Report
Project: 30304262-5.1.1.01

EXTENDICARE RIVERSIDE – 400 JESSIE CHENEVERT SERVICING BRIEF

Prepared for Extendicare Inc.
by ARCADIS

November 2025

Table of Contents

1 INTRODUCTION 4
1.1 Guidelines and Standards 4
1.2 Pre-Consultation Meeting 5
1.3 Geotechnical Concerns 5

2 WATER DISTRIBUTION 6
2.1 Existing Conditions 6
2.2 Design Criteria 6
2.2.1 Water Demands 6
2.2.2 System Pressures 6
2.2.3 Fire Flow Rate 7
2.2.4 Boundary Conditions 7
2.3 Proposed Water Plan 7

3 WASTEWATER 8
3.1 Existing Conditions 8
3.2 Proposed Sewers 8
3.2.1 Design Flow: 8
3.2.2 Population Density: 8

4 SITE STORMWATER MANAGEMENT 9
4.1 Existing Conditions 9
4.2 Design Criteria 9
4.3 Stormwater Management 10
4.3.1 Water Quantity Control 10

5 SEDIMENT AND EROSION CONTROL PLAN 13
5.1 General 13
5.2 Trench Dewatering 13
5.3 Bulkhead Barriers 13
5.4 Seepage Barriers 13
5.5 Surface Structure Filters 13

6 CONCLUSIONS & RECOMMENDATIONS 14
6.1 Conclusions 14
6.2 Recommendations 14

List of Appendices

APPENDIX A

Site Plan
City of Ottawa Pre-Consultation Meeting Notes
30304262-001 General Plan of Services

APPENDIX B

Water Demand Calculations
FUS Calculations
Water Model Results for Riverside South Town Center Phase 7A

APPENDIX C

Sanitary Sewer Design Sheet

APPENDIX D

30304262-000 Existing Conditions Plan
Riverside South Town Center Phase 7A Design Brief Excerpt
Riverside South Town Center Phase 7A Storm Drainage Areas
Storm Sewer Design Sheet
30304262-600 Pond Plan
30304262-500 Storm Drainage Area Plan
Modified Rational Method SWM Calculations
Runoff Coefficient Calculations
Storage Calculations

APPENDIX E

30304262-900 Erosion and Sediment Control Plan
30304262-010 Notes and Legends
30304262-200 Site Grading Plan

1 INTRODUCTION

Arcadis Professional Services (Canada) Inc. (formerly IBI Group) has been retained by Extendicare Inc. to provide professional engineering services for Extendicare Riverside located at 400 Jessie Chenevert Walk. The subject site is approximately 1.63 ha and consists of one 4-storey long-term care facility with 256 beds, to be completed in one phase. Refer to key plan on **Figure 1.1** for Site location.

Figure 1.1 Site Location

Extendicare Riverside is located near the South-East intersection of Earl Armstrong Road and Portico Way. This site forms part of Block 1 of the Riverside South Town Center Phase 7A project that spans between Portico Way to the west, Limebank Road to the east, Earl Armstrong Road to the north, and the future BRT corridor to the south. The site itself is bounded by Portico Way to the west, Earl Armstrong Road to the north, Jessie Chenevert Walk to the south, and undeveloped lands to the east. Vehicle access to the site will be provided from Portico Way and Jessie Chenevert Walk. Pedestrian access is provided from Portico Way and Earl Armstrong Road.

1.1 Guidelines and Standards

This evaluation takes into consideration the City of Ottawa Sewer Design Guidelines (OSDG) (October 2012), and the February 2014 Technical Bulletin ISDTB-2014-01, the September 2016 Technical Bulletin PIEDTB-2016-01, the June 2018 Technical Bulletin ISTB-2018-04, October 2019 Technical Bulletin 2019-01, and the July Technical Bulletin 2019-02.

It also considers the City of Ottawa Water Distribution Design Guidelines (OWDDG), and the 2010 Technical Bulletin 2010-02, the 2014 Technical Bulletin 2014-02, the 2018 Technical Bulletin 2018-02 and the 2020 Technical Bulletin 2020-02.

All specifications are as per current City of Ottawa standards and specifications, and Province of Ontario (OPSS/D) standards, specifications and drawings.

1.2 Pre-Consultation Meeting

The City of Ottawa hosted a pre-consultation meeting on August 1st, 2025. Notes of the meeting and City of Ottawa Planning Checklist are provided in **Appendix A**. There were no major engineering concerns flagged in this meeting.

1.3 Geotechnical Concerns

A geotechnical report entitled “Geotechnical Investigation – Proposed Mixed-Use Development – Town Center Phase 7A, Riverside South – Ottawa, Ontario” Report PG4958-6 dated June 20, 2024 by Paterson Group Inc. has been prepared for the subdivision.

The objective of the investigation report include:

- Determination of the subsoil and groundwater conditions;
- Provision of geotechnical recommendations pertaining to the design and development of the subject site including construction considerations.

Among other items, the report comments on the following:

- Site grading;
- Foundation design;
- Pavement structure;
- Grad Raise Restrictions;
- Groundwater control;

The report concludes that the subject site is considered suitable for the proposed development.

2 WATER DISTRIBUTION

2.1 Existing Conditions

Extendicare Riverside will be serviced with potable water from the City of Ottawa's existing watermains. There are two existing 203 mm diameter PVC watermain stubs on Jessie Chenevert Walk intended for this development.

2.2 Design Criteria

2.2.1 Water Demands

The proposed development consists of a 256-bed long-term care building. The closest approximation for water usage per bed was considered to be a 1-bed apartment unit. In order to calculate water demand rates, the per unit population density and consumption rates are taken from Tables 4.1 and 4.2 of the Ottawa Design Guidelines – Water Distribution were used and are summarized as follows:

- Apartment 1.4 person per 1-bed unit

- Average Day Demand 280 l/cap/day
- Peak Daily Demand 700 l/cap/day
- Peak Hour Demand 1,540 l/cap/day

A water demand calculation sheet is included in **Appendix B** and the total water demands are summarized as follows:

- Average Day 1.16 l/s
- Maximum Day 2.90 l/s
- Peak Hour 6.39 l/s

2.2.2 System Pressures

The 2010 City of Ottawa Water Distribution Guidelines states that the preferred practice for the design of a new distribution system is to have normal operating pressures range between 345 kPa (50 psi) and 552 kPa (80 psi) under maximum daily flow conditions. Other pressure criteria identified in the guidelines are as follows:

Minimum Pressure	Minimum system pressure under peak hour demand conditions shall not be less than 276 kPa (40 psi).
Fire Flow	During the period of maximum day demand, the system pressure shall not be less than 150 kPa (21 psi) during a fire flow event.

Maximum Pressure	Maximum pressure at any point in the distribution system in unoccupied areas shall not exceed 689 kPa (100 psi). In accordance with the Ontario Building/Plumbing Code the maximum pressure should not exceed 552 kPa (80 psi) in occupied areas. Pressure reduction controls may be required for buildings when it is not possible/feasible to maintain the system pressure below 552 kPa.

2.2.3 Fire Flow Rate

The Fire Underwriters Survey was used to determine the fireflow for the site. The calculations result in a fire flow of 12,000 L/min (200 L/s) based on noncombustible construction. A copy of the FUS calculation is included in **Appendix B**.

2.2.4 Boundary Conditions

The City of Ottawa has been requested for hydraulic boundary condition at the connection locations off Jessie Chenevert Walk. Boundary conditions were not received in time for this submission, however results from the hydraulic analysis of Riverside South Town Center Phase 7A were used to determine the conditions below. A copy of the hydraulic analysis is included in **Appendix B** and is summarized as follows:

SCENARIO	CONNECTION HGL (M) (NODE C26)
Average Day	132.1
Peak Hour	124.9
Max Day + Fire Flow (216.7 l/s)	347.0 L/s available at 140kPa

2.3 Proposed Water Plan

Two proposed 200mm diameter water services will connect the building to the municipal system. It is proposed to connect to two stubs off of Jessie Chenevert Walk that were installed as part of Riverside South Town Center Phase 7A intended for this development. An existing valve box separates the two connections and provides redundancy. Four existing hydrants surround the building and are expected to provide adequate fire flow coverage for the site. For the purposes of this report, assuming a minimal loss within the service connection the pressures within the site can be estimated as follows:

Minimum Pressure (Peak Hour) – The minimum peak hour pressure on the site can be estimated as HGL 124.9m – meter elevation (assumed to be 1m above ground level) 93.80m = 31.1m or 305.9 kPa which exceeds the minimum requirement of 276 kPa. The pressure on the top floor can be estimated as 124.9m – 102.8m = 22.1m or 216.8 KPa which is below the minimum of 276 kPa and will require a water pump to supply adequate pressure.

Fire Flow – The max day plus fire flow per the hydraulic analysis allows for up to 347.0 L/s of available fire flow at a residual pressure of 140 kPa, greater than the required 200.0 L/s as calculated using the FUS plus the max day demand of 2.90 L/s.

Max HGL (High Pressure Check) – The high-pressure check can be estimated as HGL 132.1 – (lowest level) 92.80 = 39.3m or 385.5 KPa which does not exceed the maximum of 552 kPa, therefore a pressure reducing valve is not required.

The above results indicate the municipal infrastructure can support the proposed development.

3 WASTEWATER

3.1 Existing Conditions

There is an existing 200mm sanitary sewer bulkhead off Jessie Cheneveert Walk. The bulkhead was previously installed as part of Riverside South Phase 7A in anticipation of development on the subject site.

3.2 Proposed Sewers

All on-site sewers have been designed to City of Ottawa and MECP design criteria which include but are not limited to the below listed criteria. The detailed sanitary sewer design sheet which is included in **Appendix C** illustrates the population densities and sewers which provide the necessary outlets. The design wastewater criteria for this analysis area:

3.2.1 Design Flow:

Average Residential Flow	-	280 l/cap/day
Peak Residential Factor	-	Modified Harmon Formula
Infiltration Allowance	-	0.33 l/sec/Ha
Minimum Pipe Size	-	200mm diameter

3.2.2 Population Density:

Apartments	-	1.4 person per 1-bed unit
Townhouse/Semi-Detached	-	2.4 people per unit
Single Family Home	-	3.2 people per unit

4 SITE STORMWATER MANAGEMENT

4.1 Existing Conditions

The subject site is currently undeveloped with no known stormwater management control measures. Stormwater currently flows overland to the existing road-side ditch on Earl Armstrong Road and Jessie Chenevert Walk.

An existing 600mm storm sewer bulkhead is located in Jessie Chenevert Walk connecting to Riverside South Town Center Phase 7A. This bulkhead was designed and installed in anticipation of this proposed site plan.

4.2 Design Criteria

The stormwater system for the subdivision was designed following the principles of dual drainage, making accommodations for both major and minor flow.

Some of the key criteria include the following:

- Design Storm — 1:2-year return (Ottawa)
- Rational Method Sewer Sizing
- Initial Time of Concentration — 10 minutes
- Runoff Coefficients
  - Softscape Areas — C = 0.20
  - Hardscape Areas — C = 0.90
- Pipe Velocities — 0.80 m/s to 3.0 m/s
- Minimum Pipe Size — 250 mm diameter

4.3 Stormwater Management

The subject site is identified on the City of Ottawa's official Plan (OP) Schedule C15, classified as lands within the urban boundary and is subject to development. This site is designed the have minimal impact on adjacent properties grading, drainage, access, circulation, and privacy. This will be achieved by means of Water Quantity Controls.

Stormwater for the subject site ultimately discharges to the Riverside South Pond 2 facility, therefore no quality control is required. This was noted by the City during the Pre-Consultation meeting.

4.3.1 Water Quantity Control

Per the Arcadis Design Brief Report Riverside South Town Center Phase 7A, the 2.43Ha block the subject site is situated on will be limited to a maximum minor system release rate of 478.80 L/s during a 100-year storm (see excerpt of design brief and storm drainage plan in **Appendix D**). The 1.63 Ha subject site will be restricted proportionally. This will be achieved through a combination of inlet control devices (ICD's), underground storage and surface storage where possible.

Surface flows in excess of the site's allowable release rate will be stored on site and gradually released into the minor system to respect the site's allowable release rate. The surface flows and ponding allocated to this site plan are shown in the ponding plan located in **Appendix D** and grading plan located in **Appendix E**.

Along the perimeter of the site, the opportunity to capture and store runoff is limited due to grading constraints and building geometry. These areas will discharge uncontrolled to Earl Armstrong Road and a very minor area at the corner of Jessie Chenevert Walk and Portico Way. These areas are located at the perimeter of the site where it is necessary to tie into public boulevards and adjacent properties or in areas where ponding stormwater is undesirable.

Based on the proposed site plan, the total uncontrolled area has been calculated to be 0.07 Ha at the edges of the site and 0.20 Ha for the inner courtyard. The runoff calculations for these uncontrolled areas have been calculated and provided in **Appendix D**. For the detailed storm drainage area plan for the site, refer to Drawing 500 in **Appendix D**.

Using the restrictions set by the RSSTC 7A design brief, based on a 2-Year design return period for a runoff coefficient of 0.85, a time of concentration of 10 minutes, and for an area of 1.63 Ha, the restricted flowrate for the subject site can be determined as:

$\mathbf{Q_{restricted}}$ = **2.78** x $\mathbf{C_{2yr}}$ x $\mathbf{i_{2yr}}$ x **A** where:

C = Design runoff coefficient

$\mathbf{i_{100yr}}$ = Intensity of 2-year storm event (mm/hr)
= $732.951 \times (T_c + 6.199)^{0.810}$ =76.81 mm/hr; where T_c = 10 minutes

A = Uncontrolled Area

Therefore, the restricted release rate can be determined as:

$\mathbf{Q_{restricted}}$ = **2.78** x $\mathbf{C_{100yr}}$ x $\mathbf{i_{100yr}}$ x **A**
= 2.78 x (0.85) x 76.81 x 1.63
= 295.83 L/s

Based on a 1:100-year event, the flow from the 0.07 Ha uncontrolled areas can be determined as:

$\mathbf{Q_{uncontrolled}}$ = **2.78** x $\mathbf{C_{100yr}}$ x $\mathbf{i_{100yr}}$ x **A** where:
C = Average runoff coefficient (100-year C-value, max 1.00)
$\mathbf{i_{100yr}}$ = Intensity of 100-year storm event (mm/hr)
= $1735.688 \times (T_c + 6.014)^{0.820}$ =178.56 mm/hr; where T_c = 10 minutes
A = Uncontrolled Area

Therefore, the uncontrolled release rate can be determined as:

$\mathbf{Q_{uncontrolled1+2}}$ = **2.78** x $\mathbf{C_{100yr}}$ x $\mathbf{i_{100yr}}$ x **A**
= 2.78 x (0.21*1.25) x 178.56 x 0.07
= 9.12 L/s

The calculation when repeated for the 0.20 Ha courtyard returns a value of 62.05 L/s. The Maximum allowable release rate from the site can be determined by subtracting the Uncontrolled release rate from the minor system restricted flow rate.

$Q_{max} = Q_{restricted} - Q_{uncontrolled1+2} - Q_{uncontrolledCourtyard}$

Q_{max} = 295.83 L/s – 9.12 L/s – 62.05 L/s

Q_{max} = 224.66 L/s

Therefore, the total restricted flow rate through the minor system will be the design flow rate of **224.66 L/s**. This will be achieved using Inlet Control Devices. A summary of the ICD's, their corresponding storage requirements, storage availability, and associated drainage areas has been provided below.

Drainage Area	ICD Restricted Flow (L/s)	100 Year Storage Required (m3)	2 Yr Storage Required (m3)	Storage Provided
MH3	164.00	179.76	22.04	341.33
MH5	60.00	141.41	20.54	490.42
TOTAL	**224.00**	**321.17**	**42.58**	**831.75**

Detailed stormwater management calculations for the 2-year event, 100-year event, and stress test (100-year plus 20%) event can be found in **Appendix D**.

There will be no surface ponding for the 2-year storm event per the rational method calculations, noting that a minimum concentration time of 10 min was considered for 2-year ponding. A 0.3m freeboard from downstream high points/maximum ponding elevations to first floor building openings is maintained in all scenarios including emergency overflow conditions.

Refer to geotechnical report for information regarding foundation drainage. Foundation drainage systems are to be independent and connected to the storm service downstream of any stormwater management control device.

5 SEDIMENT AND EROSION CONTROL PLAN

5.1 General

During construction, existing stream and conveyance systems can be exposed to significant sediment loadings. Although construction is only a temporary situation, it is proposed to introduce a number of mitigative construction techniques to reduce unnecessary construction sediment loadings. These will include:

- groundwater in trench will be pumped into a filter mechanism prior to release to the environment;
- bulkhead barriers will be installed at the nearest downstream manhole in each sewer which connects to an existing downstream sewer;
- seepage barriers will be constructed in any temporary drainage ditches; and
- silt sacks will remain on open surface structure such as manholes and catchbasins until these structures are commissioned and put into use.

5.2 Trench Dewatering

During construction of municipal services, any trench dewatering using pumps will be discharged into a filter trap made up of geotextile filters and straw bales similar in design to the OPSD 219.240 Dewatering Trap. These will be constructed in a bowl shape with the fabric forming the bottom and the straw bales forming the sides. Any pumped groundwater will be filtered prior to release to the existing surface runoff. The contractor will inspect and maintain the filters as needed including sediment removal and disposal and material replacement as needed.

5.3 Bulkhead Barriers

At the first manhole constructed immediately upstream of an existing sewer, a ½ diameter bulkhead will be constructed over the lower half of the outletting sewer. This bulkhead will trap any sediment carrying flows, thus preventing any construction –related contamination of existing sewers. The bulkheads will be inspected and maintained including periodic sediment removal as needed.

5.4 Seepage Barriers

These barriers will consist of both the Light Duty Straw Bale Barrier as per OPSD 219.100 or the Light Duty Silt Fence Barrier as per OPSD 219.110 and will be installed in accordance with the sediment and erosion control drawing. The barriers are typically made of layers of straw bales or geotextile fabric staked in place. All seepage barriers will be inspected and maintained as needed.

5.5 Surface Structure Filters

All catchbasins, and to a lesser degree manholes, convey surface water to sewers. However, until the surrounding surface has been completed these structures will be covered to prevent sediment from entering the minor storm sewer system. Until rear yards are sodded or until streets are asphalted and curbed, all catchbasins and manholes will be equipped with geotextile filter socks. These will stay in place and be maintained during construction and build until it is appropriate to remove them.

6 CONCLUSIONS & RECOMMENDATIONS

6.1 Conclusions

This report and the accompanying working drawings clearly indicate that the proposed development meets the requirements of the stakeholder regulators, including the City of Ottawa. The proposed development is also in general conformance with the recommendations made by the Riverside South Town Center Phase 7A Design Brief.

There is a reliable water supply available adjacent to the proposed development; a wastewater outlet is available adjacent to the site and local storm sewers have been installed adjacent to the site.

6.2 Recommendations

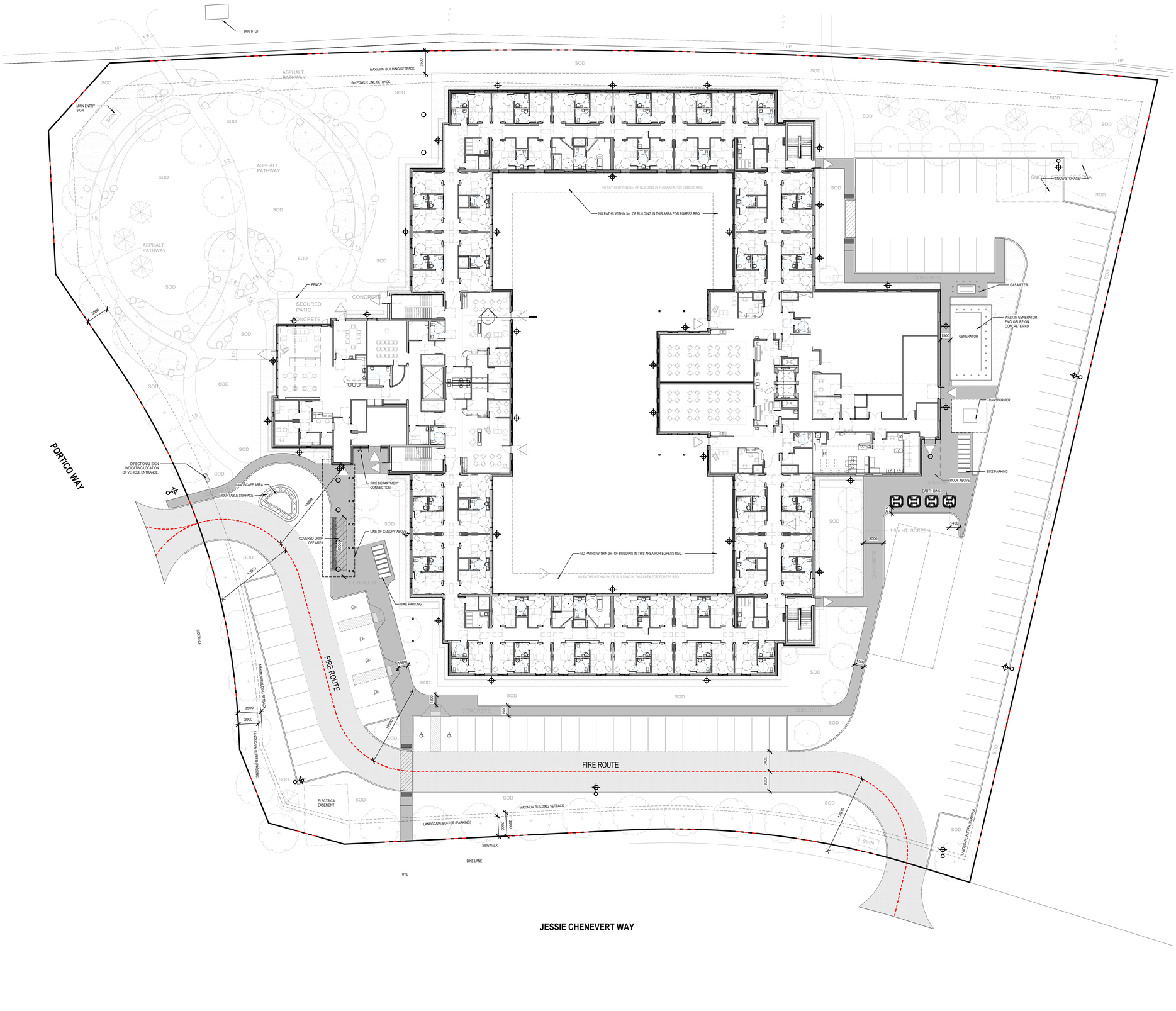
It is recommended that the regulators review this submission with an aim of providing the requisite approvals to permit the owners to proceed to the construction stage of the subject site.

Report prepared by:

ARCADIS

Samantha E. Labadie, P. Eng
Civil Engineer

Appendix A



SITE DATA		
SITE DESCRIPTION	PART OF LOT 21, CONCESSION 1, GEOGRAPHIC TOWNSHIP OF GLOUCESTER, CITY OF OTTAWA	
SITE ADDRESS	400 JESSIE CHENEVERT WALK	
PROPOSED USE	4 STOREY LONG TERM CARE (256 BEDS)	
BUILDING FOOTPRINT		
PAVED SURFACE AREA		
ZONING		
	REQUIRED	PROVIDED
ZONE		AM - Arterial Mainstreet
LOT AREA		16,323sq.m (1.63 ha)
FRONT YARD & CORNER SIDE YARD		1.5m
MIN. INTERIOR SIDE YARD		N/A
MIN. REAR YARD		N/A
BUILDING HEIGHT		
MAX. FLOOR SPACE INDEX		
MIN. WIDTH OF LANDSCAPED AREA AROUND PARKING		3m - Abutting Street 1.5m - Abutting Adjacent Property
MIN. LANDSCAPE AREA		
SNOW STORAGE		
AMENITY AREA		
PARKING		
	REQUIRED	PROVIDED
PARKING SPACES	0.25 x 256 BEDS + 1 PER 100 sq.m (medical, health/personal services) = 79	88 (EXCLUDING TYPE A & B)
BARRIER-FREE SPACES	2 TYPE A + 4 TYPE B (AS PER AODA)	2 TYPE A + 4 TYPE B
LOADING SPACES	2 (5m)	1 (20m) + 1 (5m)
BICYCLE PARKING	1 per 1500 sq.m GFA = 10	16
BUILDING DATA		
GROSS BUILDING AREA		
GROUND FLOOR LEVEL		
SECOND FLOOR LEVEL		
THIRD FLOOR LEVEL		
FOURTH FLOOR LEVEL		
ROOF: MECH. PENTHOUSE AND STAIR		
TOTAL		

Montgomery Sisam Architects Inc.

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Tel 416.364.8079 Fax 416.364.7723

MontgomerySisam

#	date:	revision:	by:

revisions

EXTENDICARE RIVERSIDE

400 Jessie Chenevert Walk
Ottawa, ON
PART OF LOT 21, CONCESSION 1, GEOGRAPHIC TOWNSHIP OF GLOUCESTER, CITY OF OTTAWA

SITE PLAN

scale:	1 : 200
drawn by:	Author
reviewed by:	Checker
job number:	0001
plot date:	10/24/2025

drawing number:

A1.01

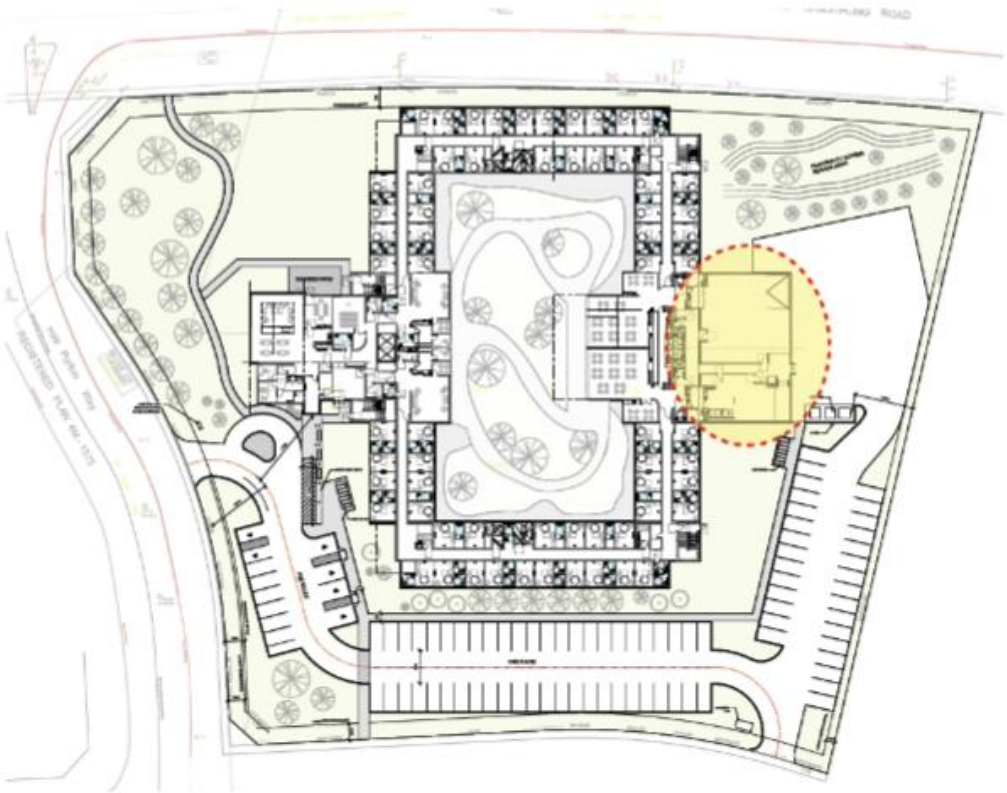
File No.: PC2025-0182

August 1, 2025

Genessa Bates
Fotenn
bates@fotenn.com

Subject: Pre-Consultation: Meeting Feedback
Proposed Minor Zoning By-Law Amendment and Site Plan Control Application
400 Jessie Chenevert Walk

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on July 2, 2025, based on the 4-storey Extendicare LTC home design below.



Pre-Consultation Preliminary Assessment

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken.

Next Steps

2. For your next submission, please submit the required Application Form, necessary studies and plans to planningcirculations@ottawa.ca, and copy the file lead, planning support and all of the review-staff who provided comments. Please also ensure that all comments or issues are addressed in a detailed cover letter and that the responses are coordinated with the numbering on the initial feedback form.

3. If your development proposal changes significantly in scope, design, or density it is recommended that a subsequent pre-consultation application be submitted.

Supporting Information and Material Requirements

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

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

Consultation with Technical Agencies

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

Planning

1. Riverside South Secondary Plan: Town Centre Designation: Please try to meet as many of the policies as possible, understanding that Long Term Care Homes are heavily regulated in their design and function by the Provincial Ministry.

2. Zoning By-Law: MC19 [2952]: The Applicant has advised that they will require a Zoning By-Law application for relief from the glazing requirements and for the

front and corner side yard setbacks. This can be done through the Minor Zoning Amendment process.

3. Landscape requirements: Please provide ample landscaping to meet the intent of the Secondary Plan, especially to buffer the view of vehicular parking, loading, garbage etc.

City Surveyor (Saeid.Sedaghatjahromi@ottawa.ca) - not in attendance

4. The determination of property boundaries, minimum setbacks and other regulatory constraints are a critical component of development. An Ontario Land Surveyor (O.L.S.) needs to be consulted at the outset of a project to ensure properties are properly defined and can be used as the geospatial framework for the development.

5. Topographic details may also be required for a project and should be either carried out by the O.L.S. that has provided the Legal Survey or done in consultation with the O.L.S. to ensure that the project is integrated to the appropriate control network.

Urban Design

Comments:

6. As the site is in a Design Priority Area and is the first development on the south side of the RSS town centre, it should set an example for high quality design.

7. If parking is located along roadway frontages it should be well screened and landscaped. Loading must also be screened from public roadways.

8. The building should try to activate public frontages.

    i. Please ensure that Earl Armstrong is well landscaped and that street trees can be provided with the overhead wires present.

9. The building and site design should be oriented to provide convenient access to transit for workers and visitors.

    i. Provide direct convenient walkway connections to building entrances.

10. Provide significant landscaping on site.

    i. Consider a landscaped gateway feature at the corner of Earl Armstrong and Portico.

    ii. Provide landscaping and tree planting on site to screen parking areas and to provide a pleasant interface adjacent to ground floor units.

Feel free to contact Lisa Stern, Urban Design, for follow-up questions.

Engineering

Comments:

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

    a. The quantity control criteria (100-year post-development to 2-year pre-development). Please refer to the Riverside South Community Infrastructure Servicing Study Update Phase 1 Mosquito Creek Study Area dated August 18, 2023 by Stantec and the Riverside South Phase 7A subdivision design brief dated April 2025.

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

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

13. Storm sewer outlets should not be submerged.

14. Quality control criteria is not required for this site since it discharges to Riverside South Pond 2 facility.

15. Ponding:

    a. Permissible ponding of 350mm for the 100-year storm event. No spilling to adjacent sites.

    b. At the 100-year ponding elevation, all drainage must be spilled to the Right-of-Way.

    c. 100-year spill elevation must be 300mm lower than any building opening or ramp.

    d. Demonstrate that the stress test spill elevation (100-year +20% event) does not spill onto any permanent structures.

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

    a. Provide existing servicing information and the recommended location for the proposed connections. Services should ideally be grouped in a common trench to minimize the number of road cuts.

    b. There is an existing temporary DICB 2 with a 200mm lateral on Jessie Chenevert Walk. The storm sewer could be relocated there to minimize new sewer connections if it aligns with the proposed entrance.

c. Provide information on the monitoring manhole requirements – should be located in an accessible location on private property near the property line (ie. Not in a parking area).

d. Sewer connections to be made above the springline of the sewermain as per:

    i. Std Dwg S11.1 for flexible main sewers – connections made using approved tee or wye fittings.

    ii. Std Dwg S11 (For rigid main sewers) – lateral must be less that 50% the diameter of the sewermain,

    iii. Std Dwg S11.2 (for rigid main sewers using bell end insert method) – for larger diameter laterals where manufactured inserts are not available; lateral must be less that 50% the diameter of the sewermain,

    iv. Connections to manholes permitted when the connection is to rigid main sewers where the lateral exceeds 50% the diameter of the sewermain. – Connect obvert to obvert with the outlet pipe unless pipes are a similar size.

17. Water

a. Water Boundary condition requests must include the location of the service (map or plan with connection location(s) indicated) and the expected loads required by the proposed development, including calculations. Please provide the following information:

    i. Location of service

    ii. Type of development

    iii. The amount of fire flow required (per OBC or FUS).

    iv. Average daily demand: ___ l/s.

    v. Maximum daily demand: ___l/s.

    vi. Maximum hourly daily demand: ___ l/s.

18. Sewer (sanitary and storm)

a. Please refer to the Riverside South Community Infrastructure Servicing Study Update Phase 1 Mosquito Creek Study Area dated August 18, 2023 by Stantec and the Riverside South Phase 7A subdivision design brief dated April 2025.

19. Grading - the site will have to be raised to provide positive drainage towards the right of way. Currently the road around the site is higher than site elevation. The grade raise will need to be reviewed by a geotechnical engineer and a memo will be required stating the final grading plan is acceptable.

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

    a. An update to the previously submitted report that supported the subdivision is required.

    b. Containing detailed information on geotechnical matters and recommendations (i.e. pavement, foundation, bedding construction etc.).

    c. Sensititve Marine Clay (SMC) is widely found across Ontario – geotechnical reposts should include Atterberg Limits, consolidation testing, sensitivity values, and vane shear test results (at a minimum) with a discussion for proposals in areas containing SMC; If SMC exists than the tree planing restrictions are to be discussed and follow the City's most current tree planting guidelines.

21. The Phase 1 and if required, Phase 2 Environmental Site Assessments will be required.

22. Sensitive Marine Clay: Please follow the City's 2017 Tree Planing in Sensitive Marine Clay guidelines Tree Planting in Sensitive Marine Clay Soils - 2017 Guidelines.

Feel free to contact Natasha Baird, Project Manager, for follow-up questions.

Noise

Comments:

23. A road noise study is required.

Feel free to contact Mike Giampa, for follow-up questions.

Transportation

Comments:

24. Right-of-way protection (Earl Armstrong).

    a. See Schedule C16 of the Official Plan.

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

25. Corner Sight Triangles:

    a. Arterial/Arterial: overlapping 5m x 15m triangles
    b. Arterial/Collector: overlapping 5m x 15m triangles
    c. Collector/Collector: overlapping 5m x 15m triangles
    d. Arterial/Local: 3m x 9m with the longer dimension along the arterial road
    e. Collector/Local: 3m x 9m with the longer dimension along the collector road
    f. Local/Local: 3m x 3m

26. A TIA is warranted, please proceed to **Step 2; TIA Scoping report**. The application will not be deemed complete without Step 2 being submitted at least 14 calendar days prior to a Phase 3 pre-consultation or formal application. A **TIA Strategy report (Step 3)** with the Synchro files will be required at or prior to the formal application. Refer to the City of Ottawa website for the updated TIA process: Transportation Impact Assessment Guidelines | City of Ottawa.

Feel free to contact Mike Giampa, Transportation Project Manager, for follow-up questions.

Environment

Comments:

27. Most environmental concerns have been addressed through previous subdivision applications. An Environmental Impact Statement is not required for this application.

28. The City has policies for tree plantings to help meet the urban forest canopy goals, as well as to reduce the impacts of climate change and the urban heat island effect. Additional plantings are always welcome. Please note that the City prefers that all plantings be of native and non-invasive species.

    Based on the preliminary drawings shown in the presentation, Staff would recommend additional tree plantings along the southern perimeter of the property, between the parking lot and new road.

29. Please review the City's Bird Safe Design Guidelines and implement mitigation measures from that document wherever possible.

30. This property is located within the Airport Bird Hazard Zone, which affects what types of trees to be planted. A list of species to avoid will be provided, but in general avoid fruit-bearing trees and shrubs.

Feel free to contact Mark Elliott, Environmental Planner, for follow-up questions.

Forestry

Comments:

31. Tree planting along all road frontages is a priority under the OP (Section 4.1.3).

32. Incorporate regular space for trees throughout the surface parking lot to align with the OP (Section 4.1.4).

33. Boundary and adjacently owned trees are not to be impacted by the development. Design the site and associated engineering accordingly.

34. Tree Conservation Report requirements.

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

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

b. Any tree 10 cm in diameter or greater and City-owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.

c. The TCR must contain 2 separate plans/maps:

    i. Plan/Map 1 - show existing conditions with tree cover information.
    ii. Plan/Map 2 - show proposed development with tree cover information.

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

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

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

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

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

i. The City encourages the retention of healthy trees; if possible, please seek opportunities for retention of trees that will contribute to the design/function of the site.

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

35. Landscape Plan (LP) requirements.

a. Landscape Plan Terms of Reference must be adhered to for all tree planting: Click Here. For more information on these requirements please contact hayley.murray@ottawa.ca

36. Additional Elements for Tree Planting in the Right of Way.

a. Please ensure any related trees are shown on the LP

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

c. Soil Volume - Please demonstrate as per the Landscape Plan Terms of Reference that the available soil volumes for new plantings will meet or exceed the minimum soil volumes requested.

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

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

f. Minimum Setbacks

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

ii. Maintain 2.5m from curb

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

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

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

g. Tree specifications

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

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

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

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

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

h. Hard surface planting

i. If there are hard surface plantings, a planting detail must be provided.

ii. Curb style planters are highly recommended.

iii. No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.

iv. Trees are to be planted at grade.

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

Parkland

Comments:

37. Covenants are required to inform future residents of the upcoming construction works for the district park.

38. Further covenants are required to inform future residents of potential lighting from nearby sport fields, which lighting will meet the Illuminating Engineering Society of North America (IES) standards.

Feel free to contact steve.gauthier@ottawa.ca for follow-up questions.

Other

1. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design and will be applicable to Site Plan Control and Plan of Subdivision applications.
    a. The HPDS was passed by Council on April 13, 2022, but is not in effect at this time, as Council has referred the 2023 HPDS Update Report back to staff with the direction to bring forward an updated report to Committee at a later date. The timing of an updated report to Committee is unknown at this time, and updates will be shared when they are available.

    b. Please refer to the HPDS information at ottawa.ca/HPDS for more information.

2. Under the Affordable Housing Community Improvement Plan, a Tax Increment Equivalent Grant (TIEG) program was created to incentivize the development of affordable rental units. It provides a yearly fixed grant for 20 years. The grant helps offset the revenue loss housing providers experience when incorporating affordable units in their developments.
        a. To be eligible for the TIEG program you must meet the following criteria:

            i. the greater of five units OR 15 per cent of the total number of units within the development must be made affordable

            ii. provide a minimum of 15 per cent of each unit type in the development as affordable

            iii. enter into an agreement with the city to ensure the units maintain affordable for a minimum period of 20 years at or below the city-wide average market rent for the entire housing stock based on building form and unit type, as defined by the Canada Mortgage and Housing Corporation

            iv. must apply after a formal Site Plan Control submission, or Building Permit submission for projects not requiring Site Plan Control, and prior to Occupancy Permit issuance

        b. Please refer to the TIEG information *at Affordable housing community improvement plan / Plan d'améliorations communautaires pour le*

logement abordable for more details or contact the TIEG coordinator via email at affordablehousingcip@ottawa.ca.

Submission Requirements and Fees

1. The proposed development will require a minor zoning amendment application (to modify zoning provisions) and a site plan control application.

    a. Additional information regarding fees related to planning applications can be found here.

2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.

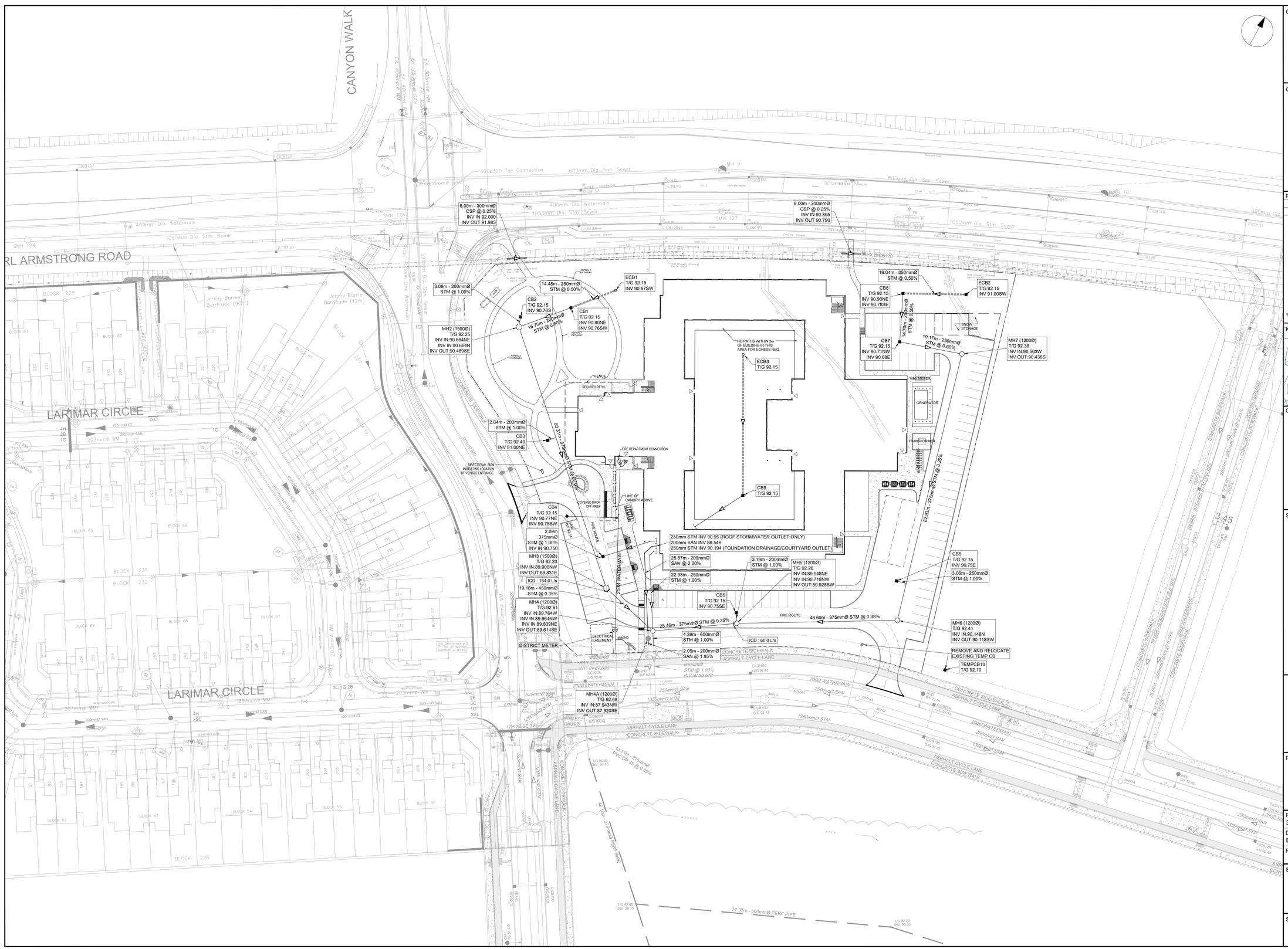
    b. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

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

Yours Truly,
Tracey Scaramozzino, MCIP RPP

c.c. Lisa Stern, Urban Design
Natasha Baird, Infrastructure Project Manager
Mike Giampa, Transportation Project Manager
Mark Elliott, Environmental Planner
Amy MacPherson, Planner, Strategic Initiatives
Steve Gauthier, Parks Planner
Chloe Bullen, Planner



SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

NOT FOR CONSTRUCTION

CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

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ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

KEY PLAN

1:500 0 5 15 25m

CONSULTANTS

SEAL

S. E. LABADIE
100214983
2025/11/13

PROJECT

EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO:
3034262

DRAWN BY:	CHECKED BY:
D.D.	T.R.B.
PROJECT MGR:	APPROVED BY:
S.E.L.	S.E.L.

SHEET TITLE

SERVICING PLAN

SHEET NUMBER	ISSUE
C-001	1

File Location: C:\Users\cormierc3992\DC\ACCDocs\Arcadis ACC US\ACA-30342262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-001 SITE PLAN SERVICING.dwg Last Saved: November 7, 2025 by cormierc3992 Plotted: November 7, 2025 12:14:29 PM by Cormier, Chris

D07-XX-XX-XXXX

SCALE CHECK 1 in 10mm

XXXXX

Appendix B

WATERMAIN DEMAND CALCULATION SHEET

ARCADIS PROFESSIONAL SERVICES (CANADA) INC.
500-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
arcadis.com

WATERMAIN DEMAND CALCULATION SHEET
Extendicare Riverside | Extendicare Inc.
30304262.5.1.1 | Rev #2 | 2025-11-03
Prepared By: SEL | Checked By: MAP

NODE	RESIDENTIAL				NON-RESIDENTIAL (ICI)			AVERAGE DAILY DEMAND (l/s)			MAXIMUM DAILY DEMAND (l/s)			MAXIMUM HOURLY DEMAND (l/s)			FIRE DEMAND (l/min)
	1 Bedroom Apartment	2 Bedroom Apartment	3 Bedroom Apartment	POPULATION	INDUST. (ha)	COMM. (m2)	INSTIT. (pp)	RESIDENTIAL	ICI	TOTAL	RESIDENTIAL	ICI	TOTAL	RESIDENTIAL	ICI	TOTAL	
Extendicare	256			358.4				1.16		1.16	2.90		2.90	6.39		6.39	12,000

POPULATION DENSITY

1 Bedroom Apartment	1.4 persons/unit
2 Bedroom Apartment	2.1 persons/unit
3 Bedroom Apartment	3.1 persons/unit

WATER DEMAND RATES

Residential	280 l/cap/day
Commercial Shopping Center	2,500 L/(1000m2)/day
Institutional	75 l/cap/day

PEAKING FACTORS

Maximum Daily	
Residential	2.5 x avg. day
Commercial	1.5 x avg. day
Maximum Hourly	
Residential	2.2 x avg. day
Commercial	1.8 x avg. day

FIRE DEMANDS

Single Family

Semi Detached & Townhouse

Medium Density 12,000 l/min (200 l/s)

ARCADIS PROFESSIONAL SERVICES (CANADA) INC.
500-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
arcadis.com

FIRE UNDERWRITERS SURVEY
Extendicare Riverside | Extendicare Inc.
30304262.5.1.1 | Rev #2 | 2025-11-06
Prepared By: SEL | Checked By: MAP

STEP	Contents	Description		Adjustment Factor		Result	
1	**Extendicare** 4-storey residential **Total Effective Floor Area**	Floor 1 Floors 2-4	4200 4200	Floors Floors	1 3	4200 12600 **16800**	m2 m2 m2
2	**Type of Construction**	**Type V** Wood Frame **Type III** Ordinary Construction **Type II** Noncombustible Construction **Type I** Fire Resistive Construction	1.5 1.0 0.8 0.6	Type II Noncombustible Construction	0.8		
3	**Required Fire Flow**	RFF = 220C√A, rounded to nearest 1000 L/min				**23000**	L/min
4	**Occupancy and Contents**	Noncombustible Contents Limited Conbustible Contents Combustible Contents Free Burning Contents Rapid Burning Contents	-25% -15% 0% 15% 25%	Limited Conbustible Contents	-15%	-3450	L/min
	Fire Flow					**19550**	L/min
5	**Automatic Sprinkler Protection**	Automatic Sprinkler Conforming to NFPA 13 Standard Water Supply for both the system and Fire Department Hose Lines Fully Supervised System	-30% -10% -10%	Yes Yes No	-30% -10%	-5865 -1955	L/min L/min
	Total Sprinkler Adjustment					**-7820**	L/min
6	**Exposure Adjustment**	Based on **Table 6** Exposure Adjustement Charges for Subject Building					
	North	Separation (m) Length X Height Factor (m.storeys) Construction Type	>30			0	L/min
	South	Separation (m) Length X Height Factor (m.storeys) Construction Type	>30			0	L/min
	East	Separation (m) Length X Height Factor (m.storeys) Construction Type	>30			0	L/min
	West	Separation (m) Length X Height Factor (m.storeys) Construction Type	>30			0	L/min
	Total Exposure Adjustment					**0**	L/min
7	**Total Required Fire Flow**					**11730**	L/min
		Rounded to Nearest 1000 L/min				**12000**	L/min
						200	L/s

Notes 1. Fire flow calculation are based on Fire Underwriters Survey version 2020.

2. If any vertical opening in the building are unprotected (e.g. interconnected floor spaces, elevators etc.), consider the two largest adjoining floor area plus 50% of all floors immediately above them up to a maximum of eight.

Arcadis
333 PRESTON STREET
OTTAWA, ON
K1S 5N4

WATERMAIN DEMAND CALCULATION SHEET

FILE: 144320
DATE PRINTED: 06-Jun-24
DESIGN: LE
PAGE : 1 OF 1

PROJECT : RSS TOWN CENTER - PHASE 7A
LOCATION : CITY OF OTTAWA
DEVELOPER : RIVERSIDE SOUTH DEVELOPMENT CORPORATION

NODE	RESIDENTIAL UNITS SF	SD & TH	APT	TC (ha)	POP'N	NON-RESIDENTIAL INDTRL (ha.)	EMP (ha.)	INST. (ha.)	AVERAGE DAILY DEMAND (l/s) Res.	Non-res.	Total	MAXIMUM DAILY DEMAND (l/s) Res.	Non-res.	Total	MAXIMUM HOURLY DEMAND (l/s) Res.	Non-res.	Total	FIRE DEMAND (l/min)
C05			45		81				0.26	0.00	0.26	0.66	0.00	0.66	1.44	0.00	1.44	13,000
C12			350		630		0.19		2.04	0.08	2.12	5.10	0.12	5.22	11.23	0.21	11.44	13,000
C14			350		630		0.19		2.04	0.08	2.12	5.10	0.12	5.22	11.23	0.21	11.44	13,000
C16			175		315				1.02	0.00	2.12	2.55	0.00	2.55	5.61	0.00	5.61	13,000
C18			235		423				1.37	0.00	1.37	3.43	0.00	3.43	7.54	0.00	7.54	13,000
C22								10.60	0.00	3.44	3.44	0.00	5.15	5.15	0.00	9.28	9.28	13,000
C32		120			324				1.05	0.00	1.05	2.63	0.00	2.63	5.78	0.00	5.78	13,000
C33		48			130				0.42	0.00	0.42	1.05	0.00	1.05	2.31	0.00	2.31	13,000
C35		205			554				1.79	0.00	1.79	4.48	0.00	4.48	9.87	0.00	9.87	13,000
C36		9			24				0.08	0.00	0.08	0.20	0.00	0.20	0.43	0.00	0.43	13,000
TOTALS					3,110		0.38	10.60			14.77			30.59			65.14	

ASSUMPTIONS

RESIDENTIAL DENSITIES
- Single Family (SF) 3.4 p / p / u
- Semi Detached (SD) & Townhouse (TH) 2.7 p / p / u
- Apartment (APT) 1.8 p / p / u
- Town Centre Area (TC) 122.4 p / p / ha

AVG. DAILY DEMAND
- Residential 280 l / cap / day
- Employment 35,000 l / ha / day
- INST 28,000 l / ha / day

MAX. DAILY DEMAND
- Residential 700 l / cap / day
- Employment 52,500 l / ha / day
- INST 42,000 l / ha / day

MAX. HOURLY DEMAND
- Residential 1,540 l / cap / day
- Employment 94,500 l / ha / day
- INST 75,600 l / ha / day

FIRE FLOW
- SF, SD, TH & ST 10,000 l / min
- ICI 13,000 l / min

RSS TOWN CENTER PHASE 7A WATER MODEL

LEGEND

- 200 mm WM
- 250 mm WM
- 300 mm WM
- 400 mm WM
- 600 mm WM

Boundary Condition

CON-1
CON-2
CON-3
CON-4
CON-5

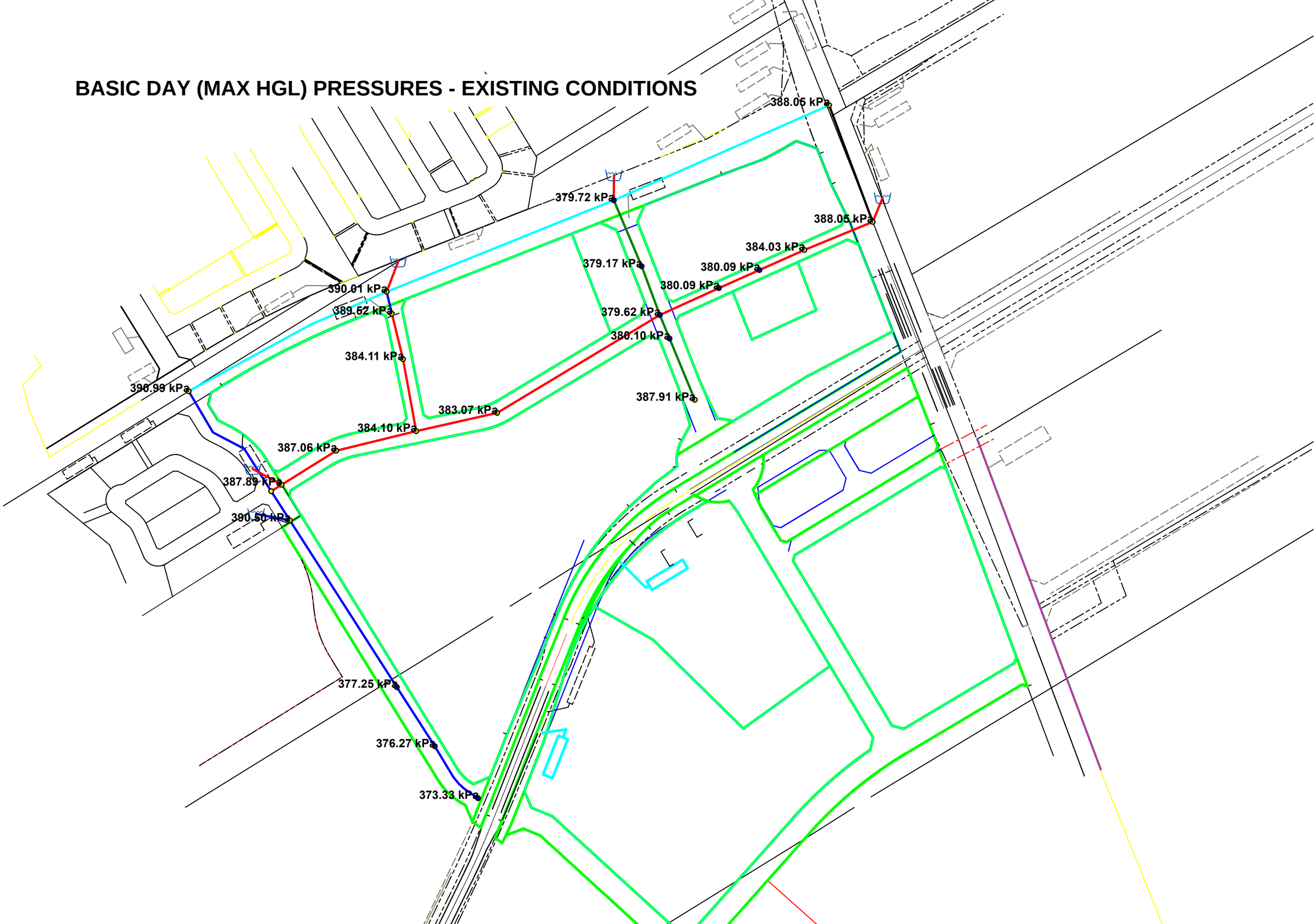
J1

D01
D02

C05
C10
C12
C14
C16
C18
C20
C21
C22
C23
C26
C27
C29
C30
C31
C32
C33
C34
C35
C36

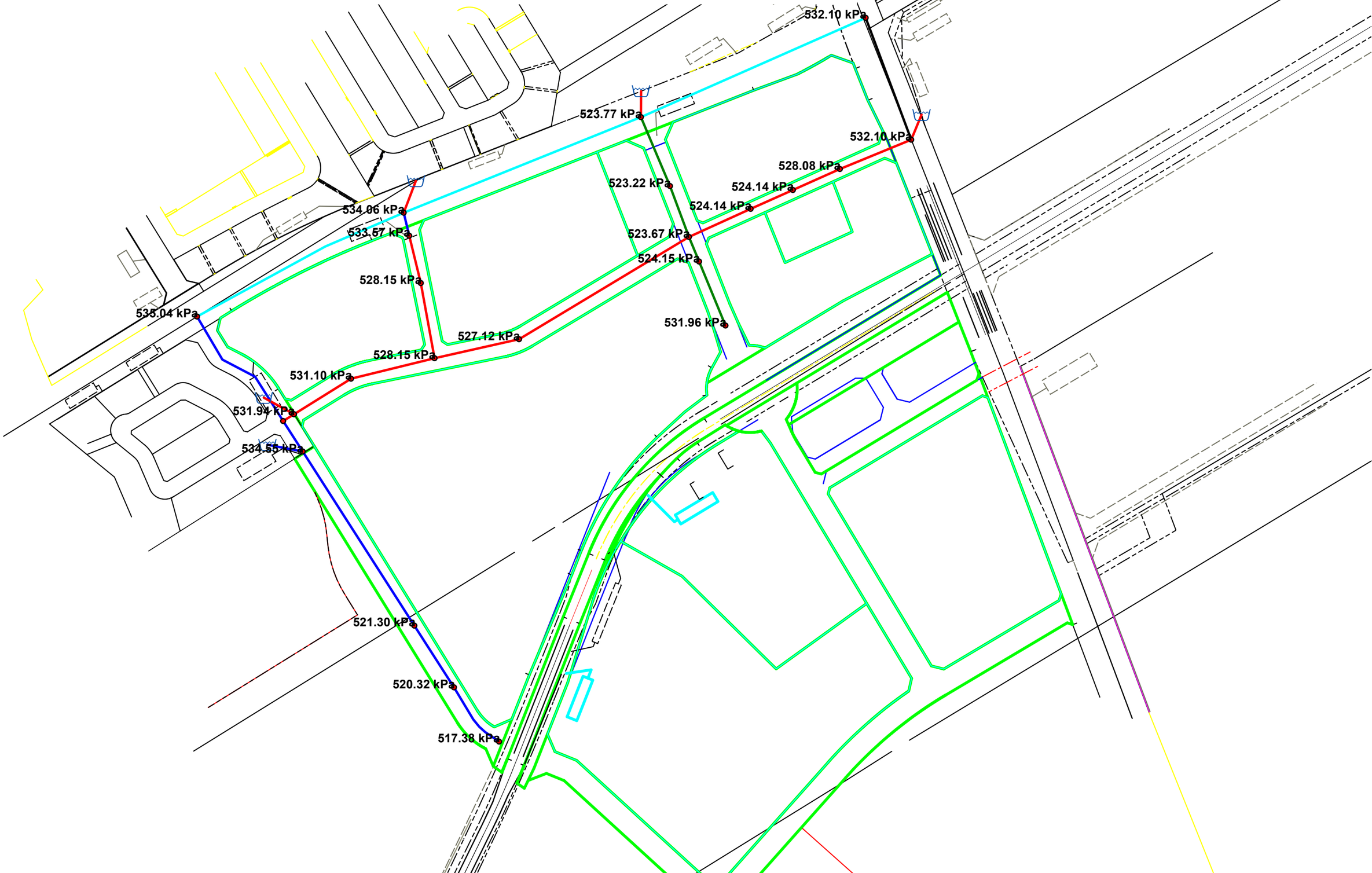
Earl Armstrong Road
Town Square Street
Springbriar Street
Limebank Road
Flavescent Street
Jessie Chenevert Walk
LRT Station
BRT
Portico Way

BASIC DAY (MAX HGL) PRESSURES - EXISTING CONDITIONS



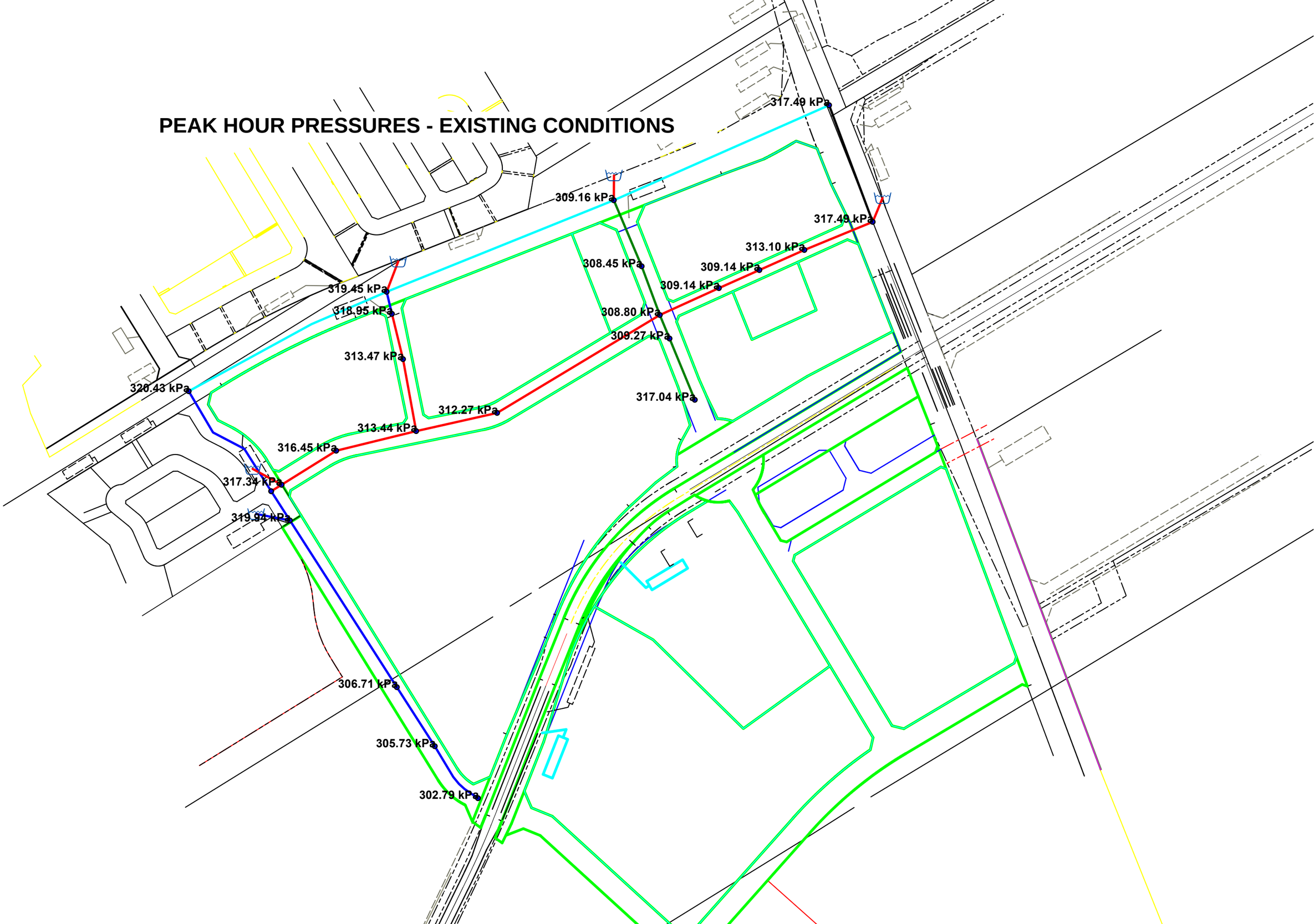
		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	C05	0.26	93.40	132.09	379.17
2	☐	C10	0.00	93.35	132.09	379.62
3	☐	C12	2.12	93.30	132.09	380.09
4	☐	C14	2.12	92.90	132.09	384.03
5	☐	C16	1.02	93.30	132.09	380.09
6	☐	C18	1.37	93.00	132.09	383.07
7	☐	C20	0.00	92.90	132.10	384.10
8	☐	C21	0.00	93.30	132.09	380.10
9	☐	C22	3.44	92.50	132.09	387.91
10	☐	C26	0.00	92.60	132.10	387.06
11	☐	C27	0.00	92.52	132.10	387.89
12	☐	C28	0.00	92.60	132.10	387.07
13	☐	C29	0.00	92.25	132.10	390.50
14	☐	C30	0.00	92.20	132.10	390.99
15	☐	C31	0.00	92.35	132.10	389.52
16	☐	C32	1.05	92.90	132.10	384.11
17	☐	C33	0.42	93.60	132.10	377.25
18	☐	C34	0.00	92.30	132.10	390.01
19	☐	C35	1.79	93.70	132.10	376.27
20	☐	C36	0.08	94.00	132.10	373.33
21	☐	D01	0.00	92.50	132.10	388.05
22	☐	D02	0.00	92.50	132.10	388.05
23	☐	J1	0.00	93.35	132.10	379.72

BASIC DAY (MAX HGL) PRESSURES - SUC ZONE RECONFIGURATION



		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	C05	0.26	93.40	146.79	523.22
2	☐	C10	0.00	93.35	146.79	523.67
3	☐	C12	2.12	93.30	146.79	524.14
4	☐	C14	2.12	92.90	146.79	528.08
5	☐	C16	1.02	93.30	146.79	524.14
6	☐	C18	1.37	93.00	146.79	527.12
7	☐	C20	0.00	92.90	146.80	528.15
8	☐	C21	0.00	93.30	146.79	524.15
9	☐	C22	3.44	92.50	146.79	531.96
10	☐	C26	0.00	92.60	146.80	531.10
11	☐	C27	0.00	92.52	146.80	531.94
12	☐	C28	0.00	92.60	146.80	531.12
13	☐	C29	0.00	92.25	146.80	534.55
14	☐	C30	0.00	92.20	146.80	535.04
15	☐	C31	0.00	92.35	146.80	533.57
16	☐	C32	1.05	92.90	146.80	528.15
17	☐	C33	0.42	93.60	146.80	521.30
18	☐	C34	0.00	92.30	146.80	534.06
19	☐	C35	1.79	93.70	146.80	520.32
20	☐	C36	0.08	94.00	146.80	517.38
21	☐	D01	0.00	92.50	146.80	532.10
22	☐	D02	0.00	92.50	146.80	532.10
23	☐	J1	0.00	93.35	146.80	523.77

PEAK HOUR PRESSURES - EXISTING CONDITIONS

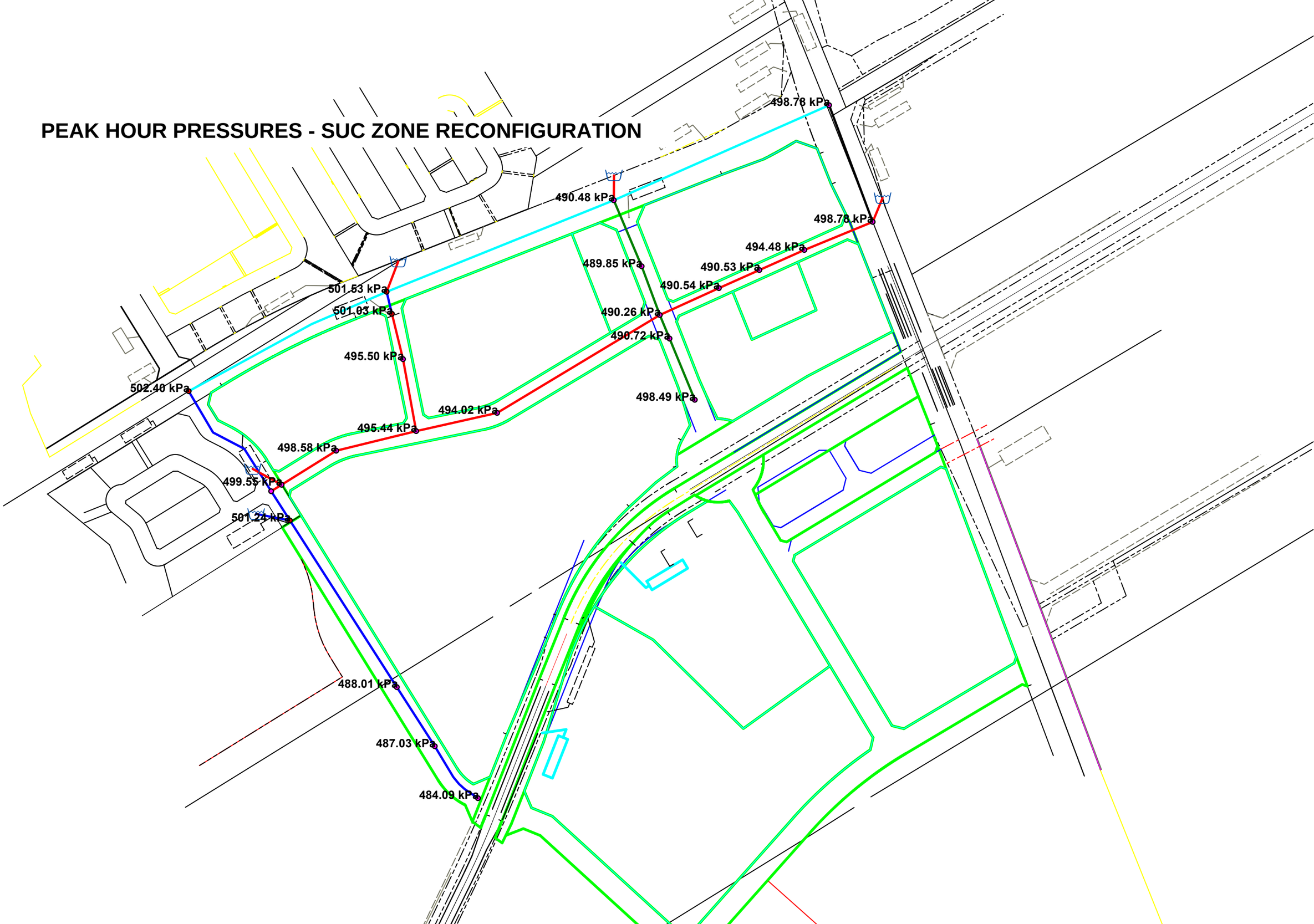


		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	C05	0.66	93.40	124.88	308.45
2	☐	C10	0.00	93.35	124.86	308.80
3	☐	C12	5.22	93.30	124.85	309.14
4	☐	C14	5.22	92.90	124.85	313.10
5	☐	C16	2.55	93.30	124.85	309.14
6	☐	C18	3.43	93.00	124.87	312.27
7	☐	C20	0.00	92.90	124.89	313.44
8	☐	C21	0.00	93.30	124.86	309.27
9	☐	C22	5.15	92.50	124.85	317.04
10	☐	C26	0.00	92.60	124.89	316.45
11	☐	C27	0.00	92.52	124.90	317.34
12	☐	C28	0.00	92.60	124.90	316.51
13	☐	C29	0.00	92.25	124.90	319.94
14	☐	C30	0.00	92.20	124.90	320.43
15	☐	C31	0.00	92.35	124.90	318.95
16	☐	C32	2.63	92.90	124.89	313.47
17	☐	C33	1.05	93.60	124.90	306.71
18	☐	C34	4.48	92.30	124.90	319.45
19	☐	C35	0.20	93.70	124.90	305.73
20	☐	C36	0.00	94.00	124.90	302.79
21	☐	D01	0.00	92.50	124.90	317.49
22	☐	D02	0.00	92.50	124.90	317.49
23	☐	J1	0.00	93.35	124.90	309.16

Peak Hour - Existing Condtions - Pipe Report

		ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status	Flow Reversal Count
1	☐	P101	C34	C31	26.36	297.00	120.00	4.44	0.06	0.00	0.02	Open	0
2	☐	P103	C32	C20	85.01	204.00	110.00	1.81	0.06	0.00	0.03	Open	0
3	☐	P105	CON-1	C27	1.00	204.00	110.00	2.96	0.09	0.00	0.09	Open	0
4	☐	P107	C34	CON-2	1.00	204.00	110.00	-8.26	0.25	0.00	0.57	Open	0
5	☐	P109	D02	CON-4	1.00	204.00	110.00	-8.45	0.26	0.00	0.60	Open	0
6	☐	P111	C28	C29	40.36	297.00	120.00	-1.13	0.02	0.00	0.00	Open	0
7	☐	P141	C16	C14	57.36	204.00	110.00	-2.92	0.09	0.00	0.08	Open	0
8	☐	P143	C21	C22	77.06	250.00	110.00	5.15	0.10	0.01	0.09	Open	0
9	☐	P145	C33	C35	81.62	297.00	120.00	0.20	0.00	0.00	0.00	Open	0
10	☐	P147	C35	C36	79.85	297.00	120.00	0.00	0.00	0.00	0.00	Open	0
11	☐	P149	C27	C28	14.26	204.00	110.00	0.07	0.00	0.00	0.00	Open	0
12	☐	P151	C29	C33	230.32	297.00	120.00	1.25	0.02	0.00	0.00	Open	0
13	☐	P153	CON-5	C29	1.00	297.00	120.00	2.38	0.03	0.00	0.01	Open	0
14	☐	P155	C31	C32	54.24	204.00	110.00	4.44	0.14	0.01	0.18	Open	0
15	☐	P31	CON-3	J1	1.00	204.00	110.00	8.55	0.26	0.00	0.60	Open	0
16	☐	P65	J1	C05	83.34	250.00	110.00	9.39	0.19	0.02	0.27	Open	0
17	☐	P67	C05	C10	60.45	250.00	110.00	8.73	0.18	0.01	0.23	Open	0
18	☐	P69	C10	C21	29.55	250.00	110.00	5.15	0.10	0.00	0.09	Open	0
19	☐	P73	C10	C12	75.55	204.00	110.00	4.85	0.15	0.02	0.21	Open	0
20	☐	P75	C12	C16	51.60	204.00	110.00	-0.37	0.01	0.00	0.00	Open	0
21	☐	P77	C14	D02	86.01	204.00	110.00	-8.14	0.25	0.05	0.55	Open	0
22	☐	P83	D02	D01	144.86	610.00	120.00	0.30	0.00	0.00	0.00	Open	0
23	☐	P85	D01	J1	273.80	393.00	120.00	0.30	0.00	0.00	0.00	Open	0
24	☐	P87	C10	C18	220.98	204.00	110.00	-1.27	0.04	0.00	0.02	Open	0
25	☐	P89	C18	C20	96.54	204.00	110.00	-4.70	0.14	0.02	0.20	Open	0
26	☐	P91	C20	C26	95.87	204.00	110.00	-2.88	0.09	0.01	0.08	Open	0
27	☐	P93	C26	C27	74.87	204.00	110.00	-2.88	0.09	0.01	0.08	Open	0
28	☐	P95	C28	C30	155.23	297.00	120.00	1.20	0.02	0.00	0.00	Open	0
29	☐	P97	C30	C34	258.01	393.00	120.00	1.20	0.01	0.00	0.00	Open	0
30	☐	P99	C34	J1	285.12	393.00	120.00	0.54	0.00	0.00	0.00	Open	0

PEAK HOUR PRESSURES - SUC ZONE RECONFIGURATION

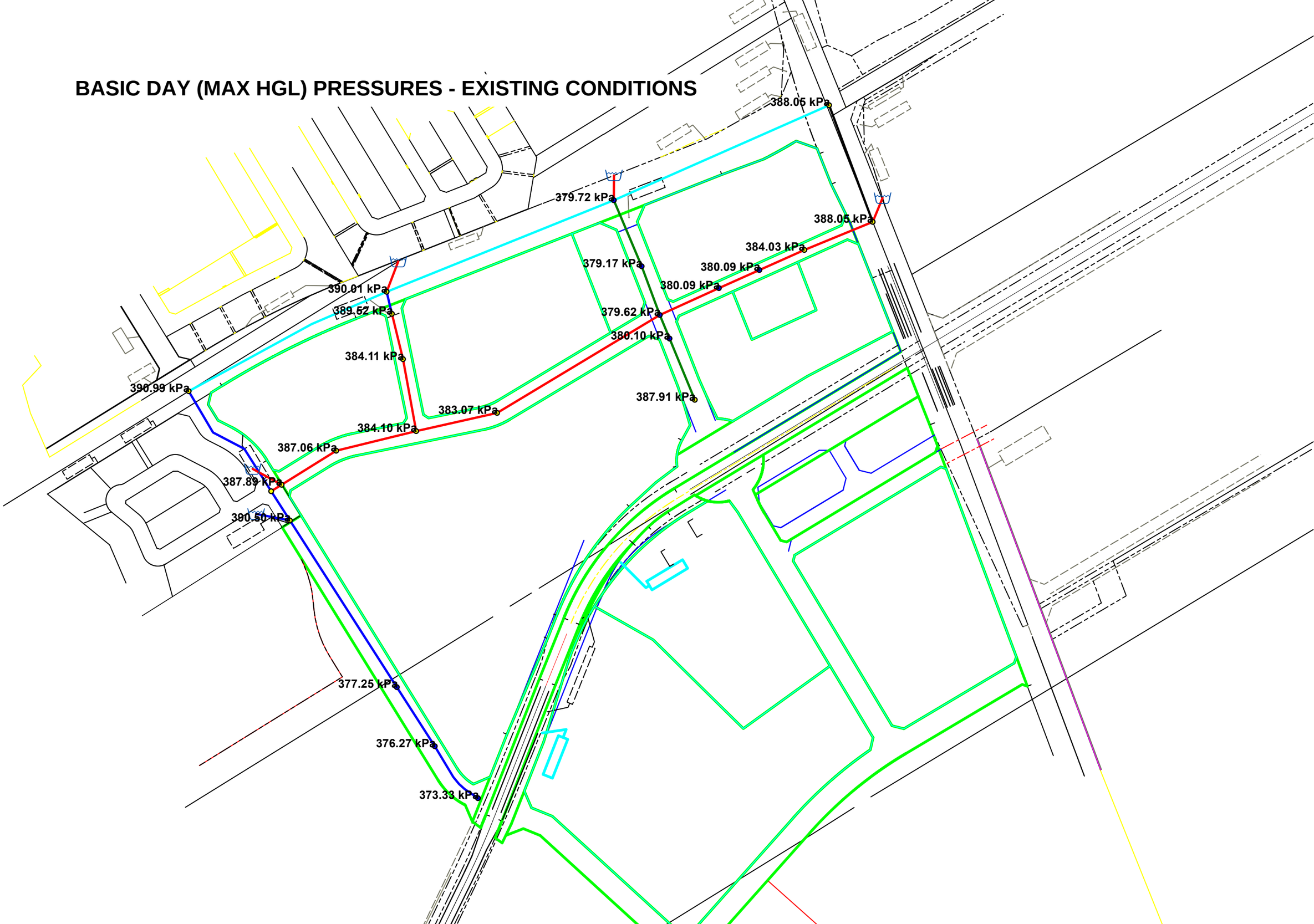


		ID	Demand (L/s)	Elevation (m)	Head (m)	Pressure (kPa)
1	☐	C05	0.66	93.40	143.39	489.85
2	☐	C10	0.00	93.35	143.38	490.26
3	☐	C12	5.22	93.30	143.36	490.54
4	☐	C14	5.22	92.90	143.36	494.48
5	☐	C16	2.55	93.30	143.36	490.53
6	☐	C18	3.43	93.00	143.41	494.02
7	☐	C20	0.00	92.90	143.46	495.44
8	☐	C21	0.00	93.30	143.38	490.72
9	☐	C22	5.15	92.50	143.37	498.49
10	☐	C26	0.00	92.60	143.48	498.58
11	☐	C27	0.00	92.52	143.49	499.55
12	☐	C28	0.00	92.60	143.44	498.24
13	☐	C29	0.00	92.25	143.40	501.24
14	☐	C30	0.00	92.20	143.47	502.40
15	☐	C31	0.00	92.35	143.48	501.03
16	☐	C32	2.63	92.90	143.47	495.50
17	☐	C33	1.05	93.60	143.40	488.01
18	☐	C34	4.48	92.30	143.48	501.53
19	☐	C35	0.20	93.70	143.40	487.03
20	☐	C36	0.00	94.00	143.40	484.09
21	☐	D01	0.00	92.50	143.40	498.78
22	☐	D02	0.00	92.50	143.40	498.78
23	☐	J1	0.00	93.35	143.40	490.48

Peak Hour - SUC Zone - Pipe Report

		ID	From Node	To Node	Length (m)	Diameter (mm)	Roughness	Flow (L/s)	Velocity (m/s)	Headloss (m)	HL/1000 (m/k-m)	Status	Flow Reversal Count
1	☐	P101	C34	C31	26.36	297.00	120.00	5.34	0.08	0.00	0.03	Open	0
2	☐	P103	C32	C20	85.01	204.00	110.00	2.71	0.08	0.01	0.07	Open	0
3	☐	P105	CON-1	C27	1.00	204.00	110.00	26.95	0.82	0.01	5.06	Open	0
4	☐	P107	C34	CON-2	1.00	204.00	110.00	-56.08	1.72	0.02	19.64	Open	0
5	☐	P109	D02	CON-4	1.00	204.00	110.00	-1.38	0.04	0.00	0.02	Open	0
6	☐	P111	C28	C29	40.36	297.00	120.00	34.42	0.50	0.04	1.09	Open	0
7	☐	P141	C16	C14	57.36	204.00	110.00	-2.09	0.06	0.00	0.04	Open	0
8	☐	P143	C21	C22	77.06	250.00	110.00	5.15	0.10	0.01	0.09	Open	0
9	☐	P145	C33	C35	81.62	297.00	120.00	0.20	0.00	0.00	0.00	Open	0
10	☐	P147	C35	C36	79.85	297.00	120.00	0.00	0.00	0.00	0.00	Open	0
11	☐	P149	C27	C28	14.26	204.00	110.00	22.15	0.68	0.05	3.51	Open	0
12	☐	P151	C29	C33	230.32	297.00	120.00	1.25	0.02	0.00	0.00	Open	0
13	☐	P153	CON-5	C29	1.00	297.00	120.00	-33.17	0.48	0.00	1.01	Open	0
14	☐	P155	C31	C32	54.24	204.00	110.00	5.34	0.16	0.01	0.25	Open	0
15	☐	P31	CON-3	J1	1.00	204.00	110.00	-20.65	0.63	0.00	3.09	Open	0
16	☐	P65	J1	C05	83.34	250.00	110.00	7.41	0.15	0.01	0.17	Open	0
17	☐	P67	C05	C10	60.45	250.00	110.00	6.75	0.14	0.01	0.14	Open	0
18	☐	P69	C10	C21	29.55	250.00	110.00	5.15	0.10	0.00	0.09	Open	0
19	☐	P73	C10	C12	75.55	204.00	110.00	5.68	0.17	0.02	0.28	Open	0
20	☐	P75	C12	C16	51.60	204.00	110.00	0.46	0.01	0.00	0.00	Open	0
21	☐	P77	C14	D02	86.01	204.00	110.00	-7.31	0.22	0.04	0.45	Open	0
22	☐	P83	D02	D01	144.86	610.00	120.00	-5.93	0.02	0.00	0.00	Open	0
23	☐	P85	D01	J1	273.80	393.00	120.00	-5.93	0.05	0.00	0.01	Open	0
24	☐	P87	C10	C18	220.98	204.00	110.00	-4.08	0.12	0.03	0.15	Open	0
25	☐	P89	C18	C20	96.54	204.00	110.00	-7.51	0.23	0.05	0.47	Open	0
26	☐	P91	C20	C26	95.87	204.00	110.00	-4.80	0.15	0.02	0.21	Open	0
27	☐	P93	C26	C27	74.87	204.00	110.00	-4.80	0.15	0.02	0.21	Open	0
28	☐	P95	C28	C30	155.23	297.00	120.00	-12.27	0.18	0.02	0.16	Open	0
29	☐	P97	C30	C34	258.01	393.00	120.00	-12.27	0.10	0.01	0.04	Open	0
30	☐	P99	C34	J1	285.12	393.00	120.00	33.99	0.28	0.08	0.27	Open	0

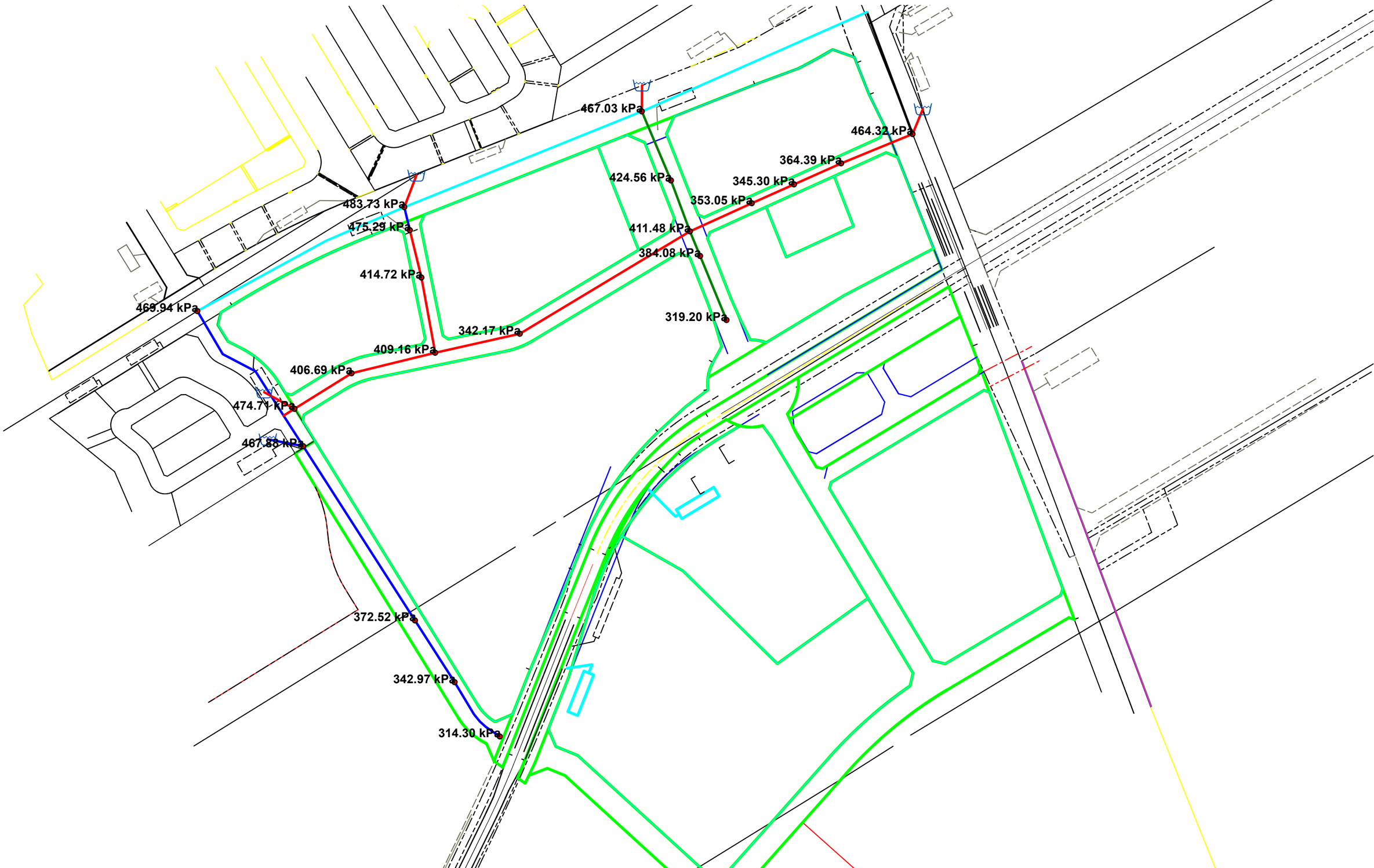
BASIC DAY (MAX HGL) PRESSURES - EXISTING CONDITIONS



Max Day + Fire (13,000 l/min) - Existing Conditions - Fireflow Design Report

		ID	Total Demand (L/s)	Available Flow at Hydrant (L/s)	Critical Node ID	Critical Node Pressure (kPa)	Critical Node Head (m)	Design Flow (L/s)	Design Pressure (kPa)	Design Fire Node Pressure (kPa)
1	☐	C05	218.11	466.78	C05	139.96	107.68	466.78	139.96	140.18
2	☐	C10	216.67	401.55	C10	139.96	107.63	401.55	139.96	140.19
3	☐	C12	228.11	274.04	C12	139.96	107.58	274.04	139.96	139.97
4	☐	C14	228.11	290.34	C14	139.96	107.18	290.34	139.96	139.97
5	☐	C16	222.28	258.16	C16	139.96	107.58	258.16	139.96	139.97
6	☐	C18	224.21	252.39	C18	139.96	107.28	252.39	139.96	140.26
7	☐	C20	216.67	361.32	C20	139.96	107.18	361.32	139.96	139.99
8	☐	C21	216.67	314.04	C21	139.96	107.58	314.04	139.96	140.03
9	☐	C22	225.95	232.81	C22	139.96	106.78	232.81	139.96	140.18
10	☐	C26	216.67	346.97	C26	139.96	106.88	346.97	139.96	139.97
11	☐	C27	216.67	2,734.89	C27	139.99	106.80	2,735.14	139.96	139.70
12	☐	C29	216.67	6,722.96	C36	122.51	106.50	6,311.78	139.96	157.79
13	☐	C30	216.67	1,043.55	C30	139.97	106.48	1,043.57	139.96	139.96
14	☐	C31	216.67	1,143.13	C31	139.97	106.63	1,143.15	139.96	139.96
15	☐	C32	222.45	379.78	C32	139.96	107.18	379.79	139.96	139.98
16	☐	C33	218.98	300.24	C36	135.95	107.87	295.55	139.96	143.99
17	☐	C34	216.67	3,285.56	C34	140.00	106.59	3,285.97	139.96	139.96
18	☐	C35	226.54	260.60	C36	137.02	107.98	257.68	139.96	142.90
19	☐	C36	217.10	220.50	C36	139.96	108.28	220.50	139.96	140.11
20	☐	D02	216.67	2,750.48	D02	139.99	106.79	2,750.75	139.96	139.94
21	☐	J1	216.67	3,361.01	J1	140.00	107.64	3,361.49	139.96	139.97

MAX DAY + FIRE (13,000 l/min) RESIDUAL PRESSURES - SUC ZONE RECONFIGURATION



		ID	Total Demand (L/s)	Available Flow at Hydrant (L/s)	Critical Node ID	Critical Node Pressure (kPa)	Critical Node Head (m)	Design Flow (L/s)	Design Pressure (kPa)	Design Fire Node Pressure (kPa)
1	☐	C05	218.11	707.09	C05	139.96	107.68	707.09	139.96	139.96
2	☐	C10	216.67	612.51	C10	139.96	107.63	612.51	139.96	139.96
3	☐	C12	228.11	416.33	C12	139.96	107.58	416.34	139.96	140.02
4	☐	C14	228.11	438.92	C14	139.96	107.18	438.92	139.96	140.00
5	☐	C16	222.28	395.64	C16	139.96	107.58	395.64	139.96	140.07
6	☐	C18	224.21	373.92	C18	139.96	107.28	373.92	139.96	139.97
7	☐	C20	216.67	535.55	C20	139.96	107.18	535.55	139.96	140.06
8	☐	C21	216.67	478.15	C21	139.96	107.58	478.15	139.96	140.35
9	☐	C22	225.95	344.99	C22	139.96	106.78	344.99	139.96	139.98
10	☐	C26	216.67	509.81	C26	139.96	106.88	509.81	139.96	139.98
11	☐	C27	216.67	4,005.32	C27	140.02	106.81	4,005.71	139.96	139.61
12	☐	C29	216.67	9,975.58	C36	122.71	106.52	9,689.13	139.96	157.75
13	☐	C30	216.67	1,518.26	C30	139.97	106.48	1,518.28	139.96	139.96
14	☐	C31	216.67	1,662.51	C31	139.97	106.63	1,662.54	139.96	139.96
15	☐	C32	222.45	558.30	C32	139.96	107.18	558.30	139.96	140.01
16	☐	C33	218.98	462.77	C36	135.95	107.87	459.50	139.96	144.05
17	☐	C34	216.67	4,758.11	C34	140.05	106.59	4,758.74	139.96	139.96
18	☐	C35	226.54	398.95	C36	137.02	107.98	396.92	139.96	142.90
19	☐	C36	217.10	343.67	C36	139.96	108.28	343.67	139.96	140.00
20	☐	D02	216.67	4,096.07	D02	140.02	106.79	4,096.50	139.96	139.95
21	☐	J1	216.67	5,007.51	J1	140.06	107.64	5,008.29	139.96	139.96

Appendix C

ARCADIS
400-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
tel 613 225 1311 fax 613 225 9868
arcadis.com

SANITARY SEWER DESIGN SHEET

Extendicare Riverside
Extendicare Inc
City of Ottawa

LOCATION				RESIDENTIAL										ICI AREAS								INFILTRATION ALLOWANCE			FIXED FLOW (L/s)		TOTAL FLOW	PROPOSED SEWER DESIGN						
				AREA w/ Units (Ha)	UNIT TYPES				AREA w/o Units (Ha)	POPULATION		RES PEAK FACTOR	PEAK FLOW (L/s)	AREA (Ha)						ICI PEAK FACTOR	PEAK FLOW (L/s)	AREA (Ha)		FLOW				CAPACITY	LENGTH	DIA	SLOPE	VELOCITY (full)	AVAILABLE CAPACITY	
STREET	AREA ID	FROM MH	TO MH		1 BDRM	2 BDRM	3 BDRM			IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL				IND	CUM	(L/s)	IND	CUM	(L/s)	(L/s)	(m)	(mm)	(%)	(m/s)	L/s	(%)
														IND	CUM	IND	CUM	IND	CUM														
Extendicare																																		
SITE PLAN		BLDG	MH4A	1.63	256	0	0			358.4	358.4	3.44	3.99		0.00		0.00		0.00	1.00	0.00	1.63	1.63	0.54		0.00	4.53	48.39	30.39	200	2.00	1.492	43.86	90.64%
		MH4A	BLK1A							0.0	358.4	3.44	3.99		0.00		0.00		0.00	1.00	0.00	0.00	1.63	0.54		0.00	4.53	48.39	2.05	200	2.00	1.492	43.86	90.64%
																														200				

Design Parameters:

Residential			ICI Areas			
1 BDRM	1.4	p/p/u	INST	28,000	L/Ha/day	
2BDRM	2.1	p/p/u	COM	28,000	L/Ha/day	
3BDRM	3.1	p/p/u	IND	35,000	L/Ha/day	MOE Chart
3+BDRM		p/p/u		17000	L/Ha/day	
Other	60	p/p/Ha				

Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day 200 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
   Harmon Formula = 1+(14/(4+(P/1000)^0.5))0.8
   where K = 0.8 Correction Factor
5. Commercial and Institutional Peak Factors based on total area, 1.5 if greater than 20%, otherwise 1.0

Designed: DV

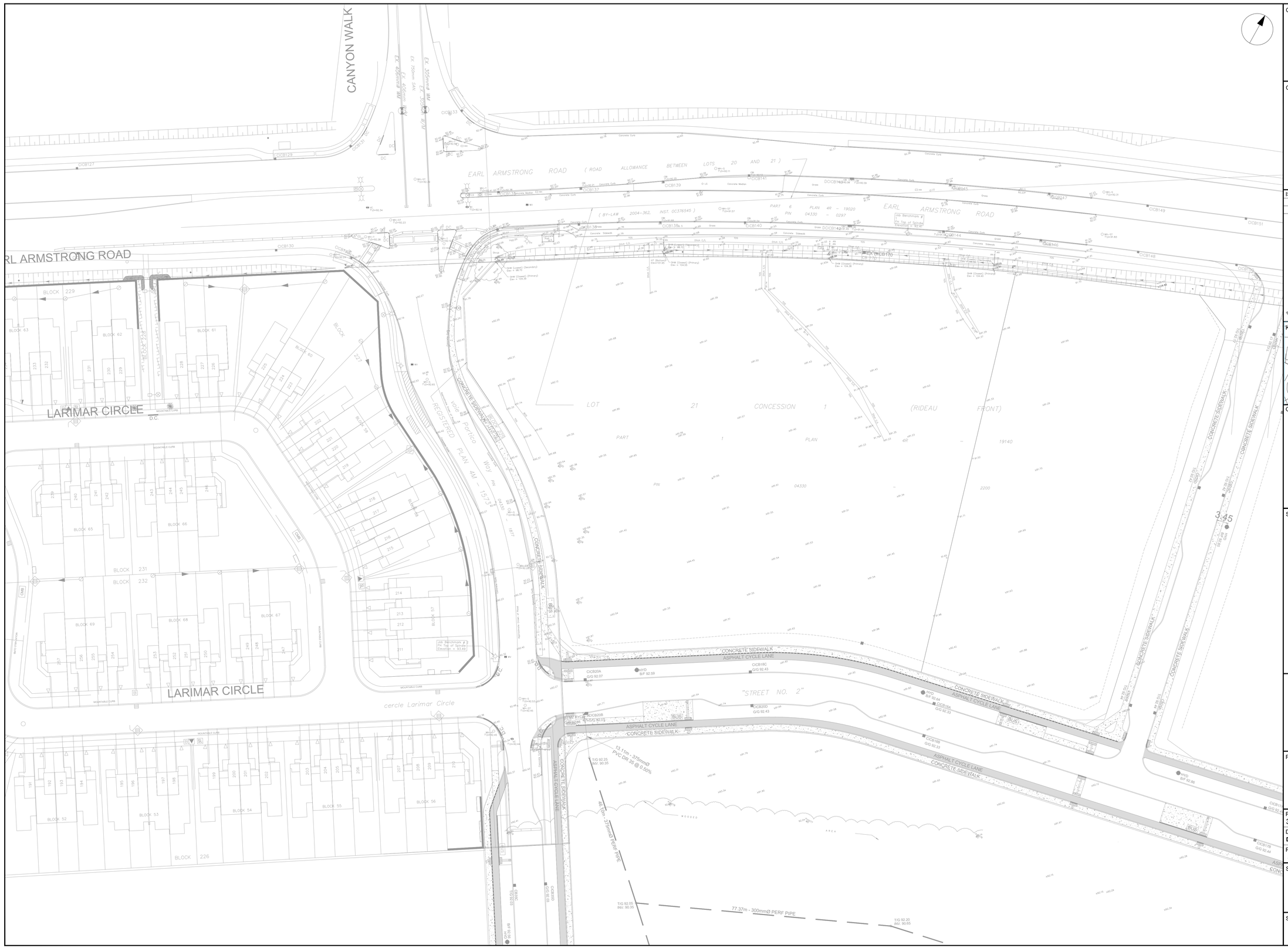
Checked: SEL

Dwg. Reference: 30304262-400

No.	Revision	Date
1.	Submission No. 1 for City Review	2025-11-04

File Reference: 30304262.5.1.1 **Date:** 2025-11-04 **Sheet No:** 1 of 1

Appendix D



CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

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ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

CONSULTANTS

1:500 0 5 15 25m

SEAL

S. E. LABADIE
100214983
2025/11/13

PROJECT

EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO:
3034262

DRAWN BY: D.D.
CHECKED BY: T.R.B.
PROJECT MGR: S.E.L.
APPROVED BY: S.E.L.

SHEET TITLE

EXISTING CONDITIONS

SHEET NUMBER: C-000
ISSUE: 1

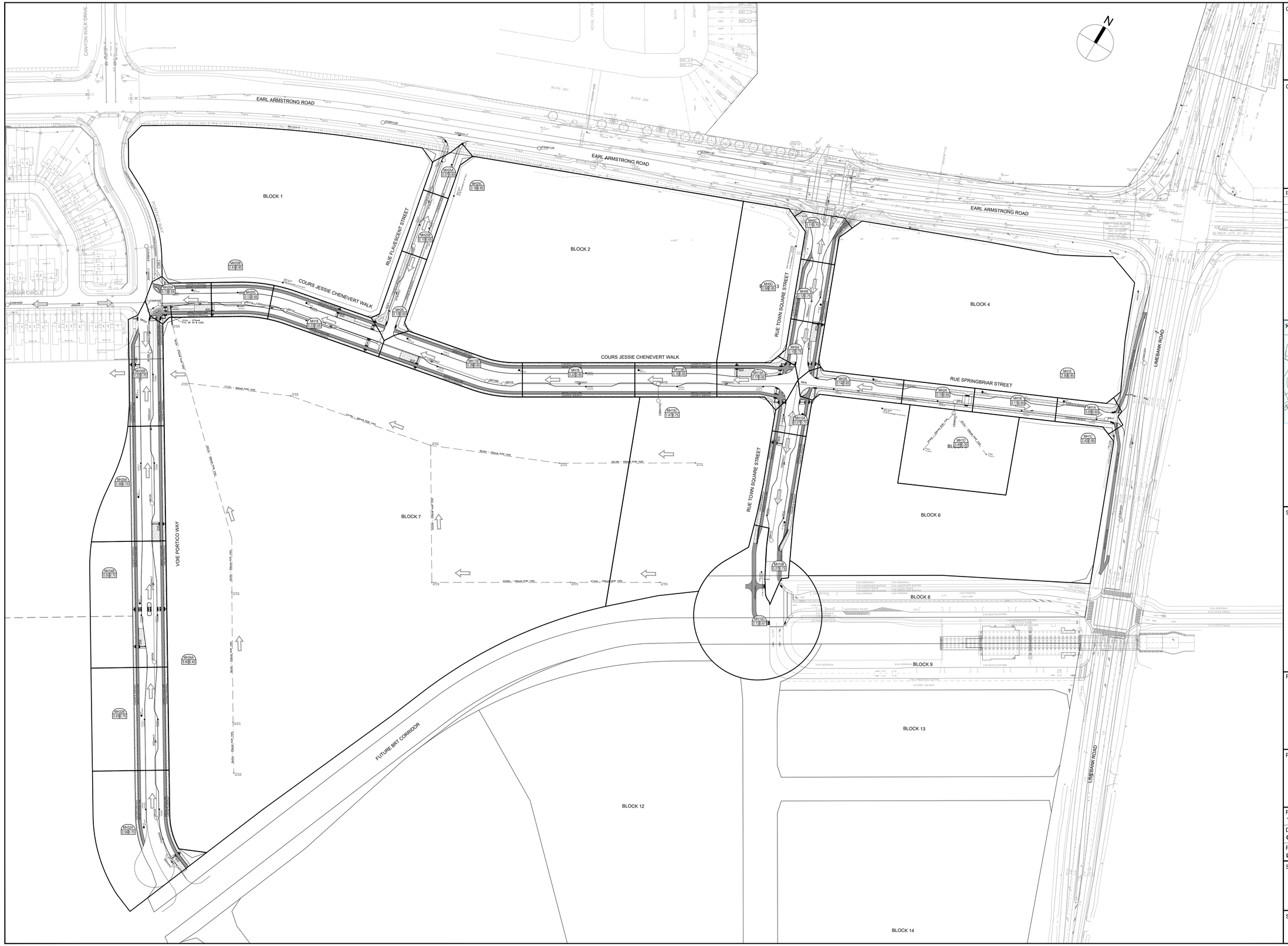
File Location: C:\Users\cormierc3992\DC\ACCDocs\Arcadis ACC US\ACA-30304262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-000 EXISTING CONDITIONS.dwg   Last Saved: November 7, 2025, by cormierc3992   Plotted: November 7, 2025 12:13:52 PM by Cormier, Chris

D07-XX-XX-XXXX

SCALE CHECK 10mm XXXXX

DRAINAGE AREA ID	CONTINUOUS/ SAG	ROAD TYPE	MINOR SYSTEM DESIGN TARGET (BASED ON ROAD TYPE)		100 YEAR CAPTURED FLOW (L/S) (3 HOUR CHICAGO STORM)	ICD ORIFICE SIZE (MM DIA.) (TWO ICDs PER DRAINAGE AREA)	
			MINOR SYSTEM DESIGN STORM	GENERATED FLOW ON INDIVIDUAL SEGMENT SIMULATED (L/S)			
S2B-Ph7A	Sag	26mROW-9.4mAsphalt	5	26.9	33.7	83	83
S32A-Ph7A	Sag	26mROW-9.4mAsphalt	5	127.0	141.6	178	152
S32B-Ph7A	Sag	26mROW-9.4mAsphalt	5	102.8	119.3	152	152
S20C-Ph7A	Sag	26mROW-9.4mAsphalt	5	21.8	33.8	83	83
S34B-Ph7A	Sag	26mROW-9.4mAsphalt	5	125.6	143.4	178	152
S35A-Ph7A	Sag	26mROW-9.4mAsphalt	5	82.8	134.0	178	152
S35B-Ph7A	Sag	26mROW-9.4mAsphalt	5	50.1	51.6	102	102
S5A-Ph7A	Sag	26mROW-12mAsphalt	2	16.2	33.5	83	83
S5B-Ph7A	Sag	26mROW-12mAsphalt	2	20.0	34.4	83	83
S5C-Ph7A	Sag	26mROW-12mAsphalt	2	18.3	42.4	94	94
Development Blocks							
B20B-Ph7A	Block	Rear Yard	2	478.8	479.0	n/a	
B25C-Ph7A	Block	Rear Yard	2	621.7	622.0	n/a	
B1C-Ph7A	Block	Rear Yard	2	476.2	477.0	n/a	
B1D-Ph7A	Block	Rear Yard	2	15.4	16.0	n/a	
B1E-Ph7A	Block	Rear Yard	2	492.6	493.0	n/a	
B15C-Ph7A	Block	Rear Yard	2	113.0	113.0	n/a	
B34A-Ph7A	Block	Rear Yard	2	578.7	579.0	n/a	
B5D-Ph7A	Block	Rear Yard	2	114.6	115.0	n/a	
EXT-Ph7A	External	External	100	307.4	307	n/a	

The available on-site storage and the results of the PCSWMM evaluation for Town Center Phase 7A are presented in **Table 4-**. The ponding plan is presented on **Drawing 144320-200** to **Drawing 144320-202.**



CLIENT

Riverside South

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ISSUES

No.	DESCRIPTION	DATE
1	SUBMISSION 1 FOR CITY REVIEW	2024-07-19
2	SUBMISSION 2 FOR CITY REVIEW	2024-10-29
3	SUBMISSION 3 FOR CITY REVIEW	2025-01-17

SEE 010, 011 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

1:1250 0 12.5 37.5 62.5m

SEAL

L. M. ERION
13379508
2025/01/17

PRIME CONSULTANT

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Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT

RSS TOWN CENTER
980 EARL ARMSTRONG & 4700
LIMEBANK ROAD
PHASE 7A

PROJECT NO:
144320

DRAWN BY:	CHECKED BY:
C.C	**L.E.**
PROJECT MGR:	APPROVED BY:
L.E.	**L.E.**

SHEET TITLE
STORM DRAINAGE AREA PLAN

SHEET NUMBER	ISSUE
500	3

File Location: J:\144320_Riverside\7.0_Production\7.03_Design\04_Civil\Sheets\500 STORM DRAINAGE AREA PLAN.dwg Last Saved: October 29, 2024, by dored5754 Plotted: January 20, 2025 2:50:54 PM by Cormier, Chris

D07-XX-XX-XXXX

SCALE CHECK 1 in 10mm

XXXXX

ARCADIS
500-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
tel 613 225 1311 fax 613 225 9868
arcadis.com

STORM SEWER DESIGN SHEET

980 Earl Armstrong/400 Jesse Chenevert
Extendicare
City of Ottawa

LOCATION				AREA (Ha)										RATIONAL DESIGN FLOW														SEWER DATA									
STREET	AREA ID	FROM	TO	C= 0.20	C= 0.31	C= 0.32	C= 0.34	C= 0.50	C= 0.60	C= 0.61	C= 0.62	C= 0.70	C= 0.90	IND 2.78AC	CUM 2.78AC	INLET (min)	TIME IN PIPE	TOTAL (min)	i (2) (mm/hr)	i (5) (mm/hr)	i (10) (mm/hr)	i (100) (mm/hr)	2yr PEAK FLOW (L/s)	5yr PEAK FLOW (L/s)	10yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	FIXED FLOW IND	FIXED FLOW CUM	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	PIPE SIZE (mm) DIA	PIPE SIZE (mm) W	PIPE SIZE (mm) H	SLOPE (%)	VELOCITY (m/s)	AVAIL CAP (2yr) (L/s)	AVAIL CAP (2yr) (%)
Extendicare																																					
	ECB1, CB1	CB1	MH2	0.03			0.08							0.09	0.09	10.00	0.34	10.34	76.81	104.19	122.14	178.56	7.09	9.62	11.27	16.48	0.00	0.00	7.09	26.54	16.75	200			0.60	0.818	19.45	73.29%
	CB2	CB2	MH2			0.11								0.10	0.10	10.00	0.05	10.05	76.81	104.19	122.14	178.56	7.52	10.20	11.95	17.47	0.00	0.00	7.52	34.18	3.09	200			1.00	1.054	26.67	78.01%
	CB3	CB3	MH2-3		0.03									0.03	0.03	10.00	0.04	10.04	76.81	104.19	122.14	178.56	1.99	2.69	3.16	4.62	0.00	0.00	1.99	34.22	2.64	200			1.00	1.055	32.23	94.20%
	CB4, ROOF	CB4	MH2-3								0.17		0.42	1.34	1.34	10.00	0.02	10.02	76.81	104.19	122.14	178.56	103.21	140.02	164.14	239.96	0.00	0.00	103.21	182.91	2.09	375			1.00	1.604	79.70	43.57%
		MH2	MH3											0.00	1.56	10.34	1.03	11.38	75.52	102.42	120.06	175.50	117.80	159.77	187.27	273.75	0.00	0.00	117.80	153.03	83.31	375			0.70	1.342	35.23	23.02%
		MH3	MH4											0.00	1.56	11.38	0.30	11.67	71.90	97.45	114.20	166.89	112.15	152.01	178.13	260.33	0.00	0.00	112.15	175.95	19.18	450			0.35	1.072	63.80	36.26%
	CB7	CB8	CB7							0.19				0.32	0.32	10.00	0.28	10.28	76.81	104.19	122.14	178.56	24.75	33.57	39.35	57.53	0.00	0.00	24.75	43.98	14.70	250			0.50	0.868	19.24	43.74%
		CB7	MH7											0.00	0.32	10.28	0.34	10.62	75.74	102.73	120.41	176.02	24.40	33.10	38.80	56.71	0.00	0.00	24.40	47.97	19.17	250			0.60	0.947	23.57	49.13%
	CB6	CB6	MH7-6									0.20		0.39	0.39	10.00	0.04	10.04	76.81	104.19	122.14	178.56	29.89	40.55	47.54	69.50	0.00	0.00	29.89	62.04	3.06	250			1.00	1.224	32.15	51.82%
		MH7	MH6											0.00	0.71	10.62	1.46	12.08	74.50	101.03	118.41	173.08	53.00	71.87	84.24	123.13	0.00	0.00	53.00	108.21	82.93	375			0.35	0.949	55.21	51.02%
		MH6	MH5											0.00	0.71	12.08	0.85	12.93	69.66	94.37	110.58	161.57	49.55	67.14	78.66	114.94	0.00	0.00	49.55	108.21	48.60	375			0.35	0.949	58.66	54.21%
	CB5	CB5	MH5						0.13					0.22	0.22	10.00	0.05	10.05	76.81	104.19	122.14	178.56	16.65	22.59	26.49	38.72	0.00	0.00	16.65	34.22	3.19	200			1.00	1.055	17.56	51.33%
		MH5	MH4											0.00	0.93	12.08	0.45	12.52	69.66	94.37	110.58	161.57	64.66	87.60	102.64	149.98	0.00	0.00	64.66	108.21	25.46	375			0.35	0.949	43.55	40.24%
	COURTYARD	BLDG	MH4					0.20						0.28	0.28	10.00	0.31	10.31	76.81	104.19	122.14	178.56	21.35	28.97	33.96	49.64	0.00	0.00	21.35	62.07	22.98	250			1.00	1.225	40.72	65.60%
		MH4	BLK1											0.00	2.77	12.52	0.03	12.56	68.31	92.52	108.40	158.37	188.94	255.92	299.83	438.07	0.00	0.00	188.94	640.78	4.39	600			1.00	2.195	451.84	70.51%
													1.56	*2.77*																		*600*					
													0.07																								
													1.63																								

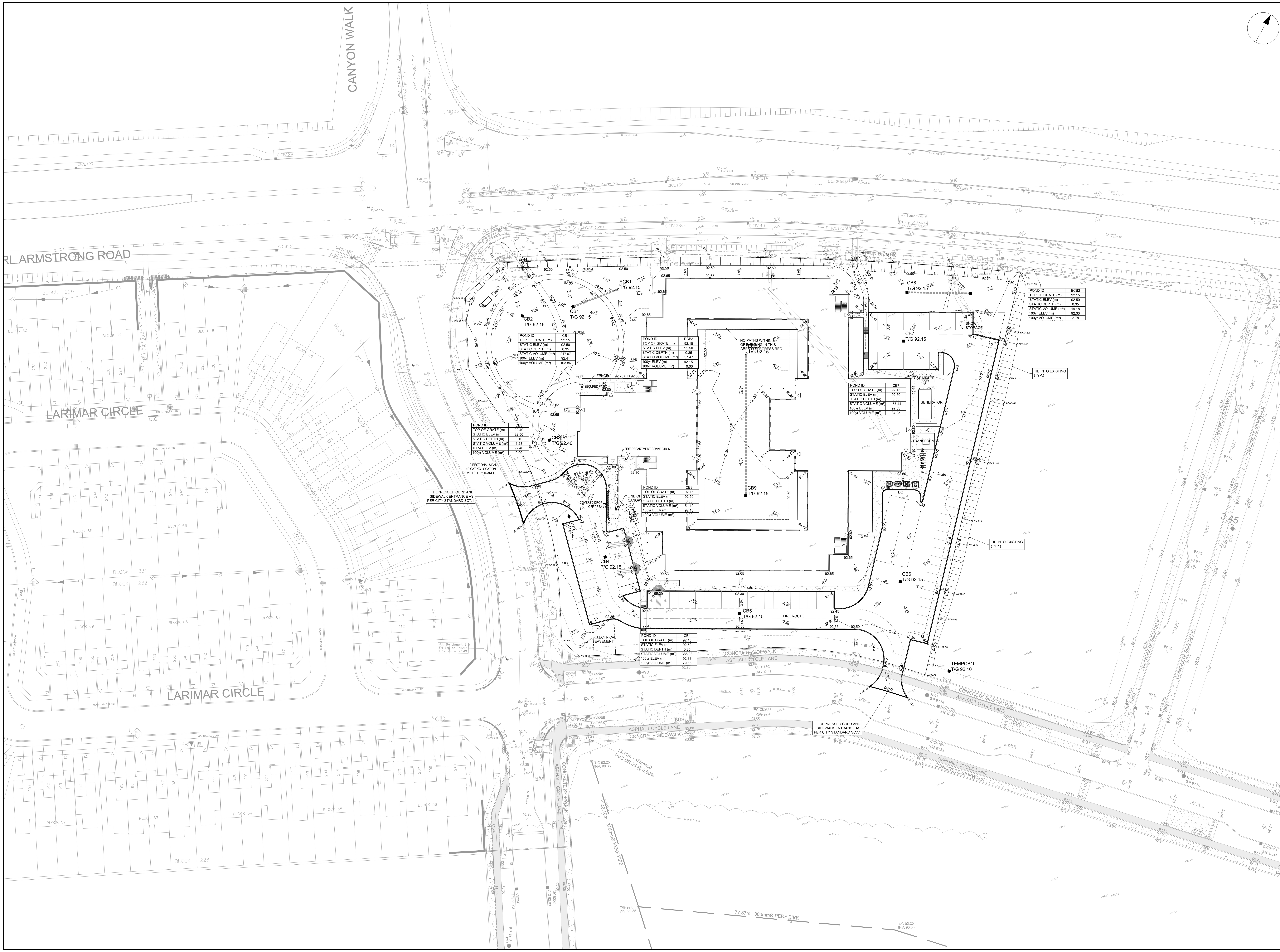
Definitions:
Q = 2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (Ha)
i = Rainfall intensity in millimeters per hour (mm/hr)
[i = 732.951 / (TC+6.199)^0.810] 2 YEAR
[i = 998.071 / (TC+6.053)^0.814] 5 YEAR
[i = 1174.184 / (TC+6.014)^0.816] 10 YEAR
[i = 1735.688 / (TC+6.014)^0.820] 100 YEAR

Notes:
1. Mannings coefficient (n) = 0.013

Designed: SEL
Checked: TRB
Dwg. Reference: 30304262-500

No.	Revision	Date
1.	Servicing Brief - Submission No. 1	2025-11-04
2.		

File Reference: 30304262.5.1.1
Date: 2025-11-04
Sheet No: 1 of 1



POND ID	CB1
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	217.07
100yr ELEV (m)	92.41
100yr VOLUME (m³)	103.86

POND ID	ECB3
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	57.47
100yr ELEV (m)	92.15
100yr VOLUME (m³)	0.00

POND ID	ECB2
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	19.18
100yr ELEV (m)	92.33
100yr VOLUME (m³)	2.78

POND ID	CB7
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	157.44
100yr ELEV (m)	92.33
100yr VOLUME (m³)	34.05

POND ID	CB3
TOP OF GRATE (m)	92.40
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.10
STATIC VOLUME (m³)	1.23
100yr ELEV (m)	92.40
100yr VOLUME (m³)	0.00

POND ID	CB9
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	51.19
100yr ELEV (m)	92.15
100yr VOLUME (m³)	0.00

POND ID	CB4
TOP OF GRATE (m)	92.15
STATIC ELEV (m)	92.50
STATIC DEPTH (m)	0.35
STATIC VOLUME (m³)	386.93
100yr ELEV (m)	92.33
100yr VOLUME (m³)	79.65

CLIENT

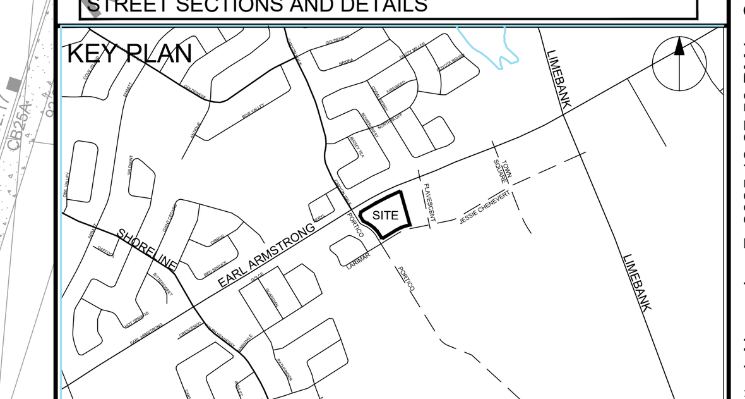
Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

KEY PLAN



CONSULTANTS

1:500 0 5 15 25m

SEAL

LICENSED PROFESSIONAL ENGINEER
S. E. LABADIE
100214983
2025/11/13
PROVINCE OF ONTARIO

PROJECT
EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO:
3034262

DRAWN BY: D.D.	CHECKED BY: T.R.B.
PROJECT MGR: S.E.L.	APPROVED BY: S.E.L.

SHEET TITLE
PONDING PLAN

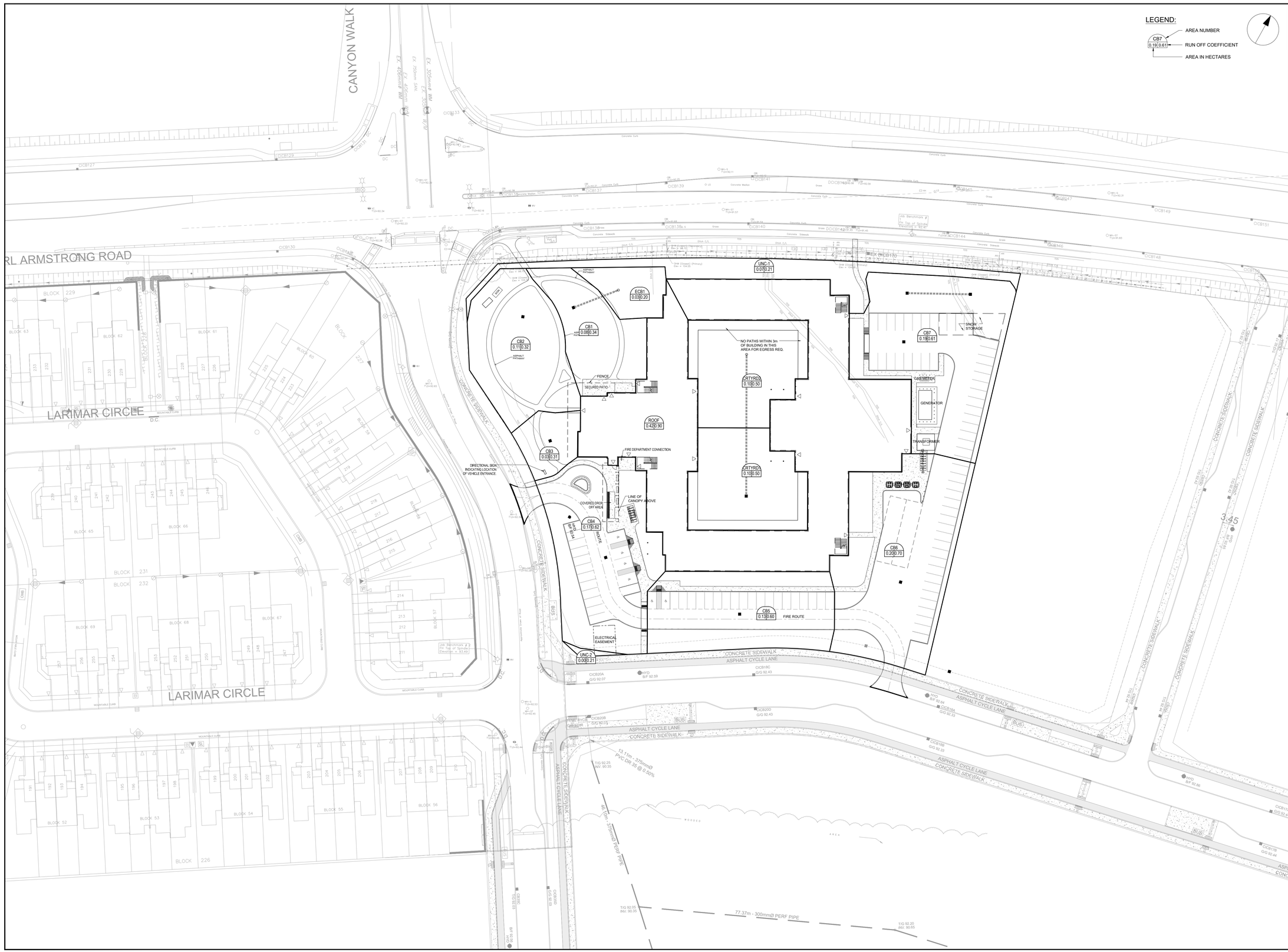
SHEET NUMBER
C-600

ISSUE
1

File Location: C:\Users\cormierc3992\DC\ACCDocs\Arcadis ACC US\ACA-30304262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-600 SITE PONDING PLAN.dwg   Last Saved: November 7, 2025, by cormierc3992   Plotted: November 7, 2025 12:27:50 PM by Cormier, Chris

D07-xx-xx-xxxx

XXXXX



CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

NOT FOR CONSTRUCTION

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

1:500 0 5 10 15 25m

CONSULTANTS

SEAL

PROJECT

EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO: 3034262	
DRAWN BY: **D.D.**	CHECKED BY: **T.R.B.**
PROJECT MGR: **S.E.L.**	APPROVED BY: **S.E.L.**

SHEET TITLE

STORM DRAINAGE AREA PLAN

SHEET NUMBER	ISSUE
C-500	1

SCALE CHECK 1 in XXXXX 10mm

D07-XX-XX-XXXX

File Location: C:\Users\cormierc3992\DCACDocs\Arcadis ACC US\ACA-3030\262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-500 STORM DRAINAGE PLAN.dwg Last Saved: November 7, 2025, by cormierc3992 Plotted: November 7, 2025 12:33:37 PM by Cormier, Chris

ARCADIS
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Formulas and Descriptions

i_{2yr} = 1:2 year Intensity = 732.951 / $(T_c+6.199)^{0.810}$
i_{5yr} = 1:5 year Intensity = 998.071 / $(T_c+6.053)^{0.814}$
i_{100yr} = 1:100 year Intensity = 1735.688 / $(T_c+6.014)^{0.820}$
T_c = Time of Concentration (min)
C = Average Runoff Coefficient
A = Area (Ha)
Q = Flow = 2.78CiA (L/s)

Maximum Allowable Release Rate

Restricted Flowrate (to reflect 5-yr storm under existing conditions)

Per Design Brief Phase 7A 908 Earl Armstrong Road & 4700 Limebank Road, Riverside South, prepared by Arcadis, dated April 2025

Design Return Period =	2-Year Event
i_{2yr} =	76.81
Runoff Coefficient for HD/MD Block =	0.85
Tc =	10 min
A =	1.63 *Ha*

$Q_{restricted}$ =	295.83 L/s

Uncontrolled Release ($Q_{uncontrolled} = 2.78*C*i_{100yr}*A_{uncontrolled}$) ***for 100-yr storm event***

UNC1+2

C_{100} =	0.26
T_c =	10 min
i_{100yr} =	178.56 mm/hr
$A_{uncontrolled}$ =	0.07 Ha
Q_{unc} =	9.12 L/s

Courtyard

C_{100} =	0.63
T_c =	10 min
i_{100yr} =	178.56 mm/hr
$A_{uncontrolled}$ =	0.20 Ha
Q_{unc} =	62.05 L/s

Total Uncontrolled

$Q_{uncontrolled}$ =	71.17 L/s

Maximum Allowable Release Rate ($Q_{max\ allowable} = Q_{restricted} - Q_{uncontrolled}$)

$Q_{max\ allowable}$ =	224.66 L/s

MODIFIED RATIONAL METHOD (100-Year, 5-Year & 2-Year Ponding)

Drainage Area	***MH3***	*ECB1, CB1, CB2, CB3, CB4, ROOF*		
Area (Ha)	0.83	Restricted Flow ICD $_{Actual}$ (L/s)=	164.00	
C =	0.84	Restricted Flow $Q_{r\ for\ swm\ calc}$ (L/s)=	82.00	50% reduction if sub-surface storage

100-Year Ponding

T_c Variable (min)	i_{100yr} (mm/hour)	Peak Flow Q_p=2.78x$Ci_{100yr}A$ (L/s)	Q_r (L/s)	Q_p-Q_r (L/s)	Volume 100yr (m^3)
10	178.56	345.06	82.00	263.06	157.83
15	142.89	276.14	82.00	194.14	174.72
20	119.95	231.80	82.00	149.80	**179.76**
25	103.85	200.68	82.00	118.68	178.02
30	91.87	177.53	82.00	95.53	171.95

100-Year +20% Ponding

100YRQ_p 20% (L/s)	Qp - Qr (L/s)	Volume 100+20 (m^3)
278.16	196.16	**235.39**

Storage (m^3)

Overflow	Required	Surface	Sub-surface	Balance
0.00	179.76	318.93	22.40	0.00
		convert to flow with peak Tc (L/s)		0.00

100+20

Overflow	Required	Balance
0.00	235.39	0.00
convert to flow with peak Tc (L/s)		0.00

overflows to: Offsite

Drainage Area	***MH3***		
Area (Ha)	0.83		
C =	0.67	Restricted Flow Q_r (L/s)=	82.00

2-Year Ponding

T_c Variable (min)	i_{2yr} (mm/hour)	Peak Flow Q_p=2.78x$Ci_{2yr}A$ (L/s)	Q_r (L/s)	Q_p-Q_r (L/s)	Volume 2yr (m^3)
8	85.46	132.11	82.00	50.11	24.05
9	80.87	125.03	82.00	43.03	23.23
10	76.81	118.74	82.00	36.74	**22.04**
11	73.17	113.11	82.00	31.11	20.54
12	69.89	108.05	82.00	26.05	18.76

Storage (m^3)

Overflow	Required	Surface	Sub-surface	Balance
0.00	22.04	318.93	22.4	0.00

overflows to: Offsite

Drainage Area	***MH5***	*CB5, CB6, CB7, CB8, ECB2*		
Area (Ha)	0.53	Restricted Flow ICD $_{Actual}$ (L/s)=	60.00	
C =	0.80	Restricted Flow $Q_{r\ for\ swm\ calc}$ (L/s)=	30.00	50% reduction if sub-surface storage

100-Year Ponding

T_c Variable (min)	i_{100yr} (mm/hour)	Peak Flow Q_p=2.78x$Ci_{100yr}A$ (L/s)	Q_r (L/s)	Q_p-Q_r (L/s)	Volume 100yr (m^3)
25	103.85	122.41	30.00	92.41	138.61
30	91.87	108.29	30.00	78.29	140.92
35	82.58	97.34	30.00	67.34	**141.41**
40	75.15	88.58	30.00	58.58	140.58
45	69.05	81.39	30.00	51.39	138.76

100-Year +20% Ponding

100YRQ_p 20% (L/s)	Qp - Qr (L/s)	Volume 100+20 (m^3)
116.80	86.80	**182.29**

Storage (m^3)

Overflow	Required	Surface	Sub-surface	Balance
0.00	141.41	463.55	26.87	0.00
		convert to flow with peak Tc (L/s)		0.00

100+20

Overflow	Required	Balance
0.00	182.29	0.00
convert to flow with peak Tc (L/s)		0.00

overflows to: MH3

Drainage Area	***MH5***		
Area (Ha)	0.53		
C =	0.64	Restricted Flow Q_r (L/s)=	30.00

2-Year Ponding

T_c Variable (min)	i_{2yr} (mm/hour)	Peak Flow Q_p=2.78x$Ci_{2yr}A$ (L/s)	Q_r (L/s)	Q_p-Q_r (L/s)	Volume 2yr (m^3)
10	76.81	72.43	30.00	42.43	25.46
11	73.17	69.00	30.00	39.00	25.74
12	69.89	65.91	30.00	35.91	**25.85**
13	66.93	63.11	30.00	33.11	25.83
14	64.23	60.57	30.00	30.57	25.68

Storage (m^3)

Overflow	Required	Surface	Sub-surface	Balance
0.00	25.85	463.55	26.87	0.00

overflows to: MH3

Stormwater Management Summary Table

Drainage Area	ICD Restricted Flow (L/s)	100 Year Storage Required (m3)	2 Yr Storage Required (m3)	Storage Provided
MH3	164.00	179.76	22.04	341.33
MH5	60.00	141.41	20.54	490.42
TOTAL	**224.00**	**321.17**	**42.58**	**831.75**

Max Allowable: **224.66 L/s**

RUNOFF COEFFICIENT CALCULATION SHEET

RESTRICTED

ECB1	Area (m^2)	C
Softscape	308.0	0.20
Hardscape	0.0	0.90
Total	308.0	**0.20**

CB1	Area (m^2)	C
Softscape	609.0	0.20
Hardscape	157.0	0.90
Total	766.0	**0.34**

CB2	Area (m^2)	C
Softscape	949.0	0.20
Hardscape	195.0	0.90
Total	1144.0	**0.32**

CB3	Area (m^2)	C
Softscape	305.0	0.20
Hardscape	36.0	0.90
Total	305.0	**0.31**

CB4	Area (m^2)	C
Softscape	662.0	0.20
Hardscape	1001.0	0.90
Total	1663.0	**0.62**

CB5	Area (m^2)	C
Softscape	568.0	0.20
Hardscape	740.0	0.90
Total	1308.0	**0.60**

CB6	Area (m^2)	C
Softscape	582.0	0.20
Hardscape	1437.0	0.90
Total	2019.0	**0.70**

CB7	Area (m^2)	C
Softscape	807.0	0.20
Hardscape	1132.0	0.90
Total	1939.0	**0.61**

Courtyard	Area (m^2)	C
Softscape	1127.0	0.20
Hardscape	840.0	0.90
Total	1967.0	**0.50**

Roof	Area (m^2)	C
Softscape	0.0	0.20
Hardscape	4153.0	0.90
Total	4153.0	**0.90**

UNC (1+2)	Area (m^2)	C
Softscape	1721.0	0.20
Hardscape	22.0	0.90
Total	1743.0	**0.21**

GROUPED DRAINAGE AREAS

MH3	Area (m^2)	C
ECB1	308.0	0.20
CB1	766.0	0.34
CB2	1144.0	0.32
CB3	305.0	0.31
CB4	1663.0	0.62
Roof	4153.0	0.90
Total	8339.0	**0.67**

MH5	Area (m^2)	C
CB5	1308.0	0.60
CB6	2019.0	0.70
CB7	1939.0	0.61
Total	5266.0	**0.64**

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PROJECT: Extendicare
DATE: 2025-11-03
FILE: 30304262.5.1.1
REV #: 1
DESIGNED BY: SEL

UNDERGROUND STORAGE CALCULATIONS

Pipe Storage ***MH3***

From	To	Length	Diameter	X-sec Area	Volume
ECB1	CB1	14.09	250	0.049	0.69
CB1	MH2	16.75	200	0.031	0.53
CB2	MH2	3.09	200	0.031	0.10
MH2	MH3	83.31	375	0.110	9.20
CB3	MH2-3	2.64	200	0.031	0.08
CB4	MH2-3	2.09	375	0.110	0.23
ROOF OUTLET	CB4	16.54	375	0.110	1.83
				Total	12.66

Structure Storage ***MH3***

	Base	Top	Height	diameter	X-sec Area	Volume
CB1	90.76	92.15	1.39	600	0.360	0.50
CB2	90.69	92.15	1.46	600	0.360	0.53
CB3	91.00	92.40	1.40	600	0.360	0.50
CB4	90.75	92.15	1.40	600	0.360	0.50
ECB1	91.15	92.15	1.00	600	0.360	0.36
MH2	90.49	92.25	1.76	1500	1.767	3.11
MH3	89.83	92.23	2.40	1500	1.767	4.24
					Total	9.75

TOTAL	MH3	22.40

Pipe Storage ***MH5***

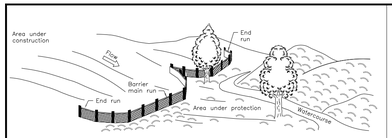
From	To	Length	Diameter	X-sec Area	Volume
ECB2	CB8	18.65	250	0.049	0.92
CB8	CB7	14.70	250	0.049	0.72
CB7	MH7	19.17	250	0.049	0.94
MH7	MH6	82.93	375	0.110	9.16
CB6	MH7-6	3.06	250	0.049	0.15
MH6	MH5	48.60	375	0.110	5.37
CB5	MH6-5	3.19	200	0.031	0.10
				Total	17.36

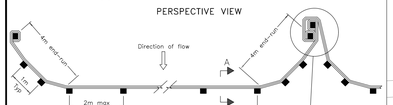
Structure Storage ***MH5***

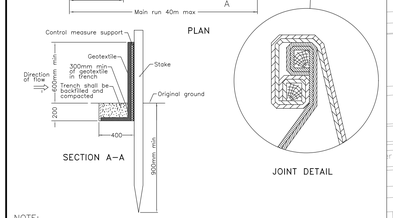
	Base	Top	Height	diameter	X-sec Area	Volume
CB5	90.75	92.15	1.40	600	0.360	0.50
CB6	90.75	92.15	1.40	600	0.360	0.50
CB7	90.68	92.15	1.47	600	0.360	0.53
CB8	90.78	92.15	1.37	600	0.360	0.49
ECB2	91.15	92.15	1.00	250	0.063	0.06
MH5	89.93	92.26	2.33	1200	1.131	2.64
MH6	90.12	92.41	2.29	1200	1.131	2.59
MH7	90.44	92.38	1.94	1200	1.131	2.19
					Total	9.51

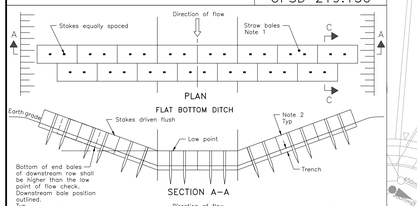
TOTAL	MH5	26.87

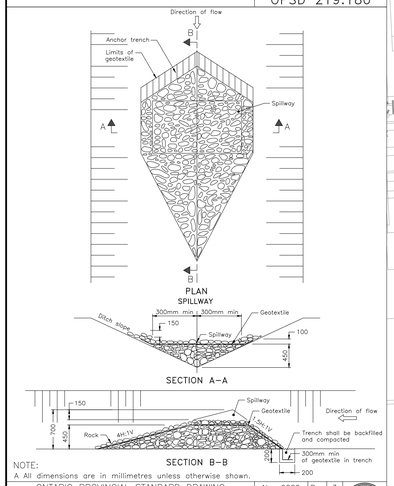
Appendix E











NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev 3
HEAVY–DUTY SILT FENCE BARRIER	OPSD 219.130	

NOTES:
1 Number of bales varies and shall suit ditch.
2 Straw bales shall be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.
A Fill and compact gaps with loose straw.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev 3
STRAW BALE FLOW CHECK DAM	OPSD 219.180	

NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2022	Rev 3
TEMPORARY ROCK FLOW CHECK DAM V–DITCH	OPSD 219.210	

NOTES:

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
2. SILT FENCE TO BE ERECTED PRIOR TO EARTH WORKS BEING COMMENCED. SILT FENCE TO BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED OR UNTIL START OF SUBSEQUENT PHASE.
3. STRAW BALE SEDIMENT TRAPS TO BE CONSTRUCTED IN EXISTING ROAD SIDE DITCHES. TRAPS TO REMAIN AND BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED.
4. FILTER CLOTH TO BE PLACED AND MAINTAINED UNDER COVER OF ALL PROPOSED CATCHBASINS AFTER BASE COURSE, AND EXISTING CATHBASINS IDENTIFIED OUTSIDE OF CONSTRUCTION LIMIT. FILTER CLOTH IN STREET CB'S TO REMAIN UNTIL ALL CURBS ARE CONSTRUCTED. FILTER CLOTH IN RYCB'S TO REMAIN UNTIL VEGETATION IS ESTABLISHED. ALL CATHCBASINS TO BE REGULARLY INSPECTED AND CLEANED AS NECESSARY, UNTIL SOD AND CURBS ARE CONSTRUCTED.
5. CONTRACTOR TO PROVIDE DETAILS ON LOCATION(S) AND DESIGN OF DEWATERING TRAP(S) PRIOR TO COMMENCING WORK. CONTRACTOR ALSO RESPONSIBLE FOR MAINTAINING TRAP(S) AND ADJUSTING SIZE(S) IF DEEMED REQUIRED BY THE ENGINEER DURING CONSTRUCTION.
6. WORKS NOTED ABOVE ARE TO BE INSTALLED, INSPECTED, MAINTAINED AND ULTIMATELY REMOVED BY SERVICING CONTRACTOR.
7. THIS IS A "LIVING DOCUMENT" AND MAY BE MODIFIED IN THE EVENT THE PROPOSED CONTROL MEASURES ARE INSUFFICIENT.

LEGEND:

━ ▪ ▪ ━	HEAVY DUTY SILT FENCE AS PER OPSD-219.130
━━━	SNOW FENCE
▦	STRAW BALE CHECK DAM AS PER OPSD-219.180
◈	ROCK CHECK DAM AS PER OPSD-219.210
⬡ CB	FILTER CLOTH PLACED UNDER EXISTING CB COVER
▨ 15.0m × 7.00	TEMPORARY MUD MAT 0.15m THICK 50mm CLEAR STONE ON NON WOVEN FILTER CLOTH

CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

CONSULTANTS

1:500 0 5 15 25m

SEAL

LICENSED PROFESSIONAL ENGINEER
S. E. LABADIE
100214983
2025/11/13
PROVINCE OF ONTARIO

PROJECT
EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO: 3034262	
DRAWN BY: **D.D.**	CHECKED BY: **T.R.B.**
PROJECT MGR: **S.E.L.**	APPROVED BY: **S.E.L.**

SHEET TITLE
EROSION - SEDIMENT PLAN

SHEET NUMBER	ISSUE
C-900	1

File Location: C:\Users\cormierc3992\DC\ACCDocs\Arcadis ACC US\ACA-30304262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-900 EROSION - SEDIMENT PLAN.dwg   Last Saved: November 7, 2025, by cormierc3992   Plotted: November 7, 2025 12:37:21 PM by Cormier, Chris

D07-XX-XX-XXXX

SCALE CHECK 1 in 10mm XXXXX

GENERAL LEGEND

- LIMIT OF CONSTRUCTION
- PHASING LINE
- BARRIER CURB
- MOUNTABLE CURB
- DEPRESSED BARRIER CURB
- CONCRETE SIDEWALK
- TACTILE WALKING SURFACE INDICATOR
- ASPHALT SIDEWALK / PATHWAY
- BUS STOP CONCRETE / ASPHALT

SERVICING LEGEND

- MH118A — SANITARY MANHOLE
- 200mmØ SAN — SANITARY SEWER
- MH109 / MH118 — STORM MANHOLE
- 825mmØ STM — STORM SEWER - LESS THAN 900Ø
- 900mmØ STM — STORM SEWER - 900Ø AND GREATER
- 200Ø WATERMAIN — WATERMAIN
- CB100, T/G 104.10 — STREET CATCHBASIN C/W TOP OF GRATE
- CICB101, G/G 104.25 — CURB INLET CATCHBASIN C/W GUTTER GRADE
- DCB100, T/G 104.10 — DOUBLE CATCHBASIN C/W TOP OF GRATE
- DCICB101, G/G 104.25 — DOUBLE CURB INLET CATCHBASIN C/W GUTTER GRADE
- DI101, T/G 103.59 — DITCH INLET MANHOLE C/W TOP OF GRATE
- CBMH101, T/G 103.59 — CATCHBASIN MANHOLE C/W TOP OF GRATE
- RYCB, T/G 104.35 — REAR YARD CATCHBASIN IN ROAD CONNECTING STRUCTURE C/W SOLID GRATE
- T/G 104.35, INV 103.35 — REAR YARD "TEE" CATCHBASIN (300Ø) C/W TOP OF GRATE AND INVERT OUT
- T/G 104.50, INV 103.00 — REAR YARD "END" CATCHBASIN (300Ø) C/W TOP OF GRATE AND INVERT OUT
- T/G 104.35, INV 103.35 — REAR YARD "CUSTOM ANGLED " CATCHBASIN (450Ø) C/W TOP OF GRATE AND INVERT OUT
- T/G 104.35, INV 103.35 — REAR YARD "THREE WAY" CATCHBASIN (450Ø) C/W TOP OF GRATE AND INVERT OUT
- PERFORATED REAR YARD SUBDRAIN
- 300mmØ CSP — CSP CULVERT C/W DIAMETER
- VB — VALVE AND VALVE BOX
- VSVC — VALVE AND VALVE CHAMBER
- PARK VALVE CHAMBER C/W SERVICE POST
- HYD, 104.35 — FIRE HYDRANT C/W BOTTOM OF FLANGE ELEVATION
- 200Ø WM — RED — 150Ø WM — WATERMAIN REDUCER
- 2 VBENDS — VERTICAL BEND LOCATION
- SIAMESE CONNECTION (IF REQUIRED)
- M — METER (IF REQUIRED)
- RM — REMOTE METER (IF REQUIRED)
- A — WATERMAIN IDENTIFICATION (IF REQUIRED)
- PIPE CROSSING IDENTIFICATION (IF REQUIRED)
- SINGLE SERVICE LOCATION
- DOUBLE SERVICE LOCATION
- SINGLE SERVICE LOCATION (REQUIRES FOUNDATION SLEEVE)
- BH 12, 102.00 — INFERRED REFUSAL (SEE GEOTECHNICAL REPORT)
- HGL, 101.79 — 100 YEAR STORM HYDRAULIC GRADE LINE AT MANHOLE
- USF, 101.79 — UNDERSIDE OF FOOTING ELEVATION
- CLAY SEAL IN SEWER / WATERMAIN TRENCH

AOV LEGEND

MH–ST	Maintenance Hole (Storm Sewer)	FH	Fire Hydrant
MH–S	Maintenance Hole (Sanitary)	WV	Water Valve
MH–T	Maintenance Hole (Traffic)	HH	Handhole
MH–H	Maintenance Hole (Hydro)	Ø	Diameter
VC	Valve Chamber (Watermain)	+ 65.00	Location of Elevations
OHW	Overhead Wires	+ 65.00*	Top of Concrete Curb Elevation
UP	Utility Pole	C/L	Centreline
AN	Anchor		Property Line
HT	Hydro Transformer Mounted on Utility Pole		Proposed Property Line per Draft Plan of Subdivision Concept Plan March 26, 2024.
LS	Light Standard	TOS	Top of Slope
CB	Catch Basin	BOS	Bottom of Slope
CBI	Catch Basin Inlet	TSL	Traffic Light
DI	Ditch Inlet		

NOTES :

1. ALL MATERIALS AND CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS & SPECIFICATIONS OR OPSD/OPSS IF CITY DRAWINGS AND SPECIFICATIONS DO NOT APPLY.
2. THE POSITION OF UNDERGROUND AND ABOVE GROUND SERVICE, UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH SERVICE, UTILITIES AND STRUCTURES IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL REPORT ALL CONFLICTS, DISCOVERIES OF ERROR AND DISCREPANCIES TO THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND ASSUME RESPONSIBILITY FOR ALL UTILITIES WHETHER OR NOT SHOW ON THESE DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL LANDS BEYOND THE SITE LIMITS. ANY AREAS BEYOND THE SITE LIMITS, WHICH ARE DISTURBED DURING CONSTRUCTION, SHALL BE REPAIRED AND RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE ADJACENT LAND OWNER, THE OWNER, THE OWNERS REPRESENTATIVES AND/OR THE AUTHORITY HAVING JURISDICTION AT THE EXPENSE OF THE CONTRACTOR.
6. WHERE NECESSARY, THE CONTRACTOR SHALL IMPLEMENT A TRAFFIC MANAGEMENT PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE LATEST VERSION OF THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL TEMPORARY TRAFFIC CONTROL MEASURES MUST BE REMOVED UPON THE COMPLETION OF THE WORKS.
7. SHOULD ANY BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE OWNER TO CONTACT THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATE, AND WORK WITHIN THE AREA SHALL BE CEASED UNTIL FURTHER NOTICE.
8. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL REPORT PG4958-6 PREPARED BY PATERSON GROUP.
9. FOR GEODETIC BENCHMARK AND GEOMETRIC LAYOUT OF STREET AND LOTS, REFER TO TOPOGRAPHICAL SURVEY AND PLAN OF SUBDIVISION PREPARED BYANNIS O'SULLIVAN VOLLEBEKK LTD. BENCHMARK BASED ON CAN--NET VIRTUAL REFERENCE SYSTEM NETWORK.
10. FOR SITE PLAN INFORMATION, REFER TO SITE PLAN PREPARED BYMONTGOMERY SISAM ARCHITECTS
11. THESE DRAWINGS ARE NOT TO BE SCALED OR USED FOR LAYOUT PURPOSES
12. ROADWAY SECTIONS REQUIRING GRADE RAISE TO PROPOSED SUB GRADE LEVEL TO BE FILLED WITH ACCEPTABLE NATIVE EARTH BORROW OR IMPORTED OPSS SELECTED SUBGRADE MATERIAL IF NATIVE MATERIAL IS DEFICIENT AS PER RECOMMENDATION OF GEOTECHNICAL ENGINEER.
13. IN AREAS WHERE EXISTING GROUND IS BELOW THE PROPOSED ELEVATION OF SEWER AND WATERMAINS, GRADE RAISING AND FILLING IS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. AS PER CITY GUIDELINES ALL WATERMAINS IN FILL AREAS ARE TO BE TIED WITH RESTRAINING JOINTS AND THRUST BLOCKS.
14. THE CONTRACTOR SHALL IMPLEMENT THE EROSION AND SEDIMENT CONTROL PLAN PRIOR TO THE COMMENCEMENT OF ANY SITE CONSTRUCTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE ENGINEER, OR ANY REGULATORY AGENCY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE START OF A SUBSEQUENT PHASE.
15. CONTRACTORS SHALL BE RESPONSIBLE FOR KEEPING CLEAN ALL ROADS WHICH BECOME COVERED IN DUST, DEBRIS AND/OR MUD AS A RESULT OF ITS CONSTRUCTION OPERATIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE SHOULD THE MAXIMUM OPSD TRENCH WIDTH BE EXCEEDED.
17. ALL PIPE, CULVERTS, STRUCTURES REFER TO NOMINAL INSIDE DIMENSIONS.
18. SHOULD CLAY SEALS BE REQUIRED, THEY SHALL BE INSTALLED AS PER THE RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT.
19. UNLESS SPECIFICALLY NOTED OTHERWISE, PIPE MATERIALS SHALL BE AS FOLLOWS;
    -WATERMAINS TO BE PVC DR18
    -SANITARY SEWER TO BE PVC DR35
    -PERFORATED STORM SEWERS IN REAR YARDS AND LANDSCAPE AREAS TO BE HDPE
    -STORM SEWERS 375mm DIAMETER AND LESS TO BE PVC DR35
    -STORM SEWERS 450mm DIAMETER AND GREATER TO BE CONCRETE, CLASS AS PER OPSD 807.010 OR 807.030, OR HIGHER
    FOR SHALLOW SEWERS, REFER TO CITY STANDARD S35.
20. ALL CONNECTIONS TO EXISTING WATERMAINS ARE TO BE COMPLETED BY CITY FORCES. CONTRACTOR IS TO EXCAVATE, BACKFILL, COMPACT AND REINSTATE.
21. ANY WATERMAIN WITH LESS THAN 2.4m AND ANY SEWER WITH LESS THAN 2.0m DEPTH OF COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22 OR AS APPROVED BY THE ENGINEER.
22. ALL FIRE HYDRANTS AS PER CITY STANDARD W19, c/w 150mmØ LEAD UNLESS OTHERWISE SPECIFIED.
23. ALL STUBBED SEWERS SHALL HAVE PRE-MANUFACTURED CAPS INSTALLED.
24. ALL CATCHBASINS SHALL HAVE A 600mm SUMP. ALL CATCHBASIN MANHOLES, AND ALL STORM MANHOLES WITH OUTLETTING PIPE SIZES LESS THAN 900mm, SHALL HAVE A 300mm SUMP.
25. ALL SANITARY MANHOLES IN PONDING AREAS SHALL BE EQUIPPED WITH A WATERTIGHT COVER.
26. ALL LEADS FOR STREET CATCHBASIN'S AND CURB INLET CATCHBASIN'S CONNECTED TO MAIN SHALL BE 200mmØ PVC DR35 @ MIN 2% SLOPE UNLESS NOTED OTHERWISE. ALL LEADS FOR RYCB'S CONNECTED TO MAIN SHALL BE 200mmØ PVC DR35 @ MIN 1% SLOPE UNLESS NOTED OTHERWISE.
27. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL STREET CATCHBASINS SHALL BE INSTALLED WITH TWO - 3.0m MINIMUM SUBDRAINS INSTALLED LONGITUDINALLY, PARALLEL WITH THE CURB. ALL CATCHBASINS IN ASPHALT AREAS, NOT ADJACENT TO A CURB, SHALL BE INSTALLED WITH FOUR - 3.0m MINIMUM SUBDRAINS INSTALLED ORTHOGONALLY.
28. INLET CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMPLETING THE ROAD BASE (GRANULAR A).
29. ALL SEWER SERVICE LATERALS WITH MAINLINE CONNECTIONS DEEPER THAN 5.0m REQUIRE A CONTROLLED SETTLEMENT JOINT.
30. EACH BUILDING SHALL BE EQUIPPED WITH A SANITARY AND STORM SEWER BACKWATER VALVE AND CLEAN-OUT ON ITS PRIMARY SERVICE, IF REQUIRED BY ONTARIO BUILDING CODE REQUIREMENTS (BY OTHERS).
31. THE SUBGRADE OF ALL STRUCTURES, PIPE, ROADS, SIDEWALKS, WALKWAYS, AND BUILDINGS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
32. TOP COURSE ASPHALT SHALL NOT BE PLACED UNTIL THE FINAL CCTV INSPECTION AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA.
33. ALL RETAINING WALLS GREATER THAN 1.0m IN HEIGHT SHALL BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.
34. ALL RETAINING WALLS GREATER THAN 0.6m IN HEIGHT REQUIRE A GUARD. ANY GUARD ON A RETAINING WALL GREATER THAN 1.0m IN HEIGHT SHALL BE DESIGNED BY THE QUALIFIED STRUCTURAL ENGINEER RESPONSIBLE FOR THE WALL DESIGN.
35. UPON COMPLETION OF THE RETAINING WALL, THE CONTRACTOR SHALL REQUEST A CONFORMANCE CERTIFICATE FROM THE QUALIFIED ENGINEER RESPONSIBLE FOR THE WALL DESIGN.

CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

NOT FOR CONSTRUCTION

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

CONSULTANTS

SEAL

PROJECT
EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO: 3034262	
DRAWN BY: **D.D.**	CHECKED BY: **T.R.B.**
PROJECT MGR: **S.E.L.**	APPROVED BY: **S.E.L.**

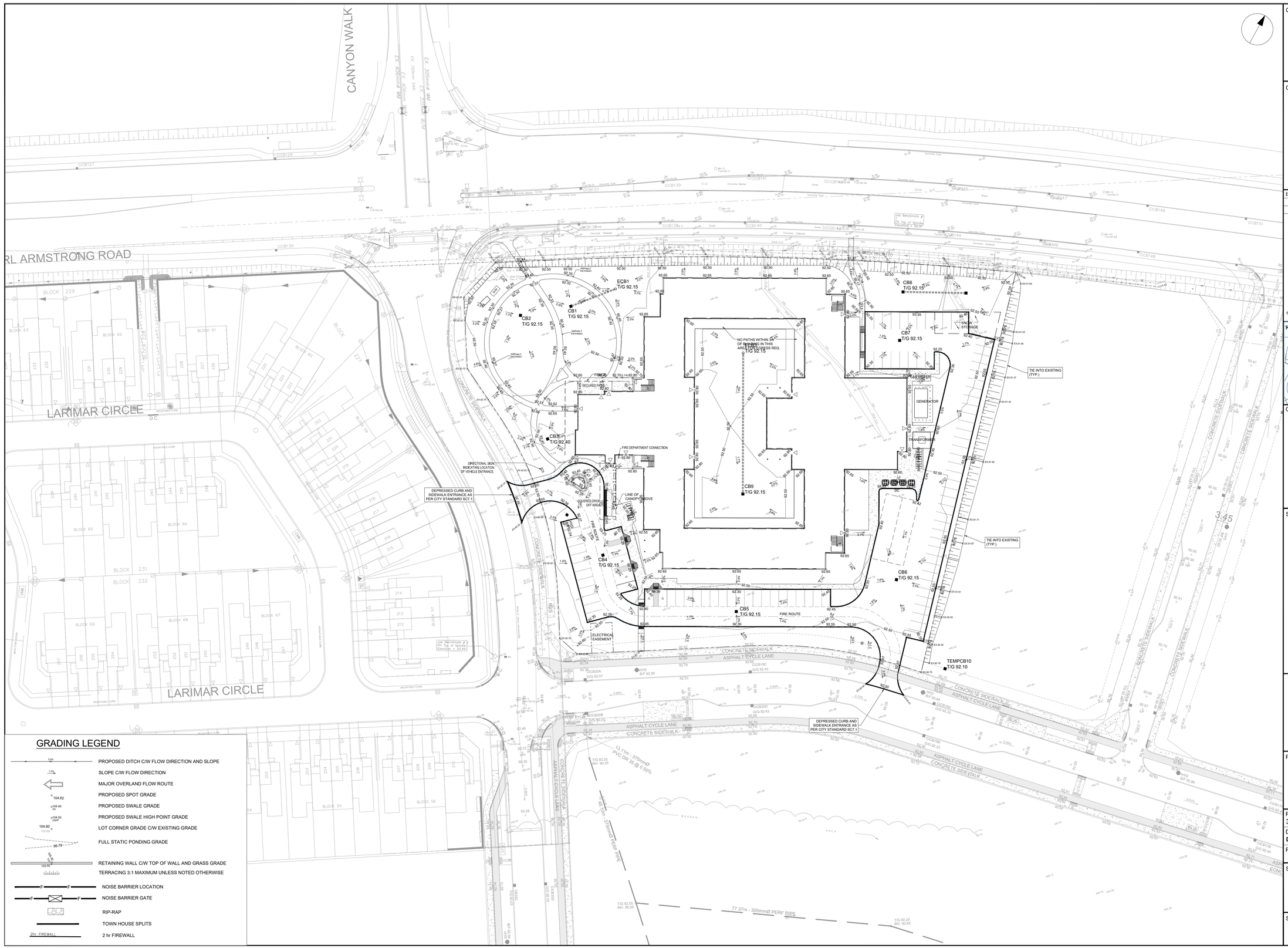
SHEET TITLE
NOTES AND LEGEND

SHEET NUMBER	ISSUE
C-010	1

SCALE CHECK: 1 in | 10mm | XXXXX

D07-XX-XX-XXXX

File Location: C:\Users\cormierc3992\DC\ACCDocs\Arcadis ACC US\ACA-3030\262-RSS-Extendicare\Project Files\10_WIP\04_CIVIL\Sheets\C-010 NOTES-LEGEND.dwg Last Saved: November 7, 2025, by cormierc3992 Plotted: November 7, 2025 12:14:56 PM by Cormier, Chris



GRADING LEGEND

- PROPOSED DITCH C/W FLOW DIRECTION AND SLOPE
- SLOPE C/W FLOW DIRECTION
- MAJOR OVERLAND FLOW ROUTE
- PROPOSED SPOT GRADE
- PROPOSED SWALE GRADE
- PROPOSED SWALE HIGH POINT GRADE
- LOT CORNER GRADE C/W EXISTING GRADE
- FULL STATIC PONDING GRADE
- RETAINING WALL C/W TOP OF WALL AND GRASS GRADE
- TERRACING 3:1 MAXIMUM UNLESS NOTED OTHERWISE
- NOISE BARRIER LOCATION
- NOISE BARRIER GATE
- RIP-RAP
- TOWN HOUSE SPLITS
- 2 hr FIREWALL

CLIENT

Extendicare

3000 Steeles Ave East, Suite 400
Markham ON L3R 4T9

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SITEPLAN APPROVAL	2025-11-13

NOT FOR CONSTRUCTION

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN

CONSULTANTS

1:500 (0, 5, 10, 15, 25m)

SEAL

LICENSED PROFESSIONAL ENGINEER
S. É. LABADIE
100214983
2025/11/13
PROVINCE OF ONTARIO

PROJECT
EXTENDICARE RIVERSIDE

400 JESSIE CHENEVERT WALK

PROJECT NO: 3034262	
DRAWN BY: D.D.	CHECKED BY: T.R.B.
PROJECT MGR: S.E.L.	APPROVED BY: S.E.L.

SHEET TITLE
GRADING PLAN

SHEET NUMBER	ISSUE
C-200	1

SCALE CHECK: 1 in

D07-xx-xx-xxxx

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