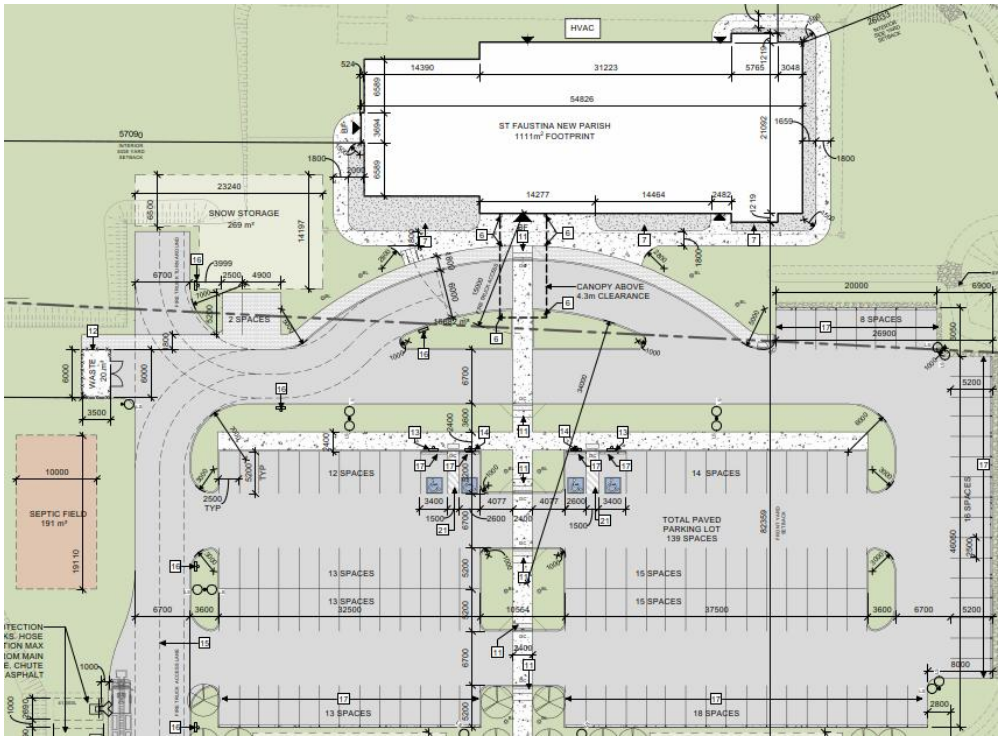
SERVICING & STORMWATER MANAGEMENT REPORT – ST. FAUSTINA - 2835 OLD MONTREAL ROAD



Project No.: CCO-25-1892

City File No.: PC2026-0118

Prepared for:

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Oct. 16, 2026

egis

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1.0 PROJECT DESCRIPTION

1.1 Purpose

Egis Canada (Egis) has been retained by CSV Architects to prepare this Servicing and Stormwater Management Report in support of the site plan control application for the proposed development located at 2835 Old Montreal Road within the City of Ottawa.

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

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

- CCO-25-1892, PRE – Pre-Development Drainage Area Plan (Appendix 'E'), and
- CCO-25-1892, POST – Post-Development Drainage Area Plan (Appendix 'F').

1.2 Site Description



Figure 1: Site Map

The subject property, herein referred to as the site, is located at 2835 Old Montreal Road within the Orléans East-Cumberland Ward. The property is described as Part of Lot 12, Concession 1, Geographic Township of

Cumberland , City of Ottawa, designated as Part 1 on Reference Plan 4R-13451. The site covers approximately 2.41 ha and is currently zoned V1E (Village Residential 1 Zone) and RC7 (Rural Commercial Zone).

1.3 Proposed Development and Statistics

The proposed development consists of a new 1-storey church, complete with drive aisles and surface parking with access from Old Montreal Road. Development is proposed within approximately ***2.0 ha*** of the site.

1.4 Existing Conditions and Infrastructure

The existing site is currently undeveloped with no access to municipal services. A municipal ditch fronts the subject site along Old Montreal Road. A secondary municipal ditch is present north of the property along Ottawa Road 174.

1.5 Approvals

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

An Environmental Compliance Approval (ECA) or Environmental Activity and Sector Registry (EASR) through the Ministry of Environment, Conservation and Parks (MECP) is not anticipated to be required as industrial activities are not proposed and the stormwater management works will service only one parcel of land.

2.0 BACKGROUND STUDIES, STANDARDS, AND REFERENCES

2.1 Background Reports / Reference Information

As municipal services are unavailable, as-built drawings of existing services within the vicinity of the proposed site were not available.

A topographic survey of the site was completed by Arpentage Dutrisac Surveying Inc.

The Site Plan was prepared by CSV Architects. and dated October 16th, 2026.

The following reports have previously been completed and are available under separate cover:

- Geotechnical Investigation completed by Paterson Group, dated March 22nd, 2022 (Report PG4197-1)
- Geotechnical Report – Site Investigation completed by McIntosh Perry, dated April 2017 (Report 0CP-17-0077)
- Phase one ESA prepared by Egis Canada Ltd., dated May 21, 2026
- Septic Impact Assessment, prepared by Egis Canada Ltd., dated October 16, 2026

- Water Balance, 2835 Old Montreal Road, prepared by Egis Canada Ltd., dated October 15, 2026
- Hydrogeological Assessment, 2835 Old Montreal Road, prepared by Egis Canada Ltd., dated October 15, 2026

2.2 Applicable Guidelines and Standards

City of Ottawa:

- Ottawa Sewer Design Guidelines, SDG004, City of Ottawa, December 2025. (***Ottawa Sewer Guidelines***)
- Water Distribution Design Guidelines, WDG003, City of Ottawa, May 2026 (***Ottawa Water Guidelines***)
  - Technical Bulletin IWSTB-2026-01 City of Ottawa, May 13, 2026. ***(IWSTB-2026-01)***

Ministry of Environment, Conservation and Parks:

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

Other:

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

3.0 PRE-CONSULTATION SUMMARY

A pre-consultation meeting was conducted on June 12th, 2026, regarding the proposed site. Specific design parameters to be incorporated within this design include the following:

- Control 2- through 100-year post-development flows to the 2-year pre-development flow with a combined C value to a maximum of 0.50.
- Quality control to be provided up to an enhanced level of treatment (80% TSS removal)

The notes from the City of Ottawa can be found in ***Appendix B.***

4.0 WATER SERVICING

4.1 Existing Watermain

The property has no existing services and no access to a municipal watermain. Neighbouring properties are serviced by private wells.

4.2 Proposed Water Servicing

A new private drilled well is proposed towards the southwest corner of the property to provide the new building with domestic water supply. The well location is identified on the Lot Grading & Drainage Plan. The pump system and water service line will be designed by others. For the purposes of this application, the anticipated water demands have been assumed to be directly related to the anticipated sewage flow demands for the development. Based on the septic system design, the calculated sewage flow demand was found to be 2,466 L/day for average day demand, and 9,940 L/day for max day demand. Analyses performed as part of the Hydrogeological Assessment prepared by Egis Canada Ltd. demonstrate that the aquifer can supply the proposed development with an adequate supply of water in terms of quantity and quality. Please refer to the Hydrogeological Assessment for additional information.

Fire protection requirements were determined based on the methodology outlined in Appendix 'J' of the Water Distribution Design Guidelines (herein referred to as WDG). As a sprinkler system is not proposed, the Ontario Building Code method shall be used to determine the required water supply. Should the required fire flow reach 9,000 L/min, the Fire Underwriters Survey and NFPA1142 calculation must also be provided.

The "K" factor (Water Supply Coefficient) for the OBC calculation was determined to be 18, based on A-2 occupancy and combustible construction with fire separations and fire-resistance ratings provided in accordance with subsection 3.2.2. The building volume of 7,476 m^3 was provided by the architect.

The results of the calculation yielded a maximum required fire flow of 3,600 L/min, and a maximum volume requirement (Q) of **134,568 litres.**

Remote fire protection will be required for the development as no municipal fire hydrants are available for firefighting. Fire protection is proposed to be provided by underground concrete water storage tanks complete with a draw pipe and chute. The tanks will be located so that at least one draw pipe is within 1.0m of the access route and within 90m of the principal entrance.

As Ottawa Fire Services is Superior Tanker Shuttle Service accredited to provide 1,900 L/min for commercial lines, a reduction in the required storage volume of up to **57,000 litres** (1,900 L/min x 30 min) applies per WDG Appendix 'J'.

It is therefore estimated that a total on-site storage volume of (134,568 – 57,000) = **77,568 litres** will be required. It is proposed to provide fire protection with two **41,000 litre** concrete water storage tank, for a total of **82,000** litres.

5.0 SANITARY SERVICING

5.1 Existing Sanitary Sewers

The subject site is currently undeveloped with no access to a municipal sanitary sewer.

5.2 Proposed Sanitary Servicing

A new septic bed located southwest of the proposed building will be installed and sized to accommodate the development.

The balanced Total Daily Design Sanitary Sewage Flow (TDDSSF) was calculated by Egis Canada Ltd. as 2,466 L/day, and maximum day demand was calculated as 9,940 L/day It is understood that approval of on-site septic treatment will be governed by OBC, as the Daily Design Flow will be less than 10,000 L/day. The septic design, completed by Egis Canada Ltd., will be submitted to the Ottawa Septic System Office (OSSO) for the required permits and approvals once finalized and included within Appendix 'D' on the subsequent submission.

In summary, the septic system has been designed using a Class 4 filter bed to treat a balanced flow of 2,466 L/day of effluent. The system incorporates a flow balancing tank and a two-compartment septic tank.

For further design information pertaining to the on-site sewage system, please refer to the septic design completed by Egis Canada Ltd.

6.0 STORM SEWER SERVICING

6.1 Existing Storm Sewers

There are no existing storm sewers within the subject site or the adjacent municipal ROW. A municipal ditch fronts the subject site along Old Montreal Road and drains east. A secondary ditch is present north of the site along Ottawa Road 174, also draining east. The site currently drains from Old Montreal Road north towards Ottawa Road 174.

6.2 Proposed Storm Servicing

Surface drainage will be directed away from the proposed building and towards a perimeter swale located along the boundary of the parking area. Flow from the parking lot will be directed to a grit separator unit before discharging back into the perimeter swale. The perimeter swales will outlet to a depressed surface storage area located at the rear of the property. Flow restrictions will be provided at the outlet of the depressed surface storage area by an orifice and weir combination, and the required storage will be provided within the stormwater management area.

See CCO-25-1892 - *POST* in ***Appendix F*** of this report for more details. The Stormwater Management design for the subject property will be outlined in Section 7.0.

7.0 PROPOSED STORMWATER MANAGEMENT

7.1 Design Criteria and Methodology

Stormwater management for the proposed site will be maintained through positive drainage away from the proposed building and towards perimeter swales along the boundary of the parking area. The perimeter swales will convey surface runoff towards a stormwater management area located at the rear of the property.

The quantitative and qualitative properties of the storm runoff for both the pre & post development flows are further detailed below. Stormwater Best Management Practices (SWM BMP's) will be implemented at the "Lot level", "Conveyance" and "End of Pipe" locations.

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

Quality Control

- Quality control will be provided up to an enhanced level of treatment (80% TSS removal) by a treatment train approach including an oil and grit separator unit.

Quantity Control

- Post development 2- to 100-year peak flow will be restricted to match the existing 2-year peak flow with a calculated C-value no greater than 0.50.

7.2 Runoff Calculations

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

$$Q = 2.78CIA \text{ (L/s)}$$

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

It is recognized that the Rational Method tends to overestimate runoff rates. As a result, the conservative calculation of runoff ensures that any SWM facility sized using this method is expected to function as intended.

The following coefficients were used to develop an average C for each area:

Roofs/Concrete/Asphalt	0.90
Gravel	0.60
Undeveloped and Grass	0.25

As per the *City of Ottawa - Sewer Design Guidelines*, the 2/5-year balanced 'C' value must be increased by 25% for a 100-year storm event to a maximum of 1.0.

7.3 Pre-Development Drainage

The existing site drainage limits are demonstrated on the Pre-Development Drainage Area Plan included in ***Appendix E***. It has been assumed that the development area contains no existing stormwater management controls for flow attenuation.

Table 1: Pre-Development Runoff Summary

Drainage Area	Area (ha)	Runoff Coefficient (2-Year)	Runoff Coefficient (100-Year)	Time of Concentration (minutes)	2-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)
A1	1.98	0.25	0.31	21	68.87	198.32
Total	**1.98**				**68.87**	**198.32**

7.4 Post-Development Drainage

The proposed site drainage limits are demonstrated on the Post-Development Drainage Area Plan. See CCO-25-1892 - *POST* in ***Appendix F*** of this report for more details. A summary of the Post-Development Runoff Calculations can be found below.

Table 2: Post-Development Uncontrolled Runoff Summary

Drainage Area	Area (ha)	Runoff Coefficient (2/100-Year)	Tc (min)	2-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)
B1	1.10	0.58 / 0.66	10	136.56	361.98
B2	0.11	0.90 / 1.00	10	21.19	54.74
B3	0.77	0.26 / 0.32	10	43.09	124.42
Total	**1.98**	**-**	**10**	**200.84**	**541.15**

See ***Appendix G*** for calculations.

Area B1 represents the drive aisles and parking lot. Runoff from area B1 will be conveyed east towards a perimeter swale along the parking lot boundary. The perimeter swale will be directed through a grit separator unit to the rear yard stormwater management area without restriction.

Area B2 represents the roof of the proposed building. Roof flow will be directed through a 250 mm diameter perforated pipe system to the rear yard stormwater management area. In the event of a rare storm event where the capacity of the subdrain is exceeded, overflows have been incorporated into the design to discharge roof

runoff at grade. The subdrain will discharge roof runoff to the stormwater management area a minimum 30cm above the 100-year ponding level.

Area B3 represents the west perimeter swale and rear yard. The west perimeter swale will be directed to the rear yard stormwater management area.

Reducing site flows will be achieved using flow restrictions and will create the need for onsite storage. Runoff from areas ***B1-B3*** will be restricted as shown in the table below, and the onsite storage will be provided via surface storage within the depressed surface storage area at the rear of the site.

Table 3: Post-Development Controlled Runoff Summary

Drainage Area	Area (ha)	2-Year Peak Flow (L/s) (Controlled)	100-Year Peak Flow (L/s) (Controlled)	100-Year Storage Required (m^3)	100-Year Storage Available (m^3)
B1	1.10	12.10	68.72	381.3	384.2
B2	0.11				
B3	0.77				
Total	**1.98**	**12.10**	**68.72**	**381.3**	**384.2**

Restriction of runoff for the 2-year event will be provided by an 85 mm diameter orifice. The orifice will be plug-style and circular in shape, located at the inlet of the 200 mm diameter outlet pipe. The orifice will be placed at an elevation of 56.12 m and restrict runoff to a maximum release rate of ***12.10 L/s*** during the 2-year event, resulting in a water surface elevation of 56.93 m and a ponding depth of ***0.81 m***. A storage volume of ***194.4 m^3*** will be provided during the 2-year event.

A 0.50 m wide rip-rap lined weir is proposed with a crest invert of 57.15 m. Smaller events will be controlled by the orifice alone, however during larger storm events, the weir will activate to provide additional discharge. Restriction of runoff from the orifice and weir combination will result in a maximum release rate of ***68.72 L/s*** during the 100-year event. The corresponding water surface elevation will be 57.30 m, resulting in a ponding depth of ***1.18 m***. A storage volume of ***384.2 m^3*** will be provided during the 100-year event.

Should runoff exceed the 100-year event, a spill point has been placed along the property line at an elevation of 57.60 m to direct excess runoff towards the City ROW. This spill point will provide 30 cm freeboard from the design 100-year ponding elevation.

7.5 Quality Control

The development of this lot will employ Best Management Practices (BMP's) wherever possible. The intent of implementing stormwater BMP's is to ensure that water quality and quantity concerns are addressed at all stages of development. Lot level MBP's typically include temporary retention of the parking lot runoff, minimizing ground slopes, and maximizing landscapes areas.

Runoff from the drive aisles and parking lot will be directed across a gravel diaphragm towards a proposed perimeter grass swale. The grass swale has been designed with minimal slope to reduce runoff velocity and promote filtration and settlement of suspended solids. To ensure that quality control criteria are met, the perimeter swale will direct runoff through an oil and grit separator unit prior to discharging to the stormwater management area at the rear of the property. The stormwater management area will provide additional removal of TSS through extended detention of runoff.

8.0 SUMMARY

- A new church is proposed at 2835 Old Montreal Road
- Water servicing will be provided by a new drilled well located south of the building towards Old Montreal Road.
- Fire protection will be provided by two 41,000 litre concrete water storage tanks complete with a draw pipe and chute.
- Sanitary servicing will be provided by a new septic system located west of the main drive aisle, designed by others.
- Stormwater management will be provided by an orifice and weir combination. Runoff will be restricted to match the existing 2-year release rate.
- Quality control will be provided by a treatment train approach including an oil and grit separator unit.

9.0 RECOMMENDATIONS

Based on the information presented in this report, we recommend that City of Ottawa approve this Servicing and Stormwater Management Report in support of the proposed development at 2835 Old Montreal Road.

This report is respectfully being submitted for approval.

Regards,

Egis Canada Ltd.



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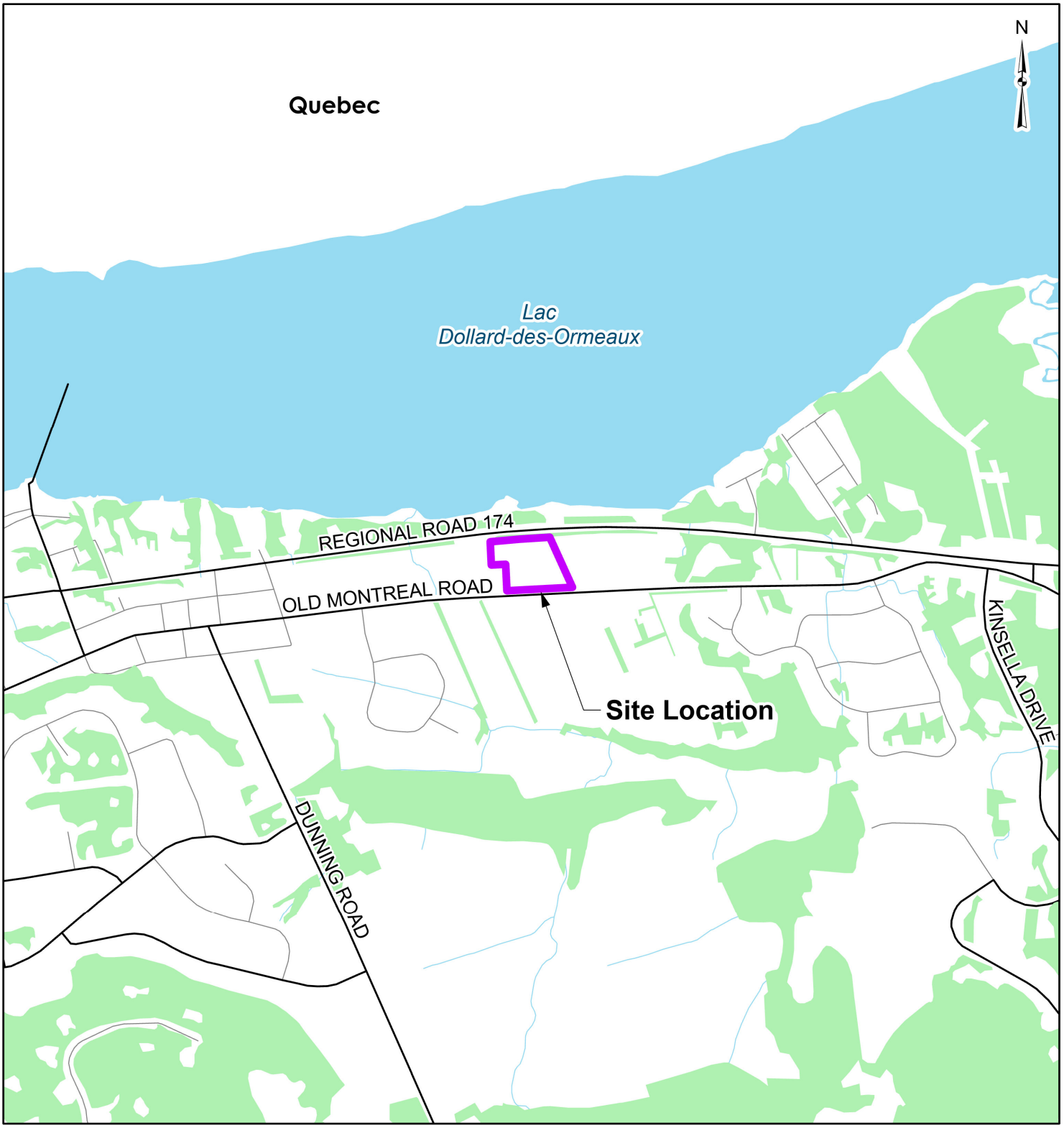
10.0 STATEMENT OF LIMITATIONS

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

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

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

APPENDIX A
KEY PLAN



LEGEND

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

400 200 0 400

Scale 1:15,000 Metres

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2026.

CLIENT: CSV ARCHITECTS

PROJECT: 2835 OLD MONTREAL ROAD

TITLE: SITE LOCATION

egis
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APPENDIX B
BACKGROUND DOCUMENTS

File No.: PC2026-0118

June 17, 2026

Camille Lewis
CSV Architects
Via email: lewis@csv.ca

Subject: Pre-Consultation: Meeting Feedback
Proposed Zoning By-law and Site Plan Control Application – 2835 Old Montreal Road

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on June 12, 2026.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.

    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

1. You are encouraged to consult with technical agencies early in the development process and throughout the development of your project concept. A list of technical agencies and their contact information is enclosed.

Planning

Comments:

1. City of Ottawa Official Plan (2022)

    a. The subject property is designated as Village as per Schedule B9 – Rural Transect in the Official Plan.

        i. Section 9.4.1 Policy 1-2: Land uses and permitted development within a Village shall be identified by a secondary Plan; and based on the ability to support development on private water and wastewater services or on municipal services where they exist;

ii. Section 9.4.2. Policy 1: Institutional uses such as schools, care facilities, recreation and community facilities and places of worship are generally permitted unless otherwise perscribed in the Secondary Plan.

2. Rural Secondary Plan (Volume 2B) – Consolidated Villages Secondary Plan

a. This property is subject to the Consolidated Villages Secondary Plan. The policies outlined within the Secondary Plan are intended to be read in conjunction the policies of the Official Plan.

b. The subject property is designated as both Village Residential and Village Commercial within the Secondary Plan as per Schedule D - Designation Plan for the Village of Cumberland.

i. Permitted uses within the Village Residential designation include the following: a) Residential built form with two or less primary dwelling units; and b) Bed and Breakfast; and c) Home based business.

ii. Permitted uses within the Village Commercial designation include: a) Retail and hospitality services for the traveling public such as automobile service stations, gas bars and restaurants; and b) Retail and commercial uses which require larger land areas or accessory outside storage, such as; i) Animal hospitals; and ii) Greenhouse; and iii) Construction products and services; and iv) Farm equipment and similar agriculture-related uses; and v) Self storage.

iii. Section 4.4 Policy 18 requires an Official Plan Amendment to designate additional lands as Village Commercial.

c. The subject property and the proposed development must conform with the Vision Statement and the Goals and Objectives for the Village of Cumberland, as detailed in the Secondary Plan, and conform with the General Policies outlined in Section 3 of the Secondary Plan. General Policies relevant to this application include, but are not limited to:

i. Section 3.2 Policy 2: Development shall be limited to the lands that are suited for the proposed use. Suitability shall be assessed within the context of the community compatibility and will avoid negative impacts on the natural and social environment.

ii. Section 3.2 Policy 3: Where development is proposed, the following will be addressed as part of a planning application to ensure compatibility with the village:

1. Building heights, setbacks, and design; and

2. The layout and location of parking; and

3. Landscape elements and features; and

4. Noise, lighting, traffic, parking and accesses, and pedestrian linkages; and

5. Other considerations identified in the City's approved design guidelines such as Design Guidelines for Rural Village; and

6. Any relevant policies of the Official Plan.

iii. Section 3.6 Policy 8: Permitted institutional uses include libraries, schools, emergency services, arenas, community centres, places of worship, museums and medical facilities.

iv. Section 3.6 Policy 9:

1. (a) Institutional uses *should*, wherever possible, locate within or in close proximity to the Village Core area in order to provide a focal point for the village, be accessible to patrons, and concentrate infrastructure and servicing in one area; and

2. (b) New institutional uses must not adversely impact adjacent land uses and must respect the character of the village and surrounding rural area.

v. You will need to provide justification in your planning rationale about why the proposed development must be located outside of the Village Core, in addition to addressing the other policies related to institutional uses.

vi. Please note that while institutional uses are generally supported throughout the Village, commercial uses are not. Please refer to zoning comments below for more detail.

vii. Section 3.9 Policy 15 (a: states that no new access to OR 174 will be permitted. Site access must be provided from Old Montreal Road.

3. Zoning By-law

a. On January 28, 2026, the City of Ottawa approved a new Zoning By-law (2026-50). The By-law was enacted by City Council on March 11, 2026. Following enactment, a 20-day appeal period began on March 25, 2026 and closed on April 14, 2026.

b. As of the date of enactment on March 11, 2026, all development applications and building permits must comply with the provisions in Zoning By-law 2008-250 and the new Zoning By-law 2026-50, with the most restrictive provisions from both by-laws applying. Given the expanded permissions in Zoning By-law 2026-50, the provisions of Zoning By-law 2008-250 will be the most restrictive in most cases.

   For provisions in the new Zoning By-law that are appealed, the related provisions in the current Zoning By-law will continue to apply, with the most restrictive provisions in either the new Zoning By-law or Zoning Bylaw 2008-250 prevailing until the appeals are resolved. The transition provisions in Section 110 concerning interpretation of exceptions and schedules will not come into effect until they are declared in effect by the OLT. Until this time the current Zoning By-law (2008-250) is in effect.

   As such, planning applications submitted between the transitory period of the current and new Zoning By-law must consider the implications of both in their supporting plans and reports.

c. The City of Ottawa is initiating a Zoning By-law Amendment Omnibus report to make amendments to Zoning By-law 2008-250 and Zoning By-law 2026-50 to clarify intent, correct errors, and to make updates to zoning schedules and the Zoning Map.

   i. Item #22: The RC12 subzone in Zoning By-law 2008-250 applied to 24 properties in Cumberland, Osgoode and Metcalfe. The RC9 subzone was proposed to carry forward the RC12 subzone with no changes to the provisions. However, the RC7 subzone was applied in error to these properties.

   ii. If approved, the subject property will be corrected to RC9 in the new Zoning By-law 2026-50.

d. Based on the proposal description provided, the proposed development will include the following uses: place of worship, place of assembly, accessory office use, parking lot and accessory building (storage shed).

e. Zoning By-law 2008-250: The subject property is currently zoned as both V1E - Village Residential First Density Subzone E and RC12 - Rural Commercial Subzone 12.

   i. As per Zoning By-law 2008-250 Section 33 (1): Where a lot is divided into more than one zone, each portion of the lot must be used in accordance with the provisions of the applicable zone; however, the zone boundary is not to be treated as a lot line. Where two or more regulations are equally applicable to a lot, Section 18 applies.

ii. The portion of the property zoned as V1E is also located within the Village Residential Enterprise Overlay (See Section 128A related to homebased businesses in Villages).

iii. The V1E Zone does not permit does not permit a place of worship, or a place of assembly.

iv. The RC12 Zone permits the following uses:
- Place of worship.
- Place of assembly.

v. Accessory Uses including, accessory office use, parking lot and an accessory building (storage shed) are subject to Section 55.

vi. Please refer to Section 96 to review zoning provisions specific to the Place of Worship and Place of Assembly.

vii. Please refer to Section 101 for minimum parking requirements:

1. Place of Worship = 10 parking spots per 100 m2 of gross floor area.

2. Place of Assembly = 10 parking spots per 100 m2 of gross floor area.

3. Office = 2.4 parking spots per 100 m2 of gross floor area.

4. As per Section 110, a minimum of 15% of the area of any parking lot, whether a principal or an accessory use, must be provided as perimeter or interior landscaped area comprised of the following:

    a. a landscaped buffer of 3 m must be provided between the perimeter of the parking lot and a lot line. A driveway may cross the landscaped buffer; and

    b. in addition to the landscaped buffer, interior landscaping may be provided including various landscaped islands, landscaped medians, pedestrian pathways or public plazas to meet the minimum 15% requirement.

    c. All outdoor refuse collection and refuse loading areas contained within or accessed via a parking lot must be: located at least 9.0 metres from a lot line abutting a public street; (b) located at least 3.0 metres from any other lot line; and (c) screened from view by an opaque screen with a minimum height of 2.0 metres

(d) where an in-ground refuse container is provided, the screening requirement above may be achieved with soft landscaping.

f. Zoning By-law 2026-50: The subject property is currently zoned as both V1E - Village Residential First Density Subzone E and RC7 - Rural Commercial Subzone 7.

i. As per Section 132 (1) of Zoning By-law 2026-50: Where a lot is divided into more than one zone, each portion of the lot must be used in accordance with the provisions of the applicable zone; however, the zone boundary is not to be treated as a lot line. Where two or more regulations are equally applicable to a lot, the most restrictive provision applies, in accordance with Section 118.

ii. The portion of the property zoned as V1E is also located within the Village Residential Enterprise Overlay (See provisions of Subsection 301 related to home-based businesses and home-based daycares).

iii. The V1E Zone does not permit a place of worship, or a place of assembly.

iv. The current RC7 Zone does not permit a place of worship or a place of assembly.

v. Please refer to Part 6 of the By-law for Parking Requirements:

1. This zoning by-law does not contain maximum or minimum parking provisions for the type of proposed use.

2. As per Section 607, a principal or accessory use parking lot, the following landscaping provisions apply:

a. a minimum percentage of the parking lot area must consist of soft landscaping as follows: 100 or fewer parking spaces: 15 per cent of the parking lot area; or more than 100 parking spaces: 20 per cent of the parking lot area.

3. The landscaping may include features such as landscaped islands, landscaped medians, pedestrian pathways, or public plazas; and

4. For parking lots with 50 parking spaces or more, in addition to the perimeter surrounding a parking lot, a minimum of one soft landscaped median or peninsula at least 3.5 metres wide must also be provided within the parking lot.

5. A soft landscaped buffer must be provided between the perimeter of a parking lot and a lot line, and a driveway may cross the soft landscaped buffer:

    a. for a parking lot with more than 10 but fewer than 100 spaces: 3.5 metres;

    b. and for a parking lot containing 100 or more spaces: 5 metres.

    c. Outdoor refuse collection and refuse loading areas contained within or accessed via a parking lot must comply with subsection 217(6).

    d. As the subject property abuts a V1 zone on either side, the parking lot must be screened from view with a minimum 1.5m high opaque screen.

g. If the zoning is corrected through the Omnibus report, the RC7 - Rural Commercial Subzone 7 portion of the property would become RC9 - Rural Commercial Subzone 9.

    i. The RC9 Zone permits the following uses:
        - Place of worship.
        - Place of assembly.

    ii. Accessory uses, buildings and structures are subject to Section 202.

4. The proposed Zoning By-law Amendment is to rezone the entire property to RC9 - Rural Commercial Subzone 9.

    a. The zoning under Zoning By-law 2026-50 is currently RC7 which would not permit the proposed development, however the City has identified this as an error and the City intends to correct the zoning to RC9 which would permit the proposed development. The proposed development however would not be permitted to encroach within the V1E zoning on the property. A zoning amendment would be required to address the V1E zoned portion of the property.

    b. Zoning By-law Amendments must consider conformity with the Official Plan and consistency with the Provincial Planning Statement. The portion of the property zoned as V1E is designated as Village Residential in the Official Plan/Secondary Plan. Your must provide a planning rationale that demonstrates how the proposed development conforms with the Official Plan (including Secondary Plan) policy and is consistent with the PPS.

c. The proposed RC9 zone permits a wide range of commercial uses that would not conform with the Village Residential designation in the Secondary Plan. An Official Plan Amendment would be needed to redesignate the Village Residential area to Village Commercial to support rezoning the entire property to the RC9 zone. Staff recommend that a Rural Institutional Zone may be the best approach to accommodate the current proposal. An exception may be needed to limit the uses to ones that conform with the Secondary Plan policy.

d. As the most restrictive policies from both by-laws will apply, the zoning application may need to address the discrepancy in the parking provisions between the old and new zoning by-law if applicable.

5. The following submission material has been identified as a requirement for a Site Plan Control (SPC) application and/or Zoning By-law Amendment (ZBA) amendment:

    a. Archaeological Assessment (SPC & ZBA) – this assessment is required as the subject property has been identified as having archaeological potential.

    b. Landscape Plan (SPC & ZBA) – to identify any existing landscaping elements and natural features that will be preserved and illustrate the proposed landscaping elements to support the proposed development.

    c. Plan of Survey (SPC & ZBA) – to depict legal boundary of the property. Please ensure the Plan of Survey includes the Surveyor's Certificate.

    d. Planning Rationale (ZBA) – This report should also demonstrate why the application is believed to represent good planning and conforms with the City's Official Plan and is consistent with the PPS. In addition, this document should also demonstrate that all permitted and all conditional permitted uses within the proposed zone are appropriate on the subject property, and if not, may propose a site-specific amendment.

    e. Site Plan (SPC & ZBA) – please be sure to include setbacks, dimensions of all proposed buildings, roads, radii of turns, overhead clearance, parking areas with defined parking spaces as well as labelled loading spaces, drive aisles and private approaches, in addition to all the City's Terms of Reference components.

Feel free to contact **Payton Hofstetter**, File Lead, for follow-up questions.

Urban Design

Comments:

6. Submission Requirement:

    a) Site Plan

    b) Landscape Plan (Conceptual)

    c) Elevation (Conceptual)

7. Rural Village Guidelines apply, please ensure that the proposed design respects the rural character of the village.

8. Recommend significant tree planting along Montreal Rd where landscape buffer is required for screening of parking.

9. Recommend additional trees planting along the proposed pedestrian pathway and internal driveway all the way leading to the parking area.

10. Consider providing trees within the landscape island of the drop off area.

11. Consider providing outdoor amenity space adjacent to storm water feature, design to integrate with landscape.

Feel free to contact **Sahara Shrestha**, Urban Design for follow-up questions.

Engineering

Comments:

12. The Stormwater Management Criteria, for the subject site, is to be based on the following:

    a. Application of the IDF information derived from the Meteorological Services of Canada rainfall data, taken from the MacDonald Cartier Airport, collected 1966 to 1997.

    b. In separated areas, the pre-development runoff shall be the lower of the existing coefficient or a maximum equivalent ‘C’ of 0.5, whichever is less (§ 8.3.7.3).

    c. A calculated time of concentration (cannot be less than 10 minutes).

    d. Flows to the storm sewer in excess of the 2-year storm release rate, up to and including the 100-year storm event, must be detained on site.

    e. Storm sewer outlets should not be submerged.

f. The quantity control criteria is to control the 100-year post-development peak flow rate to the 2-year pre-development peak flow rate. The culverts passing under Regional Road 174 are the controlling factor for this quantity criteria. For additional information on the culverts, Tyler Cassidy can be contacted.

g. Quality control criteria is to provide an 'enhanced' level of service (80% TSS removal).

h. A site-specific water balance analysis will be required, per the terms identified in the MECP Planning and Design Manual (2003), for this application.

13. Deep Services (Storm, Sanitary and/or Water Supply)

    i. This site will be privately serviced as public services are not available at this location.

14. An MECP Environmental Compliance Approval (ECA) **Private Sewage Works** may be required for the proposed development. A Ministry contact has been provided below but please work with City staff on the need (or not) of an application.

    a. Shannon Hamilton-Browne at (613) 521-3450 or Shannon.Hamilton-Browne@ontario.ca

    Note that the need for an MECP ECA will be triggered if the storm flows for this site drain to adjacent *private* property before discharging to the roadside ditch system along Highway 174.

15. Water

    a. The Site Servicing and Stormwater Management Report shall refer to the completed hydrogeological investigation for this project. The report shall identify the capacity of the well, the expected demands of the development, and confirmation that there is sufficient capacity to provide the development's demand flows plus fire protection flows.

    b. Fire protection is required for this application. See appendix J of the Water Distribution Guidelines (2025) for information on the Rural Fire Flow Calculation Process.

    c. Please contact Tyler Cassidy (tyler.cassidy@ottawa.ca) to set up a meeting with the City's Fire Protection Engineer to determine the fire protection criteria for this site. Prior to the meeting, your design team should have the required fire flow calculated per the methodology in appendix J, listed above, and provided potential locations for water storage tanks and services.

16. Wastewater

    a. The Site Servicing and Stormwater Management Report shall refer to the project's completed hydrogeological investigation and summarize.

        a. the type of wastewater system being proposed,

        b. The treatment capacity of the system

        c. The wastewater demands for the application

        d. Area and location of the proposed wastewater treatment system.

17. Grading: The site slopes naturally from Old Montreal Road (south) towards the Highway 174 & Ottawa River bank (north). If any retaining walls that are greater than 1.0m in height are proposed on site, then a global stability analysis and detailed retaining wall drawings will be required.

18. Geotechnical (including, where applicable, detailed sensitive marine clay investigation).

19. A Slope stability report is required for this application. The slope stability report shall analyse the slope at the southern portion of the site, adjacent to the Ottawa River valley slope, and delineate the Long-Term Stable Top of Slope and any other Natural Hazard setback limits.

20. A retrogressive landslide analysis (landslide hazard and risk assessment) will be required for this application. See comments from the RVCA staff below.

21. Construction constraints: there is a planned road renewal of Old Montreal Road in 2028-2029. A project manager has not yet been assigned to this project.

22. A Phase 1 Environmental Site Assessment is required for this application.

Feel free to contact **Tyler Cassidy**, Project Manager, for follow-up questions.

Hydrogeology

Comments:

23. A **Hydrogeological Report** will be required for the Zoning By-law Amendment and Site Plan Control applications. In the Zoning Amendment stage, the purpose of the study will be to establish that there is an adequate quantity and quality of groundwater to support the permitted uses in the proposed zoning and to determine the maximum allowable sewage flow that the site can accommodate. In the Site Plan Control phase, the report should demonstrate that there is an adequate quantity and quality of groundwater to support the specific

development(s)/use and that there is sufficient septic dilution to accommodate the proposed sewage flows. The requirements for the Hydrogeological and Terrain Analysis Report are outlined in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG), 5.0 for Site Plan Control Applications and 7.0 for Official Plan and Zoning By-law Amendments (Page 86). The study forms part of the requirements for Zoning By-law and Site Plan Control applications noted in the Studies and Plan Identification List, provided with the feedback documents.

a. **Quantity**: The on-site supply well(s) must be established to confirm that the water quality and quantity are suitable for the proposed use prior to site plan approval. A pumping test is required to confirm that the well(s) onsite can supply the required quantity and quality of water. For commercial/industrial operations, an 8-hour pump test, or longer, is normally recommended, however a minimum of 6-hours is required in the HGTA Guidelines. It is recommended that pressure transducers/dataloggers be installed a week prior to the start of the pumping test and one week following the pumping test to monitor groundwater fluctuations, which can be particularly helpful when it comes to the assessment of well recovery and determination of aquifer properties.

    i. If an existing well is proposed to be the on-site test well, then a well inspection is required to confirm that the well is in conformance with the Wells Regulation (O.Reg.903) or can be modified/remedied to be in conformance; specifically, confirming that the well casing and grouting are sound, grading is directed away from around the wellhead, and that the casing height is at least 40 cm above ground surface.

    ii. The anticipated water demands (average day, maximum daily, and maximum hour) must be presented and justified for the pump test rate. The pumping rate should be the maximum daily demand rate. The pumping rate should consider the actual use, as well as any uses permitted under the proposed zoning. The Ottawa Design Guidelines – Water Distribution provides information for determining water demand rates for the proposed zoning, or uses, in Table 4.2 – Consumption Rates. Alternatively in the site plan control stage, the consultant can determine and present the maximum daily demand rate derived from the septic design flows with an adequate factor of safety applied.

    iii. For maximum day water demands exceeding 10,000 L/d, technical consultation with the hydrogeological reviewer is mandatory. The duration of the pumping test must be at least 12 hours and the pumping test must be representative of the water demand cycles. The appropriate MECP authorization is to be obtained in advance of the pumping test (e.g., Permit To Take Water or EASR

registration). Observation wells are desirable, particularly when the maximum day water demand exceeds 10,000 L/d.

b. **Quality**: The parameters of water quality that will be tested will be the "subdivision suite" known to local well testing companies, as well as trace metals, and Volatile organic compounds (VOC). Requirements are outlined in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines. The report should also provide an assessment of adjacent land uses and concerns and determine if any other parameters need to be tested (e.g., petroleum hydrocarbons, etc.).

    i. The site is within the East Ottawa Aquifer Screening Tool and identifies that water quality is marginal with both shallow and deep wells susceptible. Wells in this area are often mineralized which must typically be abandoned when observed, but specific approval can be obtained from the MECP. Aesthetic and operational water quality exceedances must be identified, treatment systems are to be specified, where they are recommended, and shown on the plans. The development may not be approved if health-related parameters are exceeded in the untreated groundwater.

    ii. If well water is mineralized, then approval from the MECP will be needed to continue to use the well, as specified in Ontario Regulation 903 (Section 21). The consultant should also consider, and report, the other issues associated with the mineralized water including corrosivity of the water and shortened lifespan of plumbing fixtures and the septic system. Specialized plumbing, and fixtures, may provide some mitigation of issues.

    iii. A Technical Hydrogeological Pre-Consultation was held for the proposed project on September 12, 2024. Among the items discussed, it was flagged that there is likely aesthetic exceedances for sodium and chloride from Champlain Sea water trapped under clay aquitard. Some wells in the area cased the well to and several meters into bedrock to find adequate water quality. Generally, water quality can be variable in the area and may depend on where the well is drilled on the site given the proximity to known bedrock faults in the area.

    iv. A follow-up Technical Consultation occurred on October 20, 2025, where two specific water quality parameters were discussed; colour and strontium. For colour, Egis noted that they would address the risks of surface water migration and discuss the source of colour, possibly trapped as organic matter in the clay. Bacteriological parameters conformed with standards, which leads to supporting low risk of a long term condition. For strontium, it was noted that the City has an interim procedure, whereby the Ottawa Public health

factsheet is included and discussed in the report, that a standard notice on title be registered on title through the site plan agreement, and that treatment options be discussed in the reporting.

v. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the existing or proposed well(s).

c. A **Septic System Impact Assessment** will be required to provide the septic system design and provide sufficient information to assess the likelihood that the operation of the on-site sewage system will not adversely impact any existing or proposed well(s) on the subject property or existing wells on surrounding properties (as applicable). The reporting must be completed as per the City's Hydrogeological and Terrain Analysis Report Guidelines and MECP Guideline D-5-4, please refer to the HGTA for the predictive assessment for commercial/industrial developments, pages 30 to 31 (not applicable for residential developments).

i. As this application is a site plan (not lot creation nor a Zoning By-Law or Official Plan Amendment application) septic treatment (i.e. tertiary treatment with nitrate reduction) may be considered as part of the septic impact assessment calculations. A septic system must be certified through NSF/ANSI 245 or CAN/BNQ 3680-600 if total nitrogen reduction systems are required to meet nitrate impact limits at the property boundary.

ii. If the sewage system's daily design flow is 10,000 L/d or less, the Rideau Valley Conservation Authority provides the septic review and approval under Part 8 of the Ontario Building Code for new or replacement systems, system renovations, or septic decommissioning on behalf of the City of Ottawa. The approved septic permit from the Rideau Valley Conservation Authority must be sent to the City prior to Site Plan Approval being granted.

iii. If the site-wide/combined sewage system design flows per lot exceed 10,000 L/d, the approval of the sewage system is issued by the Ministry of Environment, Conservation and Parks through an application for an Environmental Compliance Approval (ECA) for Sewage Works. A Reasonable Use Assessment will be required for said application and should accompany the application to the City.

iv. Note that gravel shall be considered impermeable in the septic impact assessment unless field testing results confirm alternative infiltration rates.

v. If system isolation is contemplated, the technical pre-consultation with the reviewer is mandatory to ensure the assessment meets the

minimum requirements identified in City Guidelines, and to convey the minimum onsite testing requirements.

vi. Please note that based on available geological mapping, the site is potentially hydrogeologically sensitive. There is potential karst topography noted in the area. Test pits and visual observations at the site should inform the discussion surrounding hydrogeological sensitivity. If the site is hydrogeologically sensitive, then mitigative measures must be recommended to protect the underlying supply aquifer, this can include increased casing depth for any new drilled wells, increased separation distance between wells and septic systems, strategic placement of wells and septic based on direction of groundwater flow and existing soil thickness, and additional protective construction measures for the septic systems such as a clay seal or advanced septic treatment.

vii. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the proposed septic system(s).

d. It is noted that the water well must be sited meeting the minimum and extended (hydrogeological sensitivity) setbacks from potential sources of contamination, such as the stormwater management facilities, septic systems, etc. The well should also be located upgradient of those facilities.

e. In terms of the requirements for the hydrogeological investigations to Appendix 11 - *Geotechnical and Hydrogeological Investigation Guidelines for Stormwater Management Facilities (Dec 2025)* of the City's Sewer Design Guidelines for Site Plan Control applications, the applicant should reach out to the appropriate reviewer, Claire Milloy (claire.milloy@ottawa.ca) or Michel Kearney (michel.kearney@ottawa.ca) to schedule a technical pre-consultation to discuss the work plan and background review to ensure that the level of effort matches the scale of the proposal.

f. Further technical consultation with the hydrogeological report reviewer is recommended for all site plan control applications. Please contact the reviewer assigned to the file to arrange for the consultation. The hydrogeological consultant should conduct a background review and provide a work plan for review prior to the meeting. Please see list below of factors where technical consultation is considered mandatory.

i. Karst topography has been observed in the area,

ii. Where system isolation argument is being put forward, or

iii. Where septic design flows exceed 10,000 L/d.

Feel free to contact **Travis Smith**, P.Eng., Senior Project Manager, Hydrogeology, for follow-up questions.

Transportation

Comments:

24. Follow TIA Guidelines:

    a. Provide additional details regarding the anticipated forecast trips generated for this site. For a 250 seat facility, it is anticipcated that the site will forecast over 60 person-trips.

    b. Note that the TIA Guidelines have been updated, the changes are available on the City's website.

    c. A Transportation Impact Assessment is required. Please submit the Scoping/Forecasting report to josiane.gervais@ottawa.ca at your earliest convenience. The applicant is responsible to submit the Scoping Report prior to application and must allow for a 14 day circulation period.

    d. The Strategy Report (including Synchro files) must be submitted with the formal submission to deem complete. The applicant is strongly encouraged to submit the Strategy Report to the TPM prior to formal submission and allow for a 14 day circulation period.

25. The *Ottawa Road 174 Environmental Study Report* was completed in 2016. The study includes widening Ottawa Road 174.

26. ROW Protection:

    a. Ensure that the development proposal complies with the Right-of-Way protection requirements of the Official Plan's Schedule C16.

    b. ROW is required to accommodate the Ottawa Road 174 EA. CAD files can be provided upon request. This ROW protection must be provided as part of this application.

    c. Any requests for exceptions to ROW protection requirements must be discussed with Transportation Planning and concurrence provided by Transportation Planning management.

    d. ROW must be unincumbered and conveyed at no cost to the City. Note that conveyance of the ROW will be required prior to registration of the SP agreement. A registered 4R-Plan will be required and reviewed by the City's Surveyor prior to the initiation of the Site Plan Agreement. To ensure

the Site Plan is not held up at this stage, please consider submitting te draft 4R-Plan at the time of formal submission.

27. Nearby planned construction and infrastructure projects include road resurfacing of Old Montreal Road, planned in the next 2-3 years. No Project Manager has yet been assigned.

28. As the proposed site is institutional and for general public use, AODA legislation applies.

    a. Ensure all crosswalks located internally on the site provide a TWSI at the depressed curb, per requirements of the Integrated Accessibility Standards Regulation under the AODA.

    b. Clearly define accessible parking stalls and ensure they meet AODA standards (include an access aisle next to the parking stall and a pedestrian curb ramp at the end of the access aisle, as required).

    c. Please consider using the City's Accessibility Design Standards, which provide a summary of AODA requirements.

29. On site plan:

    a. Ensure site access meets the City's Access Bylaw and the associated Access Design Requirements.

    b. Show all details of the roads abutting the site; include such items as pavement markings, signage, accesses, on-street parking, and/or sidewalks.

    c. Turning movement diagrams required for all accesses showing the largest vehicle to access/egress the site.

    d. Turning movement diagrams required for internal movements (loading areas, garbage).

    e. Show all curb radii measurements; ensure that all curb radii are reduced as much as possible and fall within TAC guidelines (Figure 8.5.1).

    f. Show dimensions for site elements (i.e. lane/aisle widths, access width and throat length, parking stalls, sidewalks, pedestrian pathways, etc.)

Feel free to contact **Josiane Gervais**, Transportation Project Manager, for follow-up questions.

Environment

Comments:

30. Due to potential for species at risk, a Minor Environmental Impact Study (EIS) Form (Appendix 1 of the City of Ottawa EIS Guidelines) shall be a requirement. Please refer to the City of Ottawa Environmental Impact Study Guidelines.

31. Please adhere to the City of Ottawa Protocol for Wildlife Protection During Construction. This includes sensitive timing restrictions for vegetation and tree removal.

32. Please provide a Tree Conservation Report (TCR)/Landscape Plan. The two may be combined, at the discretion of the City of Ottawa Forester.

33. Please retain as many trees and natural vegetation as possible.

34. Please add as many locally appropriate native tree species as possible.

35. Please ensure minimum setbacks from surface water features as per Official Plan Section 4.9.3 (2) a, b, c, and d, of the Official Plan. The setbacks must be shown on the site plan.

36. Please ensure the Planning Rationale includes the required Integrated Environmental Review as per the City of Ottawa Planning Rationale Terms of Reference.

Feel free to contact **Kim MacDonald**, Environmental Planner, for follow-up questions.

Forestry

Comments:

37. City owned trees, no matter their size, are protected by the City of Ottawa Tree Protection By-law. If there are City owned trees in proximity to the development they need to be captured in the Tree Conservation Report.

38. The Tree Conservation Report and Landscape Plan can be combined if all required information is provided.

39. The City of Ottawa is working towards a 40% canopy cover target. Prioritize retention of healthy trees and plant large canopy tree species wherever feasible.

40. Reduce the extent of hardscaping on the site. Provide regular space for trees throughout the surface parking lot. Refer to policies under section 4.1.4 (11) of the official plan.

Tree Conservation Report requirements - The following Tree Conservation Report (TCR) requirements have been adapted from the Schedule E of the Urban Tree Protection Guidelines – for more information on these requirements please contact hayley.murray@ottawa.ca

41. A Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City

42. City-owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.

43. The TCR must contain 2 separate plans:

44. Plan/Map 1 - show existing conditions with tree cover information.

45. Plan/Map 2 - show proposed development with tree cover information.

46. The TCR must list all trees on site, as well as off-site trees if the CRZ (critical root zone) extends into the developed area, by species, diameter, and health condition. Please note that averages can be used if there are forested areas.

47. Please identify trees by ownership – private onsite, private on adjoining site, city owned, co-owned (trees on a property line)

48. If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained.

49. The removal of trees on a property line will require the permission of both property owners.

50. All retained trees must be shown, and all retained trees within the area impacted by the development process must be protected as per City guidelines available at Tree Protection Specification or by searching Ottawa.ca

51. 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.

52. Removal of a City tree is not permitted unless justified. If justified, monetary compensation for the value of the tree must be paid before a tree removal permit is issued.

53. Landscape Plan Terms of Reference must be adhered to: (https://documents.ottawa.ca/sites/documents/files/landscape_tor_en.pdf).

Additional Elements for Tree Planting in the Right of Way:

54. Please ensure any retained trees are shown on the LP

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

56. The city requests that consideration be given to planting native species wherever there is a high probability of survival to maturity.

57. Efforts shall be made to provide as much future canopy cover as possible at a site level, through tree planting and tree retention. The Landscape Plan shall show/document that the proposed tree planting and retention will contribute to the City's overall canopy cover over time. Please provide a projection of the future canopy cover for the site to 40 years.

Minimum Setbacks

58. Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.

59. Maintain 2.5m from curb

60. Coniferous species require a minimum 4.5m setback from curb, sidewalk, or MUP/cycle track/pathway.

61. Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas.

62. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

Tree specifications

63. Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.

64. Maximize the use of large deciduous species wherever possible to maximize future canopy coverage.

65. Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and if possible, include watering and warranty as described in the specification.

66. No root barriers, dead-man anchor systems, or planters are permitted.

67. No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

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

Parkland

Comments:

68. Per the City of Ottawa Parkland Dedication By-law No. 2022-280, Section 11 – Exceptions 2. (c) no conveyance of land or payment of cash-in-lieu is required in the case of the development or redevelopment of a place of worship, excluding any ancillary uses as defined by the Zoning By-law.
69. Thank you for providing the floor plans. Staff have determined the place of assembly, offices, storage, and parking lot are accessory uses versus ancillary uses to the place of worship. Relevant definitions from Zoning By-law 2008-250 below:

> **Place of Worship** means a place or building that is used for the regular assembly of persons for the practice of religious worship, services or rites. A **Place of Worship** must not include a school, cemetery or scattering ground. (lieu de culte) (By-law 2019-449)

> **Accessory** means aiding or contributing in a secondary way to a **principal use** to carry out its function, and having regard to this definition:
>
> (a) an **accessory use** is a land **use** that is **accessory** to a **principal use**;
>
> (b) an **accessory building** is a **building** that houses an **accessory use**;
>
> (c) an **accessory** structure is a structure, that is not a land **use**, but is **accessory** to a **principal use** and this definition is broadened to include tower antennas and satellite dishes. (accessoire) (By-law 2013-244)

> **Ancillary Use** means a listed, permitted land **use** that is additional, secondary and complementary to a permitted **principal use**, but not **accessory** to the **permitted principal use**. (utilisation complémentaire)

70. Please note that the park comments are preliminary and will be finalized (and subject to change) upon receipt of the development application and any requested supporting documentation. Additionally, if the proposed land use changes, then the parkland dedication requirement will be re-evaluated accordingly.

Feel free to contact **Lucy Ramirez**, Parks Planner, for follow-up questions.

Conservation Authority

Comments:

71. Further to the external meeting last Friday, a portion of the subject property is located within RVCA's regulated area due to the proximity of the Ottawa River valley system to the site. Any development activity within RVCA's regulated area

would require a permit pursuant to Section 28.1 of the *Conservation Authorities Act*.

72. As discussed during the meeting, the site is also considered to be within a retrogressive landslide hazard risk area due to the height/steepness of the valley slope to the north and the escarpment landform to the south, mapping identifying unlaying marine clay deposits, and documented landslide sites in the area (300 metres to the east and 650 metres to the west).

73. As a part of a future *Planning Act* application(s) for the subject site, RVCA would be looking to review a copy of the following materials:

74. RVCA's interests as it relates to development are focused on requiring that all efforts are made to ensure lands containing regulated natural features, natural hazards and associated access allowances are not subject to development. The intent of the approach is to prevent or reduce the risk to life and property damage by avoiding situations where lands impacted by natural hazards are subject to development. The proposed plans should clearly identify the limits of the natural hazards impacting the subject lands and ensure that the full extent of those areas are identified in an appropriate environmental protection or open space category, which has the effect of prohibiting development.

75. Geotechnical Assessment – Unstable Soil/Retrogressive Landslide Hazard - Geotechnical analysis is required to assess the existing conditions on the site, and adjacent area, to confirm the extent of the unstable soil/retrogressive landslide hazard. Specifically, an assessment related to sensitive marine clay conditions will be required in the area to determine if they contribute to a retrogressive landslide impacting the site.

76. Geotechnical Assessment - Slope stability Assessment – Depending on the outcome of the unstable soil/retrogressive landslide hazard analysis, a conventional slope stability report to assess/delineate the long-term stable slope associated with the adjacent Ottawa River valley slope may be required.

77. Stormwater management report – Outlining how the proposed stormwater management design conforms with requirements for water quantity, erosion control and water balance per the Ministry of Environment, Conservation and Parks' Stormwater Management Planning and Design Manual.

78. Dewater plans - If dewatering is required as a component of the development, a plan/report should be submitted that identifies the applicable details (e.g., how long will dewatering occur, what are the anticipated volumes, where will water be discharged to and what method/set up will be used to discharge the water).

79. Engineering Drawings/Plans – Including site plan, grading plan, site servicing plan, erosion and sediment control plan, cross-sections and associated details.

Feel free to contact **Stephen Bodan**, Rideau Valley Conservation Authority, for follow-up questions.

Submission Requirements and Fees

1. Zoning By-law Amendment Application: $36,372.84 (+$435.00 Conservation Authority Fee)
2. Site Plan Control (Rural Standard): $30,567.15 (+$1,155.00 Conservation Authority Fee)
    a. Additional information regarding fees related to planning applications can be found here.
3. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.
4. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

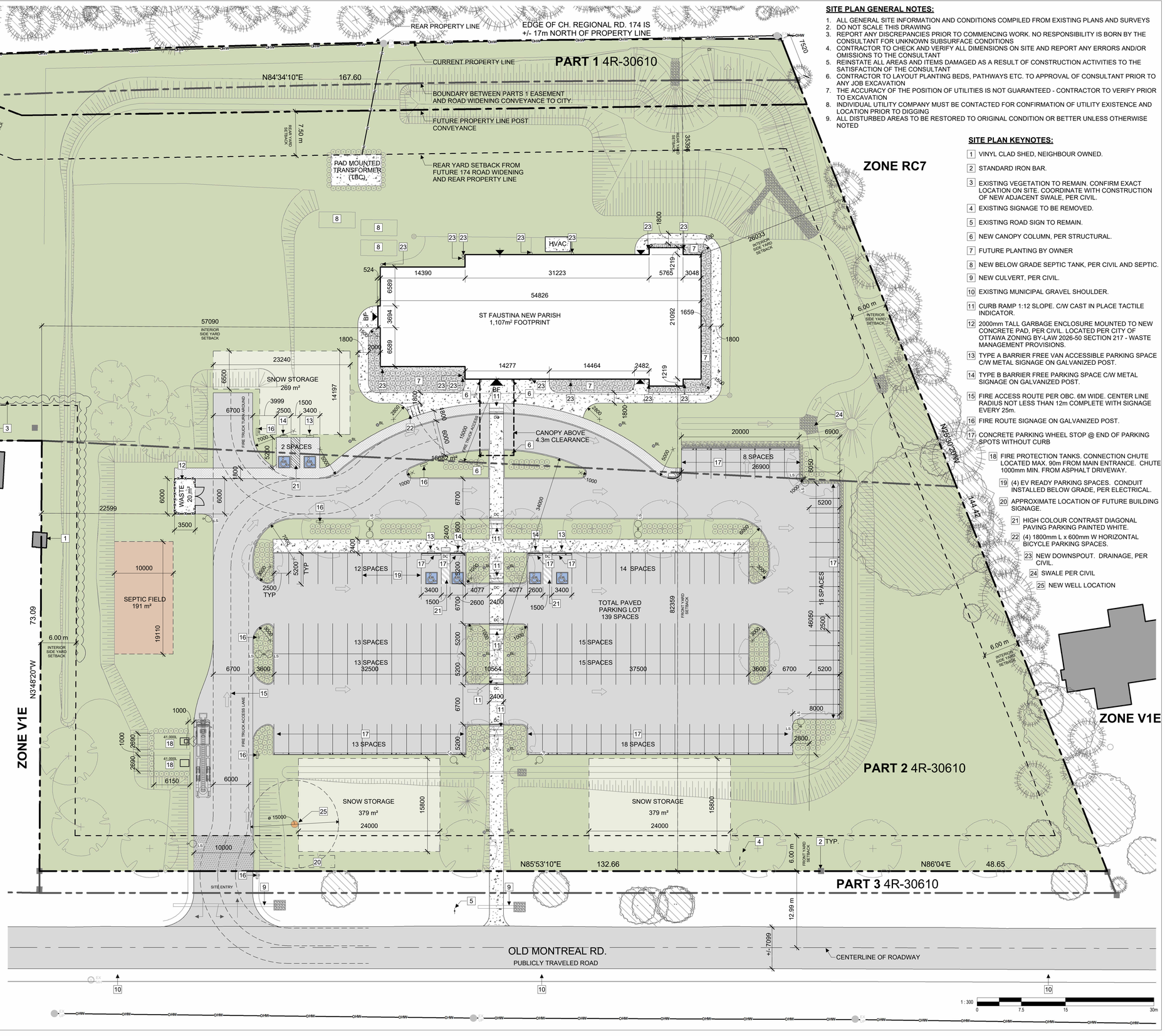
Regards,

Payton Hofstetter
Planner I – Development Review Rural

Encl. Study and Plan Identification List
Supplemental Development Information
List of Technical Agencies to Consult

c.c. Sarah McCormick, Senior Planner – DR Rural
Tyler Cassidy, Infrastructure Project Manager
Kevin Hall, Senior Infrastructure Project Manager
Josiane Gervais, Transportation Project Manager
Travis Smith, Hydrogeological Engineer
Kim MacDonald, Environmental Planner
Hayley Murray, Forrester

Lucy Ramirez, Parks Planner
Sahara Shrestha, Planner II – Urban Design
Karanpreet Kaur - Planner I – Urban Design
Stephan Bodan, Rideau Valley Conservation Authority



SITE PLAN GENERAL NOTES:

1. ALL GENERAL SITE INFORMATION AND CONDITIONS COMPILED FROM EXISTING PLANS AND SURVEYS
2. DO NOT SCALE THIS DRAWING
3. REPORT ANY DISCREPANCIES PRIOR TO COMMENCING WORK. NO RESPONSIBILITY IS BORN BY THE CONSULTANT FOR UNKNOWN SUBSURFACE CONDITIONS
4. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY ERRORS AND/OR OMISSIONS TO THE CONSULTANT
5. REINSTATE ALL AREAS AND ITEMS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE CONSULTANT
6. CONTRACTOR TO LAYOUT PLANTING BEDS, PATHWAYS ETC. TO APPROVAL OF CONSULTANT PRIOR TO ANY JOB EXCAVATION
7. THE ACCURACY OF THE POSITION OF UTILITIES IS NOT GUARANTEED - CONTRACTOR TO VERIFY PRIOR TO EXCAVATION
8. INDIVIDUAL UTILITY COMPANY MUST BE CONTACTED FOR CONFIRMATION OF UTILITY EXISTENCE AND LOCATION PRIOR TO DIGGING
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED

SITE PLAN KEYNOTES:

1. VINYL CLAD SHED, NEIGHBOUR OWNED.
2. STANDARD IRON BAR.
3. EXISTING VEGETATION TO REMAIN. CONFIRM EXACT LOCATION ON SITE. COORDINATE WITH CONSTRUCTION OF NEW ADJACENT SWALE, PER CIVIL.
4. EXISTING SIGNAGE TO BE REMOVED.
5. EXISTING ROAD SIGN TO REMAIN.
6. NEW CANOPY COLUMN, PER STRUCTURAL.
7. FUTURE PLANTING BY OWNER
8. NEW BELOW GRADE SEPTIC TANK, PER CIVIL AND SEPTIC.
9. NEW CULVERT, PER CIVIL.
10. EXISTING MUNICIPAL GRAVEL SHOULDER.
11. CURB RAMP 1:12 SLOPE. C/W CAST IN PLACE TACTILE INDICATOR.
12. 2000mm TALL GARBAGE ENCLOSURE MOUNTED TO NEW CONCRETE PAD. PER CIVIL. LOCATED PER CITY OF OTTAWA ZONING BY-LAW 2026-50 SECTION 217 - WASTE MANAGEMENT PROVISIONS.
13. TYPE A BARRIER FREE VAN ACCESSIBLE PARKING SPACE C/W METAL SIGNAGE ON GALVANIZED POST.
14. TYPE B BARRIER FREE PARKING SPACE C/W METAL SIGNAGE ON GALVANIZED POST.
15. FIRE ACCESS ROUTE PER OBC. 6M WIDE. CENTER LINE RADIUS NOT LESS THAN 12m COMPLETE WITH SIGNAGE EVERY 25m.
16. FIRE ROUTE SIGNAGE ON GALVANIZED POST.
17. CONCRETE PARKING WHEEL STOP @ END OF PARKING SPOTS WITHOUT CURB
18. FIRE PROTECTION TANKS. CONNECTION CHUTE LOCATED MAX. 90m FROM MAIN ENTRANCE. CHUTE 1000mm MIN. FROM ASPHALT DRIVEWAY.
19. (4) EV READY PARKING SPACES. CONDUIT INSTALLED BELOW GRADE, PER ELECTRICAL.
20. APPROXIMATE LOCATION OF FUTURE BUILDING SIGNAGE.
21. HIGH COLOUR CONTRAST DIAGONAL PAVING PARKING PAINTED WHITE.
22. (4) 1800mm L x 600mm W HORIZONTAL BICYCLE PARKING SPACES.
23. NEW DOWNSPOUT. DRAINAGE, PER CIVIL.
24. SWALE PER CIVIL
25. NEW WELL LOCATION

SITE PLAN LEGEND:

- EXISTING BUILDING & SITE ELEMENTS
- ASPHALT PAVING
- GRASS
- CONCRETE PAD/ WALKWAYS
- MULCH/PLANTING
- PAVER TYPE 1
- ENTRANCE/ BARRIER-FREE ENTRANCE
- MAIN ENTRANCE
- PROPERTY LINE
- SETBACK LINE
- EXTENT OF FUTURE ROAD WIDENING
- DOMESTIC WATER PER CIVIL
- SANITARY PER CIVIL
- NEW STORM PER CIVIL
- NEW ELECTRICAL SERVICE (BELOW GRADE)
- GAS PER CIVIL
- OVERHEAD WIRE
- CATCH BASIN
- FIRE HYDRANT
- MAINTENANCE HOLE
- UTILITY POLE
- FIRE TANK HYDRANT CONNECTION
- SIGN
- DEPRESSED CURB
- SHRUB NEW
- TREE NEW
- TREE EXISTING

SITE LIGHTING LEGEND:

- DOUBLE LIGHT STANDARD
- LIGHT STANDARD
- LIGHT BALLARD

CSV ARCHITECTS
sustainable design - conception écologique
613.564.8118 www.csv.ca
190 O'Connor Street, Suite 100 Ottawa, Ontario,K2P 2R3

CLIENT
(RCECO) / Archdiocese
200-1209 Michael Street North, Ottawa, Ontario K1J 7T2
613-738-5025
administration@ottawacornwall.ca

STRUCTURAL ENGINEER
Cunliffe & Associates
200-1550 Carling Ave
Ottawa Ontario
613 729-7242
www.cunliffe.ca

MECHANICAL AND ELECTRICAL
Chorley + Bisset Consulting Engineers
250 City Centre Avenue
Ottawa, Ontario K1R 6K7
613-241-0030
email@chorley.com

CIVIL ENGINEER
Egis
750 Palladium Dr suite 310,
Ottawa, ON K2V 1C7
613 836-2184

James B. Lennox & Associates Inc.
LANDSCAPE ARCHITECTS
James B. Lennox & Associates
3332 Carling Avenue
Ottawa, Ontario K2H 5A8
613-722-5168

ONTARIO ASSOCIATION OF ARCHITECTS
DARRYL J. HOOD
LICENCE
6165

STAMP

REV	DATE	ISSUE
6	2026.10.16	ISSUED FOR SITE PLAN CONTROL
4	2026.06.03	ISSUED FOR CONSULTANT COORDINATION
2	2026.05.26	ISSUED FOR SPC PRE-CONSULTATION 02
1	2026.05.14	ISSUED FOR CLIENT REVIEW

NOTES

1. OWNERSHIP OF THE COPYRIGHT OF THE DESIGN AND THE WORKS EXECUTED FROM THE DESIGN REMAINS WITH CSV ARCHITECTS, AND MAY NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF CSV ARCHITECTS.
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3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS.
4. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY DIMENSIONS ON SITE.
5. ALL WORK SHALL BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE AND ALL SUPPLEMENTS AND APPLICABLE MUNICIPAL REGULATIONS.

CLIENT

OTTAWA
ONTARIO, CANADA

PROJECT

ST. FAUSTINA NEW PARISH

2835 Old Montreal Rd, Cumberland, ON

TITLE

SITE PLAN

PROJECT NO: 2024-0740
DRAWN: RR
APPROVED: CL
SCALE: 1 : 300
DATE PRINTED: 10/16/2026 10:49:27 AM

REV 6
DRAWING NO. A101

APPENDIX C
WATERMAIN CALCULATIONS

CCO-25-1892 - 2835 Montreal Road - OBC Fire Calculations

Project:	2835 Montreal Road
Project No.:	CCO-25-1892
Designed By:	FV
Checked By:	CJM
Date:	June 19, 2026

Ontario 2024 Building Code Compendium (Div. B - Part 3)

Water Supply for Fire-Fighting - Church

Building is classified as Group : A-2

Building is of combustible construction with fire separations and fire resistance ratings provided in accordance with Subsection 3.2.2., including loadbearing walls, columns and arches. Noncombustible construction may be used in lieu of fire-resistance

From Div. B A-3.2.5.7. of the Ontario Building Code - 3. Building On-Site Water Supply:

(a) Q = K x V x Stot

where:

Q = minimum supply of water in litres

K = water supply coefficient from Table 1

V = total building volume in cubic metres

Stot = total of spatial coefficient values from the property line exposures on all sides as obtained from the formula:

Stot = 1.0 + [Sside1+Sside2+Sside3+..etc.]

K	18	(from Table 1 pg A-31)
V	7,476	(Total building volume in m^3.)
Stot	1.0	(From figure 1 pg A-32)
Q =	134,568.00 L	

From Figure 1 (A-32)

Snorth	35	m	0.0
Seast	26	m	0.0
Ssouth	82	m	0.0
Swest	59	m	0.0

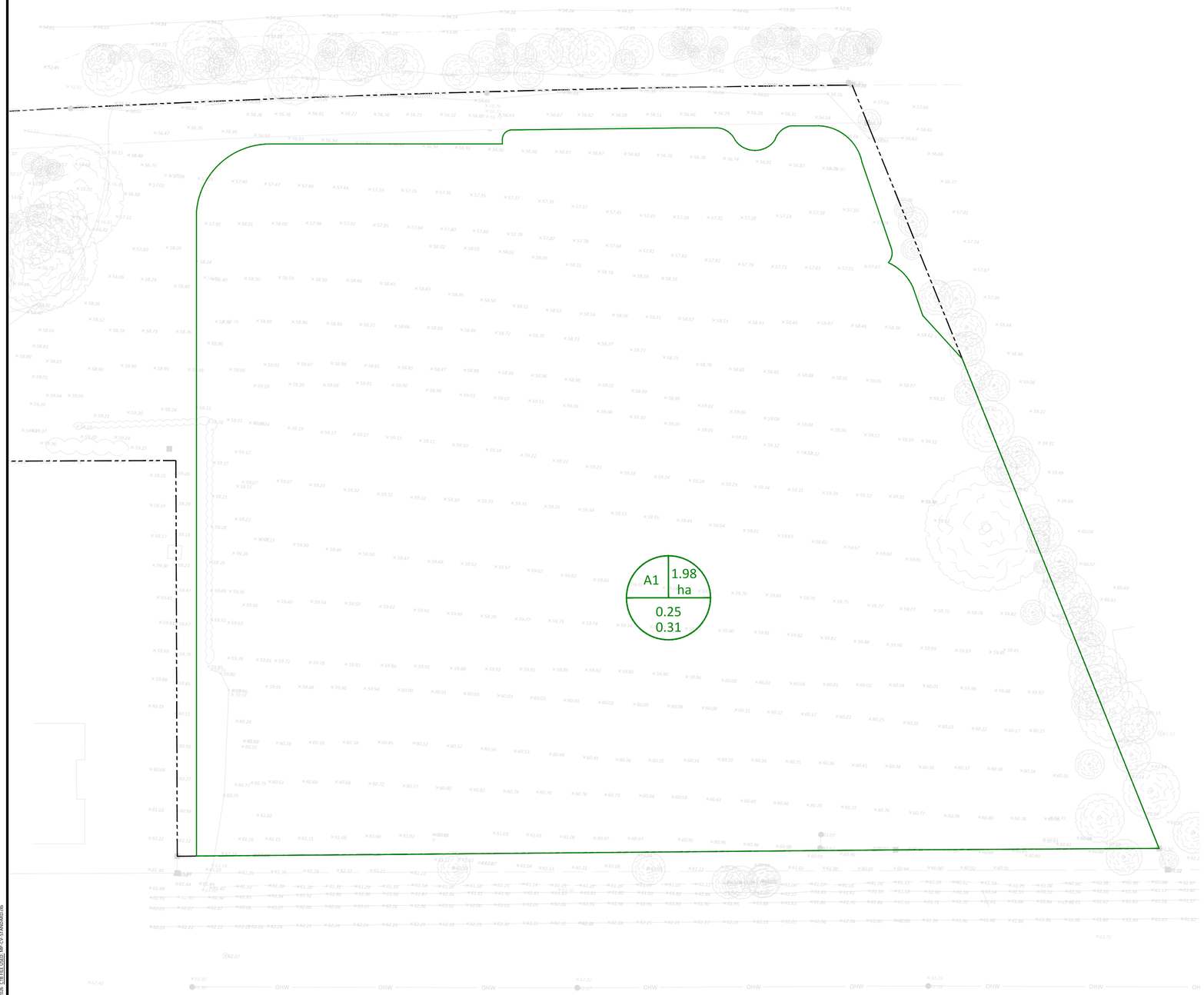
* approximate distances

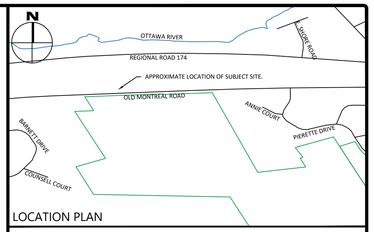
From Table 2: Required Minimum Water Supply Flow Rate (L/s)

3,600 L/min if Q > 108,000 L and < 135,000 L

951 US GPM

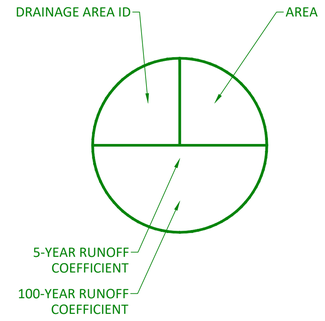
APPENDIX E
PRE-DEVELOPMENT DRAINAGE PLAN





LOCATION PLAN

LEGEND



FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
1	ISSUED FOR REVIEW	SEP. 23, 2026

Check and verify all dimensions before proceeding with the work

Do not scale drawings

SCALE 1 : 400

0 10 20 30 40 Metres

egis
750 Palladium Drive, Suite 310
Kanata, ON K2V 1C7
Tel: 613-836-2184
Fax: 613-836-3742
www.egis-group.com

N

Stamp:

Client:

CSV ARCHITECTS
190 O'CONNOR STREET, SUITE 100
OTTAWA, ON K2P 2R3

Project:

ST. FAUSTINA NEW PARISH
2835 OLD MONTREAL ROAD

Drawing Title:

PRE-DEVELOPMENT DRAINAGE AREA PLAN

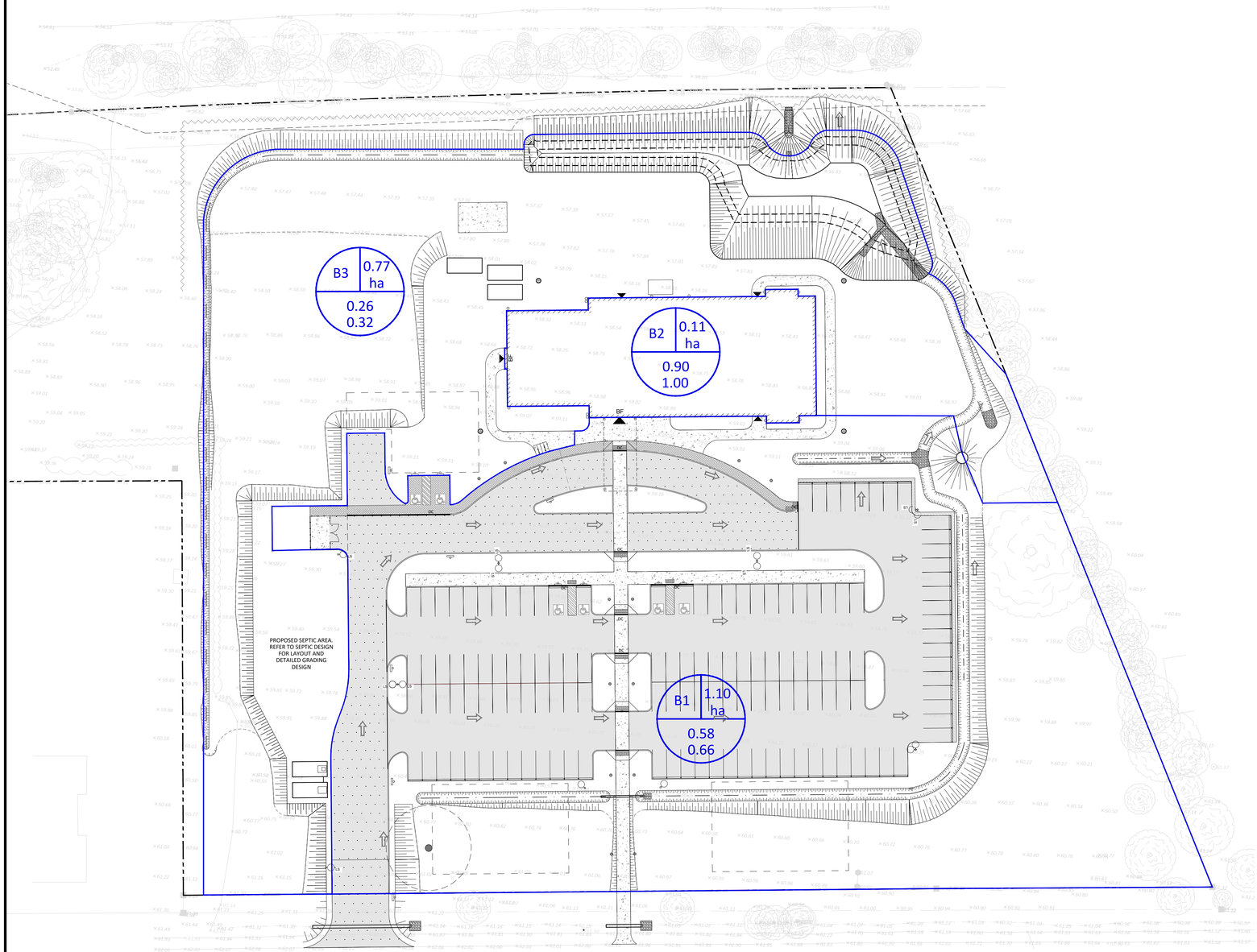
Scale: 1:400	Project Number: CCO-25-1892
Drawn By: FV	
Checked By: CJM	Drawing Number: PRE
Designed By: FV	

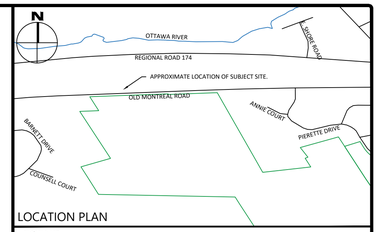
D07-12-XX-XXXX

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LAYOUT(S): Layout: PRE, Model
LAST PLOTTED: Wednesday, September 23, 2026 - 08:31:51 AM BY CV STADADARD.ctb

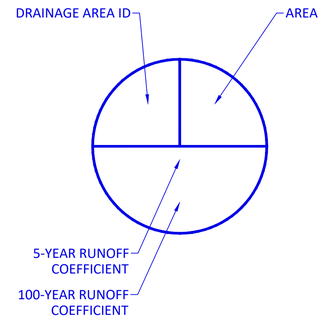
APPENDIX F
POST-DEVELOPMENT DRAINAGE PLAN





LOCATION PLAN

LEGEND



FOR REVIEW ONLY
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No.	Revisions	Date
1	ISSUED FOR REVIEW	OCT. 15, 2026

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Stamp:

Client:

CSV ARCHITECTS
190 O'CONNOR STREET, SUITE 100
OTTAWA, ON K2P 2R3

Project:

ST. FAUSTINA NEW PARISH
2835 OLD MONTREAL ROAD

Drawing Title:

POST-DEVELOPMENT DRAINAGE AREA PLAN

Scale: 1:400	Project Number: CCO-25-1892
Drawn By: FV	
Checked By: CJM	Drawing Number: POST
Designed By: FV	

D07-12-XX-XXXX

#XXXXX

FILENAME: \\Ottawa01 Project - Proposals\2025 Jobs\CCO\CCO-25-1892 CSV, New Church, 2835 Old Montreal Road\12 - Drawings\CCO-25-1892 - Presentation.dwg
LAYOUT: Layout1 PLOTTED: Thursday, October 16, 2025 - 8:36 AM BY: Fraser Vaughan
LAST PLOTTED: Thursday, October 16, 2025 - 8:36 AM BY: Fraser Vaughan
XREF PLOTTED: MP-CV-STANDARD.ctb

APPENDIX G
STORMWATER MANAGEMENT CALCULATIONS

CCO-25-1892 - 2835 Old Montreal Road

Tc (min)	Intensity (mm/hr)	
	2-Year	100-Year
21	50.0	115.2
10	76.8	178.6

C-Values	
Impervious	0.90
Gravel	0.60
Pervious	0.25

Pre-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravel (m^2)	Pervious Area (m^2)	Average C (2-Year)	Average C (100-Year)
A1	0	0	19,814	0.25	0.31

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 2/5-Year	C 100-Year	Tc (min)	Q (L/s)	
					2-Year	100-Year
A1	1.98	0.25	0.31	21	68.87	198.32
Total	**1.98**				**68.87**	**198.32**

Post-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravel (m^2)	Pervious Area (m^2)	Average C (2-year)	Average C (100-year)	
B1	5,619	0	5,354	0.58	0.66	**Parking Lot**
B2	1,103	0	0	0.90	1.00	**Building**
B3	129	0	7,609	0.26	0.32	**Rear Yard & Cutoff Swale**

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 2-Year	C 100-Year	Tc (min)	Q (L/s)		
					2-Year	100-Year	
B1	1.10	0.58	0.66	10	136.56	361.98	**Parking Lot**
B2	0.11	0.90	1.00	10	21.19	54.74	**Building**
B3	0.77	0.26	0.32	10	43.09	124.42	**Rear Yard & West Swale**
Total	**1.98**				**200.84**	**541.15**	

Required Restricted Flow

Drainage Area	Area (ha)	C 2-Year	Tc (min)	Q (L/s) 2-Year
A1	1.98	0.25	21	68.87

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow (L/S)		Restricted Flow (L/S)		Storage Required (m^3)		Storage Provided (m^3)	
	2-Year	100-Year	2-Year	100-Year	2-Year	100-Year	2-Year	100-Year
B1	136.56	361.98	12.10	68.72	190.9	381.3	194.4	384.2
B2	21.19	54.74						
B2	43.09	124.42						
Total	**200.84**	**541.15**	**12.10**	**68.72**	**190.87**	**381.31**	**194.40**	**384.20**

CCO-25-1892 - 2835 Old Montreal Road

Storage Requirements for Area B1-B3

2-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1-B3	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	76.8	200.84	12.10	188.74	113.25
20	52.0	136.06	12.10	123.96	148.75
30	40.0	104.71	12.10	92.61	166.71
40	32.9	85.94	12.10	73.84	177.22
50	28.0	73.33	12.10	61.23	183.69
60	24.6	64.22	12.10	52.12	187.63
70	21.9	57.30	12.10	45.20	189.85
80	19.8	51.85	12.10	39.76	190.83
90	18.1	47.44	12.10	35.35	190.87
100	16.7	43.79	12.10	31.69	190.16

Maximum Storage Required 2-year =	191	m^3

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1-B3	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	541.27	68.72	472.55	283.53
20	120.0	363.68	68.72	294.95	353.94
30	91.9	278.51	68.72	209.79	377.63
40	75.1	227.60	68.72	158.88	381.31
50	64.0	193.96	68.72	125.24	375.71
60	55.9	169.41	68.72	100.69	362.48
70	49.8	150.93	68.72	82.20	345.25
80	45.0	136.38	68.72	67.66	324.75
90	41.1	124.56	68.72	55.84	301.52
100	37.9	114.86	68.72	46.14	276.83

Maximum Storage Required 100-year =	381	m^3

2-Year Storm Event Storage Summary

Storage Available (m^3) =	194.4	*
Storage Required (m^3) =	190.9	

100-Year Storm Event Storage Summary

Storage Available (m^3) =	384.2	*
Storage Required (m^3) =	381.3	

*Available Storage calculated from AutoCAD

CCO-25-1892 - 2835 Old Montreal Road - B1-B3 Outlet Controls

For Orifice Flow, C= 0.61
For Weir Flow, C= 1.84

	Orifice 1	Orifice 2	Weir 1	Weir 2
invert elevation	56.12	X	57.15	X
center of crest elevation	56.308	X	X	X
orifice width / weir length	85 mm	X	0.50 m	X
weir height			X	X
orifice area (m^2)	0.006	X	X	X

Elevation Discharge Table - Storm Routing - Area B1

Elevation	Orifice 1		Orifice 2		Weir 1		Weir 2		Total	
	H [m]	Q [m^3/s]	H [m]	Q [m^3/s]	H [m]	Q [m^3/s]	H [m]	Q [m^3/s]	Q [L/s]	
56.85	0.54	0.011	x	x	x	x	x	x	11.29	
56.86	0.55	0.01	x	x	x	x	x	x	11.40	
56.87	0.56	0.01	x	x	x	x	x	x	11.50	
56.88	0.57	0.01	x	x	x	x	x	x	11.60	
56.89	0.58	0.01	x	x	x	x	x	x	11.70	
56.90	0.59	0.01	x	x	x	x	x	x	11.80	
56.91	0.60	0.01	x	x	x	x	x	x	11.90	
56.92	0.61	0.01	x	x	x	x	x	x	12.00	
56.93	0.62	0.01	x	x	x	x	x	x	**12.10**	2-Year
56.94	0.63	0.01	x	x	x	x	x	x	12.19	
56.95	0.64	0.01	x	x	x	x	x	x	12.29	
56.96	0.65	0.01	x	x	x	x	x	x	12.39	
56.97	0.66	0.01	x	x	x	x	x	x	12.48	
56.98	0.67	0.01	x	x	x	x	x	x	12.57	
56.99	0.68	0.01	x	x	x	x	x	x	12.67	
57.00	0.69	0.01	x	x	x	x	x	x	12.76	
57.01	0.70	0.01	x	x	x	x	x	x	12.85	
57.02	0.71	0.01	x	x	x	x	x	x	12.94	
57.03	0.72	0.01	x	x	x	x	x	x	13.03	
57.04	0.73	0.01	x	x	x	x	x	x	13.12	
57.05	0.74	0.01	x	x	x	x	x	x	13.21	
57.06	0.75	0.01	x	x	x	x	x	x	13.30	
57.07	0.76	0.01	x	x	x	x	x	x	13.39	
57.08	0.77	0.01	x	x	x	x	x	x	13.48	
57.09	0.78	0.01	x	x	x	x	x	x	13.56	
57.10	0.79	0.01	x	x	x	x	x	x	13.65	
57.11	0.80	0.01	x	x	x	x	x	x	13.74	
57.12	0.81	0.01	x	x	x	x	x	x	13.82	
57.13	0.82	0.01	x	x	x	x	x	x	13.91	
57.14	0.83	0.01	x	x	x	x	x	x	13.99	
57.15	0.84	0.01	x	x	x	x	x	x	14.07	
57.16	0.85	0.01	x	x	0.01	0.00	x	x	15.08	
57.17	0.86	0.01	x	x	0.02	0.00	x	x	16.84	
57.18	0.87	0.01	x	x	0.03	0.00	x	x	19.10	
57.19	0.88	0.01	x	x	0.04	0.01	x	x	21.76	
57.20	0.89	0.01	x	x	0.05	0.01	x	x	24.77	
57.21	0.90	0.01	x	x	0.06	0.01	x	x	28.09	
57.22	0.91	0.01	x	x	0.07	0.02	x	x	31.68	
57.23	0.92	0.01	x	x	0.08	0.02	x	x	35.54	
57.24	0.93	0.01	x	x	0.09	0.02	x	x	39.65	
57.25	0.94	0.01	x	x	0.10	0.03	x	x	43.98	
57.26	0.95	0.01	x	x	0.11	0.03	x	x	48.53	
57.27	0.96	0.02	x	x	0.12	0.04	x	x	53.29	
57.28	0.97	0.02	x	x	0.13	0.04	x	x	58.24	
57.29	0.98	0.02	x	x	0.14	0.05	x	x	63.39	
57.30	0.99	0.02	x	x	0.15	0.05	x	x	**68.72**	100-Year

Notes:
1. For Orifice Flow, User is to Input an Elevation Higher than Crown of Orifice.
2. Orifice Equation: $Q = cA(2gh)^{1/2}$
3. Weir Equation: $Q = CLH^{3/2}$
4. These Computations Do Not Account for Submergence Effects Within the Pond Riser.
5. H for orifice equations is depth of water above the centroide of the orifice.
6. H for weir equations is depth of water above the weir crest.

Time of Concentration Pre-Development

Drainage Area ID	Sheet Flow Distance (m)	Slope of Land (%)	Tc (min) (2-Year)	Tc (min) (100-Year)
A1	**138**	**3.58**	21	20

Tc= (3.26(1.1-c)L^0.5/S^0.33)

c = Balanced Runoff Coefficient

L = Length of drainage area

S = Average slope of watershed

STORM SEWER DESIGN SHEET

PROJECT: CCO-25-1892
LOCATION: 2835 Old Montreal Road
CLIENT: CSV Architects

LOCATION				CONTRIBUTING AREA (ha)				RATIONAL DESIGN FLOW										SEWER DATA								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Area	AREA ID	FROM MH	TO MH	C-VALUE	AREA	INDIV AC	CUMUL AC	INLET (min)	TIME IN PIPE	TOTAL (min)	i (2) (mm/hr)	i (5) (mm/hr)	i (100) (mm/hr)	2yr PEAK FLOW (L/s)	5yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	FIXED FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	PIPE SIZE (mm)			SLOPE (%)	VELOCITY (m/s)	AVAIL CAP (5yr)	
																					DIA	W	H			(L/s)	(%)
Parking Lot to OGS	B1	OGS1	OUTLET	0.58	1.10	0.64	0.64	10.00	0.07	10.07	76.81	104.19		136.22	184.80		-	184.80	322.22	8.01	450			1.00	1.963	137.42	42.65%
Front Yard to Culvert	Part of B1	Culvert Inlet	Culvert Outlet	0.20	0.09	0.02	0.02	10.00	0.17	10.17	76.81	104.19		3.97	5.38		-	5.38	54.64	7.70	300			1.00	0.749	49.26	90.15%

Definitions:
Q = 2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (ha)
i = Rainfall intensity in millimeters per hour (mm/hr)
[i = 998.071 / (TC+6.053)^0.814] 5 YEAR
[i = 1174.184 / (TC+6.014)^0.816] 10 YEAR
[i = 1735.688 / (TC+6.014)^0.820] 100 YEAR

Notes:
1. Mannings coefficient (n) = Culvert 0.024
Pipe 0.012

Designed: FV
Checked: CJM
Project No.: CCO-25-1892

No.	Revision	Date
1.	Revision 1	2026.09.23

Sheet No: 1 of 1