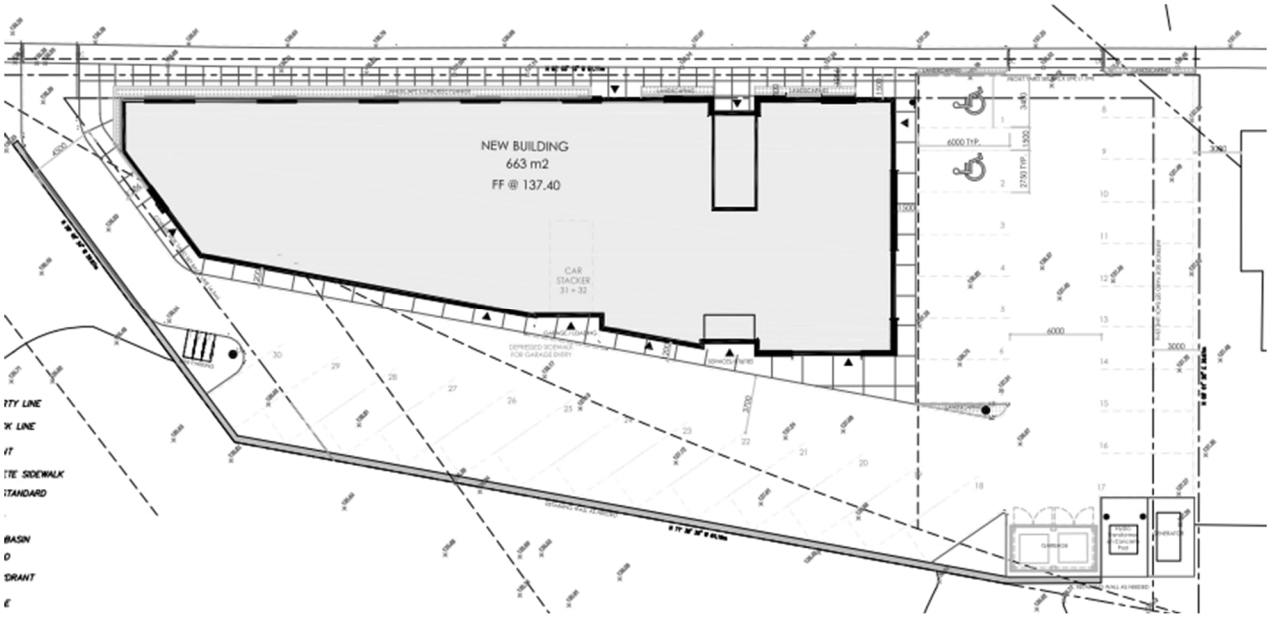
SERVICING & STORMWATER MANAGEMENT REPORT
COMMERCIAL BUILDING – 60 MOORE STREET



Project No.: CCO-26-0590

Prepared for:

DS Studio
703 Bloor Street West, Box 4
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Prepared by:

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Aug. 01, 2025

egis

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Appendices

1.0 PROJECT DESCRIPTION

1.1 Purpose

Egis Canada (Egis) has been retained by DS Studio to prepare this Servicing and Stormwater Management Report in support of the site plan control application for the proposed development located at 60 Moore Street within the Town of Carleton Place.

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 Town of Carleton Place, the Ministry of Environment (MOE), and the Ministry of the Environment, Conservation and Parks (MECP). This report will address the water, sanitary, and storm sewer servicing for the development, ensuring that existing and available services will adequately service the development.

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

- CCO-26-0590, C101 – Lot Grading, Drainage, Erosion & Sediment Control Plan, and
- CCO-26-0590, C102 – Site Servicing Plan, and
- CCO-26-0590, PRE – Pre-Development Drainage Area Plan (Appendix 'E'), and
- CCO-26-0590, POST – Post-Development Drainage Area Plan (Appendix 'F').

1.2 Site Description

Figure 1: Site Map

The property is located at 60 Moore Street within the Town of Carleton Place. It is described as part of Lots 1, 2, & 3, Registered Plan 376, Part of Park Lot 17, Registered Plan 230, Section E, and part of Lot 14, Concession 11, Geographic Township of Beckwith, Town of Carleton Place, County of Lanark. The land in question covers approximately 0.21 ha and is located along Moore Street between Munro Street and Santiago Street.

1.3 Proposed Development and Statistics

The proposed development consists of a new 2-storey commercial building. Drive aisles and parking will be provided throughout the site along with landscaping along the property frontage. The development will be accessed via the proposed site entrances from Moore Street.

1.4 Existing Conditions and Infrastructure

The existing site is currently developed containing two buildings. It is assumed that both buildings are serviced with water and sanitary connections to Moore Street.

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

- Moore Street
  - 350 mm diameter watermain, and a
  - 300 mm diameter storm sewer, and a
  - 200 mm diameter sanitary sewer.

1.5 Approvals

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

An Environmental Compliance Approval (ECA) through the Ministry of Environment, Conservation and Parks (MECP) is not anticipated to be required since the development does not outlet to a combined sewer shed and does not propose industrial usage.

2.0 BACKGROUND STUDIES, STANDARDS, AND REFERENCES

2.1 Background Reports / Reference Information

GIS mapping of existing services, provided by the Town of Carleton Place, within the vicinity of the proposed site was reviewed to identify the infrastructure available to service the proposed development.

A topographic survey of the site was completed by Fairhall, Moffatt, & Woodland and dated July 4th, 2024.

The Site Plan was prepared by DS Studio.

2.2 Applicable Guidelines and Standards

Ministry of Environment, Conservation and Parks:

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

3.0 PRE-CONSULTATION SUMMARY

A pre-consultation meeting was conducted on April 2nd, 2025, regarding the proposed site. Specific design parameters to be incorporated within this design include the following:

- Control post-development peak flows to the pre-development levels for the 5- and 100-year storm events.
- Fire flow demand to be based on the Ontario Building Code method.

The notes from the Town of Carleton Place can be found in *Appendix B.*

4.0 WATER SERVICING

4.1 Existing Watermain

The site is located south of Moore Street, which is serviced by a 350 mm diameter watermain. There are two existing fire hydrants along Moore Street available to service the proposed development.

4.2 Proposed Water Servicing

It is proposed to service the new building with a 100 mm diameter water service connection to the existing 350 mm diameter watermain within Moore Street.

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

Table 1: Water Supply Design Criteria and Water Demands

Site Area	0.21 ha
Commercial	28,000 L/gross ha/day
Max Day Peaking Factor	1.5 x Avg Day
Peak Hour Peaking Factor	1.8 x Max Day
Average Day Demand (L/s)	0.04
Maximum Daily Demand (L/s)	0.07
Peak Rate Demand (L/s)	0.12
OBC Fire Flow Requirement (L/s)	45 (2,700 L/min)

The Ontario Building Code method was utilized to estimate the required fire flow for the proposed development. The following parameters were used in the calculation:

OBC:

- Building is of noncombustible construction with fire separations and fire-resistance ratings provided in accordance with subsections 3.2.2, including loadbearing walls, columns, and arches.
- Occupancy – Group C
- Water Supply Coefficient (K) – 10

The results of the OBC calculation yielded a required fire flow of 2,*700 L/min* (45.00 L/s). The detailed calculations for the OBC fire flow demands can be found in *Appendix C*.

To confirm the adequacy of fire flow to protect the proposed development, public fire hydrants within 150m of the site were accounted for per City of Ottawa Technical Bulletin ISTB 2018-02 *Appendix I.* Results can be seen in *Table 3,* below. Class ratings were determined based on visual inspection of the colored discs as seen on street view imagery.

Table 2: Fire Protection Confirmation

Building	Fire Flow Demand (L/min.)	Fire Hydrant(s) within 75m - (Class A-A = 5,700 L/min)	Fire Hydrant(s) within 150m - (Class A-A = 3,800 L/min)	Combined Fire Flow (L/min.)
60 Moore Street	2,700 (OBC)	1 public (Class A-A)	1 public (Class A-A)	9,500

Based on *Table 2*, above, there is sufficient hydrant coverage to support the calculated fire flow demand of *2,700 L/min.* Therefore, additional private hydrants are not anticipated to be required.

The static HGL and pressure for the municipal watermain within Moore Street was determined based on the 2021 WaterCAD Model Update completed by JFSA. The results have been summarized in *Table 3*, below. Based on the modelling results, the municipal watermain has sufficient pressure during normal operating scenarios to support development. During a fire flow scenario, the model has indicated that a fire flow of *537 L/s* is available at the nearest junction (J-110).

Table 3: Watermain Pressures

Scenario	Static HGL at Nearest Junction (m) (J-110)	Pressure (psi)	Pressure (kPa)
Average Day Demand	181.83	62	429
Peak Hour Demand	180.97	61	421

Excerpts from the 2021 JFSA Water Model results can be found in *Appendix C*.

5.0 SANITARY SERVICING

5.1 Existing Sanitary Sewers

There is an existing 200 mm diameter sanitary sewer located within Moore Street available to service the development. It is anticipated that the two existing buildings are serviced with connections to the existing sanitary sewer.

5.2 Proposed Sanitary Servicing

A new 150 mm diameter gravity sanitary service will extend from the building and connect to the existing 200 mm diameter sanitary sewer within Moore Street. As the service entry is located at the rear of the building, two private maintenance holes are proposed within the parking area to direct the sanitary service around the building. The proposed service has been designed to target a minimum full flow velocity of 0.6 m/s.

Table 4, below, summarizes the wastewater design criteria utilized to determine the anticipated sanitary demand.

Table 4: Sanitary Design Criteria

Design Parameter	Value
Site Area	0.21 ha
Commercial	28,000 L/gross ha/d
Commercial Peaking Factor	1.5
Extraneous Flow Allowance	0.33 L/s/ha

Table 5, below, summarizes the estimated wastewater flow from the proposed development. Refer to *Appendix D* for detailed calculations.

Table 5: Summary of Estimated Sanitary Flow

Design Parameter	Total Flow (L/s)
Total Estimated Average Dry Weather Flow	0.05
Total Estimated Peak Dry Weather Flow	0.08
Total Estimated Peak Wet Weather Flow	0.14

As noted above, the development is proposed to be serviced via a proposed 150 mm sanitary service connection to the existing 200 mm diameter sanitary sewer within Moore Street

The full flowing capacity of the proposed private 150 mm diameter sanitary service at 0.50% slope is estimated to be *11.23* L/s. Per *Table 5*, a peak wet weather flow of *0.14 L/s* will only occupy *1.2%* of the private sanitary service's capacity, therefore the proposed 150 mm diameter service is adequately sized for the development.

6.0 STORM SEWER SERVICING

6.1 Existing Storm Sewers

The subject site contains no existing storm infrastructure available to service the development. Existing drainage is maintained by positive drainage away from the existing buildings and towards the ROW.

6.2 Proposed Storm Servicing

Runoff collected on the roof of the proposed building will be stored and controlled using 3 flow-restricting roof drains. The roof drains will be used to limit the flow from the roof to a controlled release rate. Roof drainage will then be directed towards the proposed maintenance hole MH1 via the building storm service. For calculation purposes a Watts Accutrol roof drain in the Open position was used to estimate a reasonable roof flow. Other products may be specified at detailed building design provided that the proposed release rates and storage volumes are achieved.

Runoff from the majority of the drive aisles and parking lot will be directed towards catch basin structures. The catch basin structures will convey runoff to a proposed 250 mm diameter storm sewer, which will connect to the existing 300 mm diameter storm sewer within Moore Street. A small section of drive aisle west of the building will be directed towards the ROW without restriction.

One catch basin (CB4) will be equipped with a Tempest LMF85 inlet control device, which will restrict runoff and result in ponding within the parking area. The remaining two catch basins will not employ flow restrictions.

See CCO-26-0590 - *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 proposed catch basin structures The catch basins will capture at-grade runoff and direct runoff towards a proposed 250 mm diameter storm sewer. Roof flow will be controlled by three flow restricted roof drains before being directed to the proposed 250 mm diameter storm sewer.

The proposed 250 mm diameter storm sewer will direct runoff to the existing 300 mm diameter storm within Moore Street. Emergency overland flow routes have been provided to ensure runoff will be directed towards the municipal ROW in the event of a blockage within the storm system.

The quantitative and qualitative properties of the storm runoff for both the pre & post development flows are further detailed below.

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

Quantity Control

- Post development peak flows must be controlled to the pre-development level for the 5- and 100-year storm events

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
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	0.20

The 5-year balanced 'C' value is 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 6: Pre-Development Runoff Summary

Drainage Area	Area (ha)	Runoff Coefficient (5-Year)	Runoff Coefficient (100-Year)	5-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)
A1	0.21	0.67	0.77	40.50	80.27
Total	0.21			40.50	80.27

Existing runoff is currently directed towards the municipal ROW without restriction.

7.4 Post-Development Drainage

The proposed site drainage limits are demonstrated on the Post-Development Drainage Area Plan. See CCO-26-0590 - *POST* in *Appendix F* of this report for more details. A summary of the Post-Development Runoff Calculations can be found below.

Table 7: Post-Development Uncontrolled Runoff Summary

Drainage Area	Area (ha)	Runoff Coefficient (2/100-Year)	Tc (min)	5-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)
B1A	0.05	0.90 / 1.00	10	13.39	25.50
B1B	0.03	0.89 / 0.99	10	8.79	16.75
B1C	0.03	0.88 / 0.98	10	8.96	17.07
B2	0.02	0.65 / 0.74	10	4.05	7.82
B3	0.06	0.90 / 1.00	10	14.86	28.30
B4	0.01	0.90 / 1.00	10	2.93	5.58
Total	0.21			52.98	101.02

See *Appendix G* for calculations.

Areas B1A-B1C represents runoff within the limits of the drive aisle and parking lot that will be collected by the proposed catch basins and conveyed to the 250 mm diameter storm sewer.

Area B2 represents unrestricted surface runoff that will not be collected.

Area B3 represents the portion of the roof area for which runoff will be controlled by flow restricting roof drains. Roof runoff will be directed towards the building storm service.

Area B4 represents the portion of the roof that will be directed to the building storm service without restriction.

Post development runoff for the site must be restricted to match the pre-development flow rate. These values create the following allowable release rates for the site.

Table 8: Allowable Release Rate Summary

Drainage Areas	Area (ha)	Required Restricted Flow (L/s) (5-Year)	Required Restricted Flow (L/s) (100-Year)
A1	0.21	40.50	80.27

Reducing site flows will be achieved using flow restrictions and will create the need for onsite storage. Restriction will be provided for *Area B3* roof runoff and *Area B1B* surface runoff.

Runoff from area B1B will be restricted to a maximum release rate of *7.96 L/s* by a Tempest LMF85 ICD located within the outlet of CB4. Restriction of runoff will result in parking lot ponding of 0.07 m and 0.13 m during the 5- and 100-year events, respectively. An ICD sizing sheet has been included within Appendix 'G' identifying the release rate of the proposed ICD based on the design head.

Runoff from *Area B3* will be restricted to a maximum release rate of *4.54 L/s* using three (3) flow restricting roof drains. The restriction of roof runoff will result in maximum ponding depths of 0.08m and 0.12m during the 5- and 100-year events, respectively. Emergency roof scuppers will be provided to ensure that roof ponding does not exceed 150mm. For calculation purposes a Watts Accutrol roof drain in the Open position was used to estimate a reasonable roof flow. Other products may be specified at detailed building design provided that the proposed release rates and storage volumes are achieved.

As seen in *Table 9*, below, the restriction of runoff from areas *B1B* and *B3* will be sufficient to match pre-development runoff levels. Detailed calculations along with a Storm Sewer Design Sheet demonstrating adequate sizing of the proposed storm sewer system can be found within *Appendix G.*

Table 7: Post-Development Controlled Runoff Summary

Drainage Area	Area (ha)	5-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)	100-Year Storage Required (m^3)	100-Year Storage Available (m^3)
B1A	0.05	13.39	25.50	-	-
B1B	0.03	*7.82*	*7.96*	5.3	5.4
B1C	0.03	8.96	17.07	-	-
B2	0.02	4.05	7.82	-	-
B3	0.06	*3.03*	4.54	18.03	18.23
B4	0.01	2.93	5.58	-	-
Total (Site)	0.21	40.18	68.48	23.3	23.6

7.5 Quality Control

Quality control has not been identified as a requirement for this site and is not anticipated to be a requirement given the existing site was primarily hardscaped in the existing condition. Additionally, much of the site will now be comprised of roof area from which runoff is generally considered clean. Should quality control be required, an oil and grit separator unit will be specified downstream of CB3 to ensure that all collected runoff from the parking area is treated.

8.0 SUMMARY

- A new 2-storey commercial building is proposed at 60 Moore Street.
- Water servicing will be provided by a 100 mm diameter connection to the municipal 350 mm diameter watermain within Moore Street.
- Fire protection will be providing by two existing fire hydrants.
- Sanitary servicing will be provided by a new service connection to the existing 200 mm diameter sanitary sewer located within Moore Street.
- Storage for the 5- through 100-year storm events will be provided on the roof of the proposed building and within the parking area.

9.0 RECOMMENDATIONS

Based on the information presented in this report, we recommend the Town of Carleton Place approve this Servicing and Stormwater Management Report in support of the proposed development at 60 Moore Street.

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 DS Studio.. 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, Town of Carleton Place 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

600 300 0 600

Scale 1:20,000 Metres

LEGEND

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

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2025.

CLIENT:	DS STUDIO
PROJECT:	60 MOORE STREET
TITLE:	SITE LOCATION

egis
750 Palladium Dr, Suite 310, Kanata, ON K2V 1C7
Tel: 613-836-2184 Fax: 613-836-3742

PROJECT NO:	CCO-26-0590
Date	Jul., 23, 2025
GIS	AH
Checked By	VF

FIGURE: 1

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APPENDIX B
BACKGROUND DOCUMENTS

TOWN OF CARLETON PLACE
175 Bridge St. Carleton Place K7C 2V8
planning@carletonplace.ca

PRE-CONSULTATION FOR DEVELOPMENT PERMIT APPROVAL

Section 70.2 of the Planning Act, RSO 1990, as amended

☆ ***A meeting with the Planning and Development staff is required prior to the submission of any development application. At this meeting an approval stream and submission requirements will be determined.***

Date: April 2, 2025 **Time:** 10am

CONTACT INFORMATION		
Name/Title:	**Mailing Address and Postal Code:**	**(P)Phone # / (F)Fax # / (E) Email Address**
Applicant/Agent DS Studio - Leila Emmrys and Dina Sarhane	le@dsstudio.ca	**(P):**
	ds@dsstudio.ca	**(F):**
		(E):
Property Owner(s) 2863976 ONTARIO LTD	Drs Danae and Chris Kirk	**(P):**
		(F):
		(E):

LEGAL DESCRIPTION		
Municipal Address: 60-66 Moore Street		
Legal Description: PLAN 376 PT LOTS 1 TO 3 SAVE;AND EXCEPT RP 26R2368 PART 2;RP 27R5617 PART 13		
Lot Front (m): 80	**Lot Depth (m):** 33	**Lot Area (m²):** 2000
Official Plan Designation: Mississippi Transitional	**Development Permit Designation:** Mississippi Transitional	
Previous Applications (if any): NA		

PROPOSED APPLICATION

Demolish existing buildings on site.

Construct new single 2-storey commercial building with new parking lot in rear yard with single drive aisle wrap around building. Total gross floor 1,210m2.

CLASS OF DEVELOPMENT PERMIT REQUIRED

Class	Comment
Class 1 ☐	
Class 1A ☐	
Class 2 ☒	Site Plan - variances not proposed at this time based on concept drawing
Class 3 ☐	
Other ☐	

POTENTIAL SUPPORTING STUDIES AND REPORTS

Technical reports/plans or studies may be required to assist in the review process of a Development Permit Application. The identified studies or reports are required prior to the submission of an application for Development Permit.

- ☐ Archaeological Assessment
- ☐ Building Materials Samples
- ☐ Building Shadow Impact Assessment Study
- ☑ Coloured Perspective Drawings
- ☑ Site Plan
- ☐ Construction Traffic Management Plan
- ☐ Cost Estimate for External Works
- ☐ Environmental Impact Statement
  - ➢ Butternut? ☐ YES or ☐ NO
- ☐ Environmental Site Assessment
- ☑ Servicing Report/Plan
- ☐ Heritage Impact Assessment Report
- ☐ Illumination and Traffic Signal Plan
- ☑ Landscape Plan
- ☐ Natural Heritage Evaluation
- ☐ Noise Attenuation Study
- ☐ Parking and Loading Study
- ☐ Pavement Marking and Signage Plan
- ☐ Photographs of Existing Context
- ☑ Planning Rationale Report
- ☐ Reference Plan for Land Conveyances
- ☐ Sight-line Study
- ☐ Source Water Protection
- ☐ Transportation/Traffic Impact Study
- ☐ Tree Inventory
- ☐ Tree Preservation Plan
- ☑ Urban Design Brief
- ☑ Utilities Plan
- ☐ Others (as required by the Town)
- ☑ Grading & Drainage
- ☐ Hydrogeological Study
- ☑ Stormwater Management
- ☐ MDS Calculation

NOTES

Civil - Consolidate the swm within the servicing report - pre and post flows to be equalized. PW has confirmed that the existing water service bisecting the site is not a Town asset - it appears to be a steel service line to the Wool Growers building (date, condition and location unknown). Cost sharing, relocation and investigative work to be explored directly with Wool Growers.

Building - Building matrix is helpful at time of DP submission as are limiting distance equations. Crossing charts and water and sewer charts, grading for barrier free access are also advantageous and may prevent the need for future amendments to site plan following building permit submission.

Planning - Class 2 application will include a DP Agreement with posted securities at 100% value of off-site and value 50% of on-site works. Parkland dedication at 2% Cash In Lieu of the appraised value of the land prior to the approval based on third party appraisal report.

Planning - The new draft of the Development Permit Bylaw has proposed cutting the parking requirement for commercial uses in this zone by 1/2. Anticipated effective date of the new policy is July 2025. No other material use or setback changes anticipated in new draft. Staff will "pre circulate" concept design to council to test vision for site.

PW - No Traffic Brief was deemed warrented for Moore Street.

SIGNATURES

This form must be signed by the future applicant and by the Director of Development Services or his/her designate and a copy should accompany the application for a Development Permit.

Signature: _____ **Date:** _____

Owner/Applicant

Signature: _____ **Date:** 04-03-2025

Director of Development Services/Designate

Please note that the Town may require a performance deposit (security) with the execution of a Development Permit agreement to ensure that all site works to be provided are completed to the satisfaction of the Town as per the approved plans. The Town will accept cash or letter of credit equal to one hundred percent (100 %) of the estimated off-site and fifty percent (50%) of the estimated on-site cost of the works.

Planning for Building Code Compliance

(For large projects)

The following are some of the more common items that are typically non-compliant or missing at the plans review stage. This checklist should be used as a guideline only and does not contain all the building code requirements and other applicable laws. Drawings and documentation submitted should contain enough information to verify compliance with all parts of the 2012 Ontario Building Code.

- ✓ OBC Data Matrix
  - ❖ Usually supplied by architect but should be provided for all new construction including additions and renovations (ensure exiting and washroom requirements are also included).

- ✓ Designer Requirements
  - ❖ Ensure the proper designer is taking responsibility for their drawings and any on-site review
  - ❖ Designer requirements can be found in Division C Part 3
  - ❖ Architect and/or Engineer review requirements can be found in Division C Part 1

- ✓ Grading Plan - Must be supplied to show:
  - ❖ Top of slab to verify that floor drain and storm are set to an elevation to ensure gravity drainage to Municipal services at street level
  - ❖ Existing grade and proposed grade to verify drainage away from building will not affect neighbouring properties

- ✓ Site Plan – Must be supplied to show:
  - ❖ Fire routes & fire hydrants
  - ❖ Spatial separations
  - ❖ Number of streets for classification (defined as a percentage)

- ✓ Barrier Free Construction
  - ❖ Required for all new construction except as listed in 3.8.1.1 of the Ontario Building Code
  - ❖ Parking and barrier free path of travel
  - ❖ Barrier free bathroom dimensions
  - ❖ Hardware

- ✓ Building Classification
  - ❖ Ensure enough information is provided to classify the building where it may not be clear (such as providing a list of materials being stored on site)
  - ❖ Identify use of rooms and tenant classification that may occupy portions of the building

- ✓ Architectural/Mechanical/Electrical/Structural Drawings
  - ❖ Provide door schedule, identifying rated doors and exit hardware
  - ❖ Emergency systems (ex: fire alarm, exit signage & emergency lighting)
  - ❖ Identify location of janitorial supplies, service rooms, electrical rooms (regulated under the Electrical Act), fire dampers, etc.
  - ❖ Identify types of materials to be used in above grade mechanical rough-in and plenum spaces in compliance with the type of construction under the building classification in 3.2.2.
  - ❖ Structural loads (based on climate data and Part 4)

- ✓ Fire Separations
  - ❖ Roofs, floors, walls, exits, between tenants, doors, load bearing walls, etc.
  - ❖ Ensure the proper use of the tables in SB2 and SB3 are used

- ✓ Additional Documents – To verify materials or processes not covered under the Ontario Building Code, for example, EIFS, fabric type roofs, composite decking etc.
  - ❖ CCMC report, Minister Rulings and/or BMEC (Building Materials Evaluation Commission)
  - ❖ Manufacturers details and installation guidelines
  - ❖ Other Federal or Provincial approvals

TOWN OF CARLETON PLACE
URBAN FOREST COMMITTEE
GUIDELINES & STANDARDS FOR TREE PLANTING AND CONSERVATION PLANS

The Town shall require Conservation Plans and Tree Planting plans for all development including residential, commercial, and industrial uses.

Tree Conservation Plan:

The conservation plan will have a preliminary assessment by a qualified professional (certified arborist, registered professional forester or other qualified professional), which will determine stands of trees or individual trees on the property which warrant protection. This plan should consider such matters as:

- The existing health of the tree, grouping of trees or woodlot, hackberry and the quality of such and
- Its degree of sensitivity to grade changes, drainage disruption, changes in water table or any other factors, which may affect the trees.
- Measures that can be taken to protect the trees (tree wells)
- If trees cannot be protected, why not
- Opportunities for tree planting to mitigate loss of tree or forest cover.

The conservation plan will identify how these trees will be protected both above and below ground, as it is important to protect the root systems from soil compaction. The following measures will be undertaken to protect these trees:

1. The identified tree or trees to be protected will be fenced off, a minimum, to the drip line (furthest point of extension of branches) to protect the roots from soil compaction.
2. Above ground utilities shall avoid, where possible, the crowns of the trees.
3. Below ground utilities shall avoid where possible damaging the root system of trees. If utilities are to be placed below ground they are to be placed directly under the tree so not to damage the fine root hairs of the extended root system.
4. Tree roots that will be damaged must be cut cleanly to avoid ragged edges so they will heal properly. If exposed they must be moistened immediately and covered with moist material.
5. No equipment, trucks and storage of supplies shall be inside the fenced area.
6. No grading shall take place around the protected tree or trees.

In short the professional should be asking these questions:

1. Are there trees that can be protected due to size, rareness or they are a healthy stand that would add to the community.
2. If trees are going to be protected how will this be done during construction and after the project is complete.
3. If trees cannot be protected why not.
4. If trees cannot be protected what is the mitigating measure going to be for loss of trees. i.e. enhanced tree-planting program.

Tree Planting Plan:

The Planting plan will identify where additional trees are to be planted, which species and size of trees to be planted and how these trees will be planted and maintained.

The planting plan will identify:

1. *Where trees will be planted:*
   - The site plan must identify where trees will be planted.
   - At least one tree shall be planted for each residential lot developed unless a large number of trees have been removed for the development then an enhanced tree planting program will be undertaken.
   - Industrial and commercial development site plans shall incorporate multiple trees.
   - Prior to planting the developer must identify the location of underground utilities; present, planned and potential future locations.

2. *Species and size of trees to be Planted*
   - trees will be from seed from plant hardiness zone 4b, 4a or 5a or seed zones 35 and 36.
   - the developer will plant a 60 mm (2.5 ins) caliper deciduous tree or a conifer tree minimum height 2.0 m.
   - to avoid monocultures at least 4 deciduous and 1 conifer species will be selected from the list (Table 1) and approved by town staff.

A. Table 1

Species of Tree for planting by Developers

	Deciduous	**Conifer**
Larger Trees for Larger Lots	Sugar Maple (Acer *saacharum*) Red Maple (*Acer rubrum*) Silver maple (Acer saccharium) Red Oak (*Quercus rubra*) Bur Oak (*Quercus macrocarpa*) Hackberry (*Celtis occidentalis*) Freeman Maple (Acer *x fremanii)* Basswood *(*Tilia americana) Bitternut Hickory *(Carya cordiformis*	White Pine (*Pinus strobes*) White Spruce (*Picea glaoca*) Norway Spruce (Picea *abies*) Blue Spruce(developers are encouraged to use this species on the harder sites i.e. Hwy 7)
Medium Sized Trees	White Birch (Betula *papyrifera)* Little Leaf Linden (*Tilia cordata)(*developers are encouraged to use this species on the harder site i.e. Hwy 7) Honey Locust (Gleditisia *triacanthos)*	Eastern White Cedar (*Thuja occidentalis*) Tamarack (Larix *laricina*)
Smaller Trees for Smaller Lots	Showy Mountain Ash *(Sorbus decora)* Serviceberry (*Amelanchier*) Crabapple (*Malus*) Nannyberry (Viburnum lentago)	

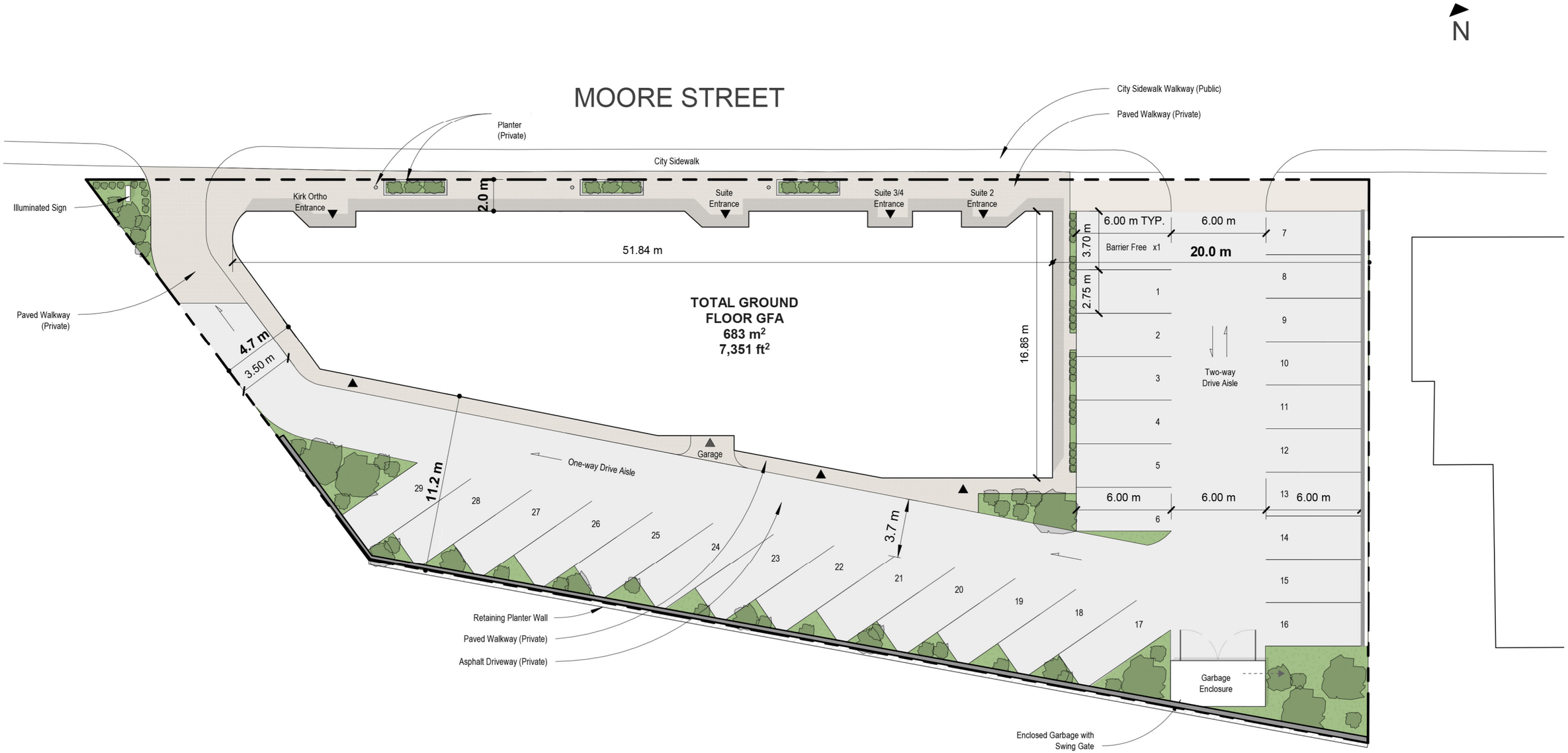
3. Tree Planting

The International Society of Arborists, the Canadian Nursery Trades Association or Landscape Ontario standards of planting and maintenance are to be followed:

- Excavate to a depth 200mm deeper than the height of the root ball, with a width 750 mm greater than the root ball.
- Loosen the planting hole to a depth of 200mm
- Loosen burlap and cut away minimum at least 50% of the burlap without disturbing the root ball (if in a wire basket cut away as much of the wire basket while the tree is in the hole)
- Place plant material to a depth equal to the depth they were originally growing in the nursery.
- Tamp soil around the root system in layers of 150 mm to eliminate air pockets. When 2/3 of the planting soil has been placed file the hole with water. After the water has penetrated into the soil, complete backfilling.
- Build a 100mm deep saucer around the outer edge of the hole to assist with watering.
- The hardwood trees will be staked following International Society of Arborist standards.
- The trees will be mulched to a depth of 10 mm filling the saucer leaving 50 mm free around the trunk to avoid trunk rot.
- The trees will be watered one week after planting and every 2 weeks thereafter, pending weather conditions, until the area developed is no longer the responsibility of the developer.

Jim McCready R.P.F./ ISACertified Arborist

November 15, 2019



DS STUDIO INC
Architecture + Interior Design
www.dsstudio.ca / studio@dsstudio.ca

66 MOORE ST FEASIBILITY

DATE	SCALE	SHEET NAME	SHEET NO.
07-02-2025	1 : 250	SITE PLAN	A1

PROJECT NUMBER
2024-38

Francis Valenti

Subject: Re: 60-66 Moore St Preconsultation

From: Mike Walker <mwalker@carletonplace.ca>
Sent: April 3, 2025 3:53 PM
To: MELANSON Curtis <curtis.melanson@egis-group.com>
Subject: RE: Re: 60-66 Moore St Preconsultation

/! Courriel externe - Merci d'être prudent avec les liens et les pièces jointes **/!** External email - Please be careful with links and attachments **/!**

Both below are correct.

Mike Walker, C.E.T.
Development Review Officer
Town of Carleton Place
Cell. 613-451-0427 |
T. 613-257-6203 |
mwalker@carletonplace.ca|www.carletonplace.ca

From: MELANSON Curtis <curtis.melanson@egis-group.com>
Sent: April 3, 2025 3:52 PM
To: Mike Walker <mwalker@carletonplace.ca>
Subject: RE: Re: 60-66 Moore St Preconsultation

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

Hi Mike,
I didn't see it in the notes but just wanted to follow up via email so we could include it in our appendices for the servicing report. We had discussed that fire protection calculations could be done using OBC and not looking at FUS. Can you confirm?

Also, it is in the notes but just to be clear that for SWM post development flows for the 5 and 100 year storm events would need to match the 5 and 100 year pre development flows for the site.

Happy to chat if needed!

Cheers,
Curtis

Curtis Melanson

MOORE ST

NEW BUILDING
663 m2
FF @ 137.40

LANDSCAPE CONCRETE PLANTER

LANDSCAPING

FRONT YARD SET BACK LINE (1.5m)

INTERIOR SIDE YARD SET BACK LINE (3m)

CORNER SIDE YARD SET BACK LINE (4.5m)

CAR STACKER
31 + 32

GARAGE / LOADING

DEPRESSED SIDEWALK FOR GARAGE ENTRY

SERVICES/UTILITIES

BIKE PARKING

RETAINING WALL AS NEEDED

N 82° 03' 15" W 81.11m

N 48° 45' 34" W 29.97m

N 48° 51' 20" E 56.61m

N 71° 39' 30" W 64.19m

GARBAGE

Hydro transformer on Concrete Pad

GENERATOR

6000 TYP.

2750 TYP.

6000

3000

3700

4500

1500

1200

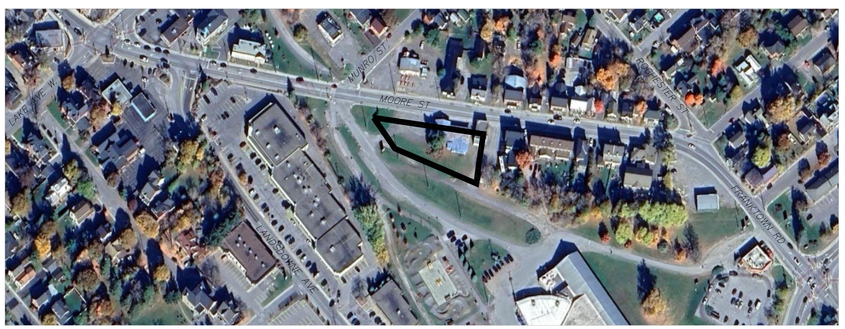
1246

3400

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASMENT
- CONCRETE SIDEWALK
- LIGHT STANDARD
- SIGN
- CATCH BASIN
- BOLLARD
- FIRE HYDRANT
- MANHOLE
- DEPRESSED CURB

SITE PLAN _ 1:125



PROVISION	REQUIRED	PROVIDED
MINIMUM LOT AREA	NIL	2,098 m^2
BUILDING FOOTPRINT AREA		663 m^2
BUILDING GROSS AREA		1283 m^2
MINIMUM LOT WIDTH	NIL	81.11 m
MAXIMUM LOT COVERAGE	NIL	N/A
FRONT YARD	NO MIN. OR ALIGNED TO NEIGHBOURING PROPERTIES	1.5 m
EXTERIOR SIDE YARD	No MIN. OR ESTABLISHED BLDG LINE	
INTERIOR SIDE YARD	3.0m MIN @ RESIDENTIAL LOT	
REAR YARD	NIL	
LANDSCAPED SPACE IN REAR YARD	NIL	N/A
MAXIMUM BUILDING HEIGHT	22 m	9 m
PARKING	50% (1/20m^2 of GFA) = 32	30 + 2 INTERIOR = 32
BARRIER FREE PARKING	4% OF VEHICLE PARKING = 2	2 BF SPACE
BICYCLE PARKING	4% OF VEHICLE PARKING = 2	3
LOADING SPACES	BUILDING AREA 250 > 1000 = 1	1

SITE DATA	
LEGAL DESCRIPTION	PART 30, 5R-10105, PIN 04744-0135
CIVIL ADDRESS	60-66 MOORE ST, CARLETON PLACE K7C 2R2
ZONING NOTES	MISSISSIPPI TRANSITIONAL SECTOR
BUILDING AREA	684 m^2

REVISION RECORD

2025-07-25 ISSUED FOR DEVELOPMENT PERMIT

ISSUE RECORD

North Arrow

Seal

DS STUDIO

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Architecture

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KIRK ORTHO CP

60-66 MOORE ST
CARLETON PLACE / ONTARIO

00000	1:125		LE
Project No.	Scale	Drawn by.	Reviewed by.

SITE PLAN — Drawing Title

A1.00 — Drawing No.

APPENDIX C
WATERMAIN CALCULATIONS

CCO-26-0590 - 60 Moore Street - Water Demands

Project:	60 Moore Street
Project No.:	CCO-26-0590
Designed By:	FV
Checked By:	CJM
Date:	July 23, 2025
Site Area:	0.21 gross ha

Commercial 1362 m2

AVERAGE DAILY DEMAND

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

AVERAGE DAILY DEMAND	Residential	0.00	L/s
	Commercial/Industrial /Institutional	0.04	L/s

MAXIMUM DAILY DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	9.5	x avg. day	L/c/d
Industrial	1.5	x avg. day	L/gross ha/d
Commercial	1.5	x avg. day	L/gross ha/d
Institutional	1.5	x avg. day	L/gross ha/d

MAXIMUM DAILY DEMAND	Residential	0.00	L/s
	Commercial/Industrial /Institutional	0.07	L/s

MAXIMUM HOUR DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	14.3	x avg. day	L/c/d
Industrial	1.8	x max. day	L/gross ha/d
Commercial	1.8	x max. day	L/gross ha/d
Institutional	1.8	x max. day	L/gross ha/d

MAXIMUM HOUR DEMAND	Residential	0.00	L/s
	Commercial/Industrial /Institutional	0.12	L/s

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

AVERAGE DAILY DEMAND	0.04	L/s
MAXIMUM DAILY DEMAND	0.07	L/s
MAXIMUM HOUR DEMAND	0.12	L/s

CCO-26-0590 - 60 Moore Street - OBC Fire Calculations

Project:	60 Moore Street
Project No.:	CCO-26-0590
Designed By:	FV
Checked By:	CJM
Date:	July 23, 2025

Ontario 2006 Building Code Compendium (Div. B - Part 3)

Water Supply for Fire-Fighting - Commercial Building

Building is classified as Group : C (from table 3.2.2.55)
Building is of noncombustible construction with fire separations and fire-resistance ratings provided in accordance with subsections 3.2.2., including loadbearing walls, columns and arches

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	10	(from Table 1 pg A-31)
V	5,348	(Total building volume in m³.)
Stot	1.7	(From figure 1 pg A-32)
Q =	90,907.50	L

→

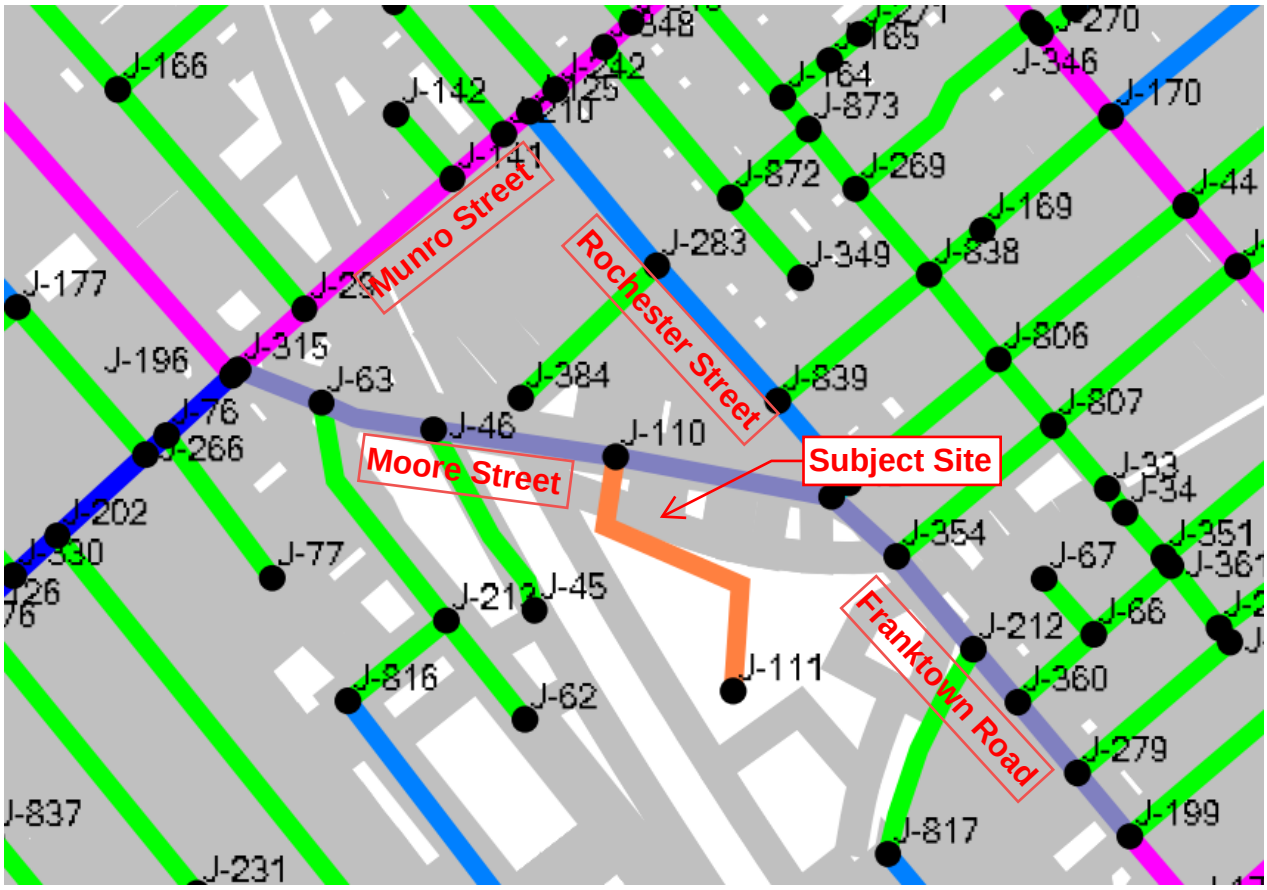
			From Figure 1 (A-32)
Snorth	8	m	0.2
Seast	20	m	0.0
Ssouth	11	m	0.0
Swest	5	m	0.5

*approximate distances

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

2,700 L/min if Q < 108,000 L
713 gpm

60 Moore Street
JFSA Water Model Excerpt



Carleton Place - 2021 Model Update

Average Day Junction Table

ID	Label	Zone	Elevation (m)	Demand (L/s)	Hydraulic Grade (m)	Pressure (kPa)
368	J-303	Zone-1	138.00	0.10	181.33	424
370	J-274	Zone-1	138.00	0.10	181.34	424
188	J-376	Zone-1	139.00	0.10	182.35	424
327	J-95	Zone-1	138.00	0.10	181.39	425
521	J-803	Zone-1	139.00	0.10	182.40	425
367	J-357	Zone-1	138.00	0.10	181.42	425
255	J-301	Zone-1	138.00	0.10	181.47	425
291	J-36	Zone-1	138.00	0.10	181.50	426
403	J-57	Zone-1	138.50	0.10	182.02	426
540	J-822	Zone-1	138.50	0.10	182.02	426
437	J-322	Zone-1	138.50	0.10	182.03	426
376	J-285	Zone-1	138.50	0.10	182.03	426
216	J-149	Zone-1	138.50	0.10	182.03	426
467	J-284	Zone-1	138.50	0.10	182.03	426
395	J-221	Zone-1	138.50	0.10	182.03	426
531	J-813	Zone-1	138.50	0.10	182.03	426
401	J-91	Zone-1	138.50	0.10	182.04	426
363	J-379	Zone-1	138.00	0.10	181.54	426
530	J-812	Zone-1	138.50	0.10	182.04	426
451	J-67	Zone-1	138.00	0.10	181.56	426
253	J-66	Zone-1	138.00	0.10	181.56	426
208	J-390	Zone-1	138.50	0.10	182.06	426
242	J-359	Zone-1	138.50	0.10	182.07	426
328	J-277	Zone-1	138.50	0.10	182.08	426
449	J-199	Zone-1	138.00	0.10	181.59	427
428	J-286	Zone-1	138.50	0.10	182.09	427
248	J-180	Zone-1	138.50	0.10	182.10	427
254	J-279	Zone-1	138.00	0.10	181.60	427
410	J-54	Zone-1	138.50	0.10	182.10	427
435	J-267	Zone-1	138.50	0.10	182.10	427
497	J-777	Zone-1	138.50	0.10	182.11	427
573	J-855	Zone-1	137.70	0.10	181.32	427
413	J-354	Zone-1	138.00	0.10	181.68	427
439	J-282	Zone-1	138.00	0.10	181.71	428
177	J-43	Zone-1	138.00	0.10	181.71	428
480	J-387	Zone-1	138.50	0.10	182.24	428
213	J-126	Zone-1	138.50	0.10	182.32	429
157	J-4	Zone-1	138.50	0.10	182.33	429
384	J-110	Zone-1	138.00	0.10	181.83	429
259	J-276	Zone-1	138.50	0.10	182.40	430
461	J-163	Zone-1	138.50	0.10	182.40	430
446	J-356	Zone-1	137.50	0.10	181.41	430
331	J-253	Zone-1	137.50	0.10	181.49	431
233	J-280	Zone-1	137.50	0.10	181.50	431
453	J-192	Zone-1	138.00	0.10	182.00	431
263	J-351	Zone-1	137.50	0.10	181.50	431
383	J-361	Zone-1	137.50	0.10	181.51	431
478	J-166	Zone-1	138.00	0.10	182.01	431
164	J-52	Zone-1	138.00	0.10	182.02	431
159	J-259	Zone-1	138.00	0.10	182.02	431
277	J-62	Zone-1	138.00	0.10	182.02	431
379	J-370	Zone-1	138.00	0.10	182.03	431
162	J-98	Zone-1	138.00	0.10	182.03	431
422	J-344	Zone-1	138.00	0.10	182.03	431

Carleton Place - 2021 Model Update

Fire Flow Table

ID	Label	Zone	Fire Flow (Available) (L/s)	Flow (Total Available) (L/s)	Pressure (Residual Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated Zone Lower Limit) (kPa)
527	J-809	Zone-1	1,775	1,775	140	246	J-972	140
1486	J-958	Zone-1	1,736	1,736	140	167	J-972	140
289	J-68	Zone-1	1,093	1,093	140	177	J-972	140
1640	J-987	Zone-1	828	828	140	140	J-986	143
203	J-200	Zone-1	768	768	140	140	J-205	177
1642	J-988	Zone-1	686	686	140	140	J-892	155
464	J-205	Zone-1	675	675	140	140	J-352	172
218	J-175	Zone-1	625	625	140	140	J-173	146
446	J-356	Zone-1	619	619	140	140	J-137	231
1645	J-989	Zone-1	605	605	140	144	J-892	140
475	J-352	Zone-1	603	603	140	140	J-808	206
221	J-360	Zone-1	599	599	140	140	J-279	159
281	J-212	Zone-1	596	596	140	140	J-972	158
449	J-199	Zone-1	593	593	140	140	J-279	164
254	J-279	Zone-1	591	591	140	140	J-199	165
1226	J-893	Zone-1	584	584	140	140	J-892	171
413	J-354	Zone-1	581	582	140	140	J-972	156
177	J-43	Zone-1	581	581	140	140	J-282	147
526	J-808	Zone-1	558	558	140	140	J-44	182
282	J-44	Zone-1	551	551	140	140	J-808	181
284	J-170	Zone-1	545	545	140	140	J-346	173
384	J-110	Zone-1	537	538	140	140	J-111	145
528	J-810	Zone-1	535	535	140	145	J-173	140
243	J-46	Zone-1	534	534	140	170	J-972	140
353	J-346	Zone-1	529	529	140	140	J-270	146
319	J-270	Zone-1	528	528	140	140	J-346	148
439	J-282	Zone-1	527	527	140	140	J-972	181
490	J-125	Zone-1	520	520	140	140	J-210	150
496	J-29	Zone-1	517	517	140	178	J-972	140
479	J-63	Zone-1	516	516	140	208	J-972	140
192	J-272	Zone-1	515	516	140	140	J-20	165
326	J-242	Zone-1	513	513	140	140	J-125	163
241	J-210	Zone-1	511	511	140	140	J-125	166
249	J-69	Zone-1	505	506	140	143	J-27	140
424	J-348	Zone-1	504	505	140	140	J-815	155
250	J-367	Zone-1	503	503	140	159	J-972	140
188	J-376	Zone-1	503	503	140	171	J-972	140
355	J-162	Zone-1	503	503	140	159	J-972	140
213	J-126	Zone-1	503	503	140	177	J-972	140
178	J-141	Zone-1	503	503	140	140	J-142	160
340	J-330	Zone-1	502	502	140	185	J-972	140
488	J-202	Zone-1	501	501	140	189	J-972	140
533	J-815	Zone-1	501	501	140	140	J-348	161
385	J-315	Zone-1	499	499	140	238	J-972	140
260	J-313	Zone-1	499	499	140	158	J-137	140
402	J-196	Zone-1	498	498	140	238	J-972	140
371	J-266	Zone-1	498	498	140	208	J-972	140
320	J-76	Zone-1	498	498	140	220	J-972	140
295	J-254	Zone-1	495	496	140	140	J-874	158
1179	J-874	Zone-1	493	493	140	140	J-235	149
539	J-821	Zone-1	491	491	140	234	J-972	140

Carleton Place - 2021 Model Update

Peak Hour Junction Table

ID	Label	Zone	Elevation (m)	Demand (L/s)	Hydraulic Grade (m)	Pressure (kPa)
200	J-41	Zone-1	138.00	0.28	180.93	420
448	J-374	Zone-1	137.00	0.28	179.95	420
542	J-824	Zone-1	137.00	0.28	179.96	420
451	J-67	Zone-1	138.00	0.28	180.96	420
253	J-66	Zone-1	138.00	0.28	180.96	420
439	J-282	Zone-1	138.00	0.28	180.96	420
472	J-73	Zone-1	137.00	0.28	179.96	420
177	J-43	Zone-1	138.00	0.28	180.96	420
413	J-354	Zone-1	138.00	0.28	180.96	420
254	J-279	Zone-1	138.00	0.28	180.97	421
449	J-199	Zone-1	138.00	0.28	180.97	421
456	J-262	Zone-1	137.00	0.28	179.97	421
384	J-110	Zone-1	138.00	0.28	180.97	421
364	J-177	Zone-1	138.00	0.28	180.99	421
367	J-357	Zone-1	138.00	0.28	180.99	421
277	J-62	Zone-1	138.00	0.28	181.00	421
415	J-326	Zone-1	137.00	0.28	180.03	421
573	J-855	Zone-1	137.70	0.28	180.74	421
312	J-65	Zone-1	138.00	0.28	181.06	421
488	J-202	Zone-1	138.00	0.28	181.10	422
589	J-19	Zone-1	137.00	0.28	180.10	422
340	J-330	Zone-1	138.00	0.28	181.13	422
588	J-14	Zone-1	136.75	0.28	179.94	423
342	J-289	Zone-1	137.00	0.28	180.23	423
452	J-325	Zone-1	137.00	0.28	180.32	424
373	J-353	Zone-1	137.00	0.28	180.32	424
377	J-369	Zone-1	137.00	0.28	180.33	424
186	J-257	Zone-1	137.00	0.28	180.37	424
348	J-111	Zone-1	137.50	0.28	180.93	425
344	J-193	Zone-1	136.50	0.28	179.93	425
1167	J-871	Zone-1	137.40	0.28	180.83	425
263	J-351	Zone-1	137.50	0.28	180.95	425
383	J-361	Zone-1	137.50	0.28	180.96	425
317	J-80	Zone-1	136.50	0.28	179.96	425
331	J-253	Zone-1	137.50	0.28	180.96	425
233	J-280	Zone-1	137.50	0.28	180.96	425
218	J-175	Zone-1	137.50	0.28	180.97	425
432	J-154	Zone-1	136.50	0.28	179.97	425
354	J-234	Zone-1	137.50	0.28	180.98	426
446	J-356	Zone-1	137.50	0.28	181.00	426
591	J-33	Zone-1	137.25	0.28	180.94	428
592	J-34	Zone-1	137.25	0.28	180.95	428
538	J-820	Zone - WTP	138.13	0.00	181.85	428
537	J-819	Zone - WTP	138.13	0.00	181.85	428
212	J-229	Zone-1	138.00	0.28	181.74	428
226	J-384	Zone-1	137.00	0.28	180.92	430
525	J-807	Zone-1	137.00	0.28	180.93	430
201	J-297	Zone-1	137.00	0.28	180.96	430
1157	J-78	Zone-1	136.00	0.28	179.96	430
281	J-212	Zone-1	137.00	0.28	180.97	430
221	J-360	Zone-1	137.00	0.28	180.97	430
597	J-85	Zone-1	136.00	0.28	179.97	430
493	J-296	Zone-1	137.00	0.28	180.98	430
182	J-263	Zone-1	136.00	0.28	179.98	430

APPENDIX D
SANITARY CALCULATIONS

CCO-26-0590 - 60 Moore Street - Sanitary Demands

Project:	60 Moore Street
Project No.:	CCO-26-0590
Designed By:	FV
Checked By:	CJM
Date:	July 23, 2025

Site Area	0.21	Gross ha
Commercial Area	1362.00	m^2

DESIGN PARAMETERS

Institutional/Commercial Peaking Factor	1.5	
Mannings coefficient (n)	0.013	
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.01
Wet	0.06
Total	0.07

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	280	L/c/d	0	0.00
Industrial - Light**	35,000	L/gross ha/d		0
Industrial - Heavy**	55,000	L/gross ha/d		0
Commercial / Amenity	2,800	L/(1000m²/d)	1362	0.04
Restaurant	125	L/(9.2m²/d)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m^2/d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

AVERAGE RESIDENTIAL FLOW	0.00	L/s
PEAK RESIDENTIAL FLOW	0.00	L/s
AVERAGE ICI FLOW	0.04	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.07	L/s
PEAK INDUSTRIAL FLOW	0.00	L/s
TOTAL PEAK ICI FLOW	0.07	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	0.05	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	0.08	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	0.14	L/s

SANITARY SEWER DESIGN SHEET

PROJECT: CCO-26-0590
LOCATION: 60 Moore Street

LOCATION				RESIDENTIAL									ICI AREAS							INFILTRATION ALLOWANCE			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	29	30	31
STREET	AREA ID	FROM MH	TO MH	UNIT TYPES				AREA (ha)	POPULATION		PEAK FACTOR	PEAK FLOW (L/s)	AREA (ha)						PEAK FLOW (L/s)	AREA (ha)		FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
				SF	SD	TH	APT		IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL			IND	CUM								L/s	(%)
													IND	CUM	IND	CUM	IND	CUM											
60 Moore Street		BLDG	MH1A												0.14	0.14			0.07	0.21	0.21	0.07	0.14	11.23	6.49	150	0.50	0.62	11.10	98.79
		MH1A	MH2A													0.14			0.07		0.21	0.07	0.14	11.23	21.12	150	0.50	0.62	11.10	98.79
		MH2A	EX. 200mm													0.14			0.07		0.21	0.07	0.14	11.23	29.75	150	0.50	0.62	11.10	98.79

Design Parameters:

Residential			ICI Areas			
						Peak Factor
SF	3.4	p/p/u	INST	28,000	L/Ha/day	1.5
TH/SD	2.7	p/p/u	COM	28,000	L/Ha/day	1.5
APT	2.3	p/p/u	IND	35,000	L/Ha/day	
Other	60	p/p/Ha				

Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
Harmon Formula = 1+(14/(4+P^0.5)*0.8)
where P = population in thousands

Designed: FV

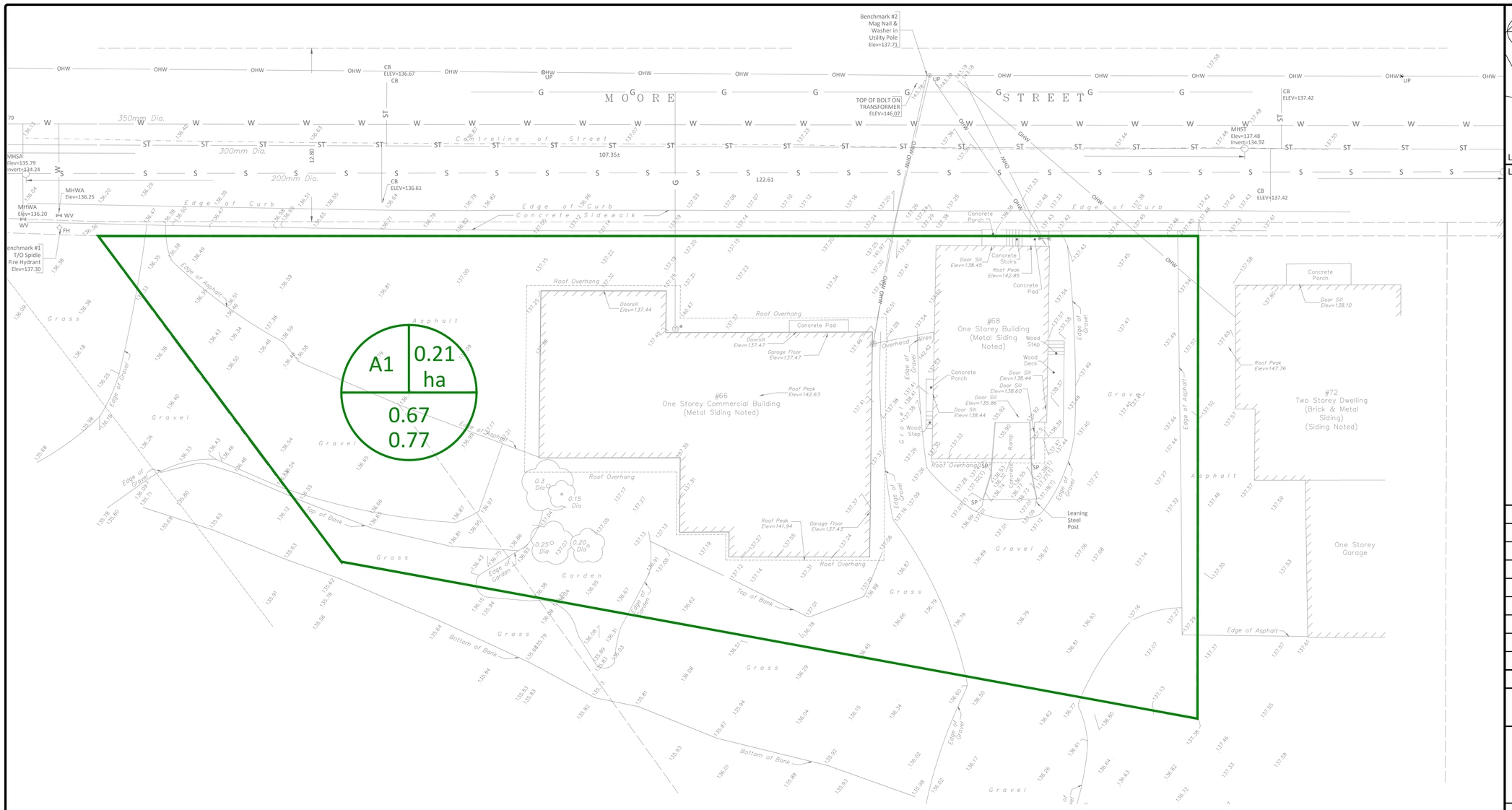
Checked: CJM

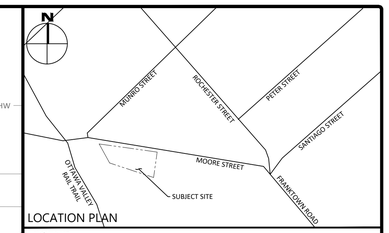
Project No.: CCO-26-0590

No.	Revision	Date
1.	Issued for Review	2025-07-24

Sheet No:
1 of 1

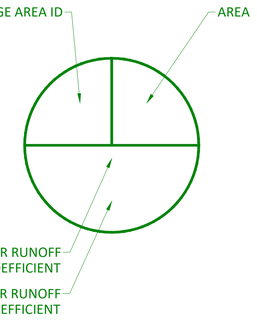
APPENDIX E
PRE-DEVELOPMENT DRAINAGE PLAN





LOCATION PLAN

LEGEND



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No.	Revisions	Date
1	ISSUED FOR REVIEW	JULY 23, 2025

Check and verify all dimensions before proceeding with the work

Do not scale drawings

SCALE 1 : 150

0 5 10 15 Metres

egis

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Carp, ON K0A 1L0
Tel: 613-836-2184
Fax: 613-836-3742
www.egis-group.com

Stamp:

Client:

DS STUDIO
703 BLOOR STREET WEST, BOX 4
TORONTO, ON M6G 1L5

Project:

PROPOSED BUILDING
60 MOORE STREET

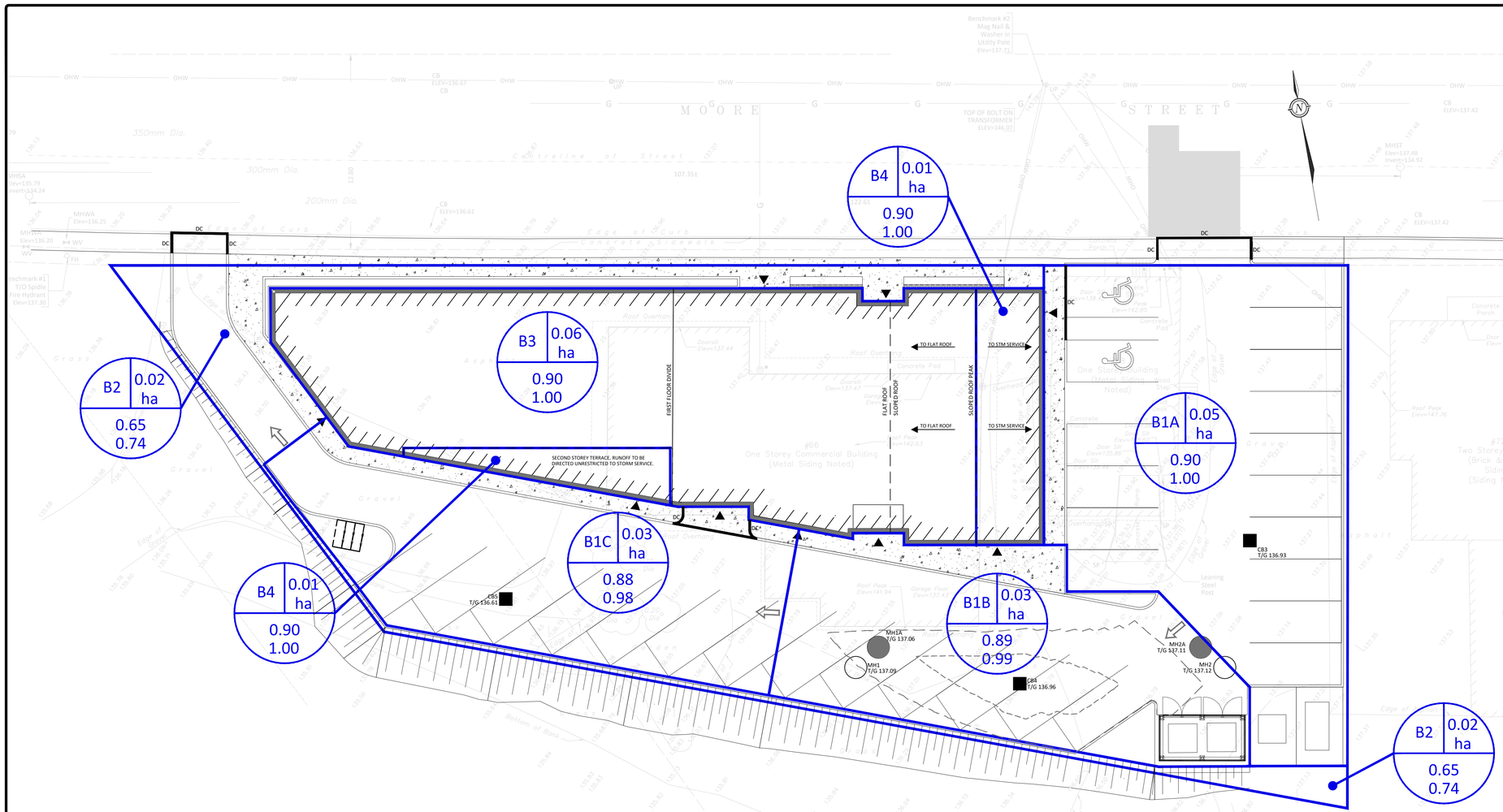
Drawing Title:

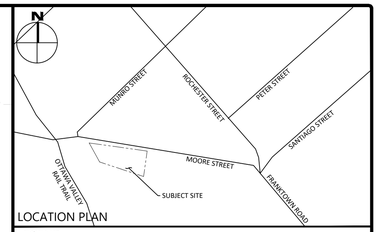
PRE-DEVELOPMENT DRAINAGE AREA PLAN

Scale: 1:150	Project Number: CCO-26-0590
Drawn By: FV	
Checked By: CJM	Drawing Number: PRE
Designed By: FV	

FILENAME: \\Ottawa01 Project - Proposals\2026 Jobs\CCO\CCO-26-0590 DS Studio_SPC, 60 Moore St, Carleton Place\12 - Drawings\CCO-26-0590 - Presentationdwg
LAYOUT(S): Layout1 Modified: Wednesday, July 23, 2025 - 11:47 AM By: FVerwey
LAST PLOTTED: Wednesday, July 23, 2025 - 11:48 AM By: FVerwey STANDARD.ctb

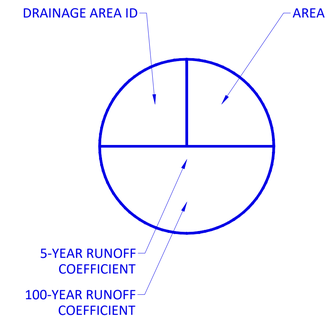
APPENDIX F
POST-DEVELOPMENT DRAINAGE PLAN





LOCATION PLAN

LEGEND



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No.	Revisions	Date
1	ISSUED FOR REVIEW	JULY 31, 2025

Check and verify all dimensions before proceeding with the work

Do not scale drawings

SCALE 1 : 150

0 5 10 15 Metres

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Stamp:

Client:

DS STUDIO
703 BLOOR STREET WEST, BOX 4
TORONTO, ON M6G 1L5

Project:

PROPOSED BUILDING
60 MOORE STREET

Drawing Title:

POST-DEVELOPMENT DRAINAGE AREA PLAN

Scale: 1:150	Project Number: CCO-26-0590
Drawn By: FV	
Checked By: CJM	Drawing Number: POST
Designed By: FV	

PLOTSAVE: U:\Drawn\01 Project - Proposals\2026 JobsVCCO\CCO-26-0590 DS Studio, SPC, 60 Moore St, Carleton Place\12 - Drawings\CCO-26-0590 - Presentation.dwg
PLOTTED: Thursday, July 31, 2025 - 2:17:11 PM by Fraser Vanderwater
LAST EDITED: Thursday, July 31, 2025 - 2:16:59 PM by FV-STANDARD.ctb

APPENDIX G
STORMWATER MANAGEMENT CALCULATIONS

Tc (min)	Intensity (mm/hr)		
	2-Year	5-Year	100-Year
20	52.0	70.3	120.0
10	76.8	104.2	178.6

C-Values	
Impervious	0.90
Gravel	0.60
Pervious	0.20

Pre-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravel (m^2)	Pervious Area (m^2)	Average C (5-Year)	Average C (100-Year)
A101	1,045	617	438	0.67	0.77

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	Q (L/s)	
					5-Year	100-Year
A1	0.21	0.67	0.77	10	40.50	80.27
Total	0.21				40.50	80.27

Post-Development Runoff Coefficient

Drainage Area	Impervious Area (m^2)	Gravel (m^2)	Pervious Area (m^2)	Average C (5-year)	Average C (100-year)	
B1A	514	0	0	0.90	1.00	Uncontrolled Surface- to CB3
B1B	337	0	3	0.89	0.99	Controlled Surface - to CB4
B1C	342	0	8	0.88	0.98	Uncontrolled Surface - to CB5
B2	137	3	74	0.65	0.74	Uncontrolled Surface
B3	570	0	0	0.90	1.00	Roof - Controlled to STM
B3	113	0	0	0.90	1.00	Roof - Uncontrolled to STM

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	Q (L/s)		
					5-Year	100-Year	
B1A	0.05	0.90	1.00	10	13.39	25.50	Uncontrolled Surface- to CB3
B1B	0.03	0.89	0.99	10	8.79	16.75	Controlled Surface - to CB4
B1C	0.03	0.88	0.98	10	8.96	17.07	Uncontrolled Surface - to CB5
B2	0.02	0.65	0.74	10	4.05	7.82	Uncontrolled Surface
B3	0.06	0.90	1.00	10	14.86	28.30	Roof - Controlled to STM
B4	0.01	0.90	1.00	10	2.93	5.58	Roof - Uncontrolled to STM
Total	0.21				52.98	101.02	

Required Restricted Flow

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	Q (L/s) Ex. 5-Year	Q (L/s) Ex. 100-Year
A1	0.21	0.67	0.77	10	40.50	80.27

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow (L/S)		Restricted Flow (L/S)		Storage Required (m^3)		Storage Provided (m^3)	
	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year
B1A	13.39	25.50	13.39	25.50	-	-	-	-
B1B	8.79	16.75	7.82	7.96	0.6	5.3	0.8	5.4
B1C	8.96	17.07	8.96	17.07	-	-	-	-
B2	4.05	7.82	4.05	7.82	-	-	-	-
B3	14.86	28.30	3.03	4.54	8.39	18.03	9.12	18.23
B4	2.93	5.58	2.93	5.58	-	-	-	-
Total	52.98	101.02	40.18	68.48	8.98	23.31	9.87	23.63

Storage Requirements for Area B1B

5-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1B	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	104.2	8.79	7.82	0.97	0.58
20	70.3	5.93	7.82	-1.89	-2.27
30	53.9	4.55	7.82	-3.27	-5.88
40	44.2	3.73	7.82	-4.09	-9.82
50	37.7	3.18	7.82	-4.64	-13.93

Maximum Storage Required 5-year =	0.6 m^3

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1B	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	16.75	7.96	8.79	5.27
20	120.0	11.25	7.96	3.29	3.95
30	91.9	8.62	7.96	0.66	1.19
40	75.1	7.04	7.96	-0.92	-2.20
50	64.0	6.00	7.96	-1.96	-5.87

Maximum Storage Required 100-year =	5.3 m^3

5-Year Storm Event Storage Summary

		Water Elev. (m) =		137.03		
Location	T/G	INV. (out)	Area (m^2)	Depth (m)	Head (m)	Volume (m^3)
CB4	136.96	135.51	33.7	0.07	1.48	0.75

Storage Available (m^3) =	0.75	*
Storage Required (m^3) =	0.58	

100-Year Storm Event Storage Summary

		Water Elev. (m) =		137.09		
Location	T/G	INV. (out)	Area (m^2)	Depth (m)	Head (m)	Volume (m^3)
CB4	136.96	135.51	128.7	0.13	1.54	5.4

Storage Available (m^3) =	5.40	**
Storage Required (m^3) =	5.27	

*Restriction to be provided by Tempest LMF90 - Refer to sizing sheet

5-Year Storm Event

Tc (min)	I (mm/hr)	B3 Runoff (L/s)	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	104.2	14.86	3.03	11.83	7.10
20	70.3	10.02	3.03	6.99	8.39
30	53.9	7.69	3.03	4.66	8.39
40	44.2	6.30	3.03	3.27	7.86
50	37.7	5.37	3.03	2.34	7.03
60	32.9	4.70	3.03	1.67	6.01
70	29.4	4.19	3.03	1.16	4.88
80	26.6	3.79	3.03	0.76	3.65

Maximum Storage Required 5-Year (m^3) =	8.39

100-Year Storm Event

Tc (min)	I (mm/hr)	B3 Runoff (L/s)	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	28.30	4.54	23.76	14.25
20	120.0	19.01	4.54	14.47	17.36
30	91.9	14.56	4.54	10.02	18.03
40	75.1	11.91	4.54	7.37	17.68
50	64.0	10.14	4.54	5.59	16.78
60	55.9	8.86	4.54	4.32	15.54
70	49.8	7.89	4.54	3.35	14.06
80	45.0	7.13	4.54	2.59	12.42

Maximum Storage Required 100-Year (m^3) =	18.03

Storage Parameters	
Roof Area (m^2)	456
Usable Roof Area (%)	75%
Usable Roof Area (m^2)	341.88

5-Year Storage Summary	
Storage Available (m^3)	9.12
5-Year Storage Required (m^3)	8.39
Ponding Depth (m)	0.080

100-Year Storage Summary	
Storage Available (m^3)	18.23
100-Year Storage Required (m^3)	18.03
Ponding Depth (m)	0.120

Roof Drain Flow (B3)

Roof Drains Summary		
Type of Control Device	Watts Drainage - Accutrol Weir	
Number of Roof Drains	3	
Roof Drain Position	Open	
	5-Year	100-Year
Rooftop Storage Available (m^3)	9.12	18.23
Rooftop Storage Required (m^3)	8.39	18.03
Storage Depth (m)	0.080	0.120
Flow (Per Roof Drain) (L/s)	1.01	1.51
Total Flow (L/s)	3.03	4.54

Flow Rate Vs. Build-Up (Individual Drain)	
Depth (mm)	Flow (L/s)
0	0.00
5	0.06
10	0.13
15	0.19
20	0.25
25	0.32
30	0.38
35	0.44
40	0.50
45	0.57
50	0.63
55	0.69
60	0.76
65	0.82
70	0.88
75	0.95
80	1.01
85	1.07
90	1.14
95	1.20
100	1.26
105	1.32
110	1.39
115	1.45
120	1.51
125	1.58
130	1.64
135	1.70
140	1.77
145	1.83
150	1.89

	Roof Drain Flow		
	Individual Flow (l/s)	Storage Depth (mm)	Cumulative Flow (l/s)
	0.00	0	0.00
	0.06	5	0.19
	0.13	10	0.38
	0.19	15	0.57
	0.25	20	0.76
	0.32	25	0.95
	0.38	30	1.14
	0.44	35	1.32
	0.50	40	1.51
	0.57	45	1.70
	0.63	50	1.89
	0.69	55	2.08
	0.76	60	2.27
	0.82	65	2.46
	0.88	70	2.65
	0.95	75	2.84
5-Year	1.01	80	3.03
	1.07	85	3.22
	1.14	90	3.41
	1.20	95	3.60
	1.26	100	3.79
	1.32	105	3.97
	1.39	110	4.16
	1.45	115	4.35
100-Year	1.51	120	4.54
	1.58	125	4.73
	1.64	130	4.92
	1.70	135	5.11
	1.77	140	5.30
	1.83	145	5.49
	1.89	150	5.68

*Roof Drain model to be Accutrol Weirs, See attached sheets
*Roof Drain Flow information taken from Watts Drainage website

Note: The flow leaving through a restricted roof drain is based on flow vs. head information

STORM SEWER DESIGN SHEET

PROJECT: CCO-26-0590
LOCATION: 60 Moore Street
CLIENT: DS Studio

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
STREET	AREA ID	FROM MH	TO MH	C-VALUE	AREA	INDIV AC	CUMUL AC	INLET (min)	TIME IN PIPE	TOTAL (min)	i (5) (mm/hr)	i (10) (mm/hr)	i (100) (mm/hr)	5yr PEAK FLOW (L/s)	10yr 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)	(%)
Moore Street	B1C	CB5	MH1	0.88	0.03	0.03	0.03	10.00	0.52	10.52	104.19	122.14	178.56	8.91				8.91	24.19	23.38	200			0.50	0.746	15.28	63.16%
	B4			0.90	0.01	0.01	0.01	10.00			104.19	122.14	178.56	2.93				2.93									
	B3	BLDG	MH1	0.90	0.06	0.05	0.06	10.00	0.16	10.16	104.19	122.14	178.56	17.79				17.79	26.50	7.79	200			0.60	0.817	8.71	32.86%
	B1B	CB4	250mm STM	0.89	0.03	0.03	0.03	10.00	0.02	10.02	104.19	122.14	178.56	8.75				8.75	34.22	1.06	200			1.00	1.055	25.46	74.42%
		MH1	MH2				0.12	10.52	0.47	10.99	101.51	118.98	173.92	34.55				34.55	43.87	24.18	250			0.50	0.866	9.32	21.24%
	B1A	CB3	250mm STM	0.90	0.05	0.05	0.05	10.00	0.03	10.03	104.19	122.14	178.56	13.39				13.39	34.22	1.64	200			1.00	1.055	20.83	60.86%
	B1+B3+B4	MH2	300mm Main				0.17	10.52	0.45	10.97	101.51	118.98	173.92	47.60				47.60	62.04	32.86	250			1.00	1.224	14.44	23.28%

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) = 0.013

Designed:
FV

Checked:
CJM

Project No.:
CCO-26-0590

No.	Revision	Date
1	Issued For Review	2025.07.31

Date:
2024-12-05

Sheet No:
1 of 1

Adjustable Accutrol Weir

Tag: _____

Adjustable Flow Control for Roof Drains

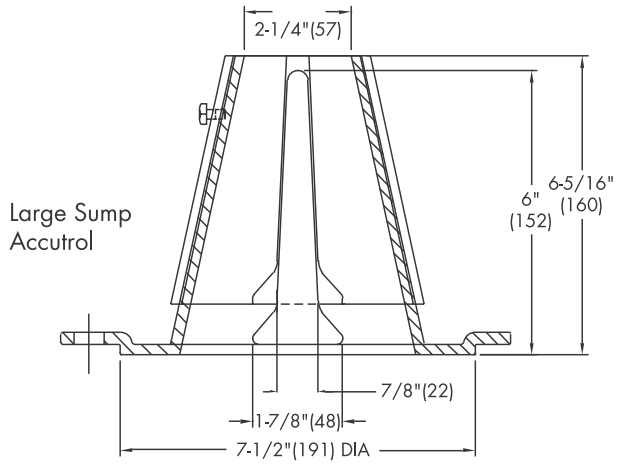
ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

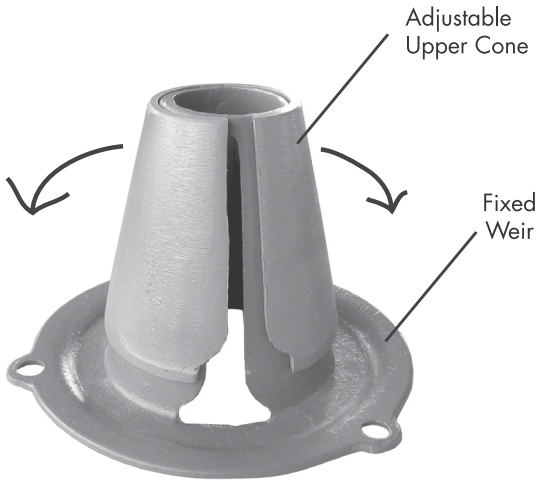
For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the flow rate for depths over 2" of head, set the slot in the adjustable upper cone according to the flow rate required. Refer to Table 1 below.
Note: Flow rates are directly proportional to the amount of weir opening that is exposed.

EXAMPLE:

For example, if the adjustable upper cone is set to cover 1/2 of the weir opening, flow rates above 2"of head will be restricted to 2-1/2 gpm per inch of head.

Therefore, at 3"of head, the flow rate through the Accutrol Weir that has 1/2 the slot exposed will be:
[5 gpm (per inch of head) x 2 inches of head] + 2-1/2 gpm (for the third inch of head) = 12-1/2 gpm.





1/2 Weir Opening Exposed Shown Above

TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	1"	2"	3"	4"	5"	6"
	Flow Rate (gallons per minute)					
Fully Exposed	5	10	15	20	25	30
3/4	5	10	13.75	17.5	21.25	25
1/2	5	10	12.5	15	17.5	20
1/4	5	10	11.25	12.5	13.75	15
Closed	5	5	5	5	5	5

Job Name _____ Contractor _____

Job Location _____ Contractor's P.O. No. _____

Engineer _____ Representative _____

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Canada: Tel: (905) 332-4090 • Fax: (905) 332-7068 • Watts.ca
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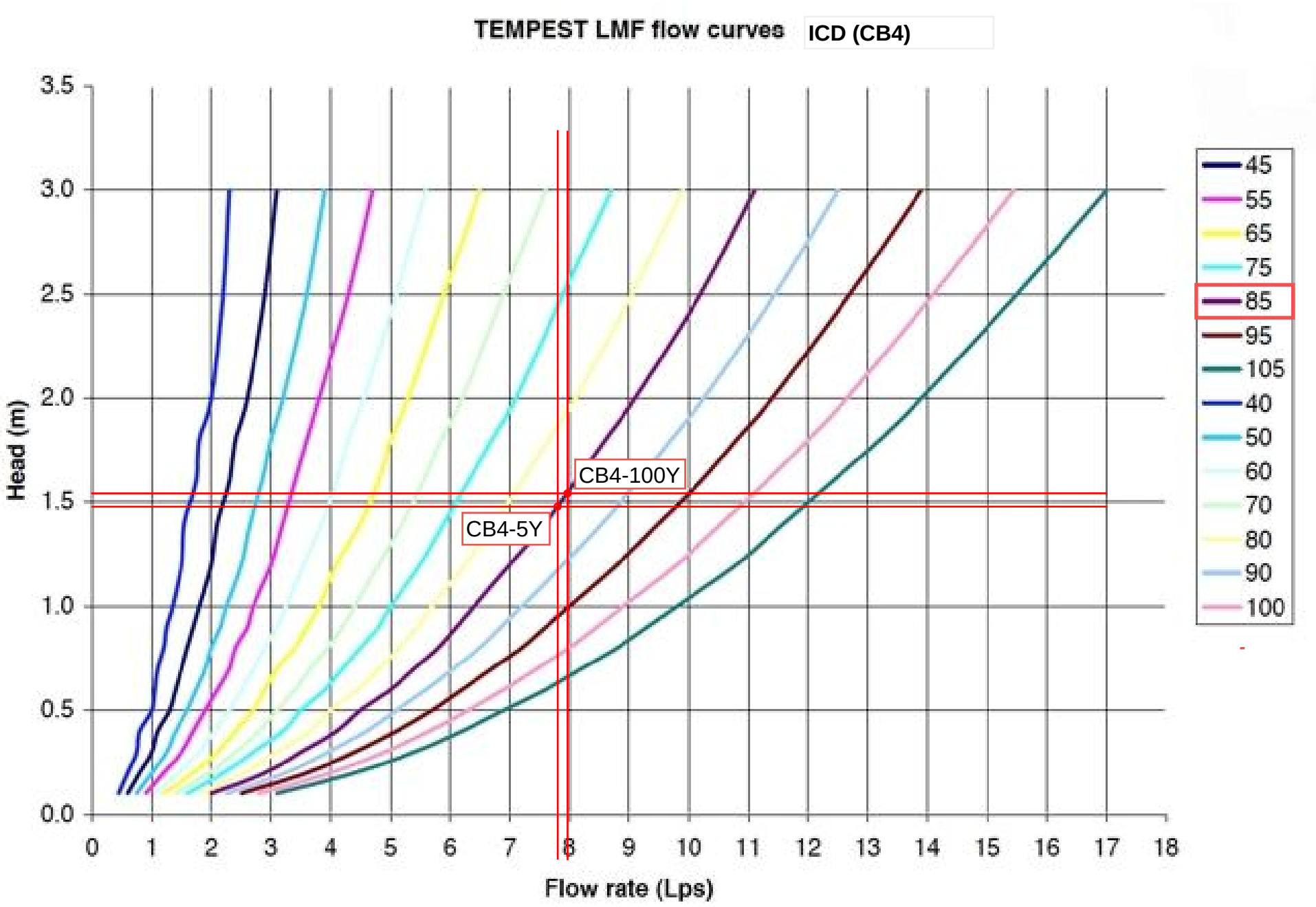
TEMPEST LMF flow curves
ICD (CB4)
Head (m)
Flow rate (Lps)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
CB4-100Y
CB4-5Y
45
55
65
75
85
95
105
40
50
60
70
80
90
100