

**ASSESSMENT OF ADEQUACY OF  
PUBLIC SERVICES**

**FOR**

**SCOTT STREET DEVELOPMENTS INC  
2050 SCOTT STREET**

**CITY OF OTTAWA**

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

**MARCH 2022 – REV. 3  
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**ASSESSMENT OF ADEQUACY OF PUBLIC SERVICES  
FOR  
2050 SCOTT STREET**

**SCOTT STREET DEVELOPMENTS INC**

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## **1.0 INTRODUCTION**

David Schaeffer Engineering Limited (DSEL) has been retained by Scott Street Developments Inc to prepare a Assessment of Adequacy of Public Services report in support of the application for a Zoning By-Law Amendment (ZBLA) 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 ZBLA would allow for the development of a 30-storey residential/commercial building fronting onto Scott Street. The proposed development would include approximately **152 m<sup>2</sup>** 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 m<sup>2</sup>** 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.

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## 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**.

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## 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-2014-01**  
City of Ottawa, February 5, 2014.  
**(ISTB-2014-01)**
  - **Technical Bulletin ISTB-2016-01**  
City of Ottawa, September 6, 2016.  
**(ISTB-2016-01)**
  - **Technical Bulletin ISTB-2018-01**  
City of Ottawa, March 21, 2018  
**(ISTB-2018-01)**
  - **Technical Bulletin ISTB-2018-04**  
City of Ottawa, June 27, 2018  
**(ISTB-2018-04)**
  - **Technical Bulletin ISTB-2019-02**  
City of Ottawa, July 8, 2019  
**(ISTB-2019-02)**
- **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 ISTB-2018-02**  
City of Ottawa, March 21, 2018.  
**(ISTB-2018-02)**

- 
- **Technical Bulletin ISTB-2021-03**  
City of Ottawa, August 18, 2021  
**(ISTB-2021-03)**
  - **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<sup>3</sup>/day. The development proposes to remove and replace the existing 152mm diameter water main on Ashton with a 200mm diameter main in coordination with the City of Ottawa's renewal project on Winona Avenue. The subject site will connect to the existing 203 mm watermain within the Scott Street right-of-way and to the new 200 mm watermain within the Ashton Avenue right-of-way via 150 mm service laterals.

**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 <sup>2</sup> /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 <b>Water Supply Guidelines</b>                                                                |                                               |
| ** 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                                                                                                    |                                               |

**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 <sup>1</sup><br>(L/min) | Boundary Condition <sup>2</sup><br>Scott Street<br>(m H <sub>2</sub> O / kPa) | Boundary Condition <sup>2</sup><br>Ashton Avenue<br>(m H <sub>2</sub> O / 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 <b>Water Supply Guidelines</b> . See <b>Appendix B</b> for detailed calculations.<br>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 <b>Appendix B</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. The developer will replace the existing local 152 mm diameter watermain within the Ashton Avenue right-of-way with a 200 mm diameter main. 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 the existing 203 mm watermain within the Scott Street right-of-way and to the newly constructed 200 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 mm 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.

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 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<br>Harmon's Corrector Factor 0.8    |
| Commercial/Amenity Floor Space                                                                      | 5 L/m <sup>2</sup> /d                                                         |
| Infiltration and Inflow Allowance                                                                   | 0.05 L/s/ha (Dry Weather)<br>0.28 L/s/ha (Wet Weather)<br>0.33 L/s/ha (Total) |
| Sanitary sewers are to be sized employing the Manning's Equation                                    | $Q = \frac{1}{n} AR^{\frac{2}{3}} S^{\frac{1}{2}}$                            |
| 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                                                                       |
| <i>Extracted from Sections 4 and 6 of the City of Ottawa Sewer Design Guidelines, October 2012.</i> |                                                                               |

**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<br>*** Including possible 25,000 L/day groundwater flow rate<br>(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.

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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 conservation 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.

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<br>Release Rate | 5-Year<br>Storage | 100-Year<br>Release Rate | 100-Year<br>Storage |
|--------------------|------------------------|-------------------|--------------------------|---------------------|
|                    | (L/s)                  | (m <sup>3</sup> ) | (L/s)                    | (m <sup>3</sup> )   |
| Unattenuated Areas | 4.9                    | 0.0               | 10.5                     | 0.0                 |
| Attenuated Areas   | 12.9                   | 25.2              | 24.4                     | 47.9                |
| <b>Total</b>       | <b>17.8</b>            | <b>25.2</b>       | <b>34.9</b>              | <b>47.9</b>         |

It is anticipated that approximately **48 m<sup>3</sup>** 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<sup>3</sup>** 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.

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## **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.

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## 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:

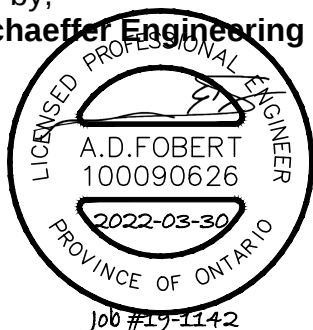
Verification that water is not flowing under silt barriers

## 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 zoning by-law amendment (ZBLA) 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;
- 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<sup>3</sup>** 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.

Prepared by,  
**David Schaeffer Engineering Ltd.**



Per: Adam D. Fobert, P.Eng.

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## ***APPENDIX A***

### ***Pre-Consultation***

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# DEVELOPMENT SERVICING STUDY CHECKLIST

19-1142

06/04/2021

| 4.1 General Content                     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <input type="checkbox"/>                | Executive Summary (for larger reports only).                                                                                                                                                                                                                                                                                                                                                                                | N/A                      |
| <input checked="" type="checkbox"/>     | Date and revision number of the report.                                                                                                                                                                                                                                                                                                                                                                                     | Report Cover Sheet       |
| <input checked="" type="checkbox"/>     | Location map and plan showing municipal address, boundary, and layout of proposed development.                                                                                                                                                                                                                                                                                                                              | Drawings/Figures         |
| <input checked="" type="checkbox"/>     | Plan showing the site and location of all existing services.                                                                                                                                                                                                                                                                                                                                                                | Figure 1                 |
| <input checked="" type="checkbox"/>     | 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              |
| <input checked="" type="checkbox"/>     | Summary of Pre-consultation Meetings with City and other approval agencies.                                                                                                                                                                                                                                                                                                                                                 | Section 1.3              |
| <input checked="" type="checkbox"/>     | Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defensible design criteria.                                                                                                                                      | Section 2.1              |
| <input checked="" type="checkbox"/>     | Statement of objectives and servicing criteria.                                                                                                                                                                                                                                                                                                                                                                             | Section 1.0              |
| <input checked="" type="checkbox"/>     | Identification of existing and proposed infrastructure available in the immediate area.                                                                                                                                                                                                                                                                                                                                     | Sections 3.1, 4.1, 5.1   |
| <input type="checkbox"/>                | 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                      |
| <input type="checkbox"/>                | 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                      |
| <input type="checkbox"/>                | 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                      |
| <input type="checkbox"/>                | Proposed phasing of the development, if applicable.                                                                                                                                                                                                                                                                                                                                                                         | N/A                      |
| <input type="checkbox"/>                | Reference to geotechnical studies and recommendations concerning servicing.                                                                                                                                                                                                                                                                                                                                                 | Section 2.0              |
| <input type="checkbox"/>                | All preliminary and formal site plan submissions should have the following information:<br>-Metric scale<br>-North arrow (including construction North)<br>-Key plan<br>-Name and contact information of applicant and property owner<br>-Property limits including bearings and dimensions<br>-Existing and proposed structures and parking areas<br>-Easements, road widening and rights-of-way<br>-Adjacent street names | SP-1<br>Drawings/Figures |
| 4.2 Development Servicing Report: Water |                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |
| <input type="checkbox"/>                | Confirm consistency with Master Servicing Study, if available                                                                                                                                                                                                                                                                                                                                                               | N/A                      |
| <input checked="" type="checkbox"/>     | Availability of public infrastructure to service proposed development                                                                                                                                                                                                                                                                                                                                                       | Section 3.1              |
| <input checked="" type="checkbox"/>     | Identification of system constraints                                                                                                                                                                                                                                                                                                                                                                                        | Section 3.1              |
| <input checked="" type="checkbox"/>     | Identify boundary conditions                                                                                                                                                                                                                                                                                                                                                                                                | Section 3.1, 3.2         |
| <input checked="" type="checkbox"/>     | Confirmation of adequate domestic supply and pressure                                                                                                                                                                                                                                                                                                                                                                       | Section 3.3              |

|                                     |                                                                                                                                                                                                                                                                                                          |                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <input checked="" type="checkbox"/> | 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      |
| <input type="checkbox"/>            | 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              |
| <input type="checkbox"/>            | Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design                                                                                                                                               | N/A              |
| <input type="checkbox"/>            | Address reliability requirements such as appropriate location of shut-off valves                                                                                                                                                                                                                         | N/A              |
| <input type="checkbox"/>            | Check on the necessity of a pressure zone boundary modification                                                                                                                                                                                                                                          | N/A              |
| <input checked="" type="checkbox"/> | 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 |
| <input type="checkbox"/>            | 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              |
| <input type="checkbox"/>            | Description of off-site required feeder mains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.                                                         | N/A              |
| <input checked="" type="checkbox"/> | Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.                                                                                                                                                                                                            | Section 3.2      |
| <input type="checkbox"/>            | 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

|                                     |                                                                                                                                                                                                                                                                                                                        |                         |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <input checked="" type="checkbox"/> | 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             |
| <input type="checkbox"/>            | Confirm consistency with Master Servicing Study and/or justifications for deviations.                                                                                                                                                                                                                                  | N/A                     |
| <input type="checkbox"/>            | 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                     |
| <input checked="" type="checkbox"/> | Description of existing sanitary sewer available for discharge of wastewater from proposed development.                                                                                                                                                                                                                | Section 4.1             |
| <input checked="" type="checkbox"/> | 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             |
| <input checked="" type="checkbox"/> | 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 |
| <input checked="" type="checkbox"/> | Description of proposed sewer network including sewers, pumping stations, and forcemains.                                                                                                                                                                                                                              | Section 4.2             |
| <input type="checkbox"/>            | 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                     |

|                          |                                                                                                                                                                          |     |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <input type="checkbox"/> | Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.                           | N/A |
| <input type="checkbox"/> | Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.                                                                         | N/A |
| <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | Special considerations such as contamination, corrosive environment etc.                                                                                                 | N/A |

#### 4.4 Development Servicing Report: Stormwater Checklist

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <input checked="" type="checkbox"/> | 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             |
| <input checked="" type="checkbox"/> | Analysis of available capacity in existing public infrastructure.                                                                                                                                                                                                                                                                                                                                                                        | Section 5.1, Appendix D |
| <input checked="" type="checkbox"/> | A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.                                                                                                                                                                                                                                                                                             | Drawings/Figures        |
| <input checked="" type="checkbox"/> | 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             |
| <input checked="" type="checkbox"/> | 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             |
| <input checked="" type="checkbox"/> | Description of the stormwater management concept with facility locations and descriptions with references and supporting information                                                                                                                                                                                                                                                                                                     | Section 5.3             |
| <input type="checkbox"/>            | Set-back from private sewage disposal systems.                                                                                                                                                                                                                                                                                                                                                                                           | N/A                     |
| <input type="checkbox"/>            | Watercourse and hazard lands setbacks.                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                     |
| <input checked="" type="checkbox"/> | Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.                                                                                                                                                                                                                                                                                      | Appendix A              |
| <input type="checkbox"/>            | Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.                                                                                                                                                                                                                                                                                                                                           | N/A                     |
| <input checked="" type="checkbox"/> | 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             |
| <input type="checkbox"/>            | 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                     |
| <input checked="" type="checkbox"/> | 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        |
| <input type="checkbox"/>            | Any proposed diversion of drainage catchment areas from one outlet to another.                                                                                                                                                                                                                                                                                                                                                           | N/A                     |
| <input type="checkbox"/>            | Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.                                                                                                                                                                                                                                                                                                         | N/A                     |
| <input type="checkbox"/>            | 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                     |
| <input type="checkbox"/>            | Identification of potential impacts to receiving watercourses                                                                                                                                                                                                                                                                                                                                                                            | N/A                     |
| <input type="checkbox"/>            | Identification of municipal drains and related approval requirements.                                                                                                                                                                                                                                                                                                                                                                    | N/A                     |

|                                     |                                                                                                                                                                                                                                                                                                                                               |             |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <input checked="" type="checkbox"/> | Descriptions of how the conveyance and storage capacity will be achieved for the development.                                                                                                                                                                                                                                                 | Section 5.3 |
| <input type="checkbox"/>            | 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         |
| <input type="checkbox"/>            | Inclusion of hydraulic analysis including hydraulic grade line elevations.                                                                                                                                                                                                                                                                    | N/A         |
| <input checked="" type="checkbox"/> | Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.                                                                                                                                                                                                | Section 7.0 |
| <input type="checkbox"/>            | 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         |
| <input type="checkbox"/>            | Identification of fill constraints related to floodplain and geotechnical investigation.                                                                                                                                                                                                                                                      | N/A         |

#### 4.5 Approval and Permit Requirements: Checklist

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <input checked="" type="checkbox"/> | 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 |
| <input type="checkbox"/>            | Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A         |
| <input type="checkbox"/>            | Changes to Municipal Drains.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N/A         |
| <input type="checkbox"/>            | Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)                                                                                                                                                                                                                                                                                                                                                                                             | N/A         |

#### 4.6 Conclusion Checklist

|                                     |                                                                                                                                                                               |             |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <input checked="" type="checkbox"/> | Clearly stated conclusions and recommendations                                                                                                                                | Section 8.0 |
| <input type="checkbox"/>            | 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. |             |
| <input type="checkbox"/>            | All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario                                                                      |             |

**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](http://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](mailto: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

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**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

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**From:** Charlotte Kelly <[CKelly@dsel.ca](mailto:CKelly@dsel.ca)>

**Sent:** Wednesday, December 18, 2019 11:40 AM

**To:** Jamie Batchelor <[jamie.batchelor@rvca.ca](mailto:jamie.batchelor@rvca.ca)>; Eric Lalande <[eric.lalande@rvca.ca](mailto:eric.lalande@rvca.ca)>

**Cc:** Alison Gosling <[AGosling@dsel.ca](mailto: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



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**

154 Colonnade Road South  
Ottawa, Ontario  
Canada, K2E 7J5  
**Tel: (613) 226-7381**  
**Fax: (613) 226-6344**

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

[www.patersongroup.ca](http://www.patersongroup.ca)

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<sub>ESA</sub>

**Report Distribution:**

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

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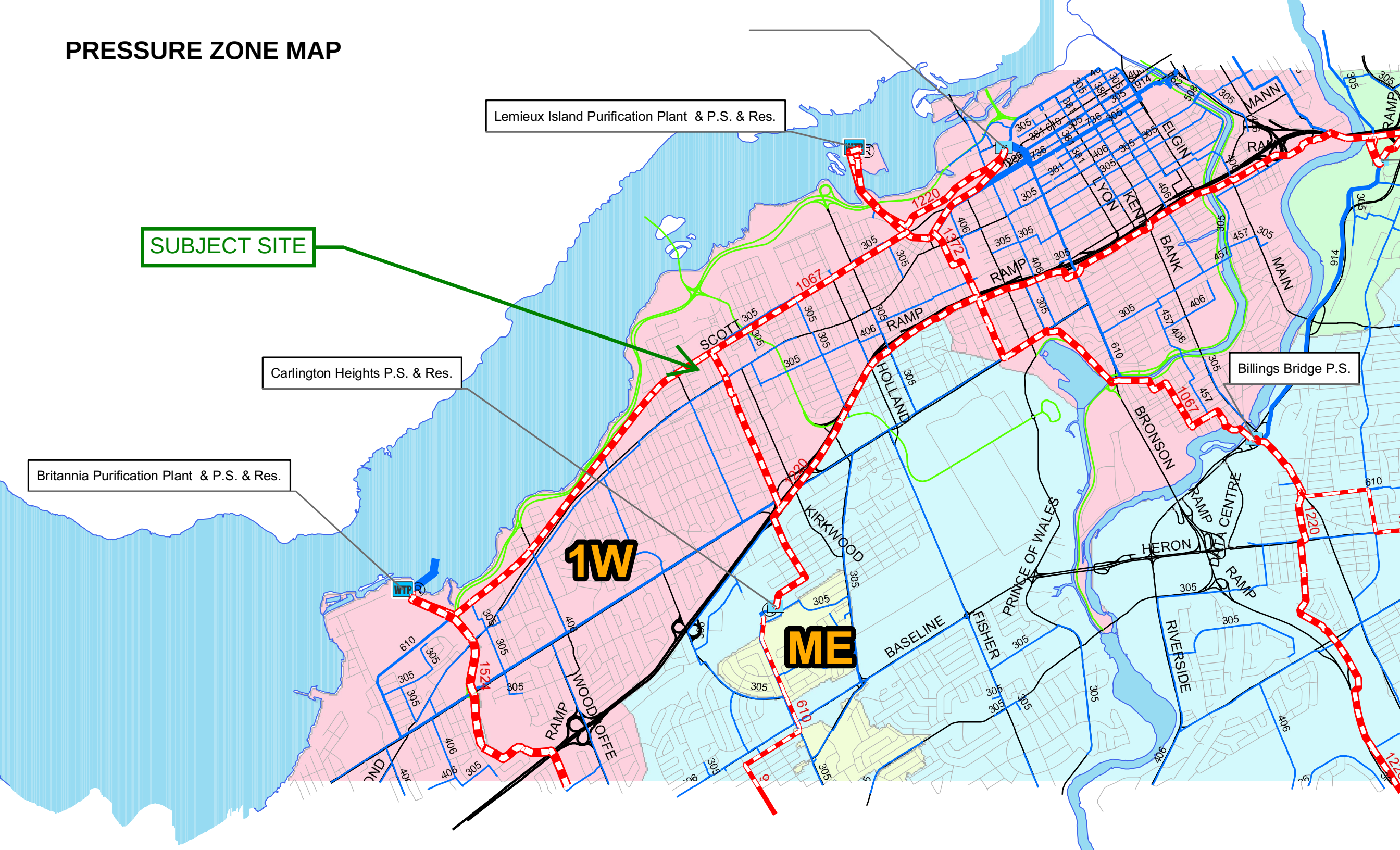
## ***APPENDIX B***

### ***Water Supply***

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# 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 <sup>3</sup> /d | L/min | m <sup>3</sup> /d | L/min | m <sup>3</sup> /d | L/min |
| <b>Total Domestic Demand</b> | 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 <sup>3</sup> /d | L/min | m <sup>3</sup> /d | L/min | m <sup>3</sup> /d | L/min |
| Commercial floor space   | 2.5 L/m <sup>2</sup> /d | 248.1 | 0.62              | 0.4   | 0.9               | 0.6   | 1.7               | 1.2   |
| Amenity Space            | 2.5 L/m <sup>2</sup> /d | 1,355 | 3.39              | 2.4   | 5.1               | 3.5   | 9.1               | 6.4   |
| <b>Total I/CI Demand</b> |                         |       | 4.0               | 2.8   | 6.0               | 4.2   | 10.8              | 7.5   |
| <b>Total Demand</b>      |                         |       | 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<sup>2</sup>

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            |           |    |    |     | <b>54%</b> 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 <sub>2</sub> O | 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 <sub>2</sub> O | PSI  | kPa   |                    | L/s | L/min |
|-----------|--------|--------------------|------|-------|--------------------|-----|-------|
| Avg. Day  | 114.8  | 52.1               | 74.1 | 510.6 | Fire Flow @ 140kPa | 40  | 2400  |
| Peak Hour | 108    | 45.3               | 64.4 | 443.9 |                    |     |       |

## 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)

**CAUTION:** This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

**ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.**

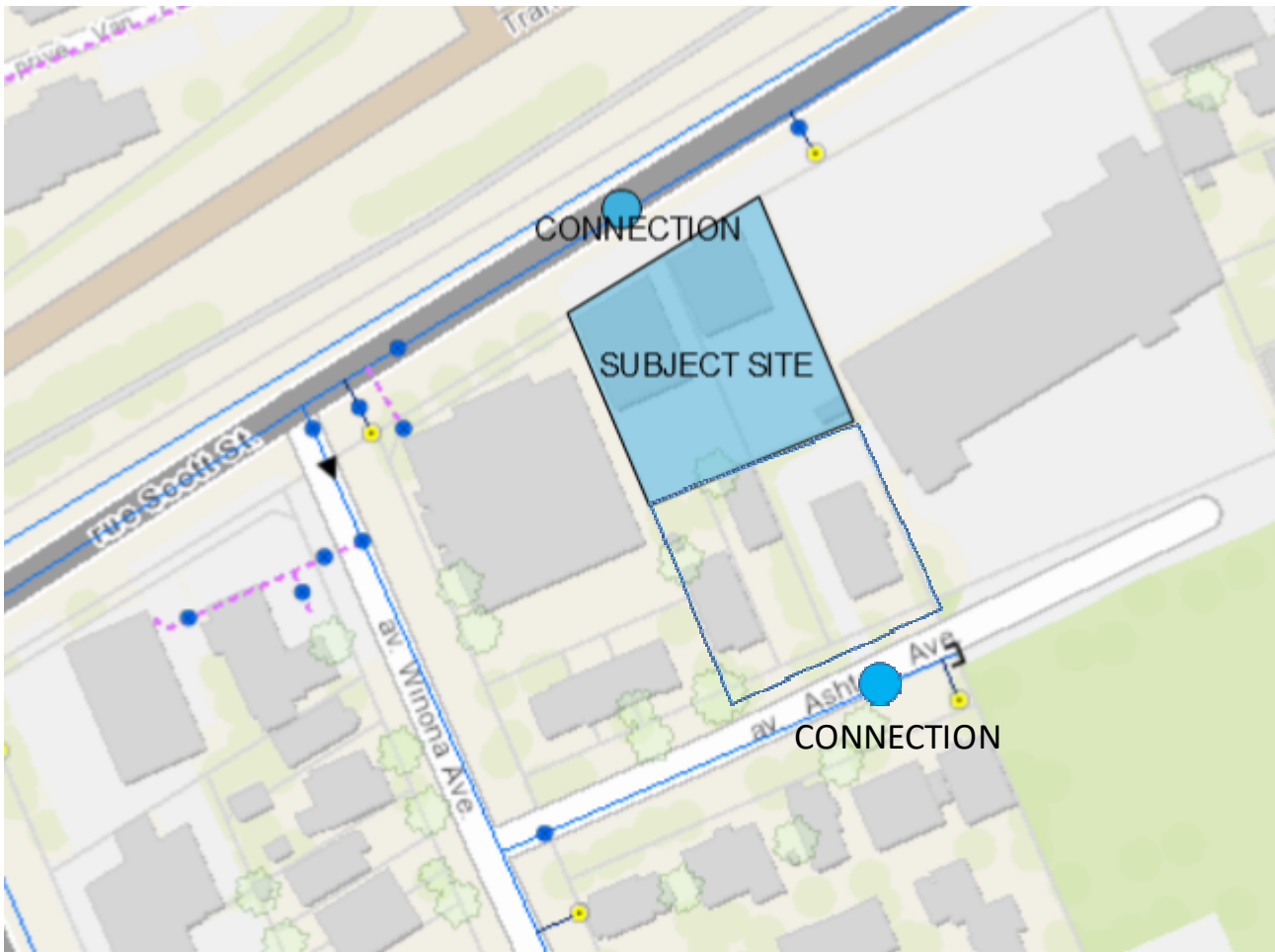
Good Morning John,

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 m<sup>2</sup>** of amenity space, **233 m<sup>2</sup>** 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   |
|-------------------|-------|-------|
| <b>Avg. Daily</b> | 114.6 | 1.91  |
| <b>Max Day</b>    | 282.9 | 4.72  |
| <b>Peak Hour</b>  | 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](mailto:ckelly@dsel.ca)

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### Boundary Condition for 2046 Scott



## connection 1



## connection 2



## 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**

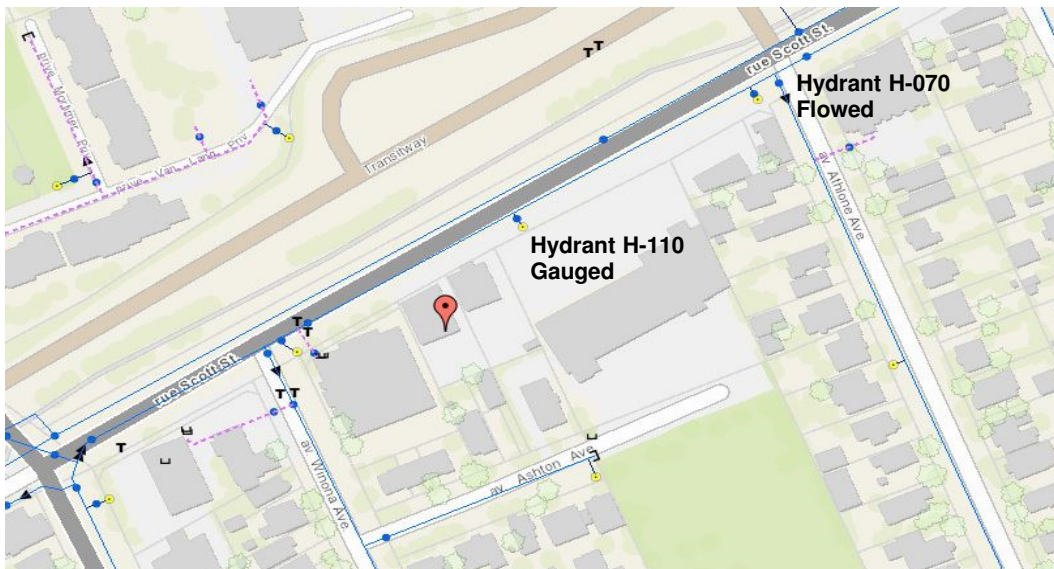
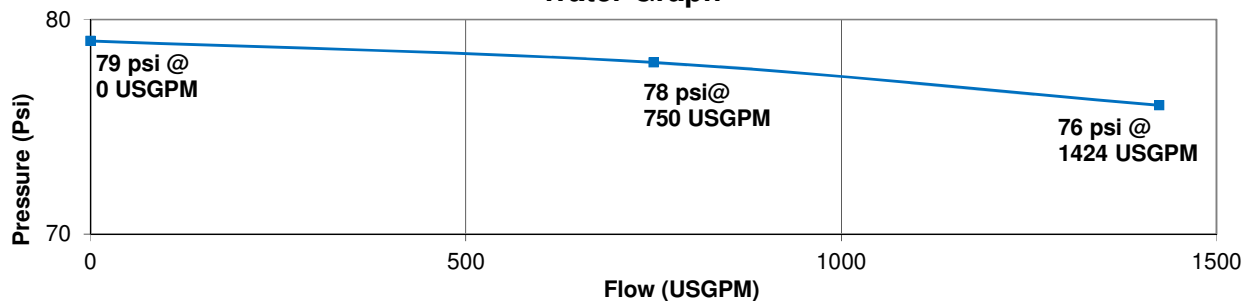
Flow At Test Hydrant at - 20 psi 7113 USGPM

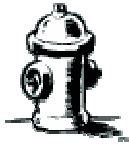
## Flow Hydrant(s) Information:

| 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.

## Water Graph



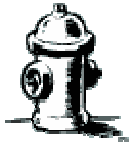


# Hydrants-R-us Inc.

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                                 | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | PAINT TO CODE | <input type="checkbox"/>            | COMPLETE PAINT |
| CAPS                                  | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| STEM                                  | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| O RINGS                               | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| TOP NUT                               | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| VALVE SEAT                            | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| CONDITION OF WATER                    | <input checked="" type="checkbox"/> | Normal | <input type="checkbox"/> | OTHER         |                                     |                |
| ISOLATION VALVE                       | <input checked="" type="checkbox"/> | OK     | <input type="checkbox"/> | OTHER         |                                     |                |
| FLOW TEST REQUESTED                   | <input checked="" type="checkbox"/> | YES    | <input type="checkbox"/> | NO            | <input checked="" type="checkbox"/> | 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                                 | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | PAINT TO CODE | <input type="checkbox"/>            | COMPLETE PAINT |
| CAPS                                  | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| STEM                                  | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| O RINGS                               | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| TOP NUT                               | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| VALVE SEAT                            | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| CONDITION OF WATER                    | <input checked="" type="checkbox"/> | Normal    | <input type="checkbox"/> | OTHER         |                                     |                |
| ISOLATION VALVE                       | <input checked="" type="checkbox"/> | OK        | <input type="checkbox"/> | OTHER         |                                     |                |
| FLOW TEST REQUESTED                   | <input checked="" type="checkbox"/> | YES       | <input type="checkbox"/> | NO            | <input checked="" type="checkbox"/> | 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:                           |                                     |           |                          |               |                                     |                |

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## ***APPENDIX C***

### ***Wastewater Collection***

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# City of Ottawa - Sanitary Trunks and PS

**SUBJECT SITE**

**WEST NEPEAN COLLECTOR**

**KENT STREET TRUNK**

**LEMIEUX ISLAND  
PURIFICATION PLANT  
PRIVATE**

**NCC  
PRIVATE  
Ottawa River**

**LEBRUN  
Fleet**

**BRITANNIA  
PURIFICATION PLANT  
Cassels St.**

**LINCOLN HGTS.  
225 Lincoln Hgts. Rd.**

**BRITANNIA RD.  
@Howe**

**MCEWEN  
31 McEwen Ave.**

**POOLER  
87 Pooler Ave.**

**WOODROFFE AVE.  
COLLECTOR**

**CAVE CREEK  
COLLECTOR  
TWIN**

**CARRUTHERS ST.  
TRUNK**

**O-TRAIN  
PRIVATE  
Carling Avenue**

**PRESTON ST.  
TRUNK**

**NCC  
Experimental  
Farm**

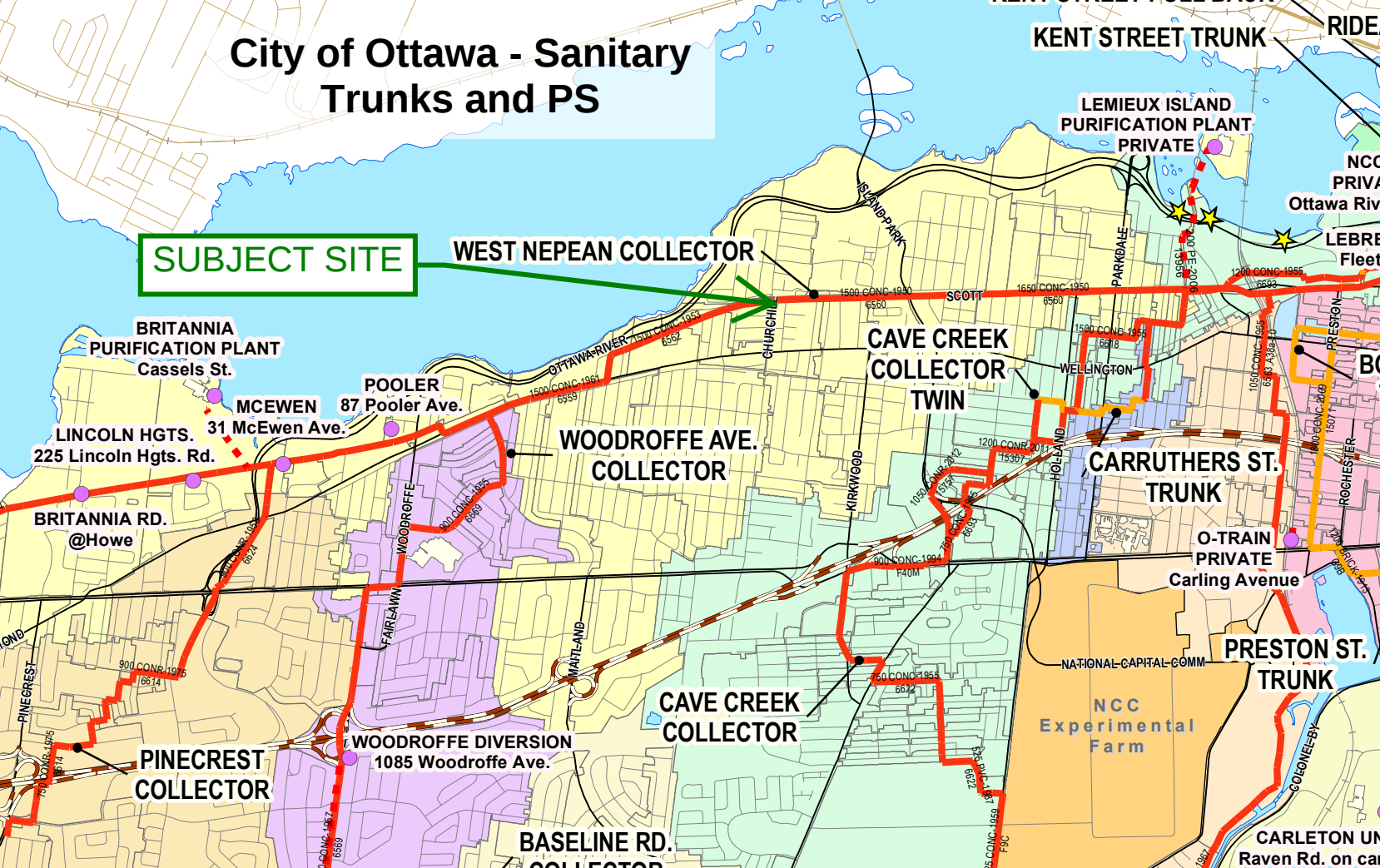
**PINECREST  
COLLECTOR**

**WOODROFFE DIVERSION  
1085 Woodroffe Ave.**

**CAVE CREEK  
COLLECTOR**

**BASELINE RD.  
COLLECTOR**

**CARLETON UN  
Raven Rd. on car**



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 <sup>2</sup> /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 |

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<br>(PG5323-MEMO.01) prepared by Paterson Group and<br>dated February 17th, 2021. |
| Q | 0.3 L/s     |                                                                                                                                 |

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 <sup>2</sup> /d | 248.1        | 0.03                 |
| Amenity                 | 5 L/m <sup>2</sup> /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

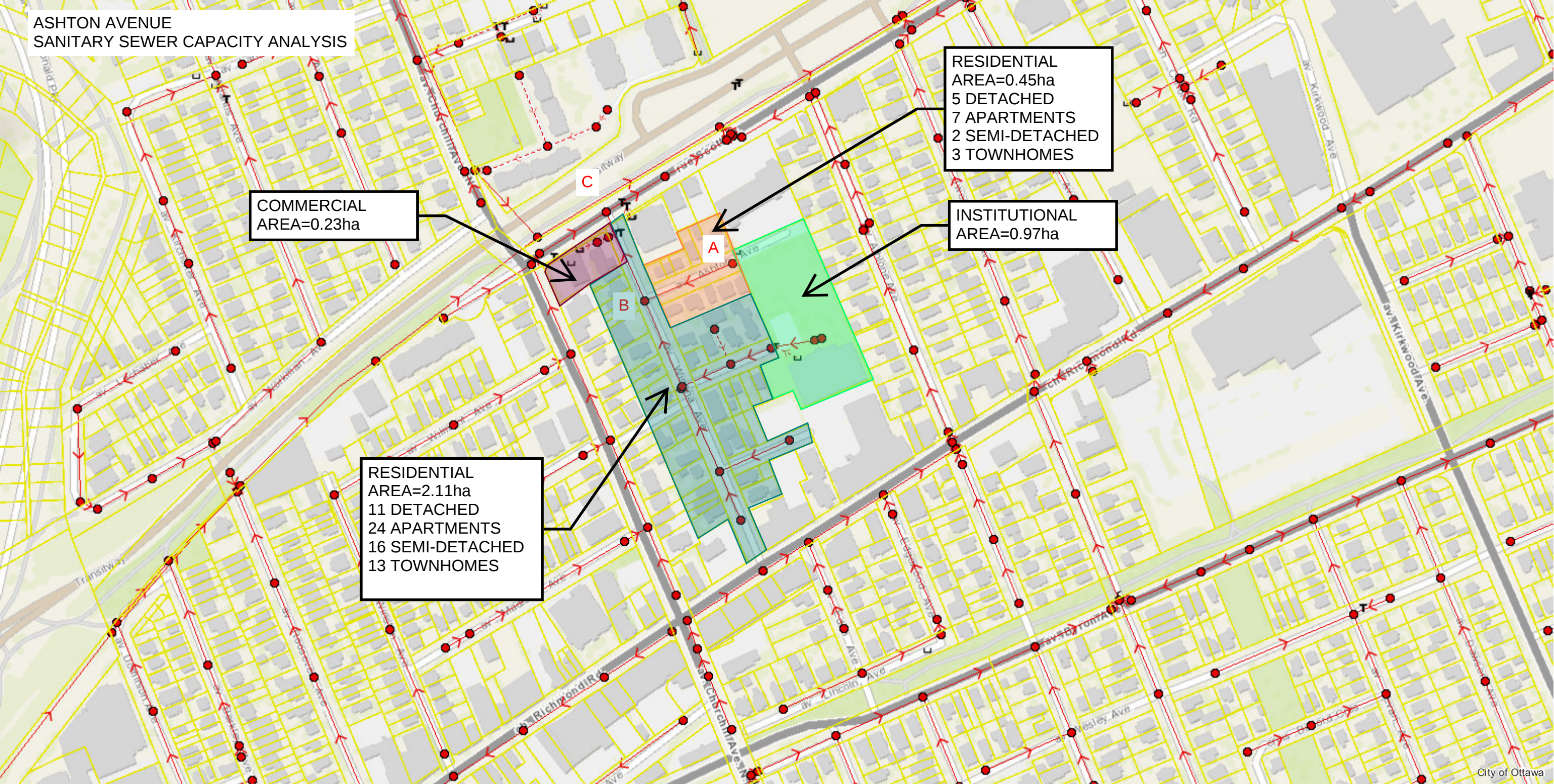
CLIENT: SURFACE  
LOCATION: 2050 SCOTT ST  
FILE REF: 19-1142  
DATE: 27-Mar-21

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



| Location   |    |      | Residential Area and Population |                 |        |        |       |       |            |       |       |                  | Commercial |       | Institutional |       | Industrial |       |                  | Infiltration |       |              | Total | Pipe Data |       |        |                        |       |          |                  |            |
|------------|----|------|---------------------------------|-----------------|--------|--------|-------|-------|------------|-------|-------|------------------|------------|-------|---------------|-------|------------|-------|------------------|--------------|-------|--------------|-------|-----------|-------|--------|------------------------|-------|----------|------------------|------------|
| Area ID    | Up | Down | Area                            | Number of Units |        |        |       | Pop.  | Cumulative |       | Peak. | Q <sub>res</sub> | Area       | Accu. | Area          | Accu. | Area       | Accu. | Q <sub>C+H</sub> | Total        | Accu. | Infiltration | Total | DIA       | Slope | Length | A <sub>hydraulic</sub> | R     | Velocity | Q <sub>cap</sub> | Q / Q full |
|            |    |      |                                 | by type         |        |        |       |       | Area       | Pop.  | Fact. |                  |            |       |               |       |            |       |                  |              |       |              |       |           |       |        |                        |       |          |                  |            |
|            |    |      | (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 <sup>2</sup> )      | (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



COMMERCIAL  
AREA=0.23ha

RESIDENTIAL  
AREA=2.11ha  
11 DETACHED  
24 APARTMENTS  
16 SEMI-DETACHED  
13 TOWNHOMES

RESIDENTIAL  
AREA=0.45ha  
5 DETACHED  
7 APARTMENTS  
2 SEMI-DETACHED  
3 TOWNHOMES

INSTITUTIONAL  
AREA=0.97ha

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***APPENDIX D***

***Stormwater Management***

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



Existing Drainage Characteristics 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 | <i>*Adjusted to 10 minutes per City of Ottawa Guidelines</i> |

1) Time of Concentration per Federal Aviation Administration

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

$t_c$ , 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)

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



Existing Drainage Characteristics 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 | <i>*Adjusted to 10 minutes per City of Ottawa Guidelines</i> |

1) Time of Concentration per Federal Aviation Administration

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

$t_c$ , 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 <sub>c</sub><br>(min) | i<br>(mm/hr) | Q <sub>actual</sub><br>(L/s) | Q <sub>release</sub><br>(L/s) | Q <sub>stored</sub><br>(L/s) | V <sub>stored</sub><br>(m <sup>3</sup> ) | i<br>(mm/hr) | Q <sub>actual</sub> <sup>*</sup><br>(L/s) | Q <sub>release</sub><br>(L/s) | Q <sub>stored</sub><br>(L/s) | V <sub>stored</sub><br>(m <sup>3</sup> ) |
| 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 <sub>c</sub><br>(min) | i<br>(mm/hr) | Q <sub>actual</sub><br>(L/s) | Q <sub>release</sub><br>(L/s) | Q <sub>stored</sub><br>(L/s) | V <sub>stored</sub><br>(m <sup>3</sup> ) | i<br>(mm/hr) | Q <sub>actual</sub><br>(L/s) | Q <sub>release</sub><br>(L/s) | Q <sub>stored</sub><br>(L/s) | V <sub>stored</sub><br>(m <sup>3</sup> ) |
| 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 <sub>attenuated</sub> | 12.88 L/s           | 100-year Q <sub>attenuated</sub> | 24.44 L/s           |
| 5-year Max. Storage Required   | 25.2 m <sup>3</sup> | 100-year Max. Storage Required   | 47.9 m <sup>3</sup> |

Summary of Release Rates and Storage Volumes

| Control Area          | 5-Year<br>Release<br>Rate<br>(L/s) | 5-Year<br>Storage<br>(m³) | 100-Year<br>Release<br>Rate<br>(L/s) | 100-Year<br>Storage<br>(m³) |
|-----------------------|------------------------------------|---------------------------|--------------------------------------|-----------------------------|
| Unattenuated<br>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                        |

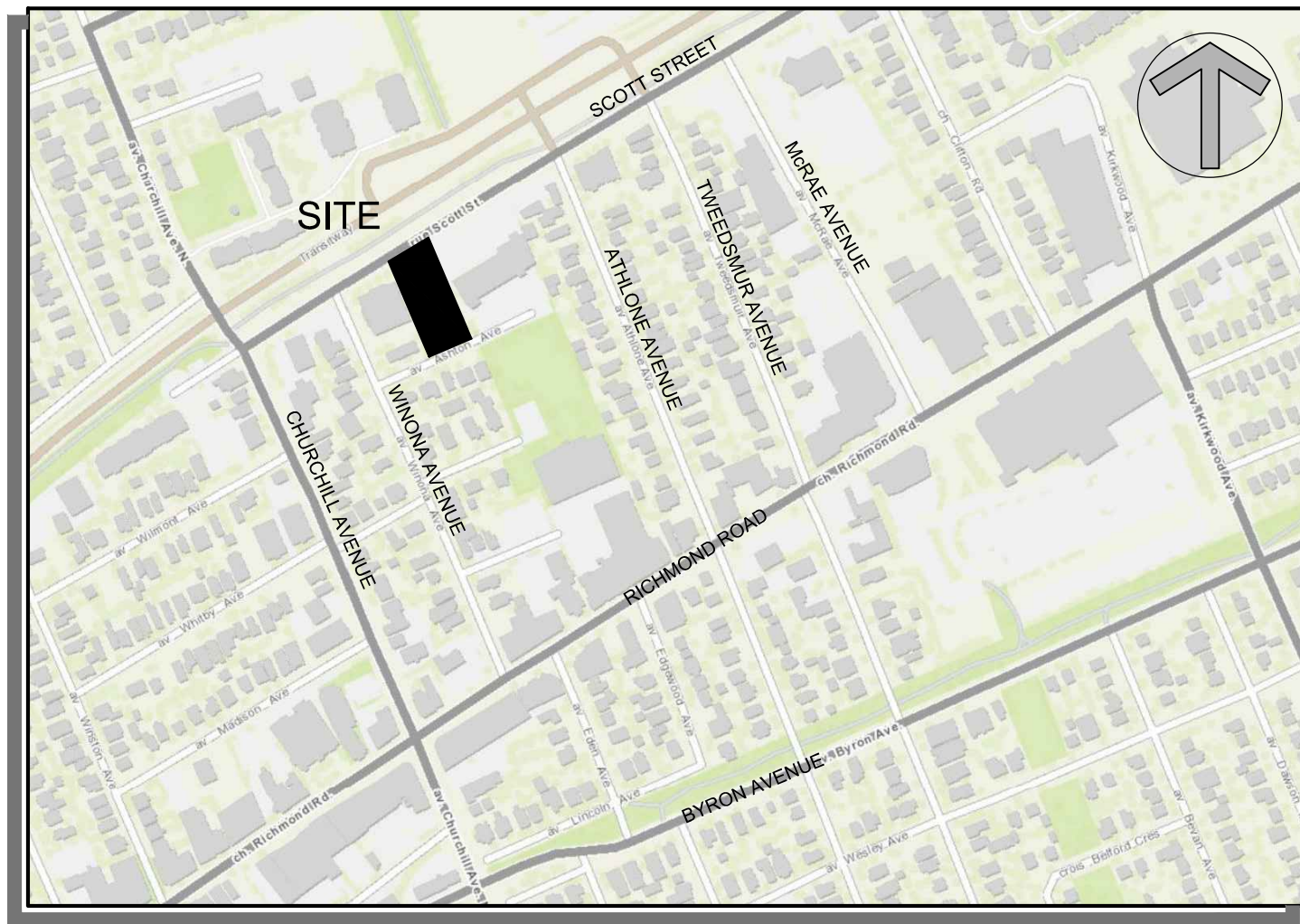
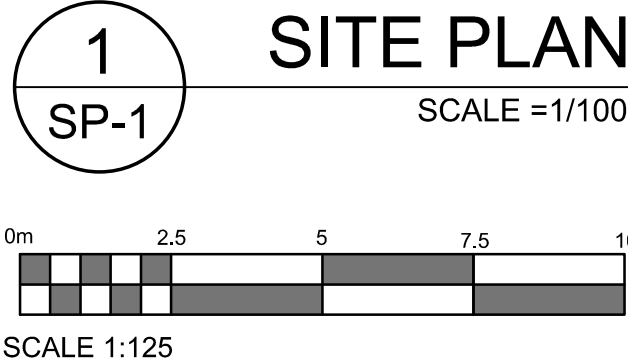
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***DRAWINGS / FIGURES***

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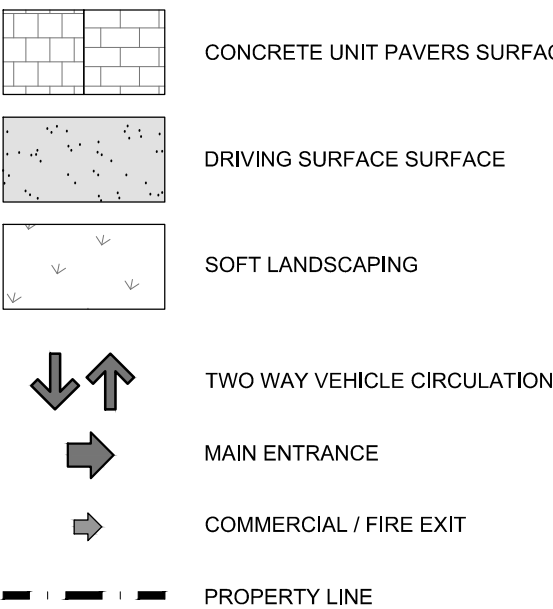
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KEY MAP

DRAWING NOTES

SITE PLAN SYMBOLS



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: rfreal@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** - 6m<sup>2</sup> PER UNIT (354 units) 2,124 sq. m.  
**FRONT YARD SETBACK** - TM (103) 4th storey or 15 m ht. + 2.0 m. 6.0 m.  
**INTERIOR YARD SETBACK** TM (103) 6.0 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. aasl  
**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.  
**STANDARD PARKING SPACE** 8,110 sq. ft.  
**SMALL CAR PARKING SPACE** 2.6m X 5.2m  
2.4m X 4.6m

GROSS BUILDING FLOOR AREA

(OTTAWA ZONING DEFINITION)  
**UG PARKING LEVELS** 000 sq. m.  
000 sq. ft.  
**GROUND FLOOR** 911.5 sq. m.  
9,140 sq. ft.  
**2nd & 3rd FLOOR** 2 x 1,288.4 sq. m. 2,536.8 sq. m.  
2 x (13,653) sq. ft. 27,306 sq. ft.  
**4th FLOOR** 1,080.1 sq. m.  
11,638 sq. ft.  
**5th & 6th FLOOR** 2 x 1,053.7 sq. m. 2,107.4 sq. m.  
2 x (11,342) sq. ft. 22,684 sq. ft.  
**7th FLOOR - AMENITY** 0.0 sq. m.  
000 sq. ft.  
**8th FLOOR** 965.6 sq. m.  
10,408 sq. ft.  
**9th & 14th FLOOR** 6 x 699.07 sq. m. 3,654.4 sq. m.  
6 x (6,556) sq. ft. 39,336 sq. ft.  
**15th & 30th FLOOR** 16 x 699.81 sq. m. 9,758.5 sq. m.  
16 x (6,565) sq. ft. 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.  
2,512 sq. ft.

CAR PARKING

**REQUIRED**  
**RESIDENCE** - 0.5 PER DWELLING UNIT (AFTER 12 UNITS) 154  
(10% REDUCTION - MAX. 30)  
**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 250m<sup>2</sup> 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** = 1,630.0 sq. m.  
**REQUIRED - 6.0M<sup>2</sup> PER UNIT (353) =** 2,116 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.  
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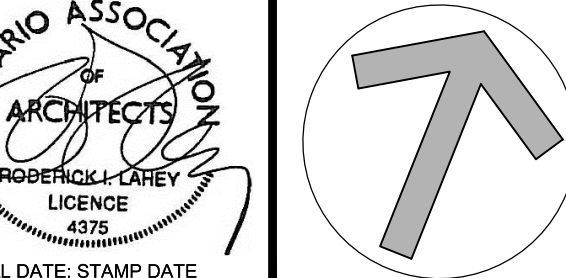
NOTATION SYMBOLS:

**(00)** INDICATES DRAWING NOTES, LISTED ON EACH SHEET.  
**(00)** INDICATES ASSEMBLY TYPE; REFER TO TYPICAL ASSEMBLIES SCHEDULE.  
**(00)** INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A500 SERIES.  
**(000)** INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A500 SERIES.  
**(00)** - DETAIL NUMBER  
**(00)** - TITLE  
**(00)** - DETAIL REFERENCE PAGE  
**(00)** - DETAIL CROSS REFERENCE PAGE

REVISIONS:

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

ARCHITECT SEAL:



CLIENT:



ARCHITECT:

**RODERICK LAHEY**  
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

SITE PLAN

DRAWN:

R.V.

SCALE:

1:125

PROJECT No.

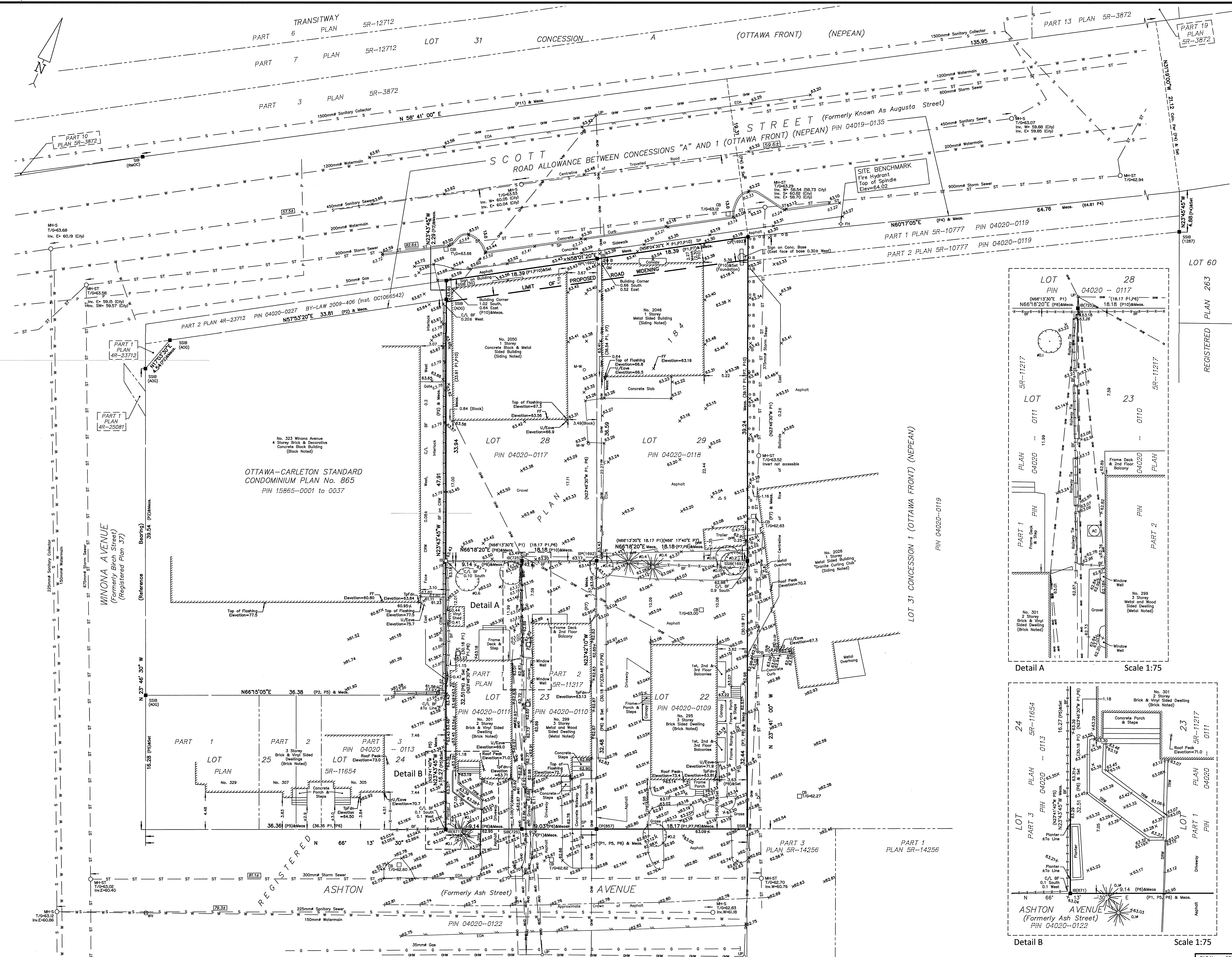
1928

CHECKED:

K.R.

SHEET No.

SP-1

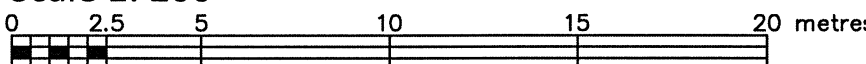


## TOPOGRAPHIC PLAN OF SURVEY OF

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

FARLEY, SMITH &amp; DENIS SURVEYING LTD. 2020

Scale 1: 200



## 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

- Elevations shown are geodetic and are referred to Geodetic Datum CGVD-1928 -1978, (FMW Ref.No.2-184NP).
- It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that its relative elevation and description agrees with the information shown on this drawing.

## Utility Notes

- 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.
- Only visible surface utilities were located.
- 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.
- Sanitary and storm sewer grades and inverts were compiled from City of Ottawa as-built drawings 15350 p18 and 15350 p19 field measurements.
- A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

## Notes &amp; 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 5R-10777                                     |
| (P5)    | Plan 5R-11654                                     |
| (P6)    | Plan 5R-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 5R-3872                                      |
| —       | Maintenance Hole (Storm)                          |
| —       | Maintenance Hole (Sanitary)                       |
| —       | Underground Storm Sewer                           |
| —       | Underground Sanitary Sewer                        |
| —       | Underground Water                                 |
| —       | Underground Power                                 |
| —       | Underground Gas                                   |
| —       | Overhead Wires                                    |
| —       | Utility Pole                                      |
| —       | Anchor                                            |
| —       | Catch Basin                                       |
| —       | Catch Basin Inlet                                 |
| —       | Water Stand Post                                  |
| —       | Gas Meter                                         |
| —       | Fire Hydrant                                      |
| —       | Water Valve                                       |
| —       | Air Conditioner                                   |
| —       | Bollard                                           |
| —       | Sign                                              |
| —       | Gate                                              |
| —       | Diameter                                          |
| —       | Monitoring Well                                   |
| —       | Finished Floor Elevation                          |
| —       | Chain Link Fence                                  |
| —       | Board Fence                                       |
| —       | Stone Retaining Wall                              |
| —       | Timber Retaining Wall                             |
| —       | Concrete Retaining Wall                           |
| —       | Edge of Asphalt                                   |
| —       | Invert                                            |
| —       | Top of Grate                                      |
| —       | Underside of Eave                                 |
| —       | Top of Foundation                                 |
| —       | Centreline                                        |
| —       | Location of Elevations                            |
| —       | Top of Wall/Concrete Curb Elevation               |
| —       | Property Line                                     |
| —       | Confertuous Tree                                  |
| —       | Deciduous Tree                                    |

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## Surveyor's Certificate

- I certify that:
- This survey and plan are correct and in accordance with the Survey Act, the Surveyors Act and the Regulations made under them.
  - The survey was completed on the 9th day of June, 2020.

Date: June 10, 2020  
Daniel Robinson  
Ontario Land Surveyor

FARLEY, SMITH &amp; DENIS SURVEYING LTD.

ONTARIO LAND SURVEYORS  
CANADA LAND SURVEYORS

190 COLONNADE ROAD, OTTAWA, ONTARIO K2E 7J5  
TEL. (613) 727-8226 FAX. (613) 727-1826

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