Site Servicing & Stormwater Management Report
IBPS Temple – 6688 Franktown Road, Ottawa, ON.

Client:
GRC Architects

Project Number:
OTT-22027645-A0

Application Stage:
Site Plan Control

Prepared By: Aaditya Jariwala, M.Eng, P.Eng.

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Date Submitted:
December 18, 2024
Revised: June 6, 2025

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47 Clerance Street, Suite 401
Ottawa, ON K1N 9K1

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Legal Notification

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1 Introduction

EXP Services Inc. (EXP) was retained by GRC Architects on behalf of International Buddhist Progress Society (IBPS) to provide Site Servicing and Stormwater Management report for Fo Guang Shan Temple of Ottawa located in Ottawa, ON.

The property located at 6688 Franktown Road is approx. 39.87 hectares. and located just outside the village of Richmond in the City of Ottawa. The property is surrounded by farm lands along the north-east and south-west property lines, a residential development on the south-east corner and Franktown road along the frontage of the property. Refer to **Figure A1** in **Appendix A** for the site location.

The proposed Fo Guang Shan Temple is intended to be developed in two phases. Under phase one, a small temple building with approx. 360m^2 footprint was constructed in 2020 along with a septic system, private water well, 10,000 Gallon underground water tank for fire fighting and a gravel access road. The current site plan control application is for the phase two development where a new temple building with approx..1400 m^2 footprint along with stormwater management infrastructure, extension of the ex. septic system, new water well, asphalt parking lots and asphalt driveways are intended to be added. The subject development will be concentrated in approx. 3.2 hectares of the property near Franktown road, while the remainder of the property will remain as forested/vegetated lands.

This servicing and stormwater management design report will address the Servicing requirements for the proposed phase two development including the domestic and fire water, sanitary and storm servicing. The report will also cover the storm water management requirements and proposed methods to meet those requirements.

2 Existing Conditions

There is an existing temple building constructed under phase one along with a septic system, water well, underground water tank for fire fighting, an existing electrical transformer, asphalt parking lot, concrete patio and a gravel access road. The remainder of the site is forested or vegetated.

The topography of the site is fairly flat, with some depressed areas within the property. The topography is assumed to be gradually sloping to the northeast towards Franktown Road.

There is a municipal 200mm dia. sanitary force main within the Franktown Road ROW. No other known municipal infrastructure is present within the City ROW near the subject property. The stormwater runoff from the subject property is currently carried by the existing roadside ditch along Franktown Road.

3 References

Various documents were referred to in preparing the current report including:

- Sewer Design Guidelines, Second Edition, Document SDG002, October 2012, City of Ottawa (Guidelines) including:
  - Technical Bulletin ISDTB-2012-4 (20 June 2012)
  - Technical Bulletin ISDTB-2014-01 (05 February 2014)
  - Technical Bulletin PIEDTB-2016-01 (September 6, 2016)

  - Technical Bulletin ISDTB-2018-01 (21 March 2018)
  - Technical Bulletin ISDTB-2018-04 (27 June 2018)
  - Technical Bulletin ISDTB-2019-02 (08 July 2019)
- Ottawa Design Guidelines – Water Distribution, July 2010 (WDG001), including:
  - Technical Bulletin ISDTB-2014-02 (May 27, 2014)
  - Technical Bulletin ISTB-2018-02 (21 March 2018)
  - Technical Bulletin ISTB-2021-03 (18 August, 2021)
- Ontario Ministry of Transportation (MTO) Drainage Manual, 1995-1997
- 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), 2020
- Ontario Building Code 2012, Ministry of Municipal Affairs and Housing
- Servicing and Stormwater Management Report prepared by McIntosh Perry dated, July 30, 2018
- Geotechnical Report prepared by McIntosh Perry dated July 2018.
- Hydrogeological Study prepared by McIntosh Perry dated July 2018.

4 Pre-Consultation / Permits / Approvals

A pre-consultation meeting was held with the City prior to design commencement for phase 1. The notes from this meeting outlined the submission requirements and provided information to assist with the development proposal. Please refer to the meeting notes included in **Appendix E**.

Since the stormwater flows from the proposed development will discharge to the road side ditch which ultimately outlets into Jock River to the east, a direct submission to MECP for an Environmental Compliance Approval (ECA) application will be required. Additionally, an ECA application for the on-site private septic system will be required. The preparations for these ECA application are currently underway and will be submitted to MECP directly once completed.

5 Watermain Design

5.1 Existing Water Servicing

The existing temple building is serviced by a 64mm dia. watermain from a private water well. The well yield was noted as 92 L/min (1.53 L/sec) during a 6-hour pump test.

Additionally, there is an existing 10,000 Gallons underground water tank for fire fighting purposes.

5.2 Required Fire Flow

Since the new building will have a greater area and volume, the required fire flow demands were calculated for the new building only.

The required fire flow for the proposed building was estimated based on OBC Div B A-3.2.5.7. The following equation was used.

$Q = K \times V \times S_{tot}$

where:

Q = Minimum supply of water in liters
K = water supply coefficient from Table 1 OBC Div B A-3.2.5.7.
V = total building volume in cubic meters
Stot = total of spatial coefficient values from property line exposures on all sides as obtained from the formula:

Stot = 1.0 + [Sside1 + Sside2 + Sside3 +…etc.].

Spatial coefficients are a function of exposure distance and can be found in Figure 1 OBC Div B A-3.2.5.7.

The required minimum water supply flow rate is a function of Q and is given in Table 2 OBC Div B A-3.2.5.7. Table 5.1 below summarizes the parameters used for estimating the Required Fire Flows (RFF) based on the Ontario Building Code (OBC) and the latest City of Ottawa Technical Bulletins.

Table 5.1: Summary of Design Parameters Used in Calculating Required Fire Flows (RFF) Using OBC

Item	Design Value
Floors Above Grade	1 floor
Sprinklered	No
North Exposure Distance, Spatial Coefficient	>10.0m, 0.0
East Exposure Distance, Spatial Coefficient	>10.0m, 0.0
South Exposure Distance, Spatial Coefficient	>10.0m, 0.0
West Exposure Distance, Spatial Coefficient	>10.0, 0.0
S_{tot}	1.0
V(m^3)	1397 m^2 x 3.0m = 4191.0m^3
K	Based on Non-Combustible Construction and Occupancy Group A, Division 2 C, K=16
Q	67,056.00 L
Required Minimum Water Supply Flow Rate (L/min)	2700 L/min (45 L/sec) (if Q<= 108,000 L)

The estimated required fire flows (RFF) based on the OBC method is 67,056.00 L at a supply rate of 45.0 L/sec for the proposed temple building.

5.3 Proposed Domestic Water Demands

Domestic water demands were calculated for the residential occupancy and institutional occupancy. For the residential occupancy, six (6) – one bedroom units were considered. For the institutional occupancy, gross hectare area of the proposed development limit (3.25 ha) was considered.

Domestic demands for institutional development of 28,000 L/ha/day and residential demands of 280 L/person/day were used based on City of Ottawa WDG001. Additionally, even though the proposed

development will be serviced by a private well, for the conservative demands calculation, peaking factors of 9.5 and 14.3 were used for the residential demands and 1.5 and 2.7 were used for the institutional demands for max. day and peak hour demands, respectively. With the above noted considerations, tje total average day demand, max day demand and peak hour demands were calculated as 1.07 L/sec, 1.77 L/sec and 3.12 L/sec, respectively. Refer to **Table B1** in **Appendix B** for detailed information.

5.4 Proposed Water Servicing Design

The existing building is serviced by an existing private water well. Based on the Hydrogeological assessment study and site servicing and storm water management report prepared by McIntosh Perry during the phase 1 site plan application, the existing water well can sufficiently service the existing building and new building. The pump rate for the existing well during 6-hour pumping test was noted as 92 L/min.

Based on the revised Hydrogeological Assessment study dated, June 6, 2025; prepared by EGIS stated that the existing well should be sufficient to service the new water demands based on the previous pump test and the observed drawdown. Therefore, A new 100mm dia. water service is proposed for the new building to feed from the existing well. Friction loss of 2.6 psi is anticipated over a length of 142 m with ground elevation difference of 1.02m (102.0m new bldg. FFE – 100.18m ex. well ground elevation).

Additionally, mechanical engineer will have to provide booster pumps to ensure that the serviceability within the building remains between the range of 40psi and 80psi for water service.

For fire fighting purposes, 67,056L of water at 2,700 L/min rate is required. A 10,000 Gallon capacity water tank was installed during phase 1 construction. EXP had reached out to the City fire department staff to review the site specific fire fighting infrastructure requirements. Based on their input, the existing 10,000 Gallon fire water storage tank is sufficient to provide required fire flow for the new and existing building. Additionally, the staff had advised EXP to install a new dry hydrant to feed from the existing fire water tank, which is shown on the site servicing plan C100. Refer to the correspondence with the City fire department staff included in **Appendix B**.

6 Sanitary Sewer Design

6.1 Peak Design Flow

Peak sanitary design flows were estimated for the existing building and proposed building using the events list and expected attendees received from the client. Residential demands were also calculated for the six (6) – one bedroom units in the new temple building. Please refer to the table included in **Appendix D** for peak daily sewage flows and max. storage calculations**.**

Based on this events list, an average number of attendees was calculated as 97 persons. There were two events on the list which had 1000 attendees and one event with 5000 attendees. which were excluded from the demand calculations. The existing septic system was designed to treat 10,000 L/day for sewage flows (Refer to septic application included in **Appendix E**), which equates to approx. 277 persons, considering 36 L/person/day of sanitary demands. Therefore, to maintain the efficiency of the septic system and health of the bacterial community within the existing biofilter by providing regular and sufficient sewage flows to the existing septic system; a new holding tank is proposed to be added. Which will hold the additional sewage greater than 10,000 L/day temporarily from the proposed development. With addition of the new sewage holding tank, the existing septic system will be able to accommodate six (6) proposed residential units and up to 1,000 attendees as per the sequencing provided by the owners in the events list by the client. The detailed calculation of sewage flows, sequencing of the events, attendance during each event and sewage holding tank volume can be found in **Appendix D**.

The owners will arrange temporary mobile toilets during infrequent large gatherings with attendance in exceedance of 1,000 people.

Design Flows

Design flows are calculated using the sewage demands for residential and institutional occupancies as per OBC 2012 tables 8.2.1.3 (A) and 8.2.1.3 (B), respectively.

Sewage design flows for Assembly:	36 L/person/day
Max. Attendance:	1000 people
Residential Bedrooms:	6

Sewage Flows from Residential Occupancy: 3,000 L/day

Peak Design Flow: = (36L/person/day)(1,000 persons)(1/86400) + (3,000 L/day)(1/86400)

= **0.44 L/s or 39,000 L/day**

As per the previous site servicing and stormwater management report prepared by McIntosh Perry, the septic system and septic bed installed during phase 1 construction were designed for sewage flows of 9,999 L/day.

As noted above, the existing system can accommodate sewage flows from up to 277 occupants. Majority of the events on the events list provided by the client have attendance less than 97. Only three events during the year will have 1000-5000 attendees. To maintain the efficiency of the biofilter by ensuring regular and consistent sewage load, a new 50,000 L holding tank is proposed to be added. With this holding tank, sewage flows from max. 1000 attendees will be accommodated. The existing septic system treatment units and septic bed sizes will remain as-is.

Previously designed septic system prepared by McIntosh Perry is included in **Appendix E** and on drawing C100 as well as C101 for information.

The existing temple building is serviced by a 100mm dia. gravity sanitary sewer discharging into the anerobic digester. The proposed building will be serviced by a 200m dia. sanitary sewer at 0.6% having a full flow capacity of 25.8 L/sec and will discharge into a new sewage holding tank. The holding tank will be equipped with two sewage grinder pumps sized to pump at the maximum rate of 10,000 L/day. The holding tankb will also be equipped with two agitators to avoid solids from settling at the tank bottom. The electric panel for the holding tank will be mounted in the building and will have alarms set at 70% and 100% capacities based on the tank level floats. The holding tank will be connected to the existing anerobic digester. The existing building sanitary service will be re-routed to the proposed sewage holding tank as well. Size and location of the new holding tank are shown on drawing C101 – Septic System Plan. The existing septic system includes an anaerobic digester followed by waterloo biofilter tanks followed by a pump tank. The sewage from the holding tank will flow through the septic system in above mentioned order in a loop and then finally be pumped to the existing raised bed Type A septic bed at the previously design rate of 10,000 L/day.

Since the daily design sewage flow under phase 2 development will exceed 10,000 L/day, an ECA application will be required for the proposed septic system and will be submitted for a direct review to MECP.

7 Stormwater Management

7.1 Storm Design Criteria

The storm sewer system was designed in conformance with the City of Ottawa Sewer Design Guidelines (October 2012) and MECP SMPDM (March 2003). The stormwater management design criteria for the proposed development are as follows:

- Post-development peak run-off for each storm events up to and including 100-year storm event to match pre-development run-off.
- Maximum allowable ponding depth is 300 mm for surface ponding and 150mm for roof ponding.
- Minimum freeboard of 300mm between the 100-year overland spill elevation and finished floor elevation. Minimum freeboard of 150mm between the 100-year overland spill elevation and lowest grades against the building foundation.
- Quality control criteria of 80% TSS removal (Enhanced level treatment) as noted by RVCA in the pre-consultation meeting notes.

7.2 Pre-Development Conditions

The subject site was a forested/vegetated parcel before the phase 1 development. During the phase 1 development, a new temple building was added along with asphalt parking lot and concrete patio. To determine the post-development allowable release rates from the subject site, pre-development landcovers before phase 1 development were used to calculate pre-development runoff coefficient. Refer to topographic survey plan prepared by McIntosh Perry dated, February 21, 2018 included in **Appendix F**.

7.3 Allowable Release Rate

To calculate allowable release rates, pre-development average run-off coefficient was calculated for the 3.25 ha of development area. An average time of concentration was also calculated. With the pre-development average runoff coefficient of 0.25 and time of concentration of 34.88 mins; pre-development runoff rates during 2-year, 5-year and 100-year storm events were estimated using rational method.

Therefore, the allowable release rates from the subject development (phase 1 and phase 2) were calculated as 82.76 L/sec, 111.36 L/sec and 236.92 L/sec during 2-year, 5-year and 100-year storm events, respectively. Refer to **Table C1 – Table C3** in **Appendix C** for detailed calculations.

7.4 Post-Development Stormwater Management Design

In post-development conditions the existing temple building constructed under phase 1 development along with the proposed temple building, asphalt areas and landscaping within the 3.25 ha development area were considered. Using the area-weighted average method, post-development average run-off coefficients were calculated. The proposed stormwater management and drainage strategy includes sheet drainage, low slope-flat bottom vegetated swales and ditches, culverts and an extended detention dry pond equipped with a sediment forebay. Based on the proposed storm drainage strategy, the development area was divided into two post-development catchment areas A1 and A2.

Drainage area A1 consists of 1.76 ha of the site on western portion of the development with a calculated average runoff coefficient of 0.52. Area A2 consists of 1.49 ha of the site on eastern portion of the development and includes the existing temple building and surrounding areas developed during phase 1 construction. Average runoff coefficient for catchment A2 was calculated as 0.57. The total post-development average runoff coefficient for the proposed 3.25ha development was calculated as 0.55. Increase in the post-development runoff coefficient is due to increase in the impervious areas such as asphalt driveways and parking lots, building roof, concrete etc.

With a time of concentration of 10mins and calculated runoff coefficients, post-development runoff rates were estimated using rational method. Post development uncontrolled runoff during 2-year, 5-year and 100-year storm events were estimated at 380.03 L/sec, 515.55 L/sec and 1104.39 L/sec, respectively. Required

storage volumes during each storm events were estimated using the Modified Rational Method. Which were estimated at 211.1 m^3, 289.7 m^3 and 618.4 m^3 during 2-year, 5-year and 100-year storm events, respectively. These estimates were based on the allowable release rates specified in **Section 7.3** above.

A detailed stormwater management pond sizing and pond outlet structure design was carried out as per MECP SMPDM. In the Geotech investigation report prepared by McIntosh Perry dated July 2018, groundwater elevation at the site was noted to be between 1.0m-1.5m below ground surface. Due to site constraints such as high groundwater table and flat topography, a dry pond was chosen as the proposed SWM facility for achieving the quantity and quality control criteria for the proposed development.

With a drainage area of 3.25 ha and 52% imperviousness, water quality volume requirement was calculated at 110.8 m^3/ha. This equates to a total water quality volume of 360 m^3. This volume calculation was based on a normal protection level (70% TSS removal). Additionally, extended detention volume of 130 m^3 was calculated based on 40 m^3/ha. For a dry pond, extended detention volume is included in the water quality volume. With the estimated quality and quantity control volumes, the proposed dry pond was designed to have a maximum depth of 1.0m with 4:1 side slopes. Additionally, a sediment forebay was designed to provide initial treatment to the stormwater runoff from the subject development. The total designed stormwater storage volume is 1,037 m^3 out of which 134 m^3 will be provided in the sediment forebay and 903 m^3 will be provided in the dry pond. Refer to Civil drawings for further details.

With the target drawdown time/detention time of minimum 24hours, the stormwater management pond outlet structure was designed. The outlet structure will be a pre-cast or a cast-in-place concrete weir wall with a 75mm square orifice for quality control and a rectangular 0.5m wide weir for quantity control. With 75mm square orifice, the calculated drawdown time during water quality flow rate was estimated at 27 hours. The quantity control weir will restrict the peak flow rates during WQF, 2-year, 5-year and 100-year storm events to 15.03 L/sec, 82.76 L/sec, 108.19 L/sec and 230 L/sec, utilizing storage volume of 376 m^3, 458 m^3, 504 m^3 and 707 m^3, respectively. During 100year + 20% storm events (check for climate change), expected peak flowrate will be 284.30 L/sec and utilized storage will be 811 m^3. The proposed stormwater management pond will outlet into the road side ditch along Franktown Road and eventually flow to Jock River towards the east.

In addition to extended detention dry-pond, low slope flat bottom vegetated ditches were also designed as per MECP design guidelines to further improve the quality of stormwater and promote infiltration and TSS removal by maintaining flow velocities less than 0.5 m/sec. The proposed ditches will have bottom width of 0.8m and depth of 0.5m with min. 3:1 side slopes. The average longitudinal slopes were kept less than 1.0% with majority of the ditch sections at 0.5%. Based on various literature review on TSS removal efficiency of a vegetated swale, a conservative 50% TSS removal was assumed for the proposed design. Therefore, the effective TSS removal from the proposed vegetated ditches and extended detentions dry pond will be 85%. Additionally, to prevent re-suspension of the settled sediments in the dry-pond, appropriate vegetation will be planted within the dry-pond as per the landscape plan.

Refer to **Table C4** to **C14** in **Appendix C** for detailed stormwater management design calculations. **Table C15** and **C16** provides detailed ditch capacity and flow velocity calculations.

With the above presented stormwater management design and supporting calculations, stormwater management quantity and quality criteria set for the subject site (phase 1 and 2 development) can be met successfully.

8 Erosion and Sediment Control

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

- Extent of exposed soils shall be limited at any given time;
- Exposed areas shall be re-vegetated as soon as possible;
- Minimize the area to be cleared and disruption of adjacent areas;
- Visual inspection shall be completed daily on sediment control barriers and any damage will be repaired immediately. Care will be taken to prevent damage during construction operations;
- In some cases, barriers may be removed temporarily to accommodate the construction operations. The affected barriers will be reinstated at night when construction is completed;
- Sediment control devices will be cleaned of accumulated silt as required. The deposits will be disposed of as per the requirements of the contract;
- During 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; and,
- Construction and maintenance requirements for erosion and sediment controls are to comply with Ontario Provincial Standard Specification (OPSS) 805.

9 Conclusions

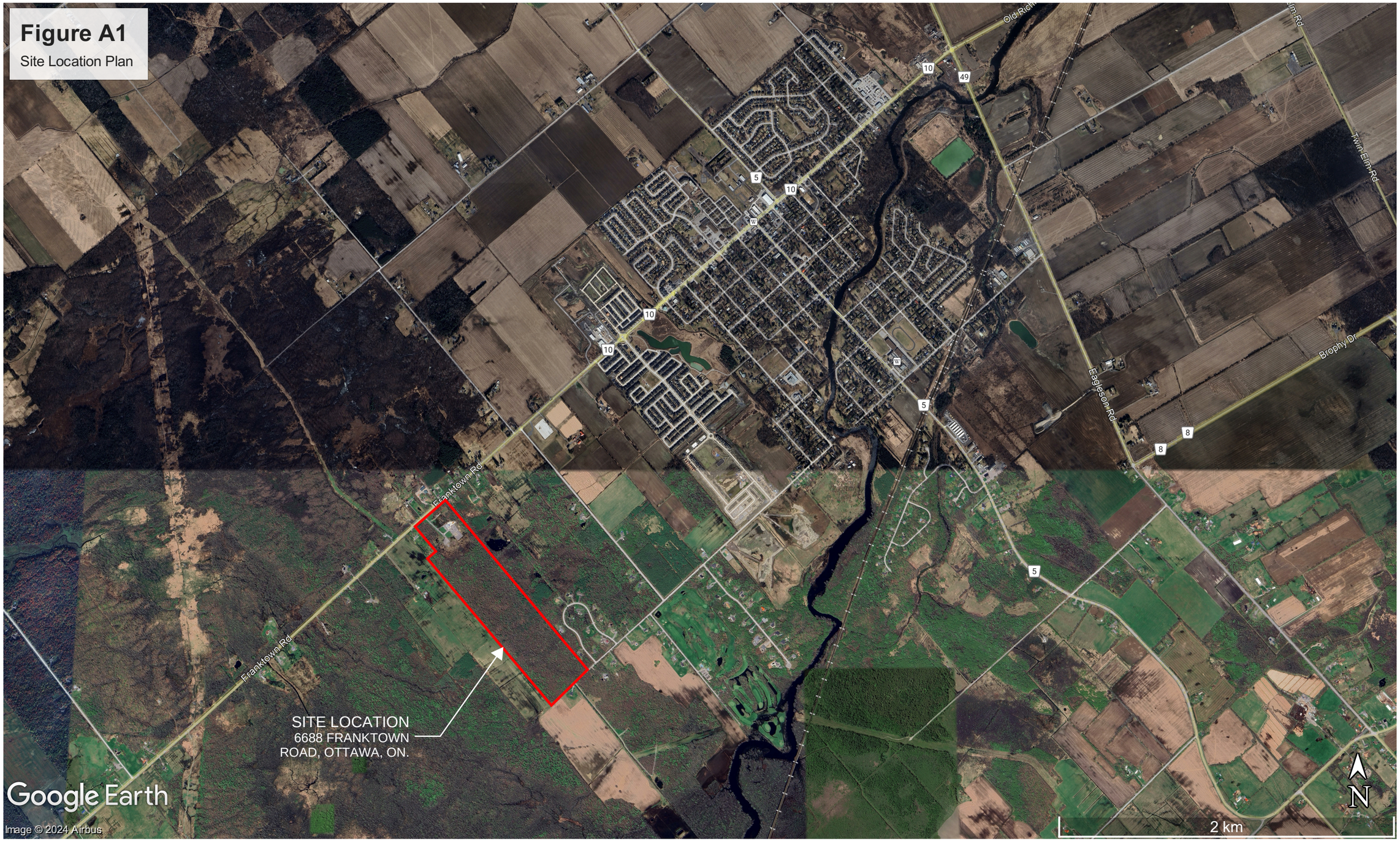
This report addresses the site servicing and stormwater management requirements for the site plan control application for the proposed development. Based on the analysis provided in this report, the conclusions are as follows:

- Proposed phase 2 development will be serviced by the existing water well for domestic demands. The existing 10m000 Gallon fire water storage tank has sufficient capacity to service both building for fire demands as confirmed by the City fire department staff.
- The proposed building will be serviced by a 200mm diameter sanitary sewer, which will discharge into a new sewage holding tank. The existing building 100mm dia. sanitary service will re-routed and connected to the new holding tank as well. The holding tank will discharge to the existing aerobic digester that was installed during phase 1 construction. It is understood that the existing septic system has a treatment capacity of 9,999 L/day. Pump rate from the new holding to the ex. Septic system will be controlled to 10,000 L/day. Therefore, the daily sewage volume treated by the ex. Septic system will remain the same. No additional changes are proposed to the existing septic treatment units and septic bed.
- Stormwater Management criteria for the proposed development will be achieved by restricting the post-development stormwater discharge rates up to and including the 100-year to the allowable release rates.
- Additionally, quality control criteria of 80% TSS removal will be achieved by low slope and flat bottom vegetated ditches as well as the proposed extended detention dry pond. The anticipated TSS removal efficiency of the proposed stormwater management system will be 85%.
- Temporary erosion and sediment control measures for the subject site have been identified.

Appendix A – Figures

Figure A1

Site Location Plan



EXP Services Inc.
IBPS Temple
6688 Franktown Road, Ottawa, ON
OTT-22027645-A0
June 6, 2025

Appendix B – Water Servicing

TABLE B1
Water Demand Chart

Junction Number (Building)	No. of Units										Total Pop	Residential Demands					Commercial/Institutional						Total Demands in (L/sec)		
	Singles/Semis/Towns				Apartments							Avg Day Demand (L/day)	Max Day Peaking Factor	Max Hour Peaking Factor	Max Day Demand (L/day)	Peak Hourly Demand (L/day)	Area (ha)	Avg Demand (L/day)	Peaking Factors (x Avg Day)		Max Day Demand (L/day)	Peak Hour Demand (L/day)	Avg Day (L/s)	Max Day (L/s)	Peak Hour (L/s)
	Single Familty	Semi	Duplex	Townhome	Bachelor	1-Bed Apt	2-Bed Apt	3-Bed Apt	4-Bed Apt	Avg Apt.									Max Day	Peak Hour					
6688 Franktown Road					6						6.0	1,680	9.50	14.30	15,960	24,024	3.25	91,000	1.5	2.7	136500.0	245700.0	1.073	1.765	3.122
Totals =					6						8.4	1,680			15,960	24,024	3.3				136,500	245,700	***1.073***	***1.765***	***3.122***

Unit Densities	**Persons/Unit**
Singles	3.4
Semi-Detached	2.7
Duplex	2.3
Townhome	2.7
Bachelor Apt Unit	1.4
1-Bed Apt Unit	1.4
2-Bed Apt Unit	2.1
3-Bed Apt Unit	3.1
4-Bed Apt Unit	4.1
Avg. Apt Unit	1.8

Residential

Residential Consumption (L/pers/day) =	280	
Max Day Peaking Factor (* avg day) =	2.5	**9.50**
Peak Hour Factor (* avg day) =	5.5	**14.30**

Based on MECP-GDWS Table 3-3. Less than 500 persons

Industrrial/Commercial/Institutional Water Consumption

Light Industrial (L/gross ha/day) =	35,000
Heavy Industrial (L/gross ha/day) =	55,000
Commer/Instit (L/gross ha/day) =	28,000
Max Day Peaking Factor (* avg day) =	1.5
Peak Hour Factor (* avg day) =	2.7

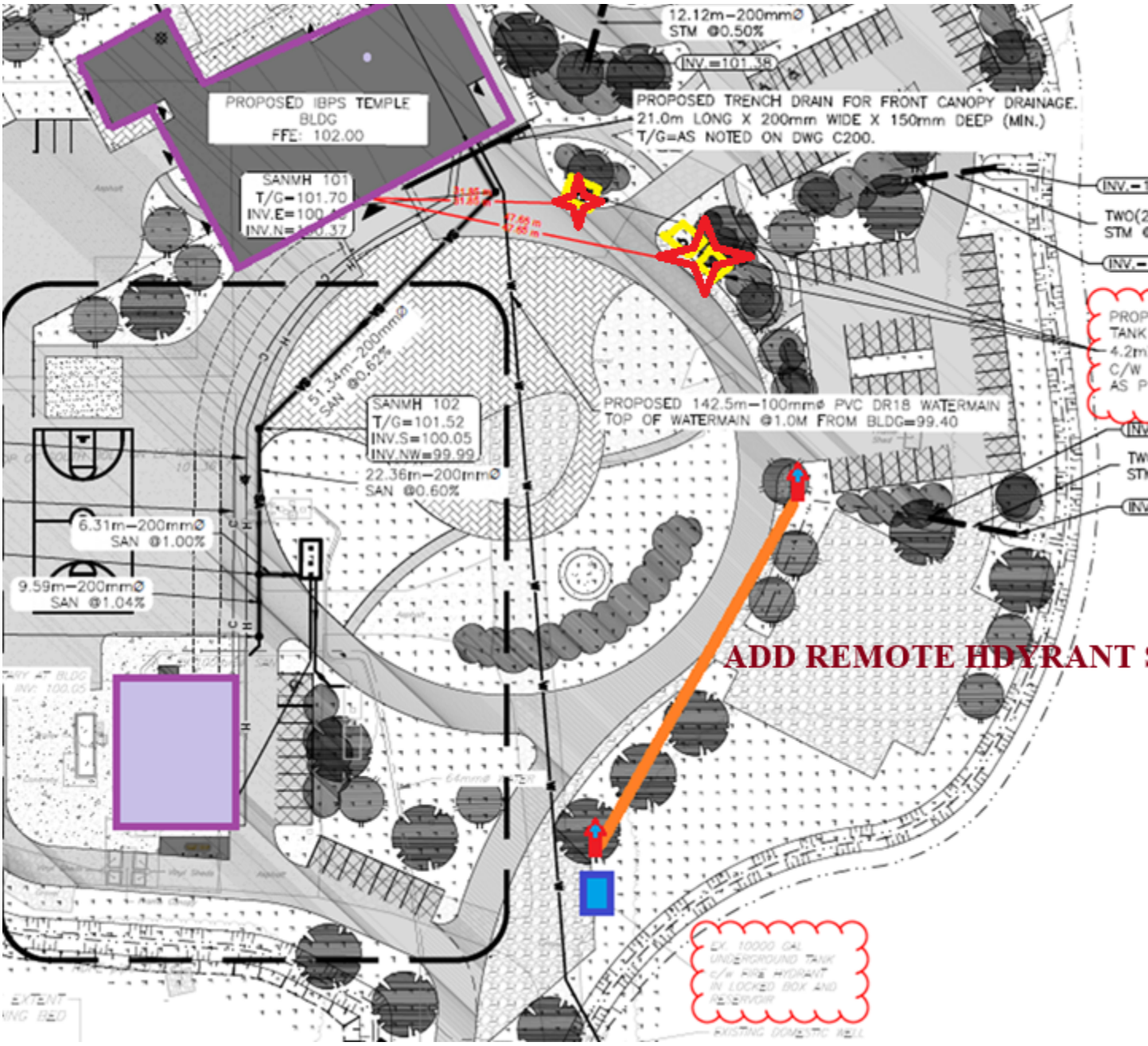
Project:	
IBPS Temple	
Designed:	Location:
Aaditya Jariwala, M.Eng., P.Eng	6688 Franktown Road, Ottawa, ON.
Checked:	
Alam Ansari, M.Sc., P.Eng	
File Reference:	Page No:
22027645 - Water - Demand Chart.xlsx	1 of 1

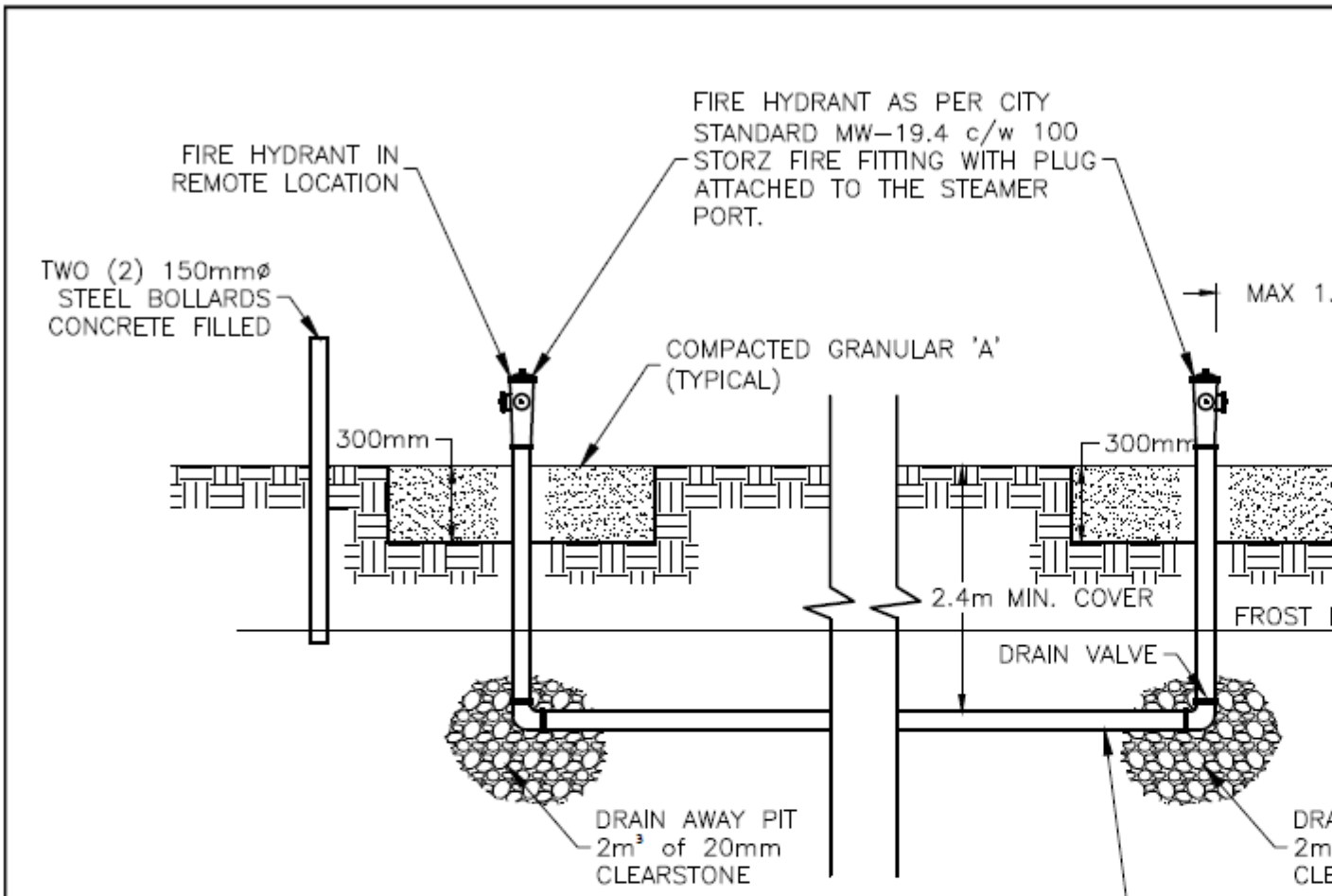
From: Evans, Allan <Allan.Evans@ottawa.ca>
Sent: Monday, April 28, 2025 1:02 PM
To: Aaditya Jariwala
Cc: Alex Leung; Caelan Mitchell; Alam Ansari; Morgan, Brian; Whittaker, Damien
Subject: RE: IBPS Temple - 6688 Franktown Road.
Attachments: Rural Water Technical Drawings.pdf

Hi everyone- thanks for the chat today. Here are my summary points:

- Eliminate 3 additional water storage tanks proposed – existing water storage is sufficient
- Add remote hydrant system roughly as shown below
    - Pipe diameter to be determined (min 6”) based upon engineering calculations/fireflow
    - Due to high water table, fire hydrants will require sealed weep holes to prevent water infiltration and subsequent freezing in winter
        - This also means when tested after install and any time used on site that they will have to be pumped dry (there are agencies that do this)
    - Note that remote fire hydrants have a specific paint pattern and placement location (near the water tank, but not too close)
- Ensure fire route maintains all OBC requirements

Happy to discuss further as needed.


12.12m–200mmØ
STM @0.50%
INV.=101.38
PROPOSED IBPS TEMPLE
BLDG
FFE: 102.00
PROPOSED TRENCH DRAIN FOR FRONT CANOPY DRAINAGE.
21.0m LONG X 200mm WIDE X 150mm DEEP (MIN.)
T/G=AS NOTED ON DWG C200.
SANMH 101
T/G=101.70
INV.E=100
INV.N=
51.34m–200mmØ
SAN @0.62%
SANMH 102
T/G=101.52
INV.S=100.05
INV.NW=99.99
22.36m–200mmØ
SAN @0.60%
PROPOSED 142.5m–100mmØ PVC DR18 WATERMAIN
TOP OF WATERMAIN @1.0M FROM BLDG=99.40
6.31m–200mmØ
SAN @1.00%
9.59m–200mmØ
SAN @1.04%
ADD REMOTE HDYRANT
EX. 10000 GAL
UNDERGROUND TANK
C/W FIRE HYDRANT
IN LOCKED BOX AND
RESERVOIR



No.	DATE	BY	REVISIONS
1	21/06/11		REVISED PER CITY

Allan Evans

Fire Protection Engineer / Ingénieur de Protection d'Incendies
Prevention Division / Prévention des Incendies

Ottawa Fire Services / Service des Incendies d'Ottawa
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Book time with Evans, Allan

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From: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Sent: April 25, 2025 1:51 PM
To: Evans, Allan <Allan.Evans@ottawa.ca>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>; Whittaker, Damien <Damien.Whittaker@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.

Ok thank you, will send an invite for Monday noon shortly.

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From: Evans, Allan <Allan.Evans@ottawa.ca>
Sent: Friday, April 25, 2025 1:49 PM

To: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>; Whittaker, Damien <Damien.Whittaker@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.

Let's do Monday at noon – I need to discuss some items with the sector chief about this site and make sure he and I are on the same page.

Brian and/or Damien are welcome to attend.

A

Allan Evans
Fire Protection Engineer / Ingénieur de Protection d'Incendies
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Book time with Evans, Allan

From: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Sent: April 25, 2025 1:25 PM
To: Evans, Allan <Allan.Evans@ottawa.ca>

Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.

Hi Allan,

I can meet today between 3PM – 4PM or anytime on Monday. Let me know. If any of the discussions are related to architectural and building code then I would have to confirm their availability as well.

Let me know,

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From: Evans, Allan <Allan.Evans@ottawa.ca>
Sent: Friday, April 25, 2025 12:31 PM
To: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.

This proposal does not work for us for location and how you are implying we would operate at this location. I think a Teams meeting to clarify some outstanding issues would be the best way to simply and move forward here. Please let me know what works for you next week – I'm available most days 9:00-2:30 but I do have other meetings schedule already.

Regards,

Allan Evans
Fire Protection Engineer / Ingénieur de Protection d'Incendies
Prevention Division / Prévention des Incendies

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Book time with Evans, Allan

From: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Sent: April 25, 2025 10:13 AM
To: Evans, Allan <Allan.Evans@ottawa.ca>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.
Importance: High

Hi Allan,

See attached plan showing the location of new tanks as well as the existing tank. Answers to your comments are provided in Red below.

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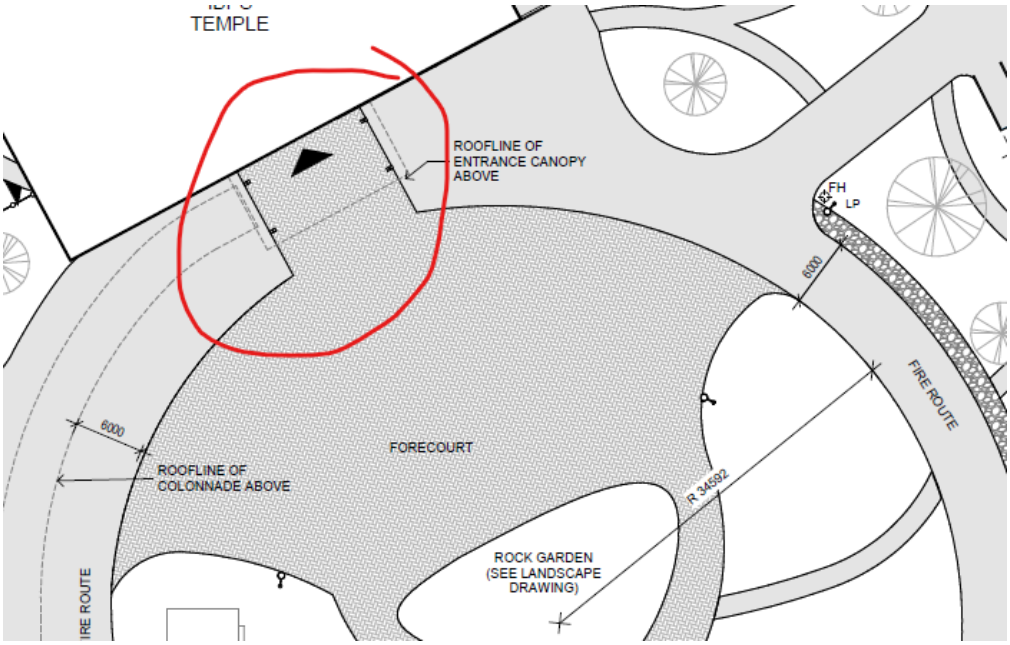
From: Evans, Allan <Allan.Evans@ottawa.ca>
Sent: Wednesday, April 16, 2025 1:10 PM
To: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>; Morgan, Brian <Brian.Morgan@ottawa.ca>
Subject: RE: IBPS Temple - 6688 Franktown Road.

Hi Aaditya – OFS does not provide fire route letters, I provide fire route comments back to planning. As long as the fire route design meets OBC requirements, there typically is only limited comments around specific access requirements for OFS as appropriate – especially in rural settings. One thing I did bring up was the overhead canopy as shown below. There is a requirement that the overhead clearance (if the fire route continues underneath) of 5m. If it is not to be part of the fire route, we would request a height signage be installed on both sides of the canopy. Additionally please show that there is a code compliant turnaround within 90m of a dead-end if the fire route does not go underneath.



3.2.5.6. Access Route Design

1) A portion of a roadway or yard provided as a required access route for fire department use shall

a) have a clear width not less than 6 m, unless it can be shown that lesser widths are satisfactory,
b) have a centre-line radius not less than 12 m,
c) have an overhead clearance not less than 5 m,
d) have a change of gradient not more than 1 in 12.5 over a minimum distance of 15 m,
e) be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions,
f) have turnaround facilities for any dead-end portion of the access route more than 90 m long, and
g) be connected with a public thoroughfare.

(See Note A-3.2.5.6.(1).)

2) For *buildings* conforming to Article 3.2.2.51. or 3.2.2.60., no portion of the access route described in Sentence 3.2.2.10.(3) shall be more than 20 m below the uppermost floor level.

In your Servicing Report you mention 3 new tanks x 10000. I have a few questions around this.

1) Location – are you proposing to add to existing tank, or is it at the location shown below circled in red? See attached plan showing location of new and existing tanks.
2) According to the OBC calculation you provided, the new building required 67060 L, yet you propose 113562L in additional storage on top of the existing storage – why? Is there a sprinkler system? Some other reason? No, the new or existing buildings are not sprinklered. We had provided additional storage for redundancy purposes until we had a contact from the City regrading this matter. We will remove one of the three tanks. So it will be 2x 10,000 Gal new tanks and 1x10,000 Gal existing tank on site.

3) Can you please provide distance from the primary entrance of the new building to the proposed location of tanks and the existing tank (travel path, not straight line). Shown on the attached plan.

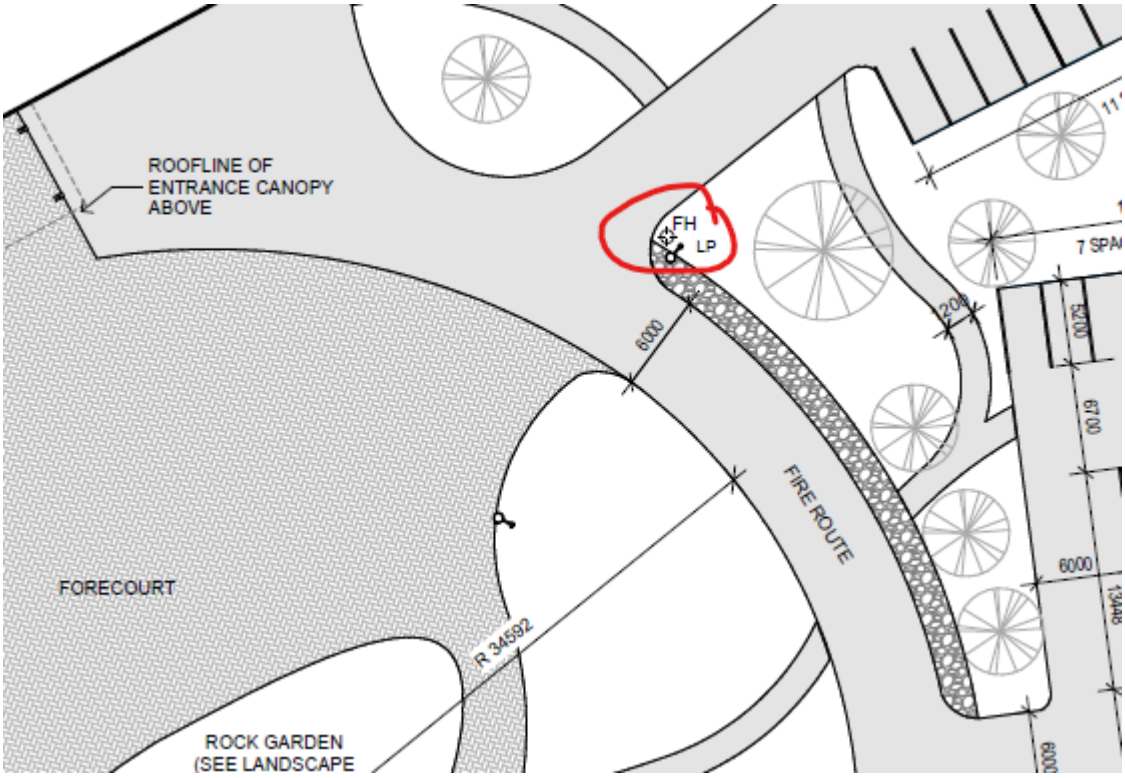


Table 5.1: Summary of Design Parameters Used in Calculating Required Fire Flows (RFF) Using OBC

Item	Design Value
Floors Above Grade	1 floor
Sprinklered	No
North Exposure Distance, Spatial Coefficient	>10.0m, 0.0
East Exposure Distance, Spatial Coefficient	>10.0m, 0.0
South Exposure Distance, Spatial Coefficient	>10.0m, 0.0
West Exposure Distance, Spatial Coefficient	>10.0, 0.0
S_{tot}	1.0
V(m^3)	1397 m^2 x 3.0m = 4191.0m^3
K	Based on Non-Combustible Construction and Occupancy Group A, Division 2 C, K=16
Q	67,056.00 L
Required Minimum Water Supply Flow Rate (L/min)	2700 L/min (45 L/sec) (if Q<= 108,000 L)

The estimated required fire flows (RFF) based on the OBC method is 45.0 L/sec for the proposed temple building.

Table J.2 – Applied Criteria

OBC Flow Rates (L/min)	Storage (Q)	Detail
2700, 3600 or 4500	Q – 57000	OBC method to be used for all fire flows < 9000 L/min
5400 or 6300	Q	OBC method to be used for all fire flows < 9000 L/min
9000	Special Evaluation	Applicant to provide calculations for OBC, FUS and National Fire Protection Association (NFPA) 1142 (possibility of two draft points required)
Sprinkler System	Special Evaluation	Applicant to provide calculations for OBC and NFPA 13.

OFS is capable of flowing approximately 4500 L/min from a single draft point. For OBC flow rates ≤ 4500 L/min, a reduction in storage volume will be applied (1,900 L/min x 30 min = 57000 L) to Q to the minimum permissible storage volume of 38000 L.

Allan Evans

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Book time with Evans, Allan

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

From: Aaditya Jariwala <Aaditya.Jariwala@exp.com>
Sent: April 16, 2025 10:40 AM
To: Evans, Allan <Allan.Evans@ottawa.ca>
Cc: Alex Leung <aleung@provencherroy.ca>; Caelan Mitchell <cmitchell@provencherroy.ca>; Alam Ansari <alam.ansari@exp.com>
Subject: IBPS Temple - 6688 Franktown Road.
Importance: High

Good morning Allan,

I am reaching out regrading the proposed development at 6688 Franktown Road in Ottawa. We had submitted to the City for SPA. In the first round of review comments, City advised us to reach out to you and get your approval letter on the fire route and on-site water storage volume for fire fighting purposes. The site is in rural area and has no access to municipal watermain. Therefore, the property will be serviced by on-site underground water storage tanks for fire demands. There is an existing temple building on-site and an existing 10,000 USGAL storage tank. As part of the proposed development, a new bigger temple building will be added along with 3 additional underground water storage tanks. The calculated volume of water for fire fighting purposes for the new building per OBC 2012 is 2700 L/min (67,056 L). With the 3 new 10,000 USGAL storage tanks each and 1 existing 10,000 USGAL tank, the total onsite storage volume for fire fighting purposes will be 151416.47 L.

See attached excerpt from our site servicing and stormwater management report. I have also attached the site plan showing the proposed fire route.

Can you please review and advise if you need any further information or clarification?

Looking forward to hearing back from you.

Best regards,

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EXP Services Inc.
IBPS Temple
6688 Franktown Road, Ottawa, ON
OTT-22027645-A0
June 6, 2025

Appendix C – Stormwater Management Design Sheet

TABLE C1

CALCULATION OF AVERAGE RUNOFF COEFFICIENTS FOR PRE-DEVELOPMENT CONDTIONS

Area No.	Roof Areas C=0.90		Asphalt Areas C=0.90		Gravel C=0.70		Grassed Areas C=0.20		Sum AC	Total Area (m^2)	C_{AVG}
	Area (m^2)	A * C	Area (m^2)	A * C	Area (m^2)	A * C	Area (m^2)	A * C			
E1	0	0	0	0	3394	2376	29303.020	5860.604	8236.502	32697.160	0.25
Site									**8236.502**	**32697.160**	**0.25**

TABLE C2

CALCULATION OF CATCHMENT TIME OF CONCENTRATION FOR PRE-DEVELOPMENT CONDITIONS

Catchment No.	Area (ha)	High Elev (m)	Low Elev (m)	Flow Path Length (m)	Indiv Slope	Avg. C	Time of Conc. Tc (mins)	Description
E1	3.2697	100.60	99.98	109.4	0.6	0.25	34.88	See Note 2

Notes

1) For Catchments with Runoff Coefficient less than C=0.40, Time of Concentration Based on Federal Aviation Formula (Airport Method), from MTO Drainage Manual Equation 8.16, where: $T_c = 3.26 * (1.1-C) * L^{0.5} / S_W^{0.33}$

2) For Catchments with Runoff Coefficient greater than C=0.40, Time of Concentration Based on Bransby Williams Equation, from MTO Drainage Manual Equation 8.15, where: $T_c = 0.057 * L / (S_W^{0.2} * A^{0.1})$

TABLE C3

CALCULATION OF PEAK RUNOFF FOR PRE-DEVELOPMENT CONDTIONS

Area No	Outlet Location	Area (ha)	Time of Conc, Tc (min)	Storm = 2 yr			Storm = 5 yr			Storm = 100 yr		
				I_2 (mm/hr)	Cavg	Q_2 (L/sec)	I_5 (mm/hr)	Cavg	Q_5 (L/sec)	I_{100} (mm/hr)	Cavg	Q_{100} (L/sec)
E1	Franktown Road	3.2697	34.88	36.14	0.25	**82.76**	48.63	0.25	**111.36**	82.78	0.31	**236.92**
Total						**82.76**			**111.36**			**236.92**

Notes

1) Intensity, $I = 732.951/(Tc+6.199)^{0.810}$ (2-year)

2) Intensity, $I = 998.071/(Tc+6.053)^{0.814}$ (5-year)

3) Intensity, $I = 1735.688/(Tc+6.014)^{0.820}$ (100-year)

4) Cavg for 100-year is increased by 25% to a maximum of 1.0

5) The standard minimium Time of Concentraion of 10 minutes was used, rather then the calaculted time, since calcualted time was less than 10 minutes.

TABLE C4

AVERAGE RUNOFF COEFFICIENTS FOR POST-DEVELOPMENT CONDITIONS

$C_{ASPH/CONC}$ = 0.90 C_{ROOF} = 0.90 C_{SLA} = 0.20 C_{GRAVEL} = 0.70

Area No.	Asphalt & Conc Areas (m^2)	A * C_{ASPH}	Roof Areas (m^2)	A * C_{ROOF}	Soft Landscaped Areas (m^2)	A * C_{SLA}	Gravel Areas (m^2)	A * C_{GRAVEL}	Sum AC	Total Area (m^2)	C_{AVG} (see note)	Comment
A1	6095.4	5485.8	511.9	460.7	8821	1764.3	2171.3	1519.9	9230.7	17600	0.52	West portion of the site
A2	6613.0	5951.7	1233.4	1110.0	6888	1377.6	183.8	128.7	8567.9	14918	0.57	East portion of the site
Totals									**17799**	**32518**	**0.55**	

Notes: Areas for each land-use are taken from CAD

TABLE C5

SUMMARY OF POST-DEVELOPMENT PEAK FLOWS (Uncontrolled and Controlled)

Area No	Area (ha)	Time of Conc, Tc (min)	Storm = WQF				Storm = 2 yr				Storm = 5 yr				Storm = 100 yr				Storm = 100 yr+20%				Comments
			C_{AVG}	I_5 (mm/hr)	Q (L/sec)	Q_{CAP} (L/sec)	C_{AVG}	I_5 (mm/hr)	Q (L/sec)	Q_{CAP} (L/sec)	C_{AVG}	I_5 (mm/hr)	Q (L/sec)	Q_{CAP} (L/sec)	C_{AVG}	I_5 (mm/hr)	Q (L/sec)	Q_{CAP} (L/sec)	C_{AVG}	I_5 (mm/hr)	Q (L/sec)	Q_{CAP} (L/sec)	
A1	1.7600	10	0.52	28.45	73.01	***15.03***	0.52	76.81	197.09	***82.76***	0.52	104.19	267.37	***108.19***	0.66	178.56	572.76	***230.00***	0.66	214.27	687.31	***284.30***	West portion of the site
A2	1.4918	10	0.57	30.60	72.88		0.57	76.81	182.94		0.57	104.19	248.17		0.72	178.56	531.63		0.72	214.27	637.96		East portion of the site
Total	**3.2518**				**145.89**	15.03			**380.03**	82.76			**515.55**	108.19			**1104.39**	230.00			**1325.27**	284.30	
Allowable Release Rates						**82.76**				**82.76**				**111.36**				**236.92**				**236.92**	

Notes

1) Intensity, I = 43C+5.9 (Water Quality Flowrate based on MECP SMPDM)

2) Intensity, I = 732.951/(Tc+6.199) $^{0.810}$ (2-year)

3) Intensity, I = 998.071/(Tc+6.053) $^{0.814}$ (5-year)

4) Intensity, I = 1735.688/(Tc+6.014) $^{0.820}$ (100-year)

5) Cavg for 100-year is increased by 25% to a maximum of 1.0

6) Time of Concentration, Tc = ***10 mins***

7) Controlled release rate is indicated by, ***49.53***

Table C6 Storage Volumes for 2-year, 5-Year and 100-Year Storms (MRM)

Area No: A1, A2
C_{AVG} = 0.55 (2-yr)
C_{AVG} = 0.55 (5-yr)
C_{AVG} = 0.68 (100-yr, Max 1.0)
Time Interval = 5.00 (mins)
Drainage Area = 3.2518 (hectares)

Actual Release Rate (L/sec) = 230.00
Percentage of Actual Rate (City of Ottawa requirement) = 100% (Set to 50% when U/G storage used)
Release Rate Used for Estimation of 100-year Storage (L/sec) = 230.00

Intensity Incr (%) = 20% Use 20% for Climate Change

Duration (mins)	Release Rate = 82.76 (L/sec), Return Period = 2 (years), IDF Parameters, A = 733.0, B = 0.810, (I = A/(T_c+C), C = 6.199					Release Rate = 108.19 (L/sec), Return Period = 5 (years), IDF Parameters, A = 998.1, B = 0.814, (I = A/(T_c+C), C = 6.053					Release Rate = 230.00 (L/sec), Return Period = 100 (years), IDF Parameters, A = 1735.7, B = 0.820, (I = A/(T_c+C), C = 6.014					Release Rate = 284.30 (L/sec), Return Period = 100+20% (years), IDF Parameters, A = 1735.7, B = 0.820, (I = A/(T_c+C), C = 6.014				
	Rainfall Intensity, I (mm/hr)	Peak Flow (L/sec)	Release Rate (L/sec)	Storage Rate (L/sec)	Storage (m^3)	Rainfall Intensity, I (mm/hr)	Peak Flow (L/sec)	Release Rate (L/sec)	Storage Rate (L/sec)	Storage (m^3)	Rainfall Intensity, I (mm/hr)	Peak Flow (L/sec)	Release Rate (L/sec)	Storage Rate (L/sec)	Storage (m^3)	Rainfall Intensity, I (mm/hr)	Peak Flow (L/sec)	Release Rate (L/sec)	Storage Rate (L/sec)	Storage (m^3)
0	167.2	827.4	82.8	744.7	0.0	230.5	1140.4	108.2	1032.2	0.0	398.6	2465.5	230.0	2235.5	0.0	478.3	2958.6	284.3	2674.3	0.0
5	103.6	512.5	82.8	429.7	128.9	141.2	698.6	108.2	590.4	177.1	242.7	1501.1	230.0	1271.1	381.3	291.2	1801.4	284.3	1517.1	455.1
10	76.8	380.0	82.8	297.3	178.4	104.2	515.5	108.2	407.4	244.4	178.6	1104.4	230.0	874.4	524.6	214.3	1325.3	284.3	1041.0	624.6
15	61.8	305.6	82.8	222.9	200.6	83.6	413.4	108.2	305.3	274.7	142.9	883.8	230.0	653.8	588.4	171.5	1060.6	284.3	776.3	698.6
20	52.0	257.5	82.8	174.7	209.6	70.3	347.6	108.2	239.4	287.3	120.0	741.9	230.0	511.9	614.3	143.9	890.3	284.3	606.0	727.2
25	45.2	223.5	82.8	140.7	211.1	60.9	301.3	108.2	193.1	289.7	103.8	642.3	230.0	412.3	618.4	124.6	770.8	284.3	486.5	729.7
30	40.0	198.1	82.8	115.4	207.7	53.9	266.8	108.2	158.6	285.6	91.9	568.2	230.0	338.2	608.8	110.2	681.8	284.3	397.5	715.6
35	36.1	178.4	82.8	95.7	200.9	48.5	240.1	108.2	131.9	276.9	82.6	510.8	230.0	280.8	589.6	99.1	612.9	284.3	328.6	690.1
40	32.9	162.6	82.8	79.9	191.6	44.2	218.6	108.2	110.4	265.0	75.1	464.8	230.0	234.8	563.5	90.2	557.7	284.3	273.4	656.2
45	30.2	149.6	82.8	66.9	180.5	40.6	201.0	108.2	92.8	250.7	69.1	427.1	230.0	197.1	532.1	82.9	512.5	284.3	228.2	616.1
50	28.0	138.7	82.8	56.0	168.0	37.7	186.3	108.2	78.1	234.4	64.0	395.6	230.0	165.6	496.7	76.7	474.7	284.3	190.4	571.1
55	26.2	129.5	82.8	46.7	154.2	35.1	173.8	108.2	65.6	216.5	59.6	368.8	230.0	138.8	458.0	71.5	442.5	284.3	158.2	522.2
60	24.6	121.5	82.8	38.8	139.5	32.9	163.0	108.2	54.8	197.3	55.9	345.7	230.0	115.7	416.6	67.1	414.9	284.3	130.6	470.0
65	23.2	114.6	82.8	31.8	124.0	31.0	153.6	108.2	45.4	177.1	52.6	325.6	230.0	95.6	372.9	63.2	390.7	284.3	106.4	415.1
70	21.9	108.4	82.8	25.7	107.8	29.4	145.3	108.2	37.1	156.0	49.8	308.0	230.0	78.0	327.4	59.7	369.5	284.3	85.2	358.0
75	20.8	103.0	82.8	20.2	91.0	27.9	138.0	108.2	29.8	134.1	47.3	292.3	230.0	62.3	280.2	56.7	350.7	284.3	66.4	298.9
80	19.8	98.1	82.8	15.4	73.7	26.6	131.4	108.2	23.2	111.6	45.0	278.3	230.0	48.3	231.7	54.0	333.9	284.3	49.6	238.2
85	18.9	93.7	82.8	11.0	56.0	25.4	125.5	108.2	17.3	88.4	43.0	265.7	230.0	35.7	181.9	51.5	318.8	284.3	34.5	176.0
90	18.1	89.8	82.8	7.0	37.9	24.3	120.2	108.2	12.0	64.7	41.1	254.3	230.0	24.3	131.1	49.3	305.1	284.3	20.8	112.5
95	17.4	86.2	82.8	3.4	19.4	23.3	115.3	108.2	7.1	40.6	39.4	243.9	230.0	13.9	79.3	47.3	292.7	284.3	8.4	47.8
100	16.7	82.9	82.8	0.1	0.6	22.4	110.9	108.2	2.7	16.1	37.9	234.4	230.0	4.4	26.6	45.5	281.3	284.3	-3.0	-17.9
Max =					**211.1**					**289.7**					**618.4**					**729.7**

Notes
1) Peak flow is equal to the product of 2.78 x C x I x A
2) Rainfall Intensity, $I = A/(Tc+C)^B$
3) Release Rate = Min (Release Rate, Peak Flow)
4) Storage Rate = Peak Flow - Release Rate
5) Storage = Duration x Storage Rate
6) Maximum Storage = Max Storage Over Duration
7) Parameters a,b,c are for City of Ottawa

City of Ottawa IDF Data (from SDG002)

IDF curve equations (Intensity in mm/hr)

100 year Intensity	$= 1735.688 / (\text{Time in min} + 6.014)^{0.820}$
50 year Intensity	$= 1569.580 / (\text{Time in min} + 6.014)^{0.820}$
25 year Intensity	$= 1402.884 / (\text{Time in min} + 6.018)^{0.819}$
10 year Intensity	$= 1174.184 / (\text{Time in min} + 6.014)^{0.816}$
5 year Intensity	$= 998.071 / (\text{Time in min} + 6.053)^{0.814}$
2 year Intensity	$= 732.951 / (\text{Time in min} + 6.199)^{0.810}$

TABLE C7
Stage-Storage Data of SWM Facility

	Elev	Incr. Elev	Total Depth Above NWL	End Area	Volume
	(m)	(m)	(m)	(m2)	(m3)
Active Storage (Dry Pond)					
Top of Pond	100.44	0.24	1.04	2097	903
Interim	100.20	0.20	0.80	1379	498
Interim	100.00	0.20	0.60	716	299
Interim	99.80	0.20	0.40	618	166
Interim	99.60	0.20	0.20	521	52
Bottom	99.40	0.00	0.00	0	0
Sediment Forebay/Ditch					
Top of Forebay Berm	100.17	0.50	1.00	465	134
Interm	99.67	0.50	0.50	87	27
Bottom of sediment forebay	99.17	0.00	0.00	2	0

Maximum Active Storage =	903
Forebay Storage =	134
Total Pond Storage (Pond + Ditch + Sediment Forebay) =	1,037
Forebay Area as percent of total area =	15%

Chart C8: Stage-Storage Curve of SWM Facility

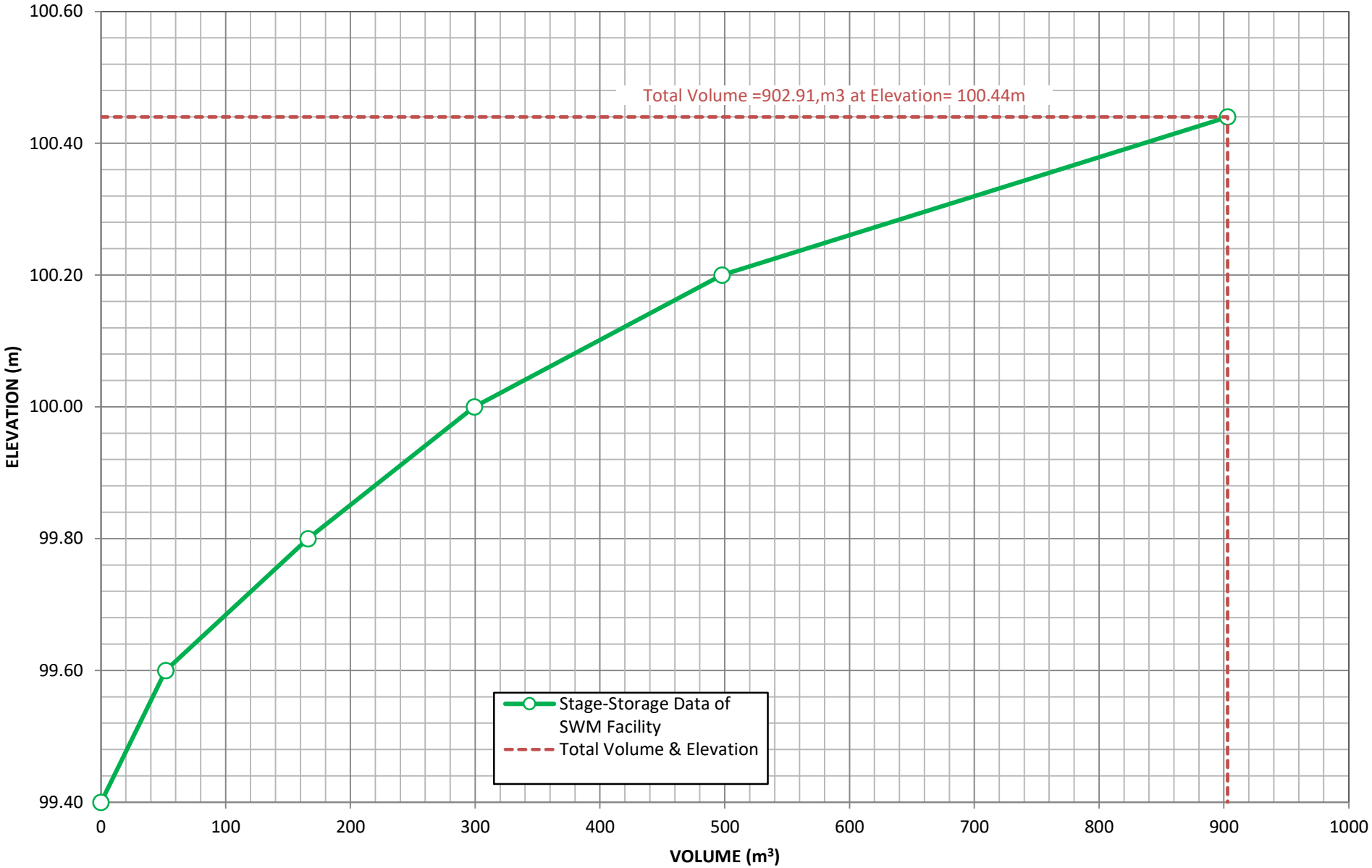


TABLE C9
Storage-Outflow Data of SWM Facility

811	100-year +20% Storm Volume (Forecasted from stage storage)
100.394	100-year+20% Storm Elev. (Forecasted based on design outflow from Table D6)
707	100-year Storm Volume (Forecasted from stage storage)
100.336	100-year Storm Elev. (Forecasted based on design outflow from Table D6)
504	5 -year Storm Volume (Forecasted from stage storage)
100.204	5-year Storm Elev. (Forecasted based on design outflow from Table D6)
458	2 -year Storm Volume (Forecasted from stage storage)
100.177	2-year Storm Elev. (Forecasted based on design outflow from Table D6)
376	Water Quality Volume (Forecasted from stage storage)
100.104	Water Quality Volume Elev. (Forecasted based on design outflow from Table D6)

1		2	
Vertical Rectangular Orifice		Broad-Crested Weir	
Width (m)	0.075	Length (m)	0.50
Height (m)	0.08	Height (m)	0.34
Area (m2):	0.00563	Area (m2):	0.17000
Coeff, C:	0.61	Coeff, C:	1.837
Orifice Inv:	99.50 m	Weir Inv:	100.10 m
Orifice Cen:	99.538 m		

WSE Elev	Comments	Quantity Volume (Note 1)	Head (Note 4)	Outflow	Head, H	Outflow	Total Flow	Storage
(m)		(m3)	(m)	(L/sec)	(m)	(L/sec)	(L/sec)	(m3)
100.44	Top of Pond	902.91	0.903	14.44	0.3400	312.2900	326.73	902.910
100.40		822.61	0.863	14.12	0.3000	275.5500	289.67	822.610
100.35		731.09	0.813	13.70	0.2500	229.6250	243.32	731.090
100.30		647.10	0.763	13.27	0.2000	183.7000	196.97	647.100
100.25		569.47	0.713	12.83	0.1500	137.7750	150.60	569.470
100.20		497.69	0.663	12.37	0.1000	91.8500	104.22	497.690
100.15		412.41	0.613	11.89	0.0500	45.9250	57.82	412.410
100.10		373.42	0.563	11.40			11.40	373.420
100.05		335.71	0.513	10.88			10.88	335.710
100.00		299.26	0.463	10.34			10.34	299.260
99.95		264.07	0.413	9.76			9.76	264.070
99.90		230.11	0.363	9.15			9.15	230.110
99.85		197.39	0.313	8.50			8.50	197.390
99.80		165.90	0.263	7.79			7.79	165.900
99.75		135.62	0.213	7.01			7.01	135.620
99.70		106.56	0.163	6.13			6.13	106.560
99.65		78.71	0.113	5.10			5.10	78.710
99.60		52.06	0.063	3.80			3.80	52.060
99.55		27.50	0.013	1.70			1.70	27.500
99.50		10.05						10.050
99.45		2.07						2.070
99.40	Bottom of Pond							

NOTES:

1) Quantity Storage values based on pond geometry and stage-storage data at 0.05m increments

2) Top of Pond = *100.44 m*

3) WSE Interval = *0.050 m*

Chart D10: Storage-Outflow Curves of SWM Facility

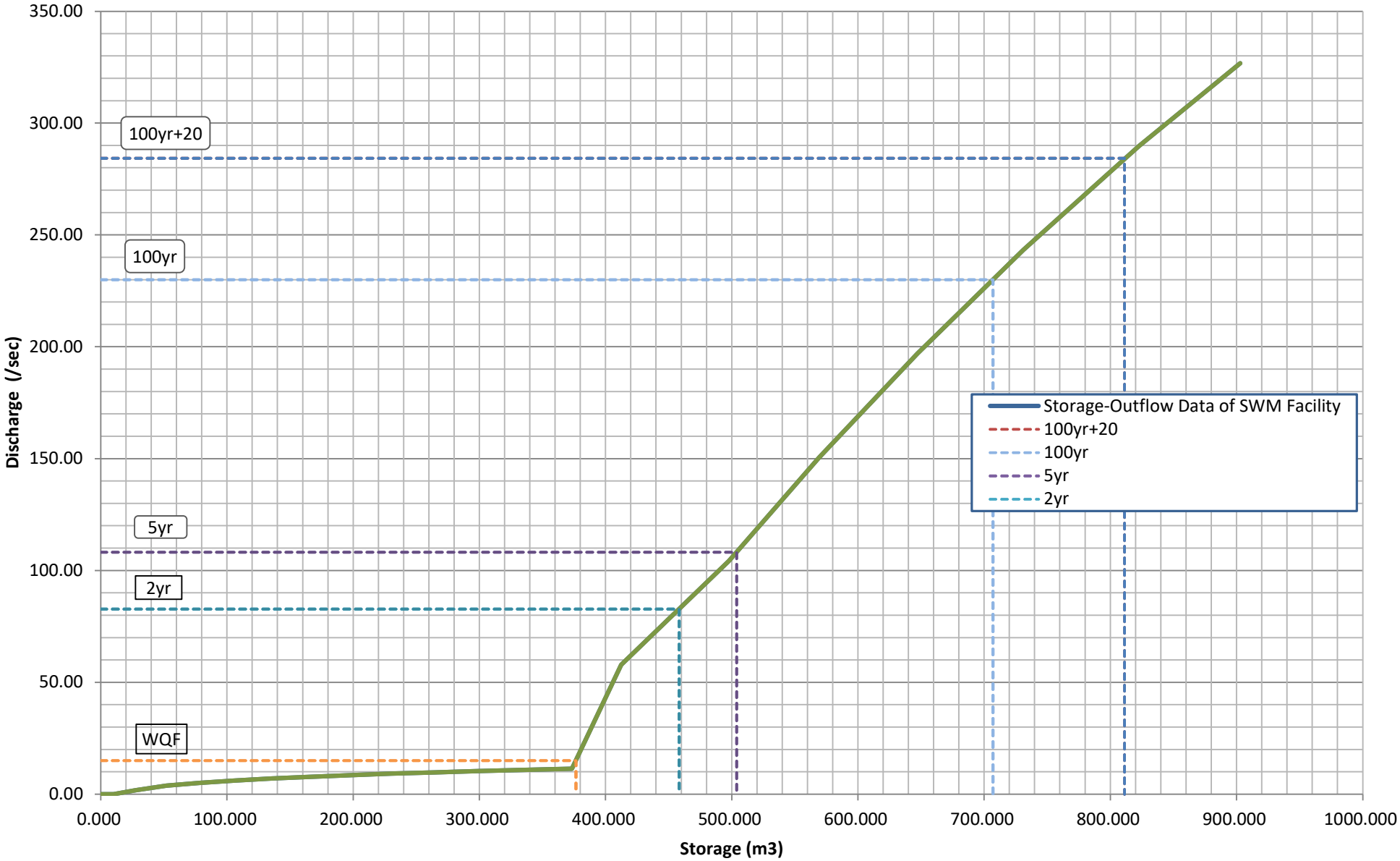


TABLE C11

SUMMARY OF WATER QUALITY VOLUMES OF SWM FACILTITY

Item	Units	Pond 1		Comment
		Requried	Provided	
Facility type		Extended Detention Dry Pond		
Drainage Area to Facility, A	ha	3.25		
Percent Imperviousness	%	52%		
Water Quality Volume Requirements, WQVV	m3/ha	110.8		Based on MOE Table 3.2
Extended Detention Volume Requirements	m3/ha	40.0		Based on 40 m3/ha
Extended Detention Volume Requirements	m3/ha	27.7		Based on 25% of WQCV
Extended Detention Volume Requirements	m3/ha	40.0		Maximum of 40 m3/h or 25% of WQCV
Permanent Pool Volume Requriements	m3/ha	0.0		WQCV - 40m3/ha for Wet Ponds, 0 for Dry Ponds
Permanent Pool Volume Req'd	m3	0	27	(WQCV - 40m3/ha) * A
Water Quality Volume Requirements	m3	360	605	Water Quality Volume = WQCV * A. Provided Volume Based on Permanent Pool + Extended Detention Volume
Extended Detention Volume, EDV	m3	130	605	Based on: 40m3/ha * A OR 25%*WQCV*A
Flood (or Quantity) Control Volume	m3	707	903	Based on City of Ottawa 100-year storm event
Extended Detention + Flood Control Vol		837	903	Extended Detention Is Included in Flood Control Volume for Wet Ponds
Forebay Volume	m3	0	134	Based on 20% of the Permanent Pool Volume per MOE, 0 for drypond
Main Cell Volume	m3	0	1037	Main Cell Volume = Permanent Pool - Forbay Volume

WATER QUALITY REQUIREMENTS FOR DRY PONDS BASED ON MOE REQUIREMENTS (From Table 3.2)

Protection Level	TSS Removal Target (%)	Drainage Area %IMP	Storage Required (m3/ha)	Stormwater Management Plan Type
Normal	*70%*	*0*	*55*	*Dry Pond. Same Level of Protection as Wet Pond*
		35	*90*	
		55	*110*	
		70	*130*	
		85	*150*	
		100	*170*	
Note: Storage Requirements for 0% and 100% are extrapolated				

TABLE C12

Area-Depth Data of SWM Facility

Elev (m)	Depth of Ponding (m)	End Area (m^2)	Comments
100.44	1.04	2,097	Top of Pond
100.10	0.70	1,158	Interim
99.60	0.20	600	Interim
99.40			Bottom

Slope coefficient from the area-depth linear regression, C2 =	2762.0
Intercept from the area-depth linear regression, C3 =	377.3

TABLE C13
Drawdown Data of SWM Facility

Top of Pond Elev (m) =	100.44
Bottom of Pond Elev (m) =	99.40
WQCV (m3) =	360
WQCE (m) =	100.03
WCD (m) =	0.63
Orifice Type =	Vertical Rectangular Orifice
Orifice Area (m2) =	0.0056
Orifice Invert Elev (m) =	99.50
Orifice Centroid Elev (m) =	99.538
Orifice Discharge Coefficient =	0.61
Weir Type =	Broad-Crested Weir
Weir Area (m2) =	0.1700
Weir Invert Elev (m) =	100.10
Weir Width (m) =	0.50
Weir Side Slopes (Z) =	1.00
Weir Discharge Coefficient =	1.84
C2 =	2,762
C3 =	377

Comments

Water Quality Control Volume Based on MOE Criteria(Table 3.2)
Water Surface Elevation for Storage of WQCV.
Depth (or height) of Water Control Volume.

LOWER ORIFICE

UPPER ORIFICE

Slope coefficient from the area-depth linear regression
Intercept from the area-depth linear regression

	Active Storage Above NWL			Quality Orifce (Lower)			Quantity Orifce (Upper)			Drawdown Time			
WSE Elev (m)	VOLUME (m3)	AREA (m2)	TOTAL DEPTH ABOVE NWL (m)	Height (m)	Area (m2)	Indiv Drawdown Time (hrs)	Height (m)	Area (m2)	Indiv Drawdown Time (hrs)	HOURS	DAYS	Outflow (L/sec)	Comments
100.44	903	2,097	0.94	0.94	0.0056	43.0	0.34	0.170	0.48	26.19	1.09	289.665	Top of Pond
100.40	823	1,914	0.90	0.90	0.0056	40.8	0.30	0.170	0.42	26.13	1.09	243.325	
100.35	731	1,746	0.85	0.85	0.0056	38.1	0.25	0.170	0.36	26.07	1.09	196.972	
100.30	647	1,613	0.80	0.80	0.0056	35.5	0.20	0.170	0.30	26.01	1.08	150.604	
100.25	569	1,492	0.75	0.75	0.0056	33.0	0.15	0.170	0.24	25.95	1.08	104.221	
100.20	498	1,379	0.70	0.70	0.0056	30.5	0.10	0.170	0.18	25.88	1.08	57.820	
100.15	412	1,258	0.65	0.65	0.0056	28.1	0.05	0.170	0.11	25.82	1.08	11.399	
100.10	373	1,158	0.60	0.60	0.0056	25.7		0.170		25.71	1.07	10.880	
100.05	336	1,067	0.55	0.55	0.0056	23.4		0.170		23.40	0.98	10.336	
100.00	299	986	0.50	0.50	0.0056	21.2		0.170		21.15	0.88	9.761	
99.95	264	912	0.45	0.45	0.0056	19.0		0.170		18.97	0.79	9.151	
99.90	230	846	0.40	0.40	0.0056	16.9		0.170		16.85	0.70	8.496	
99.85	197	791	0.35	0.35	0.0056	14.8		0.170		14.79	0.62	7.787	
99.80	166	742	0.30	0.30	0.0056	12.8		0.170		12.80	0.53	7.006	
99.75	136	701	0.25	0.25	0.0056	10.9		0.170		10.87	0.45	6.127	
99.70	107	665	0.20	0.20	0.0056	9.0		0.170		8.99	0.37	5.098	
99.65	79	632	0.15	0.15	0.0056	7.1		0.170		7.15	0.30	3.800	
99.60	52	600	0.10	0.10	0.0056	5.3		0.170		5.32	0.22	1.699	
99.55	28	534	0.05	0.05	0.0056	3.4		0.170		3.40	0.14		
99.50	10	304			0.0056			0.170					
99.45	2	144			0.0056			0.170					
99.40		60			0.0056			0.170					Bottom of Pond

NOTES:

2) Top of Pond = 100.44 m
3) WSE Interval = 0.05 m

Elev of WQ Volume =	100.034
Depth of WQ Volume =	0.634
Drawdown for WQ Volume =	**27**

$$t = \frac{0.66\ C_2 h^{1.5} + 2\ C_3 h^{0.5}}{2.75\ A_o}$$

Equation 4.11 Drawdown Time.
(Page 4-58 MOE Stormwater Management Planning and Design Manual)

where:

t = Drawdown time (seconds)
C2 = Slope coefficient from the area-depth linear regression
C3 = Intercept from the area-depth linear regression
Ao = Cross-sectional area of the orifice (m2)
h = Maximium water Elevation above the orifice

TABLE C14
SEDIMENT REMOVAL FREQUENCY

SWM Facility Type	**Extended Detention Dry Pond**
Upstream Drainge Area (ha)	**3.251796**
Imperviousness (%)	**51.7**
Requried Water Quality Vol (m3/ha)	**110.8**
Sediment Removal Frequency (years)	**33** (from Figure 6.1 Below based on WQV)

Figure 6.3: Storage Volume vs. Removal Frequency – for 70% Impervious Catchments

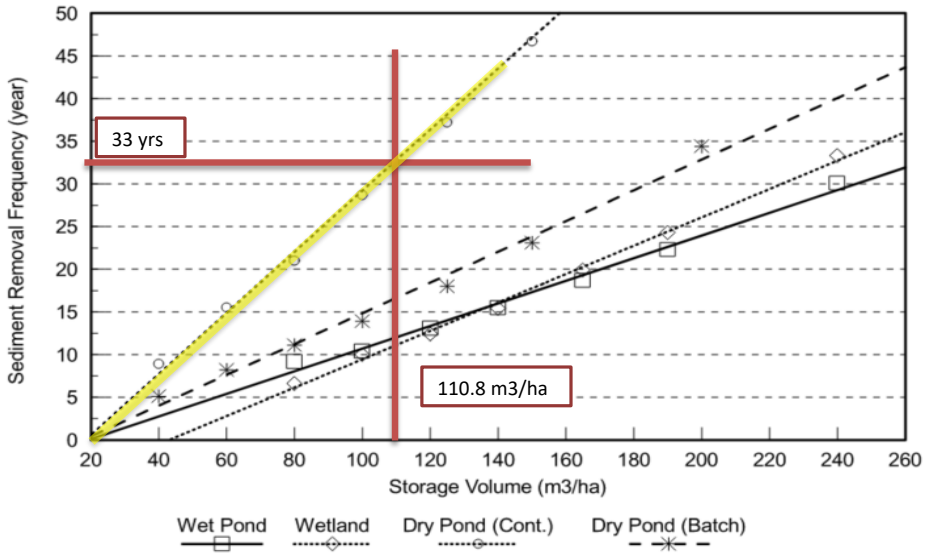


Table C15 - Full Flow Capacity of Channel-1

Channel Name:	Channel East				
Channel Type:	Trapezoidal				
Bottom Width, B =	0.8	m			
Side Slope (left) Z:1	3.0				
Side Slope (right) Z:1	3.0				
Max Depth, y	0.67	m	Flow Depth During WQF	0.16	m
$T = B + Y*(Z_1 + Z_2)$	4.820	m		1.772	m
$A = Y/2*(B + T)$	1.8827	m2		0.208332	m2
$P = B + 2*Y*\sqrt{1+Z^2}$	5.0375	m		1.8246	m
$R = A/P$	0.37374	m		0.11418	m
Manning N,	0.050	dimensionless	(kentucy bluegrass, mowed 0.10 to 0.15m high)		
	low		(depth of flow > 0.2m)		
Longitudinal Slope	0.0050	m/m			
Full Flow Capacity	**1381.5**	L/sec	Water Quality Flow (WQF)	**69.3**	L/sec
Full Flow Velocity	**0.7**	m/sec	WQF Velocity	**0.33**	m/sec

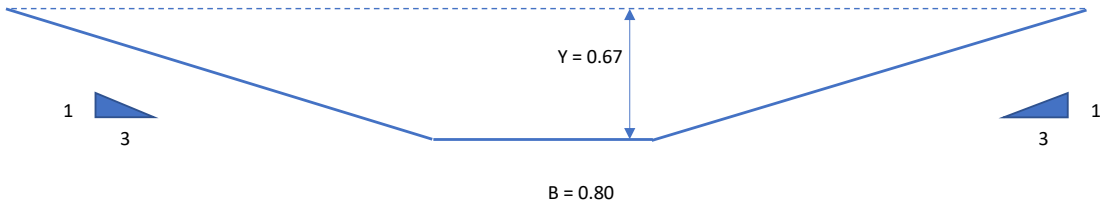
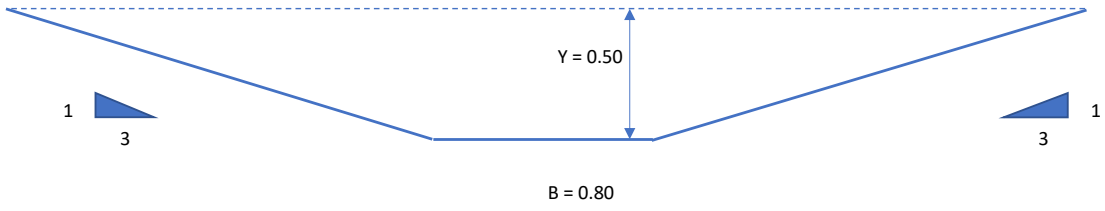


Table C16 - Full Flow Capacity of Channel-2

Channel Name:	Channel West				
Channel Type:	Trapezoidal				
Bottom Width, B =	0.8	m			
Side Slope (left) Z:1	3.0				
Side Slope (right) Z:1	3.0				
Max Depth, y	0.50	m	Flow Depth During WQF	0.17	m
$T = B + Y*(Z_1 + Z_2)$	3.800	m		1.802	m
$A = Y/2*(B + T)$	1.15	m2		0.217267	m2
$P = B + 2*Y*\sqrt{1+Z^2}$	3.9623	m		1.8562	m
R = A/P	0.29024	m		0.11705	m
Manning N,	0.050	dimensionless	(kentucy bluegrass, mowed 0.10 to 0.15m high)		
	low		(depth of flow > 0.2m)		
Longitudinal Slope	0.0050	m/m			
Full Flow Capacity	**712.9**	L/sec	Water Quality Flow (WQF)	**73.5**	L/sec
Full Flow Velocity	**0.6**	m/sec	WQF Velocity	**0.34**	m/sec



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OTT-22027645-A0
June 6, 2025

Appendix D – Sewage Flows and Storage Volume Calculations Sheet

Week	Day	Peak Attendance	Peak Attendance Used for Septic Design	Residential Population	Sewage Flows from Events (L/day)	Residential Sewage Flows (L/day)	Total Sewage Flow to be Treated (L/day)	Sewage Volume Deficit from Previous Cycle (L/day)	Daily Treatment Volume (L/day)	Sewage Storage Volume (L/day)
Week 1	Monday	0	0	6	0	3000.0	3000.0	0	3000.0	0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	200	200	6	7200	3000.0	10200.0	0.0	10000.0	200.0
Week 2	Monday	0	0	6	0	3000.0	3000.0	200.0	3200.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	130	130	6	4680	3000.0	7680.0	0.0	7680.0	0.0
	Sunday	330	330	6	11880	3000.0	14880.0	0.0	10000.0	4880.0
Week 3	Monday	0	0	6	0	3000.0	3000.0	4880.0	7880.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	300	300	6	10800	3000.0	13800.0	0.0	10000.0	3800.0
	Sunday	80	80	6	2880	3000.0	5880.0	3800.0	9680.0	0.0
Week 4	Monday	0	0	6	0	3000.0	3000.0	0.0	3000.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	100	100	6	3600	3000.0	6600.0	0.0	6600.0	0.0
	Sunday	360	360	6	12960	3000.0	15960.0	0.0	10000.0	5960.0
Week 5	Monday	0	0	6	0	3000.0	3000.0	5960.0	8960.0	0.0
	Tuesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Wednesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Thursday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Friday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Saturday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Sunday	200	200	6	7200	3000.0	10200.0	0.0	10000.0	200.0
Week 6	Monday	0	0	6	0	3000.0	3000.0	200.0	3200.0	0.0
	Tuesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Wednesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Thursday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Friday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Saturday	500	500	6	18000	3000.0	21000.0	0.0	10000.0	11000.0
	Sunday	5000	1000	6	36000	3000.0	39000.0	11000.0	10000.0	40000.0
Week 7	Monday	0	0	6	0	3000.0	3000.0	40000.0	10000.0	33000.0
	Tuesday	30	30	6	1080	3000.0	4080.0	33000.0	10000.0	27080.0
	Wednesday	30	30	6	1080	3000.0	4080.0	27080.0	10000.0	21160.0
	Thursday	30	30	6	1080	3000.0	4080.0	21160.0	10000.0	15240.0
	Friday	30	30	6	1080	3000.0	4080.0	15240.0	10000.0	9320.0
	Saturday	30	30	6	1080	3000.0	4080.0	9320.0	10000.0	3400.0
	Sunday	350	350	6	12600	3000.0	15600.0	3400.0	10000.0	9000.0
Week 8	Monday	0	0	6	0	3000.0	3000.0	9000.0	10000.0	2000.0
	Tuesday	35	35	6	1260	3000.0	4260.0	2000.0	6260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 9	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0

	Saturday	150	150	6	5400	3000.0	8400.0	0.0	8400.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 10	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	150	150	6	5400	3000.0	8400.0	0.0	8400.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 11	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Wednesday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Thursday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Friday	30	30	6	1080	3000.0	4080.0	0.0	4080.0	0.0
	Saturday	100	100	6	3600	3000.0	6600.0	0.0	6600.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 12	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 13	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	360	360	6	12960	3000.0	15960.0	0.0	10000.0	5960.0
Week 14	Monday	0	0	6	0	3000.0	3000.0	5960.0	8960.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 15	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 16	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 17	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
	Sunday	350	350	6	12600	3000.0	15600.0	2360.0	10000.0	7960.0
Week 18	Monday	0	0	6	0	3000.0	3000.0	7960.0	10000.0	960.0
	Tuesday	35	35	6	1260	3000.0	4260.0	960.0	5220.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	1000	1000	6	36000	3000.0	39000.0	0.0	10000.0	29000.0

Week 19	Monday	0	0	6	0	3000.0	3000.0	29000.0	10000.0	22000.0
	Tuesday	35	35	6	1260	3000.0	4260.0	22000.0	10000.0	16260.0
	Wednesday	35	35	6	1260	3000.0	4260.0	16260.0	10000.0	10520.0
	Thursday	35	35	6	1260	3000.0	4260.0	10520.0	10000.0	4780.0
	Friday	35	35	6	1260	3000.0	4260.0	4780.0	9040.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 20	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 21	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	1000	1000	6	36000	3000.0	39000.0	0.0	10000.0	29000.0
Week 22	Monday	0	0	6	0	3000.0	3000.0	29000.0	10000.0	22000.0
	Tuesday	35	35	6	1260	3000.0	4260.0	22000.0	10000.0	16260.0
	Wednesday	35	35	6	1260	3000.0	4260.0	16260.0	10000.0	10520.0
	Thursday	35	35	6	1260	3000.0	4260.0	10520.0	10000.0	4780.0
	Friday	35	35	6	1260	3000.0	4260.0	4780.0	9040.0	0.0
	Saturday	100	100	6	3600	3000.0	6600.0	0.0	6600.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 23	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 24	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 25	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	300	300	6	10800	3000.0	13800.0	0.0	10000.0	3800.0
	Sunday	560	560	6	20160	3000.0	23160.0	3800.0	10000.0	16960.0
Week 26	Monday	335	335	6	12060	3000.0	15060.0	16960.0	10000.0	22020.0
	Tuesday	335	335	6	12060	3000.0	15060.0	22020.0	10000.0	27080.0
	Wednesday	335	335	6	12060	3000.0	15060.0	27080.0	10000.0	32140.0
	Thursday	335	335	6	12060	3000.0	15060.0	32140.0	10000.0	37200.0
	Friday	35	35	6	1260	3000.0	4260.0	37200.0	10000.0	31460.0
	Saturday	35	35	6	1260	3000.0	4260.0	31460.0	10000.0	25720.0
	Sunday	260	260	6	9360	3000.0	12360.0	25720.0	10000.0	28080.0
Week 27	Monday	185	185	6	6660	3000.0	9660.0	28080.0	10000.0	27740.0
	Tuesday	185	185	6	6660	3000.0	9660.0	27740.0	10000.0	27400.0
	Wednesday	185	185	6	6660	3000.0	9660.0	27400.0	10000.0	27060.0
	Thursday	185	185	6	6660	3000.0	9660.0	27060.0	10000.0	26720.0
	Friday	185	185	6	6660	3000.0	9660.0	26720.0	10000.0	26380.0
	Saturday	35	35	6	1260	3000.0	4260.0	26380.0	10000.0	20640.0
	Sunday	360	360	6	12960	3000.0	15960.0	20640.0	10000.0	26600.0
Week 28	Monday	100	100	6	3600	3000.0	6600.0	26600.0	10000.0	23200.0
	Tuesday	100	100	6	3600	3000.0	6600.0	23200.0	10000.0	19800.0

	Wednesday	100	100	6	3600	3000.0	6600.0	19800.0	10000.0	16400.0
	Thursday	100	100	6	3600	3000.0	6600.0	16400.0	10000.0	13000.0
	Friday	100	100	6	3600	3000.0	6600.0	13000.0	10000.0	9600.0
	Saturday	35	35	6	1260	3000.0	4260.0	9600.0	10000.0	3860.0
	Sunday	260	260	6	9360	3000.0	12360.0	3860.0	10000.0	6220.0
Week 29	Monday	0	0	6	0	3000.0	3000.0	6220.0	9220.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	235	235	6	8460	3000.0	11460.0	0.0	10000.0	1460.0
	Sunday	460	460	6	16560	3000.0	19560.0	1460.0	10000.0	11020.0
Week 30	Monday	0	0	6	0	3000.0	3000.0	11020.0	10000.0	4020.0
	Tuesday	35	35	6	1260	3000.0	4260.0	4020.0	8280.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	235	235	6	8460	3000.0	11460.0	0.0	10000.0	1460.0
	Sunday	460	460	6	16560	3000.0	19560.0	1460.0	10000.0	11020.0
Week 31	Monday	235	235	6	8460	3000.0	11460.0	11020.0	10000.0	12480.0
	Tuesday	235	235	6	8460	3000.0	11460.0	12480.0	10000.0	13940.0
	Wednesday	235	235	6	8460	3000.0	11460.0	13940.0	10000.0	15400.0
	Thursday	235	235	6	8460	3000.0	11460.0	15400.0	10000.0	16860.0
	Friday	235	235	6	8460	3000.0	11460.0	16860.0	10000.0	18320.0
	Saturday	35	35	6	1260	3000.0	4260.0	18320.0	10000.0	12580.0
	Sunday	260	260	6	9360	3000.0	12360.0	12580.0	10000.0	14940.0
Week 32	Monday	0	0	6	0	3000.0	3000.0	14940.0	10000.0	7940.0
	Tuesday	35	35	6	1260	3000.0	4260.0	7940.0	10000.0	2200.0
	Wednesday	35	35	6	1260	3000.0	4260.0	2200.0	6460.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 33	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 34	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	100	100	6	3600	3000.0	6600.0	0.0	6600.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 35	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 36	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 37	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0

	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 38	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 39	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 40	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 41	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	185	185	6	6660	3000.0	9660.0	0.0	9660.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 42	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	185	185	6	6660	3000.0	9660.0	0.0	9660.0	0.0
Week 43	Monday	0	0	6	0	3000.0	3000.0	0.0	3000.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 44	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 45	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	100	100	6	3600	3000.0	6600.0	0.0	6600.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 46	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0

	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 47	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 48	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 49	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 50	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 51	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
Week 52	Monday	0	0	6	0	3000.0	3000.0	2360.0	5360.0	0.0
	Tuesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Wednesday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Thursday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Friday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Saturday	35	35	6	1260	3000.0	4260.0	0.0	4260.0	0.0
	Sunday	260	260	6	9360	3000.0	12360.0	0.0	10000.0	2360.0
		97	**86**		**3111.4**		**6111.4**			**40000.0**

EXP Services Inc.
IBPS Temple
6688 Franktown Road, Ottawa, ON
OTT-22027645-A0
June 6, 2025

Appendix E – Additional Information

Requirements

The following is to be brought to a Client Service Centre:

1) Application form for Site Plan Control: Application for New Development, Manager Approval, Public Consultation which can be found at: http://app06.ottawa.ca/online_services/forms/ds/site_plan_control_en.pdf
2) Application Fee Of $23,483.66
   - $21,508.66 for Site Plan Application Type
   - $ 1,000 for Engineering Design Review and Inspection Fee (unless you think should be more)
   - $975 Conservation Authority Fee
3) Plans
   - Street level visualization of the proposed development (.jpg or .pdf format) - optional
   - Survey Plan (2 copies)
   - Site Plan (10 copies)
   - Landscape Plan (10 copies) – prepared by a Landscape Architect
   - Architectural Elevation Drawings – including dimensions & materials (3 copies)
   - Grade Control and Drainage Plan (5 copies)
   - Site Servicing Plan (5 copies)
   - Stormwater Management Plan (5 copies)
   - Erosion and Sediment Control Plan (5 copies)

   All plans and drawings must be produced on A1-sized paper and folded to 21.6 cm x 27.9 cm (8½"x 11"). A scale of 1:200 is recommended for the Site and Landscape Plans.

   Studies
   - Planning Rationale including Design Statement and Integrated Environmental Review Statement (3 copies)
   - Minimum Distance Separation (MDS) (3 copies) – for institutional uses a review of a 2km radius is required.
   - Geotechnical Study (3 copies)
   - Hydrogeological and Terrain Analysis (3 copies)
   - Reasonable Use Assessment (if flows will exceed 10,000 L/d (3 copies)
   - Stormwater Management Brief (3 copies)
   - Environmental Impact Statement (3 copies)
   - Tree Conservation Report (3 copies)
   - Transportation Impact Brief (3 copies)

4) Electronic copies of all required studies and plans must be supplied on a Compact Disk on memory stick in Adobe .pdf format. These documents will be made publicly available on the City's Development Application Search Tool.

Comments

1) For more details on Development Applications can refer to links Development application review process, Guide to Preparing studies and Plans.
2) Recommend that you contact the Ward Councillor, who is Scott Moffatt (scott.moffatt@ottawa.ca or 613-580-2491), neighbours who may be impacted by the

development and the following Community groups, before submitting an application (as they will be circulated when the application is provided):

Country Club Village Community Association
Attn: Denyse MacKenzie
Phone Day: 613-253-0026
denysemackenzie@xplornet.ca
6 Links Drive South
Ashton, Ontario
K0A 1B0

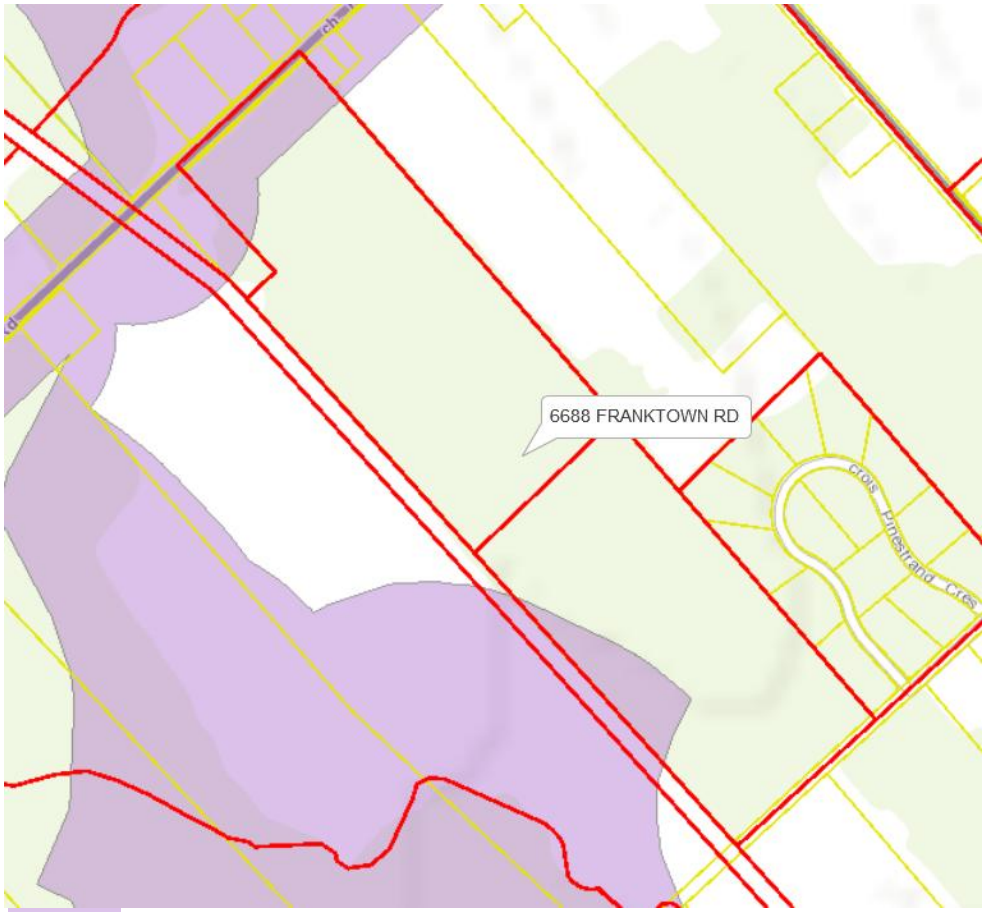
Richmond Village Association
Attn: John Shearer
Phone Day: 613-838-4830
johnshearer@richmondvillage.ca; davidproulx@richmondvillage.ca
208 Cedarstone Street
Richmond, Ontario
K0A 2Z0

3) Comments from Rideau Valley Conservation Authority (RVCA):
   - There is a ditch running along the front of the property, identified as a watercourse, tributary to the Jock River. Development is to be setback 30 metres from the watercourse. Any new crossings/relocation of culverts will be subject to a permit from the RVCA.
   - Additionally, Stormwater Management will need to demonstrate that water quality protection is maintain 80% TSS removal.
   - If the site is to be on Private Services, it may be subject to review and permitting through the Ottawa Septic Office (or MOE based on sizing)
   - Stormwater will need to be controlled post to pre for the 5 year and 100 year events.
   - the proponent will need to provide 80% TSS removal for the proposal.
   - For private on-site wastewater systems, the flows for this type of development often exceed 10,000 L/day and therefore may require approval from Ministry of the Environment and Climate Change (MOECC). If flows are less than 10,000 L per day, the Ottawa Septic System Office (OSSO) would be involved with the review through the RVCA. A permit from the OSSO or an Environmental Compliance Approval (ECA) from MOECC is normally a requirement before completion granting Site Plan Approval, to show that the proposed on-site system is consistent with the site plan.
4) Franktown Road is an arterial road. Per the City's OP a right-of-way protection of 30m is required; i.e. 15m from the existing centreline of the road to the property line.
5) The site access should be designed and implemented in accordance to the City's Private Approach By-law.
6) Depending on the interface be between the Entrance Landscape Courtyard and Franktown Road Right of Way, may want to consider a landscaped buffer between the courtyard and the front property line. The design will need to take into consideration that there is a ditch.
7) If you have any questions regarding the Transportation Impact Brief, please feel free to contact Amira directly @ amira.shehata@ottawa.ca, 613-580-2424 x 27737.
8) Planning Rationale:

- Reference to policies of the Official Plan, particularly policies 3.7.2 – General Rural Area, 3.2 – Natural Environment, 4.6.4 - Scenic Entry Route, and 4.7.5 Protection of Groundwater Resources
- References to Zoning By-law, particularly Rural Exceptions (Section 240) for RI[643r] and RI[644r], Rural Institutional Zone (Sec 223-224), Rural Countryside Zone (Section 227-228), Accessory uses, Buildings and Structures (Section 55), Place of Worship (Section 96), parking, Queuing and Loading Provisions (Section 100-114)

9) Hydrogeological:
   - Must address the fact that the subject site is within a Wellhead Protection Area
   - Will need to drill well and test it as per MOECC guidelines as a minimum (more testing may be required depending on the scope of the project—this should be discussed with the City prior to starting the hydrogeological investigation).
   - Will need to determine how MOECC defines what the City calls an accessory rooming house and what criteria to apply for the Drinking Water System.
   - Will need to include a reasonable use assessment if flows exceed 10,000 L/d.
   - Will want to start discussions with MOECC as soon as possible because it can take up to a year for their approval.
10) Require Permit To Take Water if any water taking exceeds 50,000 litres per day.
11) Not sure if MOECC will need to approve stormwater but most likely will need to approve the sewage system (if the flows >10,000 L/d). Registration with either the MOECC or the City's Health Dept. will be required depending on the category of the Drinking Water System.
12) Site Plan:
   - To show fire route
13) Environmental Impact Statement (EIS)
   - The property is indicated in Schedule L2 as part of our Natural Heritage System due to the significant woodlands which triggers an EIS along with the potential for Endangered and Threatened Species Habitat.
   - The EIS is to conform with the Council-approved guidelines which are available here: http://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/eis_guidelines2015_en.pdf
   - Consultation with the Ministry of Natural Resources and Forestry very important to ensure all endangered and threatened species are considered and some of these have very particular survey requirements, for example the Whip-poor-will.
   - Should start before the end of June due to seasonal studies being required.
   - The EIS will need to demonstrate that their project will not have a significant negative impact on the significant woodlands and that any endangered and/or threatened species habitat present is protected as per MNRF requirements.
14) Tree Conservation Report (TCR) is required to demonstrate how trees will be retained and incorporated into the landscaping.
   - could be combined with the EIS to simplify the coordination between the EIS and TCR reports.
15) The error in the zoning by-law for exception 643r has been corrected with the removal of the '-h'.
16) It appears that no development buildings are in the area of Archaeological Potential so an Archaeological Resource Assessment will not be required.
17) Will there be a connection between this property and the residential property in the northeast corner from the 6688 Franktown?

18) Design has changed significantly from the Concept Plan provided with the rezoning application, from the pre-consult in June 2005, and the downscaling noted in May of 2016..
    - Appears to be more hardscape and less features protected.
    - More parking (200 spaces)
    - Slightly larger building
    - Less uses? (previously proposed classroom, gift shop, office, main hall, conference room, storage, rooming house, pagoda
    - Private Approach - will it conform to the Private Approach By-law?
    - sculptures



Archaeological potential

Ottawa Septic System Office
Bureau des systèmes septiques d'Ottawa
3889 Rideau Valley Drive Box 599 Manotick, ON K4M 1A5
Phone: 613-692-3571 1-800-267-3504 Fax: 613-692-1507 Email: 'septic@rvca.ca

Scan - Email -Phone
Folder – CanadaPost -PickUp Box

SEPTIC APPLICATION 18-548
REQUIRED FOR ALL INQUIRIES

Address of property: 6688 Trankton N Township: OSG HUN-GLO-FIT-CUM-NEP-GOU-RID-KAN

Contact for pickup: International Buddhist Phone#/Email: (a) bingfeng.li@bingpro.ca
(b) p.leblanc@mcintoshperry.com
(b) CAN POST: 1950 Scott St.

INFORMATION FOR OWNER/APPLICANT

Attached is your Sewage System Permit. **A minimum of two inspections are required before your proposed sewage system can be approved for use (additional inspections may be required for clay soils/bedrock and/or re-inspections).** Inspections must be requested in writing. Please see attached:

- Inspection fax request form (all inspections MUST be requested in writing)
- As-built components and drawing form
- Copy of the approved application and schedule pages
- Approved Part 8 permit (applicant copy – YELLOW)**(city copy#2 – PINK ** Agent Deliver Direct To City**)**

PLEASE NOTE

- A permit is valid for 12 months from the original date of issuance noted in "*permit date*". If lapsed, it may be renewed only once for a period of 12 months *from the date of expiry.*

- No person shall make a material change or cause a material change to be made to a plan, specification, document or other information on the basis of which a permit was issued without notifying, filing details with and obtaining the authorization of the Chief Building Official. *(Building Code Act 1992, c.23, s.8(12))*

Sewage System Permit Construction Requirements

1. Clay Soils/Bedrock only (if required per issued Approval)
In clay soils/bedrock, a site preparation inspection is required. The total contact area must be properly prepared. Scarification must be done under dry conditions prior to importing leaching bed fill.

2. Installation Inspection – 2nd inspection
When the sewage system is substantially completed (i.e., before the final fill is placed over the septic tank and leaching bed system) an installation inspection is required. Prior to any inspection request, the following must be submitted:

a) "as-built components" and "as-built drawings" — see attached form
b) "engineer letter" — if the system is engineered
c) grain size analysis and weight bills for all Filter Media types of septic systems
d) Weigh bills for washed septic stone, where applicable
e) Maintenance/service contract for treatment unit installed

3. Final Grading Inspection – 3rd inspection
When construction of the sewage system is complete, a final grading inspection is required. Before a Certificate of Completion can be issued, the following must be complete:

a) The leaching bed and septic tank must be covered with sand fill and topsoil and graded accordingly
b) All conditions of the Sewage System Permit & comments on the installation inspection report must be met
c) The depth of cover & material type must be identified by inspection pipes or holes placed over trenches at 4 corners of bed
d) The 4 corners of the bed must be staked

May 2016

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

Main Phone: 613-692-3571 x 1129

SEPTIC APPLICATION 18-548 REQUIRED FOR ALL INQUIRIES

Inspection Request Form

Complete and **fax to: 613-692-1507** or **e-mail: septic@rvca.ca**

Section A. Property and General Information			
Date Submitted		**Septic File Number:**	
Civic Address			
Former Township	☐ Osgoode ☐ Cumberland ☐ Goulbourn ☐ Torbolton ☐ Nepean		
	☐ Huntley ☐ Rideau ☐ Gloucester ☐ Fitzroy ☐ Kanata ☐ Ottawa		
Property Owner			

Section B. Requestor Information			
Name of Requestor		**Phone Number:**	
E-mail		**Fax Number:**	
I am the (check one)	☐ Installer ☐ Engineer ☐ Property Owner		

Section C. I am Requesting the following:		
☐ **1st – Subgrade (If required - check one):**	☐ **2nd – Installation Inspection (Check all that apply)**	☐ **3rd – Final Grade Inspection**
☐ Scarification	**Refer to attached:**	**Note: Topsoil must be applied unless winter conditions exist at Director's discretion**
☐ Clay Seal	☐ As-Built Components Page	
☐ Subgrade	☐ As-Built Drawing	
	☐ Engineers Letter	**All deficiencies must be addressed from installation report**
	☐ Filter Media Bills	
	☐ Grain Size Analysis	
	☐ Maintenance Agreement	
	☐ ESA Permit Number:	
Notes/Comments		

Section D. Re-inspection			
☐ **Re-inspection - 1st call**	☐ **Re-inspection Request – 2nd call**		
	Note: Re-inspection fee applies on requests for same deficiency – Please provide payment information below		
	Card Type:	☐ Mastercard	☐ Visa
	Card Number:		**Expiry:**
	Cardholder Name:		
Notes/Comments			

Please Note:

- 3-5 business day turn around for inspections
- OSSO file will be given to inspector upon receipt of this request form
- PRIORITY will be given to requests that have septic file/permit numbers

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

SEPTIC PERMIT NO.

SEPTIC APPLICATION 18-548 REQUIRED FOR ALL INQUIRIES

AS-BUILT COMPONENTS

(required prior to installation inspection)

Elevations of installed system must be supplied with this report (in reference to the TBM).
Exact size and location of all structures, well(s) and system(s) and its components must be shown (including neighbouring lots).

Septic/Holding Tank: _____ L
Manufacturer: _____
❑ concrete ❑ plastic ❑ other
Filter: ❑ no ❑ yes _____ make
Treatment: Make _____
Unit: Model _____
Diameter of pipes _____ mm/inches
Make of pipes: _____
Ends: ❑ capped ❑ interconnected
Number of runs: _____ m
Length of runs: _____ m
Stone area _____ m^2

Filter media:
Amount Purchased: _____ kg
Date Purchased: _____
Supplier: _____
Grain/size analysis by: _____
Analysis dated: _____

Stone:
Amount Purchased: _____ kg
Date Purchased: _____
Supplier: _____

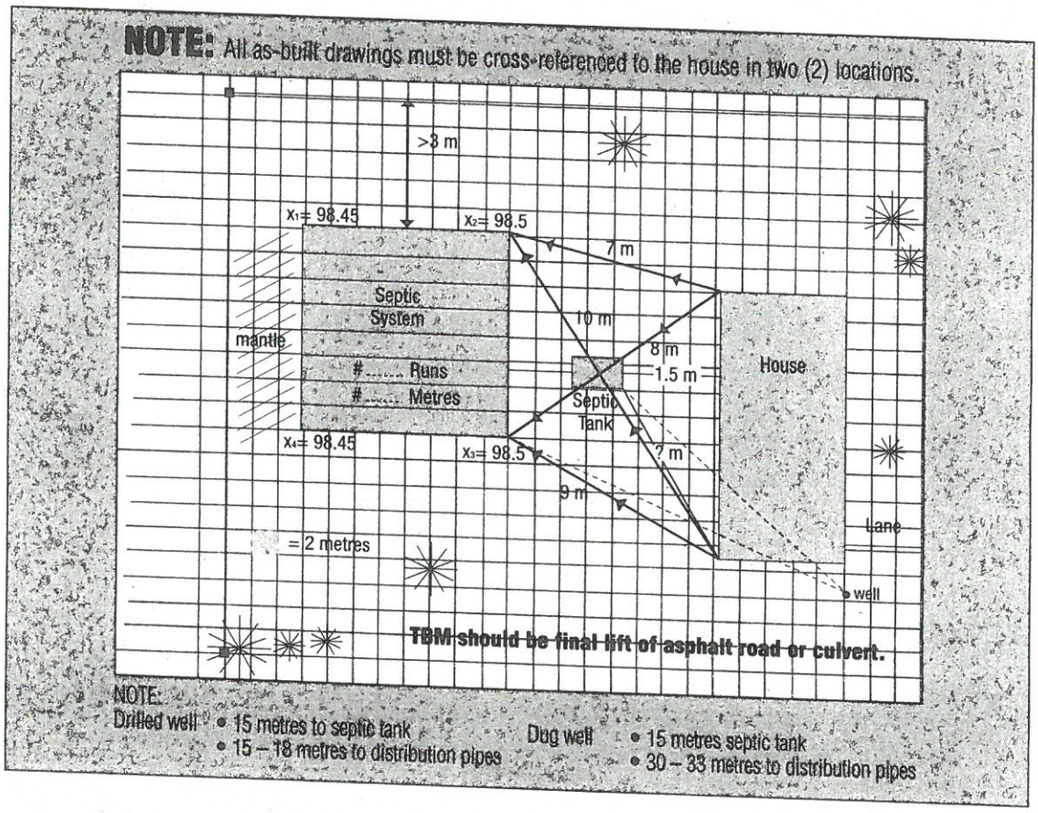
Name of owner: _____
Installer: _____
Installer Signature: _____
License Number: _____
Date of Installation: _____

Pump Systems:
ESA Permit #: _____
Volume discharge rates: _____ /15min
Alarm location: _____
Dimension of Pump Chamber: _____
Height of Float Switch: _____

Grease Interceptor:
❑ no ❑ yes Size: _____
Location: _____

*** Grain Size Analysis and weight bills must be supplied with this report.**

NOTE: All as-built drawings must be cross-referenced to the house in two (2) locations.



NOTE:
Drilled well • 15 metres to septic tank • 15 – 18 metres to distribution pipes
Dug well • 15 metres septic tank • 30 – 33 metres to distribution pipes

AS-BUILT DRAWING

SEPTIC APPLICATION
18 - 548
REQUIRED FOR ALL INQUIRIES

N

Scale: 1 = 1 metre

SEPTIC PERMIT NO.

Batch # 12778
Entry #: 10

RECEIPT CONFIRMATION

Rideau Valley C. A.
P.O. Box 599
Manotick, Ontario K4M 1A5
Canada
Phone: (613) 692-3571
Fax: (613) 692-0831

DOCUMENT NO.: PY000033782

DATE: 4/23/2019

AMOUNT RECEIVED 965.00 CAD

FROM Patrick Leblanc

SF

SIGNATURE

PAID BY: CHECK **CHECK/RECEIPT NO.:** 000012778-00010 **DATE RECEIVED:** 4/23/2019

	DESCRIPTION	AMOUNT
4300-20-20600	NEW 6688 Franktown Road (GOU) Septic File 18-548	965.00
	SUB-TOTAL:	965.00
	TOTAL:	965.00

Application for a Permit to Construct or Demolish

This form is authorized under subsection 8(1.1) of the *Building Code Act, 1992*

R.V.C.A. RECEIVED
APR 2 3 2019
SEPTIC APPLICATION
18-548
REQUIRED FOR ALL INQUIRIES

For use by Principal Authority

Application number:	Permit number (if different):
Date received:	Roll number:

Application submitted to: OTTAWA SEPTIC SYSTEM OFFICE
(Name of municipality, upper-tier municipality, board of health or conservation authority)

A. Project information

Building number, street name	Unit number	Lot/con.
6688 Franktown Road		Part Lot 19, Con 3

Municipality	Postal code	Plan number/other description
Ottawa, Geographic Township of Goulbourn	K0A 2Z0	

Project value est. $	Area of work (m^2)
	~924 sq.m

B. Purpose of application

(New construction) | Addition to an existing building | Alteration/repair | Demolition | Conditional Permit

Proposed use of building	Current use of building
Assembly/Place of Worship	N/A

Description of proposed work

Proposed development of a Class 4 leaching bed with a level IV treatment unit, and 'Type A' dispersal bed for the future development of a place of worship.
Leaching bed designed, as per this application, is intended to service the interim facility. Some components of the system which are expected to form part of a larger approval for the final build out of the development (to be approved by MECP) have been overdesigned for this reason.

C. Applicant

Applicant is: Owner or (Authorized agent of owner)

Last name	First name	Corporation or partnership	
Leblanc	Patrick	McIntosh Perry Consulting Engineers	
Street address		**Unit number**	**Lot/con.**
115 Walgreen Road, R.R. #3			
Municipality	**Postal code**	**Province**	**E-mail**
Carp	K0A 1L0	Ontario	p.leblanc@mcintoshperry.com
Telephone number	**Fax**		**Cell number**
(613) 714-4586	(613) 836-3742		(613) 229-5863

D. Owner (if different from applicant)

Last name	First name	Corporation or partnership	
		International Buddhist Progress Society of Ottawa-Carleton	
Street address		**Unit number**	**Lot/con.**
1950 Scott Street			
Municipality	**Postal code**	**Province**	**E-mail**
City of Ottawa	K1Z 8L8	Ontario	bingfeng.li@bingpro.ca
Telephone number	**Fax**		**Cell number**
(613) 759-8111	( )		( )

E. Builder (optional)

Last name	First name	Corporation or partnership (if applicable)	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ( )	Fax ( )	Cell number ( )	

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F. Tarion Warranty Corporation (Ontario New Home Warranty Program)

i. Is proposed construction for a new home as defined in the *Ontario New Home Warranties Plan Act*? If no, go to section G.	Yes	No X
ii. Is registration required under the *Ontario New Home Warranties Plan Act*?	Yes	No X

iii. If yes to (ii) provide registration number(s): _____

G. Required Schedules

i) Attach Schedule 1 for each individual who reviews and takes responsibility for design activities.

ii) Attach Schedule 2 where application is to construct on-site, install or repair a sewage system.

H. Completeness and compliance with applicable law

i) This application meets all the requirements of clauses 1.3.1.3 (5) (a) to (d) of Division C of the Building Code (the application is made in the correct form and by the owner or authorized agent, all applicable fields have been completed on the application and required schedules, and all required schedules are submitted).	Yes X	No
Payment has been made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the *Building Code Act, 1992*, to be paid when the application is made.	Yes X	No
ii) This application is accompanied by the plans and specifications prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the *Building Code Act, 1992.*	Yes X	No
iii) This application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the *Building Code Act, 1992* which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.	Yes X	No
iv) The proposed building, construction or demolition will not contravene any applicable law.	Yes X	No

I. Declaration of applicant

I Patrick Leblanc declare that:
(print name)

1. The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

Date April 23, 2019 Signature of applicant

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information

Building number, street name: 6688 Franktown Road		Unit no.	Lot/con.: Part Lot 19, Con 3
Municipality: City of Ottawa, Geographic Township of Goulbourn	Postal code: K0A 2Z0	Plan number/ other description	

B. Individual who reviews and takes responsibility for design activities

Name: Patrick Leblanc		Firm: McIntosh Perry Consulting Engineers	
Street address: 115 Walgreen Road, R.R. #3		Unit no.	Lot/con.
Municipality: Carp	Postal code: K0A 1L0	Province: Ontario	E-mail: p.leblanc@mcintoshperry.com
Telephone number: (613) 714-4586	Fax number: (613) 836-3742	Cell number: (613) 229-5863	

C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]

House	HVAC – House	Building Structural
Small Buildings	Building Services	Plumbing – House
Large Buildings	Detection, Lighting and Power	Plumbing – All Buildings
Complex Buildings	Fire Protection	On-site Sewage Systems (circled)

Description of designer's work

Proposed development of a Class 4 leaching bed with a Level IV treatment unit, and 'Type A' dispersal bed for the interim facility which will consist of a place of worship.

D. Declaration of Designer

I Patrick Leblanc declare that (choose one as appropriate):
(print name)

I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4.of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.

Individual BCIN: _____

Firm BCIN: _____

I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5.of Division C, of the Building Code.

Individual BCIN: _____

Basis for exemption from registration: _____

The design work is exempt from the registration and qualification requirements of the Building Code.

Basis for exemption from registration and qualification: P.Eng. (Licence #100141438)

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. I have submitted this application with the knowledge and consent of the firm.

Date April 23, 2019 Signature of Designer

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) (c).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

A. Project Information					
Building number, street name	6688 Franktown Road			Unit number	Lot/con. Part Lot 19, Con 3
Municipality	Ottawa, Geographic Township of Goulbourn	Postal code	K0A 2Z0	Plan number/ other description	

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B. Sewage system installer

Is the installer of the sewage system engaged in the business of constructing on-site, installing, repairing, servicing, cleaning or emptying sewage systems, in accordance with Building Code Article 3.3.1.1, Division C?

Yes (Continue to Section C) | No (Continue to Section E) | X Installer unknown at time of application (Continue to Section E)

C. Registered installer information (where answer to B is "Yes")

Name			BCIN	
Street address			Unit number	Lot/con.
Municipality	Postal code	Province	E-mail	
Telephone number ( )	Fax ( )		Cell number ( )	

D. Qualified supervisor information (where answer to section B is "Yes")

Name of qualified supervisor(s)	Building Code Identification Number (BCIN)

E. Declaration of Applicant:

I Patrick Leblanc (print name) declare that:

I am the applicant for the permit to construct the sewage system. If the installer is unknown at time of application, I shall submit a new Schedule 2 prior to construction when the installer is known;

OR

I am the holder of the permit to construct the sewage system, and am submitting a new Schedule 2, now that the installer is known.

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

Date April 23, 2019 Signature of applicant

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

Do Not Complete
Permit No _____
Revision No _____
Date _____

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Schedule 4
Proposed Services
Complete Sections 1 thru 7

1. **Engineered**
   - [X] Yes
   - [ ] No

2. **Water supply**
   - [X] Proposed
   - [ ] Existing

3. **Type of work proposed**
   - [X] New Installation
   - [ ] Replacement
   - [ ] Alteration

4. **Type of Well**
   - [ ] Dug/bored/Sandpoint well
   - [X] Drilled well
   - [ ] Municipal
   - [ ] Other

5. **Residential** Sewage Design Flow Info.
   Bedrooms _____
   House (floor area) _____ **m²**
   People _____
   Total Fixture Units _____ **(Schedule 8)**
   Residential Flow _____ **L/day**

6. Sewage Design Flow **Other Occupancies**
   Design Flow 9,999 _____ L/day
   Detailed sewage flow calculations:
   Assembly Hall, Kitchen Facilities Provided: 36L/day/seat or person
   Assume Max Accupancy in one day is 277 People
   Flow (Q) = (36L/day/Person) *(277 People) = 9,972 L/day

7. **Type of System**
   - [X] Treatment Unit Waterloo Biofilter Baskets (2x)
   - [ ] Class 2 – Leaching Pit
   - [ ] Class 3 – Cesspool
   - [ ] Class 4 – Shallow Buried Trench

   _____

   - [ ] Class 4 – Trench **(Schedule 9)**
     - [ ] Fully raised
     - [ ] Partially raised
     - [ ] In-ground
   - [ ] Class 4 – Filter Media **(Schedule 10)**
     - [ ] Fully raised
     - [ ] Partially raised
     - [ ] In-ground
   - [ ] Class 4 – BMEC Area Bed **(Schedule 11)**
     - [ ] Fully raised
     - [ ] Partially raised
     - [ ] In-ground
   - [X] Class 4 – "Type A" Dispersal **(Schedule 13)**
     - [X] Fully raised
     - [ ] Partially raised
     - [ ] In-ground
   - [ ] Class 4 – "Type B" Dispersal **(Schedule 14)**
     - [ ] Fully raised
     - [ ] Partially raised
     - [ ] In-ground
   - [ ] Class 5 – Holding Tank (9000L min)
   - [ ] Tank/TreatmentUnit/PumpChamber ONLY
   - [ ] Effluent Filter/Risers ONLY

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Schedule 5
Sewage System Details

Type of System: Class 4 Fully Raised Type A Dispersal Bed System (Schedule 4)

Septic/Holding Tank Size: 19,998 (min) Litres Make: MacGregor Concrete Products

Septic Tank Effluent Filter Make: Polylok PL-625 or Equivalent Model: MAC-23000-1P

Treatment Unit – Make & Model: Waterloo Biofilter (2x Biofilter Medium Filled Baskets)

Number of Units: 1 Other:

Refer to Typical Drawing # E Pump(s) required yes

Mantle Information: Pump Rate as per Waterloo

Native or (imported) ≈15m in S-E direction(s) **Note:** Alarm required for all pumping systems

Slope subgrade N/A % slope

direction(s)

Site to be Scarified (If clay) YES / (NO)

Clay Seal Required (If bedrock) YES / (NO)

☐ **Trench**

Distribution Pipe Length _____ m

Loading Area _____ m^2

Type of Chamber _____

Length of Chamber _____ m

☐ **BMEC Area Bed**

☒ **Type A**

☐ **Type B**

Stone _____ m^2

Sand _____ m^2

Pipe _____ m

Linear Loading _____ L/m^2

☐ **Shallow Buried Trench**

Pipe Length _____ m

☐ **Filter Media Bed**

Stone _____ m^2

Extended Base _____ m^2

Pipe _____ m

Weight of Filter Media _____ Kg

Loading Area _____ m^2

☐ **Tank/Treatment Unit/Pump Chamber Replacement** ONLY

☐ **Effluent Filter & Riser** ONLY

Construction Notes:

All tanks, piping and connections below original grade shall be sealed to prevent groundwater infiltration. Additionally, floatation protection shall be reviewed by contractor prior to installation for all tanks and accounted for during installation if determined to be required during review.

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Schedule 6
Soil and Water Table Information
(Minimum depth of test pit: 2 metres)

Name of Applicant/Agent: Patrick Leblanc
Date: October 18, 2018 Time: 11:30 AM
Applicant/Agent Signature:

Inspector:
Date: April 30/19 Time: 9:00AM
Inspector Signature:

EG (……..)	Soil Description	T	EG (……..)	Soil Description	
.5m			.5m		
0.74 m					
1.0 m			1.0 m		
			1.5m		
			2.0 m		
1.0 m			.5m		
1.5m			1.0 m		
2.0 m			1.5m		
			2.0 m		

See Attached Test Pit Logs

Test pits not available for inspection. Engineer assumes all liability for soil and HGWT info/elev's.

LEGEND

BR = Bedrock
GWT = Ground water table
HGWT = High ground water table
M = metres
EG = Existing grade
T = percolation rate

McINTOSH PERRY **TEST PIT ID:** TP1 **SHEET** 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth	Symbol	Description	Notes	Sample Type
0 m		Ground Surface		
		Topsoil (0m to 0.15m)		
0.2		Clay (0.15m to 0.90m)		
0.4				
0.6				
0.8				
		EOH @ 0.90m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP2

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2				
		Reddish brown Brown Sand becoming lighter brown with depth (0.25m to 0.91m)		
0.4				
0.6				
0.8				
		EOH @ 0.91m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP3

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.1m)		
0.2		Medium Brown Sand (0.1m to 0.30m)		
0.4		Clayey Sand to Sandy Clay, with clay content increasing with depth (0.3m to 0.90m)		
0.6				
0.8				
1.0		EOH @ 0.90m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP4

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.1m)		
0.2		Clayey Sand to Sandy Clay, with clay content increasing with depth (0.1m to 0.90m)		
0.4				
0.6				
0.8				
		EOH @ 0.90m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP5

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.1m)		
0.2		Brown sand becoming grey with depth, trace clay (0.1m to 0.9m)		
0.4				
0.6				
0.8				
		EOH @ 0.90m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP6

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.15m)		
0.2		Medium brown sand (0.15m to 0.9m)	Rust mottling visible in upper sand layer	
0.4				
0.6				
0.8				
1.0		EOH @ 0.90m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

REVIEWED BY: Patrick Leblanc

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP7

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2				
		Rusty red sand becoming lighter brown with depth (0.25m to 0.84m)		
0.4				
0.6				
0.8		EOH @ 0.84m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP8

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2				
		Medium red and brown sand becoming light brown with depth (0.25m to 0.94m)		
0.4				
0.6				
0.8				
1.0		EOH @ 0.94m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP9

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2				
		Medium brown sand with rust mottling throughout, becoming light brown with depth (0.25m to 0.97m)		
0.4				
0.6				
0.8				
1.0		EOH @ 0.97m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP10

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.10m)		
0.2		Medium brown sand, becoming light brown with depth (0.10m to 0.99m)		
0.4				
0.6				
0.8				
1.0		EOH @ 0.99m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP11

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.20m)		
0.2		Grey sand (0.20m to 0.30m)		
0.4		Rusty red sand, becoming light brown with depth (0.30m to 0.91m)		
0.6				
0.8				
1.0		EOH @ 0.91m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP12

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.20m)		
0.2		Grey sand (0.20m to 0.35m)		
0.4		Rusty red sand, becoming brown then light brown with depth (0.35m to 0.99m)		
1.0		EOH @ 0.99m (Dry)		
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand auger

REVIEWED BY: Patrick Leblanc

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP13

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.15m)		
0.2		Grey sand (0.15m to 0.30m)		
0.4		Brown sand with rust mottling, becoming light brown with depth (0.30m to 0.81m)		
0.6				
0.8		EOH @ 0.81m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand shovel

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP14

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2				
		Reddish brown sand, becoming light brown with depth (0.25m to 0.81m)		
0.4				
0.6				
0.8		EOH @ 0.81m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand shovel

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP15

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.25m)		
0.2		Reddish brown sand, becoming light brown with depth (0.25m to 0.81m)		
0.4				
0.6				
0.8		EOH @ 0.81m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand shovel

REVIEWED BY: Patrick Leblanc

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

TEMPLATE: MP - Test Pit

McINTOSH PERRY

TEST PIT ID: TP16

SHEET 1 of 1

PROJECT No: CP-17-0503
SITE: 6688 Franktown Rd.
CLIENT: Bing Professional Engineering Inc.

LOGGED BY: Patrick Leblanc
CONTRACTOR: McIntosh Perry
DATE EXCAVATED: October 18, 2018

Depth (ft / m)	Symbol	Description	Notes	Sample Type
0 / 0		Ground Surface		
		Topsoil (0m to 0.30m)		
0.2				
		Reddish brown sand, becoming light brown with depth (0.30m to 0.81m)		
0.4				
0.6				
0.8		EOH @ 0.81m (Dry)		
1.0				
1.2				
1.4				
1.6				
1.8				
2.0				

NOTES Excavated using hand shovel

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated.

REVIEWED BY: Patrick Leblanc

TEMPLATE: MP - Test Pit

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

R.V.C.A. RECEIVED
APR 2 3 2019

Do Not Complete
Permit No _____
Revision No _____
Date _____

SEPTIC APPLICATION

Scale: 1Block = _____

Schedule 7
Layout Section

18-548
REQUIRED FOR ALL INQUIRIES

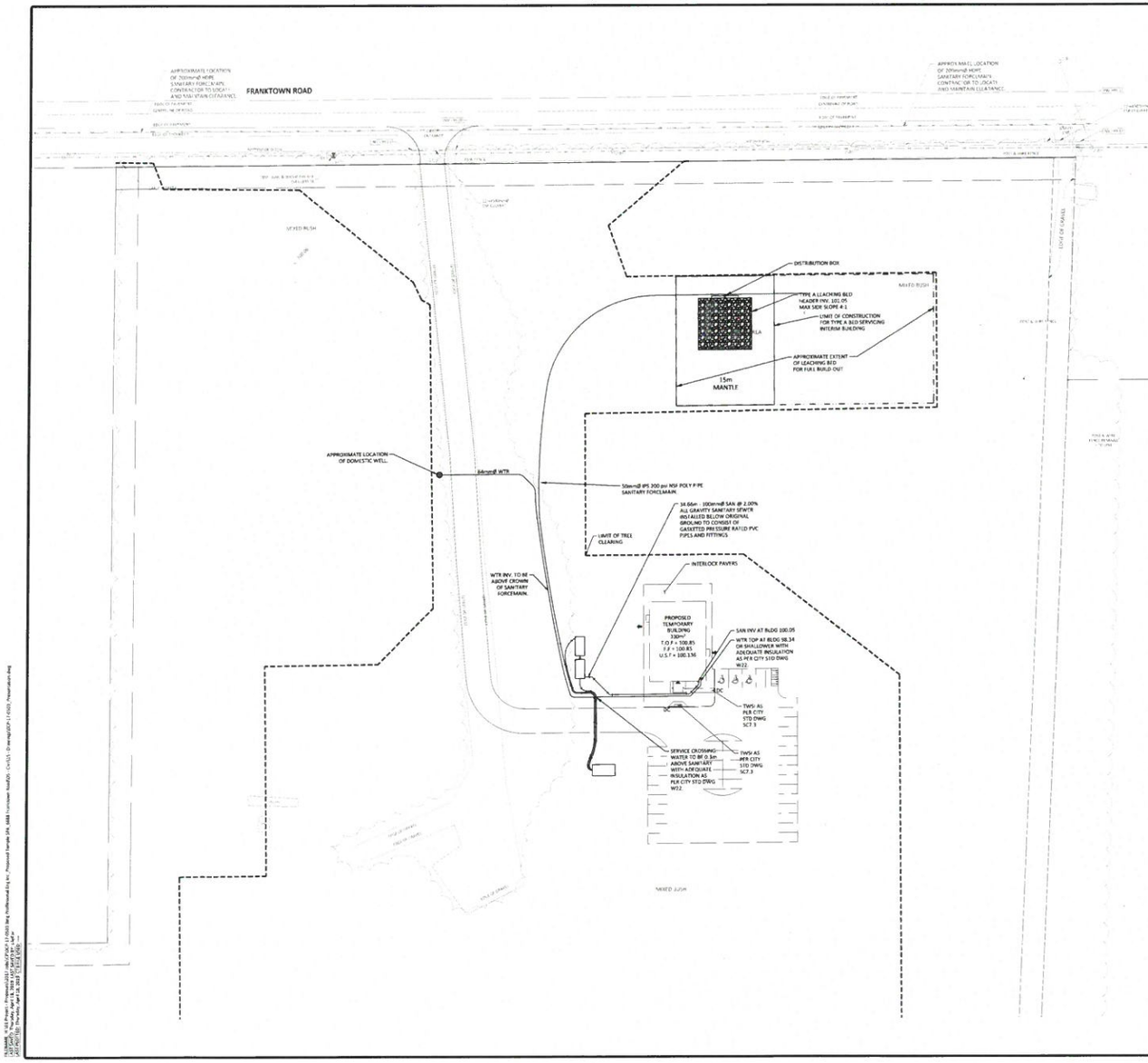
N

See Attached Drawings

○Dug Well ●Drilled Well ▲Neighbouring Homes ◊Benchmark ---Tile Drainage —Property Line

Elevations (metric only)
B.M _____ m
B.M Description _____
_____
Exact Location _____
_____

Min. of 5 elevations in proposed system area (in X pattern)
X_1 _____ X_2 _____
X_3 _____ X_4 _____
X_5 _____ $X_{6\ (toe)}$ _____
X_7 X_8



GENERAL NOTES

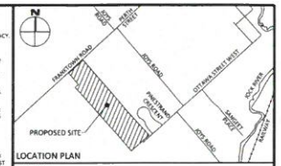
1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY IDR-SHOWN ONS MPS: JOB #17-4410, DATED JANUARY 09, 2018 AND CANNOT BE RELIED UPON, TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP TO DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. SURVEY ELEVATIONS FROM MPS: SURVEY PLAN #17-4410, ELEVATIONS DERIVED FROM THE HYDRO ONE NETWORKS GEODETIC BENCHMARK ARE 0.05m LOWER THAN ELEVATIONS SHOWN ON THIS PLAN.
   3.1 STATION: 0012980124
   3.2 VERTICAL DATUM: CGVD-2928:1978
   3.3 VERTICAL ACCURACY: FIRST ORDER
   3.4 ORTHOMETRIC ELEVATION: 97.874
   3.5 LOCATION: TOWNSHIP: RICHMOND-MAALAKORY_ROAD BRIDGE OVER JOCK RIVER IN RICHMOND, 0.8km SOUTH OF RICHMOND ROAD, TABLET IN TOP OF EAST WALL, 2.7m FROM NORTH END.
4. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
6. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
7. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY OF OTTAWA AUTHORITIES.
8. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY OF OTTAWA.
9. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
12. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE CITY OF OTTAWA.
13. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
14. CONTACT THE CITY OF OTTAWA FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY OF OTTAWA'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
15. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
16. ELECTRICAL, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY.
   - ELECTRICAL SERVICE - HYDRO OTTAWA,
   - TELEPHONE SERVICE - BELL CANADA,
   - TELEVISION SERVICE - ROGERS.
17. PLEASE NOTE THERE IS NO GAS INFRASTRUCTURE WITHIN FRANKTOWN ROAD.
18. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO OTTAWA, BELL AND THE CITY OF OTTAWA.
19. ALL PROPOSED CURB SHALL BE CONCRETE BARRIER CURB UNLESS SPECIFIED.
20. ALL EXISTING REDUNDANT PRIVATE APPROACHES FRONTING THIS DEVELOPMENT MUST BE REMOVED TO THE SATISFACTION OF THE CITY OR TOWNSHIP.
21. THIS PLAN MUST BE READ IN CONJUNCTION WITH GEOTECHNICAL REPORT BY McINTOSH PERRY REPORT #CP-17-0503, DATED JULY 2018 AND THE SITE SERVICING REPORT BY McINTOSH PERRY REPORT #CP-17-0503, DATED FEBRUARY 2019

SEWER NOTES

1. CONSTRUCT ALL SEWERS AND APPURTENANCES TO CITY OF OTTAWA STANDARDS (IF AVAILABLE) OR AS PER OPSD STANDARDS.
2. SEWER TRENCHING AND BEDDING SHALL CONFORM TO CITY OF OTTAWA STANDARD DRAWING S7 UNLESS NOTED OTHERWISE.
3. BEDDING SHALL CONFORM TO CITY OF OTTAWA STANDARD DRAWING S7. BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
4. SUB BEDDING, IF REQUIRED SHALL BE AS PER THE DIRECTION OF A GEOTECHNICAL ENGINEER.
5. BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR SAND.
6. TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0m BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
7. SEWERS AND CONNECTIONS 150mm DIAMETER AND SMALLER TO BE PVC SDR 28 OR APPROVED EQUIVALENT. SEWERS AND CONNECTIONS 200mm DIAMETER AND LARGER TO BE PVC SDR 35 OR APPROVED EQUIVALENT.
8. INSULATE ALL SEWERS AND/OR SERVICES THAT HAVE LESS THAN 1.5m OF COVER WITH THERMAL INSULATION AS PER OPSD 1109.030.
9. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILED TO WITHIN 1.0m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4" LONG MARKER.
10. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS ONSITE, OUTLET CONNECTION TO THE MAIN AND PIPES 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

WATERMAIN NOTES

1. CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH OPS STANDARDS AND SPECIFICATIONS, AS WELL AS CITY OF OTTAWA STANDARDS.
2. INSTITUTIONAL SERVICE CONNECTIONS TO BE 50mm COPPER PIPING AND SHALL CONFORM TO AS/NZS 888 TYPE 'K' SOFT.
3. WATERMAINS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY STANDARDS W22.
4. USE APPROVED SADDLE CONNECTION WITH MAIN (CORPORATION) STOP AS PER CITY OF OTTAWA STANDARD DRAWING W16.
5. THERMAL INSULATION OF WATERMAINS UNDER ROAD SIDE DITCHES AS PER CITY OF OTTAWA STANDARD DRAWING W31.
6. TRACER WIRE SHALL BE PROVIDED TO THE CAPPED WATER SERVICE AS PER CITY OF OTTAWA STANDARD DRAWING W36.



LOCATION PLAN

LEGEND

- BARRIER CURB (GUTTER LINE & TOP OF CURB)
- MOUNTABLE CURB (GUTTER LINE)
- EASEMENT
- STORM MANHOLE
- CATCHBASIN OR DITCH INLET
- SANITARY MANHOLE
- PERFORATED PIPE IN SWALES
- WATER VALVE/CHAMBER
- FIRE HYDRANT
- CENTRELINE OF SWALE
- SLOPING AT 3:1 (UNLESS SPECIFIED)
- PROPOSED ELVATION
- EXISTING ELEVATION
- SWALE ELEVATION
- SILT FENCE (AS PER OPSD 219.130)
- STRAW BALE CHECK DAM (AS PER OPSD 219.180)
- EMERGENCY OVERLAND FLOW ROUTE
- HEAVY DUTY GRAVEL

No.	Revision/Issue	Date
04	REVISED AS PER CITY COMMENTS	APR. 18, 2019
03	REVISED AS PER CITY COMMENTS	FEB. 22, 2019
02	ISSUED FOR BUILDING PERMIT	OCT. 01, 2018
01	ISSUED FOR REVIEW	JUL. 30, 2018

Check and verify all dimensions before proceeding with the work. Do not scale drawings

SCALE 1 : 500

0 10 20 30 40 50 Metres

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintosh perry.com

Stamp

Client:
BING PROFESSIONAL ENGINEERING INC.
248 HUNTSVILLE DRIVE
OTTAWA, ON K2T 0C3

Project:
6688 FRANKTOWN ROAD
PROPOSED FOGUANGSHAN TEMPLE
INTERIM BUILDING
RICHMOND ONTARIO

Drawing Title:
SITE SERVICING PLAN

Scale:	1:500
Drawn by	S.V.L.
Checked By	R.P.K.
Designed By	S.V.L.

Project Number: CP-17-0503

Drawing Number: C102

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

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APR 23 2019

Do Not Complete
Permit No _____
Revision No _____
Date _____

SEPTIC APPLICATION

18-548

REQUIRED FOR ALL INQUIRIES

Schedule 8
Fixture unit count

Fixtures	# Existing	+	# Proposed	X	unit count	=	Fixture Count
Bathroom							
Bathroom group (toilet, sink and tub or shower) with flush tank		+		X	6	=	
Bathtub with/without overhead shower		+		X	1.5	=	
Shower stall		+		X	1.5	=	
Wash basin (1½inch trap)		+		X	1.5	=	
Watercloset (toile							
Bidet							
Kitchen							
Dishwasher							
Sink with/without garbage grinder(s), domestic and other small type single, double or 2 single with a common trap		+		X	1.5	=	
Other							
Domestic washing machine		+		X	1.5	=	
Combination sink and laundry tray single or double (Installed on 1½ trap)		+		X	1.5	=	

N/A (See Schedule 4)

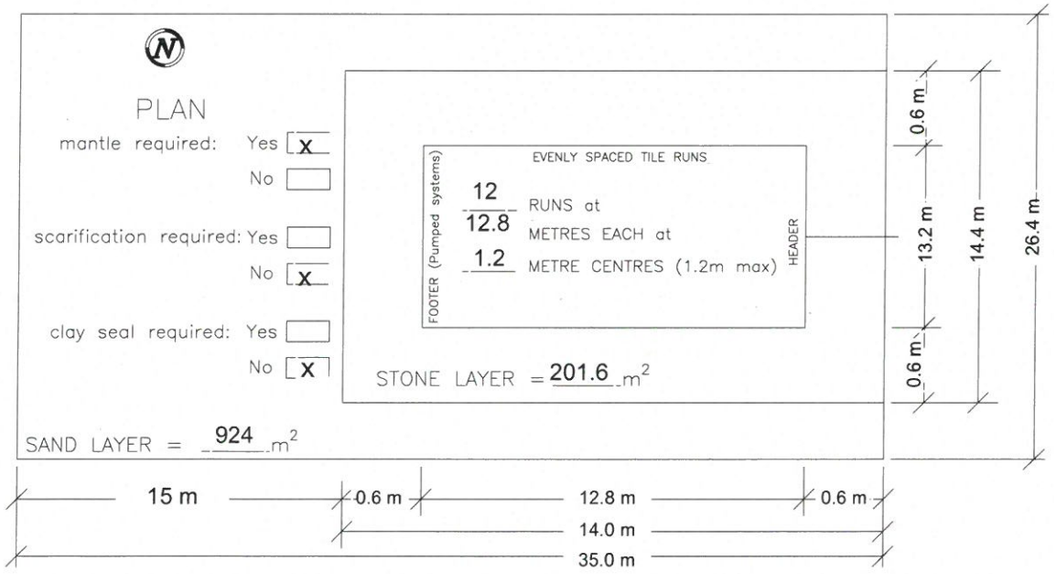
***Total:**

***Insert the TOTAL in section 5 of Schedule 4** (0.Reg 151/13 Table 7.4.9.3)

1. Sump pumps and floor drains are not to be connected to the sewage system. Connection of such fixtures to a sewage system may lead to a hydraulic failure of the said system. The above mentioned fixtures should be discharged separately to an approved Class 2 (leaching pit) sewage system.
2. Where laundry waste is not more than 20% of the total daily design sanitary sewage flow, it may discharge to a sewage system (Part 8, OBC, 8.1.3.1(2)).

Agent/Owner signature

April 23, 2019
Date



NOT TO SCALE

Ottawa Septic System Office / Bureau des systèmes septiques d'Ottawa

SCHEDULE 13 – TYPICAL DRAWING E

Type A Dispersal Bed

MANAGER, O.S.S.O. _____ DATE _____

May 2/19

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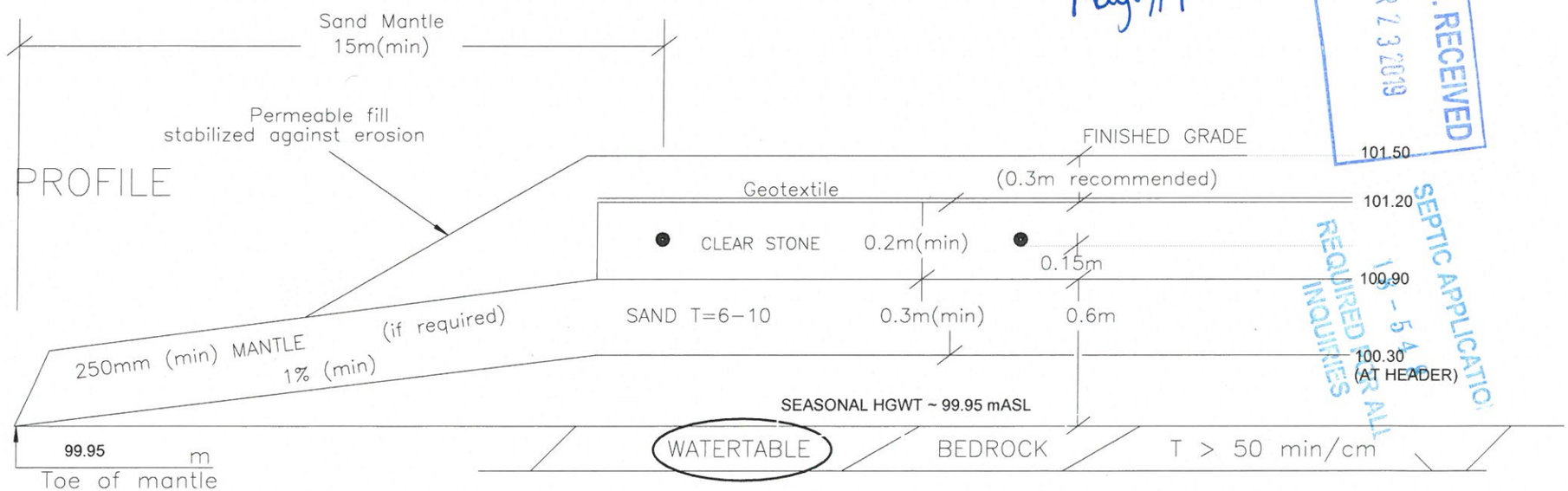
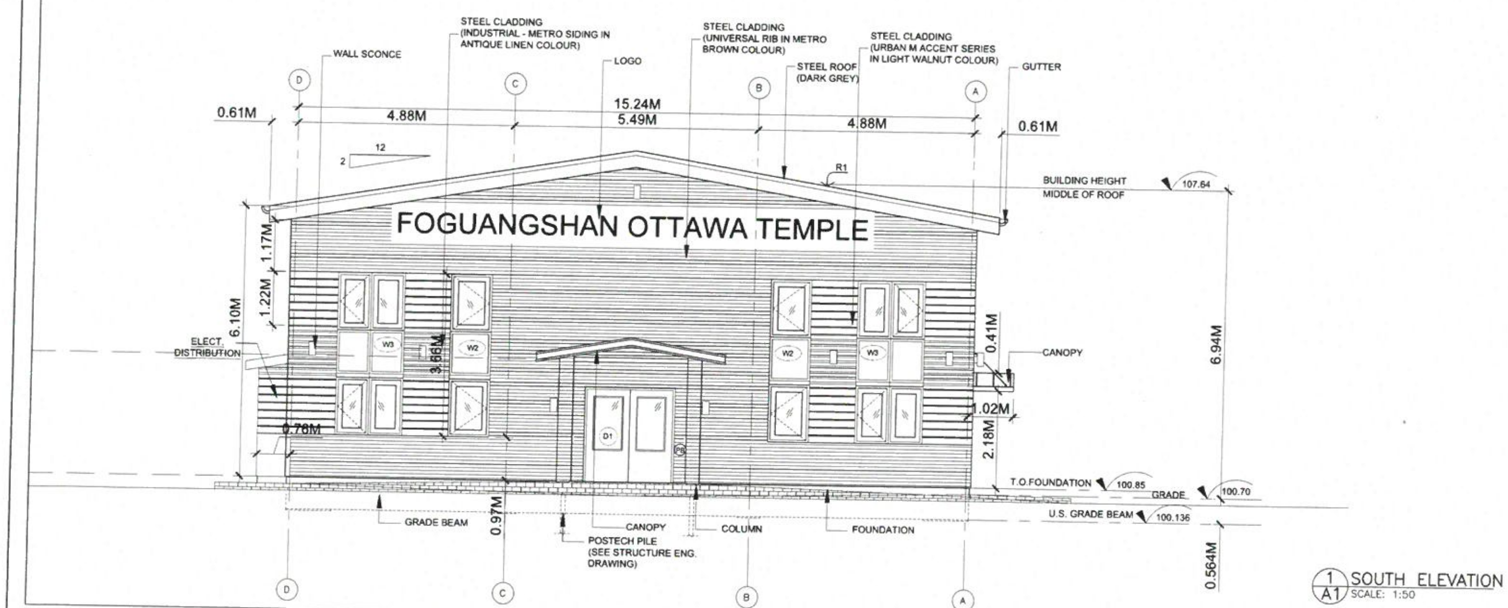
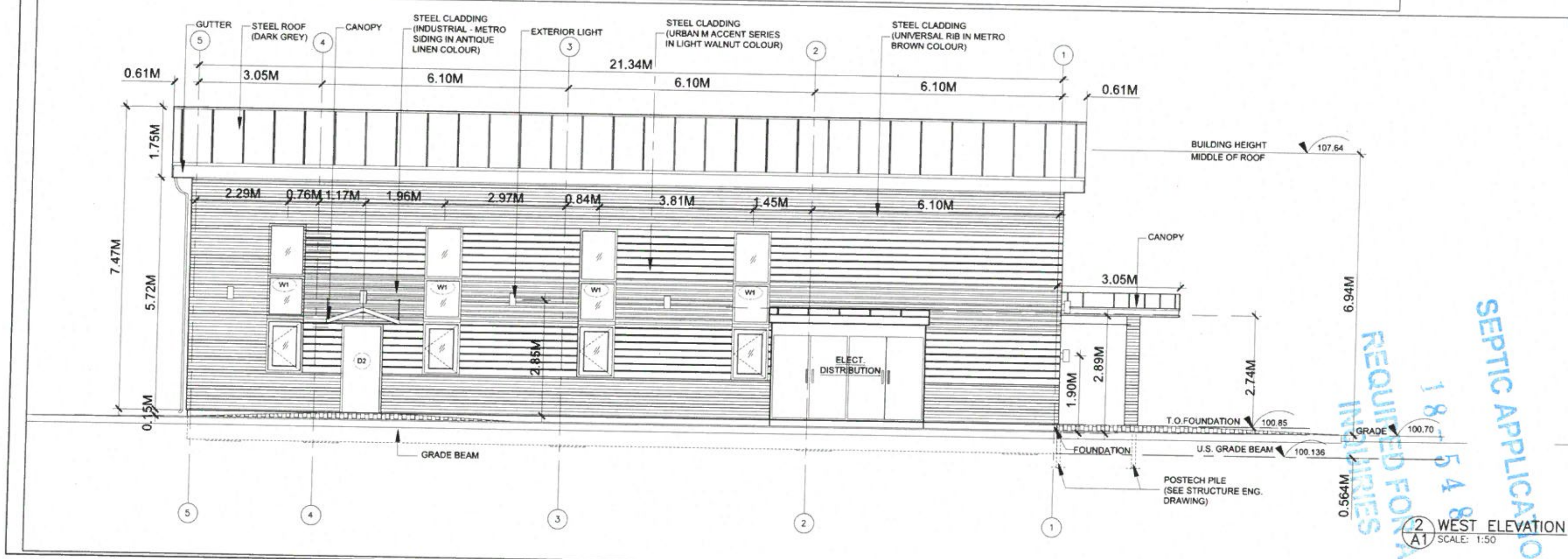
SEPTIC APPLICATIO
15 - 54
REQUIRED FOR ALL
INQUIRIES





1 SOUTH ELEVATION
A1 SCALE: 1:50



2 WEST ELEVATION
A1 SCALE: 1:50

PROPOSED FOGUANGSHAN TEMPLE INTERIM BUILDING AT

6688 FRANKTOWN RD.
RICHMOND, ON
K0I 2Z0

SUSAN D. SMITH ARCHITECT
941 Merivale Rd, Ottawa,
Ontario K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

REISSUED FOR SITE PLAN CONTROL
ISSUED FOR SITE PLAN CONTROL
ISSUED FOR REVIEW
REVISION | DATE

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

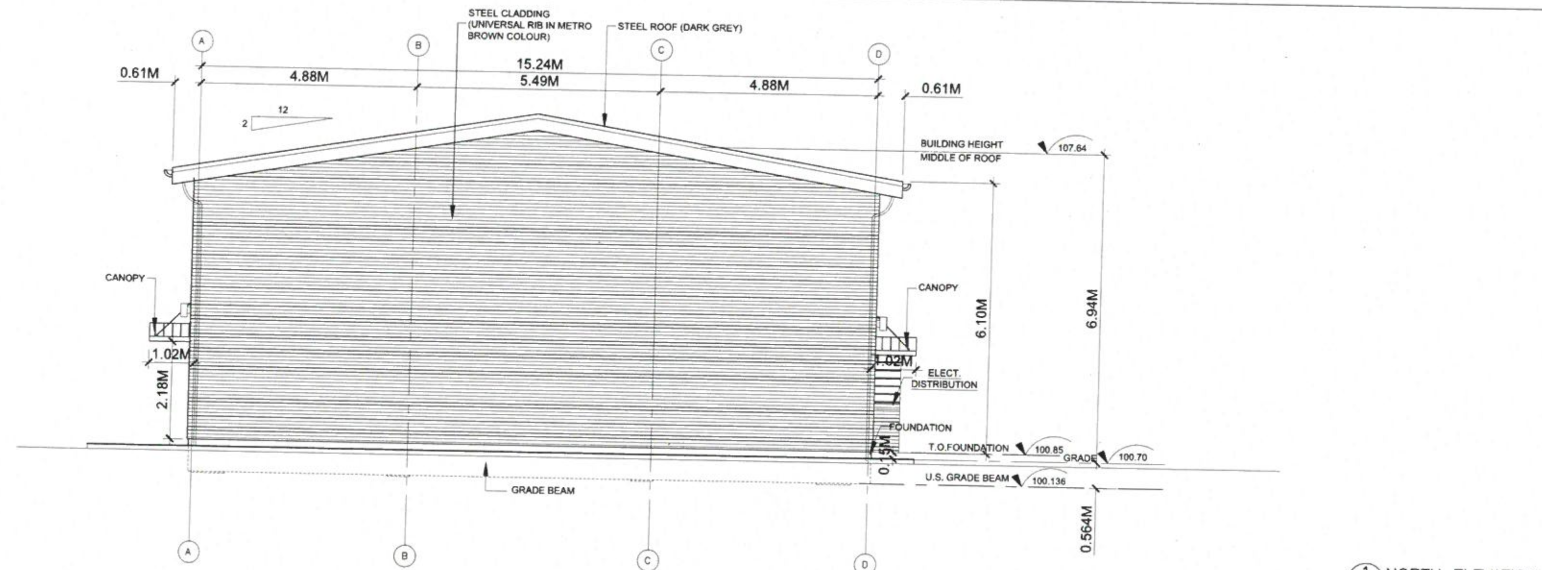
SOUTH ELEVATIONS.
WEST ELEVATIONS.

JOB # 1770B	DRAWING BY SDS & ZL
DATE AUG/18	SCALE as noted

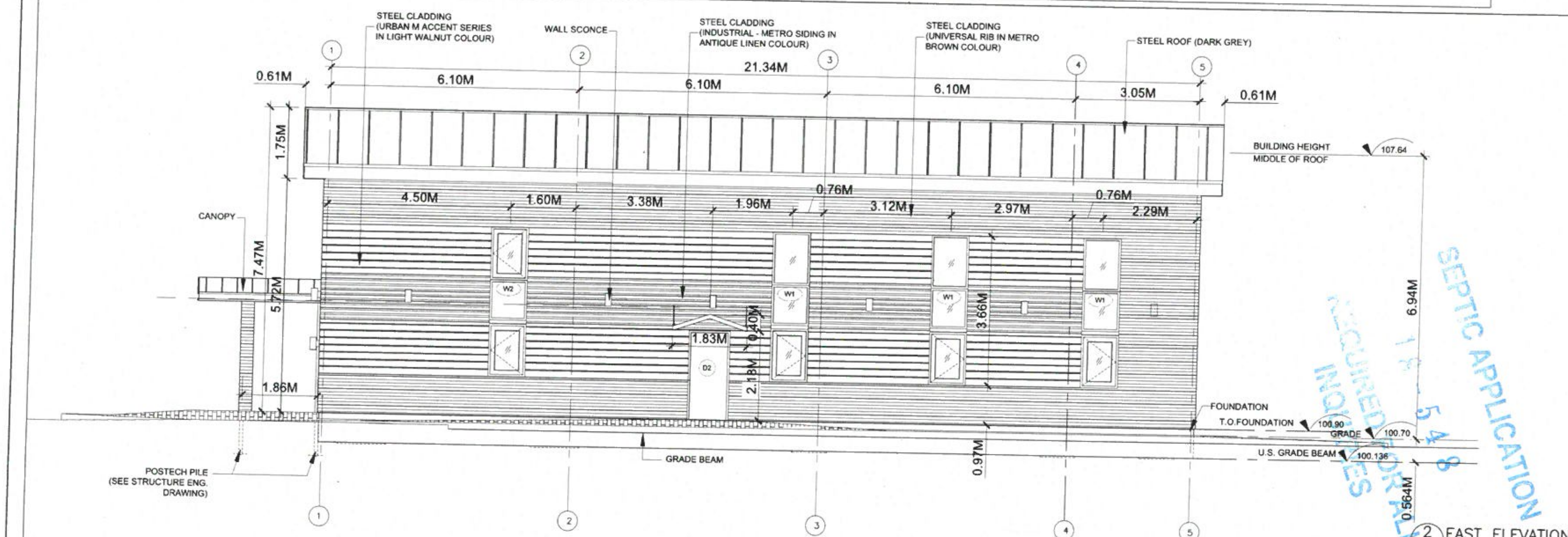
A1

R.V.C.A. RECEIVED

SEPTIC APPLICATION 18-548 REQUIRED FOR ALL INQUIRIES



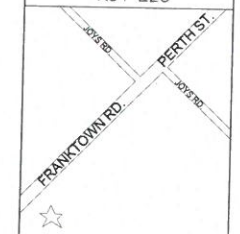
1 / A2 NORTH ELEVATION
SCALE: 1:50



2 / A2 EAST ELEVATION
SCALE: 1:50

PROPOSED
FOGUANGSHAN
TEMPLE
INTERIM BUILDING
AT

6688 FRANKTOWN RD.
RICHMOND, ON
K0I 2Z0



ONTARIO ASSOCIATION OF ARCHITECTS
SUSAN D. SMITH
LICENCE
3457
apr 17/19

R.V.C.A. RECEIVED
APR

SUSAN D. SMITH ARCHITECT
941Merivale Rd, Ottawa,
Ontario K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

No.	REVISION	DATE
3	REISSUED FOR SITE PLAN CONTROL	APR. 17/2019
2	ISSUED FOR SITE PLAN CONTROL	JUL. 20/2018
1	ISSUED FOR REVIEW	JUL. 20/2018

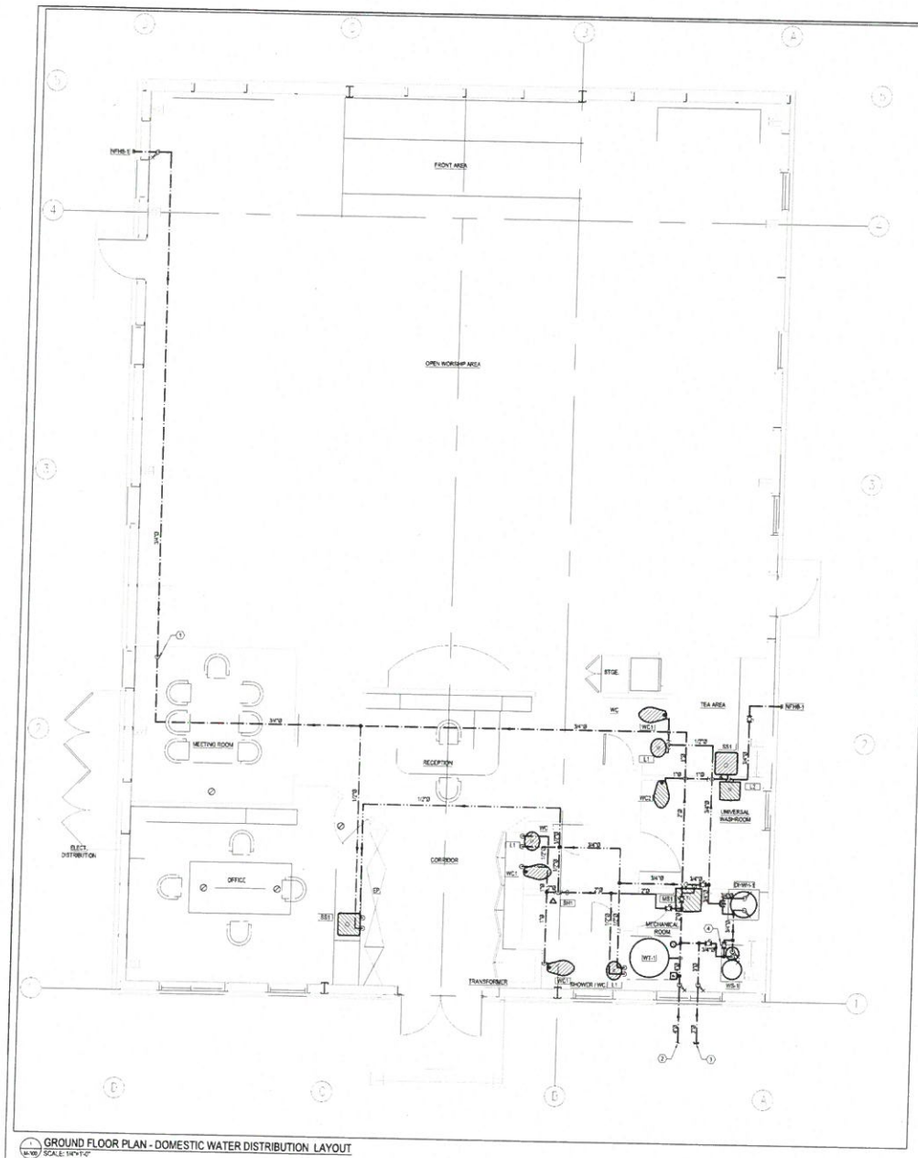
NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

NORTH ELEVATIONS.
EAST ELEVATIONS.

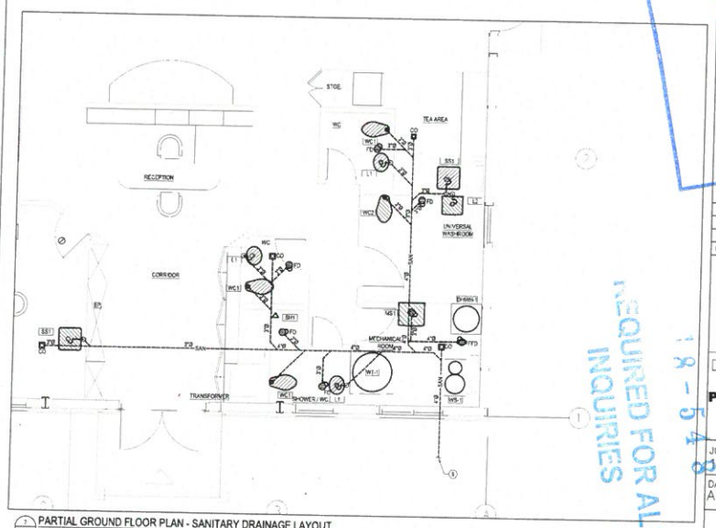
JOB # 1770B	DRAWING BY SDS & ZL
DATE AUG/18	SCALE as noted

A2

SEPTIC APPLICATION
18-548
REQUIRED FOR ALL INQUIRIES



1 GROUND FLOOR PLAN - DOMESTIC WATER DISTRIBUTION LAYOUT
SCALE: 1/4"=1'-0"



1 PARTIAL GROUND FLOOR PLAN - SANITARY DRAINAGE LAYOUT
SCALE: 1/4"=1'-0"

GENERAL NOTES

1. PROVIDE VENTING AND PIPING IN ACCORDANCE WITH OBC.
2. UNLESS OTHERWISE SHOWN OR NOTED ON THIS DRAWING, ALL DCW AND DHW PIPING SHALL BE INSTALLED IN CEILING SPACE.

DRAWING NOTES

1. DCW EXTEND UP TO HIGH LEVEL AS HIGH AS PRACTICAL
2. CONNECT 1" W WATER SERVICE TO SITE SERVICES AT APPROXIMATE THIS LOCATION. SEE CIVIL DRAWINGS FOR CONFIRMATION.
3. CAP 1" W WATER SERVICE AT APPROXIMATE THIS LOCATION. THIS SERVICE IS RESERVED FOR FUTURE BUILDING.
4. DO NOT OPEN THIS VALVE UNLESS SERVICE AND MAINTENANCE OF THIS UNIT IS PERFORMED.
5. CONNECT 4" SANITARY BUILDING DRAIN TO SITE SERVICES AT APPROXIMATE THIS LOCATION. SEE CIVIL DRAWINGS FOR CONFIRMATION.

PROPOSED FOGUANGSHAN TEMPLE INTERIM BUILDING AT

6688 FRANKTOWN RD.
RICHMOND, ON
K0I 2Z0

MECHANICAL & ELECTRICAL
Jp2g Consultants Inc.
ENGINEERS - PLANNERS - PROJECT MANAGERS
REF: 18-1073A

MECHANICAL SEAL | ELECTRICAL SEAL

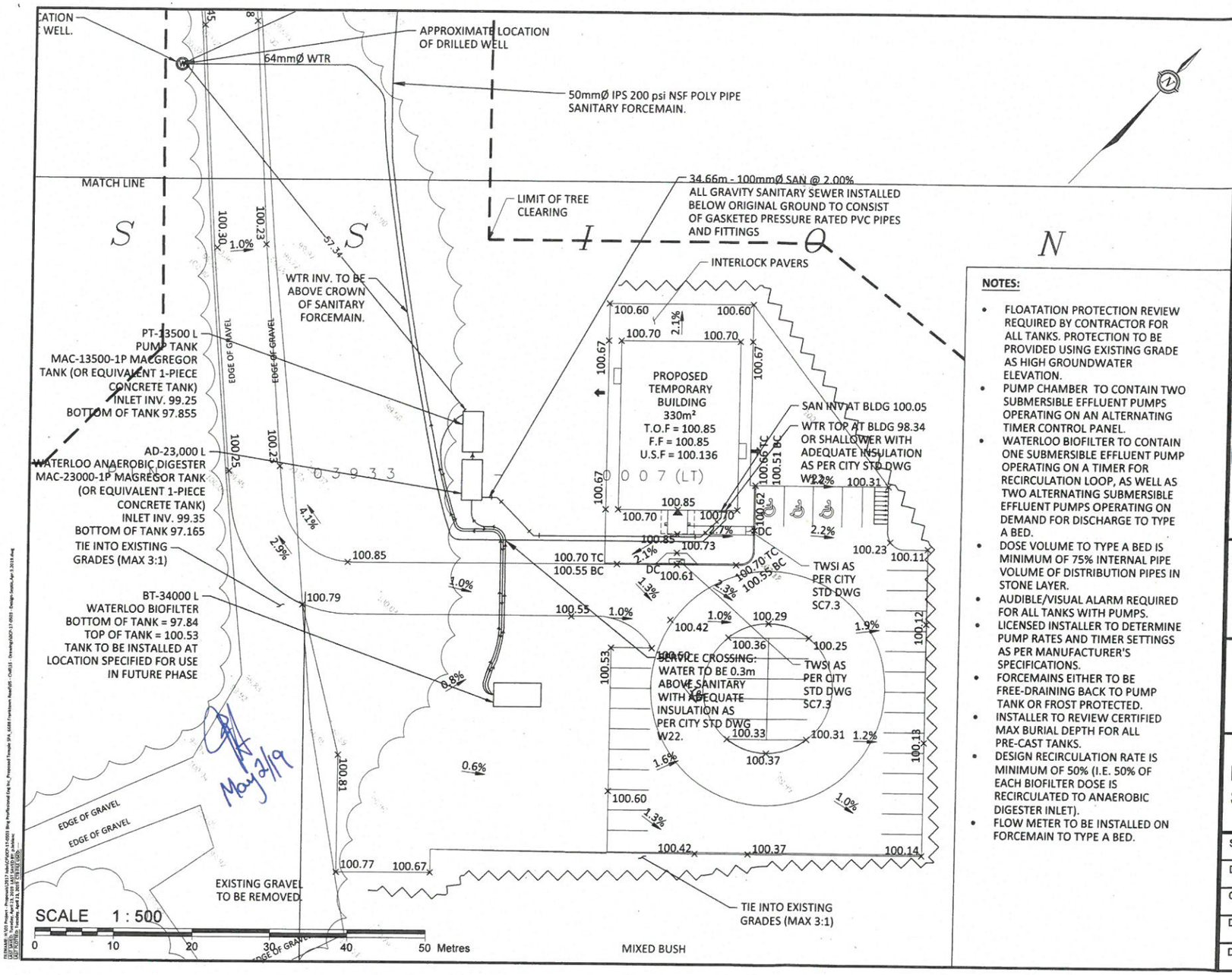
ARCHITECTURE
SUSAN D. SMITH ARCHITECT
941Merivale Rd. Ottawa,
Ontario K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

No.	REVISION	DATE
3	REISSUED FOR BUILDING PERMIT	2019/04/04
2	ISSUED FOR ADDENDUM MA-04	2019/03/25
1	ISSUED FOR BUILDING PERMIT	2018/09/28

DRAWING TITLE
GROUND FLOOR AND PARTIAL GROUND FLOOR PLANS - PLUMBING LAYOUT

JOB # 1770	DRAWING BY CC
DATE AUG/18	SCALE as noted

M-300



NOTES:

- FLOATATION PROTECTION REVIEW REQUIRED BY CONTRACTOR FOR ALL TANKS. PROTECTION TO BE PROVIDED USING EXISTING GRADE AS HIGH GROUNDWATER ELEVATION.
- PUMP CHAMBER TO CONTAIN TWO SUBMERSIBLE EFFLUENT PUMPS OPERATING ON AN ALTERNATING TIMER CONTROL PANEL.
- WATERLOO BIOFILTER TO CONTAIN ONE SUBMERSIBLE EFFLUENT PUMP OPERATING ON A TIMER FOR RECIRCULATION LOOP, AS WELL AS TWO ALTERNATING SUBMERSIBLE EFFLUENT PUMPS OPERATING ON DEMAND FOR DISCHARGE TO TYPE A BED.
- DOSE VOLUME TO TYPE A BED IS MINIMUM OF 75% INTERNAL PIPE VOLUME OF DISTRIBUTION PIPES IN STONE LAYER.
- AUDIBLE/VISUAL ALARM REQUIRED FOR ALL TANKS WITH PUMPS.
- LICENSED INSTALLER TO DETERMINE PUMP RATES AND TIMER SETTINGS AS PER MANUFACTURER'S SPECIFICATIONS.
- FORCEMAINS EITHER TO BE FREE-DRAINING BACK TO PUMP TANK OR FROST PROTECTED.
- INSTALLER TO REVIEW CERTIFIED MAX BURIAL DEPTH FOR ALL PRE-CAST TANKS.
- DESIGN RECIRCULATION RATE IS MINIMUM OF 50% (I.E. 50% OF EACH BIOFILTER DOSE IS RECIRCULATED TO ANAEROBIC DIGESTER INLET).
- FLOW METER TO BE INSTALLED ON FORCEMAIN TO TYPE A BED.

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APR 23 2019
SEPTIC APPLICATION
18 548
REQUIRED FOR ALL INQUIRIES

No.	Revision/Issue	Date
1	RESUBMISSION TO OSSO	APR/23/2019

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

LICENSED PROFESSIONAL ENGINEER
P.M.R. LEBLANC
100141438
Apr. 23, 2019
PROVINCE OF ONTARIO

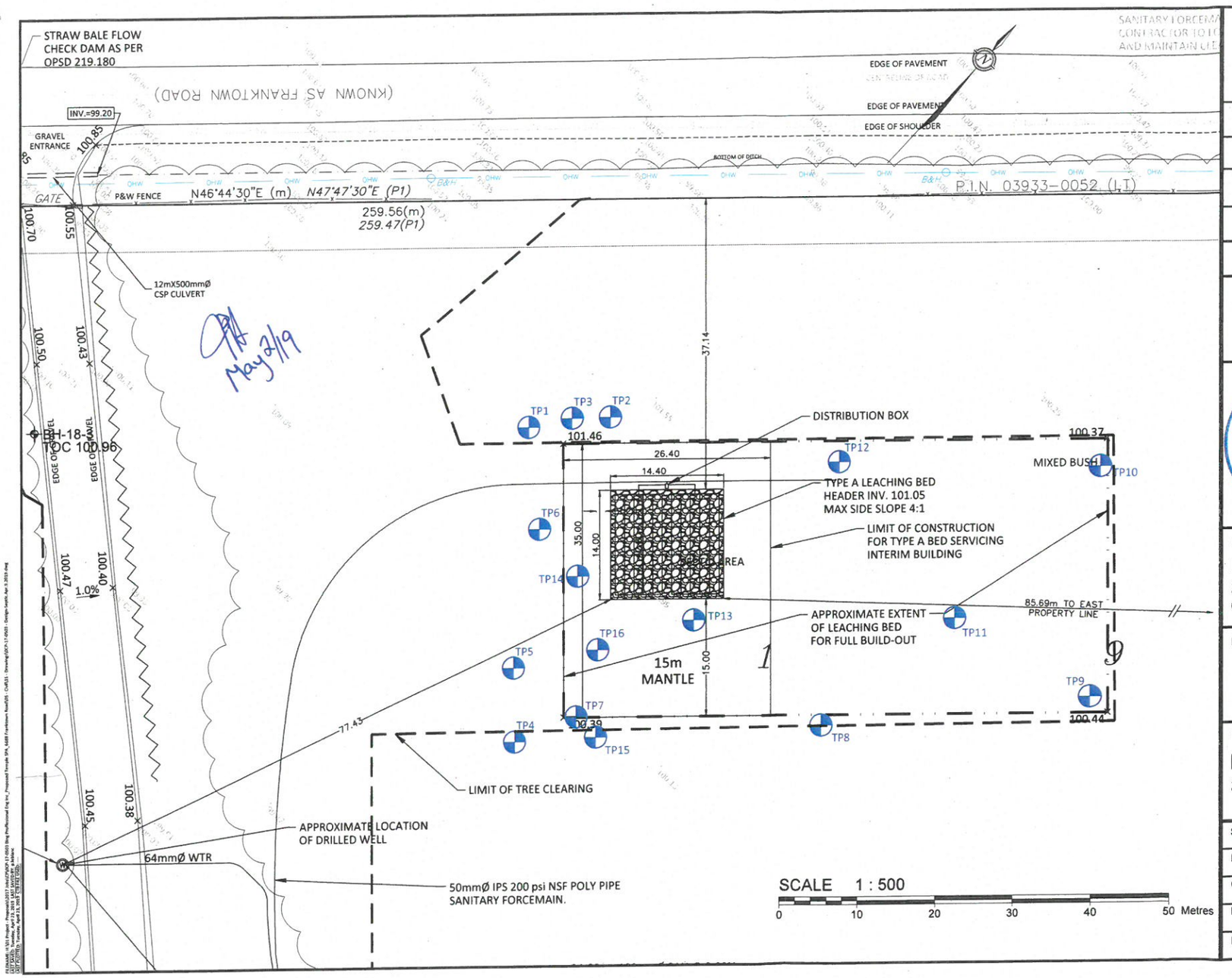
Stamp:

Client:
BING PROFESSIONAL ENGINEERING INC.
248 HUNTSVILLE DRIVE
OTTAWA, ON K2T 0C3

Project:
PROPOSED BUDDHIST TEMPLE
6688 FRANKTOWN ROAD, RICHMOND, ON

Drawing Title:
INTERIM FACILITY
SEWAGE SYSTEM DESIGN

Scale: 1:500	Project Number: 0CP-17-0503
Drawn by: BA	
Checked By: PL	
Designed By: PL	Drawing Number: SAN-01
Date: SEP/28/2018	1 of 2



R.V.C.A. RECEIVED
APR 23 2019

SEPTIC APPLICATION
18-548
REQUIRED FOR ALL INQUIRIES

No.	Revision/Issue	Date
1	RESUBMISSION TO OSSO	APR/23/2019

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

LICENSED PROFESSIONAL ENGINEER
P. M. R. LEBLANC
100141438
Apr. 23, 2019
PROVINCE OF ONTARIO

Stamp:

Client:
BING PROFESSIONAL ENGINEERING INC.
248 HUNTSVILLE DRIVE
OTTAWA, ON K2T 0C3

Project:
PROPOSED BUDDHIST TEMPLE
6688 FRANKTOWN ROAD, RICHMOND, ON

Drawing Title:
INTERIM FACILITY
SEWAGE SYSTEM DESIGN

Scale: 1:500	Project Number: 0CP-17-0503
Drawn by: BA	
Checked By: PL	Drawing Number: SAN-02
Designed By: PL	2 of 2
Date: SEP/28/2018	

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

Do Not Complete
Permit No 18-548
Revision No
Date
Related Application

SEPTIC APPLICATION REQUIRED FOR ALL INQUIRIES

Permit
Part 8 – Sewage System
Ontario Building Code

A copy of this permit must be posted on the property at all time during construction. OBC, Division C — Part 1, Section 1.3.2.1

This permit verifies that the on-site sewage system was reviewed and approved for construction under the *Ontario Building Code* and *O.Reg. 323/12* as amended by *O.Reg. 151/13*.

Inspected & Recommended by: J. Hutton
Inspection Date & Time: April 30/19 (9:00AM)
Civic Address: 6688 Franktown Rd.
Owner: International Buddhist Progress Society of Ottawa Carleton
Weather:
Legal:

number of bedrooms:
finished floor area:
fixture units:
Q: 9999 L/day

septic/holding tank/pretreatment tank AD-23000 L
effluent filter
pump rate 507 L/15 min to bed
treatment unit WB BT-34000L
number of units 1

weigh bills for filter media	☐ yes	☒ no
grain size analysis required	☐ yes	☒ no
site to be scarified	☒ yes	☐ no
clay seal inspection	☐ yes	☒ no
mantle required	☒ yes	☐ no
sub-grade inspection	☒ yes	☐ no

ELEVATION ☐ In Ground ☐ Partially Raised ☐ Fully Raised

TYPE OF SYSTEM

☐ **Trench**
○ **Pipe and Stone** or ○ **Chambers**
type of chamber
loading area m²
total trench length m
trench configuration

☒ **Dispersal Bed**
☐ BMEC ☒ Type A ☐ Type B
stone 201.6 m²
sand 924 m²
pipe 12 runs of 12.8m c/c 2m
linear loading — L/m²

☐ **Shallow Buried Trench**
pipe length m
orifice spacing m

☐ **Filter Media Bed**
stone m²
extended base m²
pipe
weight of filter media kg
loading area m²

☐ **Class 5 Holding Tank**
☐ **Septic Tank Only**

Manager, Septic System Approvals: Jason Hutt Permit Date: May 2, 2019
Comments: (1) Toe of mantle shall outlet to topsoil or other free-draining soil
(2) OSSO shall inspect subgrade preparation prior to placing sand fill

☒ maintenance/~~pumping~~ required ☐ ESA permit # required ☐ engineer to verify ☐ subgrade ☐ squirt height
☐ Class 5 Holding Tank approval only valid for three years from date of issue

Manager, Septic System Approvals: Revision Date:
Comments:

NOTE: For further details, refer to corresponding application.

Appendix F – Drawings

PLAN OF SURVEY WITH TOPOGRAPHY OF PART OF LOT 19 CONCESSION 3 GEOGRAPHIC TOWNSHIP OF GOULBOURN CITY OF OTTAWA

McINTOSH PERRY SURVEYING INC

SCALE 1 : 400

0 10 20 30 40 Metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 1118mm IN WIDTH BY 1016mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1 : 400.

METRIC :

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 25TH DAY OF AUGUST, 2023.

AUGUST 29, 2023
DATE

JOHN GAUTHIER
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER V-50120.

LEGEND :

□	DENOTES	MONUMENT PLANTED
■	DENOTES	MONUMENT FOUND
IB	DENOTES	IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
(m)	DENOTES	MEASURED
(s)	DENOTES	SET
(p)	DENOTES	PLAN 4R-32299
(p2)	DENOTES	PLAN 5R-14318
(p3)	DENOTES	PLAN 4R-7040
(p4)	DENOTES	PLAN 5R-6743
(1116)	DENOTES	W.J. JOHNSTON, OLS
(1442)	DENOTES	JOHN H. KENNEDY LTD., OLS
(1692)	DENOTES	FARLEY, SMITH & DENIS SURVEYING LTD., OLS
(OU)	DENOTES	ORIGIN UNKNOWN
WIT	DENOTES	WITNESS
N,S,E,W	DENOTES	NORTH, SOUTH, EAST, WEST
ORP	DENOTES	OBSERVED REFERENCE POINT
BF	DENOTES	BOARD FENCE
PWF	DENOTES	POST & WIRE FENCE
B&H	DENOTES	TELEPHONE & HYDRO POLE
—OHW—	DENOTES	OVERHEAD WIRES
AN	DENOTES	ANCHOR
LS	DENOTES	LAMP STANDARD
AC	DENOTES	AIR CONDITIONING UNIT
HT	DENOTES	HYDRO TRANSFORMER
MH	DENOTES	MAINTENANCE HOLE
CB	DENOTES	CATCH BASIN
T/G	DENOTES	TOP OF GRATE
FH	DENOTES	FIRE HYDRANT
MW	DENOTES	MONITORING WELL
CSP	DENOTES	CORRUGATED STEEL PIPE
HDPE	DENOTES	HIGH DENSITY POLYETHYLENE
TBM	DENOTES	TEMPORARY BENCHMARK
DS	DENOTES	DOOR SILL ELEVATION
EV	DENOTES	ELEVATION
BOL	DENOTES	BOLLARD
⊏⊐	DENOTES	SIGN
ø	DENOTES	DIAMETER
⊏⊐	DENOTES	GATE
~	DENOTES	BUSH

PART 3 PLAN 5R-14318
P.I.N. 03933-0010(LT)

NOTES :

MONUMENTATION:

SSIBS HAVE BEEN SET IN LIEU OF SIBS DUE TO SHALLOW OVERBURDEN AND THE PRESENCE OF SUBSURFACE UTILITIES.

DISTANCES:

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES AND CAN BE USED TO COMPUTE GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999909.

BEARINGS:

BEARINGS ARE MTM GRID BEARINGS, DERIVED BY REAL TIME NETWORK GNSS OBSERVATIONS ON OBSERVED REFERENCE POINTS 'A' AND 'B' SHOWN HEREON, AND ARE REFERRED TO THE NAD83 CSRS (ORIGINAL) MTM ZONE 9 COORDINATE SYSTEM.

BEARING ROTATION:

FOR THE PURPOSE OF COMPARISON, ASTRONOMIC BEARINGS HAVE BEEN ROTATED AS FOLLOWS:

PLAN	ROTATION	DIRECTION
(p3) & (p4)	1° 02' 55"	COUNTER CLOCKWISE

INTEGRATION DATA:

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GNSS OBSERVATIONS USING THE CANNET REAL TIME NETWORK (RTN) SERVICE. COORDINATES ARE CONFIRMED BY THE NRCAN RTK COMPLIANCE AGREEMENT.

COORDINATE SYSTEM : NAD83 CSRS (ORIGINAL), MTM ZONE 9

COORDINATES TO URBAN ACCURACY PER SEC. 14 (2) OF O.REG. 216/10

POINT ID	NORTHING	EASTING
ORP 'A'	5003898.73	354947.82
ORP 'B'	5004260.41	355042.69

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

ELEVATIONS:

ELEVATIONS ARE CANADA GEODETIC VERTICAL DATUM 28/78 DERIVED BY REAL TIME NETWORK GNSS OBSERVATIONS REFERENCED TO THE CANADA HT_2 GEOID MODEL.

THE CONTOUR INTERVAL IS 0.25 METRES.

BENCHMARKS:

TEMPORARY SITE BENCHMARK – TOP OF SOUTH BOLT ON LAMP STANDARD, HAVING AN ELEVATION OF 101.36m.

CAUTION:

THE LOCATION AND CONFIGURATION OF UNDERGROUND SERVICES AND UTILITIES IS NOT WITHIN THE SCOPE OF THIS SURVEY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

JOB No. 24-0240	DRAWING: 24-0240 FRANKTOWN RD.DWG
THIS PLAN WAS PREPARED FOR: VENERABLE HUI TZU	

McINTOSH PERRY SURVEYING INC.
3240 Drummond Con. 5A, R.R. #7
Perth, ON K7H 3C9
Tel: 613-267-6524 Fax: 613-267-7992
www.mcintoshperry.com
egis GROUP

CHECKED: JG | CAD: DL, CC

TOPOGRAPHIC PLAN OF SURVEY

OF PART OF
LOT 19,
CONCESSION 3
GEOGRAPHIC TOWNSHIP OF
GOULBOURN
CITY OF OTTAWA

SCALE 1 : 500

0 10 20 30 40 50 Metres

McINTOSH PERRY SURVEYING INC.

METRIC :

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 9th DAY OF JANUARY, 2018.

FEBRUARY 21, 2018
DATE

SIMON KASPRZAK
ONTARIO LAND SURVEYOR

LEGEND AND NOTES

□	DENOTES	MONUMENT PLANTED
■	"	MONUMENT FOUND
SIB	"	STANDARD IRON BAR
SSIB	"	SHORT STANDARD IRON BAR
IB	"	IRON BAR
RPL	"	ROCK PLUG
RIB	"	ROUND IRON BAR
BM	"	BENCHMARK
WT	"	WITNESS
(m)	"	MEASURED
(P1)	"	PLAN 4R–7040
(P2)	"	PLAN 5R–6743
(P3)	"	PLAN 5R–14318
(P4)	"	PLAN 4R–8424
(D1)	"	INSTRUMENT N733204
(726)	"	WILLIAM D. RATZ, O.L.S.
(1116)	"	WILLIAM J. JOHNSTON, O.L.S.
(1442)	"	JOHN H. KENNEDY, O.L.S.
BP	"	BELL POLE
BHP	"	BELL & HYDRO POLE
HP	"	HYDRO POLE
N.T.S.	"	NOT TO SCALE
TBM	"	TEMPORARY BENCHMARK
PWF	"	POST & WIRE FENCE
~~	"	MIXED BUSH
— ohw —	"	OVER HEAD WIRES
— x —	"	FENCE (TYPE NOTED ON PLAN)

TEMPORARY SITE BENCHMARK – NAIL & WASHER IN FACE OF BELL & HYDRO POLE, HAVING A GEODETIC ELEVATION OF 100.38

THE LOCATION AND CONFIGURATION OF UNDERGROUND SERVICES AND UTILITIES HAVE BEEN DERIVED FROM LIMITED FIELD INFO AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

ELEVATIONS ARE CANADA GEODETIC VERTICAL DATUM 1928:1978 DERIVED FROM REAL TIME NETWORK GPS OBSERVATIONS WITH GEOID CORRECTION APPLIED.

BEARINGS ARE MTM GRID BEARINGS, DERIVED BY REAL TIME NETWORK GPS OBSERVATIONS ON OBSERVED REFERENCE POINTS A AND B, SHOWN HEREON, AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9, (75°30' WEST LONGITUDE) NAD83 (ORIGINAL) 2010.

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.99992.

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GPS OBSERVATIONS USING REAL TIME NETWORK (RTN) SERVICE.
MTM ZONE 9, NAD83 (ORIGINAL) (2010)
COORDINATES TO RURAL ACCURACY PER SEC. 14 (2) OF O.REG. 216/10

POINT ID	NORTHING	EASTING
ORP A	5004307.4	354659.4
ORP B	5004485.2	354848.4

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

JOB No. 17–4410	DRAWING #17–4410–01
PREPARED FOR: MPCE (BEN CLARE)	

McINTOSH PERRY
SURVEYING INC.
3240 Drummond Con. 5A, R.R. #7, Perth, ON K7H 3C9
Tel: 613-267-6524 Fax: 613-267-7992
www.mcintoshperry.com

EXAMINED:	CHECK:

M:\SURVEY–DATA\5207\17–4410 CLARE TOPO\17–4410 – TOPO (BF).DWG
February 21, 2018 2:11:37 PM

ORIGINAL : PLAN MATERIAL ; Transtar, GAUGE : 0.08mm. INK ; Pelikan Nº 17

FILE Nº W-160-82

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER "THE LAND TITLES ACT."

August 24th, 1987

W. J. JOHNSTON
ONTARIO LAND SURVEYOR
WINCHESTER, ONTARIO

PLAN 4R-7040

RECEIVED AND DEPOSITED

6 October 1987

LAND REGISTRAR FOR THE LAND TITLES DIVISION OF OTTAWA-CARLETON Nº 4

OC - 5304
APP. Nº D3949-4-457

APPROVED

Sept. 27, 1989

ASSISTANT EXAMINER OF SURVEYS

SCHEDULE OF PARTS				
PART	LOT	CON.	AREA	INSTR. Nº
1	19	3	39.89 Ha.	CT 191193
2	19	3	0.096 Ha.	CT 191193

PARTS 1 & 2 - ALL OF PARCEL 19-1 SECTION GOULBOURN - 3

PLAN OF SURVEY OF

PART E1/2 LOT 19
CONCESSION 3

TOWNSHIP OF GOULBOURN

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON

SCALE : 1:2000

1987

W. J. JOHNSTON, OLS.

Metres 0 10 20 30 40 50 100 150

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

NOTES...

STANDARD IRON BARS SHOWN THUS ..... ⊕ SIB
IRON BARS SHOWN THUS ..... ⊕ IB
◆ DENOTES EVIDENCE FOUND
◇ DENOTES PLANTED
WIT. DENOTES WITNESS
O.H. DENOTES ONTARIO HYDRO
FENCES SHOWN THUS —x—x—x—
DISTANCES PER 5R-6743 SHOWN THUS (258.0)
T.C.P.L. DENOTES TRANS CANADA PIPELINES

BEARING REFERENCE...

BEARINGS ARE ASTRONOMIC, AND ARE REFERRED TO THE WESTERLY LIMIT OF PART 1, PLAN 5R-6743, BETWEEN MONUMENTS FOUND, THE BEARING BEING N40°51'20"W.

CAUTION...

THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF "THE PLANNING ACT".

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH "THE SURVEYS ACT" AND "THE LAND TITLES ACT" AND THE REGULATIONS MADE THERE UNDER.
2. THE SURVEY WAS COMPLETED ON THE 24th DAY OF AUG. 1987.

Aug. 24 1987
DATED

W. J. JOHNSTON
ONTARIO LAND SURVEYOR
WINCHESTER, ONTARIO

FROM THE OFFICES OF
HAZEN MELDRUM LIMITED
ONTARIO LAND SURVEYORS
CORNWALL-WINCHESTER