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PROPOSED RESIDENTIAL DEVELOPMENT
2000 CITY PARK DRIVE

Assessment of Adequacy of Public Services Report

PROPOSED RESIDENTIAL DEVELOPMENT
2000 City Park Drive

ASSESSMENT OF ADEQUACY OF PUBLIC SERVICES REPORT

Prepared by:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario
K2M 1P6

April 21, 2023
Revised June 12, 2025

Ref: R-2023-030
Novatech File No. 123006

June 6, 2025

City of Ottawa
Development Review - East Branch
Planning, Development and Building Services Department
110 Laurier Avenue West
Ottawa, Ontario

Attention: Kelsey Charrie

Dear Mr. Charrie:

Re: Assessment of Adequacy of Public Services Report
Proposed Residential Development
2000 City Park Drive, Ottawa, ON
Novatech File No.: 123006

Enclosed is a copy of the revised 'Assessment of Adequacy of Public Services Report' for the proposed residential development located at 2000 City Park Drive, in the City of Ottawa. The purpose of this report is to demonstrate that the proposed development can be serviced by the existing municipal infrastructure fronting the subject site. This report is being submitted in support of Official Plan Amendment and Zoning By-law Amendment applications.

Please contact the undersigned, should you have any questions or require additional information.

Yours truly,

NOVATECH

M Savic

Miroslav Savic, P. Eng.
Senior Project Manager

cc: Alex Gordon (Colonnade BridgePort)

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

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LIST OF APPENDICES

1.0 INTRODUCTION

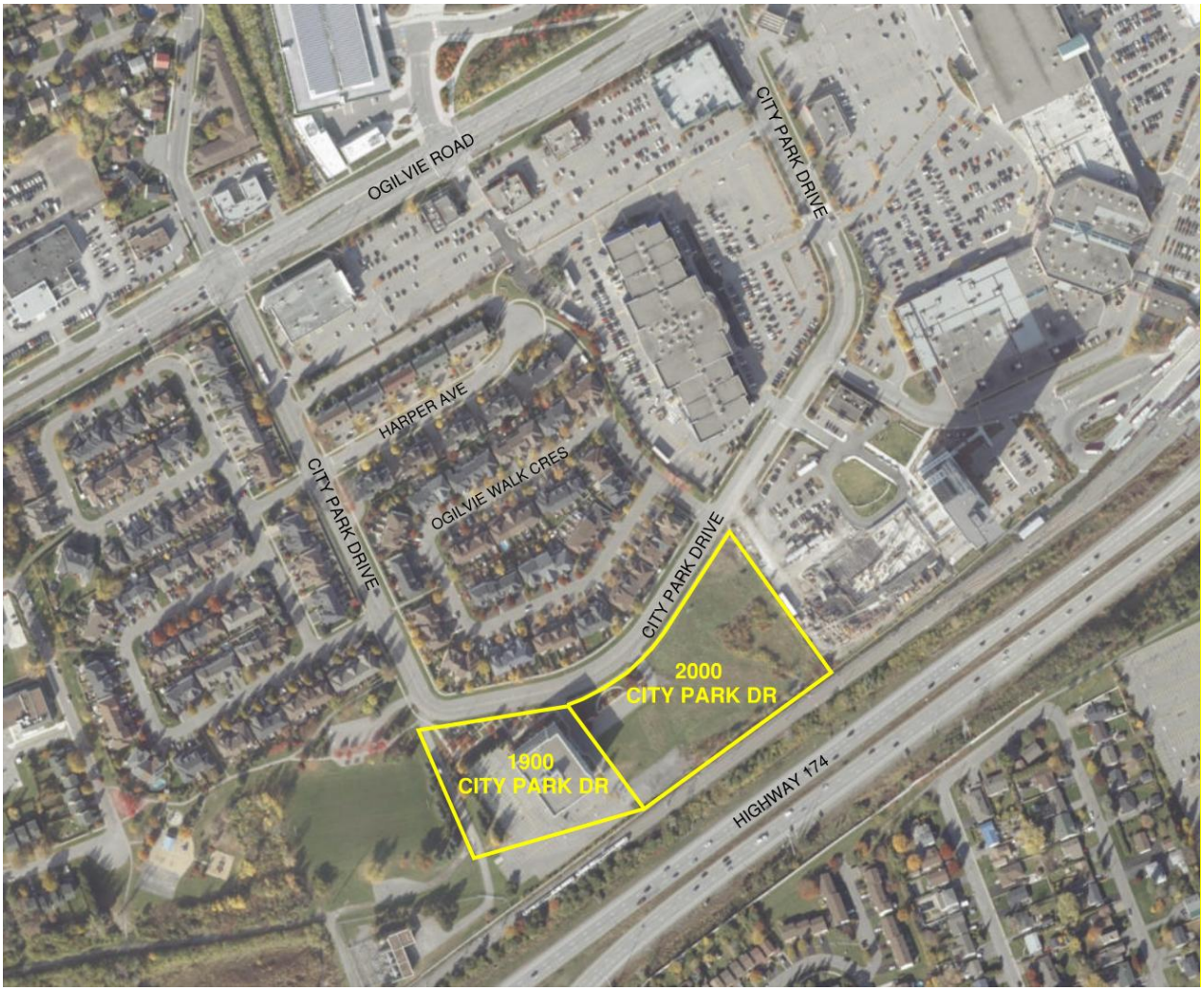
Novatech has been retained by Colonnade BridgePort to assess adequacy of the existing public services related to the proposed development at 2000 City Park Drive. The purpose of this report is to demonstrate that the proposed development can be serviced by the existing municipal infrastructure surrounding the subject site. This report is being submitted in support of Official Plan Amendment and Zoning By-law Amendment applications.

1.1 Location and Site Description

The subject site has an area of 1.55ha and is located on the south side of City Park Drive and north of Highway 174. The site is bordered by the existing office building to the west (1900 City Park Drive) and a high-rise residential development to the east. The legal description of the site is designated as Part of Block 2, Registered Plan 4M-649, City of Ottawa.

The 2000 City Park Drive site is currently undeveloped. The majority of the site is covered by natural green features (grass, bushes, and trees). Two surface parking lots servicing the adjacent office building are located at the northwest and southwest corner of the site.

Figure 1: Aerial View of the Subject Site



1.2 Pre-Consultation Information

A pre-consultation meeting was held with the City of Ottawa on January 19, 2023, at which time the client was advised of the general submission requirements. Further consultations were held with City staff and the Rideau Valley Conservation Authority (RVCA). Refer to **Appendix A** for a summary of the correspondence related to the proposed development.

1.3 Proposed Development

The proposed development will include 5 (five) residential towers. The parking will be provided underground with two site entrances off City Park Drive. Refer to Site Plan enclosed in **Appendix B** for details.

The subject site is located within an LRT Transit Oriented Development (TOD) Area. A report entitled 'LRT Transit Oriented Development Study Areas Servicing Overview, TOD Study Areas: Lees, Hurdman, Train, St. Laurent, Cyrville and Blair, Final Report' (TOD Report) dated January 22, 2014 prepared by Stantec Consulting Ltd. provides a high-level assessment of the servicing of the listed TOD stations. The subject site is within the Blair TOD Study Area of the TOD Report which assisted in preparation of this report.

2.0 SITE SERVICING

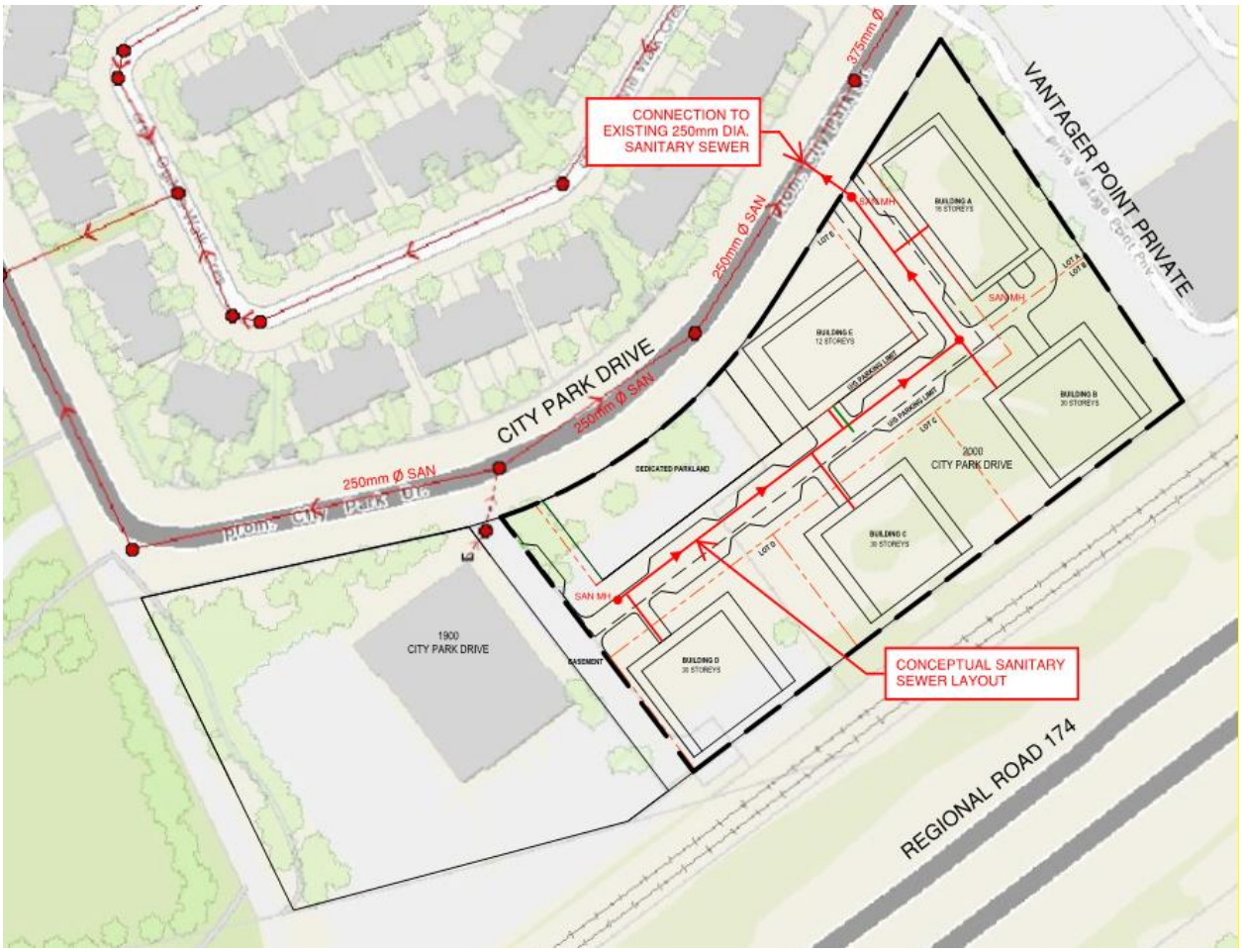
The objective of this report is to demonstrate that proper sewage outlets (sanitary and storm) as well as a suitable domestic water supply and appropriate fire protection are available for the proposed development. The servicing criteria, the expected sewage flows, and water demands are to conform to the requirements of the City of Ottawa municipal design guidelines for sewer and water distribution systems. On-site stormwater management will be implemented to meet the requirements of the City of Ottawa.

2.1 Sanitary Servicing

The proposed development sanitary servicing will be provided by connecting to the existing 250mm sanitary sewer that flows east along City Park Drive and ultimately discharges into 1050mm diameter Maxime Relief Trunk sewer. The Maxime Relief Trunk sewer outlets into the 1200mm diameter pipe crossing under the highway and eventually discharges into the1650mm diameter Greens Creek Collector.

Refer to **Figure 2** showing the existing sanitary sewer infrastructure and conceptual servicing layout.

Figure 2: Conceptual Sanitary Servicing Layout



Based on criteria in Section 4 of the City of Ottawa Sewer Design Guidelines, the total theoretical peak sanitary flow, including infiltration, from the proposed development will be approximately 20.3 L/s. Refer to the table below for a summary of the preliminary sanitary sewage flows and to **Appendix C** for detailed calculations.

Proposed Residential Development	Unit Count	Design Population	Peak Residential Flow (L/s)	Infiltration Allowance (L/s)	Peak Sewage Flow (L/s)
Towers A, B, C, D, and E	1,192	2,146	19.81	0.51	20.32

Based on review of the City record drawings, the existing 250mm sanitary sewer in City Park Drive 0.45% slope has a full flow capacity of 41.6 L/s.

The preliminary sanitary flow calculations were provided to the City of Ottawa for the purpose of capacity analysis of downstream sanitary sewer system. The city asset management flagged some concerns related to the downstream sewer system and will review in further detail when

Official Plan Amendment and Zoning By-law Amendment applications are submitted. Refer to **Appendix C** for email correspondence with the City of Ottawa.

According to the TOD report, there is ample capacity in Maxime Relief Trunk Sewer for the ultimate TOD conditions. The Green Creek Collector the Maxime Relief Trunk outlets to does have a history of surcharging, but it is unknown how much spare capacity may exist.

The sanitary servicing will be re-evaluated once the downstream sanitary sewer capacity information is received from the City of Ottawa.

2.2 Water Supply for Domestic Use and Firefighting

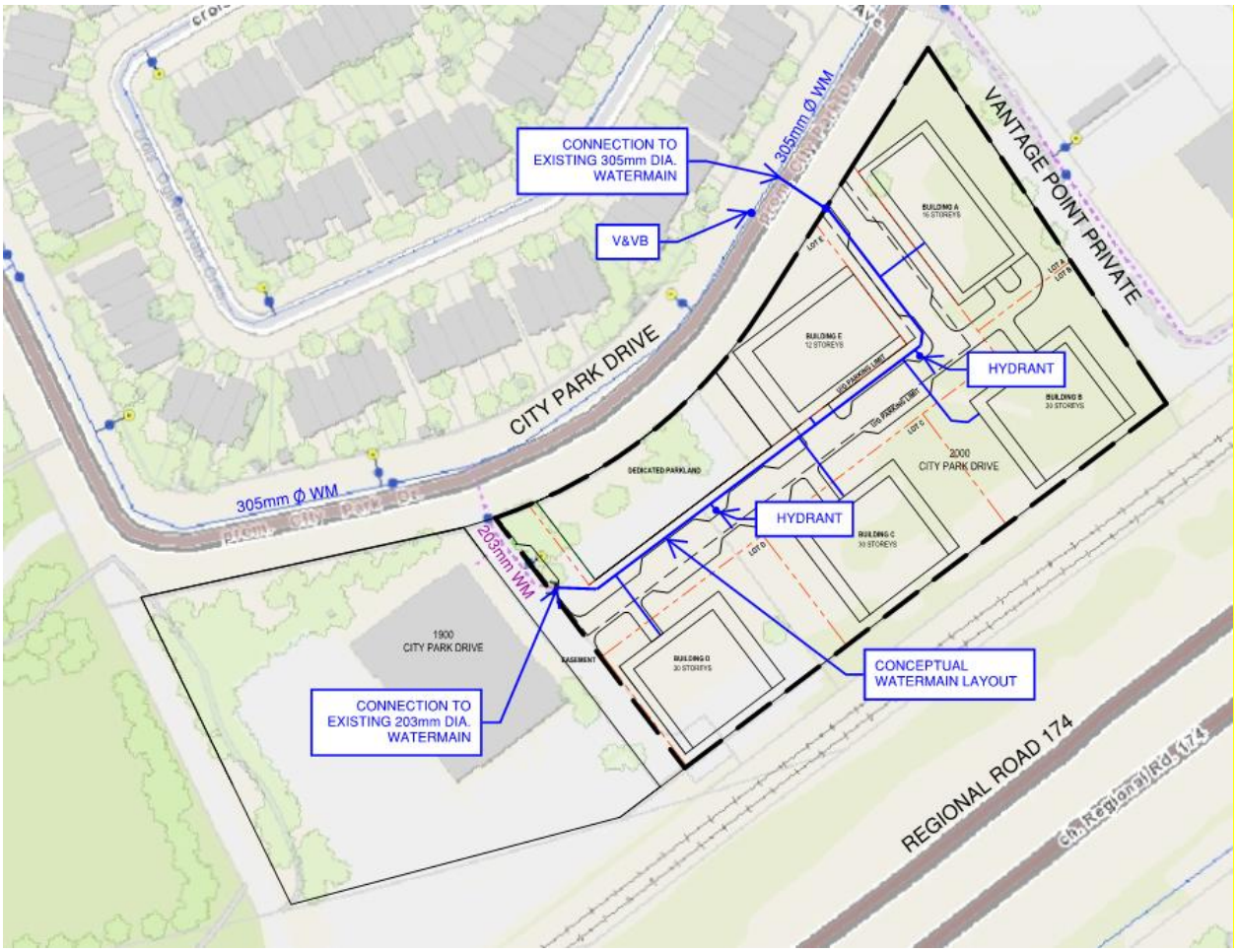
The existing office building (1900 City Park Drive) is serviced by a 203mm watermain connected the 305mm diameter municipal watermain in City Park Drive. The City Park Drive watermain is connected to the 610mm diameter watermain in Ogilvie Avenue.

The TOD report indicated that the Blair TOD study area is located within Pressure Zone 1E of the City's central water distribution system. The existing 1220mm diameter watermain parallel and south of Highway 174 represents a major feed to this area. A 610mm diameter watermain running north/south along Blair Road connects the 610mm Ogilvie watermain to the 1220mm diameter feedermain.

The proposed development will be serviced by connecting to the exiting 305mm diameter watermain in City Park Drive. The anticipated daily water demand for the proposed development will be greater than 50m^3/day. Therefore, the proposed development will require two (2) water service connections to the municipal watermain system. The second service connection will be provided by looping the watermain through the site and connecting to the existing 203mm diameter private watermain currently servicing 1900 City Park Drive. A new watermain valve on the existing 305m diameter watermain will be required between the two service connections to provide redundancy.

Refer to **Figure 3** showing the existing watermain infrastructure and conceptual servicing layout.

Figure 3: Conceptual Water Servicing Layout



Preliminary water demand and fire flow calculations have been prepared for the proposed development based on criteria in Section 4 of the City of Ottawa Design Guidelines for Water Distribution Systems. The fire flows are calculated using the Fire Underwriters Survey (FUS) method, based on general building assumptions, including building footprint, construction materials and fully sprinklered buildings. Refer to the table below for a summary of the water demands and fire flows and to **Appendix C** for detailed calculations.

Proposed Residential Development	Unit Count	Design Population	Avg. Daily Demand (L/s)	Max. Daily Demand (L/s)	Peak Hour Demand (L/s)	Max. FUS Fire Flow (L/s)
Towers A, B, C. D, and E	1,192	2,146	7.0	17.4	38.2	83

The following design criteria were taken from Section 4.2.2 – 'Watermain Pressure and Demand Objectives' of the City of Ottawa Design Guidelines for Water Distribution:

- Normal operating pressures are to range between 345 kPa (50 psi) and 483 kPa (70 psi)
- Minimum system pressures are to be 276 kPa (40 psi) under Peak Hour Demand.

- Minimum system pressures are to be 140 kPa (20 psi) under Max Day + Fire Flow demands.

The following table summarizes preliminary hydraulic analysis results based on municipal watermain boundary conditions provided by the City.

Municipal Watermain Boundary Condition	Boundary Condition HGL (m)	Normal Operating Pressure Range (psi)	Anticipated WM Pressure (psi)*
Minimum HGL (Peak Hour Demand)	110.2 m	40 psi (min.)	~ 51 psi
Maximum HGL (Max Day Demand)	117.1 m	50-70 psi	~ 61 psi
HGL Max Day + Fire Flow (133 L/s)	112.2 m	20 psi (min.)	~ 54 psi

*Based on an approximate ground elevation of 74.5 m

Based on preliminary calculations, it is anticipated that the watermain pressure within the municipal watermain network will be within the normal operation pressure range, while satisfying minimum pressure requirements under Peak Hour Demand and Max Day + Fire flow Demand conditions. Given the height of the proposed buildings, the booster pumps will be required to provide adequate water pressure to the upper floors.

New private hydrants will be provided on site within the 45m unobstructed path from the fire department siamese connection location at each building as required by the Ontario Building Code.

The proposed watermain will be sized to assure the available fire flow at the hydrants meet the FUS fire requirements for the proposed development. A detailed hydraulic analysis of the proposed watermain system will be included as part of the Site Plan Control submission to the City of Ottawa.

Refer to **Appendix C** for preliminary watermain analysis, FUS fire flow calculations and correspondence with the City of Ottawa related to the municipal watermain boundary conditions.

2.3 Storm Drainage and Stormwater Management

Under current conditions, drainage from the existing office building site (1900 City Park Drive) is collected with an on-site stormwater system that outlets to the existing 1950mm diameter storm sewer located within the sewer easement along the west property line. The topography of the 2000 City Park Drive site gradually slopes from north to south towards the south property line. Drainage from the site is collected with the two on-site existing catch basins that are connected to the existing office building stormwater system.

Under post-development conditions, storm flows from the development are proposed to be connected to the existing 1500mm diameter storm sewer in City Park Drive that outlet to the 1950mm storm sewer running within the sewer easement along the west property line.

Refer to **Figure 4** showing the existing storm sewer infrastructure and conceptual servicing layout.

Figure 4: Conceptual Storm Servicing Layout

On-site stormwater management (SWM), including both quantity and quality control measures, will be required. A detailed SWM design and report will be prepared as part of the Site Plan Control application. The stormwater quantity control criteria have been provided at pre-consultation meetings with the City of Ottawa. Follow up discussions were held with the City of Ottawa and the Rideau Valley Conservation Authority (RVCA) with respect to the stormwater quality control requirements. Refer to **Appendix A** for notes from the pre-consultation meeting and the email correspondence with the City of Ottawa and RVCA.

Based on SWM criteria provided by the City of Ottawa, the allowable release rate from the site is calculated using the Rational Method, with a maximum allowable runoff coefficient equivalent to existing conditions, but in no case greater than C=0.5, a time of concentration of 10 minutes and a 5-year rainfall intensity from City of Ottawa IDF curves. The allowable release rate for the site was calculated to be 115.3 L/s. The calculation is based on a pre-development runoff coefficient of 0.26.

For the purpose of this report, high-level stormwater management calculations are provided to estimate preliminary stormwater storage volumes requirements. The storage volumes are calculated using the Modified Rational Method and are summarized in the following table.

Preliminary Stormwater Storage Volume Table

5-Year Storage Volume (m^3)	100-Year Storage Volume (m^3)
~77	~246

It is anticipated that required storage will be provided on the proposed building roofs and in internal stormwater management tanks. The use of control flow roof drains and inlet control devices (ICD) or stormwater pumps will be required.

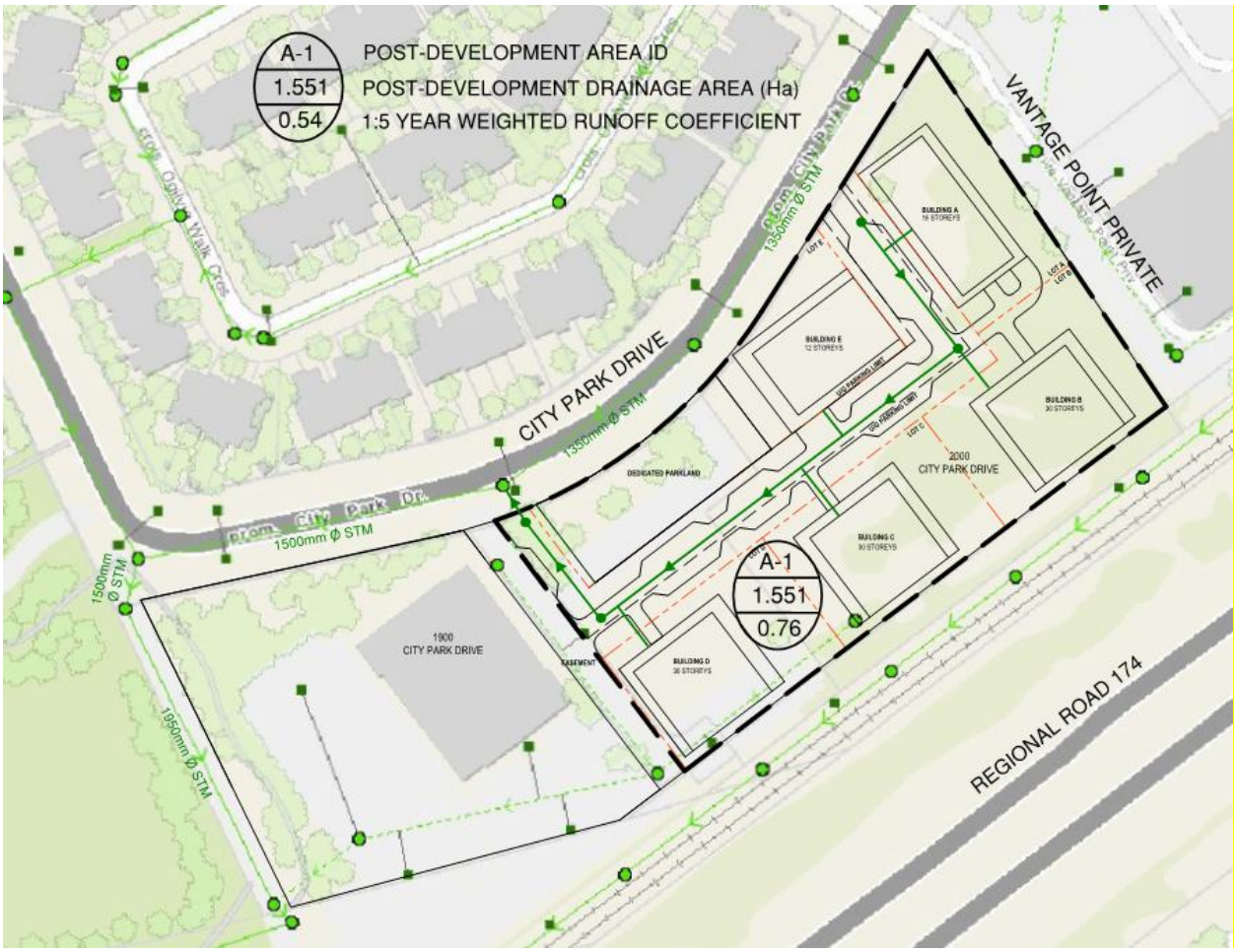
The following table compares the post-development flows from the proposed development to both the uncontrolled pre-development flows and to the allowable release rate specified by the City of Ottawa, for the 5-year and the 100-year design events.

Stormwater Flow Comparison Table

Design Event	Pre-development Conditions	Post-development Conditions	Allowable Release Rate (L/s)
	Uncontrolled Flow (L/s)	Controlled Flow (L/s)	
5-Year	115.3	115.3	115.3
10-Year	217.7	115.3	

Refer to **Appendix D** for preliminary SWM calculations and **Figure 5** showing the conceptual stormwater management plan.

Figure 5: Conceptual Stormwater Management Plan



The subject site is located within the jurisdiction of the Rideau Valley Conservation Authority (RVCA) and is tributary to the Rideau River. As per the information provided by the City of Ottawa, an 'Enhanced' Level of Protection, equivalent to a long-term average removal of 80% Total Suspended Solids (TSS), with at least 90% of the total rainfall being captured and treated, will be required for the site. This can be achieved by installation of oil-grit separator (OGS) units on the storm outlets from the site.

A complete stormwater management (SWM) analysis will be included as part of the Site Plan Control submission to the City of Ottawa.

3.0 CONCLUSION

The conclusions of this report are as follows.

The existing municipal watermain network along with internal private watermain system will provide adequate water supply and redundance for the subject site. The booster pumps will be required to provide adequate water pressure to the upper floors of the proposed towers.

Storm servicing can be provided by connecting to the existing municipal storm sewer system. On-site stormwater management will be implemented to meet the requirements of the City of Ottawa.

Sanitary servicing can be provided by connecting to the existing sanitary sewers in City Park Drive. The sanitary servicing will be re-evaluated once the capacity analysis of the downstream sewer system is completed by the City of Ottawa.

A complete servicing, grading and stormwater management design will be included as part of the Site Plan Control submission to the City of Ottawa.

NOVATECH

Prepared by:

Miroslav Savic, P. Eng.
Senior Project Manager

Reviewed by:

J. Lee Sheets, C.E.T.
Director

APPENDIX A

Correspondence

1900 – 2000 City Park (Ward 11) – Pre-application Consultation Notes

Meeting Date: Thursday, January 19, 2023, from 2:15 pm to 3 pm

Attendees	Antoine Cousineau, Architect, NEUF architectes Bonnie Martell, Development Manager, Colonnade BridgePort Carol Bandar, Architect, NEUF architectes Frank Puentes, Architect, NEUF architectes Greg Winters, Planner, Novatech James Ireland, Planner, Novatech Jennifer Luong, Transportation Engineer, Novatech Kelsey Charie, Project Manager (Development Review), City of Ottawa Lee Sheets, Senior Project Manager, Novatech Lucy Ramirez, Planner (Development Review), City of Ottawa Patrick McMahon, Project Manager (Transportation), City of Ottawa Phil Castro, Planner (Parks), City of Ottawa Randolph Wang, Planner (Urban Design), City of Ottawa
Regrets	Hayley Murray, Forester – PRED, City of Ottawa

Contents

Proposal Summary

There is an existing office building on site and parking at 1900 City Park Drive. The office building was built circa 1991. The property known municipally as 2000 City Park Drive is vacant. The Applicant is proposing a two-phase project – the first being 2000 City Park which is the vacant parcel. The second being “future development”, which is the demolition and re-development of 1900 City Park Drive. Projected timing of construction being 2024.

The pre-application consultation is for an Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBLA). Site Plan Applications will follow later. The proposal is to rezone the lands to TD3 which permits 30 storeys. Each individual building will do their own Site Plan Control process with associated studies.

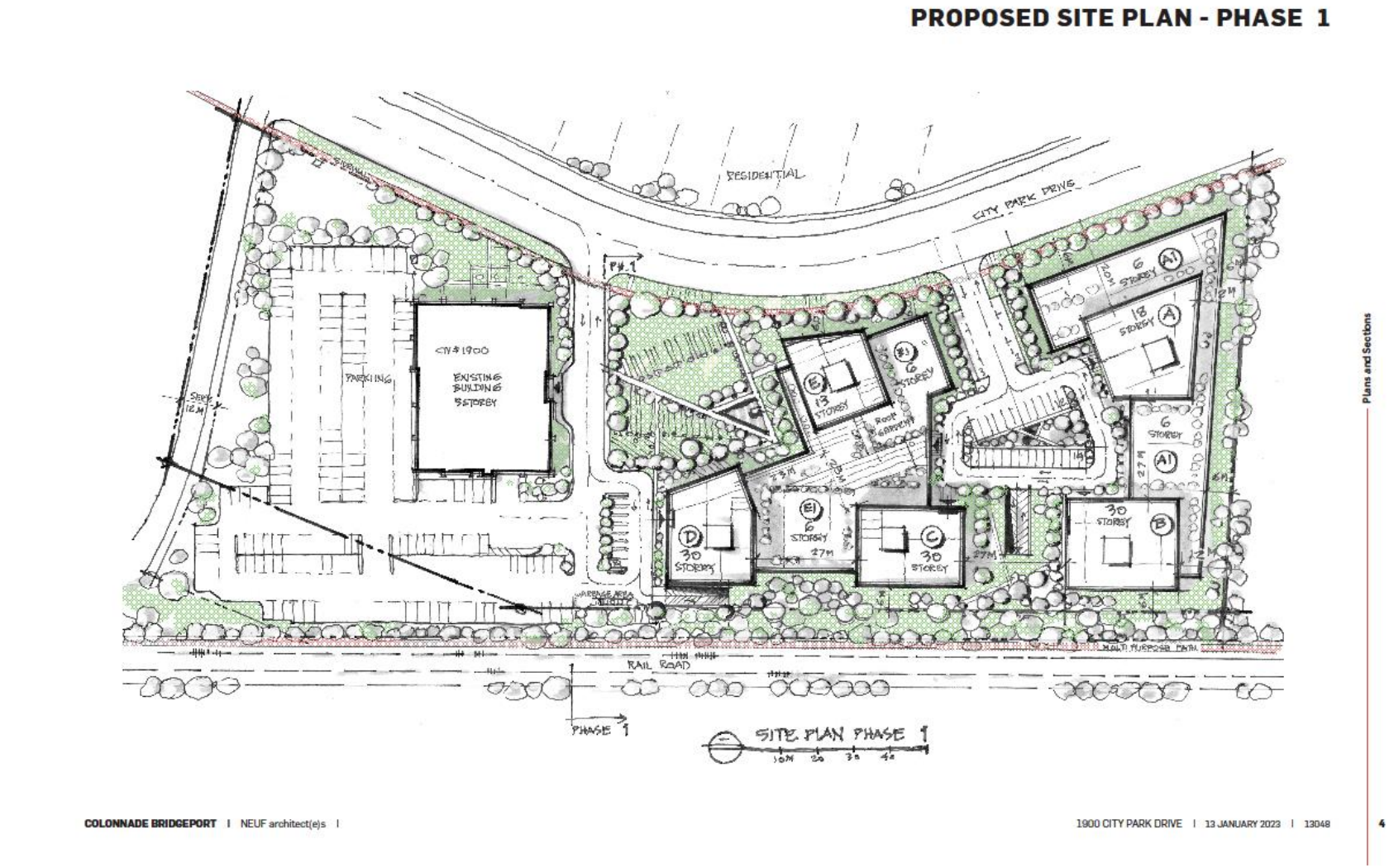


Figure 1: Concept Plan for 2000 City Park

City Surveyor

Bill Harper, City's Surveyor | Bill.Harper@ottawa.ca

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.

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.

Engineering

Kelsey Charie, Project Manager Infrastructure Approvals | kelsey.charie@ottawa.ca

Please note the following information regarding the engineering reports for the above noted site:

1. The Servicing Study Guidelines for Development Applications are available at the following address:

   https://ottawa.ca/en/city-hall/planning-and-development/how-develop-property/development-application-review-process-2/guide-preparing-studies-and-plans

2. Servicing and site works shall be in accordance with the following documents:

   - Ottawa Sewer Design Guidelines, Second Edition, (October 2012), including Technical Bulletins, ISDTB-2014-01, PIEDTB-2016-01, ISTB 2018-01, ISTB-2018-04, and ISTB-2019-02
   - Ottawa Design Guidelines – Water Distribution, First Edition, (July 2010), including Technical Bulletins ISD-2010-2, ISDTB-2014-02, ISTB-2018-02, and ISTB-2021-03
   - Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa (Revised 2008)
   - City of Ottawa Slope Stability Guidelines for Development Applications (Revised 2012)
   - Ottawa Standard Tender Documents (latest version)

- Ontario Provincial Standards for Roads & Public Works (2013)

3. Record drawings and utility plans are also available for purchase from the City (Contact the City's Information Centre by email at InformationCentre@ottawa.ca or by phone at (613) 580-2424 x 44455
4. The Stormwater Management Criteria for the subject site is to be based on the following:
    - The pre-development condition of the site including the pre-development runoff coefficient or a maximum equivalent value of 0.5, whichever is less.
    - Flows to the storm sewer in excess of the 5-year pre-development storm release rate, up to and including the 100-year storm event, must be detained on site.
    - Ensure no overland flow for all storms up to and including the 100-year event. Provide adequate emergency overflow conveyance off-site
5. Services:
    i. Provide existing servicing information and the proposed servicing information for the sanitary, water, and storm services.
    ii. Provide FUS method calculations for anticipated Fire Flow Demand
    iii. Provide calculations for anticipated post-development 100 year storm flows and the required release pre-development release rate that is to be met.
    iv. Provide storage volume calculations if required and discuss how onsite storage will be achieved
    v. Provide estimated sanitary flows to allow the City to confirm whether there are any downstream capacity constraints
    vi. Provide any quality control criteria for the proposed site as outlined by the RVCA and provide methodology to achieve quality control standards
6. Civil consultant must request boundary conditions from the City's assigned Project Manager. Water Boundary condition requests must include the location of the service and the expected loads required by the proposed development. Please provide the following information:
    i. Location of service(s)
    ii. Type of development and the amount of fire flow required (as per FUS, 2020).
    iii. Average daily demand: ___ l/s.

iv. Maximum daily demand: ___l/s.

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

vi. Hydrant location and spacing to meet City's Water Design guidelines.

vii. Water supply redundancy will be required for more than 50 m3/day water demand.

7. General Engineering Submission requirements:

    a. As per section 53 of the Professional Engineers Act, O. Reg 941/40, R.S.O. 1990, all documents prepared by engineers must be signed and dated on the seal.

    b. All required plans & reports are to be provided in *.pdf format (at application submission and for any, and all, re-submissions)

Forestry

Hayley Murray, Forester – PRED | hayley.murray@ottawa.ca

There are well established protected trees on this property. Please submit a Tree Conservation Report TCR that shows the footprint of the buildings with the proposed setbacks to understand the impacts of the Zoning By-law Amendment on tree retention. Include the current zoning setbacks and what is proposed.

Planning

Lucy Ramirez, Planner – Development Review | lucy.ramirez@ottawa.ca

Official Plan

Per the New Official Plan (2022) the subject property is designated Outer Urban Hub, (Schedule A and B3).

The New OP does have a policy to permit a high-rise where the parcel is of sufficient size to allow for a transition in built form massing. There is an existing stable residential neighbourhood across the street and any proposal will need to include a transition to this area.

Revised APPLICANT'S STUDY AND PLAN IDENTIFICATION LIST

Legend: **S** indicates that the study or plan is required with application submission.
A indicates that the study or plan may be required to satisfy a condition of approval/draft approval.

For information and guidance on preparing required studies and plans refer here:

S/A	ENGINEERING		S/A
	1. Site Servicing Plan	2. Site Servicing Study / Assessment of Adequacy of Public Services (with a conceptual site servicing figure)	S
	3. Grade Control and Drainage Plan	4. Geotechnical Study / Slope Stability Study	S
	5. Composite Utility Plan	6. Groundwater Impact Study	
	7. Servicing Options Report	8. Wellhead Protection Study	
S	9. Transportation Impact Assessment (TIA)	10.Erosion and Sediment Control Plan / Brief	
S	11.Storm water Management Report / Brief	12.Hydro geological and Terrain Analysis	
	13.Hydraulic Water main Analysis	14.Noise / Vibration Study	
	15.Roadway Modification Functional Design	16.Confederation Line Proximity Study	

S/A	PLANNING / DESIGN / SURVEY		S/A
	17.Draft Plan of Subdivision	18.Concept Plan Showing Layout of Parking Garage	S
	19.Draft Plan of Condominium	20.Planning Rationale	S
S	21.Conceptual Site Plan (required for design brief)	22.Minimum Distance Separation (MDS)	
	23.Concept Plan Showing Proposed Land Uses and Landscaping	24.Agrology and Soil Capability Study	
S	25.Concept Plan Showing Ultimate Use of Land	26.Cultural Heritage Impact Statement	
S	27.Conceptual Landscape Plan (required for design brief)	28.Archaeological Resource Assessment Requirements: **S** (site plan) **A** (subdivision, condo)	
S	29.Survey Plan	30.Shadow Analysis	S
S	31.Conceptual Architectural Building Elevation Drawings (required for design brief)	32.Design Brief (includes the Design Review Panel Submission Requirements)	S
S	33.Wind Analysis		

S/A	ENVIRONMENTAL		S/A
S	34.Phase 1 Environmental Site Assessment	35.Impact Assessment of Adjacent Waste Disposal/Former Landfill Site	
A	36.Phase 2 Environmental Site Assessment (depends on the outcome of Phase 1)	37.Assessment of Landform Features	
A	38.Record of Site Condition	39.Mineral Resource Impact Assessment	
S	40.Tree Conservation Report (high level)	41.Environmental Impact Statement / Impact Assessment of Endangered Species	
	42.Mine Hazard Study / Abandoned Pit or Quarry Study	43.Integrated Environmental Review (Draft, as part of Planning Rationale)	

S/A	ADDITIONAL REQUIREMENTS		S/A
S	44. Applicant's Public Consultation Strategy (may be provided as part of the Planning Rationale)	45.Site Lighting Plan	
A	46. Site Lighting Certification Letter	47.Street Level Visualization of the proposed development (.jpg or pdf. Format)	**S**

Meeting Date: Thursday, January 19, 2023, Application Type: *OPA and ZBLA*

File Lead (Assigned Planner): Lucy Ramirez Infrastructure Approvals Project Manager: Kelsey Charie

Site Address (Municipal Address):1900 and 2000 City Park Drive

It is important to note that the need for additional studies and plans may result during application review. If following the submission of your application, it is determined that material that is not identified in this checklist is required to achieve complete application status, in accordance with the Planning Act and Official Plan requirements, the Planning, Real Estate and Economic Development Department will notify you of outstanding material required within the required 30 day period. Mandatory pre-application consultation will not shorten the City's standard processing timelines, or guarantee that an application will be approved. It is intended to help educate and inform the applicant about submission requirements as well as municipal processes, policies, and key issues in advance of submitting a formal development application. This list is valid for one year following the meeting date. If the application is not submitted within this timeframe the applicant must again pre-consult with the Planning, Real Estate and Economic Development Department.

March 27, 2023

Novatech
Suite 200, 240 Michael Cowpland Drive
Ontario, ON K2M 1P6

Attention: James Ireland, Project Planner – Planning and Development

Subject: 1900-2000 City Park Drive
Clarification of Notes, Study and Plan Identification List

Contents

Clarification of the notes

Engineering

Initial Engineering Comment

4. The Stormwater Management Criteria for the subject site is to be based on the following:
    - The pre-development condition of the site including the pre-development runoff coefficient or a maximum equivalent value of 0.5, whichever is less.
    - Flows to the storm sewer in excess of the 5-year pre-development storm release rate, up to and including the 100-year storm event, must be detained on site.
    - Ensure no overland flow for all storms up to and including the 100-year event. Provide adequate emergency overflow conveyance off-site

Applicant's response

Engineering

In relation to note 4) Stormwater Management Criteria, the City requires post-development flows be controlled to the pre-development runoff coefficient, which in this case is 0.2. We should be controlling the post-development flows to an allowable runoff coefficient that the existing storm sewer system is sized (designed) for. Emergency overland flow details cannot be provided for rezoning as the plans are still conceptual and the design is still evolving. Details will be provided at the site plan stage when the grading plan will be prepared. The Stormwater management report will be provided as a part of the Adequacy of Public Services Report.

Engineering's Response

- I understand that per our notes the post-development runoff coefficient needs to be 0.2; however, you want a larger post-development coefficient. **What is the post-development coefficient you are seeking?**
- Regarding the emergency overland flow details, we do not want the details, it's something we want you to start thinking about now.

Consent Application

I've attached a copy of the Decision (D08-01-21/B-00378) dated February 11, 2022. I followed up with Davette Nyota, CofA Documents Approval Clerk at davette.nyota@ottawa.ca regarding the outstanding conditions. Conditions 1,2,3,4 and 6 are outstanding. The lapse date of the provisional consent decision is February 11, 2024. **Do you intend to finalize the consent?**

4. Moving forward, urban design recommends the following:
    a. Prepare a master site plan that includes both 1900 and 2000 City Park Drive include a phasing plan as indicated above.
    b. Confirm with Park Planning the size and the best location of the proposed park.
    c. Set the buildings (tower and podium) back from the NS MUP and animate the MUP. Consider grade related units with private patios and direct pedestrian access to the MUP.
    d. Create animated building frontages along City parks.
    e. Along City Park Drive, consider low-rise podium rather than the proposed 6-storey to foster a better relationship with the low-rise residential area to the north.
    f. Incorporate all parking ramps into building envelope. Given the density and vision for the site, it is important to consider a more urban typology with respect to site organization.
    g. Study the ensemble of towers as indicated above and consider varied heights along Queensway. Since the proposal intends to deviate away from the TOD vision, which envisions a concentric model of height distribution centred around the LRT station, the applicant has the responsibility to demonstrate

the merits of their alternative (to the TOD plan) vision in addition to illustrate that impacts of the height increase can be mitigated.

5. With respect to zoning, it is recommended that a detailed schedule be created. Consider the merits of holding provisions with conditions (of removal holding provisions) that tie to specific design principles and elements.

Applicant's Response

Urban Design

These comments are appreciated but are at a level of detail typical for a Site Plan application which we disagree are appropriate for this time. We can provide conceptual massing for discussion purposes but as we have noted, a concrete site plan cannot be provided at this stage of the design process. For the same reason, a detailed zoning schedule does not allow for multiple options or design flexibility as we work through design opportunities and options. We are happy to share any rationale that goes into the design decision making process.

City's response:

A master site plan still provides for flexibility; however, it helps to organize the overall site.

As noted in both the planning and urban design comments I want a schedule specific to a development proposal. You are proposing a 'two-stage zoning' to implement the recommendations of studies. I'm open to learning more about what you are proposing, but understand I want a schedule specific to a development proposal to implement the recommendations of the studies, a similar approach was taken for the Official Plan and Zoning By-law Amendments at 1178 Cummings Avenue and 1098 Ogilvie Road, which went to Council on July 15 2020.

Transportation

Initial Transportation Comment

3. The site is within the Blair Transit-Oriented Development (TOD) area. To help achieve target mode shares within TOD zones, we highly recommend developments to provide as many Transportation Demand Management (TDM) measures as possible and to provide only the minimum number of required parking. Please reach out to Pat McMahon or travelwise@ottawa.ca for recommendations.
4. Consider how each building will access the future Multi-Use Pathway (MUP) adjacent to the rail corridor as well as the 6m north-south parcel to the east. Timing for construction and implementation is currently unknown.

Applicant's response

Transportation

Comments 3) and 4) are at a level of detail usual for a Site Plan application. In relation to 3), a high-level review of potential TDM measures to be considered at Site Plan will be reviewed within the TIA. However, the specific TDM measures to be implemented in each phase will be confirmed as part of the TIA prepared for future Site Plan Control applications. In relation to 4), as this is a Zoning By-law Amendment application, where the conceptual development is subject to change, a detailed assessment of on-site pathways will not be completed as part of this TIA. A detailed assessment of on-site pathway connections between each building and the future MUP's will be conducted as part of the TIA prepared for future Site Plan Control applications.

City's response

The Transportation Demand Management (TDM) comment was intended to get you thinking about TDM, rather than requiring a fulsome and complete assessment now, which would be premature.

As noted in the planning comments, in the CDP there are future multi-use pathways proposed along the easterly side lot line and the rear lot.

Reference to the MUP was to get you to think about the layout and ensure that there is some space somewhere for a central connection as well as a connection to the north-south pathway.

Showing these MUPs on a master site plan, will ensure they are carried forward in the subsequent site plans.

It's understood that you cannot show the connection of buildings to the MUPs yet.

As I noted in the planning comments, <u>these proposed multi-use pathways provide support for the OPA and ZBLA, please include them in your concept plan.</u> You may want to consider building them as an in-kind contribution to draw down on the applicable Community Benefit Charge (CBC).

Figure 2: Capture of TOD Plan Figure 72: Blair Pedestrian Network with 1900 and 2000 City Park highlighted in red.

Parks

Initial Parks Comment

Parks & Facilities Planning (PFP) comments on the proposed concept:

- PFP is requesting land conveyance for parkland dedication.
- PFP is concerned about the location of the proposed park; the best location of the park would allow direct access from the proposed Multi Use Pathways in addition to the public Right-of-Way, along City Park Drive.
- PFP will request a surveyor's certificate to confirm parkland dedication required, prior to Zoning By-law amendment approval.

Applicant's response

Parks
As this is a ZBLA application it is not possible to confirm the number of units and therefore the parkland dedication. It is not possible to fulfil the request that PFP a surveyor's certificate to confirm parkland dedication be provided prior to Zoning By-law amendment approval. Note this is a residential only development.

City's Response

Thanks for confirming the development will only be residential, based on the numbers of towers you are proposing you're going to cap out at 10 percent of the land area. Because of the severance application, I know that together 1900 and 2000 City Park Drive is 2.638 hectares; therefore, the site plan should show a park that is 10 percent of this land area, 2,638 square metres. If the severance is finalized, then the required park would be slightly smaller.

Next Steps

Initial Comment

Next Steps

You may want to discuss the proposal with the Councillor and neighbours.

I recommend a follow up pre-application consultation once you have a concept plan for both 1900 and 2000 City Park. This will be voluntary if done before new processes are put in place regarding Bill 109, or it will be mandatory if done after new processes are put in place regarding Bill 109.

Applicant's Comment

Next Steps
An additional pre-application consultation before it becomes mandatory is not City policy.

City's Response

Applicants are encouraged to contact us for a follow-up meeting if the plan/concept are further refined. As I noted this is voluntarily until our new process is put in place to response to Bill 109.

Clarification on the Study and Plan Identification List

Initial list

APPLICANT'S STUDY AND PLAN IDENTIFICATION LIST

Legend: **S** indicates that the study or plan is required with application submission.
A indicates that the study or plan may be required to satisfy a condition of approval/draft approval.

For information and guidance on preparing required studies and plans refer here:

S/A	ENGINEERING		S/A
S	1. Site Servicing Plan (required for design brief to have a plan showing existing and proposed servicing)	2. Site Servicing Study / Assessment of Adequacy of Public Services	S
	3. Grade Control and Drainage Plan	4. Geotechnical Study / Slope Stability Study	S
	5. Composite Utility Plan	6. Groundwater Impact Study	
	7. Servicing Options Report	8. Wellhead Protection Study	
S	9. Transportation Impact Assessment (TIA)	10.Erosion and Sediment Control Plan / Brief	
S	11.Storm water Management Report / Brief	12.Hydro geological and Terrain Analysis	
	13.Hydraulic Water main Analysis	14.Noise / Vibration Study	
	15.Roadway Modification Functional Design	16.Confederation Line Proximity Study	

S/A	PLANNING / DESIGN / SURVEY		S/A
	17.Draft Plan of Subdivision	18.Plan Showing Layout of Parking Garage	S
	19.Draft Plan of Condominium	20.Planning Rationale including Design Statement	S
S	21.Site Plan (required for design brief)	22.Minimum Distance Separation (MDS)	
	23.Concept Plan Showing Proposed Land Uses and Landscaping	24.Agrology and Soil Capability Study	
S	25.Concept Plan Showing Ultimate Use of Land	26.Cultural Heritage Impact Statement	
S	27.Landscape Plan (required for design brief)	28.Archaeological Resource Assessment Requirements: **S** (site plan) **A** (subdivision, condo)	
S	29.Survey Plan	30.Shadow Analysis	S
S	31.Architectural Building Elevation Drawings (dimensioned) (required for design brief)	32.Design Brief (includes the Design Review Panel Submission Requirements)	S
S	33.Wind Analysis		

S/A	ENVIRONMENTAL		S/A
S	34.Phase 1 Environmental Site Assessment	35.Impact Assessment of Adjacent Waste Disposal/Former Landfill Site	
A	36.Phase 2 Environmental Site Assessment (depends on the outcome of Phase 1)	37.Assessment of Landform Features	
A	38.Record of Site Condition	39.Mineral Resource Impact Assessment	
S	40.Tree Conservation Report	41.Environmental Impact Statement / Impact Assessment of Endangered Species	
	42.Mine Hazard Study / Abandoned Pit or Quarry Study	43.Integrated Environmental Review (Draft, as part of Planning Rationale)	

S/A	ADDITIONAL REQUIREMENTS		S/A
S	44. Applicant's Public Consultation Strategy (may be provided as part of the Planning Rationale)	45.Site Lighting Plan	
A	46. Site Lighting Certification Letter	47.Street Level Visualization of the proposed development (.jpg or pdf. Format)	S

Meeting Date: Thursday, January 19, 2023, Application Type: *OPA and ZBLA*

File Lead (Assigned Planner): Lucy Ramirez Infrastructure Approvals Project Manager: Kelsey Charie

Site Address (Municipal Address):1900 and 2000 City Park Drive

It is important to note that the need for additional studies and plans may result during application review. If following the submission of your application, it is determined that material that is not identified in this checklist is required to achieve complete application status, in accordance with the Planning Act and Official Plan requirements, the Planning, Real Estate and Economic Development Department will notify you of outstanding material required within the required 30 day period. Mandatory pre-application consultation will not shorten the City's standard processing timelines, or guarantee that an application will be approved. It is intended to help educate and inform the applicant about submission requirements as well as municipal processes, policies, and key issues in advance of submitting a formal development application. This list is valid for one year following the meeting date. If the application is not submitted within this timeframe the applicant must again pre-consult with the Planning, Real Estate and Economic Development Department.

Applicant's response

Clarifications on the Study and Plan Identification List

The basis for us challenging the following submission requirements is that the list does not appear to have been tailored to a Zoning By-law Amendment (ZBLA) or Official Plan Amendment (OPA) application only. The consultation notes incorrectly reference "Attachment 1 is the applicant and Plan List for the Site Plan Application". Many of the requirements are specific to future Site Plan Approval applications and should not be requested at this point.

- Site Servicing Plan – This should not be required for OPA/rezoning. The detailed Site Servicing Plan will be provided at the site plan stage. At this stage we can provide conceptual site servicing figure for inclusion in Adequacy of Public Services Report.
- Design Statement (part of Planning Rationale) – We request clarification of what this is. The Planning Rationale will address policies in the Official Plan and Secondary Plan regarding design. A statement on the design will also form part of the Design Brief.
- Landscape Plan – This should not be required for OPA/rezoning. The detailed landscape plan will be provided at the site plan stage of each individual phase. The Concept Plan and Design Brief will address some aspects of landscape design.

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

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- Architectural Building Elevation Drawings – This should not be required for OPA/rezoning. The design of individual buildings will not be developed at this preliminary stage of the design process. As noted above, we will provide conceptual massing of building elevations but detailed elevations showing dimensions, materiality, etc. is not appropriate for an OPA/rezoning application. Conceptual building massing drawings will be included in the Design Brief.
- Plan Showing Layout of Parking Garage – the design of individual buildings will not be developed to this level of detail for the OPA/ZBLA application. Conceptual entrance locations to the parking garage will be considered as part of the Concept Plan.
- Tree Conservation Report – This is typically not requested at this time given that building footprints and locations are not yet solidified. We could provide a high-level index of any trees/species, but recommendations will not be provided until a detailed site plan is complete. Please advise if this is sufficient.
- Wind and Shadow Analysis – We acknowledge the benefit of having these however, without details of building heights and locations on the site, this exercise will be high-level to demonstrate an impact which should further be validated during the site plan process as the design evolves.
- Note that the plans being submitted (Concept Plan etc.) will be submitted electronically and will be at a scale that incorporates the whole site, as requested in the Urban Design comments. The scale will need to be larger than 1:500 to show the whole site. The City of Ottawa Development Application Guide to Preparing Studies and Plans lists Standard A1 size requirement only for (detailed) Site Servicing and Grade Control and Drainage Plans required or a Site Plan submission.

City's response

You are correct that there is typo in the notes, I did not update the text under the submission requirement header to read OPA and ZBLA. Rest assured I am aware you are not applying for a site plan application.

Submission Requirements

Attachment 1 is the Applicant Study and Plan List for the Site Plan Application.

Plans are to be standard A1 size (594 mm x 841 mm) or Arch D size (609.6 mm x 914.4 mm) sheets, dimensioned in metric and utilizing an appropriate Metric scale (1:200, 1:250, 1:300, 1:400 or 1:500).

All PDF submitted documents are to be unlocked and flattened.

Also, provide a 3D CAD file of the proposed massing.

The design brief requests additional plans and studies, I did not want you to miss these requirements, so I carried them over into Attachment 1. The plans required by the design brief are to be conceptual. I've provided you with a revised study and plan list and the plans that are highlighted in purple are to be conceptual.

- A conceptual site servicing figure in the Adequacy of Public Services Report is fine, please insert the conceptual site servicing into the design brief submitted.
- Most Applicants combine the Design Brief and the Planning Rationale, so they do not duplicate the information, so that is why I identified the requirement as a Planning Rationale with a Design Statement. However, if you want to submit a separate planning rationale and design brief, I'm fine with that.
- A conceptual landscape plan is all that is required
- Conceptual massing and building elevations are all that is required,
- Please provide entrances, as well as conceptual plans that show you are following the ZBL for the parking.
- A high-level index of trees/species is fine; however, it would be helpful to know if the trees are in good health.
- Please follow the TOR for these studies, these studies will help inform the ZBLA
- Regarding the plans, there are different options, plans are to be standard A1 size (594 mm x 841 mm) or Arch D size (609.6 mm x 914.4 mm) sheets, dimensioned in metric and utilizing an appropriate Metric scale (1:200, 1:250, 1:300, 1:400 or 1:500). Further, all PDF submitted documents are to be unlocked and flattened. Also, please provide a 3D CAD file of the proposed massing.

It is common to request conceptual site plans, landscape plans, elevations, as part of OPA and ZBLA application. TCR have also been requested as appropriate:

Miro Savic

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Wednesday, April 12, 2023 1:23 PM
To: Miro Savic
Cc: Lee Sheets; Baird, Natasha
Subject: RE: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hi Miro,

80% TSS removal please.

Regards,
Kelsey

From: Miro Savic <m.savic@novatech-eng.com>
Sent: April 12, 2023 10:38 AM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>; Baird, Natasha <Natasha.Baird@ottawa.ca>
Subject: RE: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hi Kelsey,

I'm following up on the stormwater quality control requirements for the proposed development.

I need this information for inclusion in the Adequacy of Public Services report for re-zoning as pre the City request at the pre-consultation meeting.

Thank you,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 265

From: Miro Savic
Sent: Wednesday, April 5, 2023 12:34 PM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: FW: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hi Kelsey,

Can you please provide comments on stormwater quality control requirements. See email from RVCA below.

Thank you,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 265

From: Eric Lalande <eric.lalande@rvca.ca>
Sent: Wednesday, April 5, 2023 11:22 AM
To: Miro Savic <m.savic@novatech-eng.com>
Subject: Re: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hi Miro,

I would like to direct you to the City of Ottawa Infrastructure group as they are now handling water quality comments as a result of changes through Bill 23.

Thank you,

Eric Lalande, MCIP, RPP
Planner, RVCA

Get Outlook for Android

From: Miro Savic <m.savic@novatech-eng.com>
Sent: Wednesday, April 5, 2023 11:14:03 AM
To: Eric Lalande <eric.lalande@rvca.ca>
Subject: FW: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hi Eric,
Please see email below as discuss.

Regards,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 265

From: Miro Savic
Sent: Wednesday, March 15, 2023 3:34 PM
To: 'Jamie Batchelor' <jamie.batchelor@rvca.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: 1900 & 2000 City Park Drive - RVCA Pre-Consultation

Hello Jamie,

We are working on a proposed multi-tower residential located at 1900 & 2000 City Park Drive. The proposed development will be phased and will consist of a total of eight (8) residential towers with podiums and underground parking. Attached is a conceptual site plan to better understand the proposed development.

The storm drainage from the site will be connected to the existing municipal storm sewers in City Pard Drive. Currently, we are preparing an Assessment of Adequacy of Public Services Report to support a re-zoning application. The detailed SWM design will be part of the Site Plan Control submission to the City following the re-zoning application.

Please review and confirm the stormwater quality control requirements for the proposed development project.

Regards,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 265

'

'

APPENDIX B

Site Plan

PRELIMINARY PROPOSED SITE PLAN

APPENDIX C

Sanitary Sewer Calculations

1900 & 2000 CITY PARK DRIVE
SANITARY FLOW

TOWERS A, B, C, D, and E

Number of Units		
Tower A	160	
Tower B	304	
Tower C	304	
Tower D	304	
Tower E	120	
Total Number of Units	1192	
Persons per Unit	1.8	
Total Population	2,146	
Average Daily Flow	280	L/c/day
Peak Factor (Harmon Formula)	2.85	
Peak Sanitary Flow	**19.81**	**L/s**
Site Area	1.55	ha
Infiltration Allowance	0.33	L/s/ha
Peak Extraneous Flows	**0.51**	**L/s**
Total Sanitary Flow	**20.32**	**L/s**

Miro Savic

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Tuesday, April 11, 2023 8:18 AM
To: Miro Savic
Cc: Lee Sheets
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Miro,

I have followed up with water resources twice with no response. I have no control over when they will get to your water boundary request.

For sewer capacity, asset management flagged some concerns but will review in further detail when the zoning application is submitted.

For your reference, Jeff is the senior engineer for the South Branch, would you like me to include Natasha who is the senior engineer for the East Branch on future emails?

Kelsey

From: Miro Savic <m.savic@novatech-eng.com>
Sent: April 10, 2023 11:09 AM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>; Shillington, Jeffrey <jeff.shillington@ottawa.ca>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Kelsey,

Following up on my voicemail, I really need to know when we can expect to receive boundary conditions and sanitary analysis information for 1900 & 2000 City Park Drive.
It's been three and a half weeks since we ordered boundary conditions, and we cannot advance Adequacy of Public Services report without this information.

Thank you,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 265

APPENDIX D

Water Demand and FUS Calculations, Watermain Boundary Conditions

1900 & 2000 CITY PARK
WATER ANALYSIS

DOMESTIC WATER DEMAND

Number of Units		
Building A	160	
Building B	304	
Building C	304	
Building D	304	
Building E	120	
Total Number of Units	1192	
Persons per Unit	1.8	
Total Population	2,146	
Average Day Demand per Person	280	L/c/day
Average Day Demand	**7.0**	**L/s**
Maximum Day Demand (2.5 x avg. day)	**17.4**	**L/s**
Peak Hour Demand (2.2 x max. day)	**38.2**	**L/s**

BOUNDAY CONDITIONS

Maximum HGL =	117.1	m
Minimum HGL =	110.2	m
Max Day + Fire Flow (133 l/S) =	112.2	m

PRESSURE TESTS

AVERAGE GROUND ELEVATION 74.5 m

HIGH PRESSURE TEST = MAX HGL - AVG GROUND ELEV x 1.42197 PSI/m < 80 PSI

HIGH PRESSURE = **61** PSI

LOW PRESSURE TEST = MIN HGL - AVG GROUND ELEV x 1.42197 PSI/m > 40 PSI

LOW PRESSURE = **51** PSI

MAX DAY + FIRE FLOW TEST = MAX DAY + FIRE - AVG GROUND ELEV x 1.42197 PSI/m > 20 PSI

MAX DAY + FIRE PRESSURE = **54** PSI

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 123006
Project Name: 1900 & 2000 City Park Drive
Date: 5/21/2025
Input By: MS
Reviewed By:
Drawing Reference:

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: Building A - 16 Storey Building with 5 Storey Podium
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Podium Level Footprint (m^2)	1095			
		Total Floors/Storeys (Podium)	5			
		Tower Footprint (m^2)	750			
		Total Floors/Storeys (Tower)	11			
		Protected Openings (1 hr)	Yes			
		A, Total Effective Floor Area (m^2)			**1,643**	
	F	**Base fire flow without reductions**				**7,000**
		$F = 220\ C\ (A)^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	-15%	**5,950**
		Limited combustible	Yes	-15%		
		Combustible		0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-2,380**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	No	-10%		
				Cumulative Sub-Total	**-40%**	
		Area of Sprinklered Coverage (m^2)	13725	100%		
				Cumulative Total	**-40%**	
5	**Exposure Surcharge per**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	>30m		0%	**1,488**
		East Side	>30m		0%	
		South Side	10.1 - 20 m		15%	
		West Side	20.1 - 30 m		10%	
				Cumulative Total	**25%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**5,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**83**
				or	USGPM	1,321

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 123006
Project Name: 1900 & 2000 City Park Drive
Date: 5/21/2025
Input By: MS
Reviewed By:
Drawing Reference:

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: Building B - 30 Storey Building with 6 Storey Podium
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Podium Level Footprint (m^2)	1050			
		Total Floors/Storeys (Podium)	6			
		Tower Footprint (m^2)	750			
		Total Floors/Storeys (Tower)	24			
		Protected Openings (1 hr)	Yes			
		A, Total Effective Floor Area (m^2)			**1,575**	
	F	**Base fire flow without reductions**				**7,000**
		$F = 220\ C\ (A)^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	-15%	**5,950**
		Limited combustible	Yes	-15%		
		Combustible		0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-2,380**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	No	-10%		
				Cumulative Sub-Total	**-40%**	
		Area of Sprinklered Coverage (m^2)	24300	100%		
				Cumulative Total	**-40%**	
5	**Exposure Surcharge per**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	20.1 - 30 m		10%	**1,190**
		East Side	>30m		0%	
		South Side	>30m		0%	
		West Side	20.1 - 30 m		10%	
				Cumulative Total	**20%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**5,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**83**
				or	USGPM	1,321

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 123006
Project Name: 1900 & 2000 City Park Drive
Date: 5/21/2025
Input By: MS
Reviewed By:
Drawing Reference:

Legend: Input by User
No Input Required
Reference: Fire Underwriter's Survey Guideline (2020)
Formula Method

Building Description: Building C - 30 Storey Buidlign with 6 Storey Podium
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Podium Level Footprint (m^2)	1050			
		Total Floors/Storeys (Podium)	6			
		Tower Footprint (m^2)	750			
		Total Floors/Storeys (Tower)	24			
		Protected Openings (1 hr)	Yes			
		A, Total Effective Floor Area (m^2)			**1,575**	
	F	**Base fire flow without reductions**				**7,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	-15%	**5,950**
		Limited combustible	Yes	-15%		
		Combustible		0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-2,380**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	No	-10%		
				Cumulative Sub-Total	**-40%**	
		Area of Sprinklered Coverage (m^2)	24300	100%		
				Cumulative Total	**-40%**	
5	**Exposure Surcharge per**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	20.1 - 30 m		10%	**1,785**
		East Side	20.1 - 30 m		10%	
		South Side	>30m		0%	
		West Side	20.1 - 30 m		10%	
				Cumulative Total	**30%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**5,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**83**
				or	USGPM	1,321

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 123006
Project Name: 1900 & 2000 City Park Drive
Date: 5/21/2025
Input By: MS
Reviewed By:
Drawing Reference:

Legend: Input by User
No Input Required
Reference: Fire Underwriter's Survey Guideline (2020)
Formula Method

Building Description: Building D - 30 Storey Building with 6 Storey Podium
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Podium Level Footprint (m^2)	1050			
		Total Floors/Storeys (Podium)	6			
		Tower Footprint (m^2)	750			
		Total Floors/Storeys (Tower)	24			
		Protected Openings (1 hr)	Yes			
		A, Total Effective Floor Area (m^2)			**1,575**	
	F	**Base fire flow without reductions**				**7,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	-15%	**5,950**
		Limited combustible	Yes	-15%		
		Combustible		0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-2,380**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	No	-10%		
				Cumulative Sub-Total	**-40%**	
		Area of Sprinklered Coverage (m^2)	24300	100%		
				Cumulative Total	**-40%**	
5	**Exposure Surcharge per**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	>30m		0%	**595**
		East Side	20.1 - 30 m		10%	
		South Side	>30m		0%	
		West Side	>30m		0%	
				Cumulative Total	**10%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**4,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**67**
				or	USGPM	1,057

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 123006
Project Name: 1900 & 2000 City Park Drive
Date: 5/21/2025
Input By: MS
Reviewed By:
Drawing Reference:

Legend: Input by User
No Input Required
Reference: Fire Underwriter's Survey Guideline (2020)
Formula Method

Building Description: Building E - 12 Storey Building with 5 Storey Podium
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Podium Level Footprint (m^2)	1085			
		Total Floors/Storeys (Podium)	5			
		Tower Footprint (m^2)	750			
		Total Floors/Storeys (Tower)	7			
		Protected Openings (1 hr)	Yes			
		A, Total Effective Floor Area (m^2)			**1,628**	
	F	**Base fire flow without reductions**				**7,000**
		$F = 220\ C\ (A)^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	-15%	**5,950**
		Limited combustible	Yes	-15%		
		Combustible		0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-2,380**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	No	-10%		
				Cumulative Sub-Total	**-40%**	
		Area of Sprinklered Coverage (m^2)	10675	100%		
				Cumulative Total	**-40%**	
5	**Exposure Surcharge per**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	>30m		0%	**1,488**
		East Side	10.1 - 20 m		15%	
		South Side	20.1 - 30 m		10%	
		West Side	>30m		0%	
				Cumulative Total	**25%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**5,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**83**
				or	USGPM	1,321

Miro Savic

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Thursday, June 12, 2025 10:43 AM
To: Miro Savic
Cc: Lee Sheets
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request
Attachments: 2000 City Park Drive May 2025.pdf

Hi again Miro,

I double checked with Water Resources just in case and they have updated the boundary conditions for this application, I am not sure what the reasoning was but hopefully that this helps. Here is their response below.

Regards,
Kelsey

Hi Kelsey,

Apologies for the discrepancy. Here's the updated results on the BC.

The following are boundary conditions, HGL, for hydraulic analysis at 2000 City Park Drive (zone 1E) assumed to be connected via two connections to the 305 mm watermain on City Park Drive (see attached PDF for location).

Both Connections:
Minimum HGL = 110.2 m
Maximum HGL = 117.1 m
Max Day + Fire Flow (83.0 L/s) = 112.2 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.
"The IWSD has recently updated their water modelling software. Any significant difference between previously received BC results and newly received BC results could be attributed to this update."

From: Charie, Kelsey
Sent: June 05, 2025 12:52 PM
To: Miro Savic <m.savic@novatech-eng.com>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Miro,

If you read their disclaimer it states *"The IWSD has recently updated their water modelling software. Any significant difference between previously received BC results and newly received BC results could be attributed to this update."* I imagine that would account for the discrepancy.

Kelsey

From: Miro Savic <m.savic@novatech-eng.com>
Sent: June 05, 2025 12:00 PM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Kelsey,

Can you please ask the water resources to double check Minimum HGL=102.2m.

The minimum HGL (102.2m) is 7.1m lower than the minimum HGL provided to us in 2023 (109.3m).

The new peak hour demand (38.2 L/s) is less than the 2023 peak hour demand (44.92L/s for Phase 1and 27.7 L/s for Phase 2). Therefore, the minimum HGL should not be that much lower than the 2023 HGL unless something has changed in the watermain distribution system in the meantime.

Please see string of email below for both, the new and old boundary conditions.

Thank you,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 205

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Wednesday, June 4, 2025 4:00 PM

To: Miro Savic <m.savic@novatech-eng.com>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Miro,

Here are the results from Water Services. Let me know if theres anything else.

Kelsey Charie
Project Manager | Gestionnaire de projet
Development Review - East Branch | Direction de l'examen des projets d'aménagement, Est
Planning, Development and Building Services Department (PDBS) | Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)
110 Laurier Avenue West | 110 avenue Laurier ouest
City of Ottawa | Ville d'Ottawa

The following are boundary conditions, HGL, for hydraulic analysis at 2000 City Park Drive (zone 1E) assumed to be connected via two connections to the 305 mm watermain on City Park Drive (see attached PDF for location).

Both Connections:
Minimum HGL = 102.2 m
Maximum HGL = 117.1 m
Max Day + Fire Flow (83.0 L/s) = 112.2 m

These are for current conditions and are based on computer model simulation.

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.
"The IWSD has recently updated their water modelling software. Any significant difference between previously received BC results and newly received BC results could be attributed to this update."

From: Miro Savic <m.savic@novatech-eng.com>
Sent: May 27, 2025 3:08 PM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Kelsey,

Have you heard back from the water resources?

Thanks,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 205

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Wednesday, May 21, 2025 11:18 AM
To: Miro Savic <m.savic@novatech-eng.com>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hi Miro,

I sent them off last week, hopefully I will hear back this week. I will follow up to see if they have a timeline for us.

Kelsey Charie
Project Manager | Gestionnaire de projet
Development Review - East Branch | Direction de l'examen des projets d'aménagement, Est
Planning, Development and Building Services Department (PDBS) | Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)
110 Laurier Avenue West | 110 avenue Laurier ouest
City of Ottawa | Ville d'Ottawa

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Miro Savic <m.savic@novatech-eng.com>
Sent: May 21, 2025 10:15 AM
To: Charie, Kelsey <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hello Kelsey,

I'm following up on the boundary conditions. When can we expect to receive them?

Thank you,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 205

From: Miro Savic
Sent: Monday, May 12, 2025 11:09 AM
To: 'Charie, Kelsey' <kelsey.charie@ottawa.ca>
Cc: Lee Sheets <l.sheets@novatech-eng.com>
Subject: RE: 1900 & 2000 City Park Drive - Watermain Boundary Conditions Request

Hello Kelsey,

I'm writing to request updated boundary conditions for new development proposal at 1900-2000 City Park Drive. The proposed development includes 5 residential towers at 2000 City Park Drive. No new development is proposed at 1900 City Park Drive where the existing office building is located.

The preliminary domestic and fire water demands for the proposed development are provided below. The domestic water demands are calculated based on a total of 1192 units. The FUS fire flows are calculated based on non-combustible building construction, with protected vertical openings, and fully sprinklered building. The domestic water demands, and the FUS fire flow calculations are attached for reference.

Average Day Demand = 7.0 L/s
Maximum Day Demand = 17.4 L/s
Peak Hour Demand = 38.2 L/s
Maximum Fire Flow Demand (Towers A and E) = 83 L/s (5,000 L/min)

Since the daily water demand will exceed 50m^3, two connections to the existing 305mm diameter watermain in City Park Drive will be required. Refer to the attached sketch for approximate watermain connection locations.

Regards,

Miroslav Savic, P.Eng., Senior Project Manager | Land Development Engineering
NOVATECH
Engineers, Planners & Landscape Architects
240 Michael Cowpland Drive, Suite 200, Ottawa, ON, K2M 1P6 | Tel: 613.254.9643 x 205

From: Charie, Kelsey <kelsey.charie@ottawa.ca>
Sent: Tuesday, April 11, 2023 9:10 AM
To: Miro Savic <m.savic@novatech-eng.com>

APPENDIX E

Preliminary SWM Calculations

Proposed Residential Development
1900 & 2000 City Park Drive

Pre - Development Site Flows										
Description	*Area (ha)*	*$A_{impervious}$ (ha) C=0.9*	*$A_{pervious}$ (ha) C=0.2*	*Agravel (ha) C=0.6*	Weighted C_{w5}	Weighted C_{w100}	1:5 Year Flow (L/s)	1:100 Year Flow (L/s)	Allowable C_{value}	Allowable Flow 5 year (L/s)
2000 City Park Drive	1.551	0.089	1.398	0.064	0.26	0.28	115.3	217.7	0.26	115.3

T_c = 10mins

Post - Development Site Flows												
Area	Description	*Area (ha)*	*A_{imp} (ha) C=0.9*	*A_{perv} (ha) C=0.2*	C_5	C_{100}	Uncontrolled Flow (L/s)		Controlled Flow (L/s)		Storage Required (m^3)	
							5 year	100 year	5 year	100 year	5 year	100 year
A-1	2000 City Park Drive	1.551	0.751	0.836	0.54	0.62	244.2	476.6	115.3	115.3	77.3	245.8

1900 & 2000 City Park Drive
Novatech Project No. 123006
REQUIRED STORAGE - 1:5 YEAR EVENT
AREA A-1 2000 City Park Drive

OTTAWA IDF CURVE

Area =	1.551	ha	Qallow =	115.3	L/s
C =	0.54		Vol(max) =	77.3	m^3

Time (min)	Intensity (mm/hr)	Q (L/s)	Qnet (L/s)	Vol (m^3)
5	141.18	330.90	215.60	64.68
10	104.19	244.21	128.91	77.35
15	83.56	195.84	80.54	72.49
20	70.25	164.66	49.36	59.23
25	60.90	142.73	27.43	41.14
30	53.93	126.40	11.10	19.97
35	48.52	113.72	-1.58	-3.33
40	44.18	103.56	-11.74	-28.18
45	40.63	95.23	-20.07	-54.20
50	37.65	88.25	-27.05	-81.14
55	35.12	82.32	-32.98	-108.82
60	32.94	77.21	-38.09	-137.11
65	31.04	72.76	-42.54	-165.90
70	29.37	68.84	-46.46	-195.12
75	27.89	65.37	-49.93	-224.71
80	26.56	62.26	-53.04	-254.61
85	25.37	59.46	-55.84	-284.79
90	24.29	56.93	-58.37	-315.21

1900 & 2000 City Park Drive
Novatech Project No. 123006
REQUIRED STORAGE - 1:100 YEAR EVENT
AREA A-1 2000 City Park Drive

OTTAWA IDF CURVE

Area =	1.551	ha	Qallow =	115.3	L/s
C =	0.62		Vol(max) =	245.8	m^3

Time (min)	Intensity (mm/hr)	Q (L/s)	Qnet (L/s)	Vol (m^3)
5	242.70	647.73	532.43	159.73
10	178.56	476.54	361.24	216.74
15	142.89	381.36	266.06	239.45
20	119.95	320.12	204.82	245.79
25	103.85	277.15	161.85	242.77
30	91.87	245.18	129.88	233.78
35	82.58	220.39	105.09	220.68
40	75.15	200.55	85.25	204.59
45	69.05	184.28	68.98	186.25
50	63.95	170.68	55.38	166.14
55	59.62	159.12	43.82	144.62
60	55.89	149.17	33.87	121.94
65	52.65	140.50	25.20	98.29
70	49.79	132.88	17.58	73.83
75	47.26	126.12	10.82	48.67
80	44.99	120.07	4.77	22.90
85	42.95	114.64	-0.66	-3.39
90	41.11	109.72	-5.58	-30.15