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SITE SERVICING AND STORMWATER MANAGEMENT

FOR

SCOTT STREET DEVELOPMENTS INC
2050 SCOTT STREET

CITY OF OTTAWA

PROJECT NO.: 19-1142
CITY APPLICATION NO.: D02-02-20-0034

OCTOBER 2021 – REV. 2

SITE SERVICING AND STORMWATER MANAGEMENT
FOR
2050 SCOTT STREET

SCOTT STREET DEVELOPMENTS INC

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FOR
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CITY OF OTTAWA
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1.0 INTRODUCTION

David Schaeffer Engineering Limited (DSEL) has been retained by Scott Street Developments Inc to prepare a Site Servicing and Stormwater Management report in support of the application for a Site Plan Control (SPC) at 2046 & 2050 Scott Street and 295, 299 & 301 Ashton Avenue.

The subject property is located within the City of Ottawa urban boundary, in the Kitchissippi Ward. As illustrated in ***Figure 1***, below, the subject property is located east of the intersection of Scott Street and Winona Avenue. Comprised of five parcels, the subject property measures approximately ***0.241 ha*** and is zoned Traditional Mainstreet (TM).

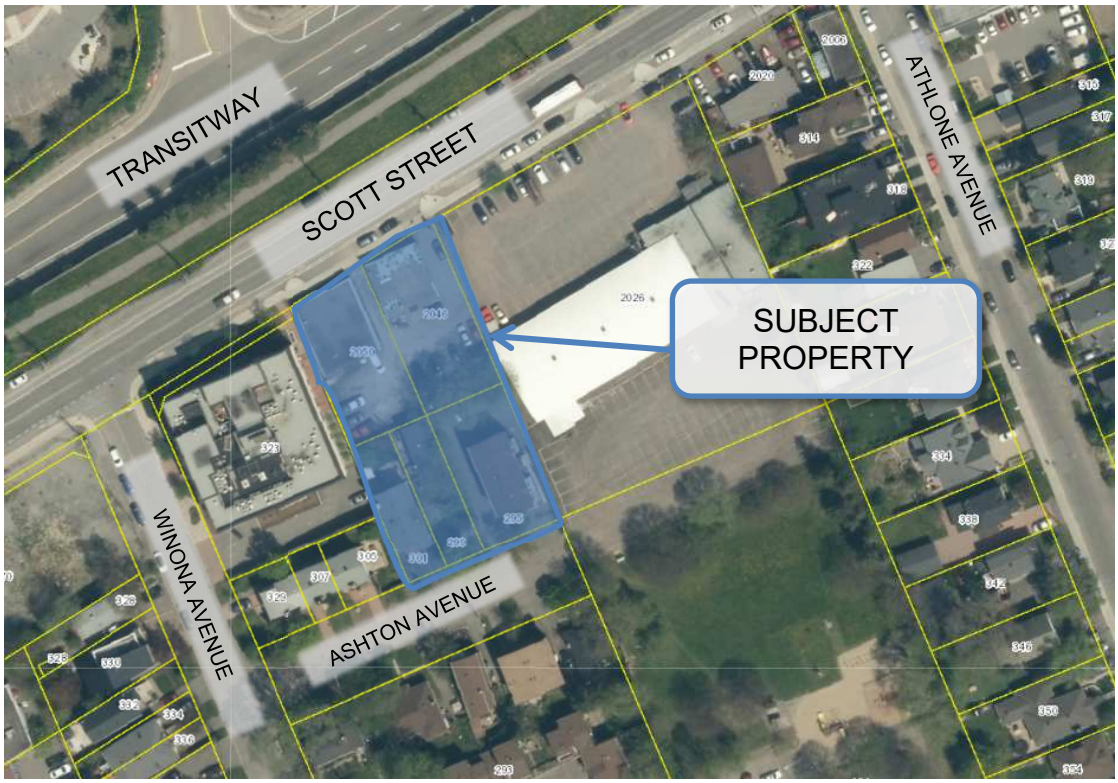

Figure 1: Site Location

The proposed SPC would allow for the development of a 30-storey residential/commercial building fronting onto Scott Street. The proposed development would include approximately ***152 m²*** of ground level retail and underground parking, with access from Scott Street and Ashton Avenue. The residential component is comprised of approximately ***331 units*** and approximately ***2,122 m²*** of amenity space. A copy of the Site Plan is included in ***Drawings/Figures***.

The objective of this report is to provide sufficient detail to demonstrate that the proposed development is supported by existing municipal services.

1.1 Existing Conditions

The existing property parcels within 2046 & 2050 Scott Street contain commercial buildings consisting of asphalt parking lots and two commercial buildings. The elevations range between 63.78 m and 62.91 m with a minimal grade change of approximately 0.34% from the Northeast to the Southwest corner of the property.

The existing property parcels within 295, 199 & 301 Ashton Avenue contain three residential buildings. The elevations range between 63.25 m and 62.65 m with a minimal grade change of approximately 1.0% from the Northeast to the Southwest corner of the property.

Sewer and watermain mapping collected from the City of Ottawa indicate that the following services exist across the property frontages within the adjacent municipal right-of-ways:

Scott Street

- 203 mm diameter PVC watermain;
- 900 mm diameter concrete storm sewer, tributary to Ottawa Central sub-watershed;
- 375 mm diameter PVC sanitary sewer, tributary to the West Nepean Collector;
- 1220 mm diameter transmission watermain; and
- 1500 mm diameter concrete West Nepean Collector sanitary trunk.

Ashton Avenue

- 152 mm diameter UCI watermain;
- 150 mm diameter concrete storm sewer, tributary to Ottawa Central sub-watershed; and
- 225 mm diameter concrete sanitary sewer, tributary to the West Nepean Collector.

1.2 Required Permits / Approvals

The development is subject to the site plan control approval process. The City of Ottawa must approve the engineering design drawings and reports prior to the issuance of site plan approval.

Based on coordination with Scott Street Developments Inc, the subject site is anticipated to be amalgamated into a single parcel of land, is not of industrial designation, and is not located within a combined sewershed. As a result, the stormwater management system is exempt from sections 53(1) and (3) of the Ontario Water Resources Act under Ontario Regulation 525/98.

1.3 Pre-consultation

Pre-consultation correspondence, along with the servicing guidelines checklist, is located in ***Appendix A***.

2.0 GUIDELINES, PREVIOUS STUDIES, AND REPORTS

2.1 Existing Studies, Guidelines, and Reports

The following studies were utilized in the preparation of this report:

- **Ottawa Sewer Design Guidelines**,
  City of Ottawa, *SDG002,* October 2012.
  (City Standards)
  - **Technical Bulletin ISTB-2018-01**
    City of Ottawa, March 21, 2018.
    (*ISTB-2018-01*)
  - **Technical Bulletin ISTB-2018-03**
    City of Ottawa, March 21, 2018.
    (*ISTB-2018-03*)
  - **Technical Bulletin ISTB-2021-03**
    City of Ottawa, August 18, 2021
    (ISTB-2021-03)
- **Ottawa Design Guidelines – Water Distribution**
  City of Ottawa, July 2010.
  (Water Supply Guidelines)
  - **Technical Bulletin ISD-2010-2**
    City of Ottawa, December 15, 2010.
    (*ISD-2010-2*)
  - **Technical Bulletin ISDTB-2014-02**
    City of Ottawa, May 27, 2014.
    (*ISDTB-2014-02*)
  - **Technical Bulletin ISDTB-2018-02**
    City of Ottawa, March 21, 2018.
    (*ISDTB-2018-02*)
- **Design Guidelines for Sewage Works,**
  Ministry of the Environment, 2008.
  (MOE* Design Guidelines*)
- **Stormwater Planning and Design Manual,**
  Ministry of the Environment, March 2003.
  (SWMP Design Manual)

- **Ontario Building Code Compendium**
  Ministry of Municipal Affairs and Housing Building Development Branch, January 1, 2010 Update.
  (OBC)

3.0 WATER SUPPLY SERVICING

3.1 Existing Water Supply Services

The subject property lies within the City of Ottawa 1W pressure zone, as shown by the Pressure Zone map in ***Appendix B***. A local 203 mm diameter watermain exists within the Scott Street right-of-way and a local 152 mm diameter watermain exists within the Ashton Avenue right-of-way. In addition to the local service, a 1200 mm diameter transmission main also exists within Scott Street. Based on As-built drawings provided by the City of Ottawa, it appears that there are two existing fire hydrants along Scott Street, fronting the subject site, and a fire hydrant along Ashton Avenue.

3.2 Water Supply Servicing Design

In accordance with City of Ottawa technical bulletin ISDTB-2014-02, redundant service connections will be required due to an estimated design flow of greater than 50 m^3/day. The development proposes to connect to both the existing 203 mm watermain within the Scott Street right-of-way and to the 152 mm watermain within the Ashton Avenue right-of-way via 150 mm service laterals. Refer to drawing ***SSP-1*** for a detailed servicing layout.

Table 1, below, summarizes the ***Water Supply Guidelines*** employed in the preparation of the water demand estimate.

Table 1
Water Supply Design Criteria

Design Parameter	Value
Residential Townhome	2.7 P/unit
Residential Bachelor/1 Bedroom Apartment	1.4 P/unit
Residential 2 Bedroom Apartment	2.1 P/unit
Residential Average Daily Demand	280 L/d/P***
Residential Maximum Daily Demand	2.5 x Average Daily *
Residential Maximum Hourly	5.5 x Average Daily *
Commercial/Amenity Space	2.5 L/m^2/d
Commercial Maximum Daily Demand	1.5 x avg. day
Commercial Maximum Hour Demand	1.8 x max. day
Minimum Watermain Size	150 mm diameter
Minimum Depth of Cover	2.4 m from top of watermain to finished grade
During normal operating conditions desired operating pressure is within	350 kPa and 480 kPa
During normal operating conditions pressure must not drop below	275 kPa
During normal operating conditions pressure must not exceed	552 kPa
During fire flow operating pressure must not drop below	140 kPa

Daily average based on Appendix 4-A from **Water Supply Guidelines*
*** Residential Max. Daily and Max. Hourly peaking factors per MOE Guidelines for Drinking-Water Systems Table 3-3 for 0 to 500 persons. -Table updated to reflect ISD-2010-2*
Daily consumption rate to align with the revised wastewater rates identified by City of Ottawa Technical Bulletin ISTB-2018-03. As a result, DSEL is submitting for a deviation from the ***Water Supply Guidelines

Table 2, below, summarizes the estimated water supply demand and boundary conditions for the development based on the ***Water Supply Guidelines***.

Table 2
Water Demand and Boundary Conditions
Proposed Conditions

Design Parameter	Estimated Demand[1] (L/min)	Boundary Condition[2] Scott Street (m H_2O / kPa)	Boundary Condition[2] Ashton Avenue (m H_2O / kPa)
Average Daily Demand	106.6	51.4 / 504.3	52.1 / 510.6
Max Day + Fire Flow	263.8 + 9,000 = 9,263.8	38.6 / 378.8	2,400 L/min (@ 20 psi)
Peak Hour	578.6	45.1 / 442.5	45.3 / 443.9

1) Water demand calculation per ***Water Supply Guidelines***. See ***Appendix B*** for detailed calculations.
2) Boundary conditions supplied by the City of Ottawa for the demands indicated in the correspondence; assumed ground elevation 63.4m within Scott Street and 62.75m within Ashton Avenue. See ***Appendix B.***

Fire flow requirements are to be determined in accordance with City of Ottawa ***Water Supply Guidelines*** and the Ontario Building Code.

Fire flow requirements were estimated per City of Ottawa Technical Bulletin ***ISTB-2018-02***. The following parameters were assumed:

- Type of construction – Fire-resistive Construction;
- Occupancy type – Limited Combustibility; and
- Sprinkler Protection – Fully Supervised Sprinklered System.

The above assumptions result in an estimated fire flow of approximately ***9,000 L/min***. A certified fire protection system specialist will need to be employed to design the building fire suppression system and confirm the actual fire flow demand.

There are three existing hydrants located within 75 m of the building in order to achieve the estimated fire flow of 9,000 L/min. The hydrants are located at:

- South-East corner of Winona Avenue and Scott Street;
- South-West corner of Athlone Avenue and Scott Street; and
- Dead end of Ashton Avenue.

Per the City of Ottawa Technical Bulletin ISTB-2018-02, each hydrant can have a maximum fire flow of 5700 L/min. Royal Fire and Hydrants R Us conducted flow tests on the aforementioned hydrants to confirm the available flow surrounding the subject lands and determined that each hydrant is capable of providing fire flow in excess of 5,700L/min. The flow test results are located in **Appendix B**. Therefore, sufficient hydrant coverage exists to support the proposed development.

The City of Ottawa was contacted to obtain boundary conditions associated with the estimated water demand, as indicated in the boundary request correspondence included in ***Appendix B***. Based on the updated Site Plan, the estimated water demand for the site decreased by approximately 5% from the boundary condition request. It is not anticipated to have a significant impact on the previously provided boundary conditions.

The City provided both the anticipated minimum and maximum water pressures, as well as, the estimated water pressure during fire flow demand for the demands indicated by the correspondence in ***Appendix B***. As shown by ***Table 2,*** above, the minimum and maximum pressures fall within the required range identified in ***Table 1*** for the Scott Street connection.

3.3 Water Supply Conclusion

A local 203 mm diameter watermain exists within the Scott Street right-of-way and a local 152 mm diameter watermain exists within the Ashton Avenue right-of-way. Based on As-built drawings provided by the City of Ottawa, there are two existing fire hydrants along Scott Street, fronting the subject site, and a fire hydrant along Ashton Avenue.

The development proposes to connect to both the existing 203 mm watermain within the Scott Street right-of-way and to the 152 mm watermain within the Ashton Avenue right-of-way via 150 mm service laterals.

Estimated water demands under proposed conditions were submitted to the City of Ottawa for establishing boundary conditions. The City provided both the anticipated minimum and maximum water pressures, as well as, the estimated water pressure during fire flow. The minimum and maximum pressures fall within the required range identified in ***Table 1*** for the Scott Street connection.

4.0 WASTEWATER SERVICING

4.1 Existing Wastewater Services

The subject site lies within the West Nepean Sewer catchment area, as shown by the City sewer mapping included in ***Appendix C***. The existing 375 mm diameter sanitary sewer within Scott Street and the existing 225 mm diameter sanitary sewer within Ashton Avenue are available to service the proposed development.

2046 & 2050 Scott Street consist of two commercial buildings contributing wastewater to the local 375 mm diameter sanitary sewer. 295, 299 & 301 Ashton Avenue consist of three residential buildings contributing wastewater to the local 225 mm diameter sanitary sewer within Ashton Avenue. The existing 375 sanitary sewer within Scott Street and the existing 225 mm diameter sanitary sewer within Ashton Avenue are tributary to the West Nepean Collector, which is located approximately 200 m downstream of the subject site.

Table 3, below, demonstrates the calculated peak flow from the existing buildings. See ***Appendix C*** for associated calculations.

Table 3
Summary of Estimated Peak Wastewater Flow

Design Parameter	Total Flow (L/s)
Estimated Average Dry Weather Flow	0.63
Estimated Peak Dry Weather Flow	0.81
Estimated Peak Wet Weather Flow	0.88

4.2 Wastewater Design

The development is proposed to be serviced via the 450 mm sanitary sewer within Scott Street via a 200 mm service lateral. Refer to drawing ***SSP-1*** for further details.

As noted by City of Ottawa staff and the geotechnical engineer, there are some contaminated soil concerns within the subject site. The geotechnical engineer is proposing a groundwater remediation program to provide treatment to the impacted groundwater plume. The post-remediation groundwater sampling will either confirm that the remediation program was successful or will indicate that a groundwater treatment system would be required for the property. In the worst-case scenario, the groundwater will need to be conveyed to the sanitary sewer at a rate of 25,000 L/day (0.3 L/s). Refer to geotechnical recommendations (PE4892-LET.03 and PG5323-MEMO.01) included in ***Appendix A*** for reference.

Table 4, below**,** summarizes the ***City Standards*** employed in the design of the proposed wastewater sewer system.

Table 4
Wastewater Design Criteria

Design Parameter	Value
Residential Single Family	3.4 P/unit
Residential Townhome	2.7 P/unit
Residential Bachelor/1 Bedroom Apartment	1.4 P/unit
Residential 2 Bedroom Apartment	2.1 P/unit
Residential Average Apartment	1.8 P/unit
Average Daily Demand	280 L/d/per
Peaking Factor	Harmon's Peaking Factor. Max 4.0, Min 2.0 Harmon's Corrector Factor 0.8
Commercial/Amenity Floor Space	5 $L/m^2/d$
Infiltration and Inflow Allowance	0.05 L/s/ha (Dry Weather) 0.28 L/s/ha (Wet Weather) 0.33 L/s/ha (Total)
Sanitary sewers are to be sized employing the Manning's Equation	$Q = \frac{1}{n} AR^{2/3} S^{1/2}$
Minimum Sewer Size	200 mm diameter
Minimum Manning's 'n'	0.013
Minimum Depth of Cover	2.5 m from crown of sewer to grade
Minimum Full Flowing Velocity	0.6 m/s
Maximum Full Flowing Velocity	3.0 m/s
Extracted from Sections 4 and 6 of the City of Ottawa Sewer Design Guidelines, October 2012.	

Table 5, below, demonstrates the estimated peak flow from the proposed development. See ***Appendix C*** for associated calculations.

Table 5
Summary of Estimated Peak Wastewater Flow

Design Parameter	Total Flow (L/s)
Estimated Average Dry Weather Flow	1.85
Estimated Peak Dry Weather Flow	5.95
Estimated Peak Wet Weather Flow **** Including possible 25,000 L/day groundwater flow rate (PG5323-MEMO.03)*	6.30

The estimated sanitary flow, based on the Site Plan included in ***Drawings/Figures,*** results in a peak wet weather flow of ***6.30 L/s***. This rate includes the possible 25,000 L/day (0.3 L/s) contaminated groundwater identified by Paterson Group.

A sanitary analysis was conducted for the local Ashton Avenue municipal sanitary sewer, located across the frontage of the subject property, in order to assess the available capacity. The catchment area serviced by the Ashton Avenue sanitary sewer was

identified and evaluated by reviewing existing development and zoning within the area. The analysis was conducted from the site to the upstream extents of the drainage area located near the intersection of Winona Avenue and Richmond Road, as shown by the sanitary drainage plan included in ***Appendix C.***

The City of Ottawa's Technical Bulletin ***ISTB-2018-01*** was employed to generate a conservative estimate of the existing wastewater flow conditions within the Ashton Avenue and Winona Avenue sewers. Based on the sanitary analysis, the controlling section of the local sewer system is located within Ashton Avenue (section A-B) with an available residual capacity of ***29.1 L/s***; detailed calculations are included in ***Appendix C***.

The analysis above indicates that sufficient capacity is available in the Ashton Avenue sewer to accommodate the proposed development.

Due to the complexity of the drainage area for the Scott Street sanitary sewer, the impacts from the estimated flow from the site require further review by the City in order to confirm available capacity and resulting HGL within the existing sanitary sewer.

4.3 Wastewater Servicing Conclusions

The development is proposed to be serviced via the 450 mm sanitary sewer within Scott Street via a 200 mm service lateral.

Due to the complexity of the drainage area for the Scott Street sanitary sewer, the impacts from the estimated flow from the site require further review by the City in order to confirm available capacity and resulting HGL within the existing sanitary sewer.

The wastewater design will conform to all relevant ***City Standards***.

5.0 STORMWATER MANAGEMENT

5.1 Existing Stormwater Services

Stormwater runoff from the subject property is tributary to the City of Ottawa sewer system and is located within the Ottawa Central sub-watershed. As such, approvals for development within this area are under the approval authority of the City of Ottawa.

Flows that influence the watershed in which the subject property is located are further reviewed by the principal authority. The subject property is located within the Ottawa River watershed, and is therefore subject to review by the Rideau Valley Conservation Authority (RVCA). Consultation with the RVCA is located in ***Appendix A***.

It was assumed that the existing development contained no stormwater management controls for flow attenuation. The estimated pre-development peak flows for the 2, 5, and 100-year events are summarized in ***Table 6,*** below:

Table 6
Summary of Existing Peak Storm Flow Rates

City of Ottawa Design Storm	Estimated Peak Flow Rate – Scott St (L/s)	Estimated Peak Flow Rate – Ashton Ave (L/s)	Total Flow (L/s)
2-year	23.2	16.4	39.6
5-year	31.5	22.3	53.8
100-year	60.0	47.8	107.8

5.2 Post-development Stormwater Management Target

Stormwater management requirements for the contemplated development were reviewed with the City of Ottawa, where the development is required to:

- Meet an allowable release rate based on a Rational Method Coefficient of 0.50, employing the City of Ottawa IDF parameters for a 5-year storm with a time of concentration equal to 10 minutes;
- Attenuate all storms up to and including the City of Ottawa 100-year design event on site; and
- Quality controls are not required for the development due to the site's distance from the outlet; correspondence with the RVCA is included in ***Appendix A***.

Based on the above the allowable release rate for the contemplated development is ***34.9 L/s***.

5.3 Stormwater Management System

To meet the stormwater objectives the development will utilize cistern storage.

The stormwater cistern is assumed to be pumped with a maximum 5-year release rate of ***12.9 L/s*** and a maximum 100-year release rate of ***24.4 L/s*** and proposed to discharge to the 250 mm storm lateral. The 250 mm service outlets to the 900 mm storm sewer within Scott Street. Refer to the drawing ***SSP-1,*** for connection points.

Based on consultation with the RVCA, stormwater quality controls are not required.

Table 7, below, summarizes post-development flow rates. Unattenuated areas will be compensated for in areas with flow attenuation controls.

Table 7
Stormwater Flow Rate Summary

Control Area	5-Year Release Rate	5-Year Storage	100-Year Release Rate	100-Year Storage
	(L/s)	(m^3)	(L/s)	(m^3)
Unattenuated Areas	4.9	0.0	10.5	0.0
Attenuated Areas	12.9	25.2	24.4	47.9
Total	**17.8**	**25.2**	**34.9**	**47.9**

It is anticipated that approximately ***48 m^3*** of storage will be required on site to attenuate flow to the established release rate of ***34.9 L/s***; storage calculations are contained within ***Appendix D***.

5.4 Stormwater Servicing Conclusions

Post development stormwater runoff will be required to be restricted to the allowable target release rate for storm events up to and including the 100-year storm in accordance with City of Ottawa ***City Standards***. The post-development allowable release rate was calculated as ***34.9 L/s,*** based on consultation with the City of Ottawa. It is calculated that ***48 m^3*** of on-site storage will be required to meet this release rate. Storage will be provided via an internal cistern.

Based on consultation with the RVCA, stormwater quality controls are not required.

The stormwater design will conform to all relevant ***City Standards*** and Policies for approval.

6.0 UTILITIES

Gas and Hydro services currently exist within the Scott Street right-of-way. Utility servicing will be coordinated with the individual utility companies prior to site development.

7.0 EROSION AND SEDIMENT CONTROL

Soil erosion occurs naturally and is a function of soil type, climate and topography. During construction the extent of erosion losses is exaggerated due to the removal of vegetation and the top layer of soil becoming agitated.

Prior to topsoil stripping, earthworks or underground construction, erosion and sediment controls will be implemented and will be maintained throughout construction.

Silt fence will be installed around the perimeter of the site and will be cleaned and maintained throughout construction. Silt fence will remain in place until the working areas have been stabilized and re-vegetated.

Catch basins will have SILTSACKs or an approved equivalent installed under the grate during construction to protect from silt entering the storm sewer system.

A mud mat will be installed at the construction access in order to prevent mud tracking onto adjacent roads.

Erosion and sediment controls must be in place during construction. The following recommendations to the contractor will be included in contract documents:

- Limit extent of exposed soils at any given time;
- Re-vegetate exposed areas as soon as possible;
- Minimize the area to be cleared and grubbed;
- Protect exposed slopes with plastic or synthetic mulches;
- Install silt fence to prevent sediment from entering existing ditches;
- No refueling or cleaning of equipment near existing watercourses;
- Provide sediment traps and basins during dewatering;
- Install filter cloth between catch basins and frames;
- Plan construction at proper time to avoid flooding; and
- Establish material stockpiles away from watercourses, so that barriers and filters may be installed.

The contractor will, at every rainfall, complete inspections and guarantee proper performance. The inspection is to include:

Verification that water is not flowing under silt barriers

8.0 CONCLUSION AND RECOMMENDATIONS

David Schaeffer Engineering Ltd. (DSEL) has been retained by Scott Street Developments Inc to prepare a Site Servicing and Stormwater Management report in support of the application for a Site Plan Control (SPC) at 2046 & 2050 Scott Street and 295, 299 & 301 Ashton Avenue. The preceding report outlines the following:

- Based on boundary condition provided by the City, the existing municipal water infrastructure within Scott Street is capable of providing the proposed development with water within the City's required pressure range. A separate boundary condition request has been sent to the City for the Ashton Avenue watermain. Further details to be provided in a subsequent application;
- The FUS method for estimating fire flow indicated ***9,000 L/min*** is required for the proposed development;
- The development is estimated to have a peak wet weather flow of ***6.30 L/s***, including post development flow from contaminated groundwater (25,000 L/day). Based on the above sanitary analysis, sufficient capacity is available to accommodate the development within the Ashton Avenue sanitary sewer. Due to the complexity of the drainage area, the capacity of the existing sanitary sewer will need to be confirmed by City of Ottawa staff;
- Based on the ***City Standards***, the development will be required to attenuate post development flows to an equivalent release rate of ***34.9 L/s*** for all storms up to and including the 100-year storm event;
- Stormwater objectives will be provided via an internal cistern, and it is estimated that ***48 m^3*** of onsite storage will be required to attenuate flow to the established release rate listed above;
- Based on consultation with the RVCA, stormwater quality controls are not required.

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APPENDIX A

Pre-Consultation

DEVELOPMENT SERVICING STUDY CHECKLIST

19-1142 06/04/2021

4.1 General Content		
☐	Executive Summary (for larger reports only).	N/A
☒	Date and revision number of the report.	Report Cover Sheet
☒	Location map and plan showing municipal address, boundary, and layout of proposed development.	Drawings/Figures
☒	Plan showing the site and location of all existing services.	Figure 1
☒	Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.	Section 1.0
☒	Summary of Pre-consultation Meetings with City and other approval agencies.	Section 1.3
☒	Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.	Section 2.1
☒	Statement of objectives and servicing criteria.	Section 1.0
☒	Identification of existing and proposed infrastructure available in the immediate area.	Sections 3.1, 4.1, 5.1
☐	Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	N/A
☐	Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.	N/A
☐	Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	N/A
☐	Proposed phasing of the development, if applicable.	N/A
☐	Reference to geotechnical studies and recommendations concerning servicing.	Section 2.0
☐	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	SP-1 Drawings/Figures

4.2 Development Servicing Report: Water		
☐	Confirm consistency with Master Servicing Study, if available	N/A
☒	Availability of public infrastructure to service proposed development	Section 3.1
☒	Identification of system constraints	Section 3.1
☒	Identify boundary conditions	Section 3.1, 3.2
☒	Confirmation of adequate domestic supply and pressure	Section 3.3

*Extracted from the City of Ottawa-Servicing Study Guidelines for Development Applications

☒	Confirmation of adequate fire flow protection and confirmation that fire flow is calculated as per the Fire Underwriter's Survey. Output should show available fire flow at locations throughout the development.	Section 3.2
☐	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	Section 3.2, 3.3
☐	Description of the proposed water distribution network, including locations of proposed connections to the existing system, provisions for necessary looping, and appurtenances (valves, pressure reducing valves, valve chambers, and fire hydrants) including special metering provisions.	N/A
☐	Description of off-site required feedermains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.	N/A
☒	Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.	Section 3.2
☐	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

☒	Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).	Section 4.2
☐	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 4.1
☒	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 4.2
☒	Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.	Section 4.2, Appendix C
☒	Description of proposed sewer network including sewers, pumping stations, and forcemains.	Section 4.2
☐	Discussion of previously identified environmental constraints and impact on servicing (environmental constraints are related to limitations imposed on the development in order to preserve the physical condition of watercourses, vegetation, soil cover, as well as protecting against water quantity and quality).	N/A

*Extracted from the City of Ottawa-Servicing Study Guidelines for Development Applications

☐	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

☒	Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)	Section 5.1
☒	Analysis of available capacity in existing public infrastructure.	Section 5.1, Appendix D
☒	A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.	Drawings/Figures
☒	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 5.2
☒	Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.	Section 5.2
☒	Description of the stormwater management concept with facility locations and descriptions with references and supporting information	Section 5.3
☐	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.	Appendix 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).	Section 5.3
☐	Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.	N/A
☒	Calculate pre and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.	Section 5.1, 5.3
☐	Any proposed diversion of drainage catchment areas from one outlet to another.	N/A
☐	Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.	N/A
☐	If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100-year return period storm event.	N/A
☐	Identification of potential impacts to receiving watercourses	N/A
☐	Identification of municipal drains and related approval requirements.	N/A

*Extracted from the City of Ottawa-Servicing Study Guidelines for Development Applications

☒	Descriptions of how the conveyance and storage capacity will be achieved for the development.	Section 5.3
☐	100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.	N/A
☐	Inclusion of hydraulic analysis including hydraulic grade line elevations.	N/A
☒	Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.	Section 7.0
☐	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

☒	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 ct. 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.	Section 1.2
☐	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

☒	Clearly stated conclusions and recommendations	Section 8.0
☐	Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the responsible reviewing agency.	
☐	All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario	

*Extracted from the City of Ottawa-Servicing Study Guidelines for Development Applications

Formal Pre-Application Consultation Meeting Minutes
2050 Scott Street
Thursday, October 31, 3:00 p.m. – 4:00 p.m.

Attendees

City of Ottawa
Jean-Charles Renaud, File Lead
Christopher Moise, Urban Design
John Wu, Engineer
Mark Richardson, Forester
Neeti Paudel, Transportation
Urja Modi, Student Planner

Applicant Team
Alison Gosling
Kevin McMahon, Owner
Pierre Boulet, Owner
Jakub Ulak, Surface Condos
Jamie Posen, FoTenn
Brian Casagrande, FoTenn
Roderick Lahey, RLA Architecture

Notes: Community association representative was unable to attend but will be added to the pre-application consultation correspondence.

Proposal Overview

- To construct a 26-storey mixed use building with 42 underground parking spaces.
- On Scott street, near Winona and near Tweedsmuir
- West of curling club
- East to four-story condo done by phoenix
- Gone through initial discussion with Doug James
- Met with ward councillor - recognizing Scott street as high-rise feeding into Light Rail Transit
- Discussion with department for high-rise guidelines
- Don't meet all of the guidelines
    - Increased setback
    - Adjacent R4 to behind
- 10m setbacks to property to east and then deal with west, setback on upper floors
- Think they are meeting intent of the bylaw
- 6 or 7 floors of underground parking - total unit count of about 200 units; parking is about 40% of the units (resident and visitor) - councillor is okay with that
    - Parking meeting zoning
- 4 or 5 storey condo to the west will most likely never disappear.

Preliminary Comments from various disciplines

Jean-Charles Renaud, File Lead

- Great area for intensification due to its proximity to the transit system, but not at all costs
- Size of lot creates problems in term of separation distance and transitioning to the neighbours, particularly to the south
- While we are seeing more high rises in the area, this remains a small TM zoned site - angular plane starting at the 4th floor is a requirement - not being met in this proposal
- The high rise tower separation zoning provisions, still in period of appeal, will apply.
- Be cognizant of Curling Club tower placement as it may allow you to reposition this one toward the east.
- Put thought into the 5-storey condo site being redeveloped in the next 5-20 years; maybe high-rise building; anticipate how surrounding lots be developed in the future similar to yours
- Timelines of adjacent property should be considered
- Wind study required
- Shadow-sun study required
- TCR required
- Project will be subject to a Complex Site Plan Control and a rezoning (tower separation guidelines depending on when you apply)
- Trigger section 37

John Wu, Engineering

- Servicing study contact ISD group - issue that needs to be addressed
- Right of way protection - 26m
- Storm or water - no issue - remind team that there is a high pressure transmission that is 1.2m; 2metres down in site is all rock - blasting of concern - follow vibration monitoring program - liability insurance - watermain break 15m from property line - connect to big one, about 3m deep
- Noise and vibration study
- 5 year stormwater management
- Major concern is sanitary

Christopher Moise, Urban Design

- More analysis needs to happen to figure out how to get around issue of scale
- Analysis of elevations along Scott street - is a tall building appropriate for this site?
- Issue of asking neighbourhood properties to accommodate for setbacks
- Appears the site is big enough for a 9 storey building - concern of not accommodating for things that need to be accommodated for - design mitigation, without land how will you mitigate
- Your building setback could be used as precedent for the property to the west having a similar setback
    - Need a limiting distance agreement to resolve this issue
- Zoning guidelines and design guidelines do not support the height being proposed

- Dealing with properties to the south; largest push back against other tall high-rise buildings on Scott Street
- How are we building it up from LRT in all directions - transition needs to be looked at of Scott Street
- Go to UDRP earlier than later, before full submission - the sooner you start the better
- Go to formal UDRP session of adjacent high-rise dev
- Think about practicality of condo site being redeveloped. The City will not look at it's redevelopment as being impossible.

Neeti Paudel, Transportation

- Scott street functional design during Stage 2 detour is included in the Scoping Report (Appendix C)
- Section of roadway along subject site is going to be reconstructed next year
- If you have to do lane reduction for road modifications or construction of the development, you can't do it until post 2024
- Submit step 1 to 4 of TIA for application to be deemed complete
- ROW protection on Scott Street between Churchill and Bayview is 26m – show this on the site plan.
- Site plan comments:
    - 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.
    - Sidewalk is to be continuous across access as per City Specification 7.1.
    - Clear throat requirements for Scott Street is 25m.

Mark Richardson, Forestry (absent from meeting)

- a Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City; an approved TCR is a requirement of Site Plan
- any removal of privately-owned trees 10cm or larger in diameter requires a tree permit issued under the Urban Tree Conservation Bylaw; the permit is based on the approved TCR
- any removal of City-owned trees will require the permission of Forestry Services who will also review the submitted TCR
- for this site, the TCR may be combined with the Landscape Plan provided all information is clearly displayed
    - if possible, please submit separate plans showing 1) existing tree inventory, and 2) a plan showing to be retained and to be removed trees with tree protection details
- tree locations are to be surveyed

- the TCR must list all trees on site by species, diameter and health condition – separate stands of trees may be combined using averages
- the TCR must address all trees with a critical root zone that extends into the developable area – all trees that could be impacted by the construction that are outside the developable area need to be addressed.
- trees with a trunk that crosses/touches a property line are considered co-owned by both property owners; permission from the adjoining property owner must be obtained prior to the removal of co-owned trees
- If trees are to be removed, the TCR must clearly show where they are, and document the reason they can not be retained – please provide a plan showing retained and removed treed areas
- 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 listed on Ottawa.ca
    - the location of tree protection fencing must be shown on a plan
    - include distance indicators from the trunk of the retained tree to the nearest part of the tree protection fencing
    - show the critical root zone of the retained trees
    - if excavation will occur within the critical root zone, please show the limits of excavation and calculate the percentage of the area that will be disturbed
- 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.
- Please ensure newly planted trees have an adequate soil volume for their size at maturity
- For more information on the process or help with tree retention options, contact Mark Richardson mark.richardson@ottawa.ca

Gary Ludington, Community Association Representative (Absent from meeting)

- Last night we attended a meeting at the Granite Curling Club regarding their potential proposal. This 26 storey proposal is immediately to the west. We have heard that the mixed use development of the Granite location could be taller.
- Surface has proposed a nine storey further east on Scott. Still on Scott but on the west side of Clifton is a proposed 20+ storey development. At McRae a 20+ storey complex is underway. Just across McRae on Scott we expect more high-rise development.
- There's a five storey building at Winona and a proposed 23 storey between Winona and Churchill.
- So we see going from 9 storeys to 23 to 26 or more to 5 to 23 to 7 where Scott ends just west of Churchill. The impact to the residential housing to the immediate south of the development on Scott will be adverse. There will be a wall of tall buildings from just east of Clifton to Churchill. Scott Street will become a speedway.
- Extra height is being or has been sought due to the FUTURE LRT. Yet parking is being provided for financial reasons and doesn't seem to take into consideration the proximity of the LRT.
- In looking at all the proposals there appears to be little or no trees or green space. Can the concrete blow not be softened by requiring trees etc on the south side of Scott.
- We are looking for ways to make Lions Park more easily accessible to all neighbours especially to those north of Scott Street. How can this be achieved?

- Birds are a concern because of the amount of glass used in the construction of all Scott Street proposals. Put some thought to this issue.

Charlotte Kelly

Subject: FW: Quality Control Requirements - 2050 Scott Street

Hi Charlotte,

Based on the site plan provided, the RVCA will not require quality controls for the proposed development. Best management practices are encouraged to provide as much protection on site, where possible. Please ensure that the stormwater management report identifies water quality considerations. (as noted below).

Thank you,

Eric Lalande, MCIP, RPP
Planner, Rideau Valley Conservation Authority
613-692-3571 x1137

From: Charlotte Kelly <CKelly@dsel.ca>
Sent: Wednesday, December 18, 2019 11:40 AM
To: Jamie Batchelor <jamie.batchelor@rvca.ca>; Eric Lalande <eric.lalande@rvca.ca>
Cc: Alison Gosling <AGosling@dsel.ca>
Subject: Quality Control Requirements - 2050 Scott Street

Good Morning Jamie and Eric,

We wanted to touch base with you regarding a development at 2046/2050 Scott Street

The existing site conditions consist of a two commercial buildings and above-ground parking area, as demonstrated in ***Figure 1*** below.

The development involves the construction of a 26-storey residential building, as shown in the contemplated site plan attached. Based on the information available, the development will discharge stormwater to the 900 mm diameter storm sewer within Scott Street and will travel approximately ***3 km*** towards the Ottawa River. Refer to ***Figure 2*** below for further details.

We anticipate that quality controls will not be required due to the distance to the outlet and as the development proposes to convert existing buildings and parking into a building and landscaped area. Can you please review and provide recommendations?

Please feel free to contact me to discuss.

Figure 1: Existing Site Limits

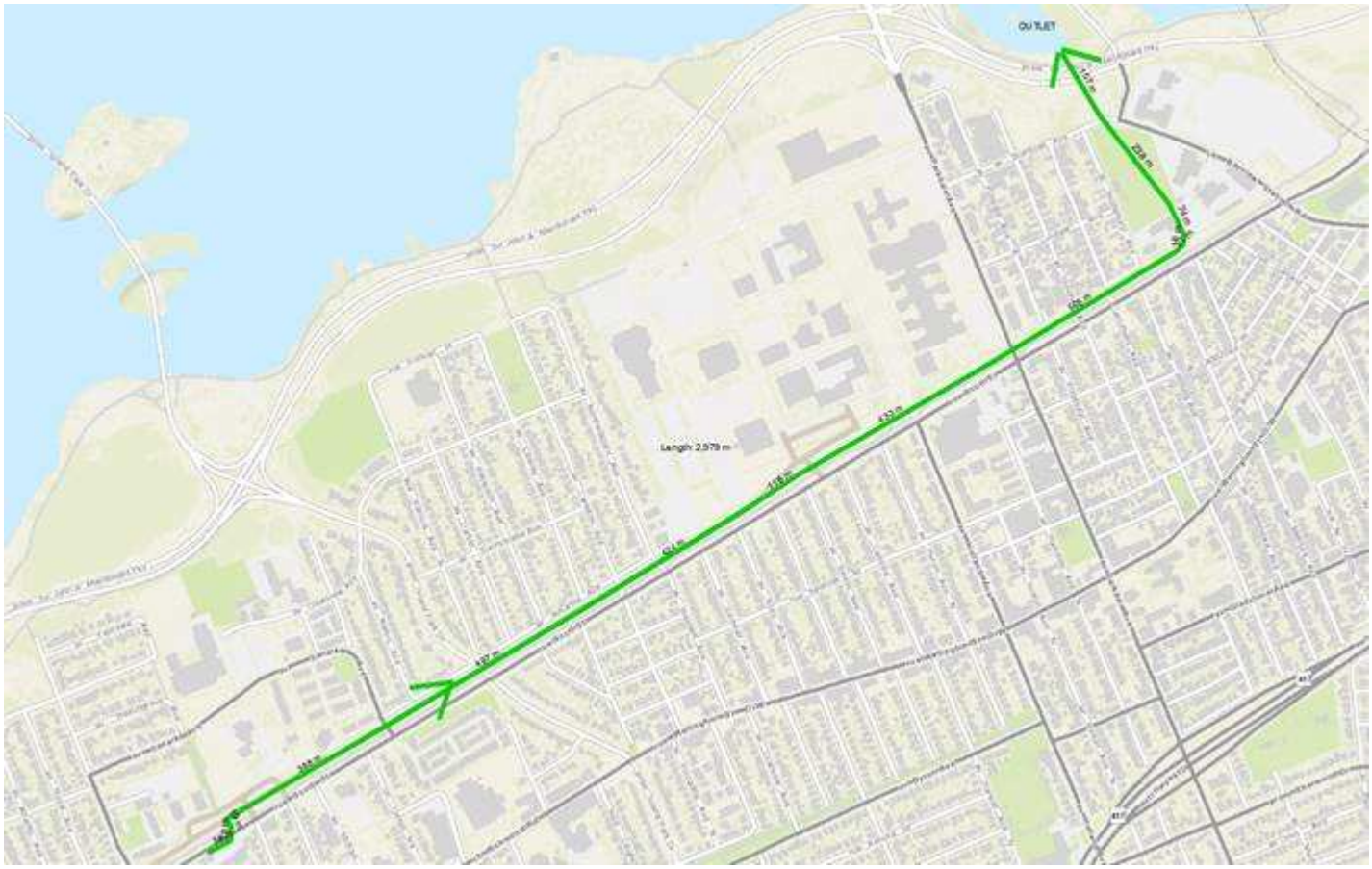

Figure 2: Distance to Outlet

Thank-you,

Charlotte Kelly, E.I.T.
Project Coordinator / Junior Designer

DSEL
david schaeffer engineering ltd.

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

phone: (613) 836-0856 ext.511
email: ckelly@dsel.ca

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Fax: (613) 226-6344

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science
Archaeological Services

www.patersongroup.ca

February 17, 2021
File: PE4892-LET.03

Mr. Jakub Ulak
88 Spadina Avenue
Ottawa, Ontario
K1Y 2C1

Subject: **Response to City Comments Regarding Impacted Groundwater**
City File No. D02-02-20-0034
2050 Scott Street
Ottawa, Ontario

Dear Sir,

This letter provides additional information, as requested by the City of Ottawa, for the proposed groundwater treatment methodologies and the Record of Site Condition filing for 2050 Scott Street.

Background

The impacted groundwater plume is expected to be contained to the perched groundwater within the overburden in the immediate vicinity of the former UST at 2050 Scott Street, where overburden depths extend from approximately 3.8 to 4.6m below grade. Groundwater within the underlying bedrock unit was determined to comply with the MECP standards selected for the site. Based on field observations at the time of the Phase II ESA field program, the soil depth decreases towards the southern portion of the site and is not a water-bearing unit. Groundwater within the bedrock stratigraphic unit is interpreted to represent the true groundwater table, while the groundwater observed in the overburden at 2050 Scott Street is considered to represent a perched condition.

The analytical test results are present on drawings appended to the Phase II ESA which has been provided under separate cover.

Groundwater Treatment

It is our understanding that the proposed development will have 2 to 3 levels of underground parking. As noted above, groundwater impacts are expected to be largely confined to the overburden; groundwater within the bedrock complies with the MECP Table 3 standards. All impacted water is expected to be removed before the excavation reaches final construction elevation.

The following remedial actions will be undertaken during the redevelopment of the site:

- ❒ Excavate soil and bedrock within the impacted groundwater zone and beyond the bottom of the impacted well screens, to the proposed founding elevation of the building.
- ❒ Pump impacted groundwater from within the excavation for off-site disposal by a licenced pumping contractor.
- ❒ Continue off-site treatment of impacted groundwater until analytical testing confirms the groundwater complies with the selected MECP site standards and/or the Sanitary Sewer Discharge Criteria.
- ❒ Monitor the groundwater quality throughout the excavation program to confirm the groundwater maintains compliance with the MECP standards and/or Sanitary Sewer Discharge Criteria.
- ❒ Once founding level is reached, install monitoring wells within the base of the excavation for post-remediation monitoring; 2 consecutive quarterly sampling events will be carried out, the first of which will be at least 90 days after the last remedial action.

The groundwater remediation program will result in one of the following scenarios:

1. The post-remediation groundwater sampling events confirm that the groundwater remediation program was successful and that the groundwater beneath the site complies with both the MECP Table 3 Standards and the Sanitary Sewer Discharge Criteria. A Generic Record of Site Condition (RSC) would be prepared and submitted for review and acknowledgement by the MECP.

2. The post-remediation groundwater sampling event(s) identify PHC impacts above the MECP Table 3 standards. In this scenario, a groundwater treatment system would be required for the property, to collect infiltrating groundwater during the remainder of construction and post-construction, until such a time that the groundwater is determined to meet the applicable discharge criteria.

Given that the impacted groundwater is expected to be primarily confined to the overburden and removed as noted above, it is expected that the groundwater treatment system would not be a permanent requirement.

Depending on the time required to achieve 2 consecutive clean quarterly groundwater results, a Generic RSC could be obtained, or a risk assessment (RA) based RSC could be obtained for the property, should groundwater concentrations above the site standards continue to be present beneath the site.

As noted above, it is expected that impacted groundwater will be removed during the removal of the soil and upper bedrock in the vicinity of the former UST. The goal of the site remediation program is to file a Generic RSC for the property.

We trust this information satisfies your requirements.

Paterson Group Inc.

Karyn Munch, P.Eng., QP$_{ESA}$

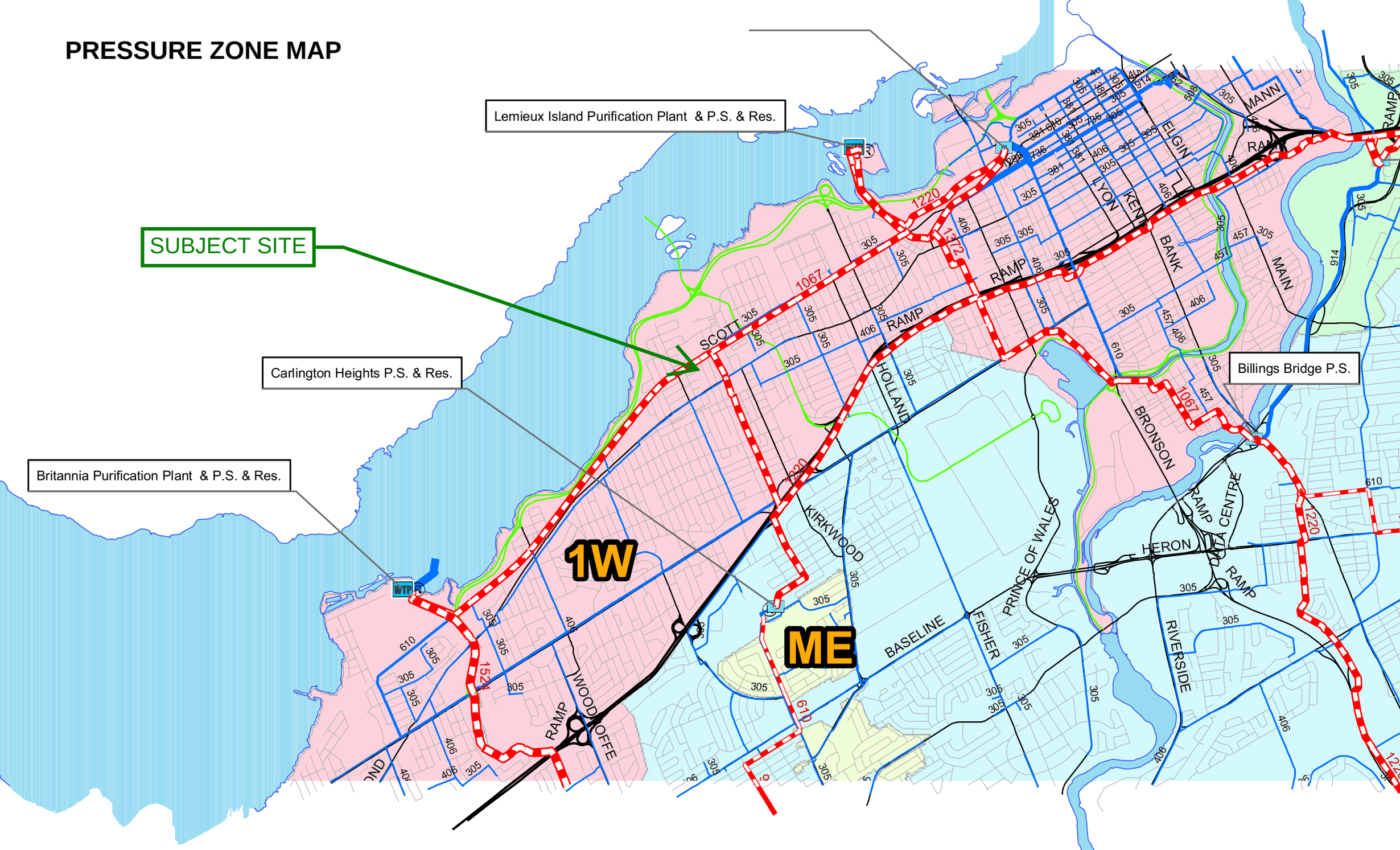
Report Distribution:

- ❒ Mr. Jakub Ulak
- ❒ City of Ottawa – Mr. John Wu

APPENDIX B

Water Supply

PRESSURE ZONE MAP



Water Demand Design Flows per Unit Count
City of Ottawa - Water Distribution Guidelines, July 2010

Domestic Demand

Type of Housing	Per / Unit	Units	Pop
Single Family	3.4		0
Semi-detached	2.7		0
Townhouse	2.7	5	14
Apartment			0
Bachelor	1.4	64	90
1 Bedroom	1.4	172	241
2 Bedroom	2.1	90	189
3 Bedroom	3.1		0
Average	1.8		0

	Pop	Avg. Daily		Max Day		Peak Hour	
		m^3/d	L/min	m^3/d	L/min	m^3/d	L/min
Total Domestic Demand	534	149.5	103.8	373.8	259.6	822.4	571.1

Institutional / Commercial / Industrial Demand

Property Type	Unit Rate	Units	Avg. Daily		Max Day		Peak Hour	
			m^3/d	L/min	m^3/d	L/min	m^3/d	L/min
Commercial floor space	2.5 $L/m^2/d$	248.1	0.62	0.4	0.9	0.6	1.7	1.2
Amenity Space	2.5 $L/m^2/d$	1,355	3.39	2.4	5.1	3.5	9.1	6.4
Total I/CI Demand			4.0	2.8	6.0	4.2	10.8	7.5
Total Demand			**153.5**	**106.6**	**379.8**	**263.8**	**833.2**	**578.6**

Fire Flow Estimation per Fire Underwriters Survey

Water Supply For Public Fire Protection - 1999

Fire Flow Required

1. Base Requirement

$$F = 220C\sqrt{A}$$ L/min

*Where **F** is the fire flow, **C** is the Type of construction and **A** is the Total floor area*

Type of Construction: Fire-Resistive Construction

*Non-combustible construction with a sprinkler system. Per OBC and Technical Bulletin IJSTB-2018-02, building is considered a "modified fire resistive building".

C	0.6		*Type of Construction Coefficient per FUS Part II, Section 1*
A	5656.0	m^2	*Total floor area based on FUS Part II section 1, Ground Floor + 50% of floors above (up to 8 floors)*
Fire Flow	9927.2	L/min	
	10000.0	**L/min**	*rounded to the nearest 1,000 L/min*

Adjustments

2. Reduction for Occupancy Type

Limited Combustible	-15%	
Fire Flow	**8500.0**	**L/min**

3. Reduction for Sprinkler Protection

Sprinklered - Supervised	-50%	
Reduction	**-4250**	**L/min**

4. Increase for Separation Distance

	Cons. of Exposed Wall	S.D	Lw	Ha	LH	EC	
N	Wood Frame	>45m	0	0	0	0%	
S	Wood Frame	10.1m-20m	15	1	15	12%	
E	Non-Combustible	0m-3m	20	1	20	22%	
W	Non-Combustible	3.1m-10m	30	4	120	20%	
		% Increase				**54%**	*value not to exceed 75%*

Increase	**4590.0**	**L/min**

Lw = Length of the Exposed Wall
Ha = number of storeys of the adjacent structure. Max 5 stories
LH = Length-height factor of exposed wall. Value rounded up.
EC = Exposure Charge

Total Fire Flow

Fire Flow	8840.0	L/min	*fire flow not to exceed 45,000 L/min nor be less than 2,000 L/min per FUS Section 4*
	9000.0	**L/min**	*rounded to the nearest 1,000 L/min*

Notes:
-Type of construction, Occupancy Type and Sprinkler Protection information provided by RLA.
-Calculations based on Fire Underwriters Survey - Part II

Boundary Conditions Unit Conversion - Scott

Grnd Elev 63.4

	Height	m H_2O	PSI	kPa
Avg. Day	**114.8**	51.4	73.1	504.3
Peak Hour	**108.5**	45.1	64.2	442.5
Max Day + FF	**102.0**	38.6	54.9	378.8

Boundary Conditions Unit Conversion - Ashton

Grnd Elev 62.8

	Height	m H_2O	PSI	kPa
Avg. Day	**114.8**	52.1	74.1	510.6
Peak Hour	**108**	45.3	64.4	443.9

	L/s	L/min
Fire Flow @ 140kPa	40	2400

Charlotte Kelly

From: Wu, John <John.Wu@ottawa.ca>
Sent: April 27, 2020 12:24 PM
To: Charlotte Kelly
Subject: RE: Boundary Condition Request - 2046 Scott Street (19-1142)
Attachments: image005.emz; 2046 Scott April 2020.pdf

Here is the result.

The following are boundary conditions, HGL, for hydraulic analysis at 2046 Scott (zone 1W) assumed to be connected to the 203mm on Scott and 152mm on Ashton (see attached PDF for location).

	203mm on Scott	152mm on Ashton
Minimum HGL	108.5m	108.0m
Maximum HGL	114.8m	114.8m
Max Day + Fire Flow (167 L/s)	102.0m	Available flow @20pi = 40L/s

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.

It looks clear, the connection on Ashton is not enough for the second water supply.

John

From: Charlotte Kelly <CKelly@dsel.ca>
Sent: April 20, 2020 8:32 AM
To: Wu, John <John.Wu@ottawa.ca>
Cc: Alison Gosling <AGosling@dsel.ca>
Subject: Boundary Condition Request - 2046 Scott Street (19-1142)

Good Morning John,

We would like to request water boundary conditions for 2046 Scott Street using the following development demands:

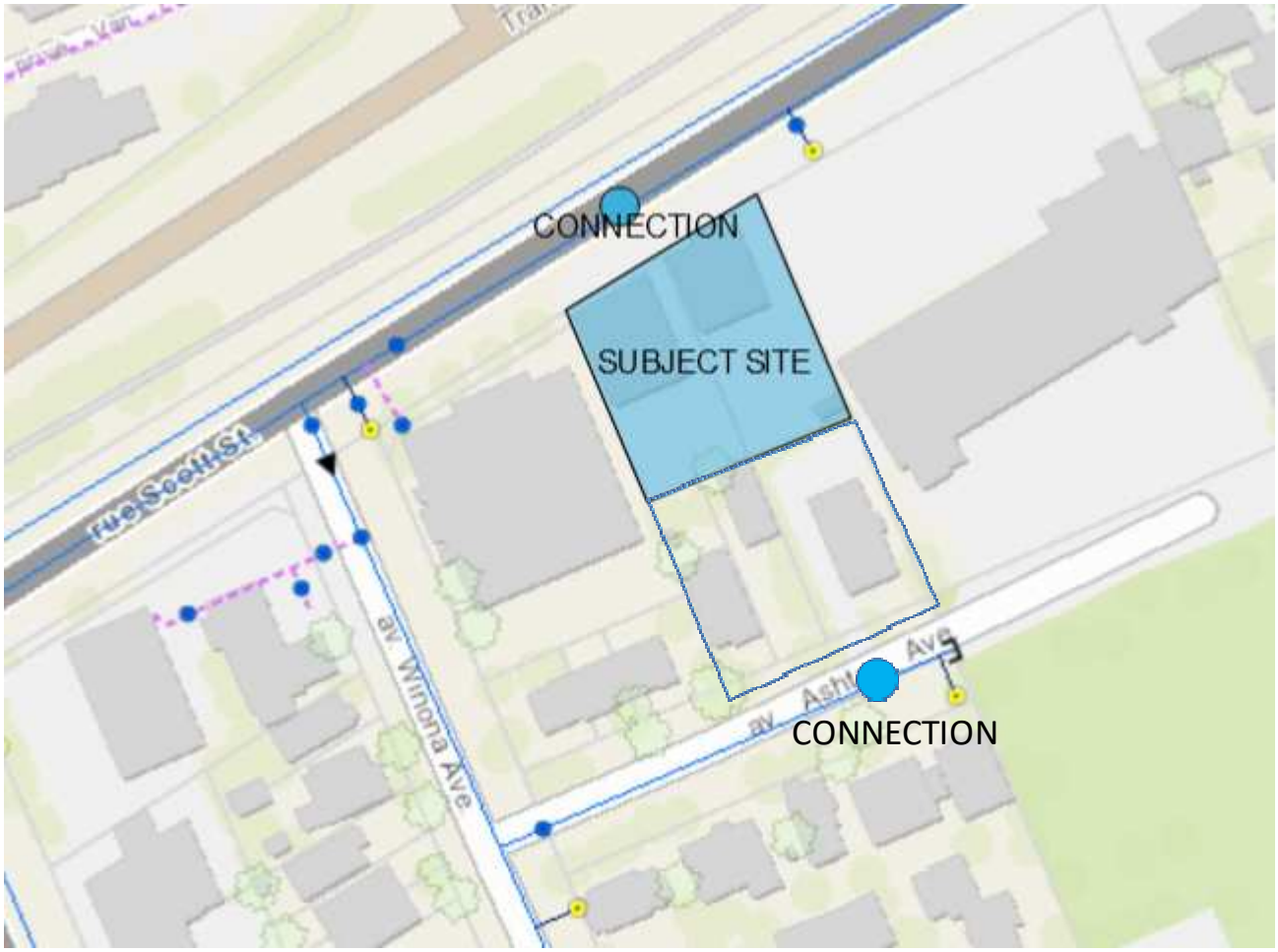
1. Location of Service: Scott Street / Ashton Avenue

2. Type of development and the amount of fire flow required for the proposed development:

- The development will include one 30-storey condominium building with approximately ***1,830 m²*** of amenity space, ***233 m²*** of commercial floor space and ***353 residential units***.
- It is anticipated that the development will have a dual connection to be serviced from the existing 203 mm diameter watermain within Scott Street and the existing 152 mm diameter watermain within Ashton Avenue, as shown by the attached map.
- Fire demand based on Technical Bulletin ISTB-2018-02 has been used to calculate an estimate the max fire demand of ***10,000 L/min***. Refer to the attached for detailed calculations.

Demand	L/min	L/s
Avg. Daily	114.6	1.91
Max Day	282.9	4.72
Peak Hour	620.3	10.34

If you have any questions, please feel free to contact me.



Thank-you,

Charlotte Kelly, E.I.T.
Project Coordinator / Junior Designer

DSEL
david schaeffer engineering ltd.

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

phone: (613) 836-0856 ext.511
email: ckelly@dsel.ca

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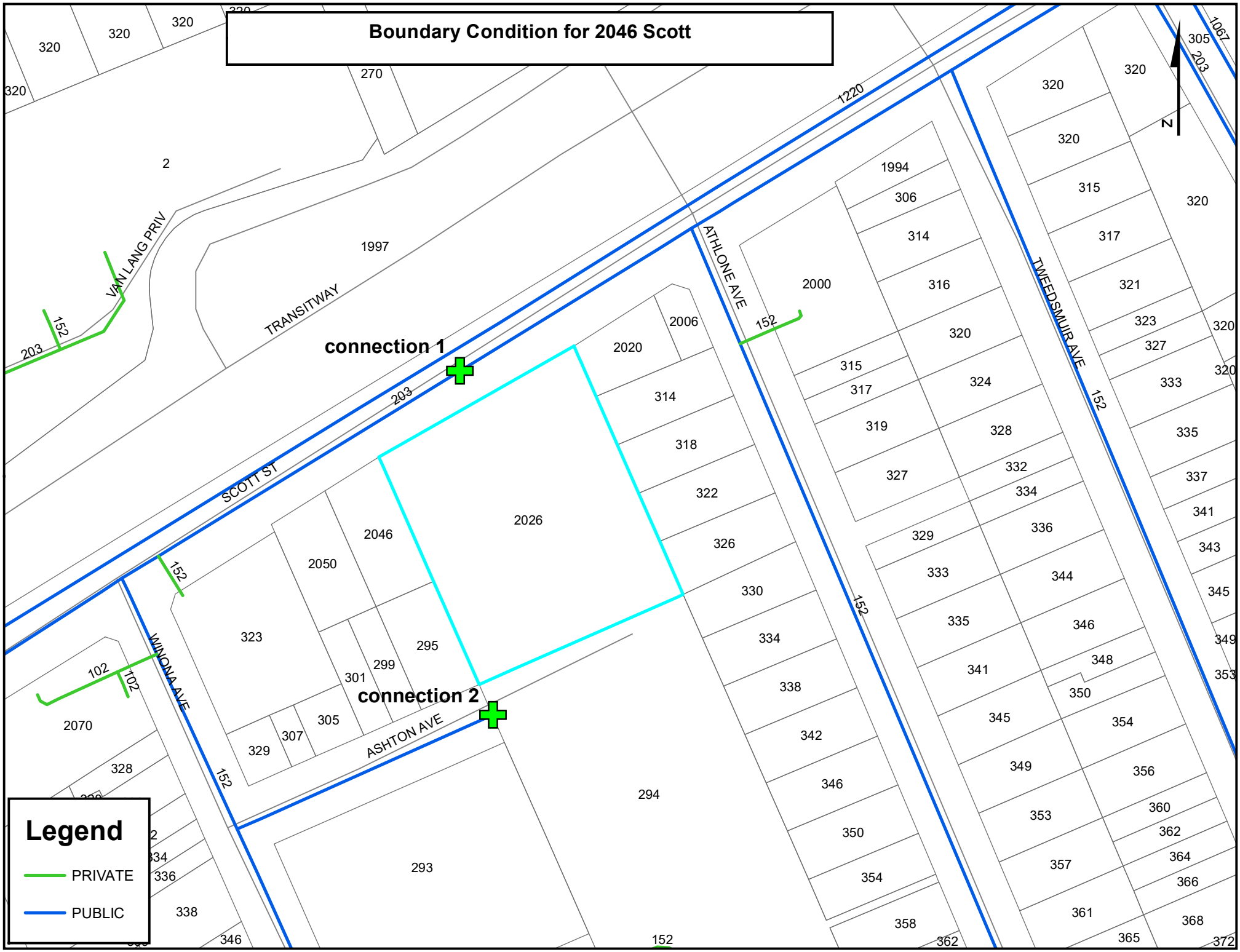

Boundary Condition for 2046 Scott
connection 1
connection 2
SCOTT ST
ASHTON AVE
WINONA AVE
ATHLONE AVE
TWEEDSMUIR AVE
TRANSITWAY
VAN LANG PRIV
2026
2046
2050
2020
2006
2000
1997
1994
2070
323
295
299
301
329
307
305
294
293
N
Legend
PRIVATE
PUBLIC

FIRE FLOW TESTING REPORT

in conformance with the NFPA 291 guidelines

Test Hydrant Number: **H-110**

Test Hydrant Information:

Test Hydrant Number:	H-110	
N.F.P.A. Colour Code:	BLUE	
STATIC PRESSURE:	79	psi
RESIDUAL PRESSURE:	76	psi
PRESSURE DROP:	3	psi
% PRESSURE DROP:	3.8	% psi

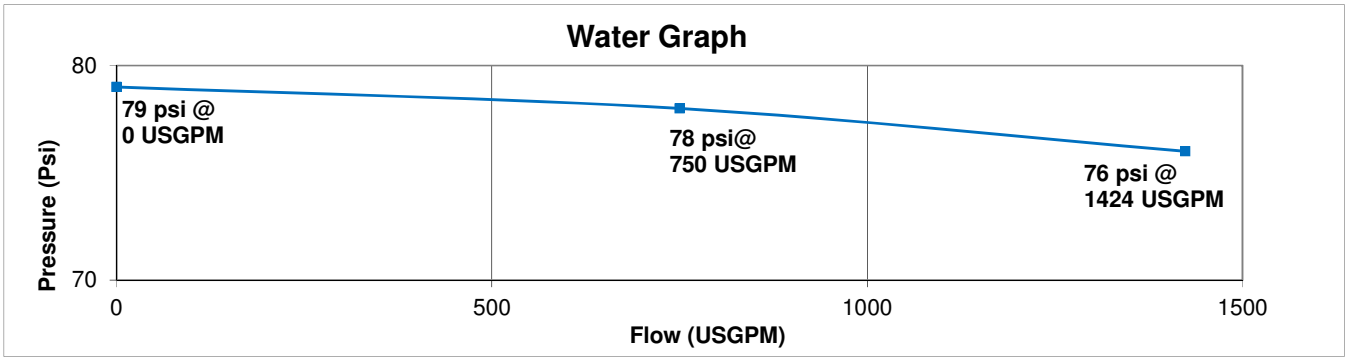
Client:	
Date:	13-Sep-21
Time:	9:00 AM
Location:	2050 Scott St.
Operator:	Topher Seguin/Nesbitt Engineering
Witnessed By:	Frank Hochreiter - Royal Fire
	Dan Vanesse - City of Ottawa

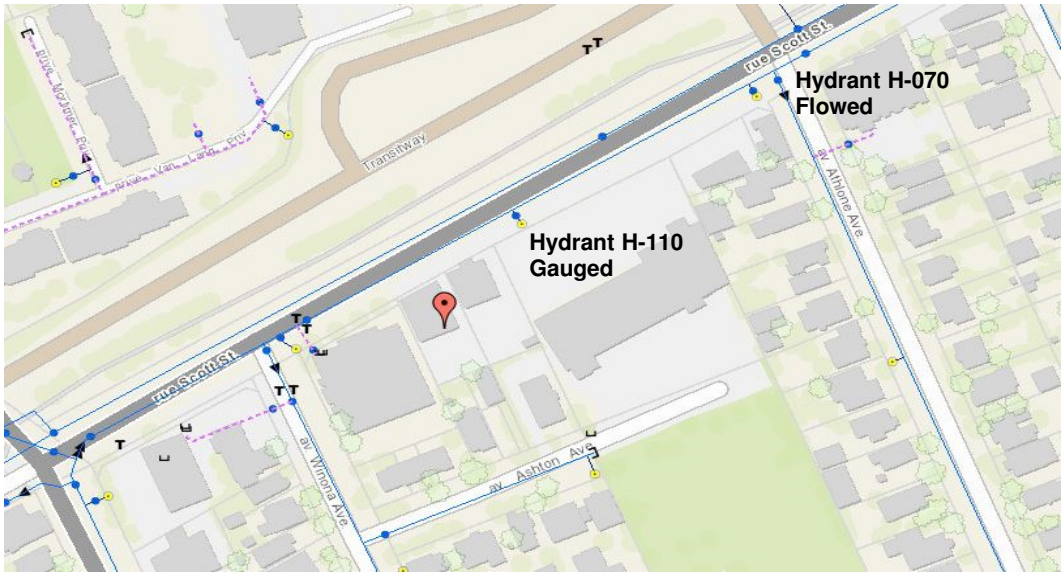
Flow At Test Hydrant at - 20 psi 7113 USGPM

Flow Hydrant(s) Information:

Hydrant #	# Ports Flowed	Outlet Diameter (Inches)	Diffuser Coefficient **	Residual Pressure (psi)	Hydrant Nozzle Coefficient (~0.9)	Pitot Gauge Reading (psi)	Flow (USGPM)
H-070	1	2.5	1	78	0.9	20	750
H-070	2	2.5	1	76	0.9	18	1424
					Estimated Flow at 20psi (USGPM)		7113

** Ensure adequate information supports Diffuser Coefficient values.





Hydrants-R-us Inc.
72 Delamere Drive
Stittsville, Ontario
K2S 1R2
(613) 836-6195 Office & Fax
(613) 868-7875 Cell
Email: dkeenan@hydrantsrus.com

Hydrant Inspection Report

OWNER:	**DSEL**				Date:	6-Oct-21	
HYDRANT LOCATION:	2050 Scott				Hydrant Type:	Concord	
PAINT	X	OK		PAINT TO CODE		COMPLETE PAINT	
CAPS	X	OK		OTHER			
STEM	X	OK		OTHER			
O RINGS	X	OK		OTHER			
TOP NUT	X	OK		OTHER			
VALVE SEAT	X	OK		OTHER			
CONDITION OF WATER	X	Normal		OTHER			
ISOLATION VALVE	X	OK		OTHER			
FLOW TEST REQUESTED	X	YES		NO	X	COMPLETE	

RESIDUAL HYDRANT STATIC PRESSURE:	PSI	70
RESIDUAL HYDRANT FLOWING PRESSURE:	PSI	67
FLOWING HYDRANT PITOT GAUGE PRESSURE:	PSI	75

NUMBER OF PORTS FLOWED: 1

NOZZLE SIZE: 2 1/2 in.

GALLONS PER MINUTE: 1213

GALLONS PER MINUTE AT 20 PSI: 5542 Colour Code: Blue

REMARKS:

CHECKED BY:

Hydrants-R-us Inc.
72 Delamere Drive
Stittsville, Ontario
K2S 1R2
(613) 836-6195 Office & Fax
(613) 868-7875 Cell
Email: dkeenan@hydrantsrus.com

Hydrant Inspection Report

OWNER:	**DSEL**				Date:	6-Oct-21	
HYDRANT LOCATION:	Ashton Ave				Hydrant Type:	Century	
PAINT	X	OK		PAINT TO CODE		COMPLETE PAINT	
CAPS	X	OK		OTHER			
STEM	X	OK		OTHER			
O RINGS	X	OK		OTHER			
TOP NUT	X	OK		OTHER			
VALVE SEAT	X	OK		OTHER			
CONDITION OF WATER	X	Normal		OTHER			
ISOLATION VALVE	X	OK		OTHER			
FLOW TEST REQUESTED	X	YES		NO	X	COMPLETE	

RESIDUAL HYDRANT STATIC PRESSURE:	PSI	70
RESIDUAL HYDRANT FLOWING PRESSURE:	PSI	60
FLOWING HYDRANT PITOT GAUGE PRESSURE:	PSI	27

NUMBER OF PORTS FLOWED: 1

NOZZLE SIZE: 2 1/2 in.

GALLONS PER MINUTE: 728

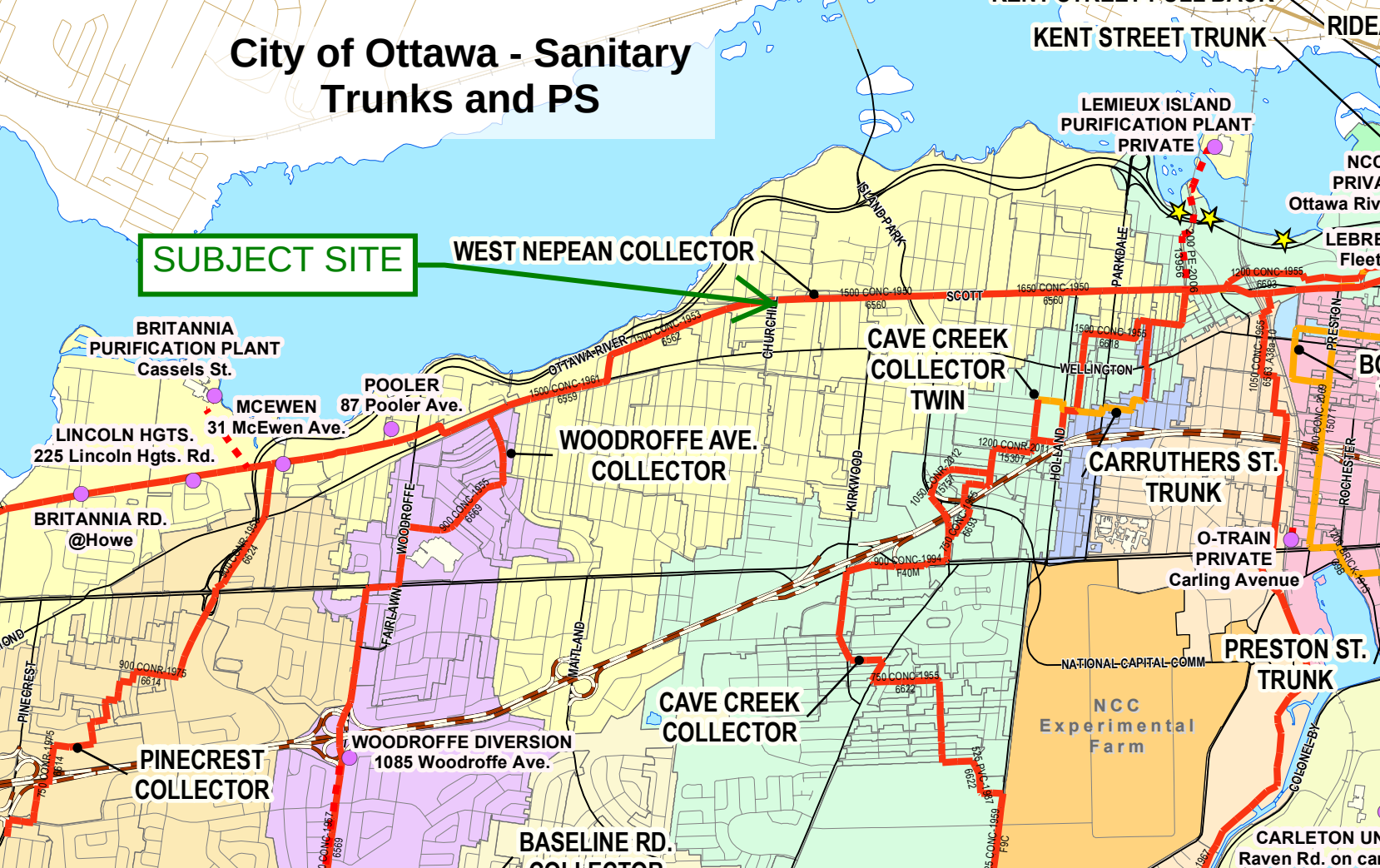
GALLONS PER MINUTE AT 20 PSI: 1736 Colour Code: Blue

REMARKS:

CHECKED BY:

APPENDIX C

Wastewater Collection


City of Ottawa - Sanitary Trunks and PS
SUBJECT SITE
WEST NEPEAN COLLECTOR
KENT STREET TRUNK
LEMIEUX ISLAND PURIFICATION PLANT PRIVATE
BRITANNIA PURIFICATION PLANT
Cassels St.
MCEWEN
31 McEwen Ave.
POOLER
87 Pooler Ave.
LINCOLN HGTS.
225 Lincoln Hgts. Rd.
BRITANNIA RD.
@Howe
WOODROFFE AVE. COLLECTOR
CAVE CREEK COLLECTOR TWIN
CARRUTHERS ST. TRUNK
O-TRAIN PRIVATE
Carling Avenue
PRESTON ST. TRUNK
NCC Experimental Farm
NATIONAL CAPITAL COMM
CAVE CREEK COLLECTOR
WOODROFFE DIVERSION
1085 Woodroffe Ave.
PINECREST COLLECTOR
BASELINE RD.
OTTAWA RIVER
SCOTT
WELLINGTON
ISLAND PARK
PARKDALE
CHURCH
KIRKWOOD
HOLLAND
WOODROFFE
FAIRLAWN
MAPLELAND
PINEGREST
ROCHESTER
PRESTON
COLONEL BY

Wastewater Design Flows per Unit Count
City of Ottawa Sewer Design Guidelines, 2004

Site Area 0.250 **ha**

Extraneous Flow Allowances

Infiltration / Inflow (Dry)	**0.01 L/s**
Infiltration / Inflow (Wet)	**0.07 L/s**
Infiltration / Inflow (Total)	**0.08 L/s**

Domestic Contributions

Unit Type	**Unit Rate**	**Units**	**Pop**
Single Family	3.4	2	7
Semi-detached and duplex	2.7		0
Townhouse	2.7		0
Stacked Townhouse	2.3		0
Apartment			
Bachelor	1.4		0
1 Bedroom	1.4		0
2 Bedroom	2.1		0
3 Bedroom	3.1		0
Average	1.8	7	13

Total Pop	**20**
Average Domestic Flow	**0.06 L/s**
Peaking Factor	**3.70**
Peak Domestic Flow	**0.24 L/s**

Institutional / Commercial / Industrial Contributions

Property Type	**Unit Rate**		**No. of Units**	**Avg Wastewater (L/s)**
Commercial floor space	5	$L/m^2/d$	400	0.56
Hospitals	900	L/bed/d		0.00
School	70	L/student/d		0.00
Industrial - Light	35,000	L/gross ha/d		0.00
Industrial - Heavy	55,000	L/gross ha/d		0.00

Average I/C/I Flow	**0.56**
Peak Institutional / Commercial Flow	0.56
Peak Industrial Flow**	0.00
Peak I/C/I Flow	**0.56**

Total Estimated Average Dry Weather Flow Rate	**0.63 L/s**
Total Estimated Peak Dry Weather Flow Rate	**0.81 L/s**
Total Estimated Peak Wet Weather Flow Rate	**0.88 L/s**

Surface Development
2050 Scott Street
Proposed Site Conditions

Wastewater Design Flows per Unit Count
City of Ottawa Sewer Design Guidelines, 2004

Site Area 0.241 **ha**

Extraneous Flow Allowances

Infiltration / Inflow (Dry)	**0.01**	**L/s**
Infiltration / Inflow (Wet)	**0.07**	**L/s**
Infiltration / Inflow (Total)	**0.08**	**L/s**

Target Long Tem Post-Development Groundwater

Q	25000	L/day	*As per Geotechnical Response to City Comments
Q	0.3	L/s	(PG5323-MEMO.01) prepared by Paterson Group and dated February 17th, 2021.

Domestic Contributions

Unit Type	**Unit Rate**	**Units**	**Pop**
Single Family	3.4		0
Semi-detached and duplex	2.7		0
Townhouse	2.7	5	14
Stacked Townhouse	2.3		0
Apartment			
Bachelor	1.4	64	90
1 Bedroom	1.4	172	241
2 Bedroom	2.1	90	189
3 Bedroom	3.1		0
Average	1.8		0

Total Pop	**534**	
Average Domestic Flow	**1.73**	**L/s**
Peaking Factor	**3.37**	
Peak Domestic Flow	**5.83**	**L/s**

Institutional / Commercial / Industrial Contributions

Property Type	**Unit Rate**		**No. of Units**	**Avg Wastewater (L/s)**
Commercial floor space*	5	$L/m^2/d$	248.1	0.03
Amenity	5	$L/m^2/d$	1,355	0.08
Industrial - Light**	35,000	L/gross ha/d		0.00
Industrial - Heavy**	55,000	L/gross ha/d		0.00

Average I/C/I Flow	**0.11**
Peak Institutional / Commercial Flow	0.11
Peak Industrial Flow**	0.00
Peak I/C/I Flow	**0.11**

** assuming a 12 hour commercial operation*
*** peak industrial flow per City of Ottawa Sewer Design Guidelines Appendix 4B*

Total Estimated Average Dry Weather Flow Rate	**1.85 L/s**
Total Estimated Peak Dry Weather Flow Rate	**5.95 L/s**
Total Estimated Peak Wet Weather Flow Rate ***	**6.30 L/s**

**** Long term post-development groundwater flow accounted for during wet weather scenario.*

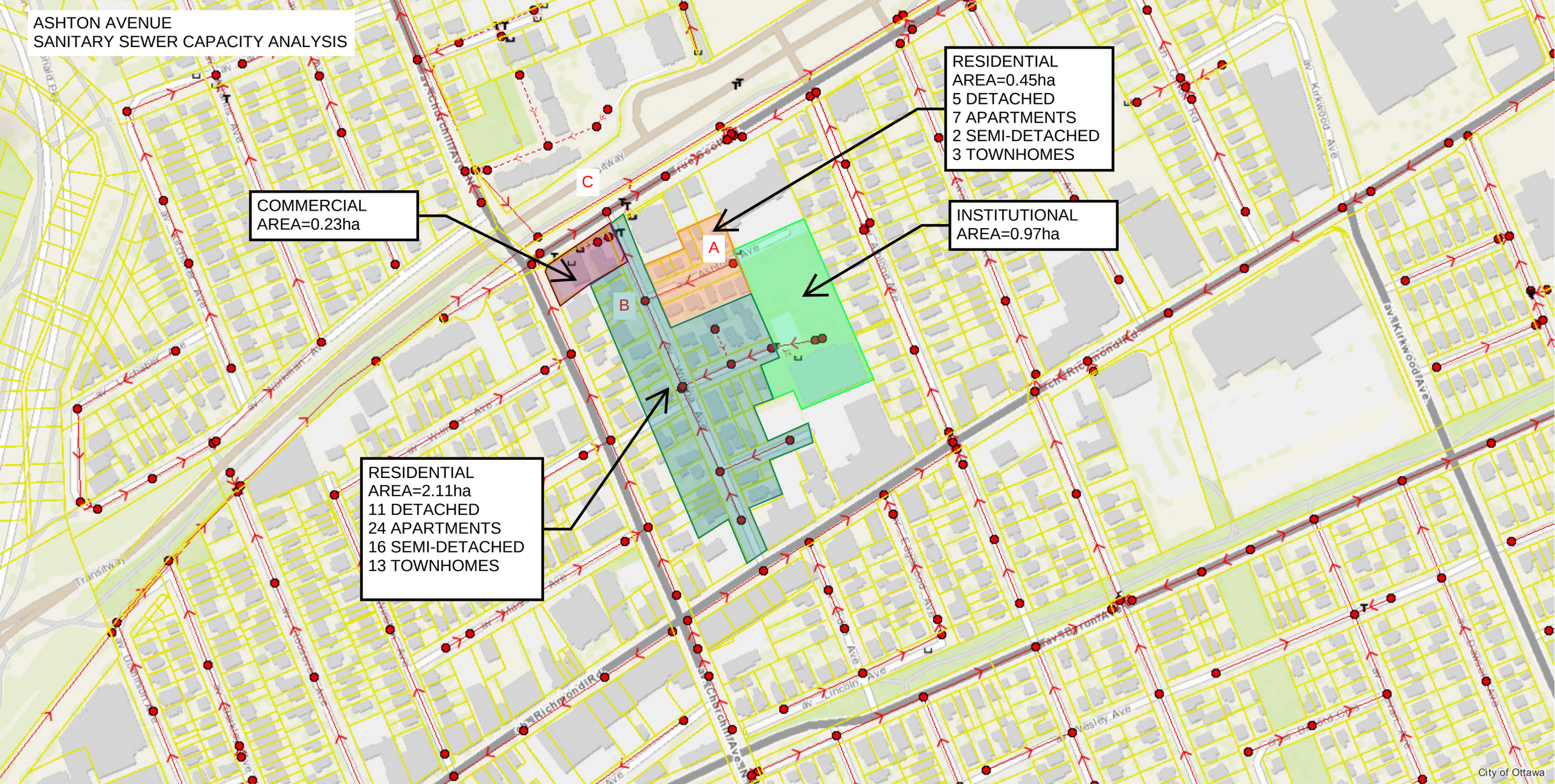
SANITARY SEWER CALCULATION SHEET

CLIENT: **SURFACE**
LOCATION: **2050 SCOTT ST**
FILE REF: **19-1142**
DATE: **27-Mar-21**

DESIGN PARAMETERS

Avg. Daily Flow Res.	280	L/p/d	Peak Fact Res. Per Harmons: Min = 2.0, Max =4.0		Infiltration / Inflow	0.33	L/s/ha
Avg. Daily Flow Comm.	28,000	L/ha/d	Peak Fact. Comm.	1.5	Min. Pipe Velocity	0.60	m/s full flowing
Avg. Daily Flow Instit.	28,000	L/ha/d	Peak Fact. Instit.	1.5	Max. Pipe Velocity	3.00	m/s full flowing
Avg. Daily Flow Indust.	35,000	L/ha/d	Peak Fact. Indust. per MOE graph		Mannings N	0.013	

Location			Residential Area and Population										Commercial		Institutional		Industrial			Infiltration				Pipe Data							
Area ID	Up	Down	Area	Number of Units				Pop.	Cumulative		Peak.	Q_{res}	Area	Accu.	Area	Accu.	Area	Accu.	Q_{C+I+I}	Total	Accu.	Infiltration	Total	DIA	Slope	Length	$A_{hydraulic}$	R	Velocity	Q_{cap}	Q / Q full
				by type					Area	Pop.	Fact.			Area		Area		Area		Area	Area	Flow	Flow								
			(ha)	Singles	Semi's	Town's	Apt's		(ha)		(-)	(L/s)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(mm)	(%)	(m)	(m^2)	(m)	(m/s)	(L/s)	(-)
ASHTON AVE	A	B	0.450	5	2	3	7	43.0	0.450	43.0	4.00	0.56	0.00	0.00	0.97	0.97		0.00	0.8	1.420	1.420	0.469	1.87	225	0.48	80.0	0.040	0.056	0.78	30.9	0.06
WINONA AVE	B	C	2.110	11	16	13	24	159.0	2.560	202.0	4.00	2.62	0.23	0.23		0.97		0.00	1.0	2.340	3.760	1.241	4.90	225	1.59	81.0	0.040	0.056	1.42	56.6	0.09


ASHTON AVENUE
SANITARY SEWER CAPACITY ANALYSIS
RESIDENTIAL
AREA=0.45ha
5 DETACHED
7 APARTMENTS
2 SEMI-DETACHED
3 TOWNHOMES
INSTITUTIONAL
AREA=0.97ha
COMMERCIAL
AREA=0.23ha
RESIDENTIAL
AREA=2.11ha
11 DETACHED
24 APARTMENTS
16 SEMI-DETACHED
13 TOWNHOMES
A
B
C
City of Ottawa

APPENDIX D

Stormwater Management

Surface Developments
2050 Scott Street
Existing Site Conditions - Scott

Estimated Peak Stormwater Flow Rate
City of Ottawa Sewer Design Guidelines, 2012

Existing Drainage Charateristics From Internal Site

Area	0.12	ha	
C	0.90	Rational Method runoff coefficient	
L	55	m	
Up Elev	63.6	m	
Dn Elev	62.91	m	
Slope	1.3	%	
Tc	4.5	min	
Tc	10.0	min	**Adjusted to 10 minutes per City of Ottawa Guidelines*

1) Time of Concentration per Federal Aviation Administration

$$t_c = \frac{1.8(1.1-C)L^{0.5}}{S^{0.333}}$$

tc, in minutes
C, rational method coefficient, (-)
L, length in ft
S, average watershed slope in %

Estimated Peak Flow

	2-year	5-year	100-year	
i	76.8	104.2	178.6	mm/hr
Q	23.2	31.5	60.0	L/s

Note:
C value for the 100-year storm is increased by 25%, to a maximum of 1.0 per Ottawa Sewer Design Guidelines (5.4.5.2.1)

Surface Developments
2050 Scott Street
Existing Site Conditions - Ashton

Estimated Peak Stormwater Flow Rate
City of Ottawa Sewer Design Guidelines, 2012

Existing Drainage Charateristics From Internal Site

Area	0.12	ha	
C	0.64	Rational Method runoff coefficient	
L	37	m	
Up Elev	63.25	m	
Dn Elev	62.75	m	
Slope	1.4	%	
Tc	8.2	min	
Tc	10.0	min	**Adjusted to 10 minutes per City of Ottawa Guidelines*

1) Time of Concentration per Federal Aviation Administration

$$t_c = \frac{1.8(1.1-C)L^{0.5}}{S^{0.333}}$$

tc, in minutes
C, rational method coefficient, (-)
L, length in ft
S, average watershed slope in %

Estimated Peak Flow

	2-year	5-year	100-year	
i	76.8	104.2	178.6	mm/hr
Q	16.4	22.3	47.8	L/s

Note:
C value for the 100-year storm is increased by 25%, to a maximum of 1.0 per Ottawa Sewer Design Guidelines (5.4.5.2.1)

Stormwater - Proposed Development
City of Ottawa Sewer Design Guidelines, 2004

Target Flow Rate

Area	0.241	ha
C	0.50	Rational Method runoff coefficient
Tc	10.0	min

5-year

i	104.2	mm/hr
Q	34.9	L/s

Estimated Post Development Peak Flow from Unattenuated Areas

Total Area	0.048	ha
C	0.35	Rational Method runoff coefficient

	5-year					100-year				
t_c (min)	i (mm/hr)	Q_{actual} (L/s)	$Q_{release}$ (L/s)	Q_{stored} (L/s)	V_{stored} (m^3)	i (mm/hr)	Q_{actual}* (L/s)	$Q_{release}$ (L/s)	Q_{stored} (L/s)	V_{stored} (m^3)
10.0	104.2	4.9	4.9	0.0	0.0	178.6	10.5	10.5	0.0	0.0

Note:
C value for the 100-year storm is increased by 25%, to a maximum of 1.0 per Ottawa Sewer Design Guidelines (5.4.5.2.1)

Estimated Post Development Peak Flow from Attenuated Areas

Total Area	0.193	ha
C	0.90	Rational Method runoff coefficient

	5-year					100-year				
t_c (min)	i (mm/hr)	Q_{actual} (L/s)	$Q_{release}$ (L/s)	Q_{stored} (L/s)	V_{stored} (m^3)	i (mm/hr)	Q_{actual} (L/s)	$Q_{release}$ (L/s)	Q_{stored} (L/s)	V_{stored} (m^3)
10	104.2	50.3	12.8	37.5	22.5	178.6	95.8	24.4	71.3	42.8
15	83.6	40.3	12.9	27.5	24.7	142.9	76.6	24.4	52.2	47.0
20	70.3	33.9	12.9	21.0	25.2	120.0	64.3	24.4	39.9	47.9
25	60.9	29.4	12.9	16.5	24.7	103.8	55.7	24.4	31.3	46.9
30	53.9	26.0	12.9	13.1	23.6	91.9	49.3	24.4	24.8	44.7
35	48.5	23.4	12.9	10.5	22.0	82.6	44.3	24.4	19.9	41.7
40	44.2	21.3	12.9	8.4	20.1	75.1	40.3	24.4	15.9	38.1
45	40.6	19.6	12.9	6.7	18.0	69.1	37.0	24.4	12.6	34.0
50	37.7	18.2	12.9	5.2	15.7	64.0	34.3	24.4	9.9	29.6
55	35.1	17.0	13.0	4.0	13.2	59.6	32.0	24.4	7.5	24.9
60	32.9	15.9	13.0	2.9	10.6	55.9	30.0	24.4	5.5	19.9
65	31.0	15.0	13.0	2.0	7.9	52.6	28.2	24.4	3.8	14.8
70	29.4	14.2	13.0	1.2	5.1	49.8	26.7	24.4	2.3	9.5
75	27.9	13.5	13.0	0.5	2.2	47.3	25.3	24.4	0.9	4.1
80	26.6	12.8	13.0	0.0	0.0	45.0	24.1	24.4	0.0	0.0
85	25.4	12.2	13.0	0.0	0.0	43.0	23.0	24.4	0.0	0.0
90	24.3	11.7	13.0	0.0	0.0	41.1	22.1	24.4	0.0	0.0
95	23.3	11.3	13.0	0.0	0.0	39.4	21.2	24.4	0.0	0.0
100	22.4	10.8	13.0	0.0	0.0	37.9	20.3	24.4	0.0	0.0
105	21.6	10.4	13.0	0.0	0.0	36.5	19.6	24.4	0.0	0.0
110	20.8	10.1	13.0	0.0	0.0	35.2	18.9	24.4	0.0	0.0

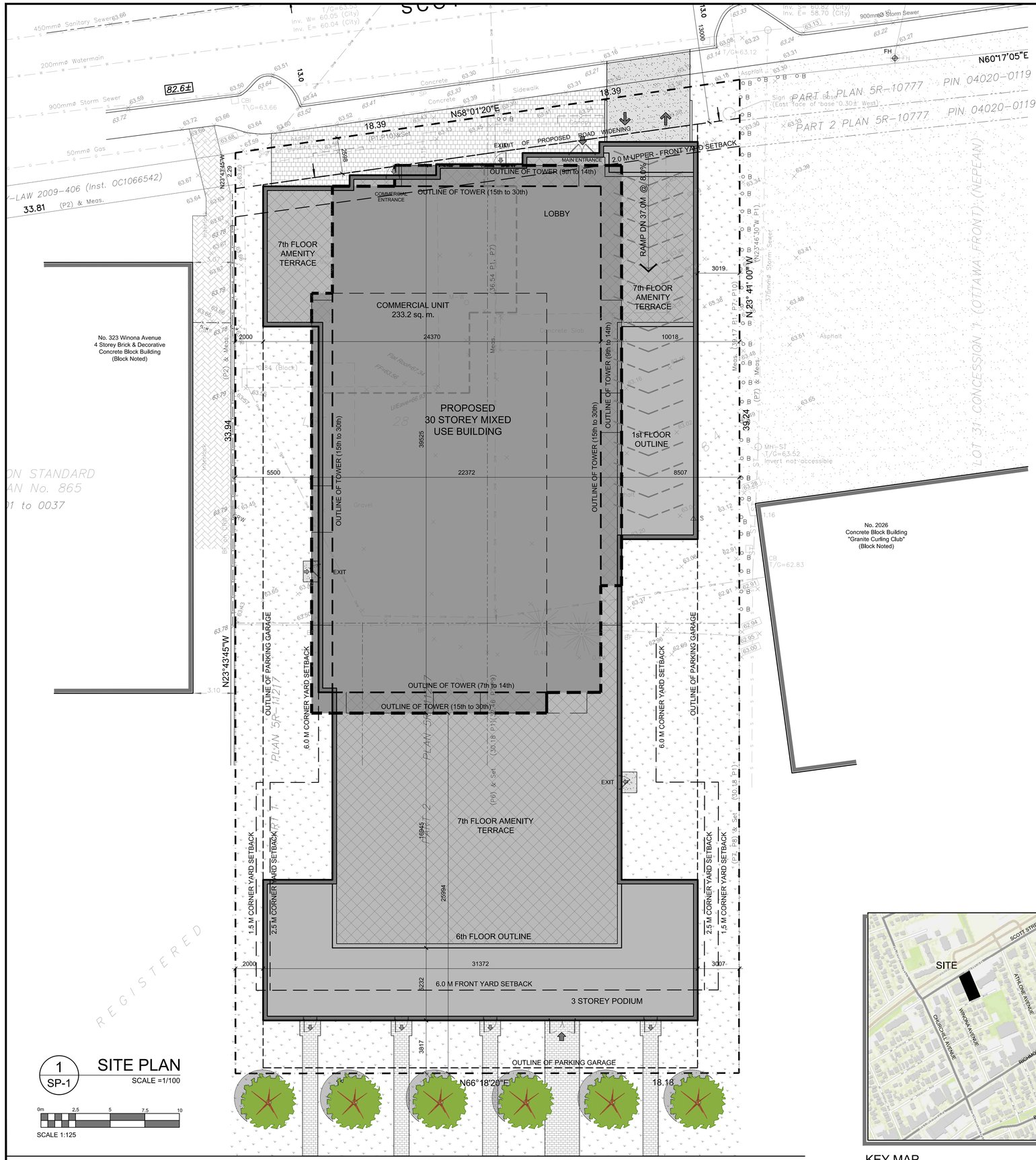
Note:
C value for the 100-year storm is increased by 25%, to a maximum of 1.0 per Ottawa Sewer Design Guidelines (5.4.5.2.1)

5-year $Q_{attenuated}$	**12.88 L/s**	**100-year $Q_{attenuated}$**	**24.44 L/s**
5-year Max. Storage Required	**25.2 m^3**	**100-year Max. Storage Required**	**47.9 m^3**

Summary of Release Rates and Storage Volumes

Control Area	5-Year Release Rate (L/s)	5-Year Storage (m^3)	100-Year Release Rate (L/s)	100-Year Storage (m^3)
Unattenuated Areas	4.9	0.0	10.5	0.0
Attenutated Areas	12.9	25.2	24.4	47.9
Total	**17.8**	**25.2**	**34.9**	**47.9**

DRAWINGS / FIGURES



1 SP-1 **SITE PLAN**

SCALE =1/100

0m 2.5 5 7.5 10

SCALE 1:125

KEY MAP

DRAWING NOTES

SITE PLAN SYMBOLS

- CONCRETE UNIT PAVERS SURFACE
- DRIVING SURFACE SURFACE
- SOFT LANDSCAPING
- TWO WAY VEHICLE CIRCULATION
- MAIN ENTRANCE
- COMMERCIAL / FIRE EXIT
- PROPERTY LINE

PROPERTY OWNER

Surface Development
88 Spadina Avenue
Ottawa, Ontario, K1Y 2C1
Tel: (613) 225-5507
E-Mail: jakub@surfacedevelopments.com

URBAN PLANNER

FoTenn Consultants Inc.
223 McLeod Street
Ottawa, ON Canada, K2P 0Z8
Tel.: (613) 730-5709
Fax: (613) 730-1136
E-Mail: casagrande@fotenn.com

SURVEYOR

FARLEY, SMITH & DENIS SURVEYING LTD.
Ontario Land Surveyors
190 Colonnade Road
Ottawa, Ontario K2E 7J5
Tel: (613) 727-8226
Fax: (613) 727-1826
Email: _____

CIVIL ENGINEER

David Schaeffer Engineering ltd.
120 Iber Road, Unit 203
Stittsville, Ontario, K2S 1E9
Tel: (613) 836-0856
Fax: (613) 836-7183
Email: rfreel@DSEL.ca

GEOTECHNICAL ENGINEER

Paterson Group
154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: 613.226-7381
Email: kevin@ulra.ca

LEGAL DESCRIPTION

TOPOGRAPHIC PLAN OF SURVEY OF

LOTS 28 AND 29
REGISTERED PLAN 184
CITY OF OTTAWA

PROJECT INFORMATION

ZONING BY-LAW 2008-250	TM (103) / R4G
SITE AREA	1,331.34 sq. m. 14,330 sq. ft.

TM (103) ZONING REQUIREMENT

BUILDING HEIGHT	TM (103) - 18 m, / R4G - 11 m.
AMENITY AREA - 6m² PER UNIT (354 units)	2,124 sq. m.
FRONT YARD SETBACK - TM (103) 4th storey or 15 m ht,	+ 2,0 m.
INTERIOR YARD SETBACK TM (103)	0,0 m.
FRONT YARD SETBACK - R4G	6,0 m.
INTERIOR YARD SETBACK - R4G	1,5 m, / 2,5 m, / 6,0 m.
LANDSCAPE AREA - ABUTTING RES.	3,0 m

PROJECT STATISTICS

GRADE (GEODETIC ELEVATION)	63,40 m, easl
BUILDING HEIGHT	92,0 m
REAR YARD SETBACK - ANGULAR PLANE @ 45°	74,5 m ht.
REAR YARD SETBACK	7,5 m.
TOWER FLOOR PLATE AREA	753,5 sq. m. 8,110 sq. ft.
STANDARD PARKING SPACE	2,6m X 5,2m
SMALL CAR PARKING SPACE	2,4m X 4,6m

GROSS BUILDING FLOOR AREA
(OTTAWA ZONING DEFINITION)

U/G PARKING LEVELS		000 sq. m. 000 sq. ft.
GROUND FLOOR		911,5 sq. m. 9,140 sq. ft.
2nd & 3rd FLOOR	2 x 1,268,4 sq. m. 2 x (13,653) sq. ft.	2,536,8 sq. m. 27,306 sq. ft.
4th FLOOR		1,080,1 sq. m. 11,626 sq. ft.
5th & 6th FLOOR	2 x 1,053,7 sq. m. 2 x (11,342) sq. ft.	2,107,4 sq. m. 22,684 sq. ft.
7th FLOOR - AMENITY		0,0 sq. m. 000 sq. ft.
8th FLOOR		565,6 sq. m. 6,088 sq. ft.
9th & 14th FLOOR	6 x 609,07 sq. m. 6 x (6,556) sq. ft.	3,654,4 sq. m. 39,336 sq. ft.
15th & 30th FLOOR	16 x 609,91 sq. m. 16 x (6,565) sq. ft.	9,758,5 sq. m. 105,040 sq. ft.
MECHANICAL PENTHOUSE		000,0 sq. m. 000 sq. ft.
TOTAL AREA ABOVE GRADE		20,552,0 sq. m. 221,220 sq. ft.

UNIT STATISTICS

STUDIO UNIT	30
1 BEDROOM UNIT	214
2 BEDROOM UNIT	109
TOTAL	353
COMMERCIAL RETAIL UNIT	233,2 sq. m. 2,510 sq. ft.

CAR PARKING

REQUIRED

RESIDENCE	- 0,5 PER DWELLING UNIT (AFTER 12 UNITS) (10% REDUCTION - ALL U/G)	154
VISITOR	- 0,1 PER DWELLING UNIT (AFTER 12 UNITS - MAX. 30)	30
TOTAL		188

PROVIDED

RESIDENCE	- 0,49 PER UNIT (353 UNITS)	174
VISITOR	- 0,1 PER UNIT (353 UNITS)	30
TOTAL		204

BICYCLE PARKING

REQUIRED

RESIDENCE	- 0,5 PER UNIT (353 UNITS)	177
COMMERCIAL RETAIL	- 1,0 PER 250m² OF G.F.A.	1
TOTAL		178

PROVIDED

BELOW GRADE LEVEL	292
GROUND FLOOR	0
TOTAL	292

AMENITY SPACE

AT GRADE EXTERIOR SIDE YARDS =	700,0 sq. m.
PRIVATE BALCONIES =	1,130,0 sq. m.
4th FLOOR - PRIVATE EXTERIOR =	197,0 sq. m.
7th FLOOR - INTERIOR =	592,0 sq. m.
7th FLOOR - EXTERIOR =	538,0 sq. m.
TOTAL =	3,157,0 sq. m.
TOTAL COMMUNAL =	1,830,0 sq. m.
REQUIRED - 6,0M² PER UNIT (353) =	2,118 sq. m.
REQUIRED COMMUNAL @ 50% =	1,059 sq. m.

LOT COVERAGE

PAVED SURFACE =	22,0 sq. m.	0,8%
BUILDING FOOTPRINT =	1,631,1 sq. m.	65,0%
LANDSCAPE OPEN SPACE =	859,0 sq. m.	34,2%
TOTAL =	2,512,1 sq. m.	100,0%

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT.

DO NOT SCALE DRAWINGS.

NOTATION SYMBOLS:

- (00) INDICATES DRAWING NOTES, LISTED ON EACH SHEET,
- ◇ 00 INDICATES ASSEMBLIE TYPE; REFER TO TYPICAL ASSEMBLIES SCHEDUAL.
- ◇ 00 INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A900 SERIES.
- 000 INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A900 SERIES.
- 00 DETAIL NUMBER
- 00 TITLE
- SCALE
- DETAIL REFERENCE PAGE
- DETAIL CROSS REFERENCE PAGE

No.	DESCRIPTION	DATE
5		
4		
3	REVISED PROJECT DESIGN	Mar. 30, 20
2	ISSUED FOR PUBLIC MEETING	Jan. 27, 20
1	ISSUED FOR ZONING AMENDMENT	Jan. 21, 20

REVISIONS:

ARCHITECT SEAL: ONTARIO ASSOCIATION OF ARCHITECTS — RODERICK LAHEY — LICENCE 4375

SEAL DATE: STAMP DATE

NORTH ARROW:

CLIENT: SURFACE

ARCHITECT:
RODERICKLAHEY
ARCHITECT INC
56 Beech Street, Ottawa, Ontario K1S 3J6
t.613.724.9932 f.613.724.1209 www.rodericklahey.ca

PROJECT TITLE:
2046 SCOTT STREET
OTTAWA ONTARIO

SHEET TITLE:
SITE PLAN

DRAWN:	CHECKED:
R.V.	K.R.

SCALE: 1:125

SHEET No.: SP-1

PROJECT No.: 1928

363223, 5028653

TOPOGRAPHIC PLAN OF SURVEY OF

LOTS 22, 23, 28 AND 29 REGISTERED PLAN 184 CITY OF OTTAWA

FARLEY, SMITH & DENIS SURVEYING LTD. 2020

Scale 1: 200

0 2.5 5 10 15 20 metres

Metric Note

Distances and coordinates on this plan are in metres and can be converted to feet by dividing by 0.3048.

Distance Note

Distances shown on this plan are ground distances and can be converted to grid distances by multiplying by the combined scale factor of 0.99994.

Bearing Note

Bearings hereon are grid bearings derived from the easterly limit of Winona Avenue having a bearing of N 23° 46' 30" W as shown on Ottawa Carleton Standard Condominium Plan No. 865 and are referred to the Central Meridian of MTM Zone 9 (76°30' West Longitude) Nad-83 (Original).

For bearing comparisons, a rotation of 0°34'25" (counter-clockwise) was applied to bearings on P4 and a rotation of 0°45'30" (counter-clockwise) was applied to bearings on P1, P5, P6, P7 and P8.

Elevation Notes

1. Elevations shown are geodetic and are referred to Geodetic Datum CGVD-1928 :1978. (FMW Ref.No.2-184NP).
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. Underground utility data derived from City of Ottawa utility sheet reference: *E-04-04, E-04-09, 1592* (sheet 5 of 6), 5774 p3 and as-built drawings 15350 p18 and 15350 p19.
4. Sanitary and storm sewer grades and inverts were compiled from City of Ottawa as-built drawings 15350 p18 and 15350 p19/ field measurements.
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Notes & Legend

Denotes

—□—	=	Survey Monument Planted
—■—	=	Survey Monument Found
SIB	=	Standard Iron Bar
SSIB	=	Short Standard Iron Bar
IB	=	Iron Bar
IB*	=	Iron Bar (0.3m long)
CC	=	Cut Cross
CP	=	Concrete Pin
(Wit)	=	Witness
Meas	=	Measured
(P1)	=	Registered Plan 184
(P2)	=	Ottawa Carleton Standard Condominium Plan No. 865
(P3)	=	Plan 4R-23712
(P4)	=	Plan SR-10777
(P5)	=	Plan SR-11654
(P6)	=	Plan SR-11217
(P7)	=	Plan by (857) November 28, 1988 (Ref 16-184NP)
(P8)	=	Plan by (857) November 18, 1992 (Ref 16(a)-184NP)
(P9)	=	Plan by (1287) August 11, 1988 (Job No. 396-88)
(P10)	=	Plan by (857) January 3, 1975 (Ref 12-184NP)
(P11)	=	Plan SR-3872
○ MH-ST	=	Maintenance Hole (Storm)
○ MH-S	=	Maintenance Hole (Sanitary)
—— ST ——	=	Underground Storm Sewer
—— S ——	=	Underground Sanitary Sewer
—— W ——	=	Underground Water
—— P ——	=	Underground Power
—— G ——	=	Underground Gas
—— OHW ——	=	Overhead Wires
○ UP	=	Utility Pole
○ AN	=	Anchor
□ CB	=	Catch Basin
□ CBI	=	Catch Basin Inlet
○ SP	=	Water Stand Post
□ GM	=	Gas Meter
○ FH	=	Fire Hydrant
⊗ WV	=	Water Valve
□ AC	=	Air Conditioner
⊘ B	=	Bollard
△ S	=	Sign
⊢⊣	=	Gate
Ø	=	Diameter
○ M-W	=	Monitoring Well
FF	=	Finished Floor Elevation
CLF	=	Chain Link Fence
BF	=	Board Fence
SRW	=	Stone Retaining Wall
TRW	=	Timber Retaining Wall
CRW	=	Concrete Retaining Wall
EOA	=	Edge of Asphalt
Inv.	=	Invert
T/G	=	Top of Grate
U/Eave	=	Underside of Eave
TpFdn	=	Top of Foundation
C/L	=	Centreline
+65.00	=	Location of Elevations
+65.00	=	Top of Wall/Concrete Curb Elevation
	=	Property Line
	=	Coniferous Tree
	=	Deciduous Tree

Surveyor's Certificate

I certify that :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Regulations made under them.
2. The survey was completed on the 9th day of June, 2020.

Date

Daniel Robinson
Ontario Land Surveyor

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2088484

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29 (3).

FARLEY, SMITH & DENIS SURVEYING LTD.
ONTARIO LAND SURVEYORS
CANADA LAND SURVEYORS
190 COLONNADE ROAD, OTTAWA, ONTARIO K2E 7J5
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FILE No. : 226-19

TOPO 24X36

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