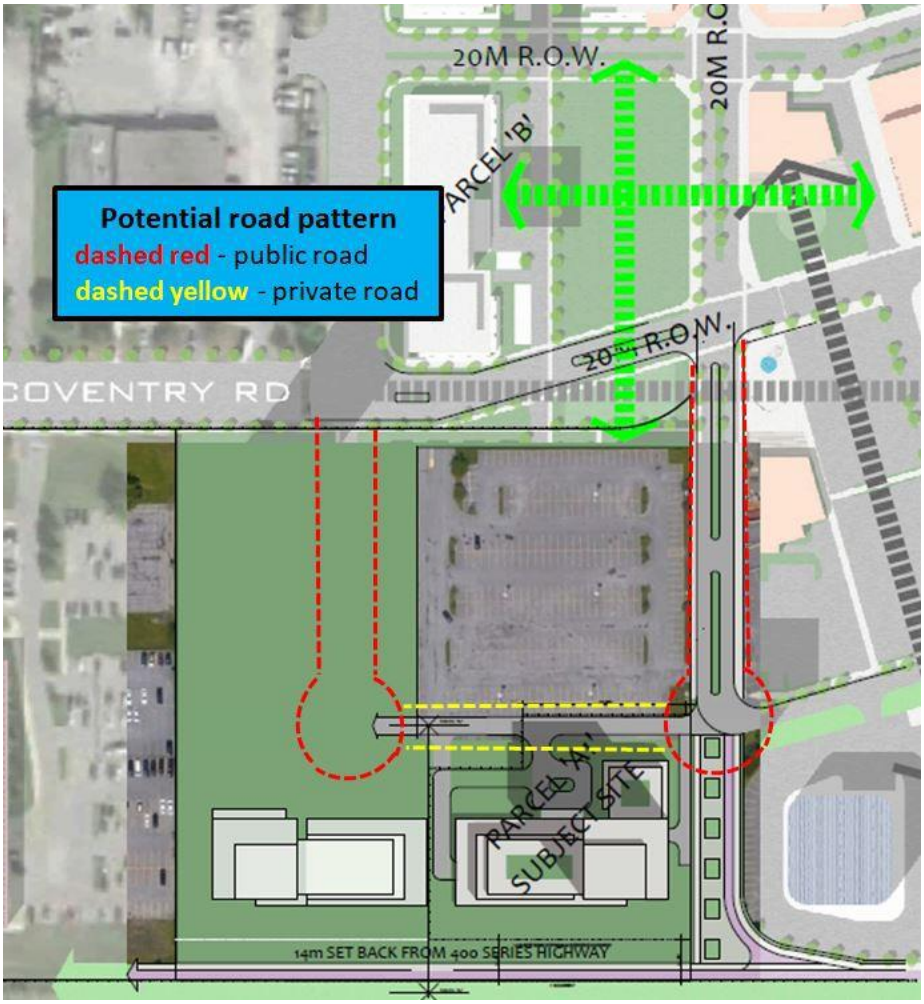
10 - A complete community
Complete communities need greenspace and good transit connections – fortunately both are anticipated to be provided with the redevelopment of 500 Coventry Road. Another key element of complete communities is access to stores/offices providing services and good for everyday living. Especially sought after is a grocery store. See if such a new tenant is able to locate at the St. Laurent Centre. This would be another draw for residents wanting to live at 500 Coventry Road (in this or future phases of its development).

11 - Community Benefit Charges
These will be expected to be negotiated and provided for per the City's policy/strategy and by-law to permit the collection of such charges for sites with large scale development or redevelopment.

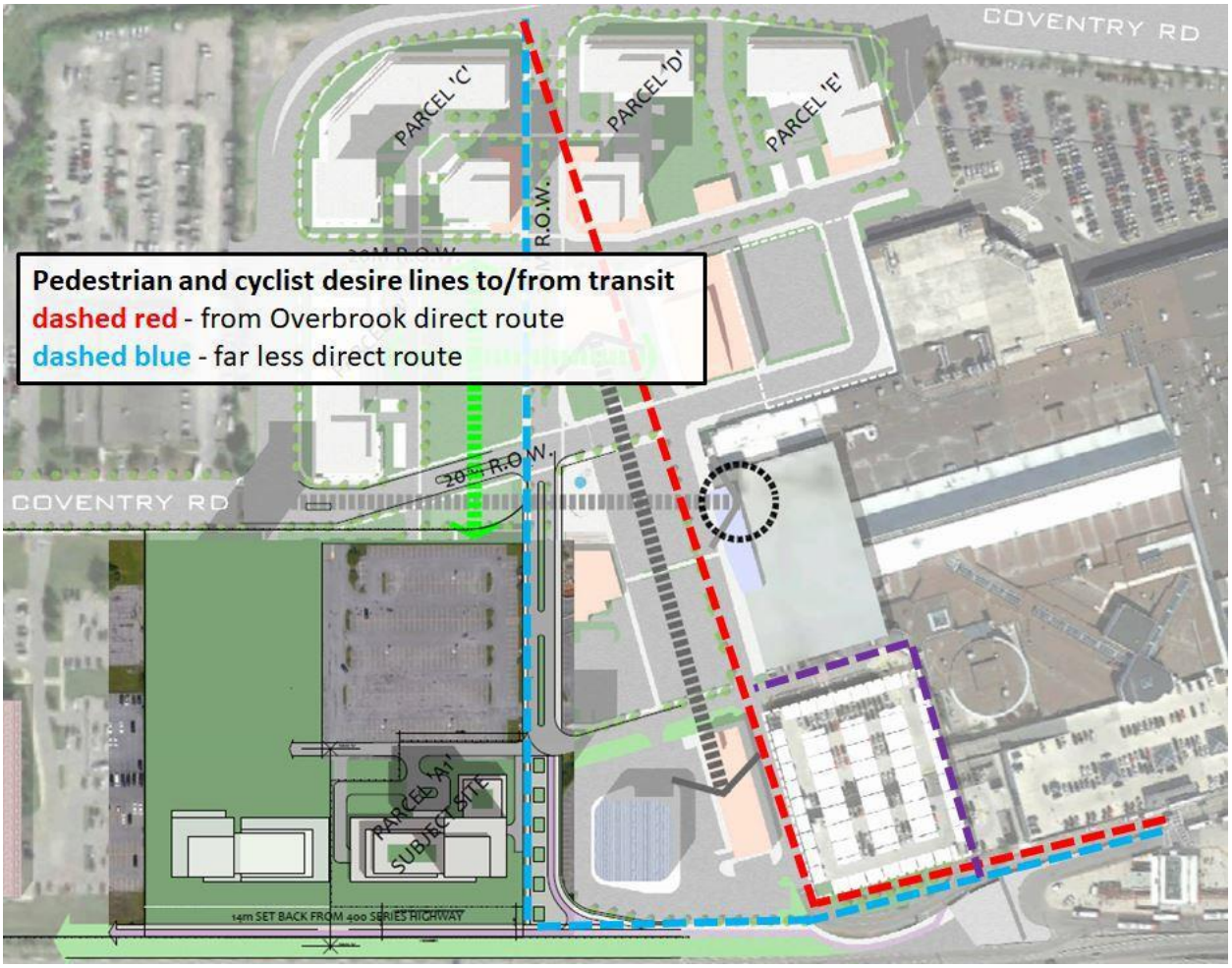
Conclusion and Next Steps

- Meeting minutes and comments sent to all attendees.
- Submission requirements sent to the applicant
- City staff are keen to see Morguard's master planning for the area.
- Please feel free to reach out to staff and meeting attendees to consult on Master Planning for this area and/or revised concepts leading up to a Formal Submission.

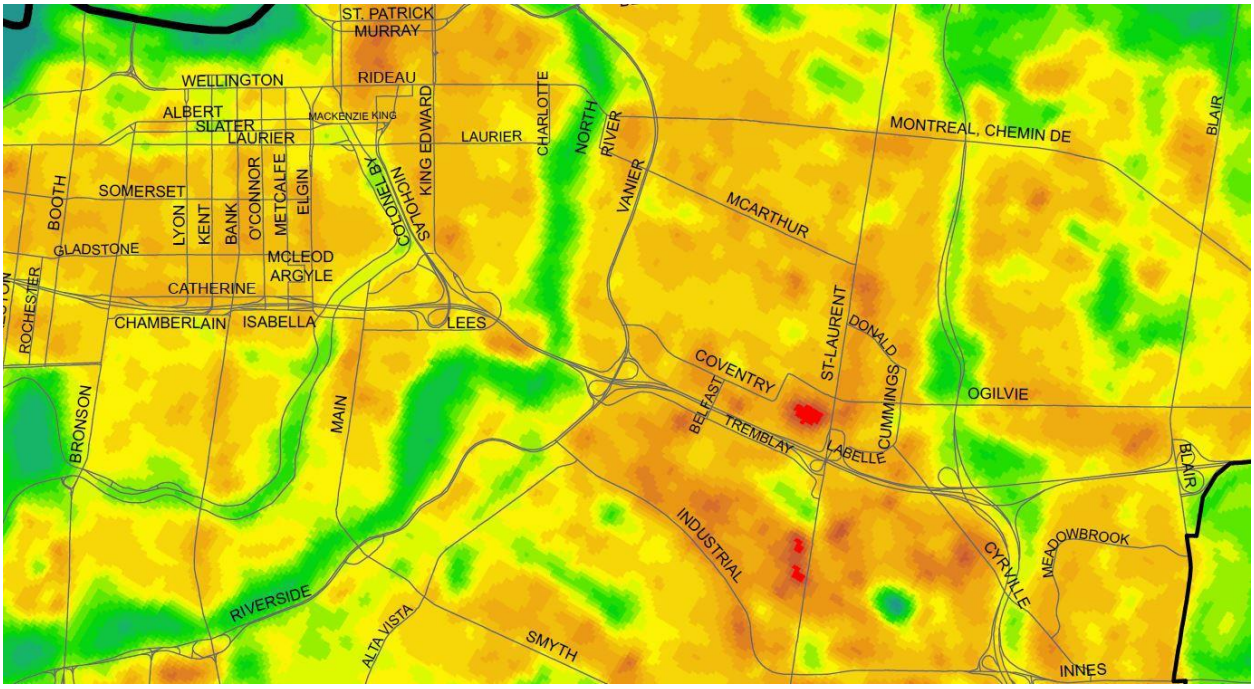
Annex 1 – Potential ROWs public and private

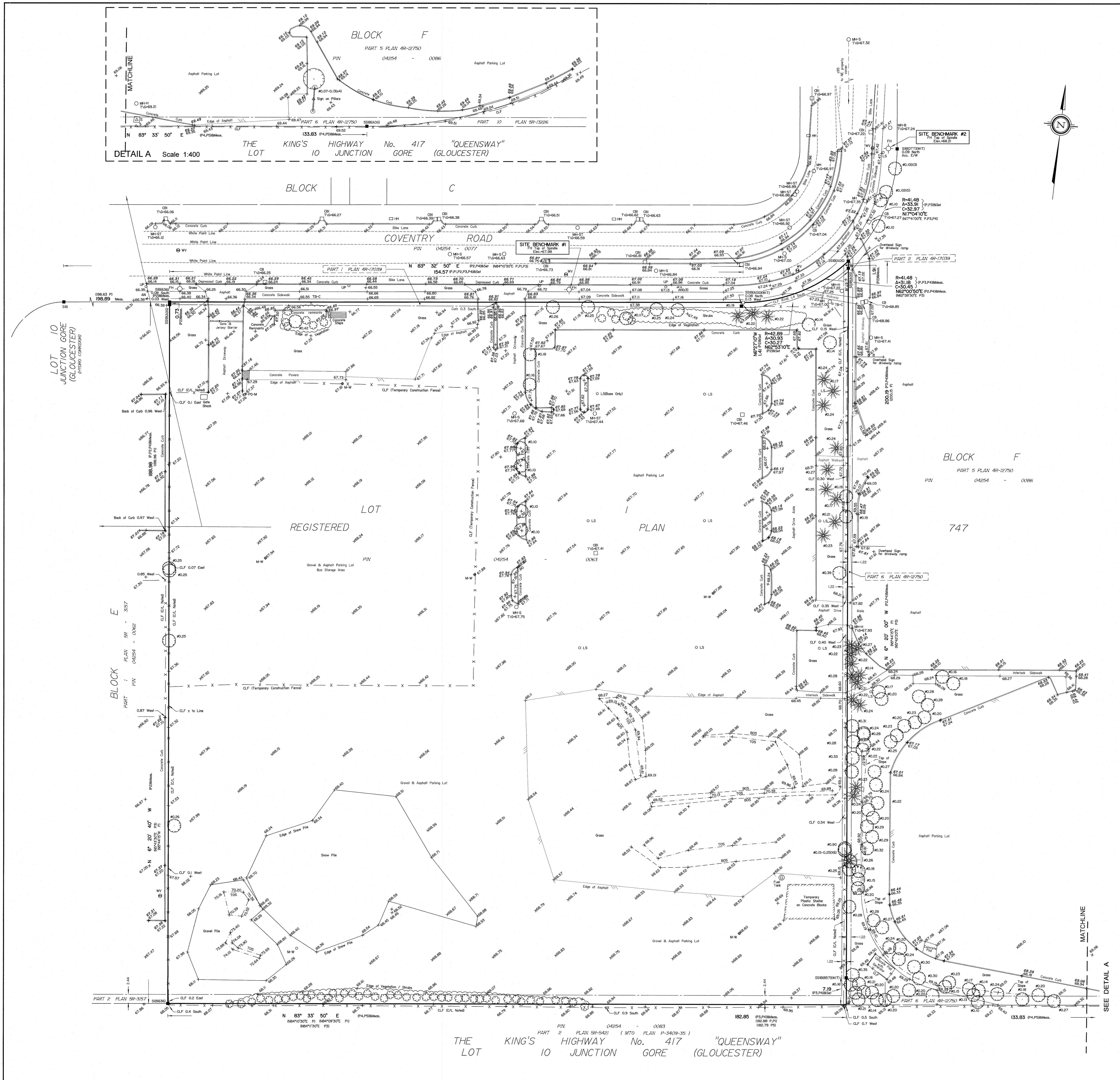


Annex 2 – Community desire line for pedestrians and cyclists to/from St. Laurent transit station



Annex 3 – Excerpt from the City of Ottawa heat island map





TOPOGRAPHIC PLAN OF SURVEY OF

LOT 1
REGISTERED PLAN 747
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 400

16 12 8 4 0 8 16 Metres

Metric

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

\Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act and the Surveyors Act and the regulations made under them.
2. The survey was completed on the 19th day of May, 2023.

May 23, 2023
Date

V. Andrew Shelp
Ontario Land Surveyor

Notes & Legend

	Denotes	
	"	Survey Monument Planted
	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
(WIT)	"	Witness
Meas.	"	Measured
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
(P)	"	Registered Plan 747
(P1)	"	Plan 5R-3157
(P2)	"	Plan 4R-17039
(P3)	"	(AOG) Plan dated June 14, 1995 (AOV Ref. 0-180-95)
(P4)	"	Plan 4R-12750
(P5)	"	Plan 5R-5421
FH	"	Fire Hydrant
WV	"	Water Valve
SP	"	Water Stand Post
MH-ST	"	Maintenance Hole (Storm Sewer)
MH-S	"	Maintenance Hole (Sanitary)
MH-B	"	Maintenance Hole (Bell Telephone)
MH-H	"	Maintenance Hole (Hydro)
CB	"	Catch Basin
CBI	"	Catch Basin Inlet
M-W	"	Monitoring Well
HH	"	Handhole
TB-C	"	Cable Terminal Box
B	"	Bollard
S	"	Sign
CLF	"	Chain Link Fence
BF	"	Board Fence
	"	Gate
PO-M	"	Metal Pole
UP	"	Utility Pole
AN	"	Anchor
LS	"	Light Standard
	"	Deciduous Tree
	"	Coniferous Tree
	"	Shrub
Ø	"	Diameter
+65.00	"	Location of Elevations
+65.00	"	Top of Concrete Curb Elevation
C/L	"	Centreline
	"	Property Line
(x5)	"	Multiple trees

SITE AREA = 34,661 m²

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-53722
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29 (3).

Bearings are grid, derived from Can-Net 2016 Real Time Network GPS observations and are referenced to Specified Control Points 01919680105 and 019198434761, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

For comparison purposes, bearings shown on Plans (P), (P1) & (P3) are astronomic bearings.

ELEVATION NOTES

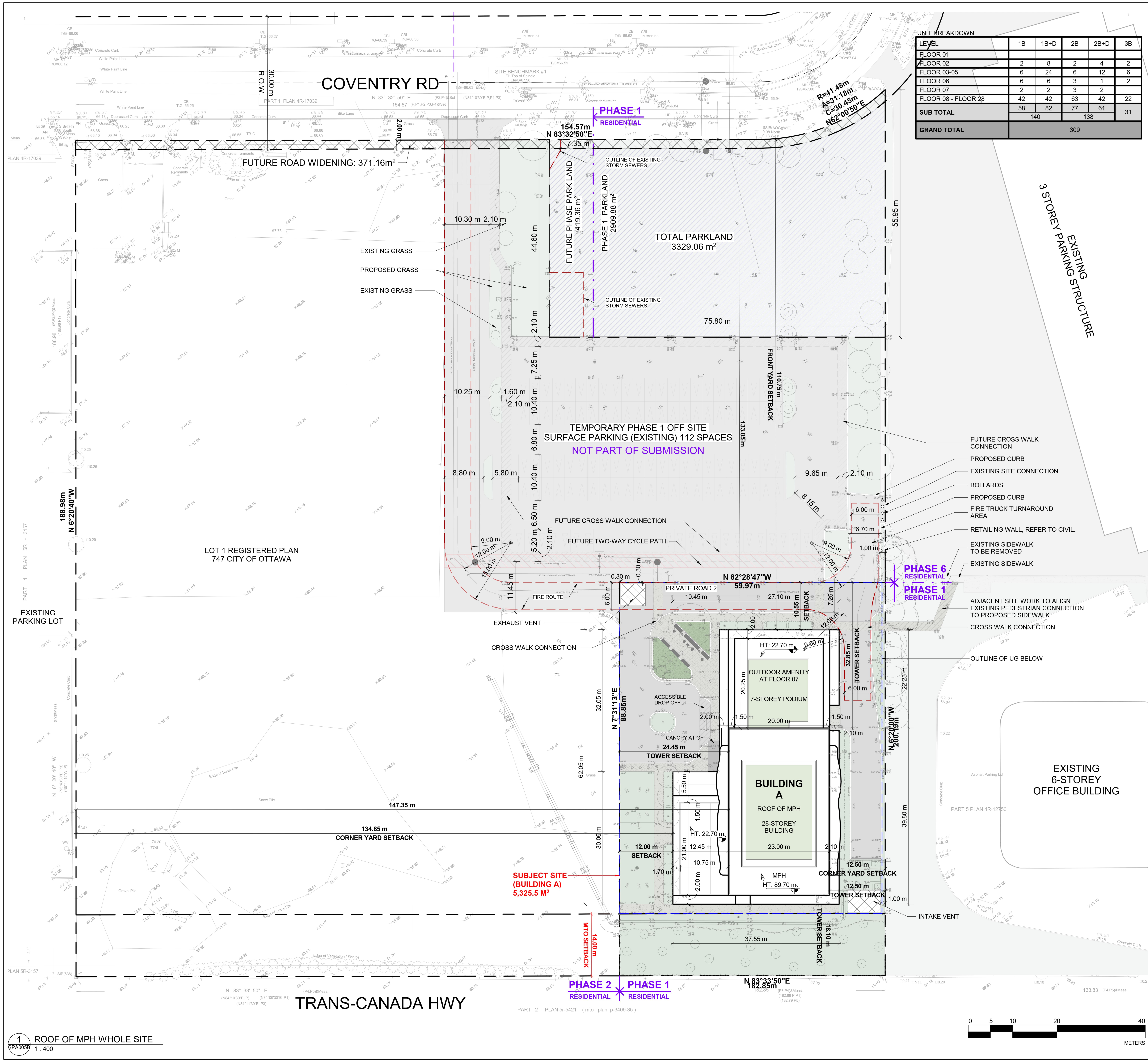
1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Ontario Land Surveyors
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com

Job No. 23868-23 Morguard Corp Lt1 PL747 0 F | NS



UNIT BREAKDOWN

LEVEL	1B	1B+D	2B	2B+D	3B
FLOOR 01					
FLOOR 02	2	8	2	4	2
FLOOR 03-05	6	24	6	12	6
FLOOR 06	6	6	3	1	2
FLOOR 07	2	2	3	2	
FLOOR 08 - FLOOR 28	42	42	63	42	22
SUB TOTAL	58	82	77	61	31
	140		138		
GRAND TOTAL	309				

PROJECT INFORMATION

Zoning By-law 2008-250 Consolidation TD3

NET OVERALL SITE AREA BREAKDOWN

AREA TYPE	m²	ft²
SITE AREA - BLDG A	5,325.54	57,323.6
TOTAL PARKLAND AREA	3,329.06	35,833.7
FUTURE ROAD WIDENING AREA	371.16	3,995.1
TOTAL SITE AREA	34,661.0	373,087.9

TEMPORARY OFF SITE PARKING (PHASE 1)

PHASE 1 SURFACE PARKING	6,804.08	73,238.5

ZONING

	REQUIRED	PROVIDED
BUILDING HEIGHT	30 STOREYS / 90.0M	28 STOREYS / 89.7M
GRADE (GEODETIC ELEVATION - ASL)		68.80M
ALLOWABLE PROJECTION - AMENITY LEVEL	0.0M	22.7M
DENSITY - MINIMUM 350 units/hectare	206 UNITS	309 UNITS
FRONT YARD SETBACK	3.0M	110.75M
CORNER YARD SETBACK (East / West)	3.0M/3.0M	134.85M/12.5M
REAR YARD SETBACK (GROUND TO 6th FLOOR)	0.0M	16.10M
REAR YARD SETBACK (ABOVE 7th STOREY)	12.0M	18.10M
AMENITY AREA - TOTAL PER UNIT	$6.0M^2$	$17.4M^2$
AMENITY AREA - 50% COMMUNAL PER UNIT	$3.0M^2$	$4.55M^2$
AMENITY AREA - 2.0% OF LOT EXTERIOR AT GRADE COMMUNAL	$117.15M^2$	$172.6M^2$
VEHICLE PARKING - RESIDENTIAL (AREA 'Z' - MAX 1.5/PER UNIT)	NOT REQUIRED	289
VEHICLE PARKING - VISITOR ONLY (MAX. 30, AFTER 12 UNITS)	30	30
BICYCLE PARKING - RESIDENTIAL - 0.5 PER UNIT	165	309
AISLE & DRIVEWAY MINIMUM / MAXIMUM WIDTH	6.0M/6.7M	6.7M

GROSS BUILDING FLOOR AREA (OTTAWA ZONING DEFINITION)

		m²	ft²
UG1			
FLOOR 01			
FLOOR 02		1,339.6	14,419
FLOOR 03-05	1,339.6 m² x 3	4,018.8	43,257
FLOOR 06		1,224.1	13,176
FLOOR 07		631.4	6,796
FLOOR 08 - FLOOR 28	725.2 m² x 21	15,229.2	163,926
TOTAL		**22,443.7**	**241,582**
TYP. FLOOR PLATE		725.2	7,806

UNIT STATISTICS

	UNITS
1B	58
1B+D	82
2B	77
2B+D	61
3B	31
TOTAL	**309**

VEHICULAR PARKING SPACES REQUIRED- AREA 'Z' ON SCHEDULE 1A

VISITOR	0.1 SPACES PER UNIT AFTER 12 UNITS - MAX 30	30
RESIDENTIAL	N/A	0
TOTAL		**30**

VEHICULAR PARKING SPACES PROVIDED

VISITOR	0.1 SPACES PER UNIT (309 UNITS)	30
RESIDENTIAL	0.56 SPACES PER UNIT (309 UNITS)	177
TOTAL		**207**
EXISTING SURFACE PARKING LOT		112
TOTAL	1.03 PER UNIT (309 UNITS)	319

ACCESSIBLE PARKING SPACES REQUIRED - (NOT INCLUDING SURFACE PARKING)

TYPE 'A'		3
TYPE 'B'		4
TOTAL		**7**

ACCESSIBLE PARKING SPACES PROVIDED - (NOT INCLUDING SURFACE PARKING)

TYPE 'A'		3
TYPE 'B'		5
TOTAL		**8**

STANDARD PARKING SPACE	2.6m X 5.2m
PARALLEL PARKING SPACE	2.6m X 6.7m
SMALL PARKING SPACE	2.4m X 4.6m
ACCESSIBLE PARKING SPACE ' TYPE A '	3.4m X 5.2m
ACCESSIBLE PARKING SPACE ' TYPE B '	2.4m X 5.2m
LOADING SPACE	**3.5m X 7.0m**

BICYCLE PARKING SPACES REQUIRED

RESIDENTIAL	0.5 PER UNIT (309 UNITS)	155
TOTAL		**155**

BICYCLE PARKING SPACES PROVIDED

RESIDENTIAL	INTERIOR	309
	EXTERIOR	0
TOTAL	1.0 PER UNIT (309 UNITS)	**309**

AMENITY AREA

	m²	ft²
GRADE EXTERIOR - COMMUNAL	172.6	1,858
INTERIOR - COMMUNAL	1,095.4	11,791
07F EXTERIOR - COMMUNAL	202.1	2,175
TOTAL COMMUNAL	**1,470.1**	**15,824**
BALCONIES / TERRACE - PRIVATE	3,506.2	37,741
TOTAL	**4,976.3**	**53,565**

REQUIRED (309 UNITS X 6 m²) = 1,854 sq. m.
REQUIRED COMMUNAL @ 50% = 927 sq. m.

SITE COVERAGE

	m²	%
BUILDING FOOTPRINT	1,815.4	34.1%
DRIVING SURFACE	1,260.5	23.7%
LANDSCAPE AREA	2,249.6	42.2%
TOTAL BUILDING A	5,325.5	100%

REFUGE REQUIREMENT (**309 UNITS**)

	COMPACTED RATIO	CUBIC YARDS
GARBAGE	0.053 yd³/UNIT	17
RECYCLING GMP	0.018 yd³/UNIT	6
RECYCLING FIBER	0.038 yd³/UNIT	12
COMPOST	240L PER 50 UNITS	7 BINS

TURNER FLEISCHER

Turner Fleischer Architects Inc.
67 Lesmill Road
Toronto, ON, M3B 2T8
T 416 425 2222
turnerfleischer.com

The site plan prepared by Turner Fleischer is reliant on a legal survey showing the boundaries of the lands together with the current location of any existing buildings, features or encroachment prepared by Annis O'Sullivan, dated 19-05-2023 as provided by Vollebekk Ltd..

SITE PLAN SYMBOLS

- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- EXIT
- FIRE HYDRANT (FH)
- SIAMESE CONNECTION
- CONVEX MIRROR
- SPOT ELEVATION (000.00)
- GAS/HYDRO METER (M / G)

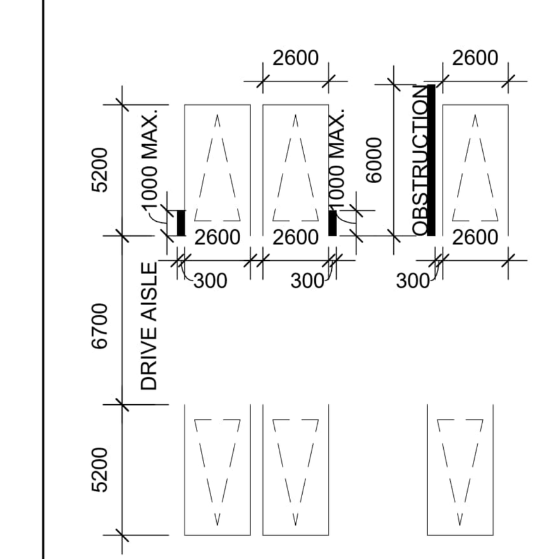
REFER TO LANDSCAPE DRAWINGS FOR SURFACE TREATMENT

MINIMUM PERMITTED PARKING DIMENSIONS

TYPICAL PARKING DIMENSIONS

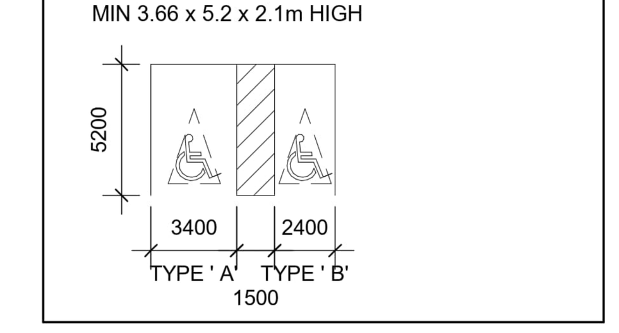
AISLE WIDTH: MIN 6.7m

TYPICAL PARKING SPACE: MIN 2.6 x 5.2 x 2.1m HIGH



TYPICAL BARRIER FREE SPACE

MIN 3.66 x 5.2 x 2.1m HIGH



#	DATE	DESCRIPTION	BY
2	2024-11-01	ISSUED FOR SITE PLAN APPROVAL	AYU
1	2024-01-30	ISSUED FOR PRE-CONSTRUCTION	AYU

Morguard

PROJECT
500 COVENTRY ROAD
500 COVENTRY ROAD, OTTAWA, ON.

DRAWING
SITE PLAN / ROOF PLAN - OVERALL SITE

PROJECT NO.	18.050 P01
PROJECT DATE	2025-02-26
DRAWN BY	RYT / DRO
CHECKED BY	AYU / MDM
SCALE	1:400
DRAWING NO.	SPA005B
REV.	2

2025-02-26 10:13:10 AM

UNIT BREAKDOWN

LEVEL	1B	1B+D	2B	2B+D	3B
FLOOR 01					
FLOOR 02	2	8	2	4	2
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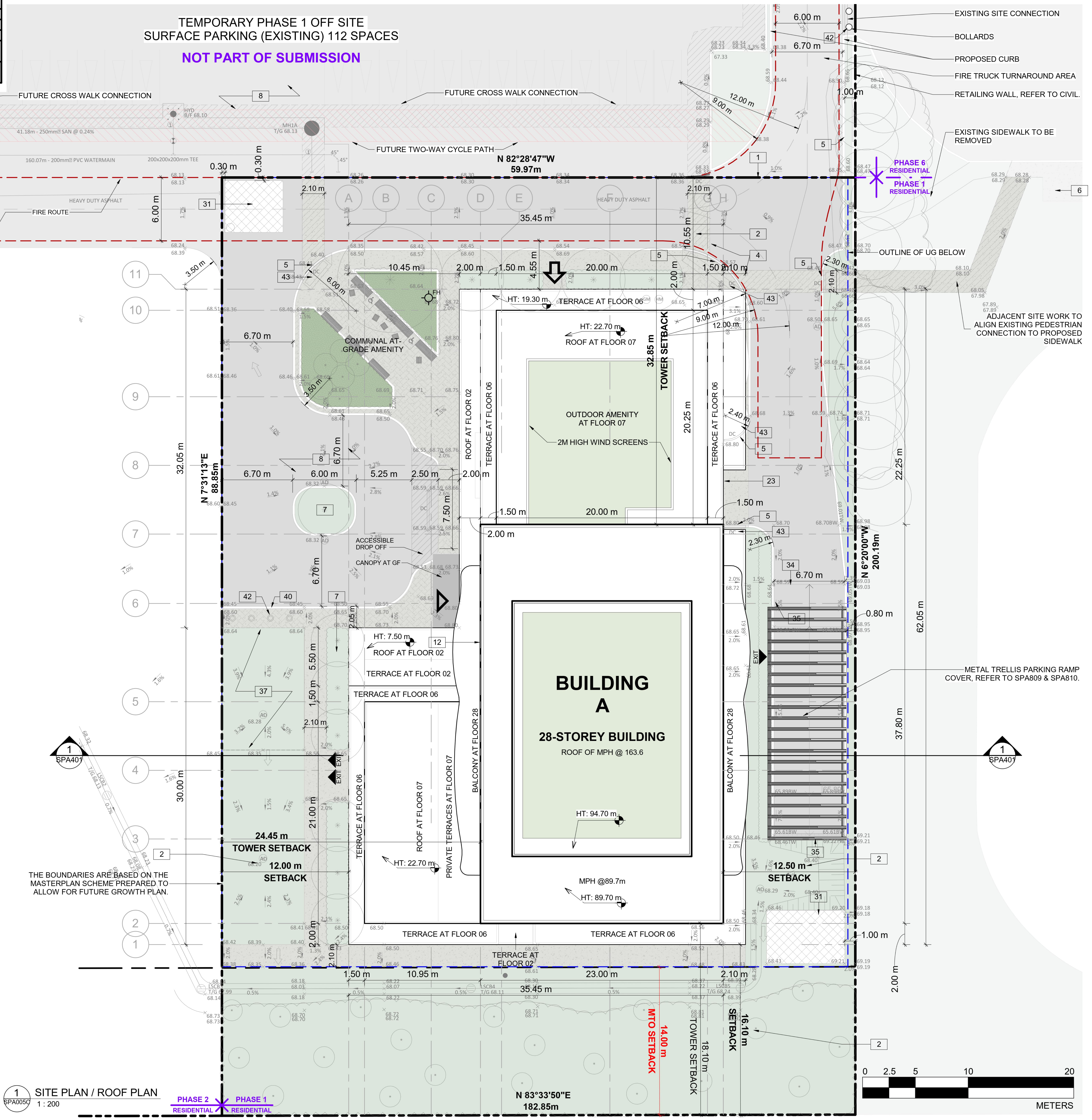

1 SPA005C SITE PLAN / ROOF PLAN
1 : 200

DRAWINGS NOTES

1. PHASE 1 LIMITS
2. BUILDING SETBACKS
3. PROPOSED ROAD WIDENING
4. HARD SURFACE PAVING, REFER TO LANDSCAPE PLAN FOR PATTERN AND TYPE
5. DEPRESSED CURB AND SIDEWALK TO CITY STANDARDS, REFER TO CIVIL
6. EXISTING STREET CURB AND SIDEWALK
7. SOFT LANDSCAPING, REFER TO LANDSCAPE PLAN
8. ASPHALT DRIVING SURFACE / PARKING LOT WITH BARRIER CURB
9. INTERNAL GARBAGE ROOM
10. 2.0m WIDE CONCRETE SIDEWALK
11. OUTLINE OF PRIVATE BALCONY ABOVE
12. OUTLINE OF TOWER ABOVE
13. STRUCTURAL SUPPORT FOR BUILDING ABOVE
14. VISITOR / SHORT TERM PARKING SPACE 2.6 x 5.2m
15. EXISTING TREE TO BE REMOVED
16. EXISTING STORM GRATE
17. EXISTING UTILITY KIOSK
18. PROPOSED SERVICES
19. RETAINING WALL, REFER TO CIVIL FOR HEIGHT
20. EXISTING CONCRETE / ASPHALT ISLAND
21. EXISTING UTILITY / LIGHT POLE
22. 1.2 X 1.8 CONCRETE PAD FOR GAS EQUIPMENT (GAS BLOW OFF)
23. 3.5 x 7.0m LOADING SPACE
24. SIAMESE CONNECTION
26. EXISTING CROSSWALK WITH DEPRESSED CURBS
27. EXISTING CONCRETE JERSEY BARRIER
28. EXISTING CONCRETE OVERPASS
29. GUARDRAIL WITH METAL PIPE RAILING
30. EXISTING FIRE HYDRANT
31. INTAKE / EXHAUST GRILL
32. BICYCLE PARKING SPACE WITH RACK
33. OUTLINE OF BELOW GRADE PARKING DECK
34. HEATED GARAGE RAMP WITH TRENCH DRAIN
35. GARAGE RAMP WALL
36. RELOCATE UTILITY / LIGHT POLE AS NEEDED
37. TEMPORARY SNOW STORAGE. SNOW WILL BE REMOVED FROM THE SITE AS REQUIRED
38. PRIVACY FENCE
39. WASHED PEA-STONE SURFACE
40. DEPRESSED CURB
41. ACCESS TO INTERNAL CISTERN
42. REMOVABLE CONCRETE BOLLARDS
43. TACTILE STRIP AT SIDE WALKS

2025-02-26 10:13:13 AM

DEVELOPER	WIND CONSULTANT	TRAFFICE CONSULTANT	CIVIL ENGINEER	LANDSCAPE & URBAN PLANNER	SURVEYOR
Morguard Corporation 55 City Centre Drive, Suite 1000 Mississauga, ON L5B 1M3 Contact Name: Mark Bradley Phone Number: (905) 281-5831 Email: mbradley@morguard.com	**Gradient Wind** 127 Walgreed Rd, Carp, ON, K0A 1L0 Contact Name: David Hurtima Tel.: (613) 836-0934 E-Mail: david.hurtima@gradientwind.com	**CGH Transportation** 13 Markham Ave Ottawa, ON, K2G 3Z1 Contact Name: Andrew Harte Tel.: (613) 697-3797 E-Mail: andrew.harte@cghtransportation.com	**Egis** 6240 Hwy 7, Suite 200 Woodbridge, ON, L4H 4G3 Contact Name: Alison Gosling Tel.: (613) 714-4629 E-Mail: Alison.GOSLING@egis-group.com	**Fotenn Planning + Design** 396 Cooper Street, Suite 300 Ottawa, ON, K2P 2H7 Contact Name: Jillian Simpson Tel.: (613) 730-5709 E-Mail: simpson@fotenn.com	**Vollebekk Ltd.** 14 Concourse Gate, Suite 500 Nepean, ON, K2E 7S6 Contact Name: Annis, O'Sullivan Tel.: (613) 727-0850 E-Mail: Nepean@aovltd.com

PROJECT INFORMATION

Zoning By-law 2008-250 Consolidation

TD3

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BICYCLE PARKING - RESIDENTIAL - 0.5 PER UNIT	165	309
AISLE & DRIVEWAY MINIMUM / MAXIMUM WIDTH	6.0M/6.7M	6.7M

GROSS BUILDING FLOOR AREA (OTTAWA ZONING DEFINITION)

		m²	ft²
UG1			
FLOOR 01			
FLOOR 02		1,339.6	14,419
FLOOR 03-05	1,339.6 m² x 3	4,018.8	43,257
FLOOR 06		1,224.1	13,176
FLOOR 07		631.4	6,796
FLOOR 08 - FLOOR 28	725.2 m² x 21	15,229.2	163,926
TOTAL		**22,443.7**	**241,582**
TYP. FLOOR PLATE		725.2	7,806

UNIT STATISTICS

	UNITS
1B	58
1B+D	82
2B	77
2B+D	61
3B	31
TOTAL	**309**

VEHICULAR PARKING SPACES REQUIRED- AREA 'Z' ON SCHEDULE 1A

VISITOR	0.1 SPACES PER UNIT AFTER 12 UNITS - MAX 30	30
RESIDENTIAL	N/A	0
TOTAL		**30**

VEHICULAR PARKING SPACES PROVIDED

VISITOR	0.1 SPACES PER UNIT (309 UNITS)	30
RESIDENTIAL	0.56 SPACES PER UNIT (309 UNITS)	177
TOTAL		**207**
EXISTING SURFACE PARKING LOT		112
TOTAL	1.03 PER UNIT (309 UNITS)	319

ACCESSIBLE PARKING SPACES REQUIRED - (NOT INCLUDING SURFACE PARKING)

TYPE 'A'		3
TYPE 'B'		4
TOTAL		**7**

ACCESSIBLE PARKING SPACES PROVIDED - (NOT INCLUDING SURFACE PARKING)

TYPE 'A'		3
TYPE 'B'		5
TOTAL		**8**

STANDARD PARKING SPACE	2.6m X 5.2m
PARALLEL PARKING SPACE	2.6m X 6.7m
SMALL PARKING SPACE	2.4m X 4.6m
ACCESSIBLE PARKING SPACE ' TYPE A '	3.4m X 5.2m
ACCESSIBLE PARKING SPACE ' TYPE B '	2.4m X 5.2m
LOADING SPACE	**3.5m X 7.0m**

BICYCLE PARKING SPACES REQUIRED

RESIDENTIAL	0.5 PER UNIT (309 UNITS)	155
TOTAL		**155**

BICYCLE PARKING SPACES PROVIDED

RESIDENTIAL	INTERIOR	309
	EXTERIOR	0
TOTAL	1.0 PER UNIT (309 UNITS)	**309**

AMENITY AREA

	m²	ft²
GRADE EXTERIOR - COMMUNAL	172.6	1,858
INTERIOR - COMMUNAL	1,095.4	11,791
07F EXTERIOR - COMMUNAL	202.1	2,175
TOTAL COMMUNAL	**1,470.1**	**15,824**
BALCONIES / TERRACE - PRIVATE	3,506.2	37,741
TOTAL	**4,976.3**	**53,565**

REQUIRED (309 UNITS X 6 m²) = 1,854 sq. m.
REQUIRED COMMUNAL @ 50% = 927 sq. m.

SITE COVERAGE

	m²	%
BUILDING FOOTPRINT	1,815.4	34.1%
DRIVING SURFACE	1,260.5	23.7%
LANDSCAPE AREA	2,249.6	42.2%
TOTAL BUILDING A	5,325.5	100%

REFUGE REQUIREMENT (**309 UNITS**)

	COMPACTED RATIO	CUBIC YARDS
GARBAGE	0.053 yd³/UNIT	17
RECYCLING GMP	0.018 yd³/UNIT	6
RECYCLING FIBER	0.038 yd³/UNIT	12
COMPOST	240L PER 50 UNITS	7 BINS

TURNER FLEISCHER

Turner Fleischer Architects Inc.
67 Lesmill Road
Toronto, ON, M3B 2T8
T 416 425 2222
turnerfleischer.com

The site plan prepared by Turner Fleischer is reliant on a legal survey showing the boundaries of the lands together with the current location of any existing buildings, features or encroachment prepared by Annis O'Sullivan, dated 19-05-2023 as provided by Vollebekk Ltd..

SITE PLAN SYMBOLS

- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- EXIT
- FIRE HYDRANT
- SIAMESE CONNECTION
- CONVEX MIRROR
- 000.00 SPOT ELEVATION
- GAS/HYDRO METER

REFER TO LANDSCAPE DRAWINGS FOR SURFACE TREATMENT

MINIMUM PERMITTED PARKING DIMENSIONS

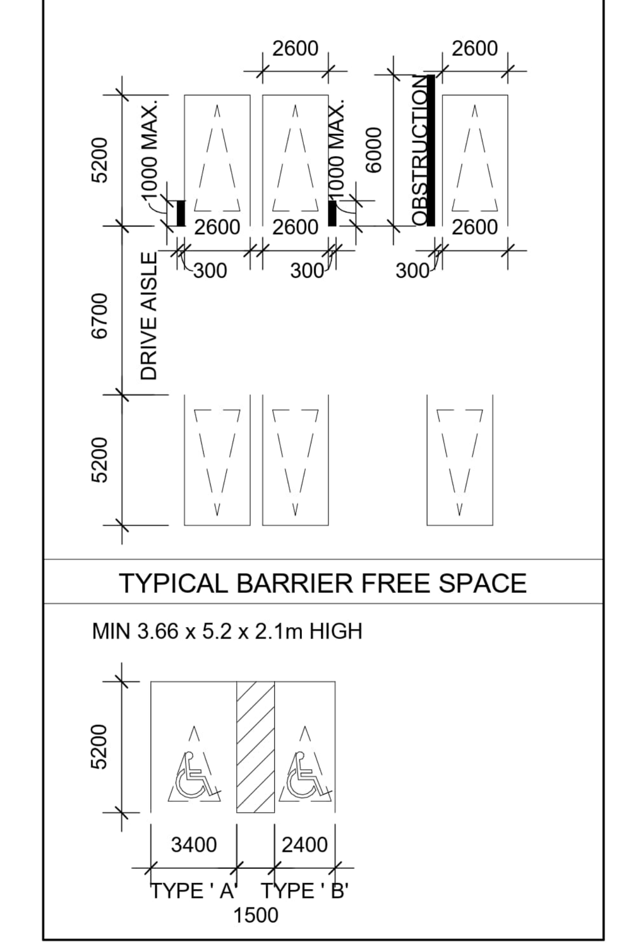
TYPICAL PARKING DIMENSIONS

AISLE WIDTH: MIN 6.7m

TYPICAL PARKING SPACE:
MIN 2.6 x 5.2 x 2.1 m HIGH

TYPICAL BARRIER FREE SPACE

MIN 3.66 x 5.2 x 2.1m HIGH



#	DATE	DESCRIPTION	BY
2	2024-11-01	ISSUED FOR SITE PLAN APPROVAL	AYU
1	2024-01-30	ISSUED FOR PRE-CONSTRUCTION	AYU

Morguard

PROJECT
500 COVENTRY ROAD
500 COVENTRY ROAD, OTTAWA, ON.

DRAWING
SITE PLAN / ROOF PLAN

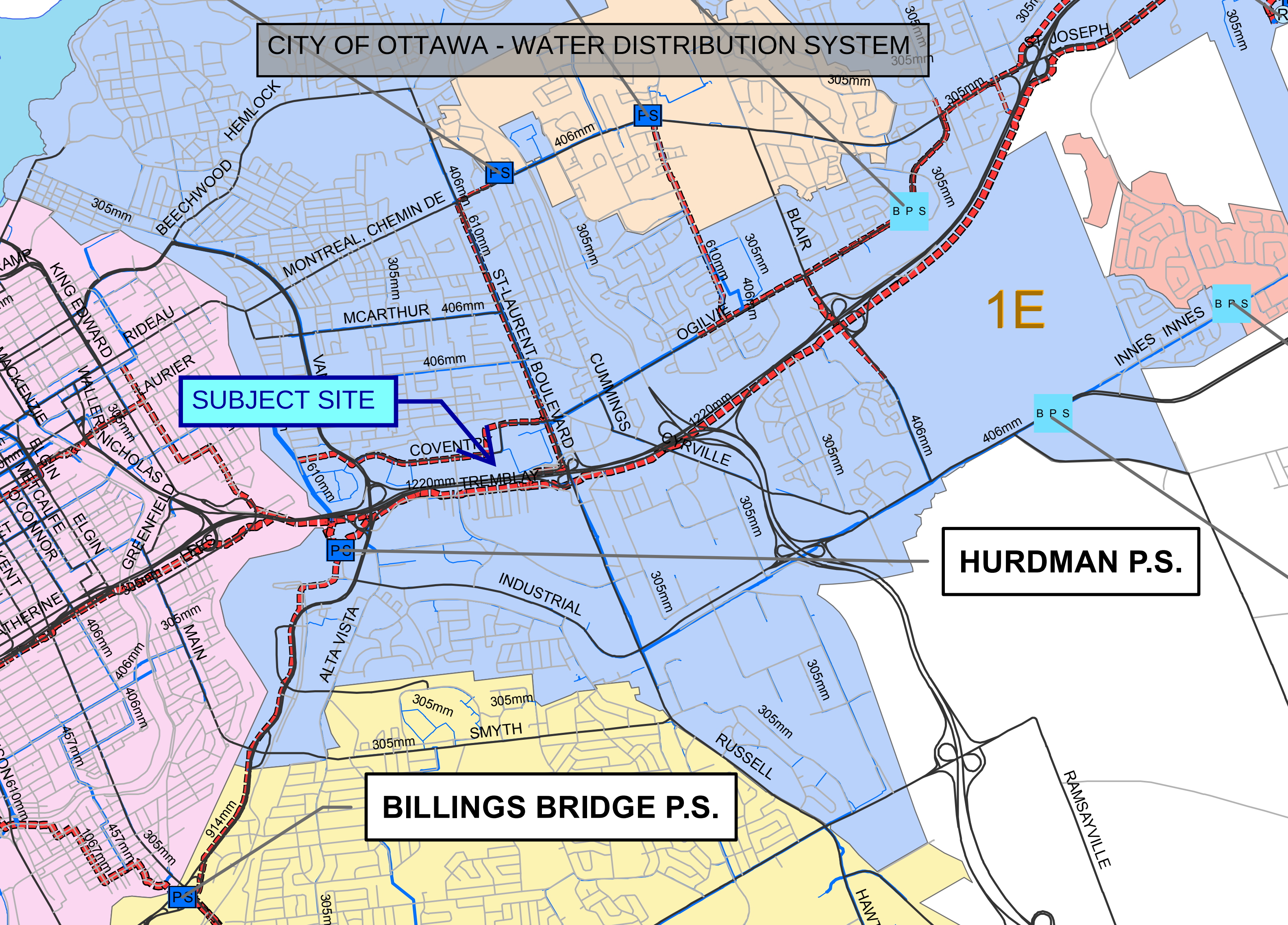
PROJECT NO.	18.050 P01
PROJECT DATE	2025-02-26
DRAWN BY	RYT / DRO
CHECKED BY	AYU / MDM
SCALE	1:200

N

DRAWING NO. SPA005C REV. 2

APPENDIX C
WATERMAIN CALCULATIONS

McINTOSH PERRY



CITY OF OTTAWA - WATER DISTRIBUTION SYSTEM
SUBJECT SITE
HURDMAN P.S.
BILLINGS BRIDGE P.S.
1E
P S
B P S
MONTREAL, CHEMIN DE
MCARTHUR
ST-LAURENT BOULEVARD
CUMMINGS
OGILVIE
BLAIR
INNES
COVENTRY
TREMBLAY
INDUSTRIAL
ALTA VISTA
SMYTH
RUSSELL
RAMSAYVILLE
BEECHWOOD
HEMLOCK
RIDEAU
LAURIER
KING EDWARD
NICHOLAS
GREENFIELD
ELGIN
METCALFE
MAIN
ST-JOSEPH
305mm
406mm
610mm
1220mm
457mm
914mm
1067mm

McINTOSH PERRY

CCO-23-2497 - 500 Coventry Rd - Water Demands

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	RF
Date:	October 28, 2024
Site Area:	3.46 gross ha

Residential	NUMBER OF UNITS		UNIT RATE	
1 Bedroom Apartment	58	units	1.4	persons/unit
2 Bedroom Apartment	159	units	2.1	persons/unit
3 Bedroom Apartment	92	units	3.1	persons/unit
Total Population	701	persons		
Amenity Area	5057	m2		

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS
Residential	280	L/c/d
Industrial - Light	35,000	L/gross ha/d
Industrial - Heavy	55,000	L/gross ha/d
Shopping Centres	2,500	L/(1000m² /d
Hospital	900	L/(bed/day)
Schools	70	L/(Student/d)
Trailer Park with no Hook-Ups	340	L/(space/d)
Trailer Park with Hook-Ups	800	L/(space/d)
Campgrounds	225	L/(campsite/d)
Mobile Home Parks	1,000	L/(Space/d)
Motels	150	L/(bed-space/d)
Hotels	225	L/(bed-space/d)
Tourist Commercial	28,000	L/gross ha/d
Other Commercial	28,000	L/gross ha/d

AVERAGE DAILY DEMAND	Residential	2.27	L/s
	Commercial/ Industrial / Institutional	0.16	L/s

MAXIMUM DAILY DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	2.5	x avg. day	L/c/d
Industrial	1.5	x avg. day	L/gross ha/d
Commercial	1.5	x avg. day	L/gross ha/d
Institutional	1.5	x avg. day	L/gross ha/d

MAXIMUM DAILY DEMAND	Residential	5.68	L/s
	Commercial/ Industrial / Institutional	0.25	L/s

MAXIMUM HOUR DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	2.2	x max. day	L/c/d
Industrial	1.8	x max. day	L/gross ha/d
Commercial	1.8	x max. day	L/gross ha/d
Institutional	1.8	x max. day	L/gross ha/d

MAXIMUM HOUR DEMAND	Residential	12.49	L/s
	Commercial/ Industrial / Institutional	0.44	L/s

WATER DEMAND DESIGN FLOWS PER UNIT COUNT
CITY OF OTTAWA - WATER DISTRIBUTION GUIDELINES, JULY 2010

AVERAGE DAILY DEMAND	2.44	L/s
MAXIMUM DAILY DEMAND	5.93	L/s
MAXIMUM HOUR DEMAND	12.94	L/s

McINTOSH PERRY

CCO-23-2497 - 500 Coventry Rd - Fire Underwriters Survey

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	RF
Date:	October 28, 2024

From the Fire Underwriters Survey (2020)

From Part II – Guide for Determination of Required Fire Flow Copyright I.S.O.:
City of Ottawa Technical Bulletin ISTB-2018-02 Applied Where Applicable

A. BASE REQUIREMENT (Rounded to the nearest 1000 L/min)

F = 220 x C x √A Where: F = Required fire flow in liters per minute
C = Coefficient related to the type of construction.
A = The total floor area in square meters (including all storey's, but excluding basements at least 50 percent below grade) in the building being considered.

Construction Type Non-Combustible Construction

C 0.8 A 22,443.7 m^2

Total Floor Area (per the 2020 FUS Page 20 - Total Effective Area) 8,293.4 m^2

Calculated Fire Flow	16,028.0 L/min
	16,000.0 L/min

B. REDUCTION FOR OCCUPANCY TYPE (No Rounding)

From Page 24 of the Fire Underwriters Survey:

Limited Combustible	-15%
Fire Flow	13,600.0 L/min

C. REDUCTION FOR SPRINKLER TYPE (No Rounding)

Fully Supervised Sprinklered	-50%
Reduction	-6,800.0 L/min

D. INCREASE FOR EXPOSURE (No Rounding)

	Separation Distance (m)	Cons. of Exposed Wall	Length Exposed Adjacent Wall (m)	Height (Stories)	Length-Height Factor	
Exposure 1	Over 30 m	Wood frame	N/A	N/A	N/A	0%
Exposure 2	Over 30 m	Wood frame	N/A	N/A	N/A	0%
Exposure 3	Over 30 m	Wood frame	N/A	N/A	N/A	0%
Exposure 4	Over 30 m	Wood frame	N/A	N/A	N/A	0%
					% Increase*	0%

Increase*	0.0 L/min

E. Total Fire Flow (Rounded to the Nearest 1000 L/min)

Fire Flow	6,800.0 L/min
Fire Flow Required**	7,000.0 L/min

* In accordance with Part II, Section 4, the Increase for separation distance is not to exceed 75%
** In accordance with Section 4 the Fire flow is not to exceed 45,000 L/min or be less than 2,000 L/min

McINTOSH PERRY

CCO-23-2497 - 500 Coventry Rd - Boundary Condition Unit Conversion

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	RF
Date:	October 28, 2024

Boundary Conditions Unit Conversion

Coventry Road

Scenario	Height (m)	Elevation (m)	m H_2O	PSI	kPa
Avg. DD	118.5	64.1	54.4	77.4	533.5
Max Day + Fire Flow (116.67 L/s)	110.8	64.1	46.7	66.4	457.9
Peak Hour	110.0	64.1	45.9	65.3	450.1

CCO-23-2497 - 500 Coventry Rd - Model Output

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	R.D.F.
Date:	October 28, 2024

MODEL INPUTS

Flow Units	L/s
Headloss Formula	H-W
Specific Gravity	1.0
Accuracy	0.001
Demand Multiplier	1.0
Maximum Fire Flow (L/s)	116.7

MODEL LOSSES

Standard Tee - Flow through run	0.6
Standard Tee - Flow through branch	1.8
45 Degree Elbow	0.4
Long Radius Elbow	0.6
Short Radius Elbow	0.9
Gate valve, fully open	0.2
Swing check valve, fully open	2.5

MODEL RESULTS

Junctions	Average Daily Demand (kPa)	Maximum Daily Demand + Fire Flow (kPa)	Peak Hourly Demand (kPa)
J1	517.76	277.16	421.97
BLDG	517.95	277.26	415.60
FH	517.56	233.14	422.46

Junctions	Average Daily Demand (m)	Maximum Daily Demand + Fire Flow (m)	Peak Hourly Demand (m)
J1	52.81	28.27	43.04
BLDG	52.83	28.28	42.39
FH	52.79	23.78	43.09

Francis Valenti

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: January 2, 2024 10:50 AM
To: Francis Valenti
Cc: Alison Gosling; Robert Freel
Subject: RE: 23-2497 - 500 Coventry Road - Boundary Condition & Sanitary Capacity Request
Attachments: 500 Coventry Road REVISED December 2023.pdf

Good Morning Francis

The following are boundary conditions, HGL, for hydraulic analysis at 500 Coventry Avenue (zone 1E) assumed to be a dual connection to the 305 mm watermain on Coventry Road (see attached PDF for location).

Both Connections:

Min HGL: 110.0 m

Max HGL: 118.5 m

Max Day + Fire Flow (116.67 L/s): 110.8 m

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

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

Thanks

Nishant Jhamb, P.Eng
Project Manager | Gestionnaire de projet
Planning, Real Estate and Economic Development Department
Development Review - Central Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 23112, nishant.jhamb@ottawa.ca

From: Francis Valenti <F.Valenti@McIntoshPerry.com>
Sent: December 07, 2023 1:17 PM
To: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Cc: Alison Gosling <a.gosling@mcintoshperry.com>; Robert Freel <r.freel@mcintoshperry.com>
Subject: RE: 23-2497 - 500 Coventry Road - Boundary Condition & Sanitary Capacity Request

Good afternoon Nishant,

There have been some site plan updates on this project that have resulted in minor reductions to the estimated water demand. The updated calculations are attached, and the revised demands are listed below:

- The estimated fire flow is 7,000 L/min based on the FUS method
- Average Daily Demand: 2.44 L/s
- Maximum Daily Demand: 5.93 L/s
- Maximum hourly daily demand: 12.94 L/s

As you can see above, the estimated Average Day, Max Day, and Peak Hour demands have been reduced by less than 5% of the values provided in the initial boundary condition request. In the past we've been told that minor reductions to the water demand would not require updated boundary conditions, but I just wanted to touch base and confirm that you're okay with this approach.

Thank you,

Francis Valenti, EIT

Engineering Intern
T. 613.714.6895 | **C.** 613.808.2123
F.Valenti@McIntoshPerry.com | www.mcintoshperry.com

McINTOSH PERRY
egis

Turning Possibilities Into Reality

From: Jhamb, Nishant <nishant.jhamb@ottawa.ca>
Sent: November 14, 2022 9:08 AM
To: Robert Freel <r.freel@mcintoshperry.com>; Alison Gosling <a.gosling@mcintoshperry.com>; Francis Valenti <F.Valenti@McIntoshPerry.com>
Subject: RE: 23-2497 - 500 Coventry Road - Boundary Condition & Sanitary Capacity Request

Good Morning

The following are boundary conditions, HGL, for hydraulic analysis at 500 Coventry Avenue (zone 1E) assumed to be a dual connection to the 305 mm watermain on Coventry Road (see attached PDF for location).

Both Connections:

Min HGL: 110.1 m

Max HGL: 118.5 m

Max Day + Fire Flow (150 L/s): 109.3 m

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

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

Thanks
Nishant

From: Jhamb, Nishant
Sent: October 28, 2022 2:09 PM
To: Robert Freel <r.freel@mcintoshperry.com>; Alison Gosling <a.gosling@mcintoshperry.com>; Francis Valenti <F.Valenti@McIntoshPerry.com>
Subject: RE: 23-2497 - 500 Coventry Road - Boundary Condition & Sanitary Capacity Request

Good Afternoon,

City's Asset Management department has confirmed that we can take the proposed 9.27L/s peak sanitary wet weather flow on Coventry Road.
Please include this confirmation in the appendix of the report.

I have sent the request to Water Resource department for BC, it may take two weeks to get the response.

Thanks
Nishant Jhamb, P.Eng
Project Manager | Gestionnaire de projet
Planning, Real Estate and Economic Development Department
Development Review - Central Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 23112, nishant.jhamb@ottawa.ca

From: Francis Valenti <F.Valenti@McIntoshPerry.com>
Sent: October 18, 2022 2:38 PM
To: Polyak, Alex <alex.polyak@ottawa.ca>
Cc: Robert Freel <r.freel@mcintoshperry.com>; Alison Gosling <a.gosling@mcintoshperry.com>
Subject: 23-2497 - 500 Coventry Road - Boundary Condition & Sanitary Capacity Request

Good afternoon,

We would like to request boundary conditions for the contemplated development at 500 Coventry Road. The site plan contemplates a 421 unit 30-storey residential building, complete with surface parking with street access from Coventry Road. The connection (dual) will be to the existing 305mm diameter PVC and 305mm diameter cast iron watermain located within Coventry Road. Please find attached a map showing the proposed connection locations and calculations prepared for the demands listed below.

- The estimated fire flow is 9,000 L/min based on the FUS method
- Average Daily Demand: 2.48 L/s
- Maximum Daily Demand: 6.18 L/s
- Maximum hourly daily demand: 13.58 L/s

Concern was also expressed in the pre-consultation meeting regarding sanitary capacity. Can you please verify municipal infrastructure has the capacity to accommodate the additional flows? Estimated post-development sanitary flows are summarized below, and detailed calculations are attached.

- Total Estimated Average Dry Weather Flow: 2.66 L/s
- Total Estimated Peak Dry Weather Flow: 8.31 L/s
- Total Estimated Peak Wet Weather Flow: 9.27 L/s

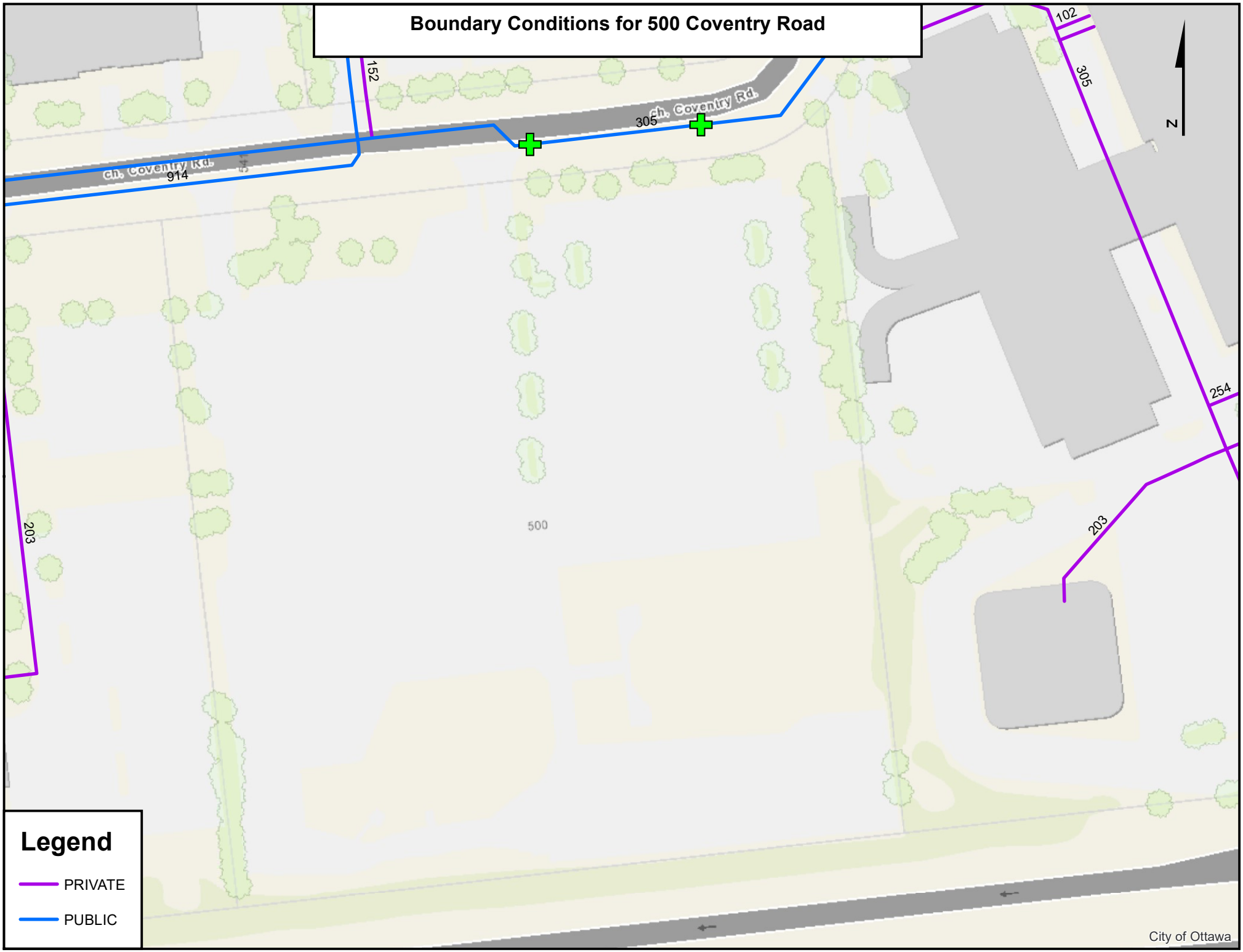
Regards,

Francis Valenti, EIT

Engineering Intern, Land Development
T. 613.714.6895 | **C.** 613.808.2123
F.Valenti@McIntoshPerry.com | www.mcintoshperry.com

McINTOSH PERRY

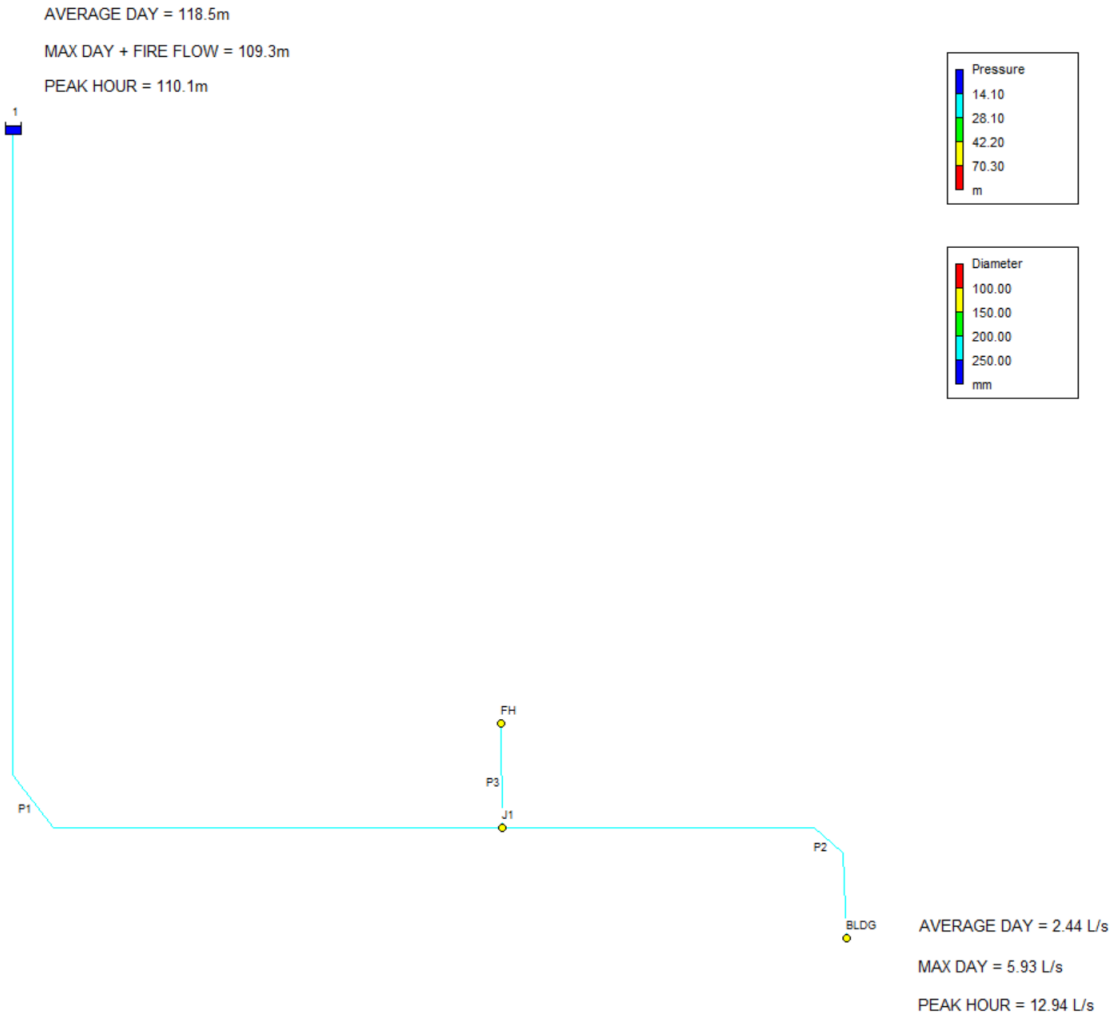
Turning Possibilities Into Reality


Boundary Conditions for 500 Coventry Road
ch. Coventry Rd.
914
152
305
102
254
203
500
N
Legend
PRIVATE
PUBLIC
City of Ottawa

EPANET WATER MODEL
AVERAGE DAY SCENARIO

McINTOSH PERRY

AVERAGE DAY
WATER MODEL NETWORK



2024-01-04

```
[TITLE]


[JUNCTIONS]
;ID                  Elev            Demand          Pattern
 J1                  65.68           0                                 ;
 BLDG                65.66           2.44                              ;
 FH                  65.7            0                                 ;

[RESERVOIRS]
;ID                  Head            Pattern
 1                   118.5                                 ;

[TANKS]
;ID                  Elevation       InitLevel       MinLevel        MaxLevel
        Diameter        MinVol          VolCurve                Overflow

[PIPES]
;ID                  Node1                   Node2                   Length
        Diameter        Roughness       MinorLoss       Status
 P1                  1                       J1                      143.1
        200             110             2.8             Open    ;
 P3                  FH                      J1                      3.89
        200             110             5.9             Open    ;
 P2                  J1                      BLDG                    16.97
        200             100             0.8             Open    ;

[PUMPS]
;ID                  Node1                   Node2                   Parameters

[VALVES]
;ID                  Node1                   Node2                   Diameter
        Type    Setting         MinorLoss

[TAGS]

[DEMANDS]
;Junction            Demand          Pattern                 Category

[STATUS]
;ID                  Status/Setting

[PATTERNS]
;ID                  Multipliers

[CURVES]
;ID                  X-Value         Y-Value

[CONTROLS]
```

```
[RULES]

[ENERGY]
 Global Efficiency      75
 Global Price           0
 Demand Charge          0

[EMITTERS]
;Junction               Coefficient

[QUALITY]
;Node                   InitQual

[SOURCES]
;Node                   Type            Quality         Pattern

[REACTIONS]
;Type           Pipe/Tank               Coefficient


[REACTIONS]
 Order Bulk             1
 Order Tank             1
 Order Wall             1
 Global Bulk            0
 Global Wall            0
 Limiting Potential     0
 Roughness Correlation  0

[MIXING]
;Tank                   Model

[TIMES]
 Duration               0
 Hydraulic Timestep     1:00
 Quality Timestep       0:05
 Pattern Timestep       1:00
 Pattern Start          0:00
 Report Timestep        1:00
 Report Start           0:00
 Start ClockTime        12 am
 Statistic              None

[REPORT]
 Status                 No
 Summary                No
 Page                   0

[OPTIONS]
 Units                  LPS
```

```
 Headloss               H-W
 Specific Gravity       1
 Viscosity              1
 Trials                 40
 Accuracy               0.001
 CHECKFREQ              2
 MAXCHECK               10
 DAMPLIMIT              0
 Unbalanced             Continue 10
 Pattern                1
 Demand Multiplier      1.0
 Emitter Exponent       0.5
 Quality                None mg/L
 Diffusivity            1
 Tolerance              0.01

[COORDINATES]
;Node                   X-Coord                 Y-Coord
J1                      6534.508                2657.856
BLDG                    8814.638                1925.219
FH                      6519.824                3348.018
1                       3289.280                7283.407

[VERTICES]
;Link                   X-Coord                 Y-Coord
P1                      3289.280                3010.279
P1                      3553.598                2657.856
P2                      8599.841                2657.120
P2                      8790.772                2490.056

[LABELS]
;X-Coord             Y-Coord             Label & Anchor Node
3500.398                8114.558                "AVERAGE DAY = 118.5m"
3500.398                7867.940                "MAX DAY + FIRE FLOW = 109.3m"
3500.398                7637.232                "PEAK HOUR = 110.1m"
9299.920                2068.417                "AVERAGE DAY = 2.44 L/s"
9291.965                1797.932                "MAX DAY = 5.93 L/s"
9291.965                1543.357                "PEAK HOUR = 12.94 L/s"

[BACKDROP]
  DIMENSIONS    0.000                   0.000                   10000.000
10000.000
 UNITS                  None
 FILE
 OFFSET                 0.00                    0.00

[END]
```

```
*********************************************************************
*                            E P A N E T                            *
*                     Hydraulic and Water Quality                   *
*                     Analysis for Pipe Networks                    *
*                          Version 2.2                              *
*********************************************************************

Input File: 2024-01-04 - 500 Coventry AVERAGE DAY.net
```

Link - Node Table:

Link ID	Start Node	End Node	Length m	Diameter mm
P1	1	J1	143.1	200
P3	FH	J1	3.89	200
P2	J1	BLDG	16.97	200

Node Results:

Node ID	Demand LPS	Head m	Pressure m	Quality	
J1	0.00	118.49	52.81	0.00	
BLDG	2.44	118.49	52.83	0.00	
FH	0.00	118.49	52.79	0.00	
1	-2.44	118.50	0.00	0.00	Reservoir

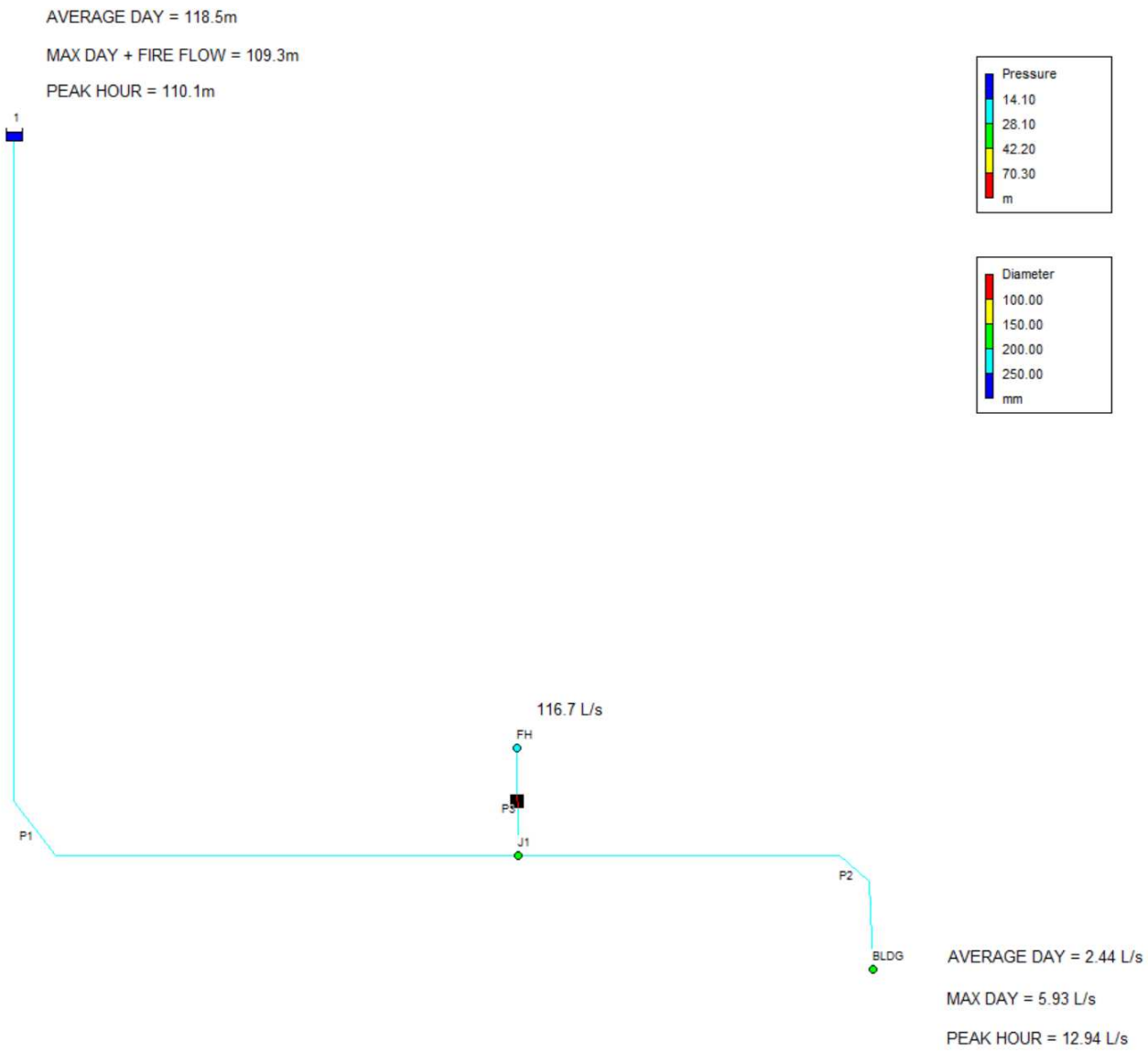
Link Results:

Link ID	Flow LPS	Velocity m/s	Unit Headloss m/km	Status
P1	2.44	0.08	0.07	Open
P3	0.00	0.00	0.00	Open
P2	2.44	0.08	0.09	Open

EPANET WATER MODEL
MAX DAY + FIRE FLOW SCENARIO

McINTOSH PERRY

MAX DAY + FIRE FLOW
WATER MODEL NETWORK



2024-01-04

```
[TITLE]


[JUNCTIONS]
;ID                  Elev            Demand          Pattern
 J1                  65.68           0                                 ;
 BLDG                65.66           5.93                              ;
 FH                  65.7            116.7                             ;

[RESERVOIRS]
;ID                  Head            Pattern
 1                   109.3                                 ;

[TANKS]
;ID                  Elevation       InitLevel       MinLevel        MaxLevel
        Diameter        MinVol          VolCurve                Overflow

[PIPES]
;ID                  Node1                   Node2                   Length
        Diameter        Roughness       MinorLoss       Status
 P1                  1                       J1                      143.1
        200             110             2.8             Open    ;
 P3                  FH                      J1                      3.89
        200             110             5.9             Open    ;
 P2                  J1                      BLDG                    16.97
        200             100             0.8             Open    ;

[PUMPS]
;ID                  Node1                   Node2                   Parameters

[VALVES]
;ID                  Node1                   Node2                   Diameter
        Type    Setting         MinorLoss

[TAGS]

[DEMANDS]
;Junction            Demand          Pattern                 Category

[STATUS]
;ID                  Status/Setting

[PATTERNS]
;ID                  Multipliers

[CURVES]
;ID                  X-Value         Y-Value

[CONTROLS]
```

```
[RULES]

[ENERGY]
 Global Efficiency      75
 Global Price           0
 Demand Charge          0

[EMITTERS]
;Junction               Coefficient

[QUALITY]
;Node                   InitQual

[SOURCES]
;Node                   Type            Quality         Pattern

[REACTIONS]
;Type           Pipe/Tank               Coefficient


[REACTIONS]
 Order Bulk             1
 Order Tank             1
 Order Wall             1
 Global Bulk            0
 Global Wall            0
 Limiting Potential     0
 Roughness Correlation  0

[MIXING]
;Tank                   Model

[TIMES]
 Duration               0
 Hydraulic Timestep     1:00
 Quality Timestep       0:05
 Pattern Timestep       1:00
 Pattern Start          0:00
 Report Timestep        1:00
 Report Start           0:00
 Start ClockTime        12 am
 Statistic              None

[REPORT]
 Status                 No
 Summary                No
 Page                   0

[OPTIONS]
 Units                  LPS
```

```
 Headloss               H-W
 Specific Gravity       1
 Viscosity              1
 Trials                 40
 Accuracy               0.001
 CHECKFREQ              2
 MAXCHECK               10
 DAMPLIMIT              0
 Unbalanced             Continue 10
 Pattern                1
 Demand Multiplier      1.0
 Emitter Exponent       0.5
 Quality                None mg/L
 Diffusivity            1
 Tolerance              0.01

[COORDINATES]
;Node                   X-Coord                 Y-Coord
J1                      6534.508                2657.856
BLDG                    8814.638                1925.219
FH                      6519.824                3348.018
1                       3289.280                7283.407

[VERTICES]
;Link                   X-Coord                 Y-Coord
P1                      3289.280                3010.279
P1                      3553.598                2657.856
P2                      8599.841                2657.120
P2                      8790.772                2490.056

[LABELS]
;X-Coord             Y-Coord             Label & Anchor Node
3500.398                8114.558                "AVERAGE DAY = 118.5m"
3500.398                7867.940                "MAX DAY + FIRE FLOW = 109.3m"
3500.398                7637.232                "PEAK HOUR = 110.1m"
9299.920                2068.417                "AVERAGE DAY = 2.44 L/s"
9291.965                1797.932                "MAX DAY = 5.93 L/s"
9291.965                1543.357                "PEAK HOUR = 12.94 L/s"
6674.622                3603.819                "116.7 L/s"

[BACKDROP]
  DIMENSIONS    0.000                   0.000                   10000.000
10000.000
 UNITS                  None
 FILE
 OFFSET                 0.00                    0.00

[END]
```

```
*********************************************************************
*                            E P A N E T                            *
*                     Hydraulic and Water Quality                   *
*                     Analysis for Pipe Networks                    *
*                          Version 2.2                              *
*********************************************************************

Input File: 2024-01-04 - 500 Coventry MAX DAY.net
```

Link - Node Table:

Link ID	Start Node	End Node	Length m	Diameter mm
P1	1	J1	143.1	200
P3	FH	J1	3.89	200
P2	J1	BLDG	16.97	200

Node Results:

Node ID	Demand LPS	Head m	Pressure m	Quality	
J1	0.00	93.95	28.27	0.00	
BLDG	5.93	93.94	28.28	0.00	
FH	116.70	89.48	23.78	0.00	
1	-122.63	109.30	0.00	0.00	Reservoir

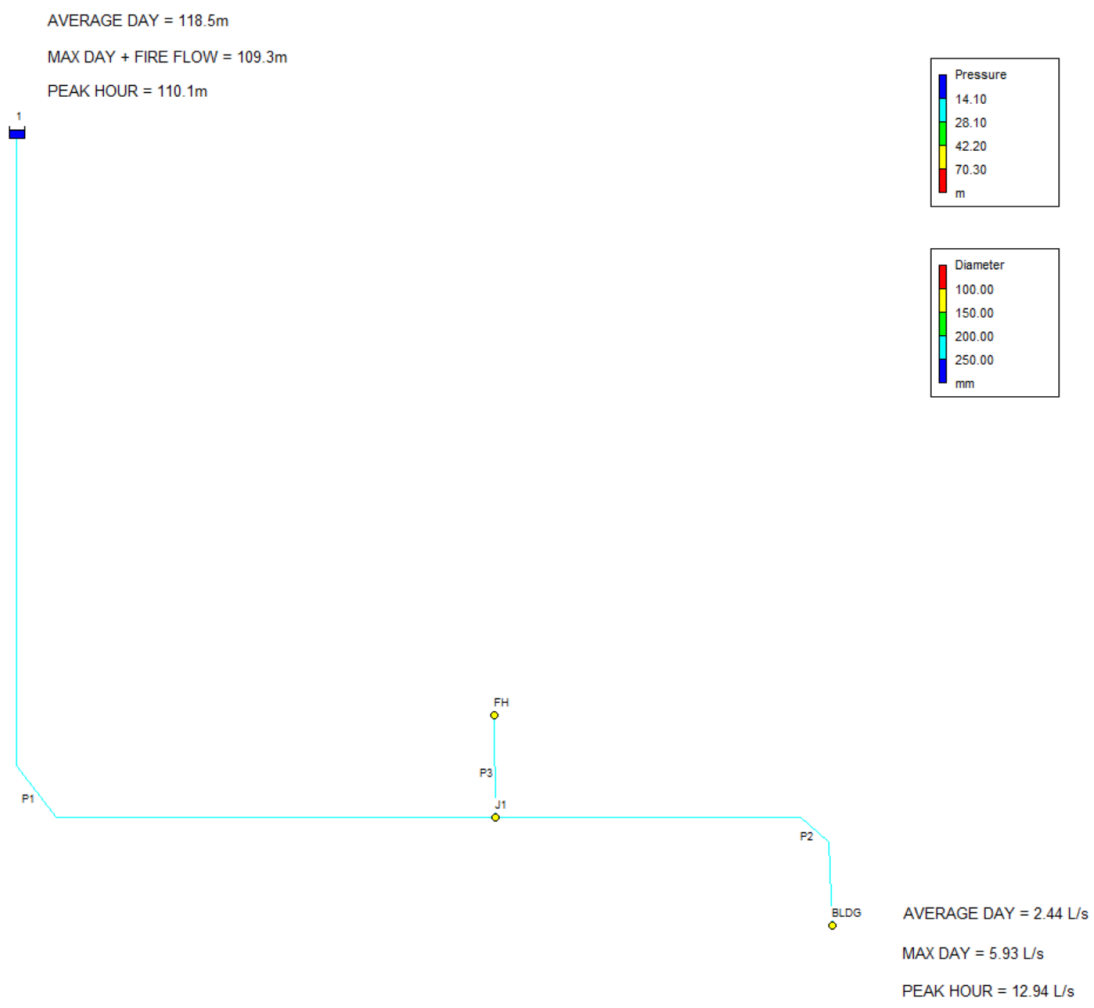
Link Results:

Link ID	Flow LPS	Velocity m/s	Unit Headloss m/km	Status
P1	122.63	3.90	107.26	Open
P3	-116.70	3.71	1150.07	Open
P2	5.93	0.19	0.49	Open

EPANET WATER MODEL
PEAK HOUR SCENARIO

McINTOSH PERRY

PEAK HOUR
WATER MODEL NETWORK



2024-01-04

```
[TITLE]


[JUNCTIONS]
;ID                  Elev            Demand          Pattern
 J1                  65.68           0                                ;
 BLDG                65.66           12.94                            ;
 FH                  65.7            0                                ;

[RESERVOIRS]
;ID                  Head            Pattern
 1                   110.1                           ;

[TANKS]
;ID                  Elevation       InitLevel       MinLevel        MaxLevel
        Diameter        MinVol          VolCurve                Overflow

[PIPES]
;ID                  Node1                   Node2                   Length
        Diameter        Roughness       MinorLoss       Status
 P1                  1                       J1                      143.1
        200             110             2.8             Open    ;
 P3                  FH                      J1                      3.89
        200             110             5.9             Open    ;
 P2                  J1                      BLDG                    16.97
        200             100             0.8             Open    ;

[PUMPS]
;ID                  Node1                   Node2                   Parameters

[VALVES]
;ID                  Node1                   Node2                   Diameter
        Type    Setting         MinorLoss

[TAGS]

[DEMANDS]
;Junction            Demand          Pattern                 Category

[STATUS]
;ID                  Status/Setting

[PATTERNS]
;ID                  Multipliers

[CURVES]
;ID                  X-Value         Y-Value

[CONTROLS]
```

```
[RULES]

[ENERGY]
 Global Efficiency      75
 Global Price           0
 Demand Charge          0

[EMITTERS]
;Junction               Coefficient

[QUALITY]
;Node                   InitQual

[SOURCES]
;Node                   Type            Quality         Pattern

[REACTIONS]
;Type           Pipe/Tank               Coefficient


[REACTIONS]
 Order Bulk             1
 Order Tank             1
 Order Wall             1
 Global Bulk            0
 Global Wall            0
 Limiting Potential     0
 Roughness Correlation  0

[MIXING]
;Tank                   Model

[TIMES]
 Duration               0
 Hydraulic Timestep     1:00
 Quality Timestep       0:05
 Pattern Timestep       1:00
 Pattern Start          0:00
 Report Timestep        1:00
 Report Start           0:00
 Start ClockTime        12 am
 Statistic              None

[REPORT]
 Status                 No
 Summary                No
 Page                   0

[OPTIONS]
 Units                  LPS
```

```
 Headloss               H-W
 Specific Gravity       1
 Viscosity              1
 Trials                 40
 Accuracy               0.001
 CHECKFREQ              2
 MAXCHECK               10
 DAMPLIMIT              0
 Unbalanced             Continue 10
 Pattern                1
 Demand Multiplier      1.0
 Emitter Exponent       0.5
 Quality                None mg/L
 Diffusivity            1
 Tolerance              0.01

[COORDINATES]
;Node                   X-Coord                 Y-Coord
J1                      6534.508                2657.856
BLDG                    8814.638                1925.219
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9291.965                1797.932                "MAX DAY = 5.93 L/s"
9291.965                1543.357                "PEAK HOUR = 12.94 L/s"

[BACKDROP]
  DIMENSIONS    0.000                   0.000                   10000.000
10000.000
 UNITS                  None
 FILE
 OFFSET                 0.00                    0.00

[END]
```

```
*****************************************************************
*                          E P A N E T                          *
*                   Hydraulic and Water Quality                 *
*                   Analysis for Pipe Networks                  *
*                         Version 2.2                           *
*****************************************************************

Input File: 2024-01-04 - 500 Coventry PEAK HOUR.net
```

Link - Node Table:

Link ID	Start Node	End Node	Length m	Diameter mm
P1	1	J1	143.1	200
P3	FH	J1	3.89	200
P2	J1	BLDG	16.97	200

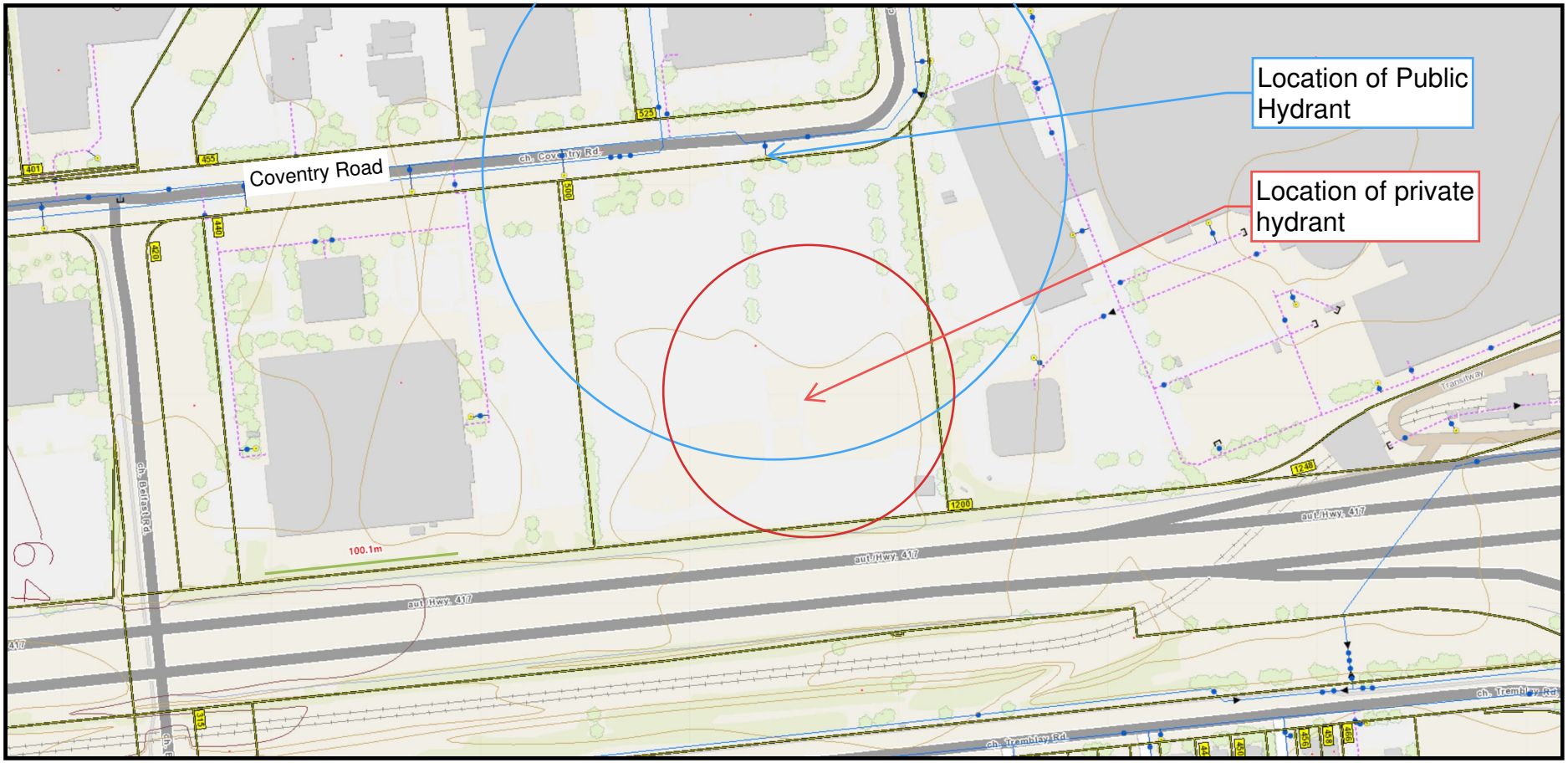
Node Results:

Node ID	Demand LPS	Head m	Pressure m	Quality	
J1	0.00	109.87	44.19	0.00	
BLDG	12.94	109.84	44.18	0.00	
FH	0.00	109.87	44.17	0.00	
1	-12.94	110.10	0.00	0.00	Reservoir

Link Results:

Link ID	Flow LPS	Velocity m/s	Unit Headloss m/km	Status
P1	12.94	0.41	1.60	Open
P3	0.00	0.00	0.00	Open
P2	12.94	0.41	2.11	Open

500 Coventry Hydrant Coverage Figure



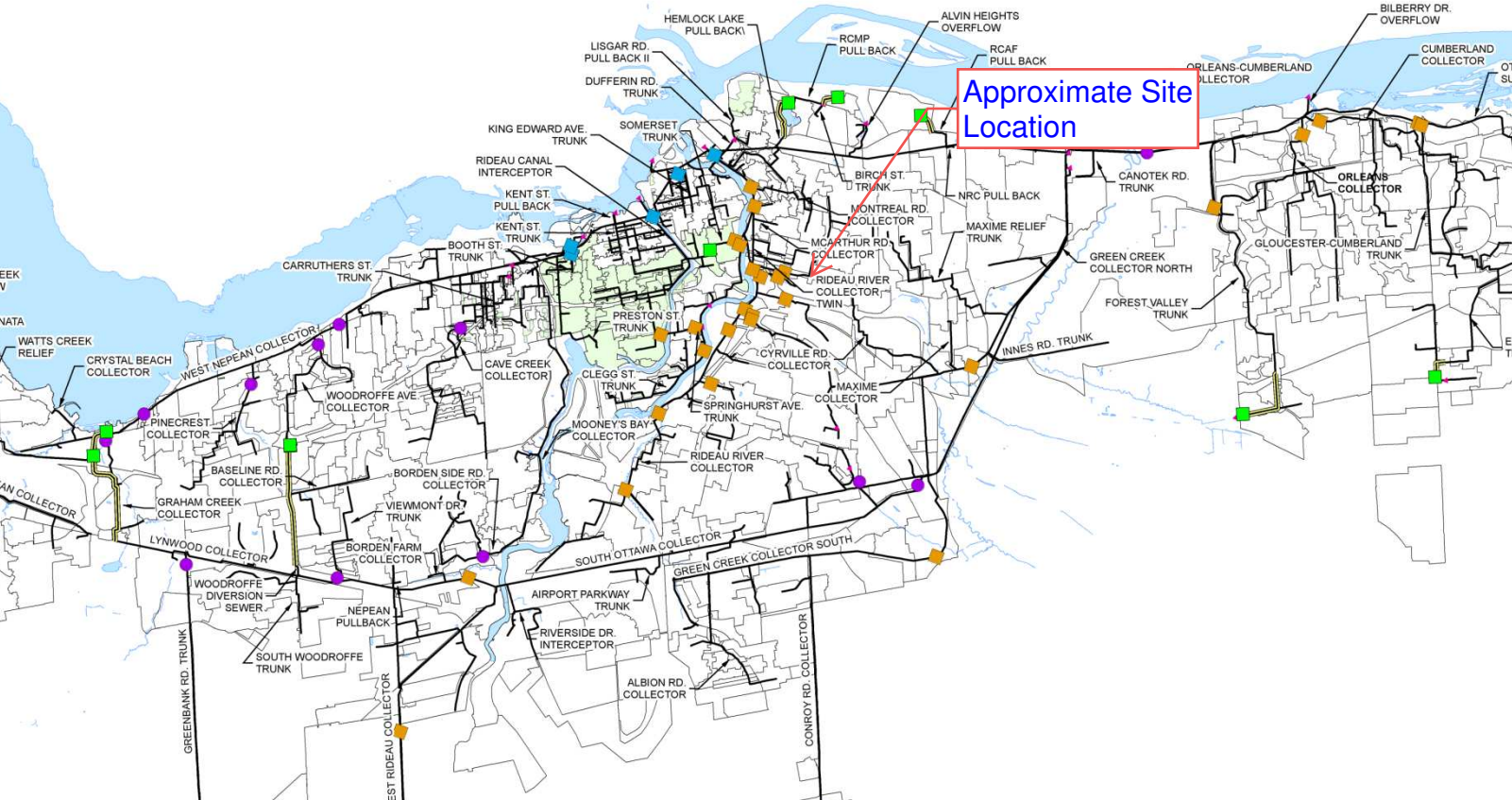
Hydrants within 75m = 1 Private

Hydrants within 150m = 1 Public

APPENDIX D
SANITARY CALCULATIONS

McINTOSH PERRY

500 Coventry Road



McINTOSH PERRY

CCO-23-2497 - 500 Coventry Rd - Sanitary Demands

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	RF
Date:	Dec-23

Site Area	3.46	Gross ha	
1 Bedroom	58	1.40	Persons per unit
2 Bedroom	159	2.10	Persons per unit
3 Bedroom	92	3.10	Persons per unit
Total Population	701	Persons	
Amenity Space	5057.00	m^2	

DESIGN PARAMETERS

Institutional/Commercial Peaking Factc	1	
Residential Peaking Factor	3.32	* Using Harmon Formula = 1+(14/(4+P^0.5))*0.8 where P = population in thousands, Harmon's Correction Factor = 0.8
Mannings coefficient (n)	0.013	
Demand (per capita)	280	L/day
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.17
Wet	0.97
Total	1.14

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	280	L/c/d	701	2.27
Industrial - Light**	35,000	L/gross ha/d		0
Industrial - Heavy**	55,000	L/gross ha/d		0
Commercial / Amenity	2,800	L/(1000m^2/d)	5057.00	0.16
Hospital	900	L/(bed/day)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m^2/d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

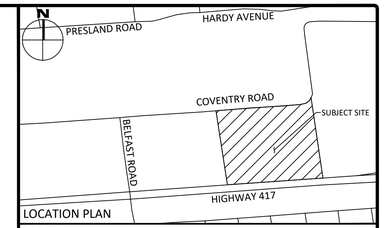
AVERAGE RESIDENTIAL FLOW	2.27	L/s
PEAK RESIDENTIAL FLOW	7.53	L/s
AVERAGE ICI FLOW	0.16	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.16	L/s
PEAK INDUSTRIAL FLOW	0.00	L/s
TOTAL PEAK ICI FLOW	0.16	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	2.61	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	7.87	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	8.84	L/s

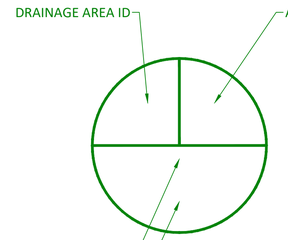
APPENDIX E
PRE-DEVELOPMENT DRAINAGE PLAN

McINTOSH PERRY



LOCATION PLAN

LEGEND



FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
1	ISSUED FOR COORDINATION	DEC. 20, 2023

Check and verify all dimensions before proceeding with the work — Do not scale drawings

SCALE 1 : 500
0 10 20 30 40 50 Metres

GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DRAWING 23868-23 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. CONTRACTOR TO MINIMIZE THE ACTUAL LIMITS OF REMOVALS AND REINSTATEMENT WHEREVER POSSIBLE, AND SHALL MAKE THEIR OWN JUDGEMENT AND ACCOUNT FOR ALL MATERIAL AND LABOUR REQUIRED FOR ADEQUATELY REINSTATING THE AREA TO PRE-CONSTRUCTION CONDITIONS OR BETTER, AND BEAR THE COST OF THE SAME. NO ADDITIONAL PAYMENT WILL BE MADE FOR REINSTATEMENT WORK NOT SHOWN ON THE CONTRACT DRAWING AS A DIRECT RESULT FROM CONSTRUCTION.
10. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
12. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE ENGINEER/CITY.
13. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
14. CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
15. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
16. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO ONE,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
17. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO ONE, BELL AND THE CITY.
18. CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION
19. ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

Stamp:

Client:
MORGUARD
55 CITY CENTRE DRIVE, SUITE 1000
MISSISSAUGA, ON L5B 1M3

Project:
RESIDENTIAL BUILDING
500 COVENTRY ROAD

Drawing Title:
PRE-DEVELOPMENT DRAINAGE AREA PLAN

Scale: 1:500	Project Number: CCO-23-2497
Drawn By: FV	
Checked By: RF	Drawing Number: PRE
Designed By: RF	

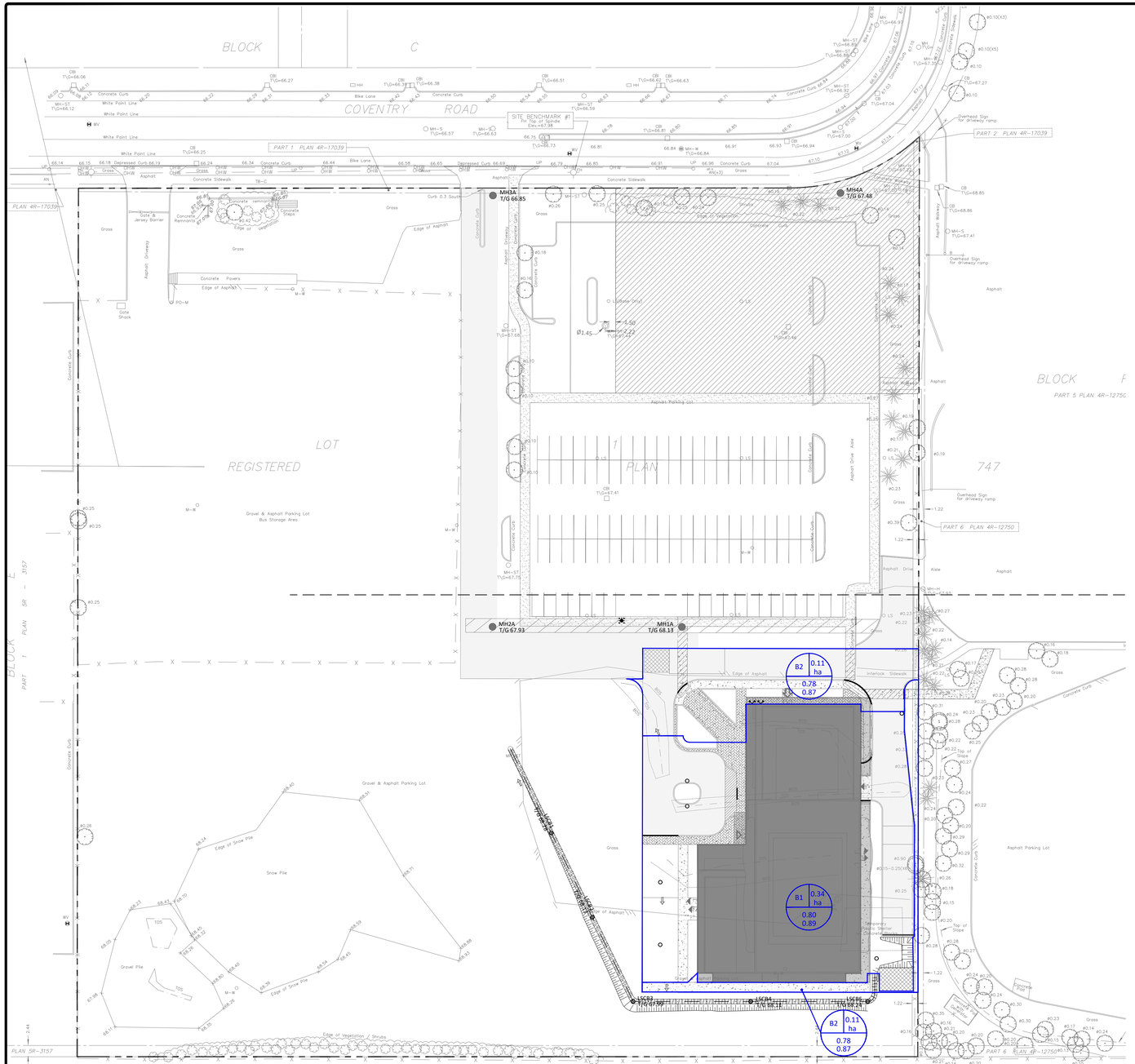
D07-12-XX-XXXX

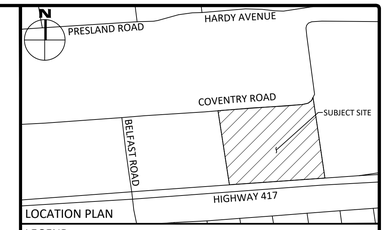
#XXXXX

FILENAME: L:\Infrastructure\2023\CCO-23-2497-Morguard 500 Coventry Rd\12 - Drawings\CCO-23-2497 - Presentation.dwg
LAST SAVED: Thursday, December 21, 2023 LAST SAVED BY: r.robineu
LAST PLOTTED: Thursday, December 21, 2023 CTB FILE USED: MP-CV-STANDARD.ctb

APPENDIX F
POST-DEVELOPMENT DRAINAGE PLAN

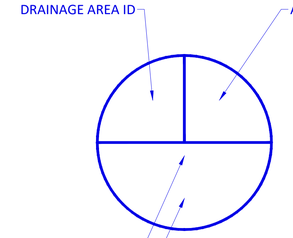
McINTOSH PERRY





LOCATION PLAN

LEGEND



FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
4	REISSUED FOR SITE PLAN CONTROL	MAR. 14, 2025
3	REISSUED FOR SITE PLAN CONTROL	OCT. 28, 2024
2	ISSUED FOR SITE PLAN CONTROL	JAN. 26, 2024
1	ISSUED FOR COORDINATION	DEC. 20, 2023

Check and verify all dimensions before proceeding with the work — Do not scale drawings

SCALE 1 : 500

0 10 20 30 40 50 Metres

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15. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
16. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO ONE,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
17. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO ONE, BELL AND THE CITY.
18. CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION
19. ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

Stamp:

Client:

MORGUARD
55 CITY CENTRE DRIVE, SUITE 1000
MISSISSAUGA, ON L5B 1M3

Project:

RESIDENTIAL BUILDING
500 COVENTRY ROAD

Drawing Title:

POST-DEVELOPMENT DRAINAGE AREA PLAN

Scale: 1:500	Project Number: CCO-23-2497
Drawn By: FV	
Checked By: RF	Drawing Number: POST
Designed By: RF	

D07-12-XX-XXXX

#XXXXX

FILENAME: U:\Infrastructure\2023\CCO-23-2497-Morguard-500 Coventry Rd\12 - Drawing\CCO-23-2497 - Presentation.dwg
LAST SAVED: Tuesday, March 04, 2025 LAST SAVED BY: F Valenti
LAST PLOTTED: Friday, March 14, 2025 STB FILE USED: MP-CV-STANDARD.ctb

APPENDIX G
STORMWATER MANAGEMENT CALCULATIONS

McINTOSH PERRY

CCO-23-2497 - 500 Coventry Road

Tc (min)	Intensity (mm/hr)	
	5-Year	100-Year
20	70.3	120.0
10	104.2	178.6

C-Values	
Impervious	0.90
Gravel	0.60
Gravely-Soil	0.40
Pervious	0.20

Pre-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravely-Soil Area (m^2)	Pervious Area (m^2)	Average C (5-year)	Average C (100-year)
A1	1,351	3,134	0	0.55	0.65

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	Q (L/s)	
					5-Year	100-Year
A1	0.45	0.55	0.65	10	71.54	144.86
Total	0.45				71.54	144.86

Post-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravel (m^2)	Pervious Area (m^2)	Average C (5-year)	Average C (100-year)	
B1	2,911	0	501	0.80	0.89	Restricted
B2	888	0	185	0.78	0.87	Unrestricted

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	Q (L/s)		
					5-Year	100-Year	
B1	0.34	0.80	0.89	10	78.79	150.72	Restricted
B2	0.11	0.78	0.87	10	24.23	46.39	Unrestricted
Total	0.45				103.02	197.12	

Required Restricted Flow

Drainage Area	Area (ha)	C 5-Year	Tc (min)	Q (L/s)
				5-Year
A1	0.45	0.50	10	64.96

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow (L/S)		Restricted Flow (L/S)		Storage Required (m^3)		Storage Provided (m^3)	
	5-year	100-Year	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year
B1	78.79	150.72	9.71	18.57	41.51	107.58	110.00	110.00
B2	24.23	46.39	24.23	46.39				
Total	103.02	197.12	33.94	64.96				

CCO-23-2497 - 500 Coventry Road

Storage Requirements for Area B1

5-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	104.2	78.80	18.57	60.23	36.14
20	70.3	53.16	18.57	34.59	41.51
30	53.9	40.76	18.57	22.19	39.94
40	44.2	33.43	18.57	14.86	35.65
50	37.7	28.51	18.57	9.94	29.82

Maximum Storage Required 5-year =	42	m^3

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	150.76	18.57	132.19	79.31
20	120.0	101.29	18.57	82.72	99.27
30	91.9	77.57	18.57	59.00	106.21
40	75.1	63.39	18.57	44.82	107.58
50	64.0	54.02	18.57	35.45	106.36
60	55.9	47.19	18.57	28.62	103.02
70	49.8	42.04	18.57	23.47	98.56
80	45.0	37.99	18.57	19.42	93.20
90	41.1	34.69	18.57	16.12	87.07
100	37.9	31.99	18.57	13.42	80.54

Maximum Storage Required 100-year =	108	m^3

5-Year Storm Event Storage Summary

Storage Available (m^3) = 110.0
Storage Required (m^3) = 41.5

100-Year Storm Event Storage Summary

Storage Available (m^3) = 110.0
Storage Required (m^3) = 107.6

McINTOSH PERRY

CCO-23-2497 - 500 Coventry Rd - Sanitary Demands

Project:	500 Coventry Rd
Project No.:	CCO-23-2497
Designed By:	FV
Checked By:	RF
Date:	Dec-23

Site Area	3.46	Gross ha	
1 Bedroom	58	1.40	Persons per unit
2 Bedroom	159	2.10	Persons per unit
3 Bedroom	92	3.10	Persons per unit
Total Population	701	Persons	
Amenity Space	5057.00	m^2	

DESIGN PARAMETERS

Institutional/Commercial Peaking Factc	1	
Residential Peaking Factor	3.32	* Using Harmon Formula = 1+(14/(4+P^0.5))*0.8 where P = population in thousands, Harmon's Correction Factor = 0.8
Mannings coefficient (n)	0.013	
Demand (per capita)	280	L/day
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.17
Wet	0.97
Total	1.14

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	280	L/c/d	701	2.27
Industrial - Light**	35,000	L/gross ha/d		0
Industrial - Heavy**	55,000	L/gross ha/d		0
Commercial / Amenity	2,800	L/(1000m^2/d)	5057.00	0.16
Hospital	900	L/(bed/day)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m^2/d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

AVERAGE RESIDENTIAL FLOW	2.27	L/s
PEAK RESIDENTIAL FLOW	7.53	L/s
AVERAGE ICI FLOW	0.16	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.16	L/s
PEAK INDUSTRIAL FLOW	0.00	L/s
TOTAL PEAK ICI FLOW	0.16	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	2.61	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	7.87	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	8.84	L/s

APPENDIX H
CITY OF OTTAWA DESIGN CHECKLIST

McINTOSH PERRY

City of Ottawa

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

Criteria	Location (if applicable)
☐ Executive Summary (for larger reports only).	N/A
☐ Date and revision number of the report.	On Cover
☐ Location map and plan showing municipal address, boundary, and layout of proposed development.	Appendix A
☐ Plan showing the site and location of all existing services.	Site Servicing Plan (C102)
☐ 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.	1.1 Purpose 1.2 Site Description 6.0 Stormwater Management
☐ Summary of pre-consultation meetings with City and other approval agencies.	Appendix B
☐ Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.	1.1 Purpose 1.2 Site Description 6.0 Stormwater Management
☐ Statement of objectives and servicing criteria.	3.0 Pre-Consultation Summary

☐ Identification of existing and proposed infrastructure available in the immediate area.	N/A
☐ Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	Site Grading Plan (C101)
☐ 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.	Site Grading Plan (C101)
☐ Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	N/A
☐ Proposed phasing of the development, if applicable.	N/A
☐ Reference to geotechnical studies and recommendations concerning servicing.	Section 2.0 Background Studies, Standards and References
☐ 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	Site Grading Plan (C101)

4.2 Development Servicing Report: Water

Criteria	Location (if applicable)
☐ Confirm consistency with Master Servicing Study, if available	N/A
☐ Availability of public infrastructure to service proposed development	N/A
☐ Identification of system constraints	N/A
☐ Identify boundary conditions	Appendix C
☐ Confirmation of adequate domestic supply and pressure	N/A
☐ 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.	Appendix C
☐ Provide a check of high pressures. If pressure is found to be high, an assessment is required to confirm the application of pressure reducing valves.	N/A
☐ Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design	N/A
☐ Address reliability requirements such as appropriate location of shut-off valves	N/A
☐ Check on the necessity of a pressure zone boundary modification.	N/A
☐ Reference to water supply analysis to show that major infrastructure is capable of delivering sufficient water for the proposed land use. This includes data that shows that the expected demands under average day, peak hour and fire flow conditions provide water within the required pressure range	Appendix C, Section 4.2

☐ 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.	Site Servicing Plan (C101)
☐ Description of off-site required feedermains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.	N/A
☐ Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.	Appendix C
☐ Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.	N/A

4.3 Development Servicing Report: Wastewater

Criteria	Location (if applicable)
☐ 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).	N/A
☐ Confirm consistency with Master Servicing Study and/or justifications for deviations.	N/A
☐ Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.	N/A
☐ Description of existing sanitary sewer available for discharge of wastewater from proposed development.	Section 5.2 Proposed Sanitary Sewer

☐ Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)	Section 5.3 Proposed Sanitary Design
☐ Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.	N/A
☐ Description of proposed sewer network including sewers, pumping stations, and forcemains.	Section 5.2 Proposed Sanitary Sewer
☐ Discussion of previously identified environmental constraints and impact on servicing (environmental constraints are related to limitations imposed on the development in order to preserve the physical condition of watercourses, vegetation, soil cover, as well as protecting against water quantity and quality).	N/A
☐ Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.	N/A
☐ Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.	N/A
☐ Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.	N/A
☐ Special considerations such as contamination, corrosive environment etc.	N/A

4.4 Development Servicing Report: Stormwater Checklist

Criteria	Location (if applicable)
☐ Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ Analysis of available capacity in existing public infrastructure.	N/A
☐ A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.	Pre & Post-Development Plans
☐ 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.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ Description of the stormwater management concept with facility locations and descriptions with references and supporting information.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ Set-back from private sewage disposal systems.	N/A
☐ Watercourse and hazard lands setbacks.	N/A
☐ Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.	N/A
☐ Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.	N/A
☐ Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5-year return period) and major events (1:100-year return period).	Appendix G

☐ Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.	Site Grading Plan (C101)
☐ 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.	Section 7.0 Proposed Stormwater Management Appendix G
☐ Any proposed diversion of drainage catchment areas from one outlet to another.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100-year return period storm event.	N/A
☐ Identification of potential impacts to receiving watercourses	N/A
☐ Identification of municipal drains and related approval requirements.	N/A
☐ Descriptions of how the conveyance and storage capacity will be achieved for the development.	Section 6.0 Stormwater Sewer Design & Section 7.0 Proposed Stormwater Management
☐ 100-year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.	Site Grading Plan (C101)
☐ Inclusion of hydraulic analysis including hydraulic grade line elevations.	N/A

☐ Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.	Section 8.0 Sediment & Erosion Control
☐ Identification of floodplains – proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions.	N/A
☐ Identification of fill constraints related to floodplain and geotechnical investigation.	N/A

4.5 Approval and Permit Requirements: Checklist

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:

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

4.6 Conclusion Checklist

Criteria	Location (if applicable)
☐ Clearly stated conclusions and recommendations	Section 9.0 Summary Section 10.0 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 are stamped
☐ All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario	All are stamped