BURNSIDE

Functional Servicing Report
70 Fountain Street East
Guelph, ON

Fitzrovia Residential Inc.
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Toronto, ON M4V 1L5

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December 19, 2025
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R.J. Burnside & Associates Limited

Report Prepared By:

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AK:js

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Disclaimer

1.0 Introduction and Background

R.J. Burnside & Associates Limited (Burnside) was retained by Fitzrovia Residential Inc. to prepare a Functional Servicing Report (FSR) in support of the proposed Official Plan Amendment (OPA) and Zoning Bylaw Amendment (ZBA) application for the proposed residential development at 70 Fountain Street East and 75 Farquhar Street in the City of Guelph.

This report will support the applications for OPA and ZBA by demonstrating that the subject lands can be adequately serviced (sanitary sewer, storm sewer, watermain and stormwater management) in accordance with applicable regulatory requirements and current City of Guelph standards.

1.1 Site Description

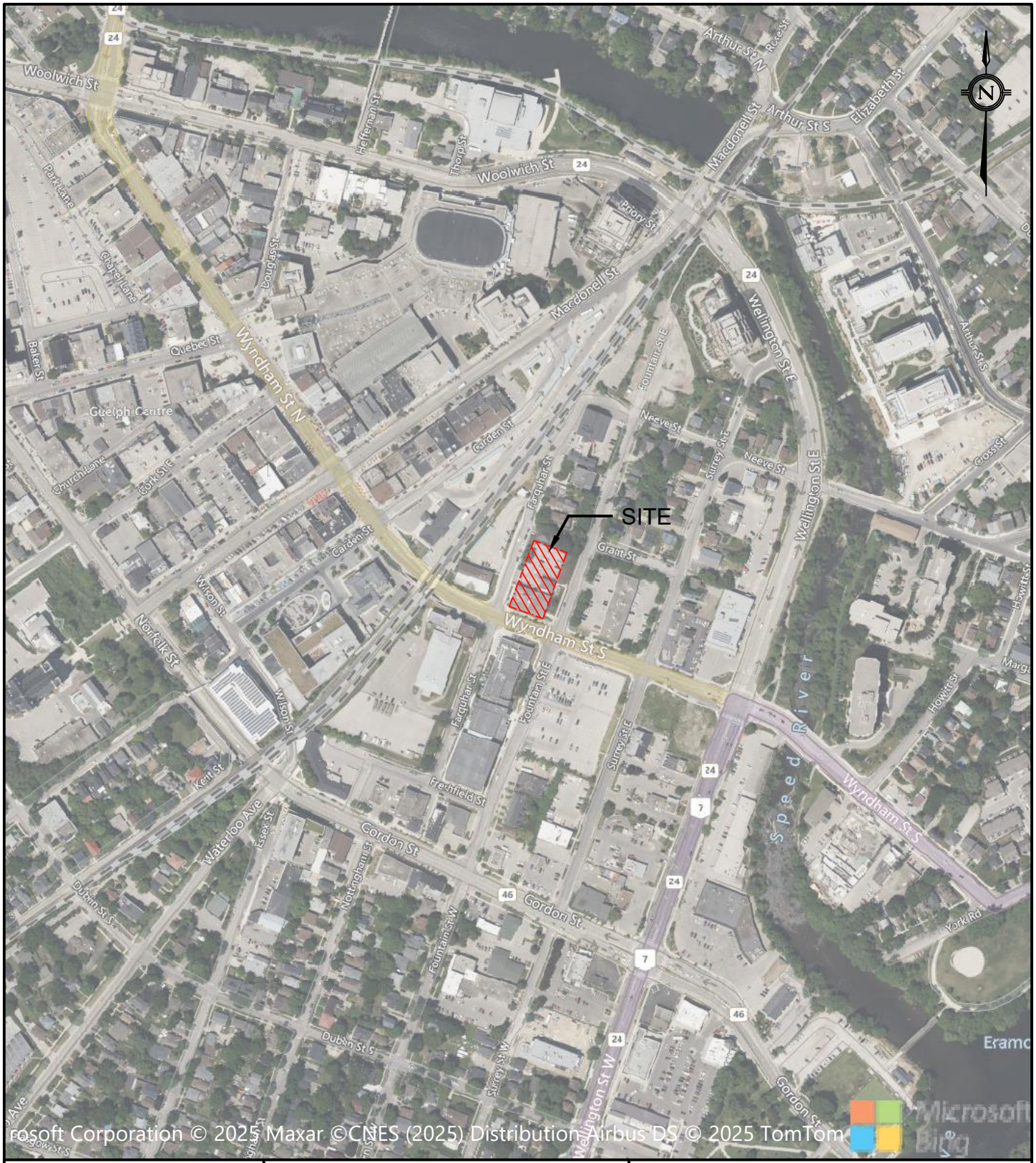
The subject site (0.213 hectares) is located at 70 Fountain Street East in Guelph. The site is bound by existing development to the north, Fountain Street East to the east, Wyndham Street South to the south, and Farquhar Street to the west.

The site currently consists of an existing two-storey office building and associated surface parking accessible off Farquhar Street. The existing building and parking area will be demolished to support the re-development of the site.

The proposed development is to include a 24-storey building, complete with 424 residential units and 428.3 m3 (4,610 sq.ft.) of retail space, along with the associated parking (underground parking) and amenity space.

The City of Guelph (the City) is currently undertaking an infrastructure improvement project along Wyndham Street South, between Wellington Street East and Farquhar Street, across the Wyndham Street South frontage of the site. The City's infrastructure improvement project is being completed to improve the capacity of the water and wastewater distribution system in Downtown Guelph (south of the Metrolinx railway corridor). Construction of the proposed infrastructure improvements across the frontage of the site is planned to commence in 2026 and be completed by the end of 2026 (subject to weather and site conditions).

See Figure 1 Site Location Plan and Figure 2 Existing Conditions Plan for details.



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Project Name

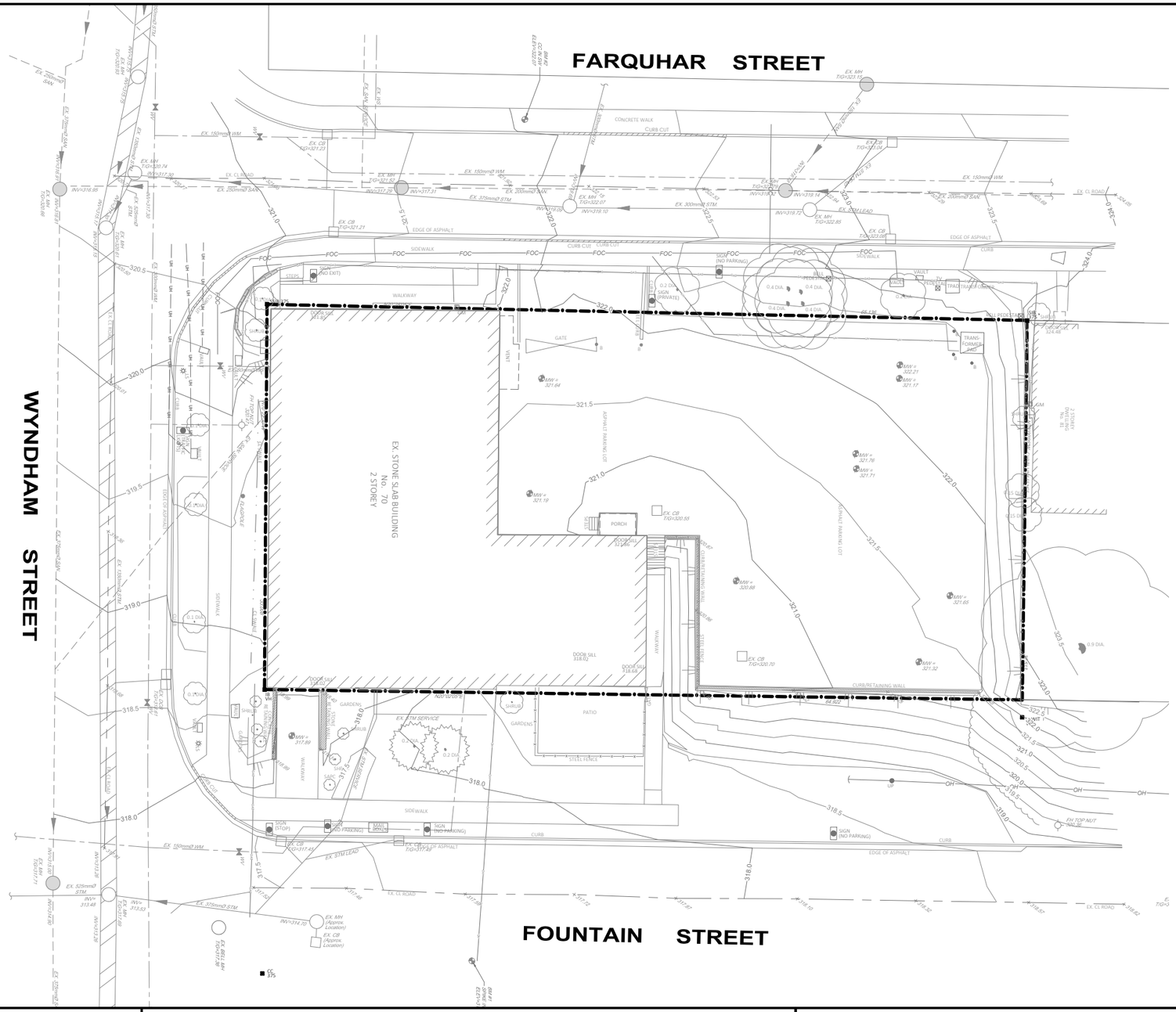
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title

SITE LOCATION PLAN

Drawn	Checked	Date	Drawing No.
ND	AK	25/12/17	**FIG 1**
Scale		Project No.	
NTS		300060546.1000	

File Name: 060546-FSR-FIGURE 1 - LOCATION PLAN.dwg Date Plotted: December 18, 2025 - 11:49 AM


FARQUHAR STREET
WYNDHAM STREET
FOUNTAIN STREET
EX. STONE SLAB BUILDING
No. 70
2 STOREY
EX. CB
EX. MH
EX. 200mmØ SAN.
EX. 375mmØ STM
EX. 150mmØ WM.
EX. 300mmØ STM.
EX. 525mmØ STM.
EX. 250mmØ SAN.
EX. 450mmØ STM.
EX. 600mmØ STM.
EX. 900mmØ STM.
EX. 1050mmØ STM.
EX. 1200mmØ STM.
EX. 1350mmØ STM.
EX. 1500mmØ STM.
EX. 1650mmØ STM.
EX. 1800mmØ STM.
EX. 2100mmØ STM.
EX. 2400mmØ STM.
EX. 2700mmØ STM.
EX. 3000mmØ STM.
EX. 3300mmØ STM.
EX. 3600mmØ STM.
EX. 3900mmØ STM.
EX. 4200mmØ STM.
EX. 4500mmØ STM.
EX. 4800mmØ STM.
EX. 5100mmØ STM.
EX. 5400mmØ STM.
EX.

1.2 Background Studies

The servicing and stormwater management approach presented within this Functional Servicing Report has been developed to comply with the results and recommendations presented in the following documents, as well as the existing services / proposed services illustrated on the following City of Guelph drawings:

- Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025)
- City of Guelph Development Engineering Manual (dated October 2023)
- City of Guelph Plan and Profile Record Drawings:
  - Wyndham Street Sta. 0+000 to Sta. 0+120 Drawing No. C03A, Revision 6 - As Constructed, dated 10/24/13
  - Wyndham Street Sta. 0+120 to Sta. 0+154 Drawing No. C04A, Revision 5 - As Constructed, dated 10/24/13
  - Wyndham Street Reconstruction - Farquhar to Wellington City of Guelph, Reconstruction 1+124 to 1+255 Drawing No. 2A-12A, Revision 2 - As Built, dated 03/12
  - Wyndham Street Reconstruction - Farquhar to Wellington City of Guelph, Reconstruction 1+255 to 1+380 Drawing No. 2A-12B, Revision -, dated August 2009
  - Wyndham Street Reconstruction - Farquhar to Wellington City of Guelph, Farquhar and Fountain Intersection Plan Drawing No. 2A-12C, Revision 2 - As Built, dated 03/12
  - Farquhar Street Reconstruction - Wyndham Street to End of Farquhar Street, Reconstruction Sta. 0+000 to Sta. 0+150 Drawing No. O-998B, Revision 2 - As Built, dated 01/2013
  - Farquhar St., Gordon St. to C.N.R., Services Drawing No. O-998, Revision 1, dated 06/99
  - Fountain St. East, Wyndham St. South to End, Services Drawing No. H-204, Revision 2, dated 08/93
- City of Guelph Plan and Profile Drawings:
  - Wellington Street East & Wyndham Street South Capacity Improvements City of Guelph – New Construction (1/6) Drawing No. NC-01, Revision 6 – Issued for Construction, dated 04/2025
- Plan of Survey of Lots 19 and 20, Registered Plan 8, City of Guelph, County of Wellington (Van Harten Surveying Inc., dated November 10, 2025)
- Geotechnical Engineering Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025)
- Hydrogeological Review Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025)

A copy of the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025) has been included in Appendix A.

The Geotechnical Engineering Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025) and the Hydrogeological Review Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025) have been submitted under separate cover.

2.0 Existing Site Conditions

2.1.1 Topography

As illustrated on the Plan of Survey of Lots 19 and 20, Registered Plan 8, City of Guelph, County of Wellington (Van Harten Surveying Inc., dated November 10, 2025), the site slopes from north to south across the property. The elevation at the north corner of the property is identified as 324.01 m and the elevation at the south corner is identified as 318.99 m. The change in elevation across the site is approximately 5 m from Farquhar Street to the intersection of Fountain Street East and Wyndham Street.

2.1.2 Soil Conditions

A subsurface geotechnical investigation, which included the advancement of two (2) boreholes on site, was completed by Grounded Engineering Inc. in July of 2025. Following this investigation, an additional ten (10) boreholes were advanced on site in October of 2025. The results of these investigations have been presented in the Geotechnical Engineering Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025).

Based on the results of the geotechnical investigation, the soils on site were found to generally consist of the following:

- Approximately 0.06 m to 0.15 m of surficial fill (pavements, aggregate, topsoil, etc.),
- Approximately 0.3 m to 4.4 m of earth fill consisting of sands and gravels, with some silt and clays,
- Approximately 0.2 m to 8.8 m of sands and gravel deposit, and
- Approximately 2.1 m to 9.1 m of bedrock.

2.1.3 Groundwater Conditions

As part of the geotechnical investigation, groundwater monitoring wells were installed in select boreholes across the site to allow for the measurement of stabilized groundwater levels.

The groundwater elevation across the site ranges from +/- 318.00 in the northernly portion of the site to +/- 317.00 in the southern corner of the site.

A summary of the groundwater monitoring data has been included in the Geotechnical Engineering Report for 70 Fountain Street East Guelph Ontario (Grounded Engineering Inc., dated December 2, 2025). Detailed groundwater monitoring well observation data is also summarized in the Hydrogeological Review Report (Grounded Engineering Inc., dated December 2, 2025).

Based on the groundwater monitoring data obtained to date, a dewatering program during construction is anticipated. Details of the dewatering program, including anticipated discharge quantities and quality, are outlined and discussed in the Hydrogeological Review Report (Grounded Engineering Inc., dated December 2, 2025).

To comply with the City's minimum separation distance of 0.5 m from the seasonal high groundwater elevation and the basement floor elevation (as detailed in Section 5.9 of the City's Development Engineering Manual (dated October 2023), a full watertight structure in accordance with the Ontario Building Code is proposed. It is Burnside's understanding that the full watertight structure will be designed to withstand uplift and hydrostatic pressures, with no permanent drainage system.

2.2 Floodlines

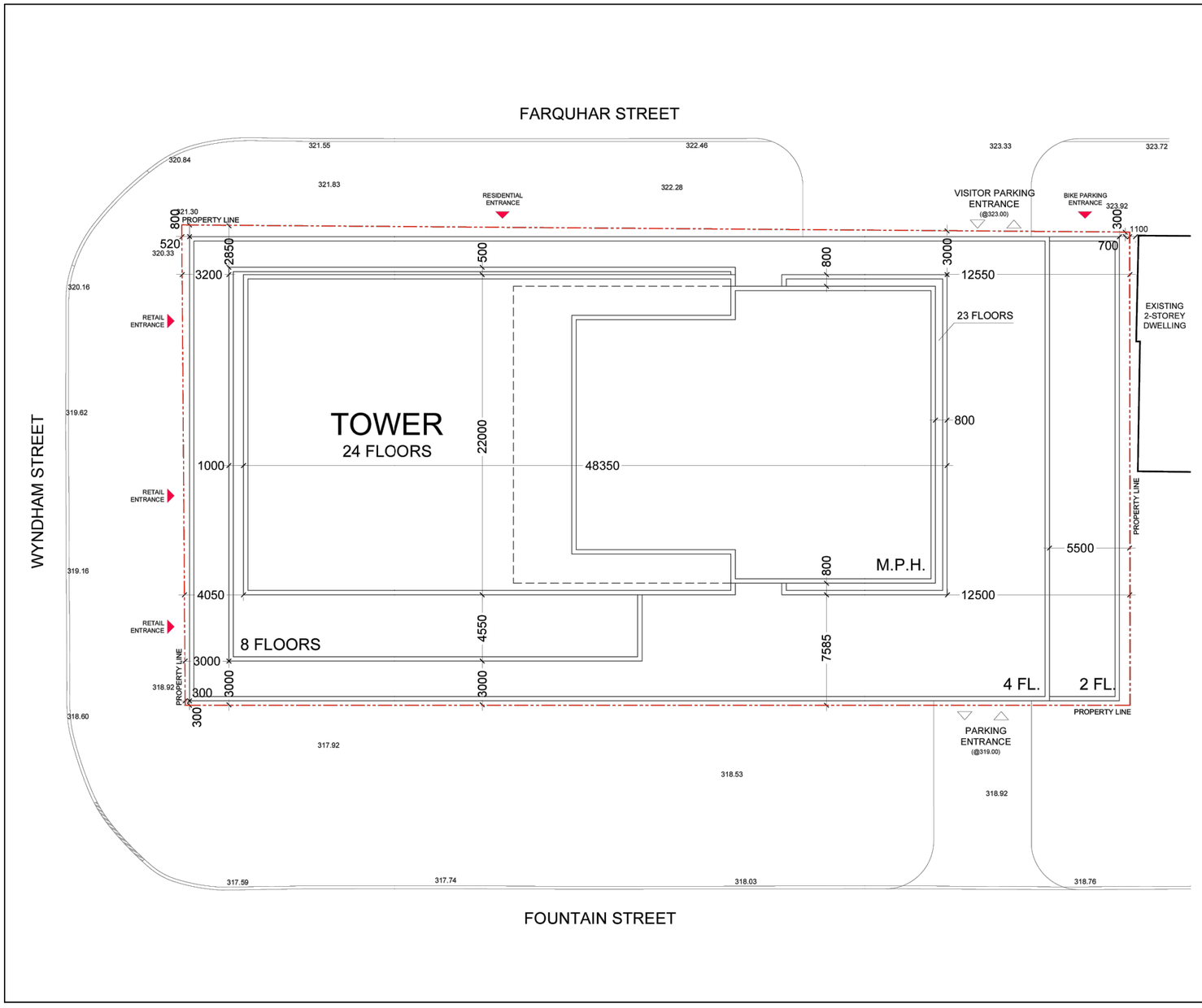
As per the Grand River Conservation Authority (GRCA) Web GIS Mapping (dated July 25, 2025), the site is not located within the Grand River Conservation Authority's regulated area. In addition to this, the site is not located with the Regulatory Floodplain.

3.0 Proposed Development

The proposed re-development is to include a 24-storey building, complete with 424 residential units, 428.3 m3 (4,610 sq.ft.) of retail space, along with the associated parking (underground parking) and amenity space.

Figure 3 Proposed Site Plan illustrates the proposed development layout prepared by Hariri Pontarini Architects (dated December 4, 2025).

Vehicular access to the site will be provided via both Fountain Street East and Farquhar Street.



General Notes:

1. These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretations of these documents by the Contractor except those made by the Architect or with the Architect's review or clarification or supplementary information regarding the intent of the Contract Documents. The Contractor will review Shop Drawings submitted by the Subcontractor for their conformance.

2. Drawings are only to be scaled for construction. Contractor to verify all existing conditions and dimensions required to perform the Work and report any discrepancies with the Contract Documents to the Architect before commencing work.

3. Positions of exposed or finished mechanical or electrical devices, fittings, and fixtures are indicated on the Architectural drawings. The locations shown on the Architectural drawings govern over locations indicated on other drawings. Where not clearly located, install as directed by the Architect.

North

DRAFT

No.	Issued For During	ORC 18, 2025
Rev.	Issue / Description	Date

Architect of Record

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Project Title

70 FOUNTAIN STREET EAST
GUELPH, ON

SITE PLAN

Project number: 2518
Scale:
Date: DECEMBER 04, 2025
Drawn by: HPA

Drawing No.: A1.01
Revision:

Notes
1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

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Project Name
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title
PROPOSED SITE PLAN

Drawn	Checked	Date	Drawing No.
ND	AK	25/12/17	**FIG 3**
Scale		Project No.	
NTS		300060546.1000	

File Name: 060546-FSR-FIGURE 3 - SITE PLAN.dwg Date Plotted: December 18, 2025 - 11:49 AM

3.1 Site Grading

The proposed site grading is shown on the Site Grading and Servicing Plan (Drawing No. SGSP-1). The site has been graded to provide pedestrian access to the building from Fountain Street East, Wyndham Street and Farquhar Street. Vehicular access to the building has been provided via Fountain Street East and Farquhar Street

3.2 Watermain Supply and Servicing

3.2.1 Existing Watermain Infrastructure

Under existing conditions, and upon completion of the Wellington Street East & Wyndham Street South Capacity Improvements construction (scheduled for construction in 2026), the watermains across the site frontages or the site will be as follows:

- Farquhar Street – existing 150mm diameter watermain (from Wyndham Street South to the End of Farquhar Street)
- Fountain Street East – existing150mm diameter watermain (from Wyndham Street South to beyond the easterly limits of the site)
- Wyndham Street South – existing 300mm diameter watermain (from Farquhar Street to Fountain Street East)

As part of the City's Wellington Street East & Wyndham Street South Capacity Improvements construction project, the existing 300 mm diameter watermain on Wyndham Street South will be maintained.

Water supply for the existing building on site is currently provided by a 150 mm diameter water service lateral extended from the existing 300 mm diameter watermain on Wyndham Street South that reduces to a 50 mm diameter water service at the building.

Fire protection for the site is currently provided by an existing fire hydrant located at the south side of the existing building, extended from the existing 300 mm diameter watermain on Wyndham Street South.

3.2.2 Proposed Watermain Infrastructure

Water supply for the proposed re-development is proposed to be provided via the extension of a new 200 mm diameter water service lateral from the existing 300 mm diameter watermain on Wyndham Street South. As part of the extension of a new water service lateral, the existing 150 mm diameter water service lateral on Wyndham Street South will be removed and capped / plugged at the main.

3.2.3 Water Demand

As outlined in the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025), the anticipated domestic demand for the proposed development was calculated to be 2.27 L/s (Average Day Demand) and 3.05 L/s (Maximum Day Demand) based on the criteria developed in the City of Guelph 2021 Water Supply Master Plan (AECOM, dated July 2022).

The proposed average day demand and maximum day demand of 2.27 L/s and 3.05 L/s, respectively, were analyzed in the City's hydraulic model. The City's hydraulic model identified that the post-development pressures ranged from 75-81 psi. While this slightly exceeds the City's preferred operating range of 50-80 psi, the City has identified that it is within the allowable pressure range of 40-100 psi and that the development will not noticeably impact pressure in the surrounding area.

A copy of the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025) has been included in Appendix A.

3.2.4 Fire Flow Analysis and Fire Hydrant Coverage

As part of the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025), the fire flow requirement for the development has been identified to be approximately 200 L/s. This is in accordance with the City's fire flow guideline which specifies that 200 L/s is required for high-density residential properties.

There are currently two (2) existing fire hydrants in located in close proximity to the development.

The first fire hydrant on Wyndham Street South, located to the south of the Wyndham Street South / Farquhar Street intersection, is connected to the existing 300mm diameter watermain on Wyndham Street South. The City's analysis has identified the available fire flow in this existing fire hydrant to be 776 L/s.

The second fire hydrant on Fountain Street, located approximately 60 m east of the Wyndham Street South / Fountain Street intersection, is connected to the existing 150 mm diameter watermain on Fountain Street. The City's analysis has identified the available fire flow in this existing fire hydrant to be 109 L/s.

Based on the above, there is sufficient fire flow in the existing fire hydrant on Wyndham Street South.

A copy of the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025) has been included in Appendix A.

3.3 Sanitary Servicing

3.3.1 Existing Sanitary Sewer Infrastructure

Under existing conditions, and upon completion of the Wellington Street East & Wyndham Street South Capacity Improvements construction, the sanitary sewers across the site frontages are as follows:

- Farquhar Street – existing 250 mm diameter sanitary sewer (from Wyndham Street South to approximately 60 m east of the intersection of Wyndham Street South and Farquhar Street) which then reduces to an existing 200 mm diameter sanitary sewer
- Fountain Street East – there is no sanitary sewer on Fountain Street East across the frontage of the site
- Wyndham Street South – the existing 375 mm diameter sanitary sewer (from Farquhar Street to Fountain Street East) is to be removed and replaced with a new 600 mm diameter sanitary sewer (from Farquhar Street to Fountain Street East) as part of the City's Wellington Street East & Wyndham Street South Capacity Improvements construction project

As part of the City's Wellington Street East & Wyndham Street South Capacity Improvements, the existing 375 mm diameter sanitary sewer on Wyndham Street South will be replaced with a new 600 mm diameter sanitary sewer. The purpose of this replacement and increase in size is to improve and increase the available sanitary sewer capacity in the downtown core, such that development potential and increased development density is not restricted. It is Burnside's understanding that the construction of the works along Wyndham Street, between Fountain Street East and Farquhar Street, is anticipated to start in 2026 and will be complete by end of 2026.

Sanitary service for the existing building on the site is currently provided by a 150 mm sanitary service lateral connected to the existing 375mm diameter sanitary sewer on Wyndham Street South. As part of the construction for the City's Wellington Street East & Wyndham Street South Capacity Improvements project, the existing sanitary service lateral will be re-connected to the new 600 mm diameter sanitary sewer.

3.3.2 Proposed Sanitary Sewer Infrastructure

Sanitary service for the proposed re-development will be provided by the extension of a new 200 mm diameter sanitary service lateral from the new 600 mm diameter sanitary sewer on Wyndham Street South. As part of the extension of the new 200 mm diameter sanitary service lateral, the existing 150 mm diameter sanitary service lateral be removed and capped / plugged at the main.

3.3.3 Sanitary Demand

As outlined in the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025), the anticipated peak wastewater flow generated from the proposed development was calculated to be 11.65 L/s (Average Day Demand) and 3.05 L/s (Maximum Day Demand) based on the criteria outlined in the City's Development Engineering Manual (October 2023).

The City's wastewater system model has identified that there is no surcharging within the downstream sanitary sewer system, from the site to the City's Water Resource Recovery Centre (Wastewater Treatment Plant).

A copy of the Wastewater and Water Capacity Check for 70 Fountain Street East and 75 Farquhar Street in Guelph (City of Guelph, dated October 22, 2025) has been included in Appendix A.

3.4 Storm Servicing

3.4.1 Existing Storm Sewer Infrastructure

Under existing conditions, and upon completion of the Wellington Street East & Wyndham Street South Capacity Improvements construction, the storm sewers across the site frontages are as follows:

- Farquhar Street – existing 375 mm diameter storm sewer (from Wyndham Street South to approximately 60 m east of the intersection of Wyndham Street South and Farquhar Street) which then reduces to an existing 300 mm diameter storm sewer
- Fountain Street East – existing 375 mm diameter storm sewer (from Wyndham Street South to approximately 20 m east of the intersection of Wyndham Street South and Fountain Street East)
- Wyndham Street South – existing 1350 mm diameter storm sewer (from Farquhar Street to Fountain Street East)

As part of the City's Wellington Street East & Wyndham Street South Capacity Improvements construction project, the existing 1350 mm diameter storm sewer on Wyndham Street South will be maintained.

3.4.2 Proposed Storm Sewer Infrastructure

Storm service for the proposed re-development will be provided by the extension of a new 300 mm diameter storm service lateral from the existing 375 mm diameter storm sewer on Farquhar Street.

3.5 Stormwater Management (SWM)

As per Appendix G – Stormwater Design Criteria and Targets of the City's Development Engineering Manual (October 2023), the site is located within the boundary of Policy Area 13. Based on this Policy Area (Policy Area 13), the stormwater management criteria for re-development of the site are as follows:

a) Maintain pre-development recharge rate, volume and hydroperiods at post-development conditions

b) Provide a minimum of 5mm of volume control

c) Thermal preventive and mitigation measures for cool water habitat are to be provided (as per Figure 4.1 of the City's SWM Master Plan)

d) Enhanced (80% TSS removal) level of water quality treatment

e) Control peak flow post to pre for all design events (2-100 year)

A hydrologic model (MIDUSS Version 2.25) was prepared to determine peak flows under both existing and proposed post-development conditions. The City of Guelph Chicago Storm parameters were used to model the 2-year to 100-year design storm events for the site and are summarized in Table 1. These parameters are consistent with the City of Guelph Management Master Plan (dated March 2023).

Table 1: Chicago Storm Parameters per City of Guelph Design Criteria

Coefficient	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
a	563.699	750.423	855.183	972.202	1054.539	1122.601
b	1.5	1.51	1.5	1.5	1.5	1.5
c	0.766	0.769	0.764	0.752	0.746	0.738
r	0.4	0.4	0.4	0.4	0.4	0.4
Duration (min)	240	240	240	240	240	240

The Horton infiltration method was used in the MIDUSS model. The parameters were as per the City of Guelph standards and are summarized in Table 2.

Table 2: Horton Parameters for MIDUSS Model

Parameter	Impervious Areas	Pervious Areas
Maximum Infiltration	0.0 mm/hr	75.0 mm/hr
Minimum Infiltration	0.0 mm/hr	12.5 mm/hr
Lag Constan	0.00 hr	0.25 hr
Depression Storage	1.5 mm	5.0 mm

3.5.1 Existing Conditions

Under existing conditions, the 0.213 ha site has been modelled as three catchments as follows:

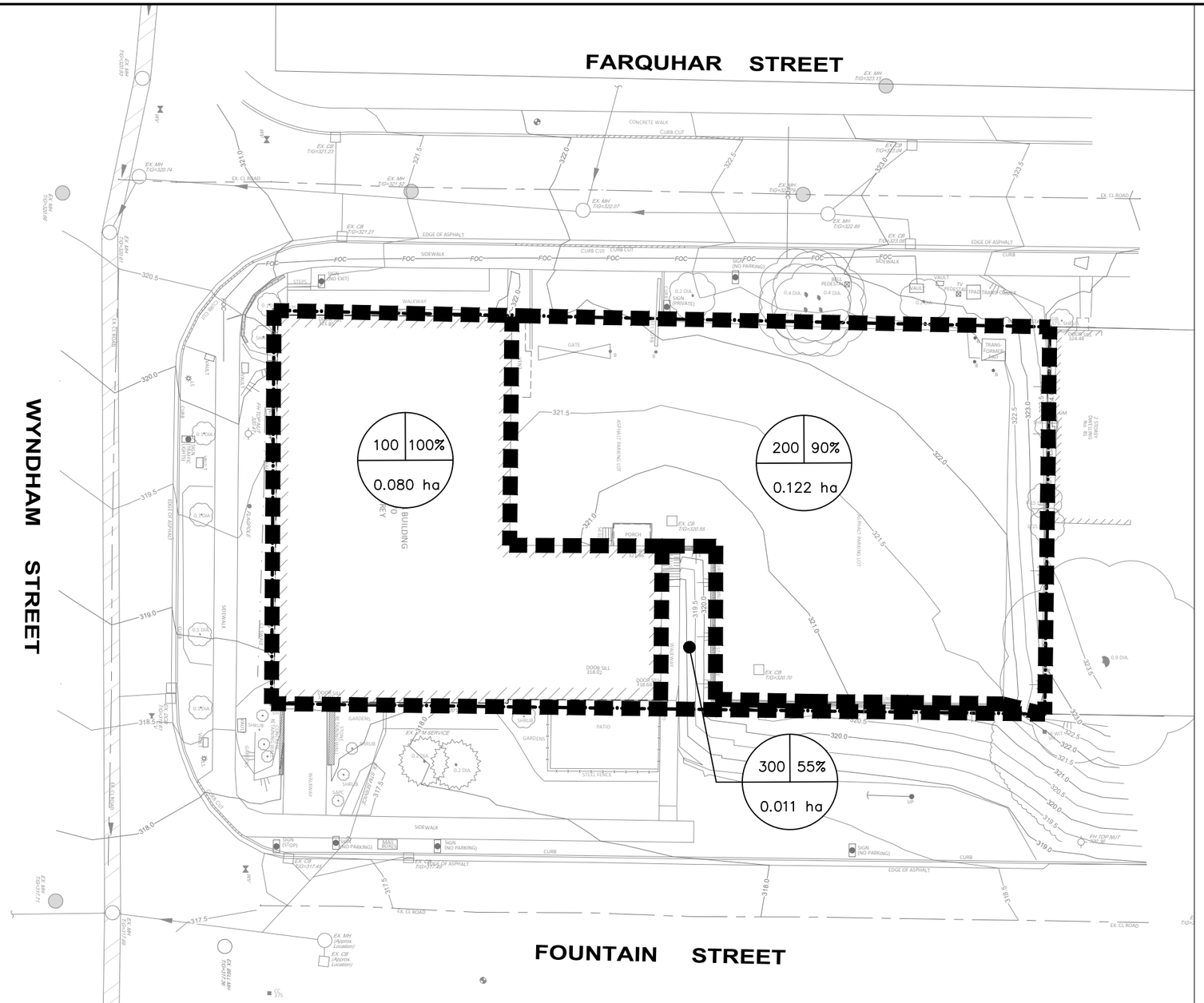
- Catchment 100 is 0.080 ha in size with an imperviousness of 100%. Catchment 100 represents the existing building rooftop. Runoff from Catchment 100 is currently directed to the existing storm sewer system on Fountain Street South and Wyndham Street.
- Catchment 200 is 0.122 ha in size with an imperviousness of 90%. Catchment 200 includes the existing parking area and landscaped area around the perimeter of the site. Runoff generated from Catchment 200 is currently captured by the on-site storm sewer system and directed to the existing storm sewer on Farquhar Street.
- Catchment 300 is 0.011 ha in size with an imperviousness of 55%. Catchment 300 represents the existing sidewalk and landscape area on site. Runoff generated from Catchment 300 currently sheetflows overland to the existing storm sewer system on Fountain Street South.

Refer to Figure 4 Existing Conditions Drainage Area for details.

Refer to Appendix B for the MIDUSS modelling files for the existing condition modelling output.

Table 3: Existing Condition Flow Rates

	Peak Flow Rate (m^3/s)					
	2-Year	**5-Year**	**10-Year**	**25-Year**	**50-Year**	**100-Year**
Catchment 100	0.022	0.030	0.036	0.041	0.045	0.049
Catchment 200	0.031	0.042	0.050	0.058	0.064	0.069
Catchment 300	0.002	0.003	0.004	0.005	0.005	0.006
Total Flow from Site	**0.055**	**0.075**	**0.090**	**0.103**	**0.114**	**0.124**


FARQUHAR STREET
WYNDHAM STREET
FOUNTAIN STREET
100 100%
0.080 ha
200 90%
0.122 ha
300 55%
0.011 ha
BUILDING
EX. CL ROAD
EDGE OF ASPHALT
SIDEWALK
CURB
CURB CUT
CONCRETE WALK
WALKWAY
GATE
STEPS
PORCH
PATIO
GARDENS
STEEL FENCE
ASPHALT PARKING LOT
EX. MH TIG=323.15
EX. MH TIG=321.74
EX. MH TIG=321.10
EX. MH TIG=322.07
EX. MH TIG=322.85
EX. CB TIG=321.23
EX. CB TIG=321.04
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EX. CB TIG=317.58
EX. MH TIG=317.71
EX. MH TIG=317.98
EX. MH TIG=318.02
EX. MH TIG=318.07
EX. MH TIG=318.08
EX. MH TIG=318.12
EX. MH TIG=318.13
EX. MH TIG=318.14
EX. MH TIG=318.15
EX. MH TIG=318.16
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EX. MH TIG=318.19
EX. MH TIG=318.20
EX. MH TIG=318.21
EX. MH TIG=318.22
EX. MH TIG=318.23
EX. MH TIG=318.24
EX. MH

3.5.2 Allowable Release Rates

- As per the City of Guelph criteria for Policy Area 13, all post-development peak flows generated from the site are to be controlled to pre-development levels for the full range of design storm events (2-100 year). A summary of the allowable release rates from the site is provided in Table 4.

Table 4: Allowable Release Rates

	Allowable Release Rate (m^3/s)					
	2-Year	**5-Year**	**10-Year**	**25-Year**	**50-Year**	**100-Year**
Total Flow from Site	**0.055**	**0.075**	**0.090**	**0.103**	**0.114**	**0.124**

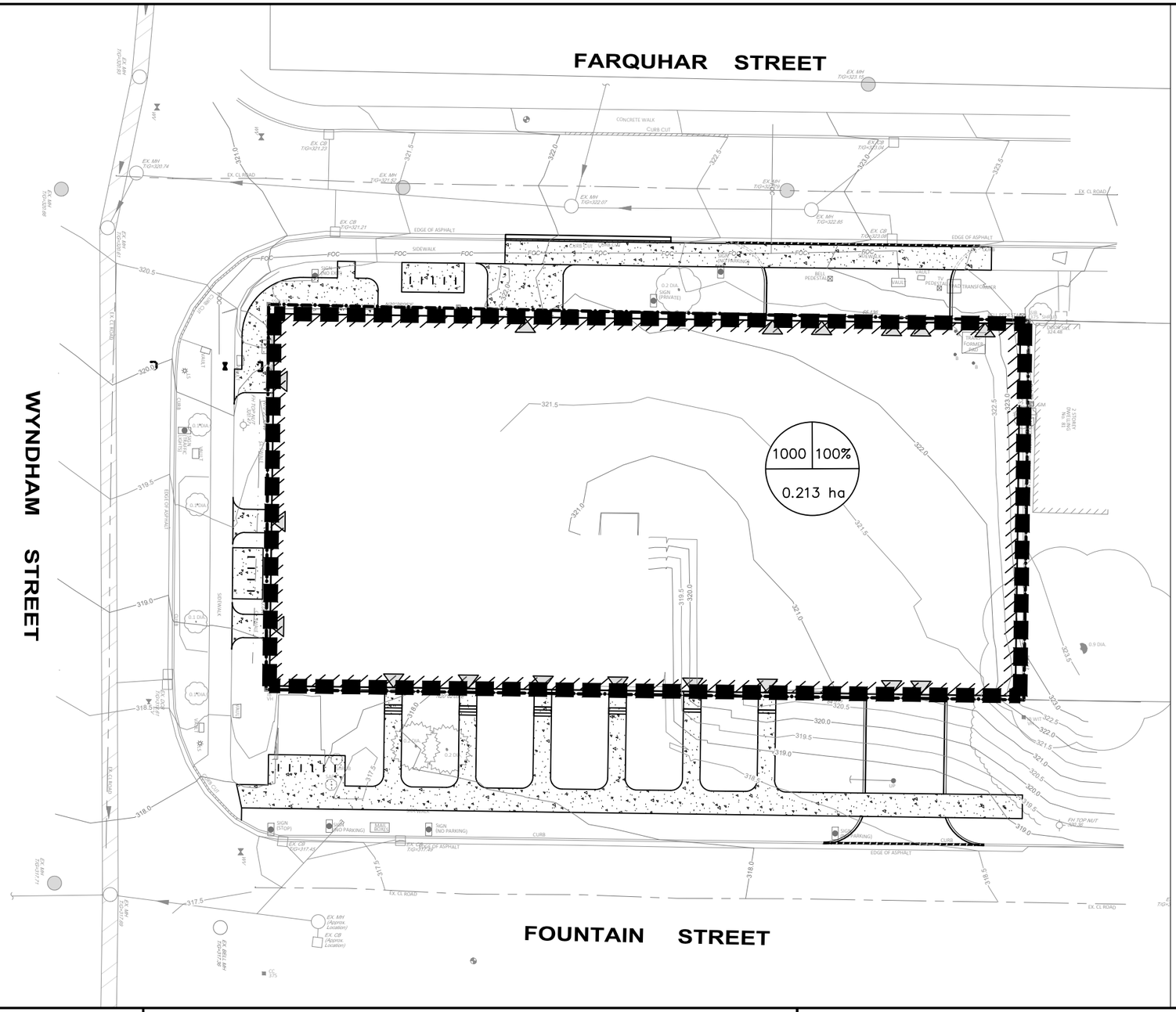
3.5.3 Post-Development Conditions

Under post-development conditions, the 0.213 ha site has been modelled as one catchment area as follows:

- Catchment 1000 is 0.213 ha in size with an imperviousness of 100%. Catchment 1000 represents the rooftop of the proposed building. Runoff generated from Catchment 1000 will be captured and conveyed to the existing 375 mm diameter storm sewer on Farquhar Street.

Refer to Figure 5: Post Development Conditions Drainage Area for details.

Refer to Appendix B for the MIDUSS modelling files for the post-development condition modelling output.



LEGEND

- PROPERTY BOUNDRY
- EXISTING CONTOURS (195.0)
- EXISTING STORM SEWER (Ex. MH, Ex. 375mmØ STM)
- EXISTING FENCING
- EXISTING CURB & GUTTER (Ex. EP, Ex. CURB)
- EXISTING RETAINING WALL
- PROPOSED BUILDING
- PROPOSED BUILDING ENTRANCE
- PROPOSED CURB & GUTTER (FACE OF CURB, BACK OF CURB)
- PROPOSED BUILDING - INTERNAL WALL
- DRAINAGE BOUNDARY
- DRAINAGE AREA NUMBER
- PERCENT IMPERVIOUS
- DRAINAGE AREA (ha)

1000 | 100%
0.213 ha

Notes
1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

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Client
FITZROVIA REAL ESTATE INC.
2 ST CLAIR AVE. W., SUITE 2100
TORONTO, ON
M4V 1L5

Project Name
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title
POST DEVELOPMENT CONDITION
DRAINAGE AREAS

Drawn	Checked	Date	Drawing No.
ND	AK	25/12/17	**FIG 5**
Scale		Project No.	
1:400		300060546.1000	

File Name: 060546-FSR-FIGURE4-5 - CATCHMENTS.dwg Date Plotted: December 18, 2025 - 11:49 AM

3.5.4 Routing – Post-Development Conditions

The post-development conditions were modelled using MIDUSS model to calculate the peak flows under proposed conditions.

A summary of the post-development condition peak flow rates for the 2-year through 100-year design storm events are presented in Table 5.

Table 5: Post-Development Condition Flow Rates for 2 to 100 Year Design Storm Events

	Peak Flow Rate (m^3/s)					
	2-Year	**5-Year**	**10-Year**	**25-Year**	**50-Year**	**100-Year**
Catchment 1000	0.052	0.072	0.084	0.100	0.112	0.122
Total Flow from Site	**0.052**	**0.072**	**0.084**	**0.100**	**0.112**	**0.122**

For the 2-year through 100-year design storm events, a summary and comparison of the existing condition peak flow rates, the allowable release rates and post-development condition peak flow rates are also provided in Table 6.

Table 6: Comparison of Existing Peak Flows and Post-Development Flow Rates

	Peak Flow Rate (m^3/s)					
	2-Year	**5-Year**	**10-Year**	**25-Year**	**50-Year**	**100-Year**
Existing Condition – Total Flow from Site	0.055	0.075	0.090	0.103	0.114	0.124
Allowable Release Rate	0.055	0.075	0.090	0.103	0.114	0.124
Proposed Condition – Total Flow from Site	0.052	0.072	0.084	0.100	0.112	0.122

As shown in Table 6, the post-development peak flow rates are less than the allowable release rates for the 2-year through 100-year design storm events.

3.5.5 Volume Retention

As noted in Section 2.5, a minimum of 5 mm of runoff must be retained on site. Due to the development footprint and the required minimum separation distance of 5m to any existing and proposed structures, the provision of on-site retention is not feasible and has not been provided.

3.5.6 Quality Control Treatment

As noted in Section 2.5, an enhanced level of quality control is required on site. Since all runoff generated from the site is from the rooftop of the proposed building and rooftop runoff is considered “clean”, quality control treatment will not be provided.

3.5.7 Water Balance

As noted in Section 2.5, the existing condition recharge rate, volume and hydroperiods are to be maintained under post-development conditions. Monthly Water Balance calculations were prepared using the Thornthwaite and Mather methodology to analyze the annual runoff and recharge volumes for the site under both existing and post-development conditions. Under existing conditions, the site has an annual recharge volume of 42 m^3/year. In the proposed post-development condition, without mitigation measures, the post-development annual recharge volume is 0 m^3/year.

Due to the development footprint and the required minimum separation distance of 5m to any existing and proposed structures, the provision of an infiltration system on site to maintain the existing condition annual recharge volume is not feasible and has not been provided.

WATER BALANCE CALCULATIONS
70 Fountain Street East
Fitzrovia Real Estate Inc.
Guelph, ON
PROJECT No: 300060546.1000

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TABLE WB-1

Pre- and Post-Development Monthly Water Balance Components

Based on Thornthwaite's Soil Moisture Balance Approach with a Soil Moisture Retention of 75 mm (Urban Lawns in Sandy Loam)

Climate data from WATERLOO WELLINGTON AIRPORT Climate Station (1981 - 2010)

Potential Evapotranspiration Calculation	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**YEAR**
Average Temperature (Degree C)	-6.50	-5.50	-1.00	6.20	12.50	17.60	20.00	18.90	14.50	8.20	2.50	-3.30	**7.0**
Heat index: $i = (t/5)^{1.514}$	0.00	0.00	0.00	1.38	4.00	6.72	8.16	7.49	5.01	2.11	0.35	0.00	**35.2**
Unadjusted Daily Potential Evapotranspiration U (mm)	0.00	0.00	0.00	29.03	60.80	87.22	99.80	94.02	71.10	38.99	11.14	0.00	**492**
Adjusting Factor for U (Latitude 43° 32' N)	0.81	0.82	1.02	1.12	1.26	1.28	1.29	1.2	1.04	0.95	0.81	0.77	
Adjusted Potential Evapotranspiration PET (mm)	0	0	0	33	77	112	129	113	74	37	9	0	**582**
COMPONENTS	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**YEAR**
Precipitation (P)	65	55	61	75	82	82	99	84	88	67	87	71	**916.3**
Potential Evapotranspiration (PET)	0	0	0	33	77	112	129	113	74	37	9	0	**582**
P - PET	65	55	61	42	6	-29	-30	-29	14	30	78	71	**334**
Change in Soil Moisture Storage	0	0	0	0	0	-29	-30	-16	14	30	31	0	**0**
Soil Moisture Storage max 75 mm	75	75	75	75	75	46	16	0	14	44	75	75	
Actual Evapotranspiration (AET)	0	0	0	33	77	112	129	100	74	37	9	0	**569**
Soil Moisture Deficit max 75 mm	0	0	0	0	0	29	59	75	61	31	0	0	
Water Surplus - available for infiltration or runoff	65	55	61	42	6	0	0	0	0	0	47	71	**347**
Potential Infiltration (based on MOE metholodogy*; independent of temperature)	46	38	43	29	4	0	0	0	0	0	33	50	**243**
Potential Direct Surface Water Runoff (independent of temperature)	20	16	18	13	2	0	0	0	0	0	14	21	**104**
IMPERVIOUS AREA WATER SURPLUS													
Precipitation (P)	916	mm/year											
Potential Evaporation (PE) from impervious areas (assume 15%)	137	mm/year											
P-PE (surplus available for runoff from impervious areas)	779	mm/year											

Assume January storage is 100% of Soil Moisture Storage

Soil Moisture Storage	75 mm	<-- See "Water Holding Capacity" values in Table 3.1, MOE SWMPDM, 2003
*MOE SWM infiltration calculations		
topography - rolling land	0.2	<-- Infiltration Factors from the bottom section of Table 3.1, MOE SWMPDM, 2003
soils - sand and gravel/fill	0.4	<-- Infiltration Factors from the bottom section of Table 3.1, MOE SWMPDM, 2003
cover - grass	0.1	<-- Infiltration Factors from the bottom section of Table 3.1, MOE SWMPDM, 2003
Infiltration factor	**0.7**	
Latitude of site (or climate station)	43 ° N.	

WATER BALANCE CALCULATIONS
70 Fountain Street East
Fitzrovia Real Estate Inc.
Guelph, ON
PROJECT No: 300060546.1000

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TABLE WB-2

Water Balance - Existing Conditions and Post-Development (with no SWM/LID measures)

Land Cover	Approx. Land Area (m^2)	Impervious Fraction for Land Cover	Estimated Impervious Area (m^2)	Runoff from Impervious Area* (m/a)	Runoff Volume from Impervious Area (m^3/a)	Estimated Pervious Area (m^2)	Runoff from Pervious Area* (m/a)	Runoff Volume from Pervious Area (m^3/a)	Infiltration from Pervious Area* (m/a)	Infiltration Volume from Pervious Area (m^3/a)	Total Runoff Volume (m^3/a)	Total Infiltration Volume (m^3/a)
Existing Conditions												
Drainage Area 100	800	1.00	800	0.779	623	0	0.104	0	0.243	0	623	0
Drainage Area 200	1,220	0.90	1,098	0.779	855	122	0.104	13	0.243	30	868	30
Drainage Area 300	110	0.55	61	0.779	47	50	0.104	5	0.243	12	52	12
TOTAL PRE-DEVELOPMENT	**2,130**		**1,959**		**1,525**	**172**		**18**		**42**	**1,543**	**42**
Post-Development Conditions (with no LID measures in place)												
Drainage Area 1000 (Building and Underground Parking)	2,130	1.00	2,130	0.779	1,659	0	0.104	0	0.243	0	1,659	0
TOTAL POST-DEVELOPMENT	**2,130**		**2,130**		**1,659**	**0**		**0**		**0**	**1,659**	**0**

* figures from Table WB-1

To balance pre- to post-,
the infiltration target (m^3/a)= **42** **m^3/a**

4.0 Erosion and Sediment Control (ESC)

During the site grading and servicing works, there is potential for sediment-laden runoff to be directed toward the adjoining properties and municipal streets. Therefore, prior to any grading activity, the erosion and sediment control strategy will include the following:

- Temporary sediment control fence installed along the site perimeter prior to the commencement of any grading activity.
- Gravel 'mud-mats' at construction vehicle entrances to minimize off-site tracking of sediments.
- Material stockpiles are to be located in appropriate locations.
- Inlet sediment control devices are to be used on existing catch basins in municipal rights-of-way that may be affected by the construction of this site.
- Proposed erosion and sediment control measures shall be inspected promptly after storm events and shall be repaired or replaced if / where damaged.

Inspection and maintenance of the silt fencing will begin following installation. It will be inspected on a weekly basis during active construction, or after a rainfall of 13 mm or greater. If any part of the silt fence requires repair, maintenance will be carried out within 48 hours. The silt fencing as well as accumulated sediment will be removed once construction and landscaping have been substantially completed.

All areas on site that are not subject to active construction within 30 days, will be topsoiled and hydroseeded as per OPSS PROV 804 to further minimize the opportunity for erosion and sediment transport.

5.0 Conclusions and Recommendations

In summary, the features of the design for the proposed development at 70 Fountain Street South are as follows:

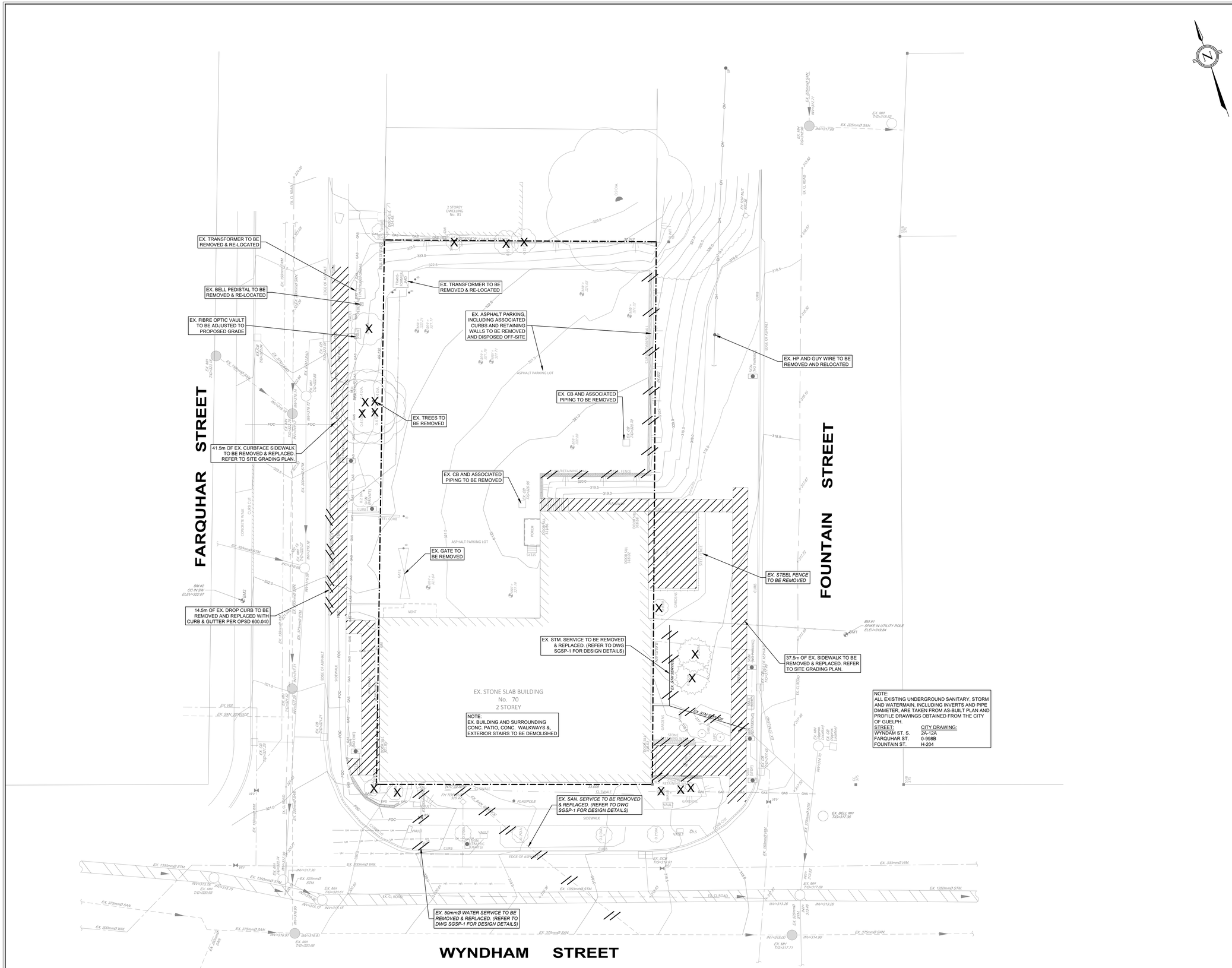
- Water supply for the proposed re-development is proposed to be provided via the extension of a new 200 mm diameter water service lateral from the existing 300 mm diameter watermain on Wyndham Street South.
- As part of the extension of a new water service lateral, the existing 150 mm diameter water service lateral on Wyndham Street South will be removed and capped / plugged at the main.
- The proposed average day demand and maximum day demand of 2.27 L/s and 3.05 L/s, respectively, were analyzed in the City's hydraulic model. The City's hydraulic model identified that the post-development pressures ranged from 75-81 psi. While this slightly exceeds the City's preferred operating range of 50-80 psi, the City has identified that it is within the allowable pressure range of 40-100 psi and that the development will not noticeably impact pressure in the surrounding area.
- The fire flow requirement for the development has been identified to be approximately 200 L/s. This is in accordance with the City's fire flow guideline which specifies that 200 L/s is required for high-density residential properties.
- The existing fire hydrant on Wyndham Street South, located to the south of the Wyndham Street South / Farquhar Street intersection, is connected to the existing 300mm diameter watermain on Wyndham Street South. The City's analysis has identified the available fire flow in this existing fire hydrant to be 776 L/s.
- There is sufficient fire flow in the existing fire hydrant on Wyndham Street South.
- Sanitary service for the proposed re-development will be provided by the extension of a new 200 mm diameter sanitary service lateral from the new 600 mm diameter sanitary sewer on Wyndham Street South.
- As part of the extension of the new 200mm diameter sanitary service lateral, the existing 150 mm diameter sanitary service lateral be removed and capped / plugged at the main.
- The anticipated peak wastewater flow generated from the proposed development was calculated to be 11.65 L/s (Average Day Demand) and 3.05 L/s (Maximum Day Demand) based on the criteria outlined in the City's Development Engineering Manual (October 2023).
- The City's wastewater system model has identified that there is no surcharging within the downstream sanitary sewer system, from the site to the City's Water Resource Recovery Centre (Wastewater Treatment Plant).
- Storm service for the proposed re-development will be provided by the extension of a new 300 mm diameter storm service lateral from the existing 375 mm diameter storm sewer on Farquhar Street.

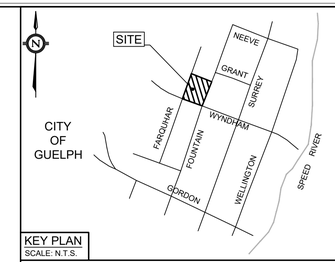
- Runoff generated from Catchment 1000 under post-development conditions, which represents the entire site, will be captured and conveyed to the existing 375 mm diameter storm sewer on Farquhar Street
- The post-development peak flow rates from the site are less than the allowable release rates for the 2-year through 100-year design storm events.
- Due to the development footprint and the required minimum separation distance of 5 m to any existing and proposed structures, the provision of on-site retention is not feasible and has not been provided.
- Since all runoff generated from the site is from the rooftop of the proposed building and rooftop runoff is considered “clean”, quality control treatment will not be provided.
- Monthly Water Balance calculations were prepared using the Thornthwaite and Mather methodology to analyze the annual runoff and recharge volumes for the site under both existing and post-development conditions. Under existing conditions, the site has an annual recharge volume of 42 m^3/year. In the proposed post-development conditions, without mitigation measures, the post-development annual recharge volume is 0 m^3/year.
- Due to the development footprint and the required minimum separation distance of 5 m to any existing and proposed structures, the provision of an infiltration system on site to maintain the existing condition annual recharge volume is not feasible and has not been provided.
- Temporary sediment control fence installed along the site perimeter prior to the commencement of any grading activity.
- Gravel ‘mud-mats’ at construction vehicle entrances to minimize off-site tracking of sediments.
- Material stockpiles are to be located in appropriate locations.
- Inlet sediment control devices are to be used on existing catchbasins in municipal rights-of-way that may be affected by the construction of this site.
- Proposed erosion and sediment control measures shall be inspected promptly after storm events and shall be repaired or replaced if / where damaged.
- Inspection and maintenance of the silt fencing will begin following installation. It will be inspected on a weekly basis during active construction, or after a rainfall of 13 mm or greater. If any part of the silt fence requires repair, maintenance will be carried out within 48 hours. The silt fencing as well as accumulated sediment will be removed once construction and landscaping have been substantially completed.
- All areas on site that are not subject to active construction within 30 days, will be topsoiled and hydroseeded as per OPSS PROV 804 to further minimize the opportunity for erosion and sediment transport.

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Drawings





KEY PLAN
SCALE: N.T.S.

LEGEND:

- PROPERTY BOUNDRY
- +217.02 — EXISTING GROUND ELEVATION
- 195.0 — EXISTING CONTOURS
- Ex. MH Ex. 200mmØ SAN — EXISTING SANITARY SEWER
- Ex. MH Ex. 375mmØ STM — EXISTING STORM SEWER
- FH WV Ex. 150mmØ WM — EXISTING WATERMAIN
- BM1 — SITE BENCHMARK LOCATION
- EXISTING FENCING
- Ex. EP / Ex. CURB — EXISTING CURB & GUTTER
- EXISTING RETAINING WALL
- GAS GAS GAS GAS — EXISTING UNDERGROUND GAS LINE
- FOC FOC — EXISTING UNDERGROUND FIBRE OPTIC CABLE
- OH OH — EXISTING OVERHEAD HYDRO
- UH UH UH UH UH — EXISTING UNDERGROUND HYDRO
- REMOVALS

SITE PLAN
PREPARED BY: HARIRI PONTARINI ARCHITECTS
DATE: DECEMBER 5, 2025

TOPOGRAPHIC & LEGAL
PREPARED BY: VAN HARTEN LAND SURVING INC.
DATE: NOVEMBER 10, 2025

BENCHMARK NOTES
ELEVATIONS ARE BASED ON GNSS OBSERVATIONS FROM PERMANENT REFERENCE STATIONS IN THE NAD83 (CSRS-2010) COORDINATE SYSTEM, WITH HEIGHTS CONVERTED TO ORTHOMETRIC ELEVATIONS ON THE CGVD28 DATUM (1978 ADJUSTMENT) WITH GEOID MODEL HTv2.0, AS SUPPLIED BY NATURAL RESOURCES CANADA.
SITE BENCHMARK 1 : SPIKE IN SOUTH FACE OF HYDRO POLE ACROSS FOUNTAIN STREET HAVING AN ELEVATION OF 319.94m.
SITE BENCHMARK 2 : CUT CROSS IN SIDEWALK ACROSS FARQUHAR STREET, ADJACENT TO SUBJECT PROPERTY ENTRANCE, HAVING AN ELEVATION OF 322.07m.

Notes
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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

NOT FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR REVIEW.	2025/12/18	AK

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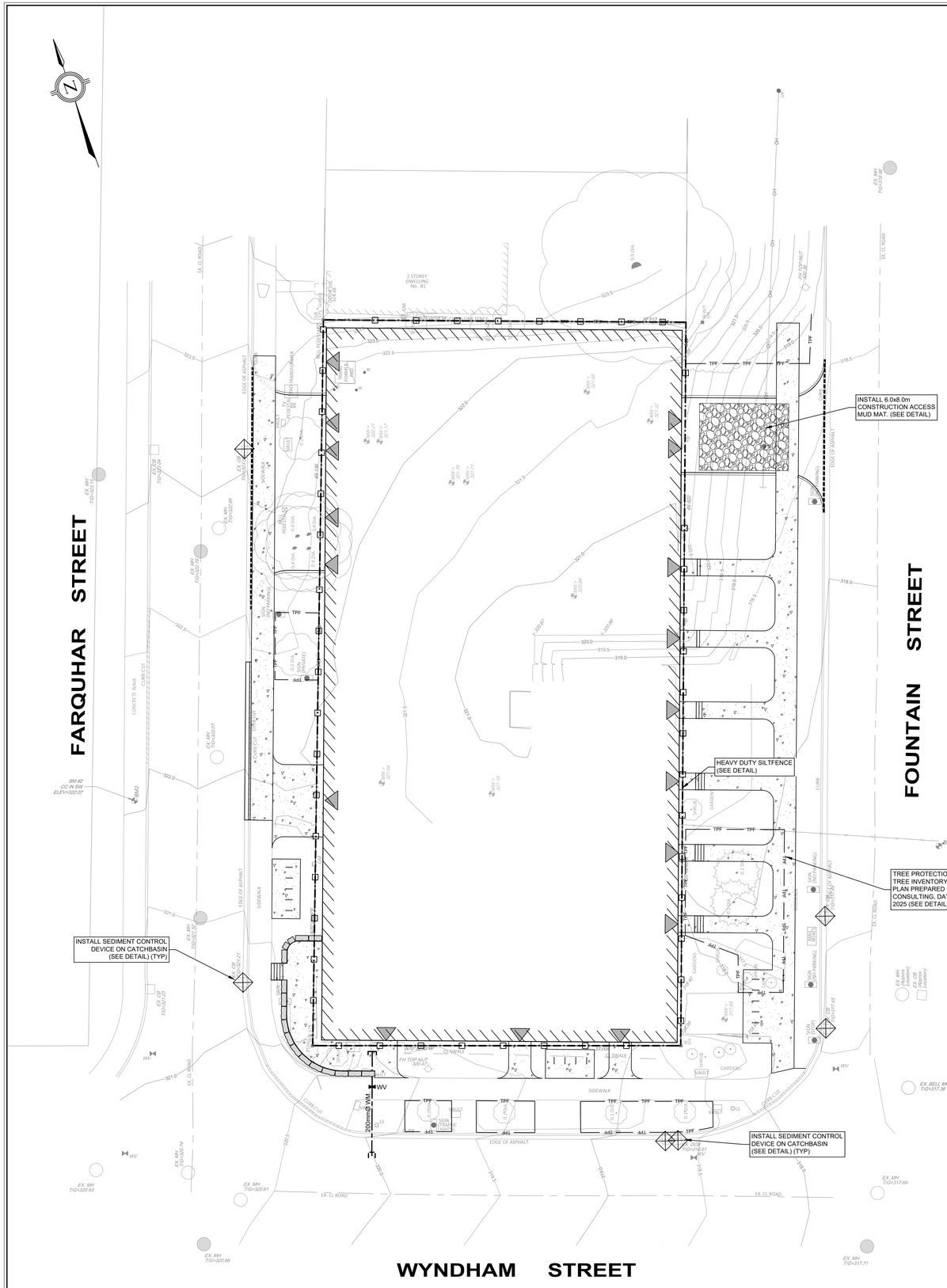
TORONTO, ON
M4V 1L5

Project Name:
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title:
EXISTING CONDITIONS & REMOVALS PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
ND	AK	ND	AK	25/10/27	EX-1
Project No. 300060546.1000		Contract No. GUELPH, ONTARIO		Revision No.	
Scale 1:200		0 4.0 8.0 12.0m			



CONSTRUCTION NOTES & SPECIFICATIONS

1. EROSION AND SEDIMENT CONTROL

1.1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND VEGETATIVE COVER IS ESTABLISHED. BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.

1.2. ALL EROSION AND SEDIMENT CONTROL MEASURES (TEMPORARY SEDIMENT CONTROL FENCES, STORM SEWER BULKHEADS, ROCK CHECK DAMS, WORK LIMIT FENCES, SEDIMENT BASINS, ETC.) MUST BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

1.3. TEMPORARY VEHICLE TRACKING CONTROLS TO BE CONSTRUCTED AS PER REQUIREMENTS IN "EROSION & SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION" DATED DECEMBER 2006, AT ALL ACCESS POINTS. CONTRACTOR SHALL MAINTAIN THESE AS REQUIRED AND AS DIRECTED BY THE CITY ENGINEER.

1.4. OVERLAND SHEET FLOW EROSION PROTECTION SHALL BE AS PER OPSD 219.130. IF EXCESSIVE SEDIMENT BUILDUP/BLOCKAGE OCCURS (VISUAL INSPECTION) THEN REPLACEMENT OF THE FILTER CLOTH IS REQUIRED.

1.5. CATCH BASIN SEDIMENT CONTROL DEVICE, I.E. "SILTSACK" BY ACF ENVIRONMENT OR APPROVED EQUIVALENT, TO BE PLACED AS PER MANUFACTURER'S RECOMMENDATIONS (SEE DETAIL). REGULAR MAINTENANCE IS REQUIRED."SILTSACK" SUMPS SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND FILTER CLOTH BLOCKAGE ON A WEEKLY BASIS). THESE SEDIMENT TRAPS ARE NOT TO BE REMOVED UNTIL THE CURBS AND THE BOULEVARDS SODDED. SEDIMENT TRAPS SHALL ALSO BE PLACED AS PER DETAIL AT ALL CATCH BASINS LOCATIONS IN AREAS TO BE VEGETATED AND MAINTAINED UNTIL GROUND COVER IS ESTABLISHED.

1.6. ALL SILT FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.

1.7. EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES.

1.8. MUD MATS TO BE PROVIDED ON-SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. MUD MATS SHALL BE A MINIMUM OF 3.0m WIDE, 15.0m LONG (LENGTH MAY VARY DEPENDING ON SITE LAYOUT) AND 0.3m DEEP AND SHALL CONSIST OF 200mm CLEAR STONE MATERIAL OR APPROVED EQUIVALENT. PROPOSED EROSION FENCING TO TIE INTO MUD MAT. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE EFFECTIVENESS AT ALL TIMES.

1.9. TOPSOIL PILES SHALL BE TEMPORARILY SEEDED TO PREVENT EROSION. PLACEMENT OF VEGETATION SHALL BE IN ACCORDANCE WITH OPSS.572. WHERE REQUIRED, EROSION CONTROL BLANKETS SHALL BE PLACED AS PER OPSS.572, AT THE DIRECTION OF THE CITY ENGINEER.

1.10. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES. EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED.

1.11. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND THE CITY OF HAMILTON DEPARTMENT OF PUBLIC WORKS.

1.12. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.

1.13. ALL DISTURBED AREAS NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN 45 DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN 7 DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.

1.14. ALL DISTURBED EXTERNAL AREAS SHALL BE RE-VEGETATED WITH PERMANENT COVER (AS DETAILED) WITHIN 7 DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.

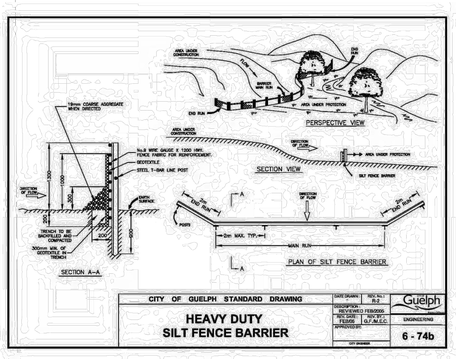
1.15. ADDITIONAL EROSION AND SEDIMENT CONTROL LOCATIONS/ MEASURES MAY BE REQUIRED AS DETERMINED BY THE CITY/CONSERVATION AUTHORITY

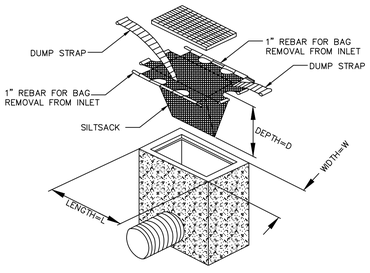
2. MAINTENANCE RECOMMENDATIONS

2.1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE VISUALLY INSPECTED AFTER EACH WORKING DAY AND MAINTAINED WHEN REQUIRED AS DIRECTED BY THE CONSULTANT AND TO THE SATISFACTION OF THE CITY/CONSERVATION AUTHORITY. THE CONSULTANT SHALL KEEP A DAILY RECORD OF INSPECTION, MAINTENANCE, ETC. AND PRESENT THE CITY WITH A COPY OF REPORT ON A MONTHLY BASIS.

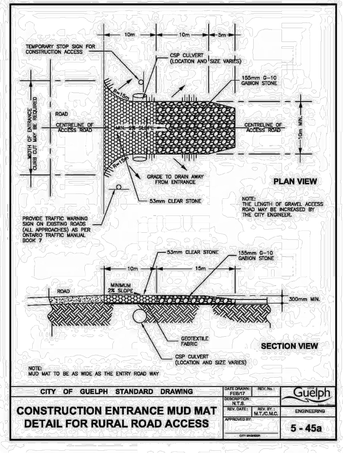
2.2. OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO CITY REQUIREMENTS.

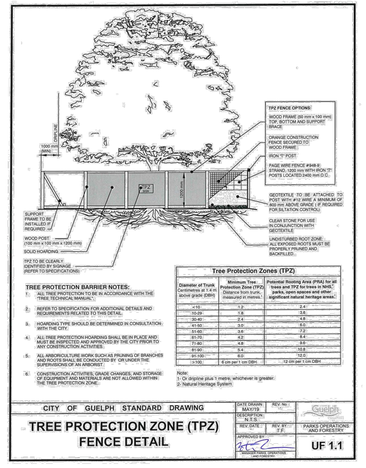
2.3. REGULAR MAINTENANCE FOR ALL CATCH BASINS (ON THE PUBLIC ROADWAY AND ON PRIVATE PROPERTY) AND INLET CHAMBERS IS REQUIRED (SEDIMENT TRAPS AND SUMPS SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION, TRASH BUILDUP AND FILTER CLOTH BLOCKAGE ON A WEEKLY BASIS AND AFTER ANY MAJOR RAINFALL EVENT). ACCUMULATED SEDIMENT SHALL BE REMOVED BY MECHANICAL MEANS. FLUSHING OF SEDIMENT INTO THE STORM SEWER SYSTEM IS PROHIBITED. IF STANDING WATER REMAINS IN THE CATCH BASIN 24 HOURS (MINIMUM) AFTER A STORM THEN CLEANING OR REPLACEMENT CLOTH IS REQUIRED.

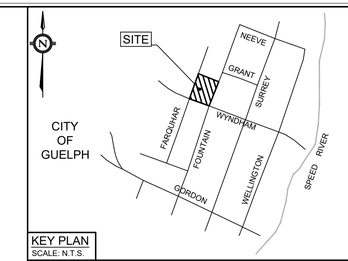




SILTSACK SEDIMENT CONTROL DEVICE
SCALE: N.T.S.







KEY PLAN
SCALE: N.T.S.

LEGEND:

- PROPERTY BOUNDRY
- EXISTING CONTOURS
- EXISTING SANITARY MANHOLE
- EXISTING STORM COMPONENTS
- EXISTING WATERMAIN COMPONENTS
- SITE BENCHMARK LOCATION
- EXISTING FENCING
- EXISTING CURB & GUTTER
- EXISTING RETAINING WALL
- PROPOSED BUILDING
- PROPOSED BUILDING ENTRANCE
- PROPOSED CURB & GUTTER
- PROPOSED BUILDING - INTERNAL WALL
- PROPOSED SILTSACK (SEE DETAIL)
- PROPOSED SEDIMENT CONTROL FENCE (SEE DETAIL)
- PROPOSED TREE PROTECTION FENCE (SEE DETAIL)

SITE PLAN

PREPARED BY: HARIRI PONTARINI ARCHITECTS
DATE: DECEMBER 5, 2025

TOPOGRAPHIC & LEGAL

PREPARED BY: VAN HARTEN LAND SURVING INC.
DATE: NOVEMBER 10, 2025

BENCHMARK NOTES

ELEVATIONS ARE BASED ON GNSS OBSERVATIONS FROM PERMANENT REFERENCE STATIONS IN THE NAD83 (CSRS-2010) COORDINATE SYSTEM, WITH HEIGHTS CONVERTED TO ORTHOMETRIC ELEVATIONS ON THE CGVD28 DATUM (1978 ADJUSTMENT) WITH GEOID MODEL HTv2.0, AS SUPPLIED BY NATURAL RESOURCES CANADA.

SITE BENCHMARK 1 : SPIKE IN SOUTH FACE OF HYDRO POLE ACROSS FOUNTAIN STREET HAVING AN ELEVATION OF 319.84m.

SITE BENCHMARK 2 : CUT CROSS IN SIDEWALK ACROSS FARQUHAR STREET, ADJACENT TO SUBJECT PROPERTY ENTRANCE, HAVING AN ELEVATION OF 322.07m.

Notes

1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

NOT FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR REVIEW.	2025/12/18	AK

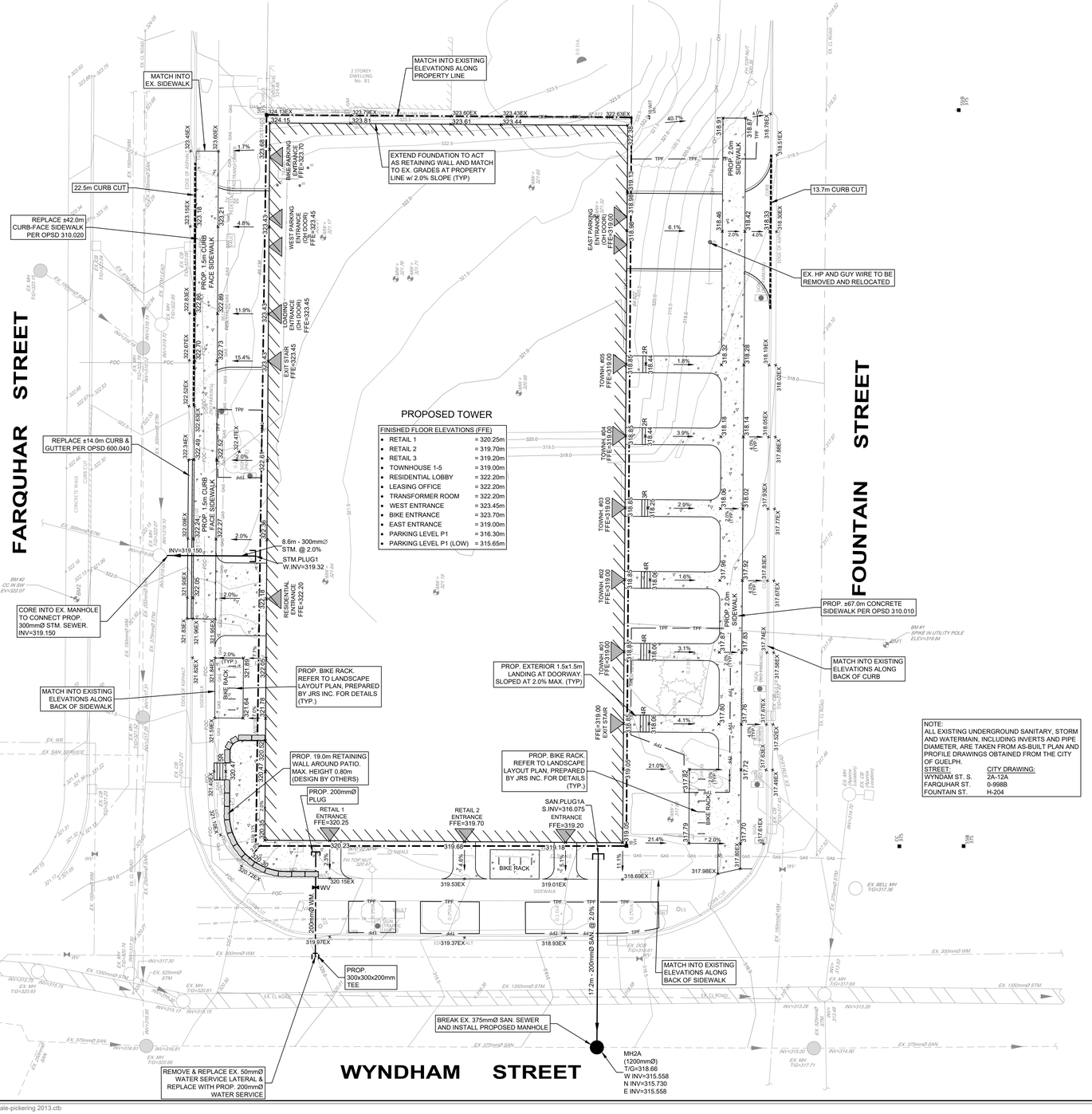
BURNSIDE
R.J. Burnside & Associates Limited
292 Speedvale Ave. W., Unit 20
Guelph, Ontario, N1H 1C4
telephone (519) 823-4995
fax (519) 836-5477
web www.rjburnside.com

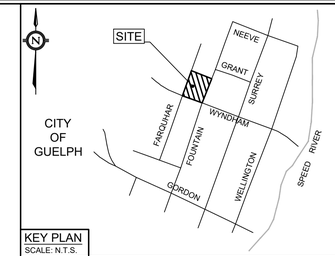
Client
FITZROVIA REAL ESTATE INC.
2 ST CLAIR AVE. W., SUITE 2100
TORONTO, ON
M4V 1L5

Project Name:
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title
EROSION & SEDIMENT CONTROL PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
ND	AK	ND	AK	25/10/27	ESC-1
Project No. 300060546.1000		Contract No. GUELPH, ONTARIO		Revision No.	
Scale 1:200		0 4.0 8.0 12.0m			





KEY PLAN
SCALE: N.T.S.

LEGEND:

- PROPERTY BOUNDRY
- EXISTING CONTOURS
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- SITE BENCHMARK LOCATION
- EXISTING FENCING
- EXISTING CURB & GUTTER
- EXISTING RETAINING WALL
- EXISTING UNDERGROUND GAS LINE
- EXISTING UNDERGROUND FIBRE OPTIC CABLE
- EXISTING OVERHEAD HYDRO
- PROPOSED BUILDING
- PROPOSED BUILDING ENTRANCE
- PROPOSED CURB & GUTTER
- PROPOSED BUILDING - INTERNAL WALL
- FINISHED FLOOR ELEVATION
- MATCH INTO EXISTING ELEVATIONS
- FINISHED GROUND ELEVATION
- TOP AND BOTTOM OF WALL ELEVATION
- PROPOSED SLOPES
- PROPOSED DRAINAGE SPLIT (HIGHPOINT)
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATERMAIN
- PROPOSED TREE PROTECTION FENCE (SEE DETAIL)

SITE PLAN

PREPARED BY: HARIRI PONTARINI ARCHITECTS
DATE: DECEMBER 5, 2025

TOPOGRAPHIC & LEGAL

PREPARED BY: VAN HARTEN LAND SURVING INC.
DATE: NOVEMBER 10, 2025

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Client
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TORONTO, ON
M4V 1L5

Project Name
70 FOUNTAIN STREET EAST
GUELPH, ON

Drawing Title
SITE GRADING & SERVICING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
ND	AK	ND	AK	25/10/27	SGSP-1
Project No.		Contract No.		Revision No.	
300060546.1000		GUELPH, ONTARIO			
Scale	1:200	0 4.0 8.0 12.0m			

Plotted by:NDaMaren Paper size: ARCH D (24.00 X 36.00 Inches) Plot table: Rjb Full Scale-pickering 2013.ctb

file: C:\Users\ND\OneDrive - R.J. Burnside & Associates Limited\300060546.1000\Drawings\Site Plan\SGSP-1.dwg Layout: Layout1 Saved: December 18, 2025 - 11:53 PM

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Water and Wastewater Capacity Check

October 22, 2025

Angela Kroetsch
R.J. Burnside & Associates Limited
299 Doon Valley Drive
Kitchener Ontario, N2G 4M4

RE: 70 Fountian Street and 75 Farquhar Street– Wastewater and Water Capacity Check

Dear Mrs. Kroetsch,

City staff have conducted a wastewater and water capacity analysis based on the proposed development at the above titled site. Please find the results summarized within the attached report.

If you have any questions, please don't hesitate to contact me.

Sincerely,

Jamie Menchenton Engineering Technologist III

Engineering and Transportation Services | City of Guelph

519-822-4308 jamie.menchenton@guelph.ca

City Hall
1 Carden St
Guelph, ON
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1.0 Introduction and Background

The proposed development is located at 70 Fountain Street and 75 Farquhar Steet, on the East side of Wyndam Street South between Fountain Street and Farquhar Street. A preliminary proposal has been shared with the City:

- Construct a 24-storey, mixed-use development consisting of 419 dwelling units and roughly 430m2 of ground floor retail space.

2.0 Wastewater Servicing Analysis

2.1 Wastewater Flow Generation

Wastewater from the 0.21 ha proposed development will flow to the existing 375 mm diameter sanitary sewer on Wyndham Street Drive, with works planned to upsize this existing sewer to 600 mm diameter sewer. As per section 5.6 of the City's current Development Engineering Manual. Therefore, the capacity modelling has been carried out using an anticipated peak flow of 11.65 L/s to ensure that the downstream sanitary servicing can accommodate the increased sewage flow from the proposed development. This additional flow consideration was added as a constant flow to the receiving pipe to be conservative and ensure that it coincides with existing peak flows.

2.2 Wastewater Capacity Analysis

The model represents the City's wastewater network and is based on the City's GIS data and is calibrated to available flow data. The model was used to assess the existing and projected capacity within the system for wet weather conditions using a 25-year 3-hour storm event.

The analysis considers the immediate capacity at the local neighborhood level, as well as a look downstream to account for the overall system's capacity (i.e., at the trunk sewer level and to the wastewater treatment plant [WWTP]). Wet weather flow (WWF) conditions were considered. The model developed for the City-wide Water and Wastewater Servicing Master Plan (2023) was used for this purpose, and the impact of increased flow from the development site was assessed. Figures supporting this analysis are provided throughout this report.

The receiving sanitary sewer on Wyndham Street South runs south until it reaches the intersection at Wellington Street East, flows continue east along Bristol Street East before reaching the treatment plant. Figures 2.3.1 and 2.3.2 below show the entire flow path to the sanitary treatment plant.

The wastewater capacity analysis was conducted based on the existing sanitary sewer infrastructure in place at the time of this report. This includes the works completed under Phase 0: Wyndham - Wellington Water and Wastewater Capacity Improvement works (https://guelph.ca/living/construction-projects/downtown-infrastructure-revitalization/wyndham-wellington-sanitary-sewer-relief/) but excludes future works associated with Phase 1: Wyndham Street Reconstruction (https://guelph.ca/living/construction-projects/downtown-infrastructure-revitalization/phase-1-wyndham-street-reconstruction/) which works are scheduled to commence in spring of 2026.

Sections 2.3 and 2.4 of this report are based on the existing sanitary sewer network, Section 2.3 presents an assessment of current sanitary flow conditions, while Section 2.4 evaluates the system performance with the addition of 11.65 L/s of flow generated by the proposed development.

2.3 Existing Wastewater Conditions

Existing modelling was carried out from MH8003 fronting the proposed development to MH4901 at the sanitary treatment plant. The flow route can be seen in Figure 2.3.1 while the profile view is demonstrated in Figure 2.3.2. MH8003 to MH4901.

Figure 2.3.1 – Flow Route from Proposed Development to Treatment Plant

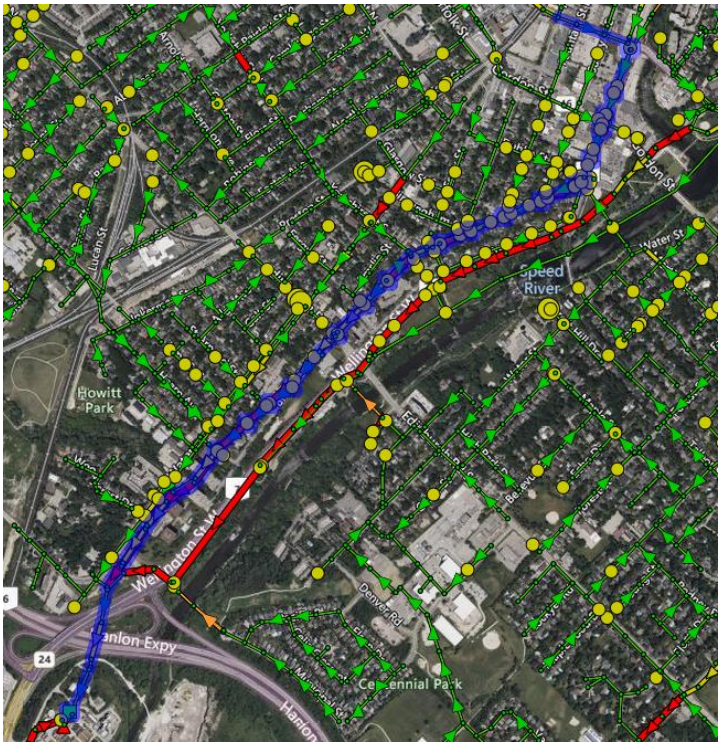
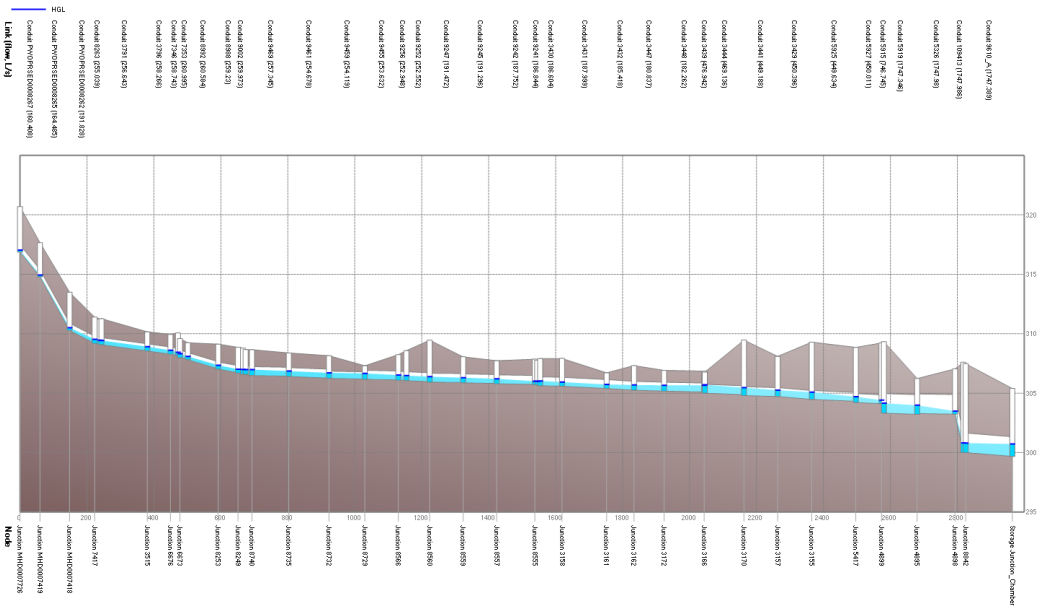


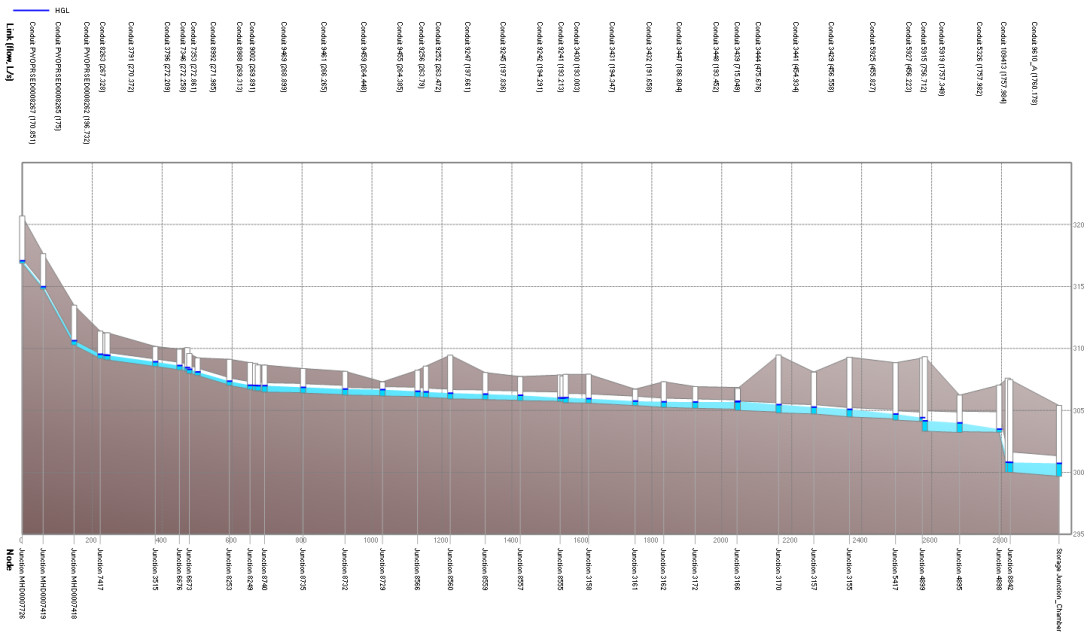
Figure 2.3.2 – Profile of Sanitary Peak Flows under Existing Conditions



2.4 Proposed Wastewater Conditions

Proposed modelling was carried out along the flow route noted within Section 2.1, above. A flow rate of 11.65 L/s was added at the maintenance hole fronting the development. Figure 2.4.1 provided below demonstrate that there is no surcharging within the receiving sewers from the sanitary sewer fronting the site downstream to the wastewater treatment plant.

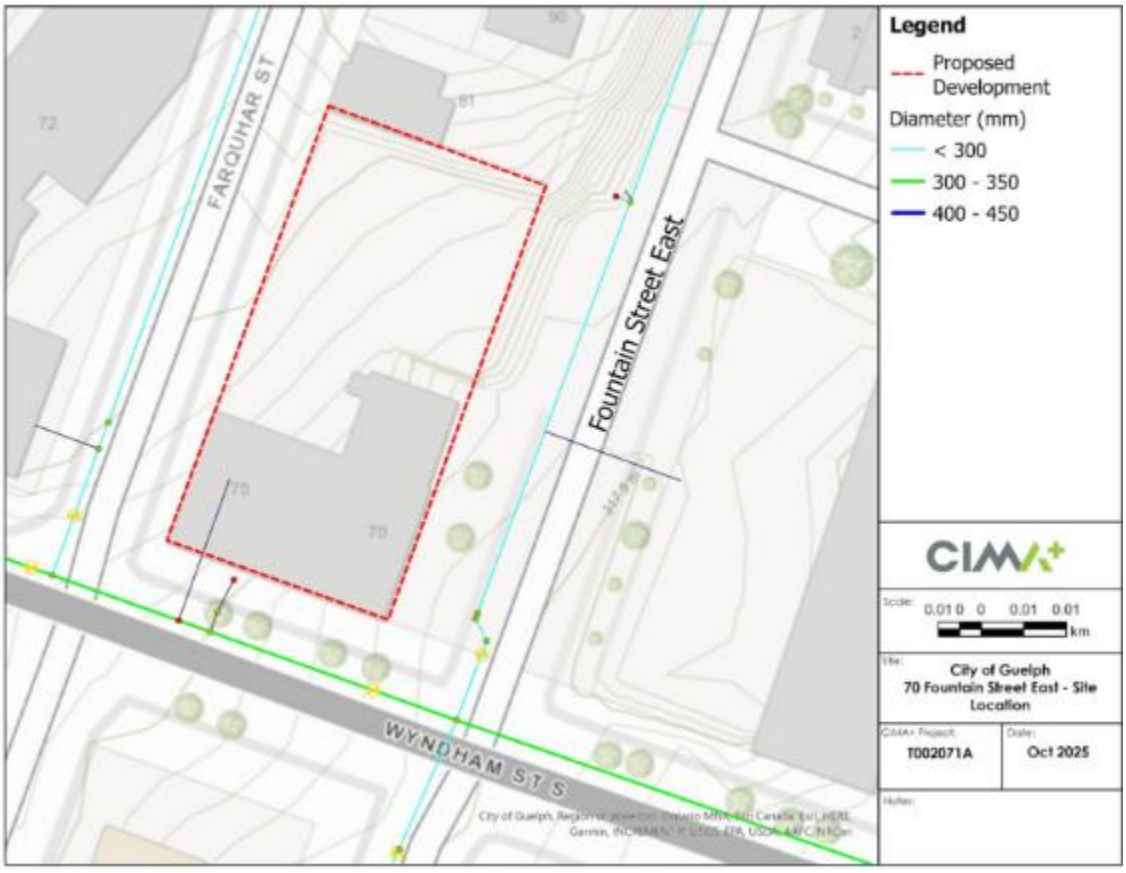
Figure 2.4.1 – Profile of Sanitary Peak Flows under Proposed Conditions



3.0 Water Servicing Analysis

The proposed development at 70 Fountain Street will consist of a 24-storey college residence tower with an estimated population of 862 people. The development will be serviced from the existing 300 mm watermain on Wyndham Street South. Figure 3.0.1 illustrates the approximate location of the proposed development.

Figure 3.0.1 Proposed Development Site Location.



The Consultant's estimated domestic demand for the proposed development is 2.02 L/s. It is assumed that this represents Average Day Demand (ADD). For comparison purposes, Average Day Demand and Maximum Day Demand (MDD) were re-calculated based on an expected population of 862 people, using criteria developed in the 2021 Water Supply Master Plan (2021 WSMP). These criteria are shown in Table 3.0.1 below. Demands for the proposed development are compared in Table 3.0.2.

Table 3.0.1 Demand Criteria

Description	ADD per Capita Water Usage
Residential	167 L/cap/day
Non-Revenue Water (NRW)	61 L/cap/day
MDD	
MDD Peaking Factor	1.34

Table 3.0.2 Anticipated Water Demands

Description	ADD (L/s)	MDD (L/s)
Estimated by Consultant	2.02	2.71[1]
Based on 2021 WSMP Criteria	2.27	3.05
(1) Calculated assuming a peaking factor of 1.34 per the 2021 WSMP.		

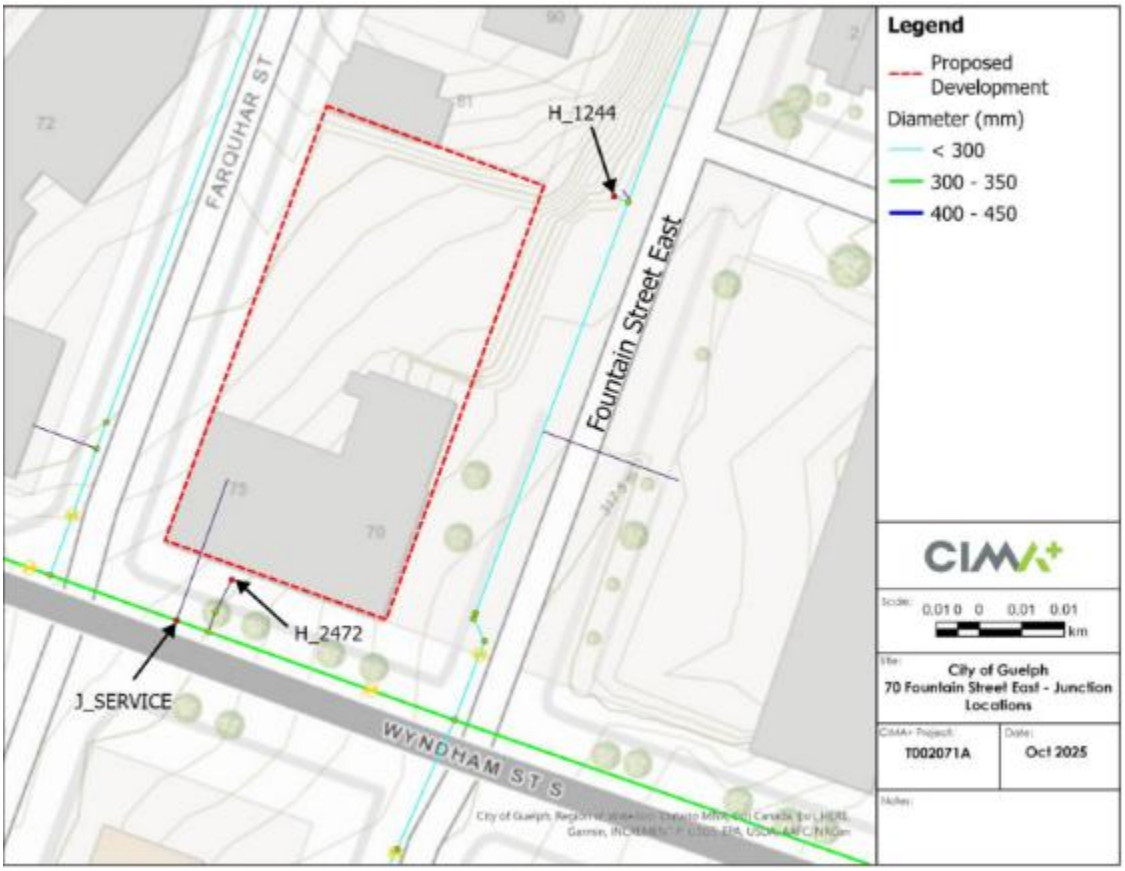
The Consultant's estimated domestic and fire flow demand is 202.23 L/s. Therefore, assuming an estimated MDD of 2.71 L/s using a peaking factor of 1.34 from the 2021 WSMP, the estimated fire flow requirement is approximately 200 L/s. According to the City's 2023 Water and Wastewater Servicing Master Plan (WWSMP), fire flow requirement for high-density residential buildings is 200 L/s for 2.5 hours.

3.1 Water Pressure Analysis

Modelling was completed under the existing (2019) ADD and MDD scenarios in the City's hydraulic model. Based on information provided by the Consultant, the water demand of the development has an assumed ADD of 2.02 L/s and calculated MDD of 2.71 L/s, however based on 2021 WSMP criteria, an ADD of 2.27 L/s and MDD of 3.05 L/s were analyzed in the model.

The proposed development is in Pressure Zone 1, along Fountain Street East. It will be serviced by an existing 300 mm watermain along Wyndham Street South. There are two hydrants in proximity of the site (H_2472 and H_1244), located on Wyndham Street South and Fountain Street East, respectively. The watermains and hydrants near the site are illustrated in Figure 3.1.1 below.

Figure 3.1.1 Existing Watermains and Hydrants Near the Development Site

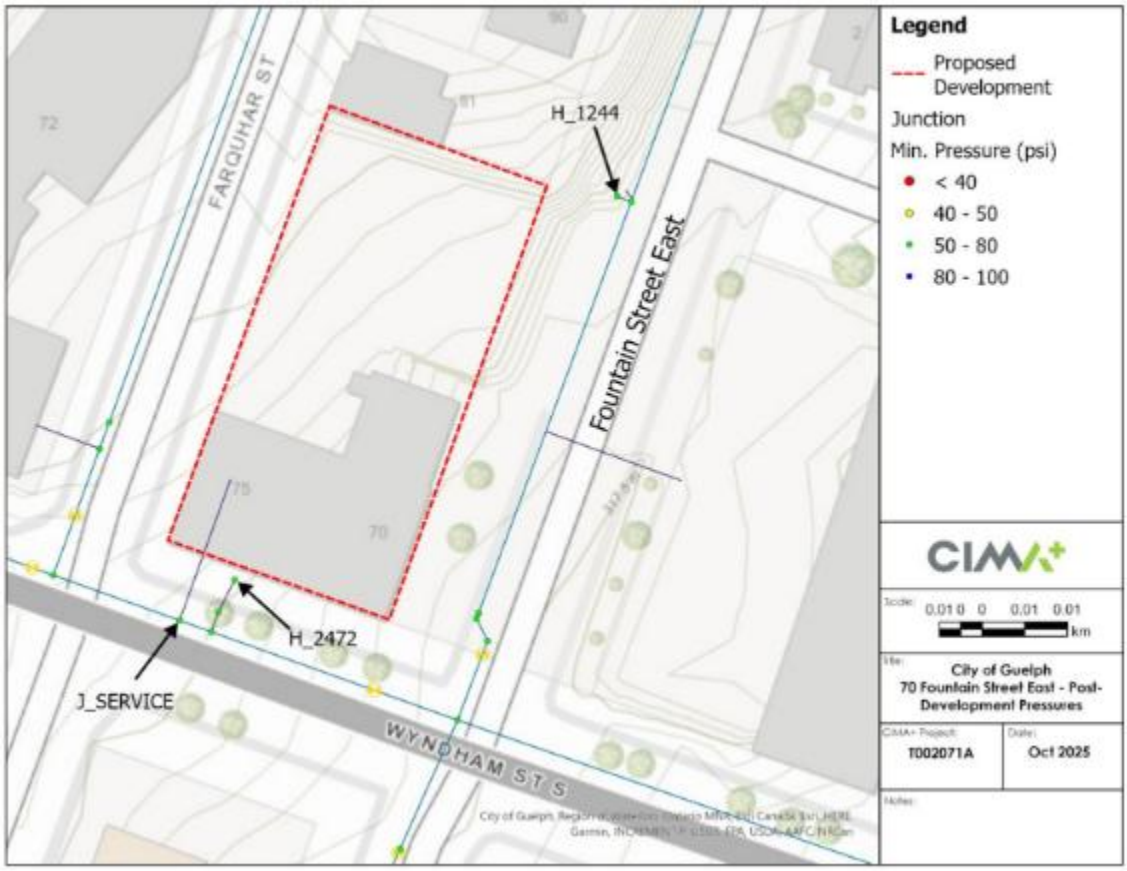


To represent post-development conditions, the estimated development demands were added to the model at the approximate location of the existing service connection on Wyndham Street South (J_SERVICE). The post-development pressures at the proposed servicing location ranged from 75 – 81 psi. This slightly exceeds the City's preferred operating range of 50 – 80 psi but is within the City's allowable pressure range of 40 –100 psi. The development was not found to noticeably impact pressures near the development area. An illustration of minimum pressures in the area of the proposed development under existing MDD conditions is shown in Table 3.1.1 and Figure 3.1.1 below.

Table 3.1.1 Wyndham Street South Pressure Results

Pressure	ADD			MDD		
	MAX	MIN	AVG	MAX	MIN	AVG
Pre-Development	82.3	77.2	78.7	80.9	74.7	78.5
Post-Development	81.0	76.9	78.6	80.8	74.5	78.5

Figure 3.1.1 MDD Minimum Pressures Post Development



3.2 Fire Flow Analysis

The fire flow requirement estimated by the Consultant for the proposed development is approximately 200 L/s. This is in accordance with the City's fire flow guideline of 200 L/s for high-density residential properties detailed in the 2023 WWSMP. As shown in Figure 3-1 there are two hydrants (H_2472 and H_1244) near the proposed development. Hydrant H_2472 is connected to the 300 mm watermain on Wyndham Street South and hydrant H_1244 is connected to the 150 mm watermain on Fountain Street East. Available fire flows under existing 2019 MDD conditions for both hydrants are summarized in Table 3.2.1.

Table 3.2.1 Hydrant Available Flow – Existing 2019 MDD

Hydrant ID	Fire Flow Requirement	Hydrant Available Flow
H_2472	200 L/s	776 L/s
H_1244		109 L/s

4.0 Plant Servicing Capacity Check

Servicing capacity needs were also assessed as part of the City's Water and Wastewater Plan Capacity for the 70 Fountain / 75 Farquhar development. This evaluation included the assessment of servicing needs versus current unallocated servicing capacity of the City's Water and Wastewater Treatment Plants, respectfully. Outcomes of this evaluation show that sufficient plant capacity is currently available for this development.

5.0 Conclusion and Recommendations

5.1 Wastewater

The capacity check has been completed and as noted above, there are no surcharging areas. The development proposal currently passes the framework provided in the Sanitary Capacity Assessment Framework as shown in Appendix A.

5.2 Water

Under existing 2019 ADD and MDD conditions, post-development pressures ranged from 75 – 81 psi. This slightly exceeds the City's preferred pressure range of 50 – 80 psi but is within the allowable pressure range of 40 – 100 psi.

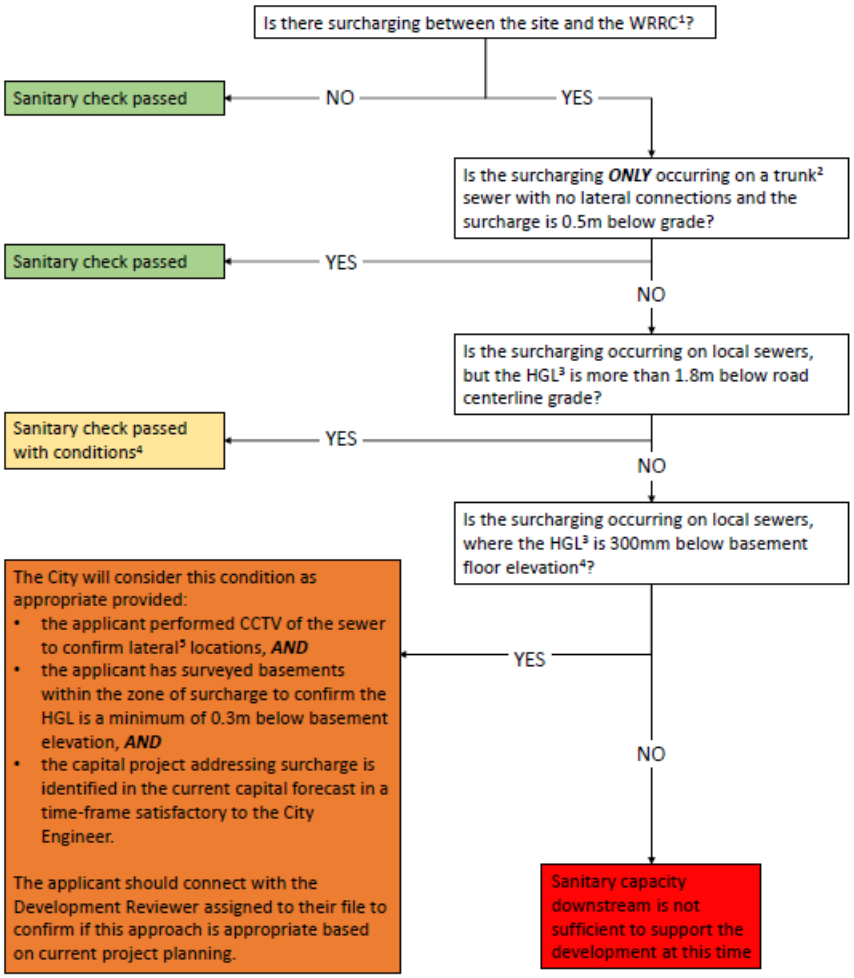
Under existing 2019 MDD conditions, there is sufficient fire flow at hydrant H_2472 to meet the requirement of 200 L/s. There is not sufficient fire flow at hydrant H_1244.

Pressure & fire flow results were assessed assuming an ADD of 2.27 L/s and a MDD of 3.05 L/s based on the population of 862 people and using criteria included in the 2021 WSMP. This slight increase in demand from the values estimated by the Consultant had minimal impact on pressure or fire flow results under 2019 existing ADD & MDD conditions.

5.0 Appendices

Appendix A

Sanitary Capacity Assessment Framework



Footnotes:
1 Water Resource Recovery Centre
2 Trunk sewers, for the purposes of this process, shall be defined as sewers 450mm in diameter or greater and with no lateral connections directly to properties
3 Hydraulic Grade Line in the 25YR Wet Weather Event, using the City's hydraulic model
4 Basement level is assumed to be 1.8m below grade, as measured from the centreline of the road. Applicant must demonstrate that there are no buildings/properties within surcharged segment that have reverse slope driveways or have a property grade lower than the road grade.
5 Applicant must perform individual survey of each lateral connection and demonstrate they are below HGL at basement connection with 300mm of freeboard

Notes:
*all questions refer to the existing pipe network, wet weather flow scenario with the proposed development flow in the City's hydraulic model
** surcharging means, for the purposes of this framework, when the HGL is above the obvert of the pipe

Appendix B

MIDUSS Modelling Files

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                        060546 Ex. Cond - 2yr.out"
"                Licensee name:                                           Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 8:59:52 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      563.699   Coefficient A"
"        1.500   Constant B"
"        0.766   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           129.248    mm/hr"
"             Total depth                  33.713    mm"
"            6   002hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
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"        1.500   Impervious Depression storage"
"                     0.022     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  20.350     2.120      2.120      minutes"
"             Time to Centroid       0.000      116.461    116.461    minutes"
"             Rainfall depth         33.713     33.713     33.713     mm"
"             Rainfall volume        0.00       26.97      26.97      c.m"
"             Rainfall losses        33.713     1.887      1.887      mm"
"             Runoff depth           0.000      31.826     31.826     mm"
"             Runoff volume          0.00       25.46      25.46      c.m"
"             Runoff coefficient     0.000      0.944      0.944      "
"             Maximum flow           0.000      0.022      0.022      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.022     0.022     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.031     0.022     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  18.440     1.921      2.067      minutes"
"             Time to Centroid       114.035    116.092    116.074    minutes"
"             Rainfall depth         33.713     33.713     33.713     mm"
"             Rainfall volume        4.11       37.02      41.13      c.m"
"             Rainfall losses        31.151     1.895      4.821      mm"
"             Runoff depth           2.562      31.817     28.892     mm"
```

```
"             Runoff volume          0.31       34.94      35.25      c.m"
"             Runoff coefficient     0.076      0.944      0.857      "
"             Maximum flow           0.000      0.031      0.031      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.031     0.053     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.002     0.053     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  6.320      0.658      1.020      minutes"
"             Time to Centroid       105.161    114.117    113.544    minutes"
"             Rainfall depth         33.713     33.713     33.713     mm"
"             Rainfall volume        1.67       2.04       3.71       c.m"
"             Rainfall losses        31.192     3.514      15.969     mm"
"             Runoff depth           2.520      30.198     17.743     mm"
"             Runoff volume          0.12       1.83       1.95       c.m"
"             Runoff coefficient     0.075      0.896      0.526      "
"             Maximum flow           0.000      0.002      0.002      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.002     0.055     0.000     0.000"
```

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"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                        060546 Ex. Cond - 5yr.out"
"                Licensee name:                                           Ted Ngui"
"                Company                      R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:25:22 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      750.423   Coefficient A"
"        1.510   Constant B"
"        0.769   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           170.880    mm/hr"
"             Total depth                  44.146    mm"
"            6   005hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.030     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  13.331     1.896      1.896      minutes"
"             Time to Centroid       112.110    115.152    115.152    minutes"
"             Rainfall depth         44.146     44.146     44.146     mm"
"             Rainfall volume        0.00       35.32      35.32      c.m"
"             Rainfall losses        36.014     2.014      2.014      mm"
"             Runoff depth           8.132      42.132     42.132     mm"
"             Runoff volume          0.00       33.71      33.71      c.m"
"             Runoff coefficient     0.000      0.954      0.954      "
"             Maximum flow           0.000      0.030      0.030      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.030     0.030     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.042     0.030     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  12.080     1.718      1.937      minutes"
"             Time to Centroid       111.103    114.903    114.823    minutes"
"             Rainfall depth         44.146     44.146     44.146     mm"
"             Rainfall volume        5.39       48.47      53.86      c.m"
"             Rainfall losses        35.971     2.034      5.428      mm"
"             Runoff depth           8.175      42.112     38.718     mm"
```

```
"             Runoff volume          1.00       46.24      47.24      c.m"
"             Runoff coefficient     0.185      0.954      0.877      "
"             Maximum flow           0.001      0.042      0.042      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.042     0.072     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.003     0.072     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  4.140      0.589      1.091      minutes"
"             Time to Centroid       104.351    113.275    112.012    minutes"
"             Rainfall depth         44.146     44.146     44.146     mm"
"             Rainfall volume        2.19       2.67       4.86       c.m"
"             Rainfall losses        36.161     4.509      18.753     mm"
"             Runoff depth           7.985      39.636     25.393     mm"
"             Runoff volume          0.40       2.40       2.79       c.m"
"             Runoff coefficient     0.181      0.898      0.575      "
"             Maximum flow           0.001      0.002      0.003      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.003     0.075     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                       060546 Ex. Cond - 10yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                      R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:27:18 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      855.183   Coefficient A"
"        1.500   Constant B"
"        0.752   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           201.326    mm/hr"
"             Total depth                  55.229    mm"
"            6   010hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.036     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  11.040     1.775      1.775      minutes"
"             Time to Centroid       111.942    114.957    114.957    minutes"
"             Rainfall depth         55.229     55.229     55.229     mm"
"             Rainfall volume        0.00       44.18      44.18      c.m"
"             Rainfall losses        40.969     2.159      2.159      mm"
"             Runoff depth           14.259     53.070     53.070     mm"
"             Runoff volume          0.00       42.46      42.46      c.m"
"             Runoff coefficient     0.000      0.961      0.961      "
"             Maximum flow           0.000      0.036      0.036      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.036     0.036     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.050     0.036     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  10.004     1.609      1.850      minutes"
"             Time to Centroid       110.848    114.634    114.525    minutes"
"             Rainfall depth         55.229     55.229     55.229     mm"
"             Rainfall volume        6.74       60.64      67.38      c.m"
"             Rainfall losses        41.154     2.344      6.225      mm"
"             Runoff depth           14.075     52.885     49.004     mm"
```

```
"             Runoff volume          1.72       58.07      59.78      c.m"
"             Runoff coefficient     0.255      0.958      0.887      "
"             Maximum flow           0.002      0.050      0.050      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.050     0.086     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.004     0.086     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  3.429      0.551      1.079      minutes"
"             Time to Centroid       104.591    113.289    111.696    minutes"
"             Rainfall depth         55.229     55.229     55.229     mm"
"             Rainfall volume        2.73       3.34       6.08       c.m"
"             Rainfall losses        41.575     5.433      21.697     mm"
"             Runoff depth           13.653     49.796     33.532     mm"
"             Runoff volume          0.68       3.01       3.69       c.m"
"             Runoff coefficient     0.247      0.902      0.607      "
"             Maximum flow           0.001      0.003      0.004      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.004     0.090     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                      060546 Ex. Cond - 25yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                 12/11/2025 at 9:35:00 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      972.202   Coefficient A"
"        1.500   Constant B"
"        0.752   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           228.875    mm/hr"
"             Total depth                  62.786    mm"
"            6   025hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.041     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  9.942      1.687      1.687      minutes"
"             Time to Centroid       111.835    114.503    114.503    minutes"
"             Rainfall depth         62.786     62.786     62.786     mm"
"             Rainfall volume        0.00       50.23      50.23      c.m"
"             Rainfall losses        43.706     2.342      2.342      mm"
"             Runoff depth           19.080     60.444     60.444     mm"
"             Runoff volume          0.00       48.36      48.36      c.m"
"             Runoff coefficient     0.000      0.963      0.963      "
"             Maximum flow           0.000      0.041      0.041      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.041     0.041     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.058     0.041     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  9.009      1.528      1.785      minutes"
"             Time to Centroid       110.990    114.167    114.058    minutes"
"             Rainfall depth         62.786     62.786     62.786     mm"
"             Rainfall volume        7.66       68.94      76.60      c.m"
"             Rainfall losses        43.493     2.530      6.627      mm"
"             Runoff depth           19.293     60.256     56.159     mm"
```

```
"             Runoff volume          2.35       66.16      68.51      c.m"
"             Runoff coefficient     0.307      0.960      0.894      "
"             Maximum flow           0.003      0.057      0.058      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.058     0.099     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.005     0.099     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  3.088      0.524      1.073      minutes"
"             Time to Centroid       104.973    112.995    111.277    minutes"
"             Rainfall depth         62.786     62.786     62.786     mm"
"             Rainfall volume        3.11       3.80       6.91       c.m"
"             Rainfall losses        43.957     6.272      23.231     mm"
"             Runoff depth           18.829     56.514     39.555     mm"
"             Runoff volume          0.93       3.42       4.35       c.m"
"             Runoff coefficient     0.300      0.900      0.630      "
"             Maximum flow           0.001      0.003      0.005      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.005     0.103     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                      060546 Ex. Cond - 50yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                 12/11/2025 at 9:37:35 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"     1054.539   Coefficient A"
"        1.500   Constant B"
"        0.746   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           251.085    mm/hr"
"             Total depth                  70.383    mm"
"            6   050hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.045     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  9.243      1.625      1.625      minutes"
"             Time to Centroid       112.531    114.314    114.314    minutes"
"             Rainfall depth         70.383     70.383     70.383     mm"
"             Rainfall volume        0.00       56.31      56.31      c.m"
"             Rainfall losses        46.127     2.574      2.574      mm"
"             Runoff depth           24.256     67.809     67.808     mm"
"             Runoff volume          0.00       54.25      54.25      c.m"
"             Runoff coefficient     0.000      0.963      0.963      "
"             Maximum flow           0.000      0.045      0.045      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.045     0.045     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.064     0.045     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  8.375      1.473      1.739      minutes"
"             Time to Centroid       111.676    113.969    113.881    minutes"
"             Rainfall depth         70.383     70.383     70.383     mm"
"             Rainfall volume        8.59       77.28      85.87      c.m"
"             Rainfall losses        45.988     2.729      7.055      mm"
"             Runoff depth           24.395     67.654     63.328     mm"
```

```
"             Runoff volume          2.98       74.28      77.26      c.m"
"             Runoff coefficient     0.347      0.961      0.900      "
"             Maximum flow           0.003      0.063      0.064      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.064     0.109     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.005     0.109     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  2.871      0.505      1.064      minutes"
"             Time to Centroid       105.746    112.927    111.230    minutes"
"             Rainfall depth         70.383     70.383     70.383     mm"
"             Rainfall volume        3.48       4.26       7.74       c.m"
"             Rainfall losses        46.377     6.912      24.671     mm"
"             Runoff depth           24.006     63.471     45.712     mm"
"             Runoff volume          1.19       3.84       5.03       c.m"
"             Runoff coefficient     0.341      0.902      0.649      "
"             Maximum flow           0.002      0.004      0.005      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.005     0.114     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                    060546 Ex. Cond - 100yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                12/11/2025 at 9:40:37 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"     1122.601   Coefficient A"
"        1.500   Constant B"
"        0.738   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           271.357    mm/hr"
"             Total depth                  78.288    mm"
"            6   100hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 100"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          100   100 to 200"
"      100.000   % Impervious"
"        0.080   Total Area"
"       33.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       33.000   Pervious length"
"        2.000   Pervious slope"
"        0.080   Impervious Area"
"       33.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.049     0.000     0.000     0.000 c.m/sec"
"             Catchment 100          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.080      0.080      hectare"
"             Time of concentration  8.805      1.576      1.576      minutes"
"             Time to Centroid       113.591    114.204    114.204    minutes"
"             Rainfall depth         78.288     78.288     78.288     mm"
"             Rainfall volume        0.00       62.63      62.63      c.m"
"             Rainfall losses        48.456     2.755      2.755      mm"
"             Runoff depth           29.832     75.532     75.532     mm"
"             Runoff volume          0.00       60.43      60.43      c.m"
"             Runoff coefficient     0.000      0.965      0.965      "
"             Maximum flow           0.000      0.049      0.049      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.049     0.049     0.000     0.000"
" 33          CATCHMENT 200"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          200   200 to 300"
"       90.000   % Impervious"
"        0.122   Total Area"
"       28.000   Flow length"
"        2.000   Overland Slope"
"        0.012   Pervious Area"
"       28.000   Pervious length"
"        2.000   Pervious slope"
"        0.110   Impervious Area"
"       28.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.069     0.049     0.000     0.000 c.m/sec"
"             Catchment 200          Pervious   Impervious Total Area "
"             Surface Area           0.012      0.110      0.122      hectare"
"             Time of concentration  7.978      1.428      1.704      minutes"
"             Time to Centroid       112.855    113.905    113.861    minutes"
"             Rainfall depth         78.288     78.288     78.288     mm"
"             Rainfall volume        9.55       85.96      95.51      c.m"
"             Rainfall losses        48.460     2.910      7.465      mm"
"             Runoff depth           29.827     75.378     70.823     mm"
```

```
"             Runoff volume          3.64       82.77      86.40      c.m"
"             Runoff coefficient     0.381      0.963      0.905      "
"             Maximum flow           0.004      0.068      0.069      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.069     0.118     0.000     0.000"
" 33          CATCHMENT 300"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"          300   300 to Fountain Street"
"       55.000   % Impervious"
"        0.011   Total Area"
"        4.700   Flow length"
"        2.000   Overland Slope"
"        0.005   Pervious Area"
"        4.700   Pervious length"
"        2.000   Pervious slope"
"        0.006   Impervious Area"
"        4.700   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
"        1.500   Impervious Depression storage"
"                     0.006     0.118     0.000     0.000 c.m/sec"
"             Catchment 300          Pervious   Impervious Total Area "
"             Surface Area           0.005      0.006      0.011      hectare"
"             Time of concentration  2.735      0.489      1.061      minutes"
"             Time to Centroid       106.462    112.925    111.280    minutes"
"             Rainfall depth         78.288     78.288     78.288     mm"
"             Rainfall volume        3.88       4.74       8.61       c.m"
"             Rainfall losses        48.754     7.543      26.088     mm"
"             Runoff depth           29.534     70.744     52.200     mm"
"             Runoff volume          1.46       4.28       5.74       c.m"
"             Runoff coefficient     0.377      0.904      0.667      "
"             Maximum flow           0.002      0.004      0.006      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.006     0.124     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                         060546 PostDev - 2yr.out"
"                Licensee name:                                            Ted Ngui"
"                Company                      R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:48:30 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      563.699   Coefficient A"
"        1.500   Constant B"
"        0.766   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           129.248    mm/hr"
"             Total depth                  33.713    mm"
"            6   002hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.052     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  30.281     3.154      3.154      minutes"
"             Time to Centroid       0.000      118.333    118.333    minutes"
"             Rainfall depth         33.713     33.713     33.713     mm"
"             Rainfall volume        0.00       71.81      71.81      c.m"
"             Rainfall losses        33.713     1.984      1.984      mm"
"             Runoff depth           0.000      31.729     31.729     mm"
"             Runoff volume          0.00       67.58      67.58      c.m"
"             Runoff coefficient     0.000      0.941      0.941      "
"             Maximum flow           0.000      0.052      0.052      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.052     0.052     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                         060546 PostDev - 5yr.out"
"                Licensee name:                                            Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:52:28 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      750.423   Coefficient A"
"        1.510   Constant B"
"        0.769   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           170.880    mm/hr"
"             Total depth                  44.146    mm"
"            6   005hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.072     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  19.837     2.821      2.821      minutes"
"             Time to Centroid       117.585    116.845    116.845    minutes"
"             Rainfall depth         44.146     44.146     44.146     mm"
"             Rainfall volume        0.00       94.03      94.03      c.m"
"             Rainfall losses        35.973     1.984      1.984      mm"
"             Runoff depth           8.172      42.162     42.162     mm"
"             Runoff volume          0.00       89.81      89.81      c.m"
"             Runoff coefficient     0.000      0.955      0.955      "
"             Maximum flow           0.000      0.072      0.072      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.072     0.072     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                         Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                      C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                       060546 PostDev - 10yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                    R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:55:01 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      855.183   Coefficient A"
"        1.500   Constant B"
"        0.764   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           196.822    mm/hr"
"             Total depth                  51.710    mm"
"            6   010hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.084     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  17.013     2.666      2.666      minutes"
"             Time to Centroid       116.516    116.295    116.295    minutes"
"             Rainfall depth         51.710     51.710     51.710     mm"
"             Rainfall volume        0.00       110.14     110.14     c.m"
"             Rainfall losses        39.113     2.011      2.011      mm"
"             Runoff depth           12.597     49.698     49.698     mm"
"             Runoff volume          0.00       105.86     105.86     c.m"
"             Runoff coefficient     0.000      0.961      0.961      "
"             Maximum flow           0.000      0.084      0.084      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.084     0.084     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                        060546 PostDev - 10yr.out"
"                Licensee name:                                           Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:                  12/11/2025 at 9:55:01 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"      972.202   Coefficient A"
"        1.500   Constant B"
"        0.752   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           228.875    mm/hr"
"             Total depth                  62.786    mm"
"            6   025hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.100     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  14.794     2.510      2.510      minutes"
"             Time to Centroid       116.797    115.965    115.965    minutes"
"             Rainfall depth         62.786     62.786     62.786     mm"
"             Rainfall volume        0.00       133.73     133.73     c.m"
"             Rainfall losses        43.425     2.158      2.158      mm"
"             Runoff depth           19.361     60.628     60.628     mm"
"             Runoff volume          0.00       129.14     129.14     c.m"
"             Runoff coefficient     0.000      0.966      0.966      "
"             Maximum flow           0.000      0.100      0.100      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.100     0.100     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                        060546 PostDev - 50yr.out"
"                Licensee name:                                           Ted Ngui"
"                Company                      R.J. Burnside & Associates Limited"
"                Date & Time last used:                 12/11/2025 at 9:55:01 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"     1054.539   Coefficient A"
"        1.500   Constant B"
"        0.746   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           251.085    mm/hr"
"             Total depth                  70.383    mm"
"            6   050hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.112     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  13.753     2.418      2.418      minutes"
"             Time to Centroid       117.358    115.760    115.760    minutes"
"             Rainfall depth         70.383     70.383     70.383     mm"
"             Rainfall volume        0.00       149.92     149.92     c.m"
"             Rainfall losses        46.047     2.300      2.300      mm"
"             Runoff depth           24.336     68.083     68.083     mm"
"             Runoff volume          0.00       145.02     145.02     c.m"
"             Runoff coefficient     0.000      0.967      0.967      "
"             Maximum flow           0.000      0.112      0.112      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.112     0.112     0.000     0.000"
```

```
"                MIDUSS Output ------------------------------------------------>"
"                MIDUSS version                            Version 2.25  rev. 473"
"                MIDUSS created                          Sunday, February 07, 2010"
"           10   Units used:                                              ie METRIC"
"                Job folder:                       C:\Users\TNgui\OneDrive - RJB\"
"                060546 70 Fountain Street Guelph - Due Diligence -
Documents\02_Tech Proj Doc\Design Calcs\SWM\MIDUSS"
"                Output filename:                      060546 PostDev - 100yr.out"
"                Licensee name:                                          Ted Ngui"
"                Company                     R.J. Burnside & Associates Limited"
"                Date & Time last used:               12/11/2025 at 10:28:25 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      240.000   Max. Storm length"
"     1500.000   Max. Hydrograph"
" 32          STORM Chicago storm"
"            1   Chicago storm"
"     1122.601   Coefficient A"
"        1.500   Constant B"
"        0.738   Exponent C"
"        0.400   Fraction R"
"      240.000   Duration"
"        1.000   Time step multiplier"
"             Maximum intensity           271.357    mm/hr"
"             Total depth                  78.288    mm"
"            6   100hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 1000"
"            1   Triangular SCS"
"            1   Equal length"
"            2   Horton equation"
"         1000   1000 to Fountain Street"
"      100.000   % Impervious"
"        0.213   Total Area"
"       64.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       64.000   Pervious length"
"        2.000   Pervious slope"
"        0.213   Impervious Area"
"       64.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"       75.000   Pervious Max.infiltration"
"       12.500   Pervious Min.infiltration"
"        0.250   Pervious Lag constant (hours)"
"        5.000   Pervious Depression storage"
"        0.015   Impervious Manning 'n'"
"        0.000   Impervious Max.infiltration"
"        0.000   Impervious Min.infiltration"
"        0.001   Impervious Lag constant (hours)"
```

```
"        1.500   Impervious Depression storage"
"                     0.122     0.000     0.000     0.000 c.m/sec"
"             Catchment 1000         Pervious   Impervious Total Area "
"             Surface Area           0.000      0.213      0.213      hectare"
"             Time of concentration  13.102     2.345      2.345      minutes"
"             Time to Centroid       118.535    115.645    115.645    minutes"
"             Rainfall depth         78.288     78.288     78.288     mm"
"             Rainfall volume        0.00       166.75     166.75     c.m"
"             Rainfall losses        48.666     2.518      2.518      mm"
"             Runoff depth           29.621     75.769     75.769     mm"
"             Runoff volume          0.00       161.39     161.39     c.m"
"             Runoff coefficient     0.000      0.968      0.968      "
"             Maximum flow           0.000      0.122      0.122      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.122     0.122     0.000     0.000"
```

R.J. Burnside & Associates Limited