IVANHOÉ CAMBRIDGE INC.

# LOT-B RESIDENTIAL DEVELOPMENT, 100 BAYSHORE DR. OTTAWA, ON

## SITE SERVICING REPORT

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## SITE SERVICING REPORT

IVANHOÉ CAMBRIDGE INC.

FOR SITE PLAN APPROVAL

PROJECT NO.: 211-02810-00
DATE: APRIL 2021

WSP
2611 QUEENSVIEW DRIVE, SUITE 300
OTTAWA, ON, CANADA, K2B 8K2

WSP.COM

Ivanhoé Cambridge Inc.
95 Wellington St. W., #300
Toronto, ON  M5J 2R2

**Attention: Jean-François Lavallée**

Dear Sir:

**Subject:** 100 Bayshore Drive, Ottawa, ON – Site Servicing and Stormwater Management Report

Please find attached our site servicing report issued for site plan approval application.

Yours sincerely,

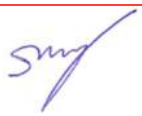
Stephen McCaughey, P.Eng.
Project Engineer

WSP ref.: 211-02810-00

2611 QUEENSVIEW DRIVE, SUITE 300
OTTAWA, ON, CANADA, K2B 8K2

wsp.com

# QUALITY MANAGEMENT

| ISSUE/REVISION | FIRST ISSUE | REVISION 1 | REVISION 2 | REVISION 3 |
|---|---|---|---|---|
| Remarks | Issued for Site Plan Approval Application | | | |
| Date | 2021-04-28 | | | |
| Prepared by | Stephen McCaughey, P.Eng. | | | |
| Signature |  | | | |
| Checked by | James Johnston, P.Eng. | | | |
| Signature |  | | | |
| Authorised by | | | | |
| Signature | | | | |
| Project number | 211-02810-00 | | | |
| Report number | | | | |
| File reference | | | | |

# SIGNATURES

PREPARED BY


Stephen McCaughey, P.Eng.
Project Engineer

REVIEWED BY

James Johnston, P.Eng.
Senior Project Engineer

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# 1 INTRODUCTION

## 1.1 EXECUTIVE SUMMARY

WSP was retained by Invanhoé Cambridge to provide servicing, grading and stormwater management design services in support of the site plan approval for the proposed residential development located at 100 Bayshore Dr. Lot B, in the City of Ottawa. The proposed work consists of two residential high-rise towers connected by an above-ground parking podium. The development will likely be constructed in two phases: West Tower first then East Tower. This report will provide sufficient detail to demonstrate that the proposed development can be supported by the existing municipal infrastructure services (watermain, sanitary and storm sewers) and that the servicing design conforms to the applicable standards and guidelines. The report will also include measures to be taken during the construction to minimize erosion and sedimentation. A separate report (100 Bayshore Dr. – Stormwater Management Report) is provided detailing the stormwater management approach and addressing the quantity control and quality measures in accordance with the applicable guidelines.

Currently, the site is an open grassed area with a small array of trees. The southeast corner of the lot has an existing pedestrian bridge between the Bayshore Shopping Centre and the Bayshore Transit Station. The total property area is 6,743 $m^2$ in size. The site is bounded by undeveloped land to the west, the transit station to the south, Woodridge Crescent to the north, and transit/shopping centre access road to the east.

The subject site is a single property with easements for Hydro along the west and north edges (refer to Appendix A for the Topographical Survey Plan). There is also an allowance for a multi-use pathway (MUP) that will run along the south and east edges of the site. The site generally slopes away from the centre outwards to the four sides. The site is not currently serviced for water or sanitary, though there are some minor storm sewers on site which will be demolished.

The City of Ottawa requires that the design of a drainage and stormwater management system in this development must be prepared in accordance with the following documents:

- Sewer Design Guidelines, City of Ottawa, October 2012;
- Stormwater Management Planning and Design Manual, Ministry of the Environment, March 2003; and
- Stormwater Management Facility Design Guidelines, City of Ottawa, April 2012

This report was prepared utilizing servicing design criteria obtained from the City of Ottawa and outlines the design for water, sanitary wastewater and stormwater facilities.

The format of this report matches that of the servicing study checklist found in Section 4 of the City of Ottawa's Servicing Study Guidelines for Development Applications, November 2009.

The following municipal services are available within Woodridge Cres. adjacent to the development as recorded from the following as-built drawings received from the City:

Woodridge Cres.

- 203 mm PVC watermain, 250 mm concrete sanitary sewer and 675 mm concrete stormwater sewer.

It is proposed that an on-site stormwater management system will be provided to collect and attenuate flow rates leaving the site. Refer to stormwater management report for details.

## 1.2 LOCATION MAP AND PLAN

The site at 100 Bayshore Dr. is shown in the centre of Figure 1-1 below as presented in the GeoOttawa website. The parcels are still shown separately, but it is our understanding that they have been merged as a single parcel.


**Figure 1-1 Site Location**

The proposed development will consist of two high-rise residential towers with a shared three storey parking podium (and one below grade parking). The building will have a gross floor area of approximately 50,000 m$^2$. See Appendix A for the architectural site plan. The project will be a phased development: the west tower will be constructed first then the east tower.

## 1.3 HIGHER LEVEL STUDIES

The review for servicing has been undertaken in conformance with, and utilizing information from, the following documents:

- Ottawa Sewer Design Guidelines, Second Edition, Document SDG002, October 2012, City of Ottawa including all amendments issued as part of Technical Bulletins.

- Ottawa Design Guidelines – Water Distribution, July 2010 (WDG001), including all amendments issued as part of Technical Bulletins.

- Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment and Climate Change, March 2003 (SMPDM).

- Design Guidelines for Drinking-Water Systems, Ontario Ministry of the Environment and Climate Change, 2008 (GDWS).

- Fire Underwriters Survey, Water Supply for Public Fire Protection (FUS), 1999.

## 1.4 AVAILABLE EXISTING AND PROPOSED INFRASTRUCTURE

As described above, all municipal mains (sanitary, storm and watermain) are available and located along Woodridge Crescent. Valved water servicing will be provided as well as sanitary servicing with monitoring hole at or near the property line. Quantity and quality control is required to restrict the stormwater discharge leaving the site, thus the on-site storm runoff will be captured, detention storage provided, flow release restricted, treated for quality control requirements, and finally directed towards the existing storm sewer on Woodridge Crescent.

## 1.5 GEOTECHNICAL STUDY

Golder provided a draft geotechnical investigation report of the subject property dated September 2020. Based on the report, groundwater was measured between 2.7-5.6 m below grade. The recommendations of the report have been taken into account for this design development.

# 2 WATER DISTRIBUTION

## 2.1 SYSTEM CONSTRAINTS AND BOUNDARY CONDITIONS

Boundary conditions have been provided by the City of Ottawa at the existing connection along the Woodridge Cres. 203mm watermain (Zone 1W).

**Table 2-1: Boundary Conditions (City of Ottawa)**

| Scenario | Woodridge Cres. Connection |
|---|---|
| Average Day (MAX HGL) | 115.2m |
| Peak Hour (MIN HGL) | 106.3m |
| Max Day + Fire Flow | 82.5m |

## 2.2 CONFIRMATION OF ADEQUATE DOMESTIC SUPPLY AND PRESSURE

Water demands are based on Table 4.2 of the Ottawa Design Guidelines – Water Distribution for these residential demands based on the number of apartment units. For purpose of verification of supply, the full buildout (both towers) have been assumed. A water demand calculation sheet is included in Appendix B, and the total water demands are summarized as follows:

| | West Tower | East Tower | **Total** |
|---|---|---|---|
| Average Day | 1.35 L/s | 1.52 L/s | **2.86 L/s** |
| Maximum Day | 3.38 L/s | 3.77 L/s | **7.15 L/s** |
| Peak Hour | 7.44 L/s | 8.28 L/s | **15.72 L/s** |

Since the average day demand is greater than 50,000 L/d (0.58 L/s), twin 150mm services will be provided from Woodridge Cres. to the building, as shown in the site servicing drawing in Appendix D.

The 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 140 kPa (20 psi) during a fire flow event.

Maximum Pressure — Maximum pressure at any point the distribution system 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). Pressure reduction controls may be required for buildings where it is not possible/feasible to maintain the system pressure below 552 kPa.

The site has been analyzed as summarized below and in Table 2-2 to ensure all the City of Ottawa minimum criteria for water pressures are met for the two conditions (maximum day + fire flow and peak hour). The analysis was carried out using

EPANET, hydraulic and water quality analysis based on the boundary conditions provided by the City of Ottawa. The detailed EPANET output results are also included in the Appendix B.

With respect to a max day + fire flow of 140.48 L/s, the model indicated that the pressure drop in the pipe was acceptable and within the City of Ottawa's minimum pressure requirements. Section 2.3 following details the fire flow estimation.

With respect to a peak hour demand of 15.72 L/s, the model indicated that the pressure drop in the pipe was also acceptable and within the City of Ottawa's minimum pressure requirements.

Refer to Appendix B for the detailed water distribution analysis output.

**Table 2-2: Summary of Water Pressure from EPANET results**

| Scenario | Pressure at Building Connection | |
|---|---|---|
| | (psi) | (kPa) |
| Max Day + Fire Flow | 21 | 145 |
| Peak Hour (MIN HGL) | 60 | 414 |
| Average Day (Max HGL) | 73 | 502 |

## 2.3 CONFIRMATION OF ADEQUATE FIRE FLOW PROTECTION

The fire flow rate has been calculated using the Fire Underwriters Survey (FUS) method. The method takes into account the type of building construction, the building occupancy, the use of sprinklers and the exposures to adjacent structures. For fire resistive construction with a full sprinkler system only the first four largest floors are taken into account, leading to the calculated fire flow demand of 8,000 L/min (133 L/s). A copy of the FUS calculations are included in Appendix B.

The maximum fire demand of 8,000 L/min can be delivered through the proposed twin 150mm services. Further, there is one Class AA fire hydrant within 75m of the building and two Class AA fire hydrants with 150m of the building along the same side of Woodridge Cres. capable of providing total 13,248 L/min per City of Ottawa Technical Bulletin ISTB-2018-02. The nearest hydrant will be replaced and slightly relocated to be within 45m of the building fire department connections.

The boundary condition for Maximum Day and Fire Flow results in a pressure of 145 kPa at the building. In the guidelines, a minimum residual pressure of 140 kPa must be maintained in the distribution system for a fire flow and maximum day event; therefore, the fire flow requirement is met.

# 3 WASTEWATER DISPOSAL

## 3.1 DESIGN CRITERIA

In accordance with the City of Ottawa's Sewer Design Guidelines, the following design criteria have been utilized in order to estimate wastewater flows generated by the subject site and verify existing capacity;

- Average sanitary flow for residential use 280 L/c/d
- Gross area Residential use 0.6
- Infiltration & Foundation Allowance (Total) 0.33 L/ha/s

## 3.2 CALCULATIONS FOR SANITARY DEMAND

The criteria to determine anticipated peak flow based on site used as described in Ottawa Sewer Design Guidelines Appendix 4-A are as follows, refer to appendix C for detailed calculation. Since the building size and lot zoning is not changing, from a capacity verification standpoint there isn't a difference considered for current demand estimate to post-refit demand estimate. Detailed calculations are provided in Appendix C.

| | West Tower | East Tower | **Total** |
|---|---|---|---|
| Average Day | 1.35 L/s | 1.51 L/s | **2.86 L/s** |
| Peak | 4.61 L/s | 5.11 L/s | **2.86 L/s** |
| Extraneous Day | 0.10 L/s | 0.10 L/s | **0.20 L/s** |
| Total | 4.71 L/s | 5.21 L/s | **9.92 L/s** |

## 3.3 VERIFICATION OF AVAILABLE CAPACITY IN EXISTING SEWER

The sanitary demand will be serviced by a 150mm sewer with a minimum slope of 1% to the 250mm sewer on Woodridge Crescent, on a proposed maintenance hole installed on the existing sewer. A Sanitary Sewer Design Sheet is provided in Appendix C confirming capacity and minimum scouring velocity is achieved. Further, per communication with the City provided in Appendix F, the existing downstream sewer has sufficient capacity for the estimated peak flow.

# 4 SITE STORM SERVICING

## 4.1 EXISTING CONDITION

The subject site is located on the south side of Woodridge Crescent, west of the Bayshore Shopping Centre and north of the Bayshore Transit Station, currently undeveloped with grass, shrub and tree growth. The site contains some storm infrastructure (pipes, maintenance holes, catch basins) that will be removed/abandoned as part of the development. The storm sewer entering the site at the southwest is abandoned as part of the Phase 2 LRT Expansion. Most runoff from the subject site is ultimately directed to 675 mm diameter trunk storm sewer, which runs from east to west along Woodridge Cres.

## 4.2 DRAINAGE DRAWINGS

Site drawings are included in Appendix D including servicing, grading, drainage area, and erosion and sediment control.

## 4.3 WATER QUANTITY CONTROL OBJECTIVE

Refer to the Stormwater Management Report for the water quantity objective for the site.

## 4.4 WATER QUALITY CONTROL OBJECTIVE

Refer to the Stormwater Management Report for the water quality objective for the site.

## 4.5 PROPOSED MINOR SYSTEM

The development will be serviced by 375 mm storm service connection with a proposed maintenance hole on the existing 675 mm storm sewer on Woodridge Crescent. Runoff from the new development area of the site will be collected by a network of surface inlets and storm sewers. Prior to the site oil grit separator, a flow restrictor will be placed in a maintenance hole to restrict post-development flows to the allowable rate. An underground storage cistern will be installed in the building footprint where flows exceeding the allowable site discharge rate will backflow into the cistern, as well drainage from the building roofs will be directed directly into the cistern. The cistern will be complete with sump pumps to discharge at fixed rates back into the drainage system. The sewer design sheet for the site storm system is provided in Appendix E.

## 4.6 PROPOSED MAJOR SYSTEM

The major overland flow routes lead out to Woodridge Crescent, with the overflow elevations at the driveway entrances to the ROW at minimum 300mm below the building entrances (66.50m). Additionally, the spillover point is less than 300mm from the catch basin elevation so there will be no ponding greater than 300mm even in cases of catch basin blockage. The storm sewers are sized such that no ponding will occur during the 2-year and even 100-year storm, with capacity exceedances backflowing into the cistern. The storm sewer design sheets are provided in Appendix E.

# 5 SEDIMENT AND EROSION CONTROL

## 5.1 GENERAL

Prior to topsoil stripping, earthworks or underground construction, erosion and sediment controls will be implemented and will be maintained throughout construction. Silt fences will be installed around the perimeter of the site and will be cleaned and maintained throughout construction. Silt fences will remain in place until the working areas have been stabilized or re-vegetated. Catch basins and manholes will have filter fabric installed under the grate during construction to protect from silt entering the storm sewer system. A mud mat will be installed at the construction access to reduce risk of mud tracking onto adjacent roads.

Erosion and sediment controls must be in place during construction. Recommendations to the contractor will be included in the erosion and sediment control plan C05 in Appendix D and are summarized below:

During all construction activities, erosion and sedimentation shall be controlled by the following techniques:

Prior to start of construction:

- Install silt fence along the perimeter of the property line.
- Install filter fabric or silt sack filters in all the catchbasins and manholes that capture runoff from the construction area.

During construction:

- Minimize the extent of disturbed areas and the duration of exposure and impacts to existing grading.
- Perimeter vegetation to remain in place until permanent storm water management is in place otherwise, immediately install silt fence when the existing site is disturbed at the perimeter.
- Protect disturbed areas from overland flow by providing temporary swales to the satisfaction of the field engineer. Tie-in temporary swale to existing catchbasins as required.
- Provide temporary cover such as seeding or mulching if disturbed area will not be rehabilitated within 30 days.
- Inspect silt fences, filter fabric filters and catch basin sumps weekly and within 24 hours after a storm event. Clean and repair when necessary.
- Drawing to be reviewed and revised as required during construction.
- Erosion control fencing to be also installed around the base of all stockpiles.
- Do not locate topsoil piles and excavation material closer than 2.5m from any paved surface, or one which is to be paved before the pile is removed. All topsoil piles are to be seeded if they are to remain on site long enough for seeds to grow (longer than 30 days).
- Control dust blown off-site by seeding topsoil piles and other areas temporarily (provide watering as required and to the satisfaction of the engineer).
- No alternate methods of erosion protection shall be permitted unless approved by the field engineer.
- City roadway and sidewalk to be cleaned of all sediment from vehicular tracking as required.
- Provide gravel entrance (mud mat) wherever equipment leaves the site to provide mud tracking onto paved surfaces.

- During wet conditions, tires of all vehicles/equipment leaving the site are to be scrapped.
- Any mud/material tracked onto the road shall be removed immediately by hand or rubber tire loader.
- Take all necessary steps to prevent building material, construction debris or waste being spilled or tracked onto abutting properties or public streets during construction and proceed immediately to clean up any areas so affected.
- All erosion control structure to remain in place until all disturbed ground surfaces have been stabilized either by paving or restoration of vegetative ground cover.
- During the course of construction, if the engineer believes that additional prevention methods are required to control erosion and sedimentation, the contractor will install additional silt fences or other methods as required to the satisfaction of the engineer.
- 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.

# 6 APPROVAL AND PERMIT REQUIREMENTS

## 6.1 GENERAL

The proposed development is subject to City of Ottawa site plan approval and criteria from the Rideau Valley Conservation Authority.

No other permits or approvals are anticipated to be required from the Ontario Ministry of the Environment, Conservation and Parks (MECP), Ontario Ministry of Transportation, National Capital Commission, Parks Canada, Public Works and Government Services Canada, or any other provincial or federal regulatory agency except those noted above.

# 7 CONCLUSION CHECKLIST

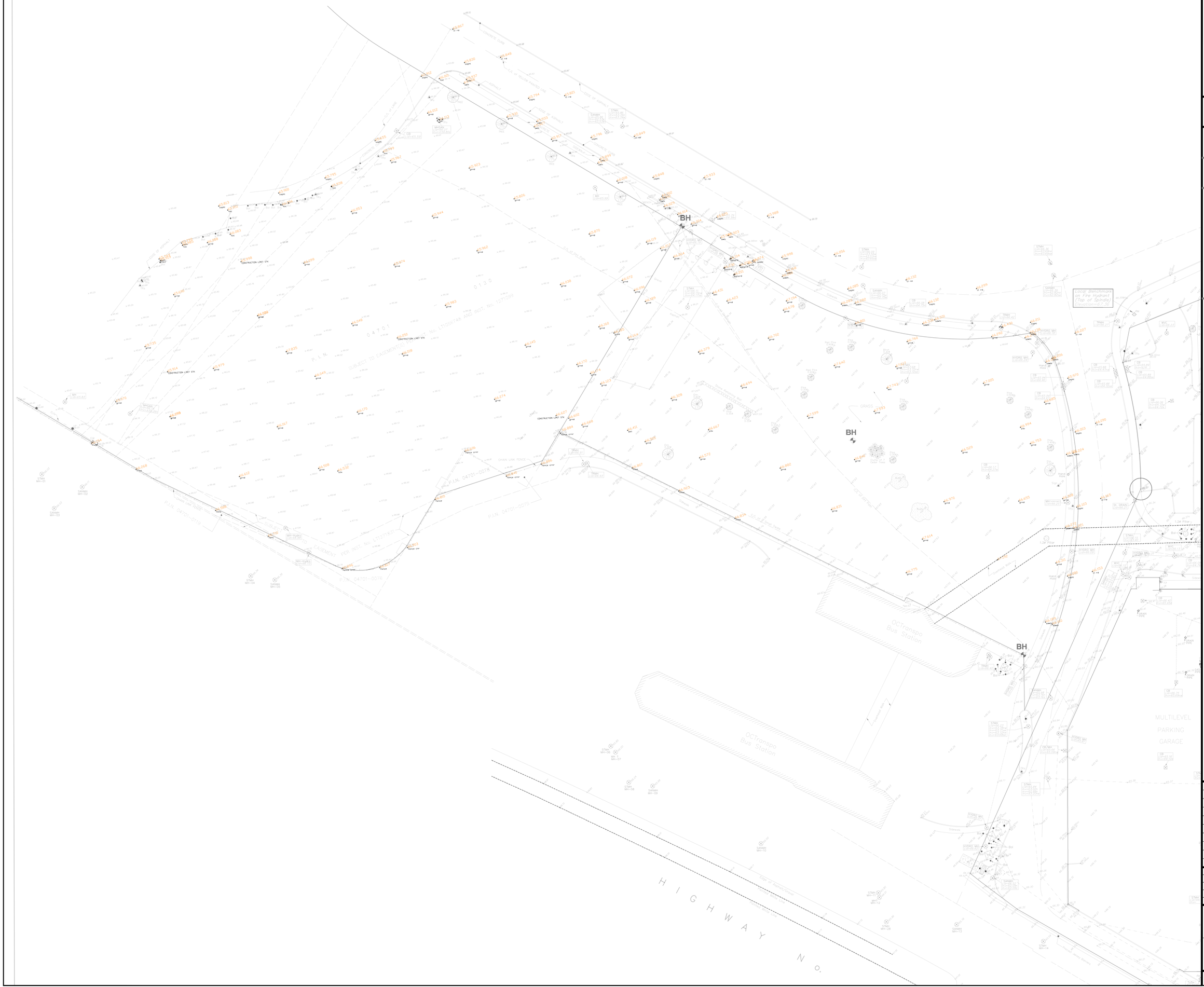
## 7.1 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the proposed development can meet all provided servicing constraints and associated requirements. It is recommended that this report be submitted to the City of Ottawa in support of the application for site plan approval.

## 7.2 COMMENTS RECEIVED FROM REVIEW AGENCIES

Minutes from a pre-consultation meeting held with the City of Ottawa are provided in Appendix F.

# A TOPOGRAPHICAL SURVEY & ARCHITECTURAL PLAN





**CONSTRUCTION LEADERS**
OTTAWA DISTRICT
49 Auriga Drive
Nepean, Ontario, K2E 8A1
Phone: 613-225-6130
Fax: 613-225-6176

Site Office: -

Phone: -
Fax: -




CONSULTANTS:
–
–
–

OWNERS:
–
–
–

| REV | DATE | BY | DESCRIPTION |
|---|---|---|---|
| | | | |

| | |
|---|---|
| SCALE: | NTS |
| DATE: | FEB 26th 2021 |
| DRAWN BY: | CNK |
| CHECKED BY: | CNK |
| PCLPROJECT: | PCL PROJECT NO# |

100 BAYSHORE

TOPO

SKT-TOPO-BS | -

*METRIC*
DISTANCES AND ELEVATIONS SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

# TOPOGRAPHIC PLAN OF SURVEY OF PART OF BLOCK 'A' REGISTERED PLAN 465465 GEOGRAPHIC TOWNSHIP OF NEPEAN CITY OF OTTAWA

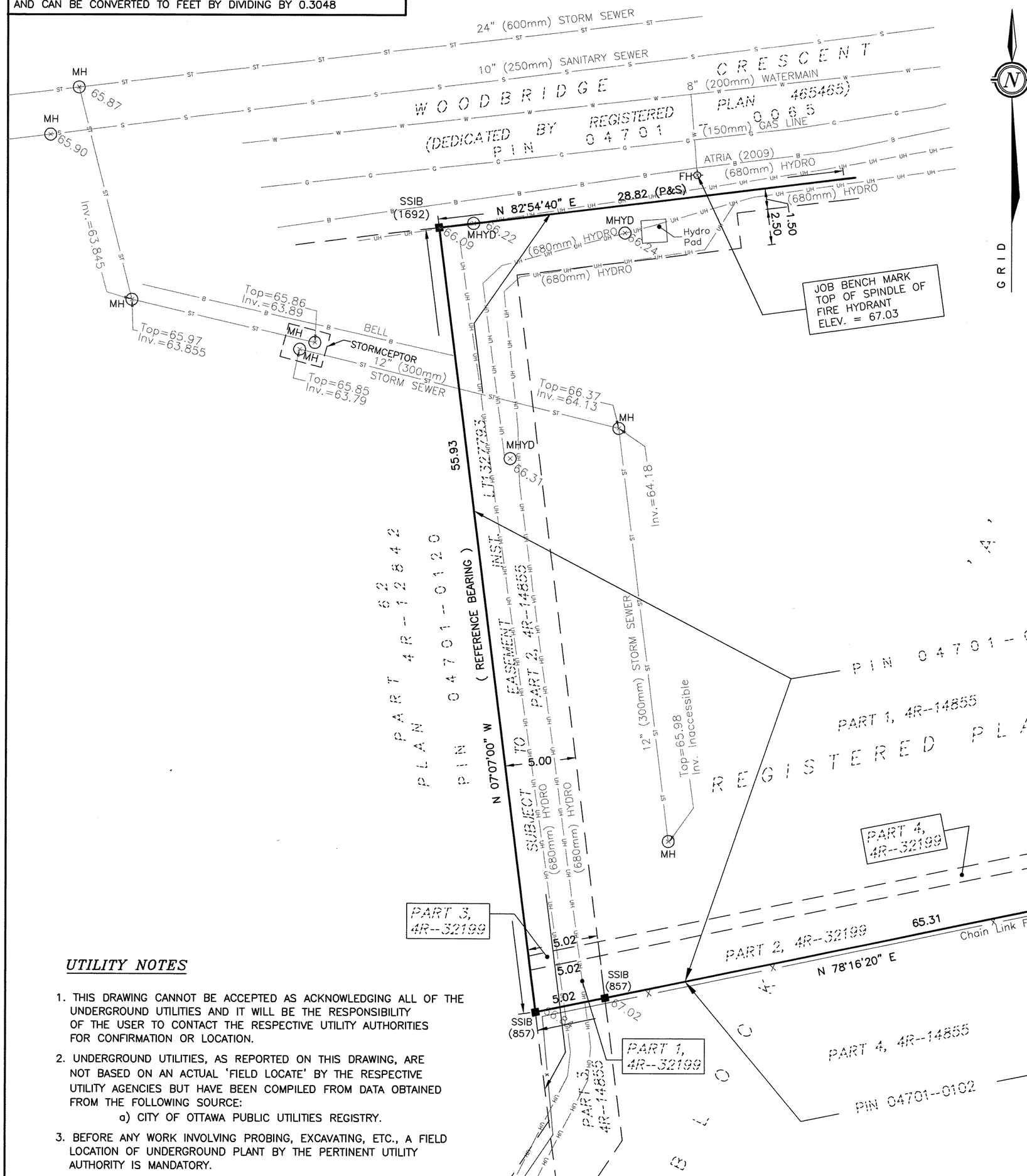
SCALE 1 : 250

0 5 10 20 25 metres


*FAIRHALL, MOFFATT & WOODLAND LIMITED*
ONTARIO LAND SURVEYORS


## *LEGEND*

- ■ – SURVEY MONUMENT FOUND
- SSIB – SHORT STANDARD IRON BAR
- (P) – PLAN 4R–32199
- (S) – SET
- (857) – FAIRHALL, MOFFATT & WOODLAND LIMITED, O.L.S.
- (1692) – FARLEY, SMITH & DENIS SURVEYING LTD., (REF. JOB 365–14)
- PIN – PROPERTY IDENTIFIER NUMBER
- INV. – INVERT
- ○ MH – MANHOLE
- ○ MHYD – HYDRO MANHOLE
- —S— – SANITARY SEWER
- —ST— – STORM SEWER
- —W— – WATERMAIN
- —G— – GAS LINE
- —B— – BELL / ATRIA (2009)
- —UH— – HYDRO




## *UTILITY NOTES*

1. THIS DRAWING CANNOT BE ACCEPTED AS ACKNOWLEDGING ALL OF THE UNDERGROUND UTILITIES AND IT WILL BE THE RESPONSIBILITY OF THE USER TO CONTACT THE RESPECTIVE UTILITY AUTHORITIES FOR CONFIRMATION OR LOCATION.
2. UNDERGROUND UTILITIES, AS REPORTED ON THIS DRAWING, ARE NOT BASED ON AN ACTUAL 'FIELD LOCATE' BY THE RESPECTIVE UTILITY AGENCIES BUT HAVE BEEN COMPILED FROM DATA OBTAINED FROM THE FOLLOWING SOURCE:
   a) CITY OF OTTAWA PUBLIC UTILITIES REGISTRY.
3. BEFORE ANY WORK INVOLVING PROBING, EXCAVATING, ETC., A FIELD LOCATION OF UNDERGROUND PLANT BY THE PERTINENT UTILITY AUTHORITY IS MANDATORY.

## *ELEVATION NOTES*

1. ELEVATIONS SHOWN HEREON ARE REFERRED TO GEODETIC DATUM (CGVD28).
2. ELEVATIONS FOR MANHOLE COVERS AND CATCH BASINS HAVE TO BE INDEPENDENTLY CONFIRMED BEFORE THEY CAN BE ACCEPTED FOR FINAL DESIGN OR CONSTRUCTION PURPOSES.
3. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THIS DRAWING.

## *NOTES*

1. BEARINGS ARE GRID DERIVED FROM THE WESTERLY LIMIT OF PART 2, PLAN 4R–14855 SHOWN HAVING A BEARING OF N 07°07'00"W AND ARE REFERRED TO THE CENTRAL MERIDIAN, 76°30'W LONGITUDE MTM ZONE 9, NAD83 ORIGINAL.
2. DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR 0.999931.

## *SURVEYOR'S CERTIFICATE*

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON NOVEMBER 26, 2019.

2019/11/28
DATE

JOHN H. GUTRI
ONTARIO LAND SURVEYOR




Fairhall Moffatt & Woodland
LIMITED
ONTARIO LAND SURVEYORS
OTTAWA
*Surveying and Land Information Services*
100–600 TERRY FOX DRIVE, KANATA, ONTARIO K2L 4B6
TEL: (613) 591–2580 FAX: (613) 591–1495
www.fmw.on.co


JOB No. Z 3 6 6 0 0

E358983, N5023165

REFERENCE No. 9(a) – 465465

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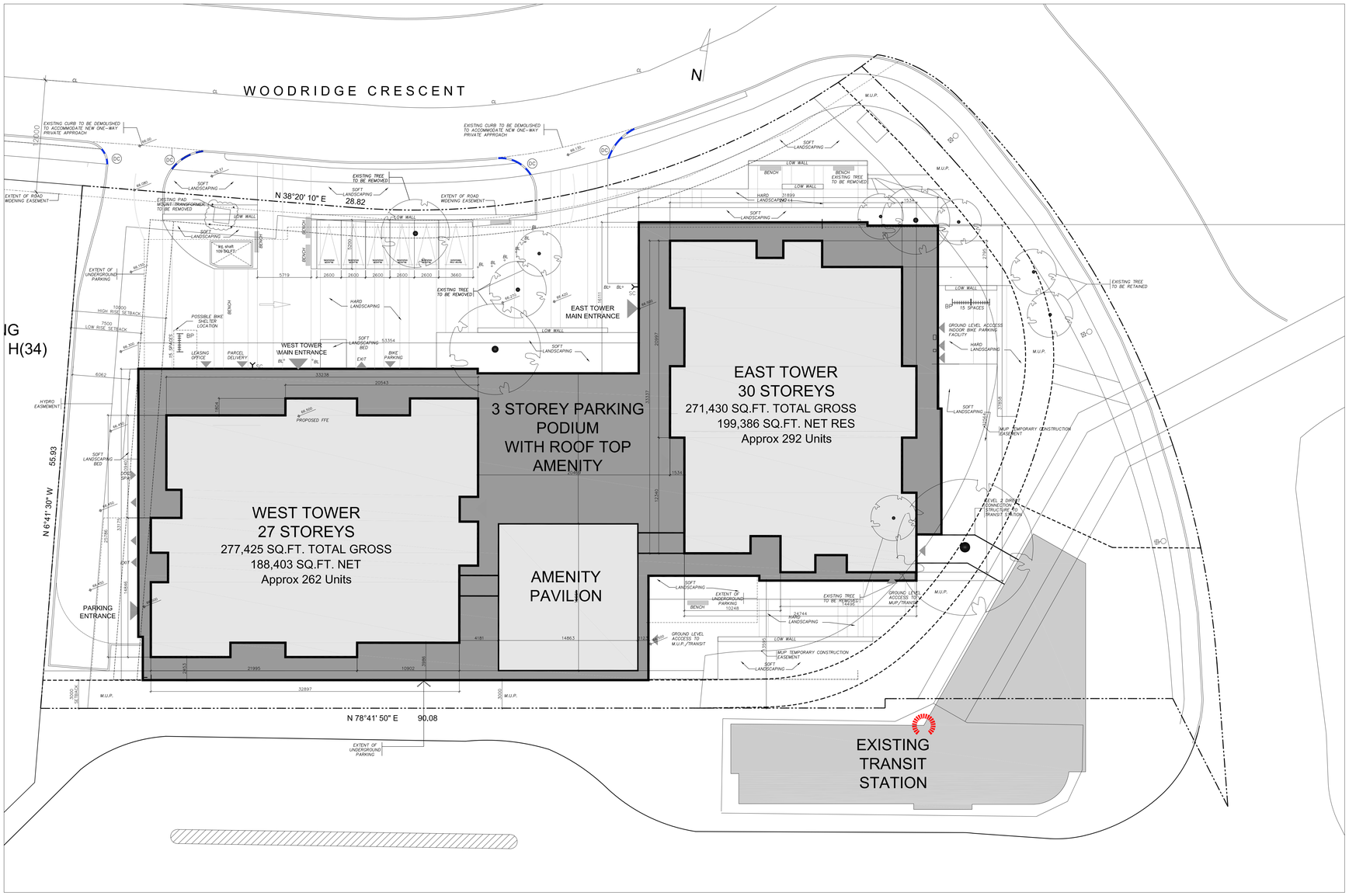
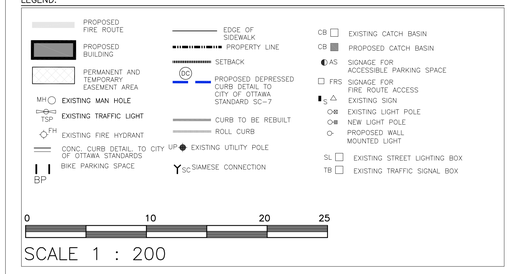



PROPOSED SITE PLAN

LOCATION PLAN

LEGEND:

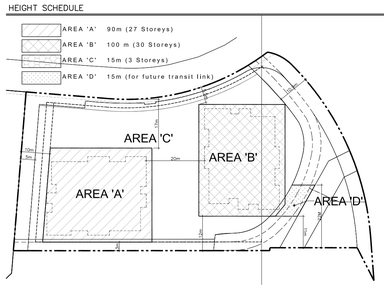



ZONING NOTES:

CURRENT ZONING: **GMP [199] H(34)**
PROPOSED ZONING: **TBD**

| TOTAL DEVELOPMENT STATS | PROPOSED |
|---|---|
| LOT OF AREA | 6,743 m² |
| LOT WIDTH | 127 m IRREGULAR |
| LOT DEPTH | 56 m IRREGULAR |
| | |
| SETBACK ALONG WOODRIDGE | 4.2 m |
| SETBACK ALONG SOUTH SIDE | 3 m |
| SIDEYARD SETBACK – WEST SIDE | 8 m |
| CORNER SIDEYARD SETBACK – EAST SIDE | 11 m |
| | |
| MAXIMUM HEIGHT | 100 m |
| MAX NUMBER OF STOREYS | 30 |
| TOTAL BUILDING AREA | 2,938 m² |
| | |
| TOTAL UNITS | 554 UNITS |
| TOTAL PARKING SPACES (INTERIOR + SURFACE PARKING) | 257 SPACES |
| TOTAL TOTAL RES. PARKING SPACES (0.36 /UNIT) | 201 SPACES |
| TOTAL TOTAL VISITOR PARKING SPACES (0.1/UNIT) | 56 SPACES |
| TOTAL BICYCLE PARKING SPACES (0.5/UNIT) | 262 SPACES |
| | |

HEIGHT SCHEDULE




ZONING NOTES:

| WEST PHASE – DEVELOPMENT STATS | PROPOSED |
|---|---|
| NUMBER OF STOREYS | 27 |
| TOTAL UNITS | 262 |
| SETBACK ALONG WOODRIDGE | 17.3 m |
| SETBACK ALONG SOUTH SIDE | 1.2 m |
| SIDEYARD SETBACK – WEST SIDE | 8 m |
| SIDEYARD SETBACK ABOVE PODIUM – WEST SIDE | 10 m |
| | |
| MAXIMUM HEIGHT | 90 m |
| NUMBER OF STOREYS | 27 |
| TOTAL GROSS FLOOR AREA (city def.) | 17,608 m² |
| TYP. FLOOR GROSS FLOOR AREA (city def.) | 725 m² |
| | |
| | |

WEST PHASE – PARKING REQUIREMENTS

1. PARKING REQUIREMENTS

| LAND USE | PROVIDED VEHICLE PARKING |
|---|---|
| APARTMENT | 99 RESIDENTIAL PARKING SPACES PROVIDED FOR 262 UNITS (0.37/UNIT) * LOCATED IN UNDERGROUND PARKING GARAGE AND PARKING PODIUM |

2. REQUIRED VISITOR PARKING

| LAND USE | PROVIDED VISITOR PARKING |
|---|---|
| APARTMENT | 27 VISITOR PARKING SPACES PROVIDED FOR 262 UNITS * LOCATED IN PARKING GARAGE |
| TOTAL PARKING PROVIDED FOR PHASE 1 | 126 TOTAL PARKING PARKING SPACES 126 INTERIOR |

3. BICYCLE PARKING
3.1 REQUIRED BICYCLE PARKING SPACES
RESIDENTIAL (0.5 SPACE/UNIT – 119 SPACES REQUIRED)
3.2 PROVIDED BICYCLE PARKING 157
P1 level 25 spaces
Ground 92 spaces + 15 exterior spaces
Level 2 25 spaces

4. AMENITY SPACE REQUIREMENTS
REQUIRED AMENITY SPACE 6 m² REQUIRED PER UNIT
262 UNITS X 6 SQ.M. = 1572 SQ.M. TOTAL AMENITY REQUIRED
REQUIRED AMENITY SPACE TO BE COMMON – 786 SQ.M.
PROVIDED COMMON AMENITY SPACE – 786 SQ.M.

| EAST PHASE – DEVELOPMENT STATS | PROPOSED |
|---|---|
| NUMBER OF STOREYS | 30 |
| TOTAL UNITS | 292 |
| SETBACK ALONG WOODRIDGE | 4.2 m |
| SETBACK ALONG SOUTH SIDE | VARIES m |
| SIDEYARD SETBACK | N/A m |
| CORNER SIDEYARD SETBACK – EAST SIDE | 11 m |
| | |
| MAXIMUM HEIGHT | 100 m |
| NUMBER OF STOREYS | 30 |
| TOTAL GROSS FLOOR AREA (city def.) | 18,090 m² |
| TYP. FLOOR GROSS FLOOR AREA (city def.) | 682 m² |
| | |
| | |

EAST PHASE – PARKING REQUIREMENTS

1. REQUIRED PARKING

| LAND USE | PROVIDED VEHICLE PARKING |
|---|---|
| APARTMENT | 101 RESIDENTIAL PARKING SPACES PROVIDED FOR 292 UNITS (0.34/UNIT) * LOCATED IN UNDERGROUND PARKING GARAGE AND PARKING PODIUM |

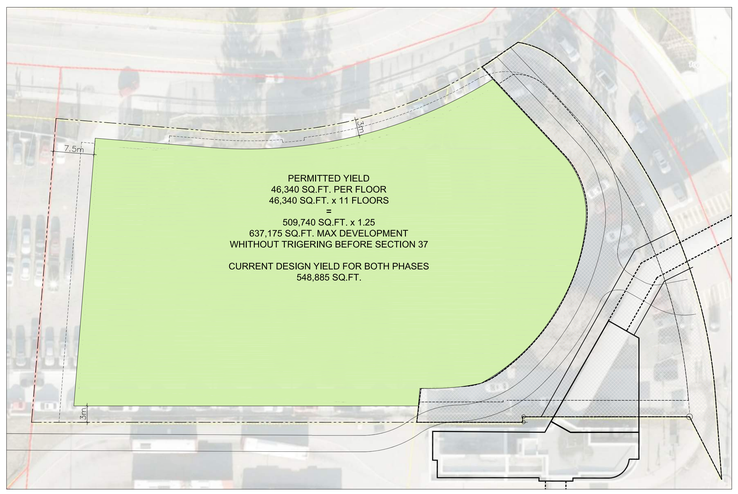
2. REQUIRED VISITOR PARKING

| LAND USE | PROVIDED VISITOR PARKING |
|---|---|
| APARTMENT | 30 VISITOR PARKING SPACES PROVIDED FOR 266 UNITS * LOCATED IN PARKING GARAGE AND @ GRADE |
| TOTAL PARKING PROVIDED FOR PHASE 2 | 131 TOTAL PARKING PARKING SPACES 125 INTERIOR 6 SURFACE |

3. BICYCLE PARKING
3.1 REQUIRED BICYCLE PARKING SPACES
RESIDENTIAL (0.5 SPACE/UNIT – 133 SPACES REQUIRED)
3.2 PROVIDED BICYCLE PARKING 135
P1 level 41 spaces
Ground 79 spaces + 15 exterior spaces

4. AMENITY SPACE REQUIREMENTS
REQUIRED AMENITY SPACE 6 m² REQUIRED PER UNIT
292 UNITS X 6 SQ.M. = 1752 SQ.M. TOTAL AMENITY REQUIRED
REQUIRED AMENITY SPACE TO BE COMMON – 876 SQ.M.
PROVIDED COMMON AMENITY SPACE – 876 SQ.M.

DIAGRAM OF PERMITTED ZONNING ENVELOPE BASED ON CURRENT ZONNING N.T.S.




C:\Users\BJH\Desktop\KingSett300.jpg

C:\Users\BJH\Desktop\Ivanhoe_cambridge_2.jpg

PROJECT TEAM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| no. | date | revision |
|---|---|---|
| 5 | 21.04.30 | ISSUED FOR S.P.A. |
| 4 | 20.07.24 | RE-ISSUED FOR REZONING |
| 3 | 20.06.04 | RE-ISSUED FOR REZONING |
| 2 | 20.03.30 | RE-ISSUED FOR REZONING |
| 1 | 19.02.20 | ISSUED FOR REZONING |

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.




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HOBIN ARCHITECTURE


PROJECT/LOCATION:
100 BAYSHORE LOT "B"
WOODRIGDE CRESENT

DRAWING TITLE:
SITE PLAN

| DRAWN BY: | DATE: | SCALE: |
|---|---|---|
| PB | 19.12.20 | 1:200 |

PROJECT: 1837

DRAWING NO.: A1.00

REVISION NO.:

None
Notes

# B WATER DEMAND

# WATER DISTRIBUTION - PROPOSED DOMESTIC DEMANDS

| Demand Type | | Amount | Units |
|---|---|---|---|
| **Average Day Demand** | | | |
| Residential | = | 280 | L/c/d |
| Light Industrial | = | 35000 | L/gross ha/d |
| Heavy Industrial | = | 55000 | L/gross ha/d |
| Shopping Centres | = | 2500 | L/(1000m2/d) |
| Hospitals | = | 900 | L/(bed/d) |
| Schools | = | 70 | L/(Students/d) |
| Trailer Parks no Hook-Ups | = | 340 | L/(space/d) |
| Trailer Parks with Hook-Ups | = | 800 | L/(space/d) |
| Campgrounds | = | 225 | L/(campsite/d) |
| Mobile Home Parks | = | 1000 | L/(Space/d) |
| Motels | = | 150 | L/(bed-space/d) |
| Hotels | = | 225 | L/(bed-space/d) |
| Tourist Commercial | = | 28000 | L/gross ha/d |
| Other Commercial | = | 28000 | L/gross ha/d |

| **Maximum Daily Demand:** | | | | |
|---|---|---|---|---|
| Residential | = | 2.5 x | average day | L/c/d |
| Industrial | = | 1.5 x | average day | L/gross ha/d |
| Commercial | = | 1.5 x | average day | L/gross ha/d |
| Institutional | = | 1.5 x | average day | L/gross ha/d |

| **Maximum Hour Demand:** | | | | |
|---|---|---|---|---|
| Residential | = | 2.2 x | maximum day | L/c/d |
| Industrial | = | 1.8 x | maximum day | L/gross ha/d |
| Commercial | = | 1.8 x | maximum day | L/gross ha/d |
| Institutional | = | 1.8 x | maximum day | L/gross ha/d |

| **Unit Type** | **Person / Unit** |
|---|---|
| Single Family | 3.4 |
| Semi-detached | 2.7 |
| Duplex | 2.3 |
| Townhouse (row) | 2.7 |
| **Apartments:** | |
| Bachelor | 1.4 |
| 1 Bedroom | 1.4 |
| 2 Bedroom | 2.1 |
| 3 Bedroom | 3.1 |
| Average Apt. | 1.8 |

| Population Calculator | East Tower | West Tower |
|---|---|---|
| Single Family | | |
| Semi-detached | | |
| Duplex | | |
| Townhouse (row) | | |
| Bachelor | | |
| 1 Bedroom | 212 | 190 |
| 2 Bedroom | 80 | 72 |
| 3 Bedroom | | |
| Avergage Apt. | | |
| Total Population | **465** | **417** |

| | East Tower | | | West Tower | | | Combined Demand |
|---|---|---|---|---|---|---|---|
| Demand Type = | Residential | | | Residential | | | |
| Average Day Demand = | 280 | L/c/d | | 280 | L/c/d | | |
| **Population** = | 465 | | | 417 | | | |
| = | 280 x | 465 | | 280 x | 417 | | |
| = | 130,144 | L/day | | 116,816 | L/day | | |
| **Average Daily Flow** = | **1.51** | **L/s** | | **1.35** | **L/s** | | 2.86 |
| Daily Demand Type = | Residential | | | Residential | | | |
| Max. Daily Factor = | 2.5 | L/c/d | | 2.5 | L/c/d | | |
| = | 2.5 x | Average Daily Flow | | 2.5 x | Average Daily Flow | | |
| = | 2.5 x | 130,144 | | 2.5 x | 116,816 | | |
| = | 325,360 | L/day | | 292,040 | L/day | | |
| **Maximum Daily Demand** = | **3.77** | **L/s** | | **3.38** | **L/s** | | 7.15 |
| Hour Demand Type = | Residential | | | Residential | | | |
| Max. Hour Factor = | 2.2 | L/c/d | | 2.2 | L/c/d | | |
| = | 2.2 x | Maximum Daily Demand | | 2.2 x | Maximum Daily Demand | | |
| = | 2.2 x | 325,360 | | 2.2 x | 292,040 | | |
| = | 715,792 | L/day | | 642,488 | L/day | | |
| **Maximum Hour Demand** = | **8.28** | **L/s** | | **7.44** | **L/s** | | 15.72 |

# WATER DISTRIBUTION - PROPOSED FIRE FLOW DEMANDS

**F = 220 C √ A**

| **Type of Construction Coefficient:** | | Comments |
|---|---|---|
| Wood Frame | 1.5 | (all structurally combustible) |
| Ordinary | 1.0 | (brick, masonry wall, combustible floor and interior) |
| Non-Combustible | 0.8 | (unprotected metal structural component, masonry or metal walls) |
| Fire Resistive | 0.6 | (fully protected frame, floors and roof) |

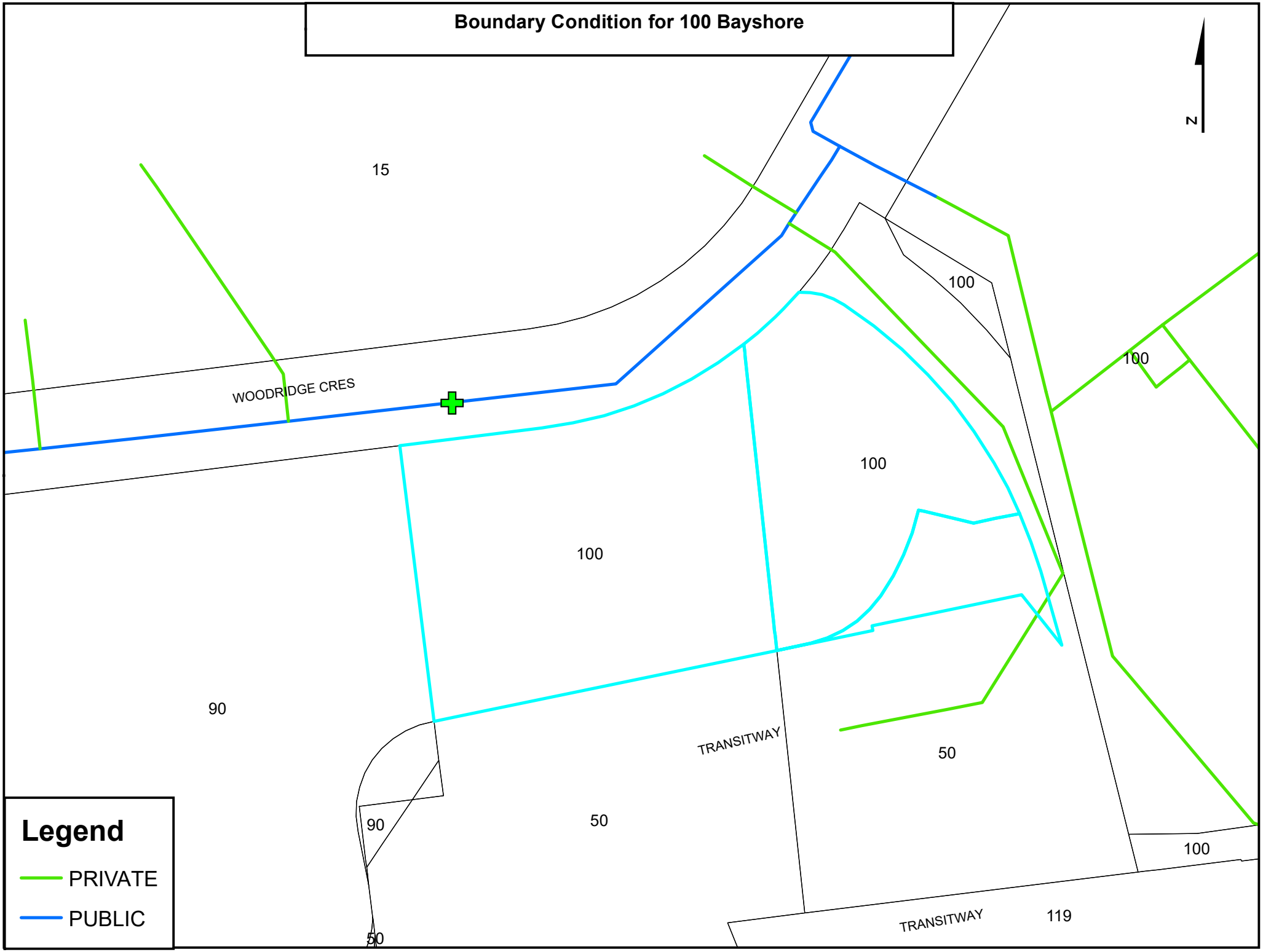
| **Combustibility:** | | |
|---|---|---|
| Non-Combustible | -25% | |
| Limited Combustible | -15% | |
| Combustible | 0% | |
| Free Burning | 15% | |
| Rapid Burning | 25% | |

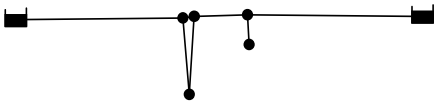
| **Sprinkler Protection:** | | |
|---|---|---|
| Complete Sprinkler System | -50% | (max.) |
| NFPA 13 Conformed | -30% | (max.) |
| If Water Supply Standard for Both System and Fire Lines | -10% | additional (max.) |
| Fully Supervised System | -10% | additional (max.) |
| None | 0% | |

| | | **East Tower** | | | **West Tower** | | |
|---|---|---|---|---|---|---|---|
| Type of Construction Coefficient | | Fire Resistive | | | Fire Resistive | | |
| | | 0.6 | | | 0.6 | | |
| Gross Floor Area ($m^2$) | | 10,926 | m2 | | 10,915 | m2 | |
| Fire Flow, F | | 13,798 | L/min | | 13,791 | L/min | |
| F(round) | | 14,000 | L/min | | 14,000 | L/min | |
| Modification 1: Occupancy Combustibility | | Limited Combustible | | | Limited Combustible | | |
| | | -15% | | | -15% | | |
| Occupancy Credit | | -2,100 | L/min | | -2,100 | L/min | |
| F(mod1) = F(round) + Occupancy Credit | | 11,900 | L/min | | 11,900 | L/min | |
| Modification 2: Sprinkler Protection | | Complete Sprinkler System | | | Complete Sprinkler System | | |
| | | -50% | | | -50% | | |
| Additional Credit | | If Water Supply Standard for Both System and Fire Lines | | | If Water Supply Standard for Both System and Fire Lines | | |
| | | 0 | | | 0 | | |
| Sprinkler Credit | | -5,950 | L/min | | -5,950 | L/min | |
| F(mod2) = F(mod1) + Sprinkler Credit | | 5,950 | L/min | | 5,950 | L/min | |
| Modification 3: Exposure Distances | | | | | | | |
| North | | >45 | m | 0% | >45 | m | 0% |
| South | | >45 | m | 0% | >45 | m | 0% |
| East | | >45 | m | 0% | 20 | m | 15% |
| West | | 20 | m | 15% | >45 | m | 0% |
| | | Total % | = | 15% | Total % | = | 15% |
| | | 11,900 | x | 0.15 | 11,900 | x | 0.15 |
| Exposure Credit | | 1,785 | L/min | | 1,785 | L/min | |
| F(mod3) = F(mod2) + Exposure Credit | | 7,735 | L/min | | 7,735 | L/min | |
| **F(final) = F(mod3) rounded to nearest 1,000L/min** | | **8,000** | **L/min** | | **8,000** | **L/min** | |
| **F(final)** | | **133** | **L/s** | | **133** | **L/s** | |

| | East Tower | West Tower | | |
|---|---|---|---|---|
| **Average Daily Demand** | 1.51 | 1.35 | 2.86 | L/s |
| **Maximum Daily Demand** | 3.77 | 3.38 | 7.15 | L/s |
| **Peak Hour Demand** | 8.28 | 7.44 | 15.72 | L/s |
| **Fire Flow** | 133 | 133 | | L/s |

| | | |
|---|---|---|
| **Max Day + Fire Flow** | 140.48 | L/s |


Boundary Condition for 100 Bayshore
N
15
WOODRIDGE CRES
100
100
100
100
90
TRANSITWAY
50
90
50
50
100
TRANSITWAY
119
Legend
PRIVATE
PUBLIC



```
******************************************************************************
*                            E P A N E T                                     *
*                     Hydraulic and Water Quality                            *
*                     Analysis for Pipe Networks                             *
*                          Version 2.0                                       *
******************************************************************************
```

Input File: 100 Bayshore Dr - Model.net

Link - Node Table:

| Link ID | Start Node | End Node | Length m | Diameter mm | |
|---|---|---|---|---|---|
| 10 | SiteConnection1 | SiteConnection2 | 3 | 203 | |
| 11 | SiteConnection1 | Building | 13 | 150 | |
| 12 | SiteConnection2 | Building | 13 | 150 | |
| 13 | SiteConnection2 | SiteHydrantConnection | 8 | | 203 |
| 14 | SiteHydrantConnection | EastSupply | 50 | | 203 |
| 15 | WestSupply | SiteConnection1 | 50 | 203 | |
| 16 | SiteHydrantConnection | SiteHydrant | 6 | | 150 |

Node Results:

| Node ID | Demand LPS | Head m | Pressure m | Quality | |
|---|---|---|---|---|---|
| SiteConnection2 | 0.00 | 115.20 | 51.50 | 0.00 | |
| Building | 2.86 | 115.20 | 51.20 | 0.00 | |
| SiteConnection1 | 0.00 | 115.20 | 51.50 | 0.00 | |
| SiteHydrantConnection | 0.00 | 115.20 | 51.50 | 0.00 | |
| SiteHydrant | 0.00 | 115.20 | 48.20 | 0.00 | |
| WestSupply | -1.49 | 115.20 | 0.00 | 0.00 | Reservoir |
| EastSupply | -1.37 | 115.20 | 0.00 | 0.00 | Reservoir |

Link Results:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---|---|---|---|---|
| 10 | 0.06 | 0.00 | 0.00 | Open |
| 11 | 1.43 | 0.08 | 0.12 | Open |
| 12 | 1.43 | 0.08 | 0.12 | Open |
| 13 | -1.37 | 0.04 | 0.02 | Open |
| 14 | -1.37 | 0.04 | 0.02 | Open |
| 15 | 1.49 | 0.05 | 0.02 | Open |
| 16 | 0.00 | 0.00 | 0.00 | Open |

```
******************************************************************************
*                                E P A N E T                                 *
*                        Hydraulic and Water Quality                         *
*                        Analysis for Pipe Networks                          *
*                              Version 2.0                                   *
******************************************************************************

Input File: 100 Bayshore Dr - Model.net
```

Link - Node Table:

| Link ID | Start Node | End Node | Length m | Diameter mm |
|---|---|---|---|---|
| 10 | SiteConnection1 | SiteConnection2 | 3 | 203 |
| 11 | SiteConnection1 | Building | 13 | 150 |
| 12 | SiteConnection2 | Building | 13 | 150 |
| 13 | SiteConnection2 | SiteHydrantConnection | 8 | 203 |
| 14 | SiteHydrantConnection | EastSupply | 50 | 203 |
| 15 | WestSupply | SiteConnection1 | 50 | 203 |
| 16 | SiteHydrantConnection | SiteHydrant | 6 | 150 |

Node Results:

| Node ID | Demand LPS | Head m | Pressure m | Quality | |
|---|---|---|---|---|---|
| SiteConnection2 | 0.00 | 106.27 | 42.57 | 0.00 | |
| Building | 15.72 | 106.24 | 42.24 | 0.00 | |
| SiteConnection1 | 0.00 | 106.27 | 42.57 | 0.00 | |
| SiteHydrantConnection | 0.00 | 106.28 | 42.58 | 0.00 | |
| SiteHydrant | 0.00 | 106.28 | 39.28 | 0.00 | |
| WestSupply | -8.17 | 106.30 | 0.00 | 0.00 | Reservoir |
| EastSupply | -7.55 | 106.30 | 0.00 | 0.00 | Reservoir |

Link Results:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---|---|---|---|---|
| 10 | 0.31 | 0.01 | 0.00 | Open |
| 11 | 7.86 | 0.44 | 2.75 | Open |
| 12 | 7.86 | 0.44 | 2.75 | Open |
| 13 | -7.55 | 0.23 | 0.49 | Open |
| 14 | -7.55 | 0.23 | 0.49 | Open |
| 15 | 8.17 | 0.25 | 0.57 | Open |
| 16 | 0.00 | 0.00 | 0.00 | Open |

```
******************************************************************************
*                                E P A N E T                                 *
*                        Hydraulic and Water Quality                         *
*                        Analysis for Pipe Networks                          *
*                              Version 2.0                                   *
******************************************************************************

Input File: 100 Bayshore Dr - Model.net
```

Link - Node Table:

| Link ID | Start Node | End Node | Length m | Diameter mm |
|---|---|---|---|---|
| 10 | SiteConnection1 | SiteConnection2 | 3 | 203 |
| 11 | SiteConnection1 | Building | 13 | 150 |
| 12 | SiteConnection2 | Building | 13 | 150 |
| 13 | SiteConnection2 | SiteHydrantConnection | 8 | 203 |
| 14 | SiteHydrantConnection | EastSupply | 50 | 203 |
| 15 | WestSupply | SiteConnection1 | 50 | 203 |
| 16 | SiteHydrantConnection | SiteHydrant | 6 | 150 |

Node Results:

| Node ID | Demand LPS | Head m | Pressure m | Quality | |
|---|---|---|---|---|---|
| SiteConnection2 | 0.00 | 80.86 | 17.16 | 0.00 | |
| Building | 140.48 | 78.79 | 14.79 | 0.00 | |
| SiteConnection1 | 0.00 | 80.86 | 17.16 | 0.00 | |
| SiteHydrantConnection | 0.00 | 81.09 | 17.39 | 0.00 | |
| SiteHydrant | 0.00 | 81.09 | 14.09 | 0.00 | |
| WestSupply | -73.05 | 82.50 | 0.00 | 0.00 | Reservoir |
| EastSupply | -67.43 | 82.50 | 0.00 | 0.00 | Reservoir |

Link Results:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---|---|---|---|---|
| 10 | 2.81 | 0.09 | 0.08 | Open |
| 11 | 70.24 | 3.97 | 158.92 | Open |
| 12 | 70.24 | 3.97 | 158.91 | Open |
| 13 | -67.43 | 2.08 | 28.29 | Open |
| 14 | -67.43 | 2.08 | 28.29 | Open |
| 15 | 73.05 | 2.26 | 32.81 | Open |
| 16 | 0.00 | 0.00 | 0.00 | Open |

# C SANITARY DEMAND

## SANITARY SEWAGE - PROPOSED SANITARY FLOWS

| **Average Wastewater Flows:** | | |
|---|---|---|
| Residential | 280 | L/c/d |
| Commercial | 28,000 | L/gross ha/d |
| Institutional | 28,000 | L/gross ha/d |
| Light Industrial | 35,000 | L/gross ha/d |
| Heavy Industrial | 55,000 | L/gross ha/d |

| **Peaking Factors:** | |
|---|---|
| Residential | Harmon Equation |
| Commercial (>20% Area) | 1.5 |
| Commercial (<20% Area) | 1.0 |
| Institutional (>20% Area) | 1.5 |
| Institutional (<20% Area) | 1.0 |
| Industrial | Per Figure in Appendix 4-B |

$$P.F. = 1 + \left(\frac{14}{4 + \left(\frac{P}{1000}\right)\text{^}0.5}\right) * \text{K}$$

where P = population
K = correction factor = 0.8

| **Peak Extraneous Flows:** | |
|---|---|
| Infiltration Allowance | 0.33 |
| **Less than 10 ha:** | |
| Foundation Drain Allowance | 5.0 |
| **10 ha - 100 ha:** | |
| Foundation Drain Allowance | 3.0 |
| **Greater than 100 ha:** | |
| Foundation Drain Allowance | 2.0 |

| **Unit Type** | **Person Per Unit** | East Tower | West Tower | |
|---|---|---|---|---|
| Single Family | 3.4 | | | |
| Semi-detached | 2.7 | | | |
| Duplex | 2.3 | | | |
| Townhouse (row) | 2.7 | | | |
| **Apartments:** | | | | |
| Bachelor | 1.4 | | | |
| 1 Bedroom | 1.4 | 212 | 190 | |
| 2 Bedroom | 2.1 | 80 | 72 | |
| 3 Bedroom | 3.1 | | | |
| Average Apt. | 1.8 | | | |
| | **Total Population:** | **465** | **417** | **882** |
| | **Total Area (ha):** | **0.3** | **0.3** | **0.6** |

| | **Phase 1 (East Tower)** | | | **Phase 2 (West Tower)** | | |
|---|---|---|---|---|---|---|
| Demand Type= | **Residential** | | | **Residential** | | |
| Average Day Demand= | 280 | | L/c/d | 280 | | L/c/d |
| Population | **465** | | | **417** | | |
| Site Area (ha) | **0.300** | | | **0.300** | | |
| | 280 | x | 465 | 280 | x | 417 |
| | 130,144 | | L/day | 116,816 | | L/day |
| **Average Daily Flow=** | **1.51** | | **L/s** | **1.35** | | **L/s** |
| Peaking Factor Type | Residential | | | Residential | | |
| Peaking Factor | 3.39 | | *Max=4 | 3.41 | | *Max=4 |
| | 3.39 | x | average day | 3.41 | x | average day |
| | 3.39 | x | 130,144 | 3.41 | x | 116,816 |
| | 441,482 | | L/day | 398,427 | | L/day |
| **Peak Daily Flow=** | **5.11** | | **L/s** | **4.61** | | **L/s** |
| Infiltration Allowance | 0.33 | | | 0.33 | | |
| | 0.33 | x | lot area | 0.33 | x | lot area |
| | 0.33 | x | 0.3 | 0.33 | x | 0.3 |
| **Peak Extraneous Flow=** | **0.10** | | **L/s** | **0.10** | | **L/s** |
| | peak daily flow | + | extraneous flow | peak daily flow | + | extraneous flow |
| | 5.11 | + | 0.10 | 4.61 | + | 0.10 |
| **Total Peak Design Flow=** | **5.21** | | **L/s** | **4.71** | | **L/s** |

| | | |
|---|---|---|
| **Phase 1 (East Tower) - Peak Design Flow =** | **5.21** | **L/s** |
| **Phase 2 (West Tower) - Peak Design Flow =** | **4.71** | **L/s** |
| **Total Peak Design Flow =** | **9.92** | **L/s** |

# WSP Canada

## Sanitary Sewer Design Sheet



| LOCATION | | | RESIDENTIAL AREA AND POPULATION | | | | | | INSTITUTIONAL | | C+I+I | INFILTRATION | | | TOTAL FLOW (l/s) | PIPE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONNECTIONS | FROM MH | TO MH | AREA (Ha) | POP. | CUMMULATIVE AREA (Ha) | CUMMULATIVE POP. | PEAK FACT. | PEAK FLOW (l/s) | AREA (Ha) | ACCU. AREA (Ha) | PEAK FLOW (l/s) | TOTAL AREA (Ha) | ACCU. AREA (Ha) | INFILT. FLOW (l/s) | | LENGTH (m) | DIA. (mm) | SLOPE (%) | CAP. (FULL) (l/s) | PIPE CAPACITY USED (%) | VEL. (FULL) (m/s) |
| | | | | | | | | | | | | | | | | | | | | | |
| Building | Building | SANMH2 | 0.6 | 882 | 0.60 | 882 | 3.4 | 9.72 | 0.000 | 0.000 | 0.00 | 0.6 | 0.6 | 0.20 | **9.92** | 3.8 | 150.00 | 1.1% | **15.63** | **63.5%** | 0.88 |
| | SANMH2 | SANMH1 | 0.0 | 0 | 0.60 | 882 | 0.0 | 9.72 | 0.000 | 0.000 | 0.00 | 0.0 | 0.6 | 0.20 | **9.92** | 11.3 | 150.00 | 1.0% | **15.03** | **66.0%** | 0.85 |
| | | | | | | | | | | | | | | | | | | | | | |

DESIGN PARAMETERS

Residential: 280 L/cap/d
Peak Factor = 3.4
Extraneous Flow = 0.33 l/s/ha
Minimum Velocity = 0.60 m/s
Manning's n = 0.013

Designed: Stephen McCaughey, P.Eng.

Checked: Ishaque Jafferjee, P.Eng.

Dwg. Reference:

PROJECT: 100 Bayshore Lot "B"

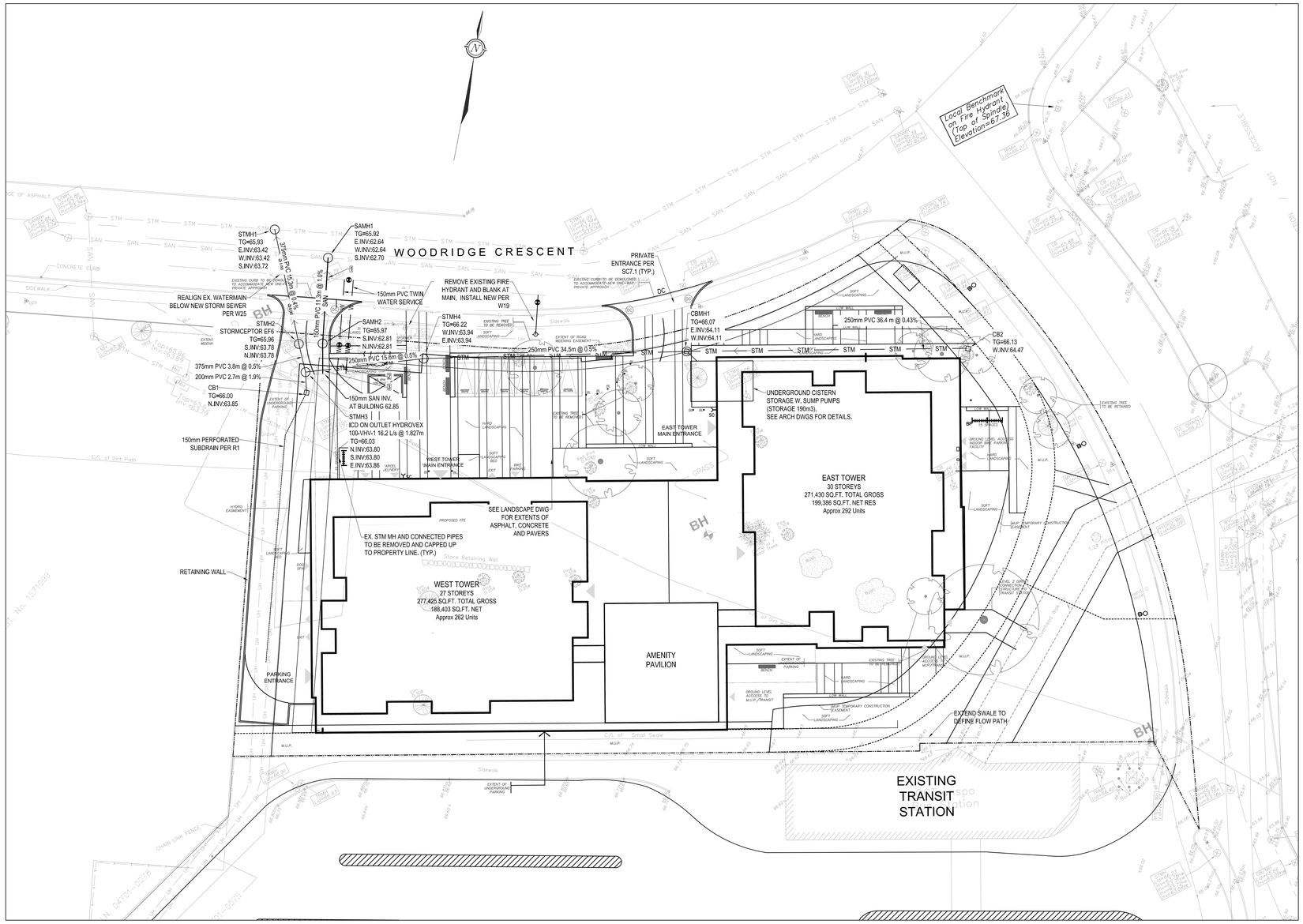
LOCATION: 100 Bayshore Dr., Lot B, Woodridge Cres., Ottawa, ON

File Ref.:

Date: April 2021

Sheet 1 of 1

# D SITE DRAWINGS




1 C001 SERVICING PLAN
SCALE=1:250

0 5m 10m 20m 25m
SCALE: 1:250

LEGEND

| | |
|---|---|
| 66.50 | PROPOSED GRADE ELEVATION |
| 66.50TC 66.35 | PROPOSED TOP AND BOTTOM OF CURB |
| STMH | PROPOSED STORM SEWER MANHOLE |
| SAMH | PROPOSED SANITARY SEWER MANHOLE |
| CBMH | PROPOSED CATCHBASIN MANHOLE |
| CB | PROPOSED CATCHBASIN |
| STM | PROPOSED STORM SEWER |
| SAN | PROPOSED SANITARY SEWER |
| W | PROPOSED WATER SERVICE LINE |
| | PROPOSED VALVE BOX |
| | PROPOSED REDUCER |
| FH | PROPOSED FIRE HYDRANT |
| DC | PROPOSED DEPRESSED CURB |
| x65.96 | EXISTING GRADE ELEVATION |
| MH | EXISTING MANHOLE |
| CB | EXISTING CATCHBASIN |
| VB | EXISTING VALVE & BOX |
| FH | EXISTING FIRE HYDRANT |
| STM | EXISTING STORM SEWER |
| SAN | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| G | EXISTING GASMAIIN |

NOTES: STORM SEWERS AND STRUCTURES

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW STORM SEWERS, SERVICES AND CB LEADS.
2. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3.
3. STORM SEWER LARGER THAN 450mm SHALL BE REINFORCED CONCRETE CLASS 100.
4. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
5. ALL STORM MANHOLES TO BE AS PER STORM STRUCTURE TABLE.
6. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
7. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
8. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S19. STORM CBMH'S AS INDICATED IN TABLE WITH SUMP, ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
9. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.

NOTES: SANITARY SEWER AND MANHOLES

1. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW SANITARY PIPING.
2. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
3. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
4. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
5. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE OPSD 701.021
6. ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.

NOTES: WATERMAIN

1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARD
7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
8. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

SAN STRUCTURE TABLE

| STRUCTURE ID | TOP OF GRATE ELEVATION | INVERT IN | | | INVERT OUT | INSULATION REQUIRED ON OUTLET PIPE? | DESCRIPTION SIZE | DESCRIPTION OPSD | DESCRIPTION COVER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMH1 | 65.92 | 62.70 | 62.64 | | 62.64 | N | 1200mm DIA. | OPSD 701.010 | S24 | |
| SAMH2 | 65.97 | 62.81 | | | 62.81 | N | 1200mm DIA. | OPSD 701.010 | S24 | |

STORM STRUCTURE TABLE

| STRUCTURE ID | TOP OF GRATE ELEVATION | INVERT IN | | | INVERT OUT | INSULATION REQUIRED ON OUTLET PIPE? | DESCRIPTION SIZE | DESCRIPTION OPSD | DESCRIPTION COVER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| CB1 | 66.00 | | | | 63.85 | N | 600X600mm | OPSD 705.010 | S19.1 | |
| CB2 | 66.13 | | | | 64.47 | Y | 600X600mm | OPSD 705.010 | S19.1 | |
| STMH1 | 65.93 | 63.72 | 63.42 | | 63.42 | N | 1200mm DIA. | OPSD 701.010 | S24.1 | |
| STMH2 | 65.96 | 63.78 | | | 63.78 | Y | 1200mm DIA. | OPSD 701.012 | Stormceptor | EF6 |
| STMH3 | 66.03 | 63.86 | 63.80 | | 63.80 | Y | 1200mm DIA. | OPSD 701.010 | S24.1 | |
| STMH4 | 66.22 | 63.94 | | | 63.94 | N | 1200mm DIA. | OPSD 701.010 | S24.1 | |
| CBMH1 | 66.08 | 64.11 | | | 64.11 | Y | 1200mm DIA. | OPSD 701.010 | S24.1 | |

PIPE CROSSING TABLE

| | | Obvert | | | Invert | |
|---|---|---|---|---|---|---|
| 1 | 150mm SAN | 62.88 | 0.50 | Clearance Under | 63.38 | 200mm Ex. WM |
| 2 | 150mm WM | 63.39 | 0.50 | Clearance Under | 63.89 | 250mm STM |
| 3 | 150mm SAN | 63.00 | 0.87 | Clearance Under | 63.87 | 250mm STM |

None
Above

KingSett CAPITAL

Ivanhoé Cambridge

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GRADIENT WIND ENGINEERING
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T613-836-0634

| no. | date | revision |
|---|---|---|
| 1 | 2021-04-28 | ISSUED FOR SPA |



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OTTAWA ONTARIO CANADA K2B 8K2
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PROJECT/LOCATION:
100 BAYSHORE LOT "B"
WOODRIDGE CRESCENT

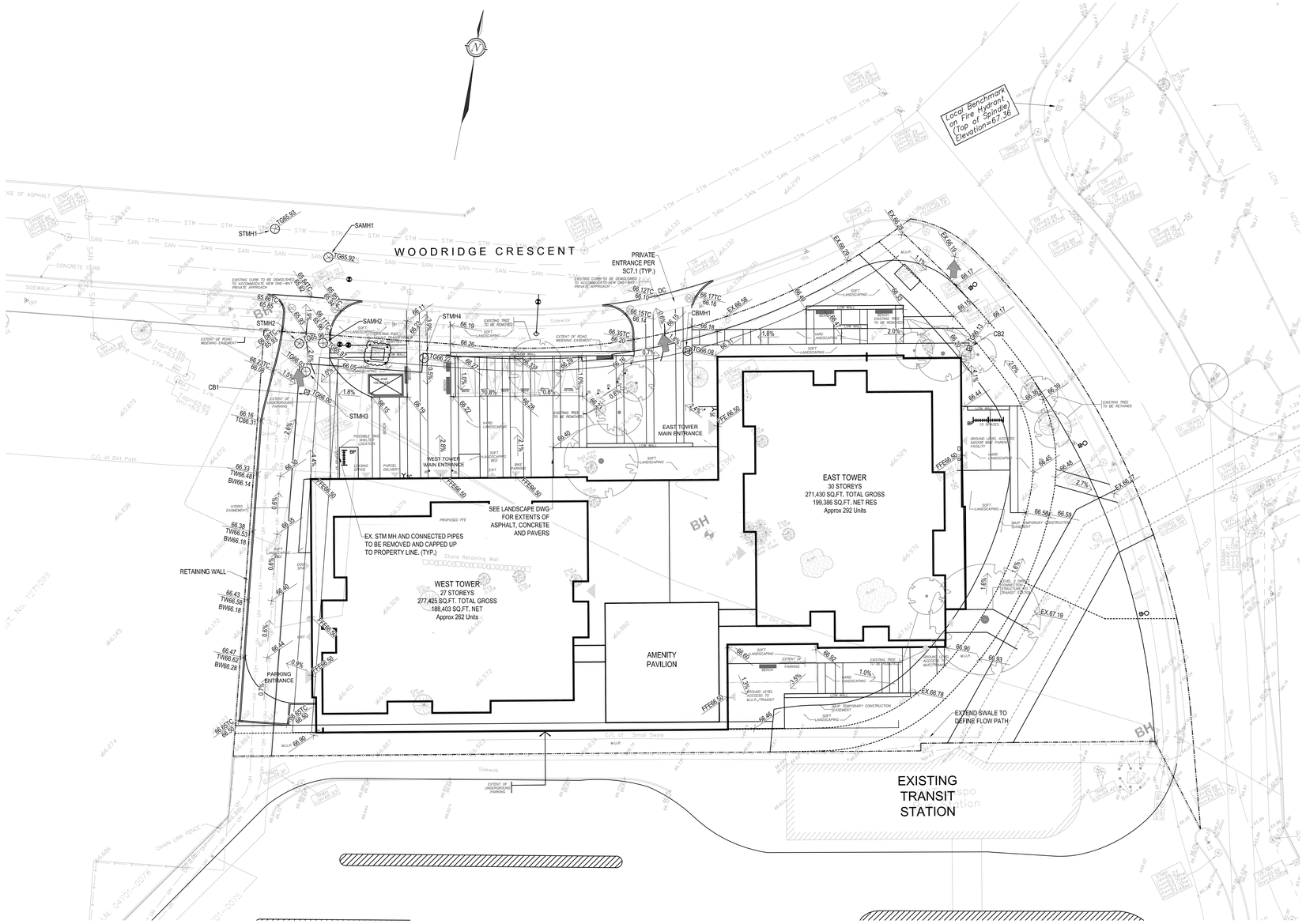
DRAWING TITLE:
SERVICING PLAN

| DRAWN BY: | DATE: | SCALE: |
|---|---|---|
| B.N. / S.M. | APRIL 28, 2021 | AS NOTED |

PROJECT: 211-02810-00

DRAWING NO.: C001

REVISION NO.:




1 C002 GRADING PLAN
SCALE=1:250

0 5m 10m 20m 25m
SCALE: 1:250

NOTES: PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

1. CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
2. REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GOLDER ASSOCIATES DATED SEPTEMBER 2020 FOR GEOTECHNICAL RECOMMENDATIONS.
3. CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
4. FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
5. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
6. GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
7. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
8. ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
9. CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
10. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
11. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY CONSULTANT. CONSULTANT TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
12. PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT.

| PAVEMENT COMPONENT | |
|---|---|
| SUPERPAVE 12.5 SURFACE COURSE | 50mm |
| SUPERPAVE 19.mm BASE COURSE | 70mm |
| OPPS GRANULAR A BASE | 150mm |
| OPPS GRANULAR B TYPE II SUBBASE | 450mm |

LEGEND

| | |
|---|---|
| 66.50 | PROPOSED GRADE ELEVATION |
| 66.50TC 66.35 | PROPOSED TOP AND BOTTOM OF CURB |
| STMH | PROPOSED STORM SEWER MANHOLE |
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| W | PROPOSED WATER SERVICE LINE |
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| SAN | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| G | EXISTING GASMAIIN |

KingSett CAPITAL

Ivanhoé Cambridge

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| no. | date | revision |
|---|---|---|
| 1 | 2021-04-28 | ISSUED FOR SPA |



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PROJECT/LOCATION:
100 BAYSHORE LOT "B"
WOODRIDGE CRESCENT

DRAWING TITLE:
GRADING PLAN

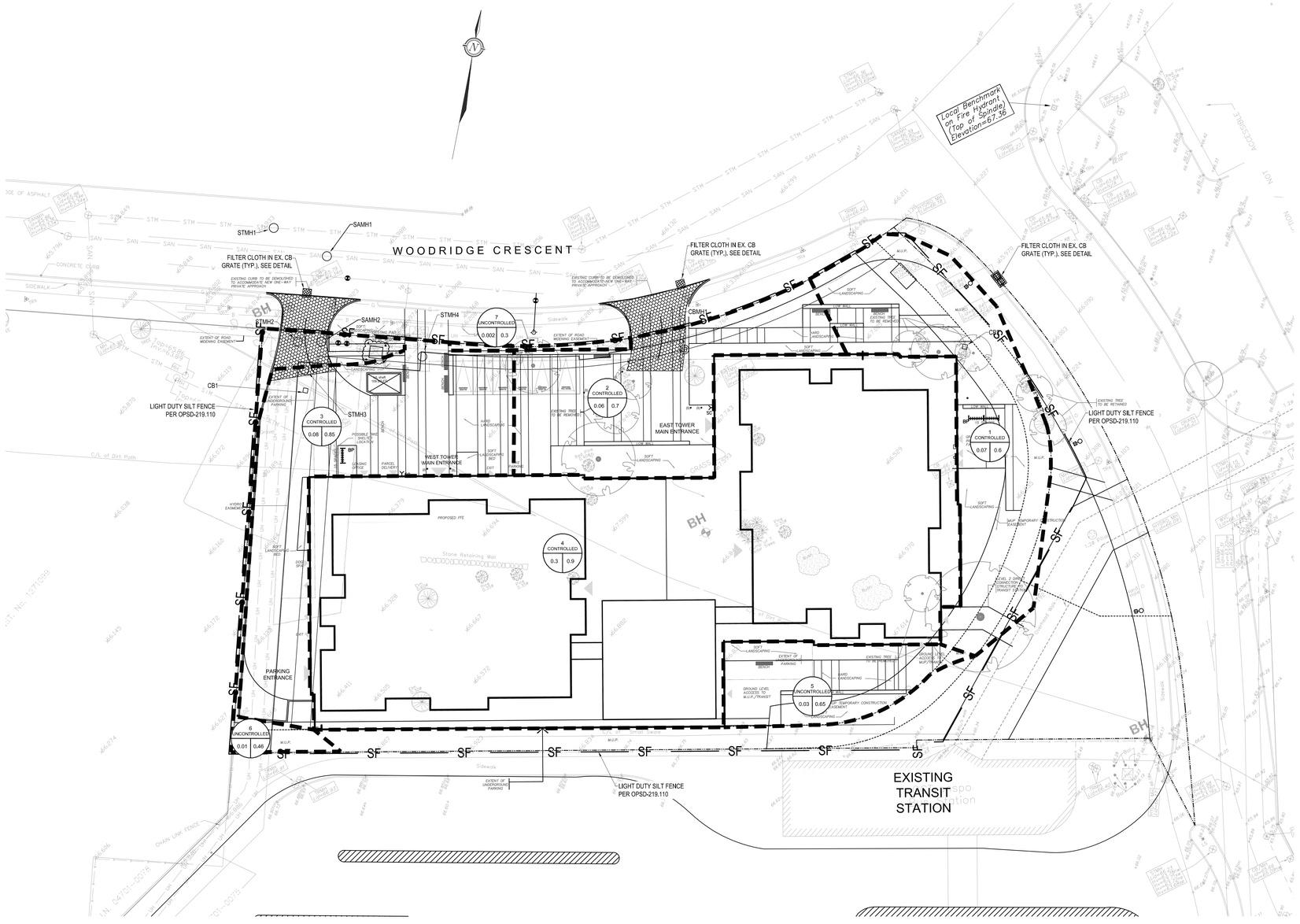
| DRAWN BY: | DATE: | SCALE: |
|---|---|---|
| B.N. / S.M. | APRIL 28, 2021 | AS NOTED |

PROJECT: 211-02810-00

DRAWING NO.: C002

REVISION NO.:

None
None




1 C003 EROSION CONTROL AND DRAINAGE PLAN

SCALE=1:250

SCALE: 1:250

## LEGEND

| | |
|---|---|
| 66.50 | PROPOSED GRADE ELEVATION |
| 66.50TC 66.35 | PROPOSED TOP AND BOTTOM OF CURB |
| STMH | PROPOSED STORM SEWER MANHOLE |
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| STM | EXISTING STORM SEWER |
| SAN | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| G | EXISTING GASMAIIN |

NOTES: EROSION AND SEDIMENT CONTROL

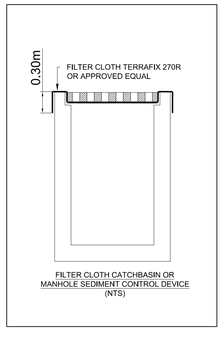
** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES. **

1. PRIOR TO START OF CONSTRUCTION:

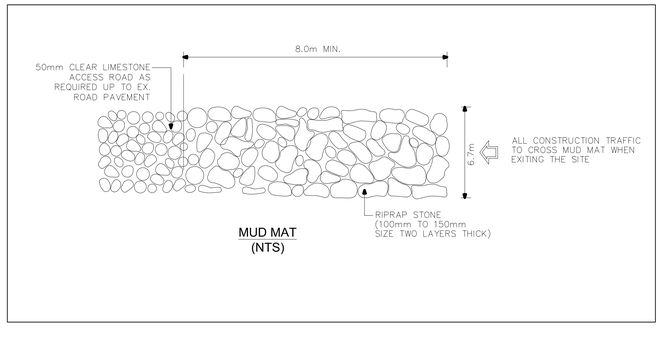
1.1. INSTALL SILT FENCE IN LOCATION SHOWN ON DWG C12.
1.2. INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL).
1.3. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:

2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
2.2. PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
2.3. PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CB'S AS REQUIRED.
2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
2.6. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
2.7. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
2.8. DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
2.9. CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
2.10. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
2.11. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
2.12. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
2.13. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
2.14. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
2.15. ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
2.16. 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.




FILTER CLOTH CATCHBASIN OR MANHOLE SEDIMENT CONTROL DEVICE (NTS)




MUD MAT (NTS)

None
None

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PROJECT/LOCATION:

100 BAYSHORE LOT "B"

WOODRIDGE CRESCENT

DRAWING TITLE:

EROSION CONTROL AND DRAINAGE PLAN

| DRAWN BY: | DATE: | SCALE: |
|---|---|---|
| B.N. / S.M. | APRIL 28, 2021 | AS NOTED |

PROJECT: 211-02810-00

DRAWING NO.: C003

REVISION NO.:

# E STORM SEWER DESIGN SHEET

# WSP Canada

## Storm Sewer Design Sheet



| LOCATION | | | | | FLOW | | | | | | | PIPE | | | | | | | MANHOLE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Catchment Area | FROM MH | TO MH | Coefficient | Area (m2) | Indiv. 2.78*AC | Cum. 2.78*AC | Time of Conc. (min.) | Rainfall Intensity (mm.hr) | Indiv. Area Flow (L/s) | Cum. Flow (L/s) | Controlled Cum. Flow (L/s) | Length (m) | Dia. (mm) | Slope (%) | Cap. (Full) (L/s) | Velocity (Full) (m/s) | Time of flow (min.) | Ratio (Q/Qfull) | UP INVERT (m) | DOWN INVERT (m) |
| | | | | | | | | | | | | | | | | | | | | |
| 1 | CB2 | CBMH1 | 0.6 | 687 | 0.115 | 0.115 | 10.00 | 76.81 | 8.80 | 8.80 | 8.80 | 36.40 | 250 | 0.99% | 59.14 | 1.2 | 0.50 | 15% | 64.47 | 64.11 |
| 4 | BLDG* | CBMH1 | 0.9 | 3000 | 0.751 | 0.751 | 10.00 | 76.81 | 57.65 | 57.65 | 57.65 | 1.50 | 300 | 2.67% | 157.91 | 2.2 | 0.01 | 37% | 64.15 | 64.11 |
| 2 | CBMH1 | STMH4 | 0.7 | 575 | 0.112 | 0.977 | 10.07 | 76.55 | 8.57 | 74.79 | 74.79 | 34.50 | 250 | 0.49% | 41.74 | 0.9 | 0.68 | 179% | 64.11 | 63.94 |
| | STMH4 | STMH3 | 0.0 | 0 | 0.000 | 0.977 | 10.74 | 74.06 | 0.00 | 72.37 | 72.37 | 15.60 | 250 | 0.51% | 42.59 | 0.9 | 0.30 | 170% | 63.94 | 63.86 |
| 3 | CB1 | STMH3 | 0.9 | 791 | 0.187 | 0.187 | 10.00 | 76.81 | 14.36 | 14.36 | 14.36 | 2.70 | 200 | 2.22% | 48.89 | 1.6 | 0.03 | 29% | 63.86 | 63.80 |
| | STMH3** | STMH2 | 0.0 | 0 | 0.000 | 1.164 | 10.88 | 73.58 | 0.00 | 85.65 | *16.20* | 3.80 | 375 | 0.53% | 127.20 | 1.2 | 0.05 | 13% | 63.80 | 63.78 |
| | STMH2*** | STMH1 | 0.0 | 0 | 0.000 | 1.164 | 10.94 | 73.39 | 0.00 | 85.43 | *16.20* | 15.30 | 375 | 0.39% | 109.80 | 1.0 | 0.26 | 15% | 63.78 | 63.72 |
| | | | | | | | | | | | | | | | | | | | | |

| DESIGN PARAMETERS | | Designed: | PROJECT: | | |
|---|---|---|---|---|---|
| Q = 2.78CIA where, | Ottawa IDF Curve | Stephen McCaughey, P.Eng. | 100 Bayshore Lot "B" | | |
| Q = Peak flow in L/s | IDF Curve Equation (2yr storm) | Checked: | LOCATION: | | |
| A = Drainage area in ha | I = 732.951/(T+6.199)^0.81 | James Johnston, P.Eng. | 100 Bayshore Lot "B", Ottawa | | |
| I = Rainfall intensity (mm/hr) | Min. velocity = 0.8 m/s | Dwg. Reference: | File Ref.: | Date: April 2021 | Sheet No. 1 of 1 |
| C = Runoff coefficient | Manning 'n' = 0.013 | | | | |

Note:
* Underground storage in building footprint
** ICD on STMH3 outlet controlled to 16.2 L/s
*** Oil Grit Separator

# WSP Canada

## Storm Sewer Design Sheet



| LOCATION | | | | | FLOW | | | | | | | PIPE | | | | | | | MANHOLE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Catchment Area | FROM MH | TO MH | Coefficient | Area (m2) | Indiv. 2.78*AC | Cum. 2.78*AC | Time of Conc. (min.) | Rainfall Intensity (mm.hr) | Indiv. Area Flow (L/s) | Cum. Flow (L/s) | Controlled Cum. Flow (L/s) | Length (m) | Dia. (mm) | Slope (%) | Cap. (Full) (L/s) | Velocity (Full) (m/s) | Time of flow (min.) | Ratio (Q/Qfull) | UP INVERT (m) | DOWN INVERT (m) |
| | | | | | | | | | | | | | | | | | | | | |
| 1 | CB2 | CBMH1 | 0.8 | 687 | 0.143 | 0.143 | 10.00 | 178.56 | 25.58 | 25.58 | 25.58 | 36.40 | 250 | 0.99% | 59.14 | 1.2 | 0.50 | 43% | 64.47 | 64.11 |
| 4 | BLDG* | CBMH1 | 1.0 | 3000 | 0.834 | 0.834 | 10.00 | 178.56 | 148.92 | 148.92 | 148.92 | 1.50 | 300 | 2.67% | 157.91 | 2.2 | 0.01 | 94% | 64.15 | 64.11 |
| 2 | CBMH1 | STMH4 | 0.9 | 575 | 0.140 | 1.117 | 10.07 | 177.90 | 24.88 | 198.73 | 198.73 | 34.50 | 250 | 0.49% | 41.74 | 0.9 | 0.68 | 476% | 64.11 | 63.94 |
| | STMH4 | STMH3 | 0.0 | 0 | 0.000 | 1.117 | 10.75 | 171.99 | 0.00 | 192.13 | 192.13 | 15.60 | 250 | 0.51% | 42.59 | 0.9 | 0.30 | 451% | 63.94 | 63.86 |
| 3 | CB1 | STMH3 | 1.0 | 791 | 0.220 | 0.220 | 10.00 | 178.56 | 39.26 | 39.26 | 39.26 | 2.70 | 200 | 2.22% | 48.89 | 1.6 | 0.03 | 80% | 63.86 | 63.80 |
| | STMH3** | STMH2 | 0.0 | 0 | 0.000 | 1.337 | 10.88 | 170.89 | 0.00 | 228.48 | *16.20* | 3.80 | 375 | 0.53% | 127.20 | 1.2 | 0.05 | 13% | 63.80 | 63.78 |
| | STMH2*** | STMH1 | 0.0 | 0 | 0.000 | 1.337 | 10.94 | 170.43 | 0.00 | 227.87 | *16.20* | 15.30 | 375 | 0.39% | 109.80 | 1.0 | 0.26 | 15% | 63.78 | 63.72 |
| | | | | | | | | | | | | | | | | | | | | |

| DESIGN PARAMETERS | | Designed: | PROJECT: | | | |
|---|---|---|---|---|---|---|
| Q = 2.78CIA where, | Ottawa IDF Curve | Stephen McCaughey, P.Eng. | 100 Bayshore Lot "B" | | | |
| Q = Peak flow in L/s | IDF Curve Equation (100yr storm) | Checked: | LOCATION: | | | |
| A = Drainage area in ha | I = 1735.688/(T+6.014)^0.82 | James Johnston, P.Eng. | 100 Bayshore Lot "B", Ottawa | | | |
| I = Rainfall intensity (mm/hr) | Min. velocity = 0.8 m/s | Dwg. Reference: | File Ref.: | Date: | Sheet No. | |
| C = Runoff coefficient | Manning 'n' = 0.013 | | | April 2021 | 1 of 1 | |

Note:
* Underground storage in building footprint
** ICD on STMH3 outlet controlled to 16.2 L/s
*** Oil Grit Separator

# WSP Canada

## Storm Sewer Design Sheet



| LOCATION | | | | | FLOW | | | | | | | PIPE | | | | | | | MANHOLE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Catchment Area | FROM MH | TO MH | Coefficient | Area (m2) | Indiv. 2.78*AC | Cum. 2.78*AC | Time of Conc. (min.) | Rainfall Intensity + 20% (mm.hr) | Indiv. Area Flow (L/s) | Cum. Flow (L/s) | Controlled Cum. Flow (L/s) | Length (m) | Dia. (mm) | Slope (%) | Cap. (Full) (L/s) | Velocity (Full) (m/s) | Time of flow (min.) | Ratio (Q/Qfull) | UP INVERT (m) | DOWN INVERT (m) |
| | | | | | | | | | | | | | | | | | | | | |
| 1 | CB2 | CBMH1 | 0.8 | 687 | 0.143 | 0.143 | 10.00 | 214.27 | 30.69 | 30.69 | 30.69 | 36.40 | 250 | 0.99% | 59.14 | 1.2 | 0.50 | 52% | 64.47 | 64.11 |
| 4 | BLDG* | CBMH1 | 1.0 | 3000 | 0.834 | 0.834 | 10.00 | 214.27 | 178.70 | 178.70 | 178.70 | 1.50 | 300 | 2.67% | 157.91 | 2.2 | 0.01 | 113% | 64.15 | 64.11 |
| 2 | CBMH1 | STMH4 | 0.9 | 575 | 0.140 | 1.117 | 10.07 | 213.47 | 29.86 | 238.47 | 238.47 | 34.50 | 250 | 0.49% | 41.74 | 0.9 | 0.68 | 571% | 64.11 | 63.94 |
| | STMH4 | STMH3 | 0.0 | 0 | 0.000 | 1.117 | 10.75 | 206.39 | 0.00 | 230.56 | 230.56 | 15.60 | 250 | 0.51% | 42.59 | 0.9 | 0.30 | 541% | 63.94 | 63.86 |
| 3 | CB1 | STMH3 | 1.0 | 791 | 0.220 | 0.220 | 10.00 | 214.27 | 47.12 | 47.12 | 47.12 | 2.70 | 200 | 2.22% | 48.89 | 1.6 | 0.03 | 96% | 63.86 | 63.80 |
| | STMH3** | STMH2 | 0.0 | 0 | 0.000 | 1.337 | 10.88 | 205.06 | 0.00 | 274.17 | *16.20* | 3.80 | 375 | 0.53% | 127.20 | 1.2 | 0.05 | 13% | 63.80 | 63.78 |
| | STMH2*** | STMH1 | 0.0 | 0 | 0.000 | 1.337 | 10.94 | 204.52 | 0.00 | 273.44 | *16.20* | 15.30 | 375 | 0.39% | 109.80 | 1.0 | 0.26 | 15% | 63.78 | 63.72 |
| | | | | | | | | | | | | | | | | | | | | |

| DESIGN PARAMETERS | | Designed: | PROJECT: | | | |
|---|---|---|---|---|---|---|
| Q = 2.78CIA where, | Ottawa IDF Curve | Stephen McCaughey, P.Eng. | 100 Bayshore Lot "B" | | | |
| Q = Peak flow in L/s | IDF Curve Equation (100yr storm) | Checked: | LOCATION: | | | |
| A = Drainage area in ha | I = 1735.688/(T+6.014)^0.82 | James Johnston, P.Eng. | 100 Bayshore Lot "B", Ottawa | | | |
| I = Rainfall intensity (mm/hr) | Min. velocity = 0.8 m/s | Dwg. Reference: | File Ref.: | Date: | Sheet No. | |
| C = Runoff coefficient | Manning 'n' = 0.013 | | | April 2021 | 1 of 1 | |

Note:
* Underground storage in building footprint
** ICD on STMH3 outlet controlled to 16.2 L/s
*** Oil Grit Separator

# F CORRESPONDENCES

## McCaughey, Stephen

**Subject:** FW: Pre-Consultation Follow-Up: 100 Bayshore Drive
**Attachments:** Plans & Study List.pdf; design_brief_TOR_100 Bayshore.pdf

**From:** "McCreight, Laurel" <Laurel.McCreight@ottawa.ca>
**Date:** March 3, 2021 at 9:55:19 AM EST
**To:** Christine McCuaig <christine@q9planning.com>
**Subject: Pre-Consultation Follow-Up: 100 Bayshore Drive**

Hi Christine,

Please refer to the below regarding the Pre-Application for 100 Bayshore Drive for a Site Plan Control Application for a residential development containing two high-rise towers. I have also attached the required Plans & Study List for application submission.

Below are staff's preliminary comments based on the information available at the time of the pre-consultation meeting:

**Planning / Urban Design**

- A Design Brief is required for the site plan control application. The Terms of Reference is attached for convenience.
    - Please note a secondary wind study is required for the application. Please refer to the Terms of Reference of the wind study for details.
    - The preliminary wind study prepared for the OPA and rezoning identifies a number of areas that will experience rather windy conditions.
    - The detailed design should respond and mitigate such conditions to the extent possible.
    - The secondary wind study should confirm the adequacy of the design measures.
- The site is not within a Design Priority Area. However, as identified in the zoning exception, the applicant is required to visit the Urban Design Review Panel (UDRP) for formal approval.
- Please contact udrp@ottawa.ca for any questions regarding UDRP.
- Regarding the detailed design:
    - Please investigate possible architectural and landscaping measures to mitigate wind impacts/improve conditions in the public realm as well as at the roof top patio.
        - Some refined sculpting at the building corners and Tower A may be helpful.
    - The front yard of the site should be designed as a welcoming pedestrian forecourt through landscaping details where vehicular functions are accommodated but not dominating.
        - Considerations should be given to paving the entire area with interlocks, using depressed curbs, and locating parking only on one side of the central pedestrian walkway.
    - The entrances of both towers should be treated equally within the pedestrian forecourt through landscape design.
    - Please provide details of the parking lot screens.
    - Considerations may be given to refining the building facades to display some commercial characteristics.
    - Considerations should be given to exterior lighting.
- Cash-in-lieu of Parkland will be required.
- Please consult the new Draft Official Plan for emerging directions.

- Please refer to the recently approved Bird-Friendly Design Guidelines.
- LRT Proximity Study – Confirm details with File Lead prior to application submission. In process of reviewing Stage 2 requirements.

- You are encouraged to contact the Ward Councillor, Councillor Theresa Kavanagh, about the proposal.

    - It is recommended to reach out to the Councillor to discuss the working group as required per the direction of Council.

    - I would be happy to attend this meeting as well.

**Engineering**

- All exterior light fixtures must be included and approved as part of the site plan approval. Therefore, the lights must be clearly identified by make, model and part number. All external light fixtures must meet the criteria for full cut-off classification as recognized by the Illuminating Engineering Society of North America (IESNA or IES), and must result in minimal light spillage onto adjacent properties (as a guideline, 0.5 fc is normally the maximum allowable spillage). In order to satisfy these criteria, the applicant must provide certification from an acceptable professional engineer. The location of all exterior fixtures, a table showing the fixture types (including make, model, part number), and the mounting heights must be included on a plan

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

Ottawa Sewer Design Guidelines (October 2012)
Ottawa Design Guidelines – Water Distribution (2010)
Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa (2007)
City of Ottawa Slope Stability Guidelines for Development Applications (revised 2012)
City of Ottawa Environmental Noise Control Guidelines (January, 2016)
City of Ottawa Park and Pathway Development Manual (2012)
City of Ottawa Accessibility Design Standards (2012)
Ottawa Standard Tender Documents (latest version)
Ontario Provincial Standards for Roads & Public Works (2013)

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).

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

The IDF information derived from the Meteorological Services of Canada rainfall data, taken from the MacDonald Cartier Airport, collected 1966 to 1997.
The existing storm system in the RoW was built pre-1970, as such the post-development peak flow rate for storm events up to and including the 100 year event will need to be controlled to the 2 year pre-development storm event. Runoff will need to be detained onsite to control all storm events, up to and including the 100 year event, with an allowable release rate calculated based on the peak flow for the pre-development 2 year event.
The pre-development runoff coefficient or a maximum equivalent 'C' of 0.5, whichever is less (§ 8.3.7.3).
A calculated time of concentration (cannot be less than 10 minutes).
Redevelopment will be expected to provide water quality protection at an enhanced level (minimum 80% TSS removal), as per the RVCA.

The proposed sanitary flows need to be provided to the City to confirm capacity / identify the impact on the downstream West Nepean Collector.

Deep Services (Storm, Sanitary & Water Supply)

- 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.
- Connections to trunk sewers and easement sewers are typically not permitted.
- 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).
- Review provision of a high-level sewer.
- Provide information on the type of connection permitted
  - Sewer connections to be made above the springline of the sewermain as per:
    - Std Dwg S11.1 for flexible main sewers – connections made using approved tee or wye fittings.
    - Std Dwg S11 (For rigid main sewers) – lateral must be less that 50% the diameter of the sewermain,
    - 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,
    - 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.
    - No submerged outlet connections.

Please refer to ISDTB – 2014-2: individual residential facilities with a basic day demand greater than 50 m3/day shall be connected with a minimum of two water services, separated by an isolation valve, to avoid the creation of a vulnerable service area.

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:

- Location of service
- Type of development and the amount of fire flow required (as per FUS, 1999).
- Average daily demand:____l/s.
- Maximum daily demand:____l/s.
- Maximum hourly daily demand:____l/s.
- Note that if Accora Village is proposed to re-develop in its entirety, the proponent may be required to (or may consider) modelling the loop along Woodridge Crescent to provide sub-division level details above.

Phase 1 ESAs and Phase 2 ESAs must conform to clause 4.8.4 of the Official Plan that requires that development applications conform to Ontario Regulation 153/04.

- Please refer to Ontario Regulation 153/04:
  - "the date the last work on all of the records review, interviews and site reconnaissance required for the phase one environmental site assessment that is the subject of the report was done is no later than 18 months before the submission of the record of site condition or the commencement of the phase two environmental site assessment" and

"the date the last work on all of the planning the site investigation, conducting the site investigation and reviewing and evaluating the information gathered through the site investigation required for the phase two environmental site assessment that is the subject of the report was done is no later than 18 months before the submission of the record of site condition or the commencement of the risk assessment".

MOECC ECA Requirements

Please note that an ECA is not required for zoning amendment however the following applies to the Site Plan Control process:

An MOECC Environmental Compliance Approval (Municipal/Private Sewage Works) will be required for the proposed development where the storm sewer network is designed to service more than one lot or parcel of land. The proposed development boundary appears to include two parcels of land.

Although not required for the rezoning amendment, please note that for Site Plan Control, there is an existing public STM sewer running through the site. Please identify the easement associated with this sewer and provide details of how this will be taken into consideration in the proposed design.

Although not required for the rezoning amendment, please note that for Site Plan Control, please ensure that all easements within the property and adjacent to the subject property are identified on the drawing set and please provide details for all easements identified.

Please contact Infrastructure Project Manager Ahmed Elsayed for follow-up questions.

**Transportation**

- Please submit an addendum/memo to the Transportation Impact Assessment previously provided.
- A noise study is required.

Please contact Transportation Project Manager, Mike Giampa for follow-up questions.

**Other**

Please refer to the links to "Guide to preparing studies and plans" and fees for general information. Additional information is available related to building permits, development charges, and the Accessibility Design Standards. Be aware that other fees and permits may be required, outside of the development review process. You may obtain background drawings by contacting informationcentre@ottawa.ca.

These pre-consultation comments are valid for one year. If you submit a development application(s) after this time, you may be required to meet for another pre-consultation meeting and/or the submission requirements may change. You are as well encouraged to contact us for a follow-up meeting if the plan/concept will be further refined.

Please do not hesitate to contact me if you have any questions.

Regards,
Laurel

**Laurel McCreight MCIP, RPP**
Planner
Development Review West
Urbaniste
Examen des demandes d'aménagement ouest

City of Ottawa | Ville d'Ottawa

613.580.2424 ext./poste 16587
ottawa.ca/planning / ottawa.ca/urbanisme

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## Description:

A Design Brief is the core submission document that illustrates how the development is designed to work with its existing and planned context, to improve its surroundings and also demonstrate how the proposal supports the overall goals of the Official Plan, relevant secondary plans, Council approved plans and design guidelines. The purpose of the Terms of Reference is to assist the applicant to organize and substantiate the design justification in support of the proposed development and to assist staff and the public in the review of the proposal.

## Authority to Request a Design Brief:

The *Planning Act* gives municipalities the authority to require that a Design Brief be prepared. Under Sections 22(4), (5) and Section 41(4) of the *Planning Act*, a Council has the authority to request such other information or material that the authority needs in order to evaluate and make a decision on an application. Section 5.2.6 of the Official Plan sets out the general requirement for a Design Brief.

## Preparation:

The Design Brief should be signed by an urban designer, licenced architect, landscape architect, or a full member of the Canadian Institute of Planners.

## When Required:

A Design Brief is required for a Site Plan Control planning application.

A Scoped Design Brief* is required when the following planning applications are applied for and not accompanied by a Site Plan Control application:

- Official Plan Amendment
- Zoning By-law Amendment (exception: a change in use which does not result in an increase in height or massing)

The requirement and scope of a Design Brief will be determined at the formal pre-application consultation meeting. Should an application be required to go to the Urban Design Review Panel (UDRP), the Design Brief may be submitted as part of the submission materials to the panel.

## Contents for Design Brief Submissions:

A Design Brief will contain and/or address the points identified during the pre-consultation meeting. Failure to address the critical elements identified in the pre-consultation meeting may result in the application being considered incomplete.

** A Scoped Design Brief is composed of:*

- *Section 1 should be combined into the Planning Rationale submission, and*
- *Section 2 items will be confirmed in the pre-application consultation meeting.*

## SECTION 1 Note: This section will be combined with the Planning Rationale report.

Application Submission:

| Not Required | Required | |
|---|---|---|
| ☐ | ☒ | State the: type of application, legal description, municipal address, purpose of the application and provide an overall vision statement and goals for the proposal. |

Response to City Documents:

| Not Required | Required | |
|---|---|---|
| ☐ | ☒ | State the Official Plan land use designation for the subject property and demonstrate how the proposal conforms to the Official Plan as it relates to the design of the subject site. Reference specific policy numbers from the Official Plan to show consistency. Justify areas of non-compliance and explain why there is non-compliance. |
| ☐ | ☒ | State the applicable plans which apply to the subject proposal: community design plan, secondary plan, concept plan and design guideline. Reference the relevant design related polices within the applicable plans/guidelines and provide a comprehensive analysis as to how the proposed development incorporates the objectives or why it does not incorporate the objectives. |

Context Plan:

| Not Required | Required | |
|---|---|---|
| ☐ | ☒ | Provide a contextual analysis that discusses/illustrates abutting properties, key destinations and linkages within a 100 meter radius (a larger radius may be requested for larger/more complex projects), such as transit stations, transportation networks for cars, cyclists, and pedestrians, focal points/nodes, gateways; parks/open spaces, topography, views towards the site, the urban pattern (streets, blocks), future and current proposals (if applicable), public art and heritage resources. |
| ☐ | ☒ | Photographs to illustrate existing site conditions and surrounding contexts. Include a map pinpointing (with numbers) where each photo is taken and correspond these numbers with the site photos. Arrows illustrating the direction the photo is taken is also useful. |

Note:
Although zoning has already been approved, it is still useful include a broader area context in the submission, including pedestrian connections, parks and open spaces, and different uses.

## SECTION 2

Design Proposal:
The purpose of the Design Proposal is to show the building elevations, exterior details, transitions in form, treatment of the public realm and compatibility with adjacent buildings, using 3-D models, illustrations, diagrams, plans, and cross sections. Referencing Official Plan, Section 5.2.1, as determined at time of pre-application consultation meeting, submissions will need to address the following in the form of labelled graphics and written explanation:

***Massing and Scale***

| Not Required | Required | |
|---|---|---|
| | | *Images which show:*<br>Building massing – from: |
| ☐ | ☐ | • at least two sides set within it current context (showing the entire height and width of the building) **OR** |
| ☐ | ☒ | • all four sides set within it current context (showing the entire height and width of the building). |
| | | Views – of the entire block, from: |
| ☐ | ☐ | • at least two perspectives to show how the proposed building is set within its current context **OR** |
| ☐ | ☒ | • all four perspectives to show how the proposed building is set within its current context. |
| ☐ | ☒ | Building transition – to adjacent uses, with labelled explanation of the transition measures used. |
| ☐ | ☒ | Grading – if grades are an issue. |
| ☐ | ☒ | Alternative building massing – additional imagery and site layouts considered and provide justification for the ultimate proposal sought. |

***Public Realm***

| Not Required | Required | |
|---|---|---|
| | | *Labelled graphics and a written explanation which show:* |
| ☐ | ☒ | Streetscape – cross sections which illustrate the street design and right of way (referencing the City's design manuals). |
| ☐ | ☒ | Relationship to the public realm – illustrating how the first few storeys of the proposed development responds to and relates to the existing context (e.g. through a podium plan and first floor plan). This is to include detailed explanation on:<br>• Architectural responses<br>• Landscaping details<br>• Public art features (in accordance with Official Plan, Section 4.11)<br>• For developments in Design Priority Areas, detail the building and site features, (in accordance with Official Plan, Section 4.11) which will enhance the public realm. Provide explanation for features which are not provided. |

***Building Design***

| Not Required | Required | |
|---|---|---|
| ☐ | X | Labelled graphics (e.g. building elevations and floor plans) and a written explanation which document the proposed exterior architectural details and design (in accordance with Official Plan, Section 5.2.1). |
| ☐ | X | For high-rise development applications, detail the building design and massing and scale elements and how they relate to the proposed high-rise development (in accordance with Official Plan, Section 5.2.1). |

***Sustainability***

| Not Required | Required | |
|---|---|---|
| ☐ | X | Any sustainable design features to be incorporated, such as green roofs or walls, sun traps, reflective or permeable surfaces. |

***Heritage***

| Not Required | Required | |
|---|---|---|
| X | ☐ | How the building relates to the historic details, materials, site and setting of any existing historic resources on or adjacent to the subject property (if applicable). |

## Additional Contents:

Some proponents may be requested to provide submission material which complements the Design Brief. These additional requirements could be incorporated into the Design Brief submission for ease of review. These will be identified at the time of application consultation meeting:

- X Site Plan
- X Landscape Plan
- X Plan showing existing and proposed servicing
- X Shadow Analysis
- X Wind Analysis

## Submission Requirements

- Six hard copies and one digital copy

## 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 | Number of copies | ENGINEERING | | S/A | Number of copies |
|---|---|---|---|---|---|
| S | 3 | 1. Site Servicing Plan | 2. Site Servicing Study | S | 3 |
| S | 3 | 3. Grade Control and Drainage Plan | 4. Geotechnical Study | S | 3 |
| | 2 | 5. Composite Utility Plan | 6. Groundwater Impact Study | | 3 |
| | 3 | 7. Servicing Options Report | 8. Wellhead Protection Study | | 3 |
| S | 4 | 9. Transportation Impact Assessment (TIA) | 10.Erosion and Sediment Control Plan | S | 3 |
| S | 3 | 11.Storm water Management Report | 12.Hydro geological and Terrain Analysis | | 3 |
| S | 3 | 13.Water Main Protection and Contingency Plan | 14.Noise and vibration Study | S | 3 |
| | PDF only | 15.Roadway Modification Functional Design | 16.LRT Proximity Study | S | 3 |

| S/A | Number of copies | PLANNING / DESIGN / SURVEY | | S/A | Number of copies |
|---|---|---|---|---|---|
| | 15 | 17.Draft Plan of Subdivision | 18.Plan Showing Layout of Parking Garage | S | 2 |
| | 5 | 19.Draft Plan of Condominium | 20.Planning Rationale | S | 3 |
| S | 10 | 21.Site Plan | 22.Minimum Distance Separation (MDS) | | 3 |
| | 15 | 23.Concept Plan Showing Proposed Land Uses and Landscaping | 24.Agrology and Soil Capability Study | | 3 |
| | 3 | 25.Concept Plan Showing Ultimate Use of Land | 26.Cultural Heritage Impact Statement | | 3 |
| S | 3 | 27.Landscape Plan | 28.Archaeological Resource Assessment Requirements: **S** (site plan) **A** (subdivision, condo) | | 3 |
| S | 1 | 29.Survey Plan | 30.Shadow Analysis | S | 3 |
| S | 3 | 31.Architectural Building Elevation Drawings (dimensioned) | 32.Design Brief (includes the Design Review Panel Submission Requirements) | S | Available online |
| S | 3 | 33.Wind Analysis | | | |

| S/A | Number of copies | ENVIRONMENTAL | | S/A | Number of copies |
|---|---|---|---|---|---|
| S | 3 | 34.Phase 1 Environmental Site Assessment | 35.Impact Assessment of Adjacent Waste Disposal/Former Landfill Site | | 3 |
| S | 3 | 36.Phase 2 Environmental Site Assessment (depends on the outcome of Phase 1) | 37.Assessment of Landform Features | | 3 |
| S | 3 | 38.Record of Site Condition (condition of Site Plan) | 39.Mineral Resource Impact Assessment | | 3 |
| | 3 | 40.Tree Conservation Report | 41.Environmental Impact Statement / Impact Assessment of Endangered Species | | 3 |
| | 3 | 42.Mine Hazard Study / Abandoned Pit or Quarry Study | 43.Integrated Environmental Review (Draft, as part of Planning Rationale) | | 3 |

| S/A | Number of copies | ADDITIONAL REQUIREMENTS | | S/A | Number of copies |
|---|---|---|---|---|---|
| S | 1 | 44. Applicant's Public Consultation Strategy (may be provided as part of the Planning Rationale) | 45. Site Lighting Plan & Certificate | S | 1 |

Meeting Date: February 17, 2021 Application Type: *Site Plan Control*

File Lead (Assigned Planner): Laurel McCreight Infrastructure Approvals PM: Ahmed Elsayed

Site Address (Municipal Address): 100 Bayshore Drive *Preliminary Assessment: 1☐ 2☐ 3☐ 4☐ 5

*One (1) indicates that considerable major revisions are required before a planning application is submitted, while five (5) suggests that proposal appears to meet the City's key land use policies and guidelines. **This assessment is purely advisory and does not consider technical aspects of the proposal or in any way guarantee application approval.**

***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, Infrastructure 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, Infrastructure and Economic Development Department.***

## McCaughey, Stephen

**From:** Elsayed, Ahmed <ahmed.elsayed@ottawa.ca>
**Sent:** Monday, March 15, 2021 10:20 AM
**To:** McCaughey, Stephen
**Cc:** McCreight, Laurel
**Subject:** RE: 100 Bayshore Drive - Inquiries for Site Plan Application

Hi Stephen,

Thanks for your follow up, about the Sanitary, there is no issue with the flows shown below, as for water, it takes 10 business days for IPU to get to us.

I will keep you posted.

Ahmed

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**From:** McCaughey, Stephen <Stephen.Mccaughey@wsp.com>
**Sent:** Monday, March 15, 2021 9:38 AM
**To:** Elsayed, Ahmed <ahmed.elsayed@ottawa.ca>
**Cc:** McCreight, Laurel <Laurel.McCreight@ottawa.ca>
**Subject:** FW: 100 Bayshore Drive - Inquiries for Site Plan Application



Hi Ahmed,

Just touching base from my inquiry last Monday, are there any questions or further information you need for water boundary conditions and sanitary capacity?

Thank you,

**Stephen McCaughey, P.Eng.**
T +1 613-690-3955 (Direct)
T +1 613-829-2800 (Office)

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**From:** McCaughey, Stephen
**Sent:** Monday, March 08, 2021 2:38 PM
**To:** ahmed.elsayed@ottawa.ca
**Subject:** 100 Bayshore Drive - Inquiries for Site Plan Application

Hi Ahmed,

Wanted to inquire regarding civil servicing capacity for this 100 Bayshore Dr. site we had a pre-consultation meeting with Laurel McCreight on.

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:

Location of service see attached (note conceptual servicing using older architectural site plan for reference, proposed location of services however is still valid)

Type of development and the amount of fire flow required (as per FUS, 1999). 8,000 L/min (133 L/s) based on letter from the Architect confirming fire resistive construction. This justification was previously presented for the site with the rezoning application.

Average daily demand: 2.86 l/s.

Maximum daily demand: 7.15 l/s.

Maximum hourly daily demand: 15.72 l/s.

The proposed sanitary flows need to be provided to the City to confirm capacity / identify the impact on the downstream West Nepean Collector.

Peak sanitary 9.92 L/s

Thank you and let me know if there are any questions,

**Stephen McCaughey, P.Eng.**
Project Engineer
Municipal Infrastructure

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T +1 613-829-2800 (Office)

300-2611 Queensview Drive
Ottawa, Ontario
K2B 8K2 Canada

**wsp.com**



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## McCaughey, Stephen

**From:** Elsayed, Ahmed <ahmed.elsayed@ottawa.ca>
**Sent:** Tuesday, March 16, 2021 12:25 PM
**To:** McCaughey, Stephen
**Cc:** McCreight, Laurel
**Subject:** RE: 100 Bayshore Drive - Inquiries for Site Plan Application
**Attachments:** 100 Bayshore March 2021.pdf

Hi Stephen,

Hereunder are the BC as received from IPU.

The following are boundary conditions, HGL, for hydraulic analysis at 100 Bayshore (zone 1W) assumed to be connected to the 203 mm on Bayshore Ave (see attached PDF for location).
Minimum HGL = 106.3 m
Maximum HGL = 115.2 m
Max Day + Fire Flow (133 L/s) = 82.5 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.*

Please let me know if you have any questions.

Ahmed

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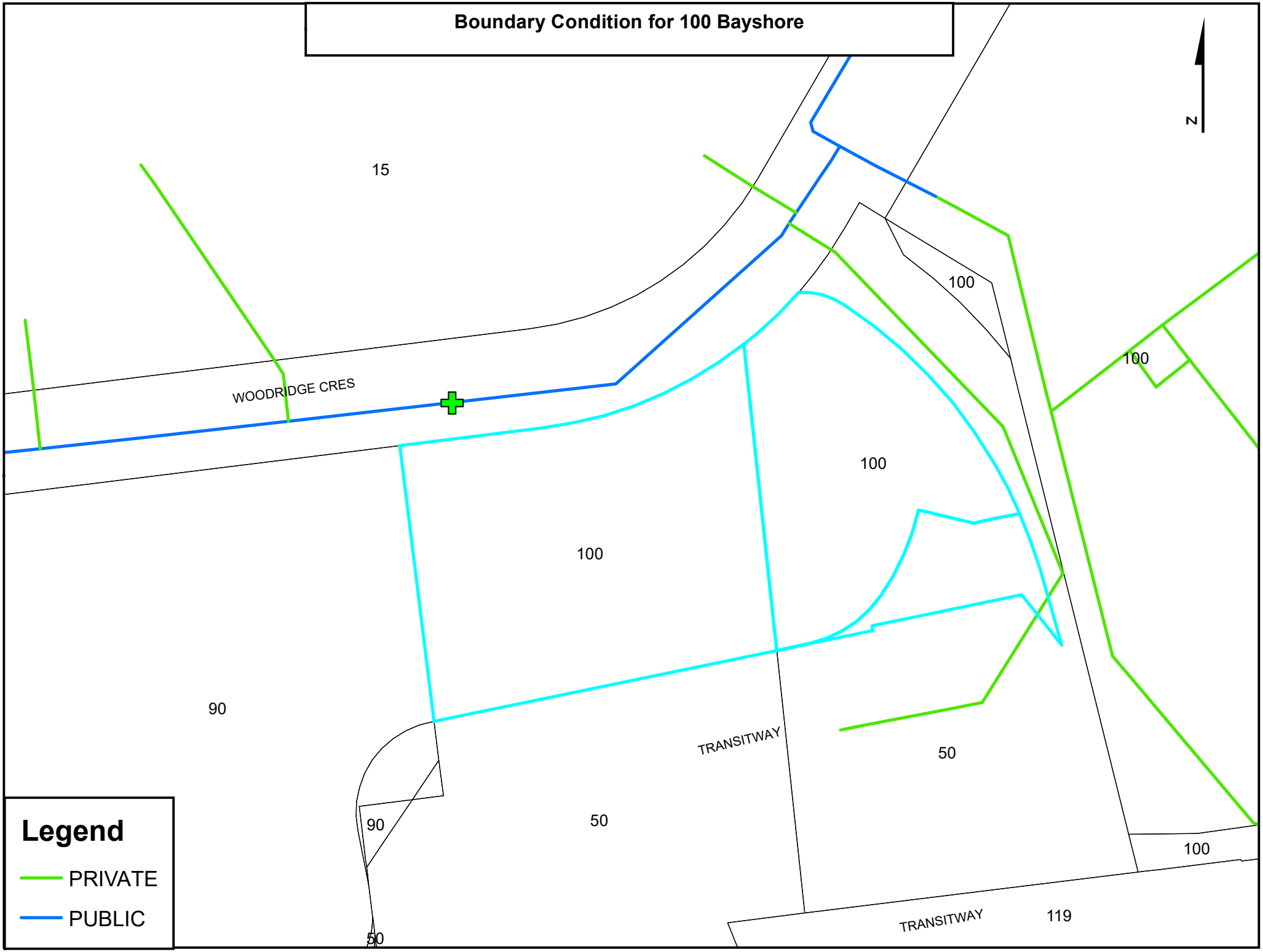
**From:** McCaughey, Stephen <Stephen.Mccaughey@wsp.com>
**Sent:** Monday, March 15, 2021 9:38 AM
**To:** Elsayed, Ahmed <ahmed.elsayed@ottawa.ca>
**Cc:** McCreight, Laurel <Laurel.McCreight@ottawa.ca>
**Subject:** FW: 100 Bayshore Drive - Inquiries for Site Plan Application



Hi Ahmed,

Just touching base from my inquiry last Monday, are there any questions or further information you need for water boundary conditions and sanitary capacity?

Thank you,


Boundary Condition for 100 Bayshore
N
15
WOODRIDGE CRES
100
100
100
100
90
TRANSITWAY
50
90
50
50
100
TRANSITWAY
119
Legend
PRIVATE
PUBLIC