

April 14, 2025

**PH4905-LET.02.REV.01.**

**Ottawa Sivan Temple**  
2104 Roger Stevens Drive  
Ottawa, Ontario  
K0A 2T0

Attention: **Kula Sellathurai**

Subject: **Hydrogeological Assessment and Terrain Analysis**  
Proposed Temple Redevelopment  
2104 Roger Stevens Drive Ottawa, Ontario

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## INTRODUCTION

Further to your request, Paterson Group (Paterson) has conducted a Hydrogeological Assessment and Terrain Analysis in support of a Site Plan Control Application for the proposed redevelopment of the temple located at 2104 Roger Stevens Drive in Ottawa, Ontario. Please refer to the Key Plan (attached) for the approximate site location. The subject site refers to the parcel at 2104 Roger Steven Drive.

The purpose of this work has been to determine the suitability of the water supply aquifer underlying the site to support the Site Plan Application for the proposed redevelopment.

The proposed Site Plan Application is for the construction of a new temple and priest residence that is replacing the currently existing temple. Details of the proposed temple redevelopment can be found in the attached P<sup>2</sup> Concepts drawing SP01 - Site Plan – dated October 4, 2024.

The Subject Site consists of a 2.04 hectares (ha) lot and is currently occupied by the existing temple with associated private infrastructure. The ground surface is generally flat at the location of the temple and is sloped to the south behind the temple and towards the rear of the property. The surficial groundwater flow is anticipated to be towards the southeast, while general groundwater flow is anticipated to be to the east towards an unnamed tributary which eventually drains into Stevens Creek.



The Subject Site is situated in a rural area which is serviced by private water supplies and private on-site septic fields. The site is bordered to the north by Roger Stevens Drive, followed by a residential dwelling and agricultural land, to the west by residential dwellings, and to the south and east by agricultural land.

### **Description of Subject Site**

The subject site is approximately 2.04 ha in size and is currently occupied by a one-storey commercial building; Ottawa Sivan Temple. The Site Plan application is for a proposed redevelopment. The proposed redevelopment includes the construction of a new temple and a priest residence. Please refer to Figure-1 Key Plan and Site Plan Drawing SP01.REV.05, dated October 4, 2024 by P<sup>2</sup>Concepts, attached, for the proposed site location and site layout.

The subject site is currently serviced by an onsite sewage system and a private drilled well. A new drilled well was installed onsite to support the redevelopment. A new sewage system is proposed to be located on the western side, behind the priest residence. D.B Gray Engineering Inc. (hereby referred to as DBG Engineering) has designed a new sewage system due to the nitrate reduction required as part of the Nitrate Impact Assessment (NIA). A septic flow calculation was completed by DBG Engineering and resulted in a total daily water demand calculation of 7,250 L/day. Please refer to DBG Engineering Sewage System design, attached, for full details.

The existing well is currently servicing the existing building, however, a new drilled well, hereafter referred to as Test Well 1 (TW1) was installed on September 9, 2024 and is intended to service the proposed temple and priest residence following the completion of the proposed redevelopment. The existing well will be decommissioned in accordance with O.Reg.903 once it is no longer required.

The suitability of the aquifer to supply the subject site was assessed using the methodology provided in City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).

### **Karst Mapping**

Available Karst mapping (OGS GRS005) was reviewed as part of this assessment. The available mapping does not indicate the presence of any inferred or potential karstic features. Furthermore, no indication of karstic features were observed during the site visits completed by Paterson personnel.

### **Mississippi-Rideau Source Protection Plan**

The Mississippi-Rideau Source Protection Plan (MRSPP) provides guidance as to which policies apply to a given property, municipality or specific activity and if there are specific designations that apply to the area. The subject site has not been designated as any of the four groundwater related vulnerable areas identified within the Clean Water Act



(2006). The four vulnerable areas consist of Significant Groundwater Recharge Area (SGRA), Highly Vulnerable Aquifer (HVA), Intake Protection Zone (IPZ) and Wellhead Protection Area (WHPA).

As the subject site has not been designated as any of the four groundwater related vulnerable areas, there is no prohibition of land uses on the subject site based upon its existing or proposed usage.

## **HYDROGEOLOGICAL ASSESSMENT**

The purpose of this work has been to determine the suitability of the water supply aquifer underlying the site to support the Site Plan Application for the proposed temple redevelopment for potable supply usage. Specifically, the intent of this report is to review the availability of a safe and reliable water supply having sufficient quantity and quality to provide potable water for the proposed redevelopment.

### **Fieldwork Program**

#### **Geotechnical Program**

A geotechnical investigation was carried out on September 19, 2023, and consisted of a total of 3 boreholes excavated to a maximum depth of 6.7 m below ground surface (bgs). Practical refusal to DCPT was encountered at a depth of 10.8 m bgs in BH3-23. The boreholes were distributed in a manner to provide general coverage of the proposed redevelopment, taking into account underground utilities and site features. The locations of the boreholes are shown on Drawing PG6832-1 – Test Hole Location Plan (attached). The geotechnical analysis is completed under report no. PG6832-1.Revision 2, dated October 15, 2024.

#### **Well Testing**

As a means to demonstrate the adequacy of the aquifer underlying the subject lands, with respect to water quality and quantity, the newly drilled well (TW1) on the subject site was tested. TW1 has a Water Well Record (WWR) Well ID of A395525. TW1 has a 158.7 mm diameter steel casing that extends to 17.67 m below ground surface (bgs) with a 0.62 m stick up. The well itself extends to a depth of 54.9 m bgs. Based on available geological mapping, the drift thickness at TW1 varies from 15 to 25 m. According to the Water Well Record (WWR) for the newly drilled well, the overburden generally consists of sand and gravel, boulders, clay and hardpan to a depth of 15.84 m, where limestone bedrock was encountered. Refer to P<sup>2</sup>Concepts - Site Plan Drawing-SP01.REV.05 (Oct 4, 2024), attached, for the approximate location of TW1.

As a means to evaluate the water supply aquifer intercepted by the well, the well was subjected to an 8-hour constant rate pumping test. The pumping test was conducted on September 24, 2024 under the full-time supervision of Paterson personnel. Prior to the



pumping test the well was disinfected as per the MECP Disinfection Instruction Sheet (attached), and a data-logger was installed to monitor the background groundwater levels.

The submersible pump was rented from and installed by a licensed well technician (Air Rock Drilling Inc.) and used for the 8-hour pumping test. A licensed water well technician (Air Rock) completed the necessary plumbing related activities. The discharge line was placed at a sufficient distance to ensure that the discharge water was being directed away from the well as well as any septic systems in the area. Upon completion of the test, the system was returned to its normal configuration.

The pumping test was carried out at a pumping rate of 58 L/min for a duration of 8 hours. During the pumping test, the pumping rate was periodically measured using the timed volume correlation method. The pump rate was maintained within 5% of the selected pump rate. The static water level was recorded manually and an electric datalogger (VanEssen TD-Diver) was installed in the test well prior to the start of the pumping test. The selected rate of 58 L/min provides approximately 4.8 times the maximum total daily design volume for the septic system during the 8-hour pumping test. The rate was determined to be representative of a flow rate which would be in excess of what the proposed redevelopment would require.

The data logger recorded water levels at 30 second intervals. In addition, manual water level readings were taken at periodic intervals during the test.

Recovery data was collected from the well following the completion of the pumping. The well was noted to have fully recovered within 2 minutes after the end of pumping.

Groundwater samples were collected 4 hours and 8 hours after the start of pumping. Prior to collection of the groundwater samples, the free chlorine residual was verified as non-detectable. The water samples were submitted for comprehensive testing of bacteriological, chemical, and physical water quality parameters consistent with the standard "Subdivision Supply" suite of parameters plus trace metals, and volatile organic compounds (VOCs).

All samples were collected unfiltered and unchlorinated and were placed directly into clean bottles supplied by the analytical laboratory. Samples were placed immediately into a cooler with ice and were transported directly to Environmental Testing Canada Inc.(Eurofins) laboratory in Ottawa. All samples were received by the laboratory within 24 hours of collection.

A series of field tests of the pumped water were carried out at the well head during the 8-hour pumping test. The parameters tested at the well head included: pH, total dissolved solids, conductivity, turbidity, apparent colour, and temperature.



## Well Inspection

A visual inspection of TW1 was performed by Paterson personnel and confirmed that the well casing and well cap are in good condition. The grading around the well was noted to be sufficiently graded to direct surface water away from the wellhead, as required by O.Reg 903. The stickup was measured to be 0.62 m above ground surface. Based on a visual inspection by Paterson personnel, the well was deemed to be in good condition.

## Aquifer Analysis

### Water Quantity

Pumping test data was analyzed using AQTESOLV Pro Version 4 aquifer analysis software package by HydroSOLVE Inc. Drawdown data was measured using an electronic water level tape and an electronic datalogger unit.

<b>Table 1: SUMMARY OF WATER SUPPLY AQUIFER CHARACTERISTICS OF TW1</b>	
<b>AQUIFER PARAMETER</b>	<b>RESULT OF ANALYSIS</b>
Transmissivity (m <sup>2</sup> /day)	1971
Pumping Rate (L/min)	58
Pre-test Static Water Level (m)	4.62
Post-test Static Water Level (m)	4.88 (4.98 max)
Available Drawdown (m)	50.28
% Drawdown During Pump Test (%)	0.7
Specific Capacity (L/min/m drawdown)	161

The drawdown data was analyzed using the Cooper Jacob method of analysis. Aquifer transmissivity is estimated to be 1971 m<sup>2</sup>/day. Refer to the Cooper Jacob method of analysis data sheet attached to this report. Note that there was very little draw down during the pumping test at the associated pumping rate.

The pumping test results show that TW1 has a high yield to support the water demands that may be required. Overall maximum drawdown at a constant pumping rate for a period of 8 hours was approximately 0.36 m (0.7% of the available drawdown). It should be noted that full recovery was achieved within 2 minutes after the end of pumping.

The total volume of water pumped during the 8-hour pumping event was approximately 27,840 L. This is approximately 3.8 times the maximum total daily design volume of water required (7,250 L/day) to support the proposed redevelopment.

The suitability of the aquifer to supply the proposed Site Plan Application for the proposed commercial modification was assessed using the methodology provided in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).



Based on the information summarized in Table 1, it is readily apparent that the water supply well has intercepted an adequately strong water supply aquifer which has sufficient quantity to service the proposed Site Plan Control Application.

Given the analyses presented and summarized above, it is our opinion that there is an adequate supply of water to support the proposed redevelopment as well as the neighbouring lots. Available water well records (WWR) of the neighboring properties on the MECP Well Record mapping website indicated that the wells were screened in limestone and sandstone. Surrounding WWR's are attached to this report.

## Water Quality

### Field Data

Turbidity, electrical conductivity, total dissolved solids (TDS), pH, apparent color and temperature were measured at the wellhead during the pumping test. The measurements and time intervals for each of these parameters are summarized on the graphical representation below. In addition, a HACH Pocket Colorimeter II chlorine reader was used to measure the free chlorine residual level. No chlorine residual was detected in the discharge water prior to the collection of the water samples.

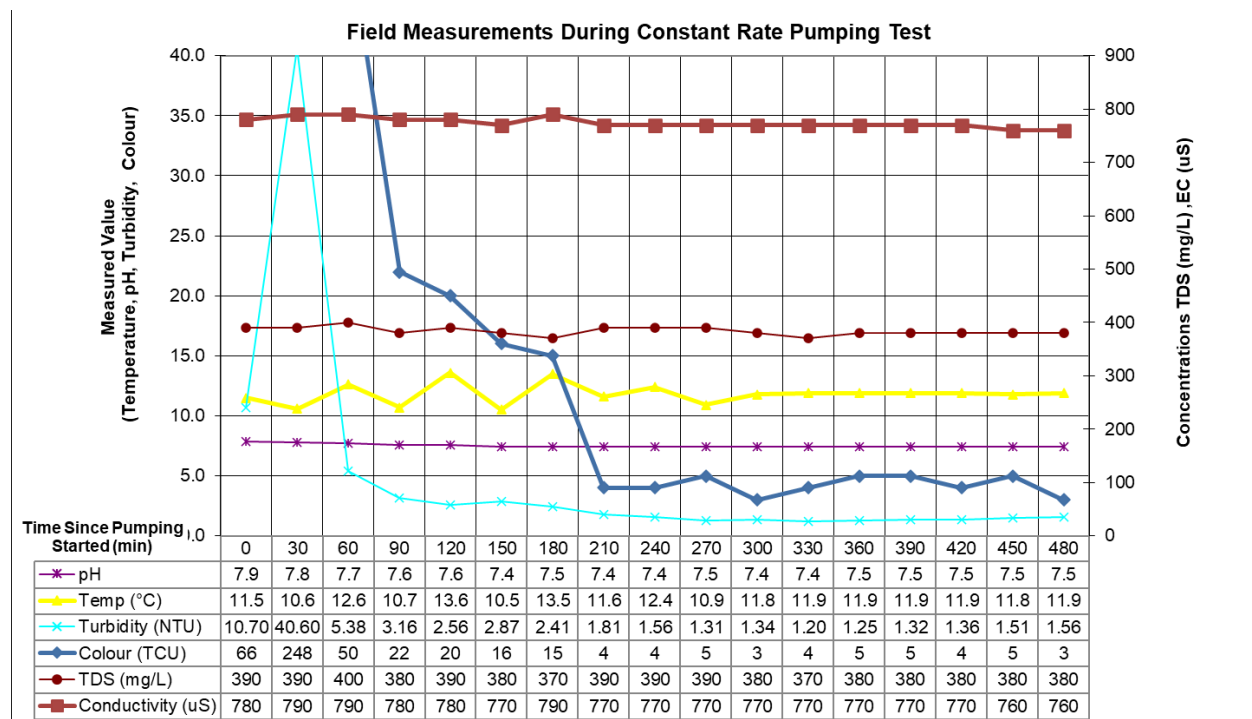


Figure 1: Field Measurements



### Laboratory Data

The Subdivision Package suite of parameters and trace metals laboratory water quality obtained from the pumping test of TW1 is provided in Table 2a, 2b, and 2c below and the laboratory analyses reports can be found attached. VOC laboratory analytical testing were completed and measured to be non-detect in the sample results. All laboratory test results can be found attached to this report.

TABLE 2a: GROUNDWATER MICROBIOLOGY & GENERAL GEOCHEMISTRY					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	TW1 GW1 (4 hr)	TW1 GW2 (8 hr)
				9/24/2024	9/24/2024
MICROBIOLOGICAL					
Escherichia Coli (E.Coli)	ct/100mL	0	MAC	0	0
Total Coliforms	ct/100mL	0	MAC	0	0
GENERAL CHEMICAL - HEALTH RELATED					
Fluoride (F)	mg/L	1.5	MAC	0.64	0.63
Ammonia (N-NH <sub>3</sub> )	mg/L	-	-	0.154	0.153
Nitrite (N-NO <sub>2</sub> )	mg/L	1	MAC	<0.1	<0.1
Nitrate (N-NO <sub>3</sub> )	mg/L	10	MAC	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	-	-	0.231	0.236
Turbidity (Field)	NTU	1.0 (5.0)	MAC/AO	1.56	1.56
Turbidity (Laboratory)	NTU	1.0 (5.0)	MAC/AO	1.6	2.3
GENERAL CHEMICAL - AESTHETIC RELATED					
Alkalinity (as CaCO3)	mg/L	30-500	OG	229	236
Chloride (Cl)	mg/L	250	AO	90	85
Colour (Apparent - Lab)	TCU	5	AO	6	7
Colour (Apparent - Field)	TCU	5	AO	4	3
Conductivity	uS/cm	-	-	781	766
Dissolved Organic Carbon	mg/L	5	AO	0.7	1.1
Hardness (as CaCO3)	mg/L	100	OG	226	226
Ion Balance	unitless	-	-	1.01	1.00
pH@25°C	unitless	6.5-8.5	AO	7.99	7.95
Phenols	mg/L	-	-	<0.001	<0.001
Sulphate (SO <sub>4</sub> )	mg/L	500	AO	47	47
Sulphide (S <sub>2</sub> <sup>-</sup> )	mg/L	0.05	AO	<0.01	<0.01
Tannin & Lignin	mg/L	-	-	0.10	<0.01
Total Dissolved Solids	mg/L	500	AO	508	498

1. ODWS identifies the following types of parameters:

MAC = Maximum Allowable Concentration

AO = Aesthetic Objective

OG = Operational Guideline

2. Shaded Concentration Indicates an Exceedance of the ODWS Objective

**TABLE 2b: GROUNDWATER GEOCHEMISTRY - METALS**

PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	TW1 GW1 (4 hr)	TW1 GW2 (8 hr)
				9/24/2024	9/24/2024
METALS					
Aluminum (Al)	mg/L	0.1	OG	0.03	0.01
Antimony (Sb)	mg/L	0.006	IMAC	<0.0005	<0.0005
Arsenic (As)	mg/L	0.01	IMAC	<0.001	<0.001
Barium (Ba)	mg/L	1.0	MAC	0.07	0.06
Beryllium (Be)	mg/L	-	-	<0.0005	<0.0005
Boron (B)	mg/L	5.0	IMAC	0.20	0.20
Cadmium (Cd)	mg/L	0.005	MAC	<0.0001	<0.0001
Calcium (Ca)	mg/L	-	-	42	42
Chromium (Cr)	mg/L	0.05	MAC	<0.001	<0.001
Cobalt (Co)	mg/L	-	-	<0.0002	<0.0002
Copper (Cu)	mg/L	1.0	AO	<0.001	<0.001
Iron (Fe)	mg/L	0.3	AO	0.19	0.33
Lead (Pb)	mg/L	0.01	MAC	<0.001	<0.001
Magnesium (Mg)	mg/L	-	-	30	29
Manganese (Mn)	mg/L	0.05	AO	<0.01	<0.01
Molybdenum (Mo)	mg/L	-	-	<0.005	<0.005
Nickel (Ni)	mg/L	-	-	<0.005	<0.005
Potassium (K)	mg/L	-	-	8	8
Selenium (Se)	mg/L	0.05	MAC	<0.001	<0.001
Silver (Ag)	mg/L	-	-	<0.0001	<0.0001
Sodium (Na)	mg/L	200	AO	81	78
Strontium (Sr)	mg/L	-	-	1.75	1.77
Thallium (Tl)	mg/L	-	-	<0.0001	<0.0001
Uranium (U)	mg/L	0.02	MAC	<0.001	<0.001
Vanadium (V)	mg/L	-	-	<0.001	<0.001
Zinc (Zn)	mg/L	5.0	AO	<0.01	<0.01

1. ODWS identifies the following types of parameters:

MAC = Maximum Acceptable Concentration

IMAC = Interim Maximum Acceptable Concentration

AO = Aesthetic Objective

OG = Operational Guideline

2. Shaded Concentration Indicates an Exceedance of the ODWS Objective

**TABLE 2c: GROUNDWATER GEOCHEMISTRY - VOLATILES**

PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	TW1 GW1 (4 hr) 9/24/2024	TW1 GW2 (8 hr) 9/24/2024
VOCs Surrogates					
1,2-dichloroethane-d4	%	-	-	-	113
4-bromofluorobenzene	%	-	-	-	81
Toluene-d8	%	-	-	-	99
Volatiles					
1,1,1,2-tetrachloroethane	µg/L	-	-	-	<0.5
1,1,1-trichloroethane	µg/L	-	-	-	<0.4
1,1,2,2-tetrachloroethane	µg/L	-	-	-	<0.5
1,1,2-trichloroethane	µg/L	-	-	-	<0.4
1,1-dichloroethane	µg/L	-	-	-	<0.4
1,1-dichloroethylene	µg/L	14.0	MAC	-	<0.5
1,2-dichlorobenzene	µg/L	200.0	MAC	-	<0.4
1,2-dichloroethane	µg/L	5.0	IMAC	-	<0.2
1,2-dichloropropane	µg/L	-	-	-	<0.5
1,3,5-trimethylbenzene	µg/L	-	-	-	<0.3
1,3-dichlorobenzene	µg/L	-	-	-	<0.4
1,3-Dichloropropylene (cis+trans)	µg/L	-	-	-	<0.3
1,4-dichlorobenzene	µg/L	5.0	MAC	-	<0.4
Acetone	µg/L	-	-	-	<30
Benzene	µg/L	1.0	MAC	-	<0.5
Bromodichloromethane	µg/L	-	-	-	<0.3
Bromoform	µg/L	-	-	-	<0.4
Bromomethane	µg/L	-	-	-	<0.5
c-1,2-Dichloroethylene	µg/L	-	-	-	<0.4
c-1,3-Dichloropropylene	µg/L	-	-	-	<0.2
Carbon Tetrachloride	µg/L	2.0	MAC	-	<0.2
Chloroethane	µg/L	-	-	-	<0.2
Chloroform	µg/L	-	-	-	<0.5
Dibromochloromethane	µg/L	-	-	-	<0.3
Dichlorodifluoromethane	µg/L	-	-	-	<0.5
Dichloromethane	µg/L	50	MAC	-	<4.0
Ethylbenzene	µg/L	140	MAC	-	<0.5
Ethylene Dibromide	µg/L	-	-	-	<0.2
Hexane	µg/L	-	-	-	<5
m/p-xylene	µg/L	-	-	-	<0.4
Methyl Ethyl Ketone (MEK)	µg/L	-	-	-	<10
Methyl Isobutyl Ketone (MIBK)	µg/L	-	-	-	<10
Methyl Tert Butyl Ether (MTBE)	µg/L	15	AO	-	<2
Monochlorobenzene	µg/L	80	MAC	-	<0.5
o-xylene	µg/L	-	-	-	<0.4
Styrene	µg/L	-	-	-	<0.5
t-1,2-Dichloroethylene	µg/L	-	-	-	<0.4
t-1,3-Dichloropropylene	µg/L	-	-	-	<0.2
Tetrachloroethylene	µg/L	10	MAC	-	<0.3
Toluene	µg/L	60	MAC	-	<0.4
Trichloroethylene	µg/L	5	MAC	-	<0.3
Trichlorofluoromethane	µg/L	-	-	-	<0.5
Vinyl Chloride	µg/L	1	MAC	-	<0.2
Xylene; total	µg/L	90	MAC	-	<0.5



The bacteriological test results (Certificate of Analysis – Report No. 4102006) indicated that the test samples at the 4 and 8 hour interval were non-detect (0 ct/100 mL) for E.Coli and Total Coliforms.

The water quality of the subject water supply well meets all the Ontario Drinking Water Standards maximum acceptable concentrations (MAC). Furthermore, the water meets all of the Aesthetic Objectives (AO) and Operational Guidelines (OG) with the exception of the following.

- ☐ Hardness (as  $\text{CaCO}_3$ )
- ☐ Turbidity
- ☐ Iron (Fe)

Exceedances of the above parameters are not uncommon of the water supply in the subject aquifer. Each of these groundwater parameters are discussed in detail below.

### **Hardness as $\text{CaCO}_3$**

Hardness, expressed as calcium carbonate, is an operation guideline and does not appear in the ODWS. Rather, it appears in the Technical Support Documents for Ontario Drinking Water Standards, Objectives and Guidelines (ODWS) as a parameter with an operational guideline at 100 mg/L. At the measured concentration of 226 mg/L, the water is considered to be hard, however, it is below the reasonable treatable limit of 500 mg/L specified in Table 3 of the MOECC guidance document Procedure D-5-5 (1996). The hardness concentration can be treated using conventional softening technologies, if desired by the owner.

### **Turbidity**

Turbidity, which is generally an aesthetic parameter, was detected in the laboratory test samples at values of 1.6 and 2.3 NTU in the 4- and 8-hours tests, respectively. Field testing of the samples detected values of 1.56 NTU in the 4- and 8-hour field tests, respectively. It is expected that continued use of the well would further reduce turbidity values. The elevated turbidity in the laboratory analyzed samples is attributed to the precipitation of iron.

The ODWS maximum acceptable concentration for turbidity in drinking water entering the distribution system is 1 NTU. The health-related Ontario Drinking Water Objective (ODWO) is 1 NTU. The Aesthetic Objective for turbidity in drinking water reaching the consumer is 5 NTU. The City's HTAG has a Maximum Concentration Considered Reasonably Treatable (MCCRT) of 5 NTU.

The field test parameters are below the 5 NTU objective. Furthermore, total coliforms and E.Coli were non-detect (0 ct/100 mL) in both the 4 and 8-hour samples, which meets the health requirements of the City's HTAG when the sample results are above the health-related ODWO of 1 NTU. Therefore, treatment for turbidity is not required



## **Iron**

Concentrations of iron above 0.3 mg/L can contribute to staining of fixtures and a metallic taste at higher concentrations. Precipitation of iron can promote the growth of iron bacteria in pipes. The concentration of iron in the groundwater in TW1 was measured to be 0.33 mg/L at the 8-hour mark. The concentration of iron in the groundwater in the test well is considered to be reasonably treatable in accordance with Procedure D-5-5. It is recommended that an iron filter be used to reduce the levels of iron and reduce the potential for excessive precipitate occurring in the water supply system, if desired by the owner.

## **Colour**

Colour may occur in drinking water for several reasons. It may be due to organic substances from the decay of vegetation, or the presence of metals such as iron, manganese, and copper, which are abundant in nature. The provincial aesthetic objective for colour in drinking water is 5 True Colour Units (TCU). The federal (Health Canada) guideline aesthetic objective limit for colour is 15 TCU (Guidelines for Canadian Drinking Water Quality, Health Canada June 2019). Procedure D-5-5 gives a maximum concentration considered reasonably treatable for colour as 7 TCU. As colour is a strictly aesthetic parameter, it can be reduced from the water supply, if desired, through the use of a manganese greensand treatment.

During the field pumping test, a DR900 colorimeter was used to measure apparent colour in the groundwater at regular intervals. Apparent colour in the groundwater was measured as 4 and 3 TCU at the 4- and 8- hour marks, which are below the aesthetic guideline of 5 TCU, whereas apparent colour from laboratory measurements was 6 and 7 TCU which is above the guideline but within treatable limits. The elevated colour levels detected in the lab samples is attributed to the precipitation of iron out of the groundwater.

## **Total Dissolved Solids (TDS)**

TDS refers to the concentration of inorganic substances dissolved in water. The main constituents are typically chloride, sulphates, calcium, magnesium, and bicarbonates. The TDS concentration of 508 mg/L at the 4-hour mark exceeds the Aesthetic Objective of 500 mg/L. At concentrations above 500 mg/L, some consumers may find the taste objectionable, however, as the objective is an aesthetic objective, no treatment is required. At the 8-hour mark, the TDS concentration was 498 mg/L which is below the Aesthetic Objective. As the TDS concentration was decreasing with time and was below the Aesthetic Objective no taste problems are anticipated to occur and treatment is not likely to be required. If desired by the owner, a point of use reverse osmosis unit can be installed to reduce TDS levels for drinking purposes.

The Langelier calculation provided an LSI of 0.0. Based on the evaluation of the result, the water is saturated and does not precipitate a scale layer of calcium carbonate or dissolve calcium carbonate (neither scale forming nor corrosive). Based on the stable



value, there are no mitigative measures needed. See Langelier Saturation Index Calculation attached for calculation details.

### **Sodium**

Sodium (Na), an aesthetic parameter, was detected in the laboratory test sample at concentrations of 81 and 78 mg/L, which does not exceed the ODWS aesthetic objective of 200 mg/L. Although sodium is not toxic and no maximum acceptable concentration has been set, concentrations above 20 mg/L require that the Medical Officer of Health be notified of the water quality results, so that this information may be passed on to local physicians for use in treatment of those requiring a sodium-restricted diet.

## **TERRAIN ANALYSIS**

The purpose of this study is to determine the site's suitability for private on-site wastewater systems. Specifically, the intent of this report is to provide design details for private septic servicing and lot development potential.

### **Surficial Geology**

Paterson carried out a Geotechnical Investigation on September 19, 2023 where 3 boreholes were installed in a manner to provide general coverage of the subject site, with specific consideration to the redevelopment. The general overburden was observed to be a thin layer of topsoil followed by fill and/or glacial till. Fill, consisting of brown silty sand with gravel, was encountered in BH2-23 and BH3-23, to a maximum depth of 2.1 m bgs. Glacial till, consisting of silty sand to sandy silt with varying amounts of gravel and, cobbles and boulders, was found in each borehole to the maximum depth of the boreholes. Practical refusal to augering was observed at a depth of 5 m in BH1-23 and DCPT refusal was observed in BH3-23 at a depth of 10.8 m bgs. The results of the geotechnical program are generally consistent with available geological mapping provided by the Ontario Geological Survey (OGS MRD128) and with the available historical surrounding Water Well Records (WWR). Further details can be found in geotechnical report PG6832-1.Revision 2, dated October 15, 2024.

Available bedrock geological mapping provided by the Ontario Geological Survey (MRD 219) indicates that the bedrock underlying the subject site consists of dolostone, minor shale and sandstone of the Oxford Formation in the Beekmantown Group. Available overburden thickness mapping shows a drift thickness of 10 to 15 m across the subject site.

### **Hydrogeological Sensitivity of the Site**

The subject site currently consists of a temple with associated infrastructure and private servicing. The subject site is serviced by a private potable well and septic system. The subject site is currently occupied by a one-story commercial building, specifically the Ottawa Sivan Temple. The site is bordered to the north by Roger Stevens Drive, followed by a residential dwelling and agricultural land, to the west by residential dwellings, and to



the south and east by agricultural land. All surrounding properties are on private services. The adjacent properties are serviced by private wells and septic systems.

The overburden at the subject site and surrounding WWRs is recorded as a sand based glacial till.

According to the Ontario Building Code (OBC) Section 8.7.2.1 (1) (b)(i), highly permeable soils as it relates to sewage system design is defined by soils having a percolation rate of less than 1 minute per cm. According to the Ministry of Municipal Affairs and Housing (MMAH) Supplementary Standard SB-6 – Percolation time and soil descriptions dated January 1, 2024 only “Well graded gravels, gravel-sand mixtures, little or no fines” or “Poorly graded gravels, gravel-sand mixtures, little or no fines” have a percolation time of less than 1 minute per cm. The onsite soils were noted to be a glacial till consisting of silty sand to sandy silt with varying amounts of gravel and, cobbles and boulders. Due to the presence of silty sand to sandy silt (a high composition of fines), the percolation time is anticipated to be greater than 1 min/cm and therefore is not considered a highly permeable soil. As such, septic impacts due to observed soils are not anticipated onsite.

According to the Geotechnical Investigation, the overburden thickness was observed to be greater than 2 m.

As the proposed site does not have bedrock within 2 m of the ground surface and the site does not contain any highly permeable soils, the site is not considered hydrogeologically sensitive. Separation distances are not required to be increased between the septic components and the onsite well.

To corroborate our position in this matter, the water quality of the bedrock aquifer targeted by the onsite drilled potable supply well shows no indication of surface water or surface impacts.

### **Lot Development Plan**

The Site Plan for the proposed redevelopment was produced by P<sup>2</sup>Concepts and is attached (Drawing-SP01.REV.05, dated October 4, 2024). The location of the temple, priest residence, proposed sewage system, and related infrastructure are shown. Please note that although a “permeable parking area” was designated in the site plan drawing, the material was considered impermeable as a conservative approach for this Nitrate Impact Assessment.

### **Sewage System Volumes**

The sewage system has been designed by D.B. Gray Engineering and can be found attached to this report. The maximum total daily design sanitary sewage flow volume (TDDSSF) was determined to be 7,250 L/day. An approved Ottawa Septic System Office (OSSO) permit will be submitted with the Site Plan Application.



## Predictive Nitrate Impact Assessment

In order to demonstrate that private services would adequately support the proposed Site Plan application, a Predictive Nitrate Impact Assessment (NIA) for the subject site was completed. The values shown in the Predictive NIA attached to this report are summarized below.

<input type="checkbox"/> Site area	2.04 ha
<input type="checkbox"/> Impervious area (%)	27 %
<input type="checkbox"/> Daily sewage flow	7.25 m <sup>3</sup> /d
<input type="checkbox"/> Concentration of nitrate in effluent (Value based on typical effluent concentration)	40 mg/L
<input type="checkbox"/> Concentration of nitrate in effluent with treatment (Value based on BNQ/NSF 245 certified nitrate reduction system with 50% nitrate reduction)	20 mg/L
<input type="checkbox"/> Surplus Water (The surplus water value was estimated based on Environment Canada Climate Office values with a soil type comprised of a fine sandy loam (Urban lawns / Shallow Rooted Crops) and anthropogenic sources.)	378 mm/yr
<input type="checkbox"/> Combined infiltration factor based on:	0.70
• Topography infiltration factor	0.20
• Soil texture infiltration factor	0.40
• Cover infiltration factor	0.10

The topography infiltration factor of 0.20 is based upon a generally rolling land with an average slope between 2.8 to 3.8 m/km. The soil texture infiltration factor was based upon an “open sandy loam” with a value of 0.4 which is a reasonable generalization based upon the site investigations and available geological mapping. The “cover infiltration factor” was calculated at 0.10 based upon a cultivated land type cover.

The calculation for a conventional septic system results in a predicted nitrate concentration of 16.05 mg/L nitrate for the subject site, using a value of 40 mg/L nitrate concentration within the effluent. This value was based upon a daily sewage flow of 7,250 L/day. It is expected that the actual usage should be lower. The inclusion of nitrate reduction technology (50 % nitrogen reduction of the effluent nitrate, with a BNQ or NSF 245 certified technology) would result in a nitrate concentration of 8.03 mg/L at the property boundary using a value of 20 mg/L nitrate within the effluent, which is below the maximum property value of 10 mg/L nitrate by the property boundary. Using a BNQ or NSF 245 certified 50% nitrate reduction technology, the maximum allowable flow is greater than 10,000 L/day.



Based on the results of the predictive NIA, it is our opinion that the property can adequately support the proposed Site Plan application without having an adverse impact on the underlying bedrock aquifer, provided that an BNQ/NSF 245 certified nitrate reduction system with a minimum of 50% nitrate reduction is used in the sewage system.

## CONCLUSIONS

Based on the information contained within the body of this report the following conclusions can be drawn:

1. The water supply aquifer intercepted by the existing well is considered to be adequate to support the water quantity demands for the proposed redevelopment.
2. Based on a visual inspection performed by Paterson personnel, the well casing, stickup, well cap, and surrounding grading around the well are of sufficient standard to meet O.Reg 903. It is a requirement that the well continue to adhere to and be maintained in accordance with O.Reg 903.
3. The preferred water supply intercepted by TW1 contains a water supply that is potable, and contains only elevated concentrations of hardness, turbidity, iron, and apparent colour. The noted parameters can be treated with current readily available water conditioning equipment if desired by the owner.
4. A residential grade water softener is recommended to facilitate the reduction of the hardness concentration. If a water softener is used for the proposed redevelopment, the owner should be made aware that additional sodium will be added to the water to reduce hardness. If desired, a point-of-use reverse osmosis system can be also used to provide a drinking tap source.
5. If desired, the owner can use an iron filter to treat the potential iron values.
6. The sodium concentration was measured to be above the 20 mg/L reporting limit and, as such, the Medical Officer of Health for the City of Ottawa should be informed to assist area physicians in the treatment of local residents on sodium reduced diets.
7. The site is not considered hydrogeologically sensitive.
8. The predicted nitrate concentrations at the property boundary is calculated to be below the required 10 mg/L threshold when a standard denitrification system (50% nitrate reduction) using BNQ/NSF 245 certified nitrate reduction technology is used.



9. A Sewage System Permit and Building Permit need to be issued prior to the commencement of construction on the proposed redevelopment or the proposed septic system.
10. The existing well will be decommissioned in accordance with O.Reg.903 once it is no longer needed.
11. The results of the Hydrogeological Assessment and Terrain Analysis have provided satisfactory evidence that the subject site can support the proposed redevelopment with respect to water quality, quantity and sewage system placement.

We trust that the current submission satisfies your immediate requirements.

Best Regards,

**Paterson Group Inc.**

Alexander Schopf, PhD, EIT



Erik Ardley, P. Geo

**Attachments:**

- ☐ Key Plan
- ☐ P<sup>2</sup>Concepts - Drawing SP.01.REV.08, dated April 9, 2025
- ☐ MECP Water Well Records
- ☐ Eurofins Certificate of Analysis
- ☐ AQTESOLV - Pumping Test Analysis Reports
- ☐ Langelier Saturation Calculation
- ☐ Testhole Soil Profile and Data Sheets
- ☐ Nitrate Impact Assessment Calculations
- ☐ PG6832-1 – Test Hole Location Plan
- ☐ DBG Engineering Septic System Design



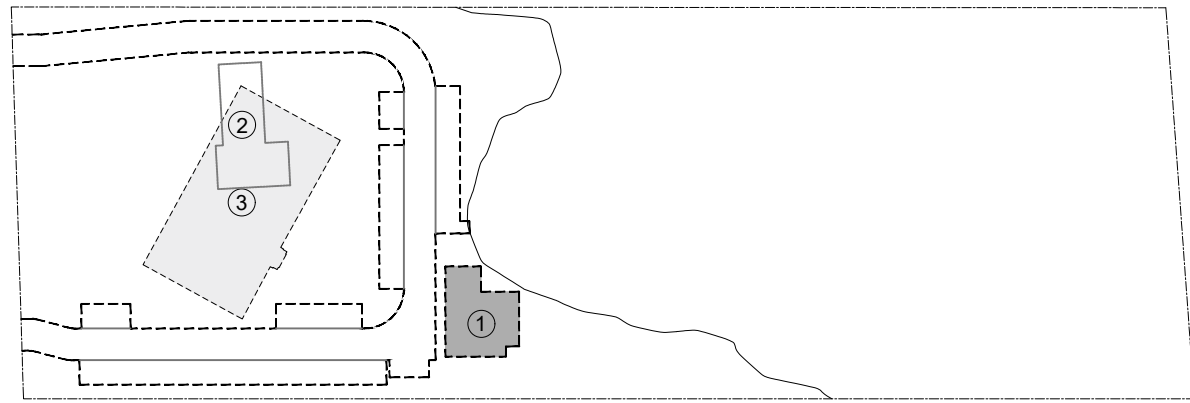


**FIGURE 1**

**KEY PLAN**

2104 Roger Stevens	R13 [608r]	S. 1A - Area D (Rural)	S. 58 - Floodplain overlay	Official Plan - S. B9	Rural Transect - Village	Temple GFA 2,013 m2 Priest Residence GFA 551 m2 Temple Assembly Area GFA 1,067.74 m2
<b>General Provisions</b>		<b>Section</b>	<b>Required</b>		<b>Proposed</b>	
Permitted uses*		S. 240 [608r]	School, Place of Worship, or Dwelling unit accessory to these uses		Place of Worship, Dwelling unit	
Min. lot area (sq. m)		Table 224A, (a)	10,000 m2		20,395 m2	
Min. lot width (m)		Table 224A, (b)	75 m		82.95 m	
Max. building height (m)		Table 224A, (g)	12 m		7.54 m	
Min. front yard setback (m)		Table 224A, (c)	9 m		26.20 m	
Min. rear yard setback (m)		Table 224A, (d)	10 m		177.10 m	
Min. int. side yard setback (m)		Table 224A, (e)	9 m		16.69 m (east), 16.90 m (west)	
Max. lot coverage (%)		Table 224A, (h)	30% lot area = 6,118.50 m2		6% lot area = 1,309.56 m2	
Min. landscaped area (%)		Table 224A, (i)	20% lot area = 4,079 m2		94% lot area = 19,085.44 m2	
* 608r exception						
<b>Parking Provisions</b>		<b>Section</b>	<b>Required</b>		<b>Proposed</b>	
Place of Worship		Table 101, N66	10 spaces / 100 m2 of assembly area GFA = 107 Spaces		60 spaces	MV REQUIRED
Dwelling unit		Table 101, R4	1 space		1 space	
Parking space size		S. 106, (1)	2.6 m x 5.2 m		2.6 m x 5.2 m	
B/F parking (included in total)		AODA, S. 80.36	4% of the total provided spaces = 2 spaces		3 spaces (2 type A, 1 type B)	
Type A parking space dimensions		AODA, S. 80.34 (1)	3.4 m x 5.2 m (plus 1.5 m aisle)		3.4 m x 5.2 m with 1.5 m shared aisle	
Type B parking space dimensions		AODA, S. 80.34 (2)	2.4 m x 5.2 m (plus 1.5 m aisle)		2.4 m x 5.2 m with 1.5 m shared aisle	
Min. drive aisle width (m)		S. 107, (1) (d)	6.7 m		6.7 m	
Min. driveway width (m)		S. 107, (1) (a)	3 m - single lane; 6 m - double lane		6.7 m	
Min. landscaped area for parking lots (%)		S. 110, (1)	15% (322.32 m2)		24% (757.31 m2)	
Min. landscaped buffer for parking lot (m)		Table 110, (1)	3 m abutting street; 1.5 m not abutting street		11.94 abutting a street; 3.02 not abutting street	
Min. setback for outdoor refuse (in-ground container)		S. 110, (3)	9 m from a lot line abutting a public street 3 m from any other lot line Screened by soft landscaping 2 m in height		77.71 m from a lot line abutting a public street 4.57 m from any other lot line Screened by soft landscaping 2 m in height	
Permitted parking lot material		S. 100, (3) (b)	gravel; B/F spaces must be hard and stable		Asphalt, interlock pavers	
Min. number of bike parking spaces		Table 111A, (i)	1 space / 1,500 m2 GFA = 1 Space		3 spaces	
Min. number of loading spaces		Table 113A, (a)	1 space if 2,000 - 4,999 m2 of GFA = 1 Space		0 spaces	MV REQUIRED

PHASING DIAGRAM:



- PHASE 1 - CONSTRUCTION OF A TWO STOREY BUILDING (TEMPORARY TEMPLE / PRIEST RESIDENCE) DRIVEWAY / PARKING)
- PHASE 2 - DEMOLITION OF THE OF EXISTING BUILDING
- PHASE 3 - CONSTRUCTION OF A ONE STOREY BUILDING - TEMPLE

LEGEND:

INTERNAL ROAD / FIRE ROUTE

S.O.D.

SNOW STORAGE AREA

PERMEABLE PARKING AREA

TERRACES

BARRIER FREE CAR PARKING SPACES  
TYPE A (3.4 x 5.2 m)  
TYPE B (2.4 x 5.2 m)  
ACCESS AISLE (1.5 x 5.2 m)

CAR PARKING SPACES

PROPOSED BUILDING

PROPOSED WALKWAY

SHRUB / BUSHES

EXISTING VEGETATION

PROPOSED TREES

BIKES PARKING SPACE

MOLOK BIN

SANITARY MANHOLE

STORM / CATCH BASIN MANHOLE

CATCH BASIN

LIMIT OF SITE DEVELOPMENT

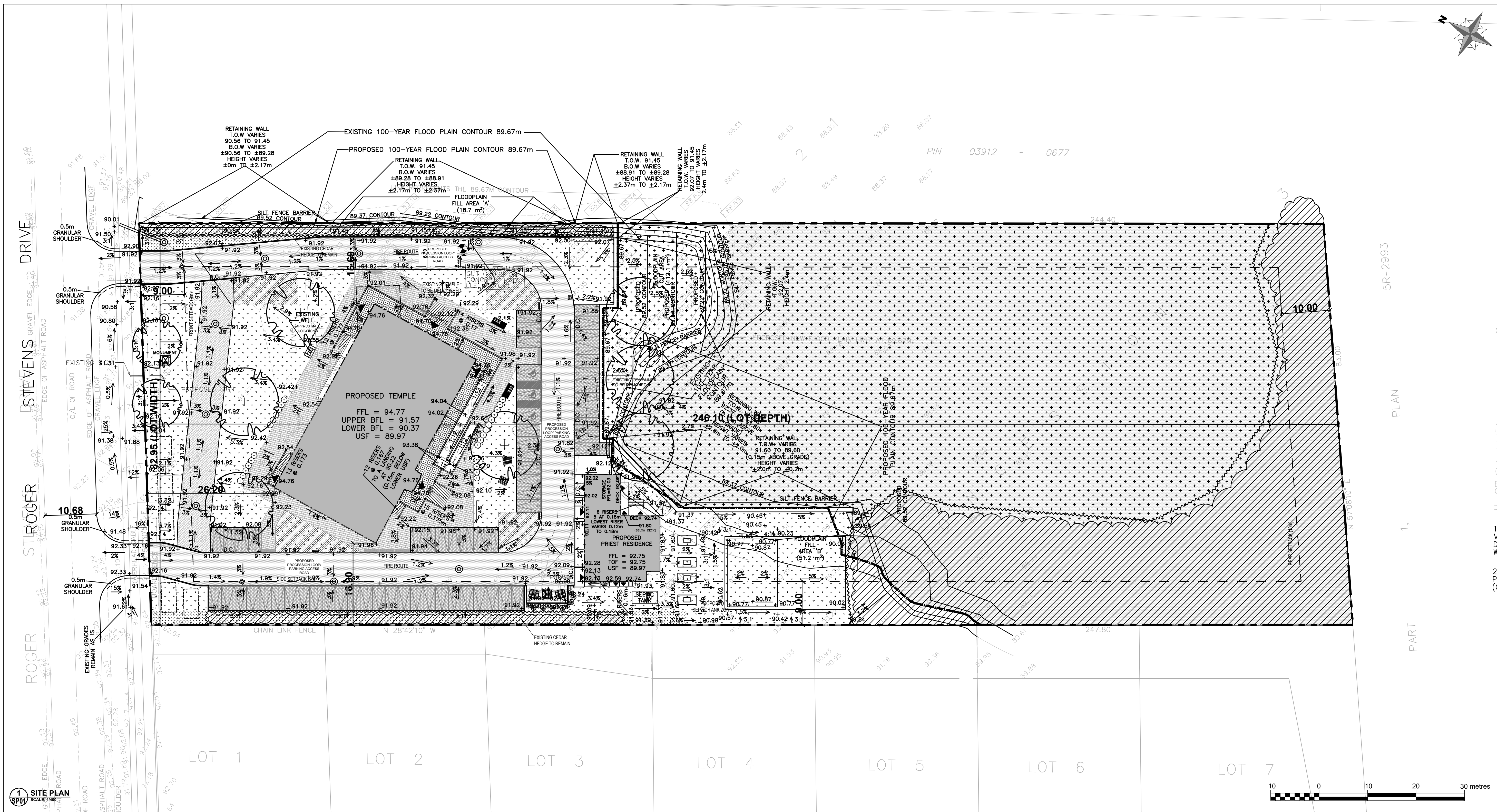
EXISTING STATUE

FIRE ROUTE SIGN

ACCESSIBLE BENCH WITH CONCRETE PAD

PROPOSED PICNIC TABLE

EXISTING TREE TO REMAIN



OWNER NAME & ADDRESS  
Valluvambiga Sri Talyayayaki Sametha  
Vaihiyanathan Swamy Koli Inc.  
Kugendran Sabaratham  
2104 Roger Stevens Rd North Gower, ON, K0A 2T0

ARCHITECT  
OM P. MADAN ARCHITECT  
8 AVE. Q, QAA, M9A4C  
7 SPALTER CRES.  
OTTAWA, ONTARIO K2B 1B3  
T: (613) 203-1805

APPLICANT AND DESIGNER  
P-SQUARED CONCEPTS INC.  
P<sup>2</sup>concepts

PROJECT TEAM (ENGINEERS)  
PATERNON GROUP  
CIMAX  
D.B. Gray Engineering Inc.

James B. Lemox & Associates Inc.  
LANDSCAPE ARCHITECTS

PLAN OF SURVEY  
INFORMATION SHOWN HAS BEEN TAKEN FROM  
J.D. BARNES LIMITED  
62 STEACIE DRIVE, SUITE 103,  
KANATA, ON K2K 2A9  
(613) 731-7244

TOPOGRAPHIC PLAN OF  
PART OF LOT 21  
CONCESSION 3  
GEOGRAPHIC TOWNSHIP OF NORTH GOWER  
NOW IN THE  
CITY OF OTTAWA

BENCHMARK NOTE  
1. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE SITE BENCHMARK HAVE NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.  
2. ELEVATIONS ARE GEODETIC AND REFERRED TO PUBLISHED CONTROL POINT 01019791716 HAVING A PUBLISHED ELEVATION OF 91.214 METRES (GVD28-78 DATUM)

08	ISSUED FOR REVIEW	2025-04-09
07	ISSUED FOR REVIEW	2025-04-03
06	ISSUED FOR COORDINATION	2025-03-06
05	ISSUED FOR COORDINATION	2024-10-04
04	ISSUED FOR COORDINATION	2024-09-26
04	ISSUED FOR COORDINATION	2024-08-08
03	ISSUED FOR CIVIL COORDINATION	2024-05-21
02	ISSUED FOR CLIENT REVIEW	2024-04-09
01	ISSUED FOR PHASE I PRE-CONSULT	2024-03-01
No.	REVISIONS	DATE

NOT AUTHENTIC UNLESS SIGNED AND DATED

P<sup>2</sup>concepts  
2001 FURBER DR., UNIT 205  
OTTAWA, ONTARIO, K1G 4E1

DESIGNED BY: S.A. DRAWN BY: P.S. APPROVED BY: P.R.

PROJECT

NEW OTTAWA SIVAN TEMPLE

DRAWING TITLE

SITE PLAN

PROJECT NO.  
0399

DATE  
APR, 09, 2025

SP01

Measurements recorded in: ☐ Metric ☒ Imperial

A395525

Regulation 903 Ontario Water Resources Act

Page \_\_\_\_\_ of \_\_\_\_\_

## Well Owner's Information

First Name	Last Name/Organization <b>Ottawa Sivan Temple</b>	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) <b>2104 Roger Stevens Drive</b>	Municipality <b>North Gower</b>	Province <b>ON</b>	Postal Code <b>K0A 2T0</b>
Telephone No. (inc. area code)			

## Well Location

Address of Well Location (Street Number/Name) <b>2104 Roger Stevens Drive</b>	Township <b>Rideau</b>	Lot <b>P/L 21</b>	Concession <b>3</b>
County/District/Municipality <b>Ottawa Carleton</b>	City/Town/Village <b>North Gower</b>	Province <b>Ontario</b>	Postal Code
UTM Coordinates Zone Easting <b>NAD 83 18 445192</b>	Northing <b>4998614</b>	Municipal Plan and Sublot Number <b>5R-6158</b>	Other

## Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	To (m)
	Sand	Clay		0	25
	Gravel	Boulders	Hard Pan	25	52
Grey & Black	Limestone			52	154
Grey & Black	Limestone			154	160
Grey	Sandstone			160	170
Grey	Sandstone			170	174
Grey	Sandstone			174	180

\*Owner - Vallavambiga Sri Taiyalayaki Sametha  
Vaithiyanatha Swamy Koil Inc. (AS) Ottawa Sivan Temple\*

Annular Space				Results of Well Yield Testing				
Depth Set at (m)	To	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> )	After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify <b>Not tested</b>	Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
58	48	Neat cement	10.92	If pumping discontinued, give reason: <b>X</b>	Static Level	14'3"		16.5"
48	0	Bentonite slurry	21.00		1	16.1	1	14.8
				Pump intake set at (m)	2	16.2	2	14.5
				170	3	16.2	3	14.4
				Pumping rate (l/min / GPM)	4	16.2	4	14.3
				20	5	16.2	5	14.3
				Duration of pumping 1 hrs + 0 min	10	16.3	10	14.3
				Final water level end of pumping (m/ft)	15	16.3	15	14.3
				16.5"	20	16.4	20	14.3
				If flowing give rate (l/min/GPM)	25	16.4	25	14.3
				<b>X</b>	30	16.4	30	14.3
				Recommended pump depth (m/ft)	40	16.5	40	14.3
				100	50	16.5	50	14.3
				Recommended pump rate (l/min/GPM)	60	16.5	60	14.3
				20				
				Well production (l/min/GPM)				
				20				
				Disturbed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Method of Construction				Well Use			
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Industrial					
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging						
<input checked="" type="checkbox"/> Air percussion							
<input type="checkbox"/> Other, specify							

Construction Record - Casing				Status of Well			
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Replacement Well	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Recharge Well
6 1/4"	Steel	.188"	+2' 58'	<input type="checkbox"/> Dewatering Well	<input type="checkbox"/> Observation and/or Monitoring Hole	<input type="checkbox"/> Alteration (Construction)	<input type="checkbox"/> Abandoned, Insufficient Supply
6"	Open Hole		58' 180'	<input type="checkbox"/> Abandoned, Poor Water Quality	<input type="checkbox"/> Abandoned, other, specify		

Construction Record - Screen			
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot Size	Depth (m/ft)
			From To

Water Details				Hole Diameter			
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Depth (m/ft)	Diameter (cm/in)	Depth (m/ft)	Diameter (cm/in)
154				0' 58'	9 3/4"	58' 180'	6"
170							
174							

Well Contractor and Well Technician Information			
Business Name of Well Contractor <b>Air Rock Drilling Co. Ltd.</b>	Well Contractor's Licence No. <b>7881</b>		
Business Address (Street Number/Name) <b>5550 Frankton Road</b>	Municipality <b>Richmond</b>		
Province <b>ON</b>	Postal Code <b>K0A 2Z0</b>	Business E-mail Address <b>air-rock@sympatico.ca</b>	

Bus. Telephone No. (inc. area code) <b>8138382170</b>	Name of Well Technician (Last Name, First Name) <b>Hanna, Jeremy</b>	Date <b>2024 09 30</b>	Signature of Technician and/or Contractor <b>[Signature]</b>
Well Technician's Licence No. <b>13632</b>			

Map of Well Location			
Please provide a map below following instructions on the back.			
<b>#2104 ROGER STEVENS DRIVE</b>			
<b>Trailwood Drive</b>			
<b>150m</b>			
<b>170 FT</b>			

Comments: <b>LHR-20 GPM Set @ 100 FT</b>	Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered <b>2024 09 30</b>	Ministry Use Only Audit No. <b>2427310</b>
		<b>2024 09 09</b>	Received

# WATER WELL RECORD

31649

1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

1519044

MUNICIPALITY 15004

CON. 020

03

COUNTY OR DISTRICT Ottawa-Carleton	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE RIDEAU-NORTH GOWER	CON. BLOCK TRACT SURVEY, ETC. 3	LOT 020	DATE COMPLETED DAY 05 MO 06 YR 84	
MIDWINTER 99.849.9		RC 4	ELEVATION 030.0	RC 4	BASIN CODE 26

## LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Gray	Clay			0'	3'
Gray	Hardpan	Stones		3'	53'
Gray	Limestone			53'	105'

31	0003105	00531412	0105215
32			

41 WATER RECORD	
WATER FOUND AT - FEET 0100	KIND OF WATER 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD			
INSIDE DIAM INCHES 06	MATERIAL 1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	WALL THICKNESS INCHES 1.88	DEPTH - FEET FROM 0' TO 105'

SCREEN	SIZE (S) OF OPENING (SLOT NO.)	DIAMETER 31-33 INCHES	LENGTH 39-40 FEET
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN 41-44 FEET	30 FEET

61 PLUGGING & SEALING RECORD	
DEPTH SET AT - FEET FROM 10-13 TO 14-17	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
18-21	22-25
26-29	30-33

71 PUMPING TEST	PUMPING TEST METHOD 1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	PUMPING RATE 0010 GPM	DURATION OF PUMPING 01 15-16 HOURS 00 17-18 MINS
	STATIC LEVEL 015 FEET	WATER LEVEL END OF PUMPING 055 FEET	WATER LEVELS DURING 15 MINUTES 055 FEET 30 MINUTES 055 FEET 45 MINUTES 055 FEET 60 MINUTES 055 FEET
	IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	RECOMMENDED PUMP TYPE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	RECOMMENDED PUMP SETTING 055 FEET	RECOMMENDED PUMPING RATE 0008 GPM

FINAL STATUS OF WELL 1	1 <input checked="" type="checkbox"/> WATER SUPPLY 2 <input type="checkbox"/> OBSERVATION WELL 3 <input type="checkbox"/> TEST HOLE 4 <input type="checkbox"/> RECHARGE WELL	5 <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY 6 <input type="checkbox"/> ABANDONED, POOR QUALITY 7 <input type="checkbox"/> UNFINISHED	
	WATER USE 01	1 <input checked="" type="checkbox"/> DOMESTIC 2 <input type="checkbox"/> STOCK 3 <input type="checkbox"/> IRRIGATION 4 <input type="checkbox"/> INDUSTRIAL 5 <input type="checkbox"/> OTHER	5 <input type="checkbox"/> COMMERCIAL 6 <input type="checkbox"/> MUNICIPAL 7 <input type="checkbox"/> PUBLIC SUPPLY 8 <input type="checkbox"/> COOLING OR AIR CONDITIONING 9 <input type="checkbox"/> NOT USED
	METHOD OF DRILLING 1	1 <input checked="" type="checkbox"/> CABLE TOOL 2 <input type="checkbox"/> ROTARY (CONVENTIONAL) 3 <input type="checkbox"/> ROTARY (REVERSE) 4 <input type="checkbox"/> ROTARY (AIR) 5 <input type="checkbox"/> AIR PERCUSSION	6 <input type="checkbox"/> BORING 7 <input type="checkbox"/> DIAMOND 8 <input type="checkbox"/> JETTING 9 <input type="checkbox"/> DRIVING

1723 LOCATION OF WELL	
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.	
DRILLERS REMARKS	

CONTRACTOR	NAME OF WELL CONTRACTOR M. Kavanagh & Son Well Drilling	LICENCE NUMBER 3142
	ADDRESS RR #2 Carleton Place Ont.	
	NAME OF DRILLER OR BORE M. Kavanagh	LICENCE NUMBER 3142
	SIGNATURE OF CONTRACTOR Michael Kavanagh	SUBMISSION DATE DAY 20 MO 6 YR 84

OFFICE USE ONLY	DATA SOURCE 1 3142	CONTRACTOR 59-62 3142	DATE RECEIVED 63-68 10 07 84
	DATE OF INSPECTION	INSPECTOR	
	REMARKS		



**Print only in spaces provided.**

Mark correct box with a checkmark, where applicable.

11

1531768

Municipality **15004** Con. **CON** **03**

County or District <b>CARLETON</b>	Township/Borough/City/Town/Village <b>RIDEAU</b>	Con block tract survey, etc. <b>3</b>	Lot <b>Part of 20</b>
Address <b>6626 3RD Line RD KARS</b>		Date completed <b>16</b> day <b>01</b> month <b>2001</b> year	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)					
General colour	Most common material	Other materials	General description	Depth - feet	
				From	To
Brown	clay		thick	0	10
Grey	clay		Runny	10	20
Grey	Clay	Sandy, with Boulders,	HARD Pan	20	36
Grey	Limestone	BROKEN LAYERS, Sand	MED HARD	36	48
Grey	Limestone		MED HARD	48	65
		43' OF 6 1/4" casing			
		20' OF 5" casing			
		1 Heavy Duty DRIVE shoe			
		1 well cap			
		10 Bags OF Cement			

[illegible]

41	<b>WATER RECORD</b>				42
<b>Water found at - feet</b>		<b>Kind of water</b>			
15-18	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input checked="" type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	14		
20-23	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	19		
25-28	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	24		
30-33	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	29		

CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6 1/4	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic	1.88	0	30
5 1/4	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic	1.88	30	50
4 3/8	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic		50	65
24-25	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			27-30

<b>SCREEN</b>	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
			inches		feet	
	Material and type			Depth at top of screen 41-44		
				feet		

61 <b>PLUGGING &amp; SEALING RECORD</b>			
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
0 <sup>3</sup>	38	Cement Grout	
18-21	22-25		
26-29	30-33	80	

PUMPING TEST	Pumping test method <sup>10</sup> 1 <input type="checkbox"/> Pump 2 <input checked="" type="checkbox"/> Bailer		Pumping rate <sup>11-14</sup> <b>10</b> GPM		Duration of pumping <sup>15-16</sup> <b>1</b> Hours <sup>17-18</sup> <b>15</b> mins	
	Static level		Water level end of pumping <sup>25</sup>		Water levels during <sup>1</sup> <input checked="" type="checkbox"/> Pumping <sup>2</sup> <input type="checkbox"/> Recovery	
	19-21 <b>3</b> feet	22-24 <b>40</b> feet	15 minutes <sup>26-28</sup> <b>40</b> feet	30 minutes <sup>29-31</sup> <b>40</b> feet	45 minutes <sup>32-34</sup> <b>40</b> feet	60 minutes <sup>35-37</sup> <b>40</b> feet
	If flowing give rate <sup>38-41</sup> GPM		Pump intake set at feet		Water at end of test <sup>42</sup> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Cloudy	
	Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep		Recommended pump setting <sup>43-45</sup> <b>50</b> feet		Recommended pump rate <sup>46-49</sup> <b>7</b> GPM	
	50-53					

<b>FINAL STATUS OF WELL</b>		54
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)	
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering	

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<b>WATER USE</b>		55-56
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other .....
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply	
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning	

---

<b>METHOD OF CONSTRUCTION</b>		57
1 <input checked="" type="checkbox"/> Cable tool	5 <input type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other .....
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting	

**LOCATION OF WELL**

In diagram below show distances of well from road and lot line.  
Indicate north by arrow.

Roger Stevens DR.

Pitless

H

G

3rd Line RD

thru. 416

Pumped well for  
49 hrs until clear

227611

Name of Well Contractor	Well Contractor's License No.
B. MOORE Well Drilling	6455
Address	
Box 436 OSGOOD ONT KOA 2W	
Name of Well Technician	Well Technician's License No.
BOB MOORE	T-0319
Signature of Technician/Contractor	Submission date
Bob Moore	17 01 2001
	day mo yr

MINISTRY USE ONLY	Data source	58	Contractor	59-62	Date received	63-68	80
			64	55	MAR 01 2001		
	Date of inspection		Inspector				
Remarks							
CSS.ES1							



# The Ontario Water Resources Act

## WATER WELL RECORD

**Print only in spaces provided.**

Mark correct box with a checkmark, where applicable.

1532449

Municipality

Con.

03

County or District O Haric varletos	Township/Borough/City/Town/Village O north Lamer	Con block tract survey, etc. 3 block 21	Lot 5
Owner's surname Hans and Jo construct	Address north Lamer 2160	Date completed 24/19/01	25-27 48-53 day month year

21      Zone      Easting      Northing      RC      Elevation      RC      Basin Code      ii      iii      iv

## LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

[illegible]

31

32

41		10		14		15		21	
WATER RECORD									
Water found at - feet			Kind of water						
10-13 <b>70</b>			1	<input checked="" type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	14		
			2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals			
15-18			1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	19		
			2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals			
20-23			1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	24		
			2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals			
25-28			1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	29		
			2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals			
30-33			1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	34		
			2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals			
					6	<input type="checkbox"/> Gas			

CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11 8 3/4"	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input checked="" type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic		0	13-16 48
17-18 6 1/4"	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		+2	20-23 48
24-25 6"	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		48	27-30 85

<b>SCREEN</b>	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
			inches		feet	
	Material and type			Depth at top of screen	3	
				41-44		
						feet

61		<b>PLUGGING &amp; SEALING RECORD</b>	
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
10-23	78	Cement Grout	
18-21	22-25		
26-29	30-33	80	

PUMPING TEST	71 Pumping test method 1 <input type="checkbox"/> Pump <input checked="" type="checkbox"/> Bailor		10 Pumping rate 12 GPM		11-14 Duration of pumping 1 15-16 Hours 0 17-18 Mins	
	25 Static level 19-21 25 feet		Water level end of pumping 22-24 85 feet		Water levels during 1 <input type="checkbox"/> Pumping 2 <input checked="" type="checkbox"/> Recovery	
	15 minutes 25 feet		30 minutes 25 feet		45 minutes 25 feet	
	60 minutes 25 feet		1 hour 25 feet		1 hour 15 minutes 25 feet	
	If flowing give rate 38-41 GPM		Pump intake set at 85 feet		Water at end of test 42 <input checked="" type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy	
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep		Recommended pump setting 75 feet		Recommended pump rate 10 GPM		

<b>FINAL STATUS OF WELL</b>			54
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished	
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well	
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)		
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering		

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<b>WATER USE</b>			55-56
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use	
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other	
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply		
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning		

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<b>METHOD OF CONSTRUCTION</b>			57
1 <input type="checkbox"/> Cable tool	5 <input type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving	
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging	
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other	
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting		

**LOCATION OF WELL**

In diagram below show distances of well from road and lot line.  
Indicate north by arrow.

60' or

↑ N

Rye Shales Lane

80' \*

232401

Name of Well Contractor <i>Gilles Bourgeois well drill</i>		Well Contractor's Licence No. <i>14/14</i>	
Address <i>St-Albert</i>			
Name of Well Technician <i>Jacques Raymond</i>		Well Technician's Licence No. <i>0264</i>	
Signature of Technician/Contractor <i>Gilles Bourgeois</i>		Submission date <i>24 10 01</i> day mo yr	

MINISTRY USE ONLY	Data source	58 Contractor	59-62	Date received	63-68
		1414		NOV 02 2001	
	Date of inspection	Inspector			
	Remarks				
	OFF.ES1				



# ***The Ontario Water Resources Act*** **WATER WELL RECORD**

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

11

1532710

Municipality  
15004

Con. **CON** **03**

County or District Ottawa Carleton	Township/Borough/City/Town/Village Rideau	Con block tract survey, etc. 3	Lot 1	25-27
	Address North Gower, Ont	Date completed 04 04 02 day month year 48-53		

21

1 2

U  
T  
M

10 12 17

Northings

18 24

RC

Elevation

25 26

RC

Basin Code

ii iii iv

30 31 47

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)**[illegible]

31

32

41		10		14		15		21	
WATER RECORD									
Water found at - feet			Kind of water						
10-13			1 <input checked="" type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	14				
2 <input type="checkbox"/> Salty			4 <input type="checkbox"/> Minerals						
142			5 <input type="checkbox"/> Gas						
15-18			1 <input type="checkbox"/> Fresh	3 <input checked="" type="checkbox"/> Sulphur	19				
2 <input type="checkbox"/> Salty			4 <input type="checkbox"/> Minerals						
			6 <input type="checkbox"/> Gas						
20-23			1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	24				
2 <input type="checkbox"/> Salty			4 <input type="checkbox"/> Minerals						
			6 <input type="checkbox"/> Gas						
25-28			1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	29				
2 <input type="checkbox"/> Salty			4 <input type="checkbox"/> Minerals						
			6 <input type="checkbox"/> Gas						
30-33			1 <input type="checkbox"/> Fresh	3 <input type="checkbox"/> Sulphur	34				
			4 <input type="checkbox"/> Minerals						
			6 <input type="checkbox"/> Gas						

CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic	12		13-16
6 $\frac{1}{4}$		188	0	46
17-18	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic	19		20-23
8 $\frac{3}{4}$			0	44
24-25	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic	26		27-30
6			44	150

<b>SCREEN</b>	54	65	75	80	
	Sizes of opening (Slot No.)	31-33	Diameter inches	34-38	Length feet
	Material and type		Depth at top of screen feet		
			41-44	30	

61				<b>PLUGGING &amp; SEALING RECORD</b>			
<input checked="" type="checkbox"/> Annular space				<input type="checkbox"/> Abandonment			
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)					
From To							
10-13		14-17		bentonite			
2-18-21		22-25					
26-29		30-33		80			

PUMPING TEST	71 Pumping test method <sup>10</sup> <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailer		Pumping rate <sup>11-14</sup> 20 GPM		Duration of pumping <sup>17-18</sup> 1 Hours    Mins	
	Static level		25 Water levels during <input type="checkbox"/> Pumping <input checked="" type="checkbox"/> Recovery			
	Water level end of pumping					
	<sup>19-21</sup> 8 feet		<sup>22-24</sup> 70 feet		<sup>25-28</sup> 15 minutes feet	
			<sup>29-31</sup> 8 feet		<sup>32-34</sup> 45 minutes feet	
					<sup>35-37</sup> 8 feet	
If flowing give rate <sup>38-41</sup> GPM		Pump intake set at feet		Water at end of test <sup>42</sup> <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy		
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep		Recommended pump setting <sup>43-45</sup> 70 feet		Recommended pump rate <sup>46-49</sup> 20 GPM		
50-53						

<b>FINAL STATUS OF WELL</b>			54
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished	
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well	
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)		
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering		

<b>WATER USE</b>			55-56
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use	
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other	
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply		
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning		

<b>METHOD OF CONSTRUCTION</b>			57
1 <input type="checkbox"/> Cable tool	5 <input checked="" type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving	
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digger	
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other	
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting		

**LOCATION OF WELL**

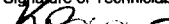
In diagram below show distances of well from road and lot line.  
Indicate north by arrow.

100'

1 Km

Trailwood.

237826

Name of Well Contractor	Well Contractor's Licence No.
Airtech Drilling Ltd	1119
Address	
RR #1 Richmond, Ont	
Name of Well Technician	Well Technician's Licence No.
Shannon Purcell	T2122
Signature of Technician/Contractor	Submission date
	10 day 04 mo 02 yr

MINISTRY USE ONLY	Data source	58 Contractor	59-62	Date received	63-68	80
		111.9		APR 15 2002		
	Date of inspection	Inspector				
	Remarks					
	CSS.ES2					

**Print only in spaces provided.**

Mark correct box with a checkmark, where applicable.

11

1533234

Municipality 15009

Con.

County or District <i>Ottawa Carleton</i>	Township/Borough/City/Town/Village <i>Osgood</i>	Con block tract survey, etc. <i>PLAN 4/M-773</i>	Lot <i>8</i>
	Address <i>2180 TRAILWOOD DRIVE North Gower Ont.</i>	Date completed <i>07/10/02</i>	<i>48-53</i> day month year

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)**[illegible]

31

32

10 14 15 31 22 43 64 65 75 80

41		<b>WATER RECORD</b>	
Water found at - feet	Kind of water		
10-13 <i>80</i>	1 <input checked="" type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	14
15-18	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	19
20-23	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	24
25-28	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	29
30-33	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas	34

51 CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11 8 3/4"	12 <input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic		0	13-16 45
17-18 6 1/4"	19 <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic	1.88	+ 2	20-23 45
24-25 6"	26 <input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Open hole <input type="checkbox"/> Plastic		45	27-30 90

<b>SCREEN</b>	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
			inches		feet	
	Material and type			Depth at top of screen	41-44	30
				feet		

61 <b>PLUGGING &amp; SEALING RECORD</b>			
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
10-13	14-17	Cement Grout	
18-21	22-25		
26-29	30-33	80	

PUMPING TEST	71	Pumping test method 1 <input type="checkbox"/> Pump <u>2</u> <input checked="" type="checkbox"/> Water	10	Pumping rate <u>7</u> GPM	11-14	Duration of pumping 1 <u>1</u> <sup>15-16</sup> Hours <u>0</u> <sup>17-18</sup> Mins		
	25	Static level	Water level end of pumping	Water levels during	1 <input type="checkbox"/> Pumping	2 <u>0</u> <input checked="" type="checkbox"/> Recovery		
	19-21	<u>18</u> feet	22-24	<u>90</u> feet	15 minutes <sup>25-28</sup> <u>24</u> feet	30 minutes <sup>29-31</sup> <u>22</u> feet	45 minutes <sup>32-34</sup> <u>20</u> feet	60 minutes <sup>35-37</sup> <u>18</u> feet
	38-41	If flowing give rate GPM	Pump intake set at <u>90</u> feet	Water at end of test <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy	42			
	43-45	Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	Recommended pump setting <u>80</u> feet	Recommended pump rate <u>6</u> GPM	46-49			
	50-53							

FINAL STATUS OF WELL		54	
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished	
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well	
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)		
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering		

WATER USE		55-56	
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use	
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other .....	
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply		
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning		

METHOD OF CONSTRUCTION		57	
1 <input type="checkbox"/> Cable tool	5 <input type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving	
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging	
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other .....	
4 <input checked="" type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting		

**LOCATION OF WELL**

In diagram below show distances of well from road and lot line.  
Indicate north by arrow.

Maple Forest Estate Subd.

252700

Name of Well Contractor <i>Gilles Bourgeois well drill</i>	Well Contractor's Licence No. <i>1414</i>
Address <i>St-Albert Ont.</i>	
Name of Well Technician <i>Jacques Raymond</i>	Well Technician's Licence No. <i>T-0264</i>
Signature of Technician/Contractor	Submission date day      mo      yr

MINISTRY USE ONLY	Data source	58	Contractor	59-62	Date received	63-68	90
			1414		OCT 21 2002		
	Date of inspection		Inspector				
	Remarks						
	CSS.ES2						

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

11

1533324

Municipality

Con.

15004

County or District <i>Ottawa</i>	Township/Borough/City/Town/Village <i>North Gower</i>	Con block tract survey, etc. <i>Plan 4M-773</i>	Lot <i>6</i>
Owner's surname <i>Antaric Ltd</i>	First Name <i>724471</i>	Address <i>2120 TRAILWOOD DR. NORTH GOWER ONT.</i>	Date completed <i>28/10/02</i> day month year

Figure 1 illustrates the layout of a data record. The record consists of several fields: a box containing the number 21, followed by Zone, Easting, Northing, RC, Elevation, RC, Basin Code, and a final box containing the Roman numerals ii, iii, and iv. Below the fields are horizontal lines with tick marks and numbers indicating their positions: 1, 2, 10, 12, 17, 18, 24, 25, 26, 30, 31, and 47. To the left of the Zone field is a vertical stack of letters U, T, and M.

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)**[illegible]

31      

32      

41		10	14	13	21
WATER RECORD					
Water found at - feet		Kind of water			
10-13 <u>80</u>	1	<input checked="" type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	14
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	
15-18	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	19
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	
20-23	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	24
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	
25-28	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	29
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	
30-33	1	<input type="checkbox"/> Fresh	3	<input type="checkbox"/> Sulphur	34
	2	<input type="checkbox"/> Salty	4	<input type="checkbox"/> Minerals	

51 CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11 8 3/4"	<input type="checkbox"/> 1 Steel <input checked="" type="checkbox"/> 2 Galvanized <input type="checkbox"/> 3 Concrete <input checked="" type="checkbox"/> 4 Open hole <input type="checkbox"/> 5 Plastic	12	0	13-16 45
17-18 6 1/4"	<input checked="" type="checkbox"/> 1 Steel <input type="checkbox"/> 2 Galvanized <input type="checkbox"/> 3 Concrete <input type="checkbox"/> 4 Open hole <input type="checkbox"/> 5 Plastic	19	188 + 2	20-23 45
24-25 6"	<input type="checkbox"/> 1 Steel <input checked="" type="checkbox"/> 2 Galvanized <input type="checkbox"/> 3 Concrete <input type="checkbox"/> 4 Open hole <input type="checkbox"/> 5 Plastic	26	45	27-30 90

<b>SCREEN</b>	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
			inches		feet	
	Material and type			Depth at top of screen	41-44	30
				feet		

61					<b>PLUGGING &amp; SEALING RECORD</b>				
<input checked="" type="checkbox"/> Annular space					<input type="checkbox"/> Abandonment				
Depth set at - feet			Material and type (Cement grout, bentonite, etc.)						
From		To							
0-13		45 <sup>00</sup>	Cement grout						
18-21		22-25							
26-29		30-33	80						

PUMPING TEST	Pumping test method <sup>10</sup> 1 <input type="checkbox"/> Pump <u>At</u> <u>BA</u> Bailer		Pumping rate <sup>11-14</sup> <u>15</u> GPM		Duration of pumping <sup>15-16</sup> <u>7</u> Hours <u>0</u> Mins	
	Static level	Water level end of pumping	Water levels during		1 <input type="checkbox"/> Pumping 2 <input checked="" type="checkbox"/> Recovery	
	<sup>19-21</sup> <u>16</u> feet	<sup>22-24</sup> <u>90</u> feet	<sup>25</sup> 15 minutes <u>22</u> feet	<sup>26-28</sup> 30 minutes <u>20</u> feet	<sup>29-31</sup> 45 minutes <u>18</u> feet	<sup>32-34</sup> 60 minutes <u>16</u> feet
	If flowing give rate <sup>38-41</sup> GPM		Pump intake set at <u>90</u> feet		Water at end of test <sup>42</sup>	
	Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep		Recommended pump setting <sup>43-45</sup> <u>75</u> feet		Recommended pump rate <sup>46-49</sup> <u>10</u> GPM	
	50-53					

<b>FINAL STATUS OF WELL</b>			54
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished	
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well	
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)		
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering		

---

<b>WATER USE</b>			55-56
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use	
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other .....	
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply		
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning		

---

<b>METHOD OF CONSTRUCTION</b>			57
1 <input type="checkbox"/> Cable tool	5 <input type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving	
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging	
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other .....	
4 <input checked="" type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting		

**LOCATION OF WELL**

In diagram below show distances of well from road and lot line.  
Indicate north by arrow.

252742

Name of Well Contractor <i>Gilles Bourgeois Wellkill</i>	Well Contractor's Licence No. <i>1414</i>
Address <i>St-Albert Ont.</i>	
Name of Well Technician <i>Jacques Raymond</i>	Well Technician's Licence No. <i>T-0264</i>
Signature of Technician/Contractor <i>[Signature]</i>	Submission date <i>28 11 02</i> day mo yr

MINISTRY USE ONLY	Data source	58 Contractor	59-62	Date received	63-68	80
	1414		NOV 08 2002			
	Date of inspection		Inspector			
	Remarks					
	CSS.ES2					

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- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.**
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

First Name <b>Hansand J</b>		Last Name <b>Construction</b>		Mailing Address (Street Number/Name, RR, Lot, Concession) <b>2108 Regional Rd 8</b>			
County/District/Municipality <b>City of Ottawa</b>		Township/City/Town/Village <b>NORTH LOWER</b>		Province <b>Ontario</b>	Postal Code <b>K0A 2T0</b>	Telephone Number (include area code) <b>613-838-2463</b>	
Address of Well Location (County/District/Municipality) <b>City of Ottawa</b>				Township <b>Osgoode</b>		Lot <b>38</b>	Concession <b>4</b>
RR#/Street Number/Name <b>6647 Stillwood DRIVE</b>				City/Town/Village <b>NORTH LOWER</b>		Site/Compartment/Block/Tract etc. <b>Plan 4M-1209</b>	
GPS Reading	NAD <b>83</b>	Zone <b>18</b>	Easting <b>445173 E</b>	Northing <b>4998194</b>	Unit Make/Model <b>Magellan</b>	Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify	

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
brown	fill		Hard	0	3.0
grey	fill	boulders	Hard	3.0	11.88
grey	limestone		layered	11.88	27.43

Hole Diameter			Construction Record				Test of Well Yield				
Depth From	Metres To	Diameter Centimetres	Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To	Pumping test method	Draw Down	Recovery	
0	11.88	22.23						34HPS46	Time min	Water Level Metres	
11.88	27.43	15.55						Pump intake set at - (metres) 25	Static Level	5.10	
								Pumping rate - (litres/min) 60	1	5.58	
								Duration of pumping 1 hrs + 0 min	2	5.70	
								Final water level end of pumping 5.90 metres	3	5.73	
								Recommended pump type. <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	5.80	
								Recommended pump depth. 25 metres	5	5.90	
								Recommended pump rate. (litres/min) 44	10	5.81	
								If flowing give rate - (litres/min) 25	15	5.86	
								If pumping discontinued, give reason.	20	5.89	
									25	5.90	
									30	5.90	
									40	5.90	
									50	5.90	
									60	5.90	

Plugging and Sealing Record			Annular space	Abandonment
Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)	
0	11.88	neat cement grout	96 bag	

Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well	
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality
<input type="checkbox"/> Unfinished	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Abandoned, (Other)	<input type="checkbox"/> Replacement well

Well Contractor/Technician Information	
Name of Well Contractor <b>Gilles Bougeois</b>	Well Contractor's Licence No. <b>1414</b>
Business Address (street name, number, etc.) <b>5741 16th ave</b>	
Name of Well Technician (last name, first name) <b>SA me</b>	Well Technician's Licence No. <b>0-193</b>
Signature of Technician/Contractor <b>x Gilles Bougeois</b>	Date Submitted <b>04 09 16</b>

Location of Well	
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.	

Audit No. <b>2</b>	Well Completed <b>04 09 16</b>
Was the well owner's information package delivered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Delivered <b>04 09 16</b>

Ministry Use Only	
Data Source	Contractor <b>1414</b>
Date Received <b>AUG 30 2004</b>	Date of Inspection <b>04 09 16</b>
Remarks	Well Record Number <b>1534867</b>

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 • Please print clearly in blue or black ink only.

## Well Owner's Information and Location of Well Information

First Name <i>Hans and IO</i>		Last Name <i>Const Ruction</i>		Mailing Address (Street Number/Name, RR, Lot, Concession) <i>724471 ont Ltd 2108 Regional Rd 8</i>			
County/District/Municipality <i>City of Ottawa</i>		Township/City/Town/Village <i>OS gowde</i>		Province <i>Ontario</i>	Postal Code	Telephone Number (include area code) <i>613-838-2463</i>	
Address of Well Location (County/District/Municipality) <i>City of Ottawa</i>				Township <i>OS gowde</i>		Lot <i>37</i>	Concession <i>4</i>
RR#/Street Number/Name <i>N.A. still wood DRIVE</i>				City/Town/Village <i>NORTH Limer</i>		Site/Compartment/Block/Tract etc. <i>Plan 4M-1209</i>	
GPS Reading	NAD <i>83</i>	Zone <i>18</i>	Easting <i>445170 E</i>	Northing <i>4998147</i>	Unit Make/Model <i>Maxellan</i>	Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged Differentiated, specify	

## Log of Overburden and Bedrock Materials (see instructions)

[illegible]

Hole Diameter			Construction Record			Test of Well Yield						
Depth	Metres	Diameter	Inside diam centimetres	Material	Wall thickness centimetres	Depth	Metres	Pumping test method	Draw Down		Recovery	
From	To	Centimetres				From	To	Time min	Water Level Metres	Time min	Water Level Metres	
0	10.36	22.23	15.55	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	0	10.36	3-4 HP sub	Static Level	3.90		4.52
10.36	24.38	15.55						1	4.28	1	4.24	
Water Record			Casing			Duration of pumping			2	4.33	2	4.16
Water found at	Metres	Kind of Water	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			1 hrs + 0 min						
24 m		<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			Final water level end of pumping			3	4.34	3	4.14
24 m		<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			4.52 metres			4	4.37	4	4.10
24 m		<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			Recommended pump type			5	4.57	5	4.08
24 m		<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			<input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep Recommended pump depth. 18 metres						4
After test of well yield, water was			Screen			Recommended pump rate.			10	4.46	10	4.05
<input type="checkbox"/> Clear and sediment free <input type="checkbox"/> Other, specify			Outside diam <input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized Slot No.			44 (litres/min)			15	4.46	15	4.01
Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			No Casing or Screen			If flowing give rate -			20	4.51	20	4.00
			<input checked="" type="checkbox"/> Open hole			25 (litres/min)			25	4.54	25	4.00
			10.36			If pumping discontinued, give reason.			30	4.54	30	4.00
			24.38						40	4.54	40	3.99
									50	4.52	50	3.99
									60	4.52	60	3.99

[illegible]

Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

		Final Status of Well		
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other) _____	
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering		
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well		

Well Contractor/Technician Information			
Name of Well Contractor	Well Contractor's Licence No.		
Cilles BOUAGUIS		1414	
Business Address (street name, number, city etc.)			
5 x A 15th Ave			
Name of Well Technician (last name, first name)	Well Technician's Licence No.		
SA ME	0-193		
Signature of Technician/Contractor		Date Submitted	
x Cilles Bouaguis		YYMMDD 04/08/16	

Location of Well
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.

SH. DIKE

20m o well

Audit No. <b>Z 12198</b>	Date Well Completed YYYY MM DD <b>04 08 16</b>
Was the well owner's information package delivered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date Delivered YYYY MM DD <b>04 08 16</b>

Ministry Use Only			
Data Source	Contractor <b>1414</b>		
Date Received <b>AUG 30 2004</b>	YYYY	MM	DD
Date of Inspection	YYYY	MM	DD
Remarks	Well Record Number <b>1534868</b>		



022034

# Well Record

Regulation 903 Ontario Water Resources Act

page \_\_\_\_\_ of \_\_\_\_\_

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### Well Owner's Information and Location of Well Information

MUN

CON

LOT

Street Number/Name * 2134 TRAILWOOD DRIVE				City/Town/Village NORTH GOWER		Site/Compartment/Block/Tract/etc. PLAN 4M-113, S/L 9	
Grids Reading NAD 8 3		Zone 18		Easting 445119		Northing 4998321	
Unit Make/Model MASSELAN				Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify			

## Log of Overburden and Bedrock Materials (see instructions)

[illegible]

Hole Diameter			Construction Record				Test of Well Yield					
Depth	Metres	Diameter	Inside diam centimetres	Material	Wall thickness centimetres	Depth		Pumping test method	Draw Down		Recovery	
From	To	Centimetres				From	To		Time min	Water Level Metres	Time min	Water Level Metres
0	36.57	15.23						Sub pump	Static Level	6.88		7.05
								Pump intake set at - (metres)	1	7.77	1	7.06
								Pumping rate - (litres/min)	2	7.23	2	7.95
								Duration of pumping	3	7.23	3	7.90
								Final water level end of pumping	4	7.03	4	7.88
								Recommended pump type	5	7.23	5	
								Recommended pump depth	10	7.23	10	
								Recommended pump rate	15	7.23	15	
								If flowing give rate - (litres/min)	20	7.23	20	
								If pumping discontinued, give reason	25	7.23	25	
									30	7.23	30	
									40	7.24	40	
									50	7.24	50	
									60	7.23	60	

Water Record			
Water found at	Kind of Water		
33.32 m	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur		
<input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals			
<input type="checkbox"/> Other:			
NOT TESTED			
<input type="checkbox"/> m <input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur			
<input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals			
<input type="checkbox"/> Other:			
Cloudy - NOT TESTED			
<input type="checkbox"/> Clear and sediment free			
<input type="checkbox"/> Other, specify			
Chlorinated	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Casing			
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass	.48	0 17.37
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete		
	<input type="checkbox"/> Galvanized		
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass		
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete		
	<input type="checkbox"/> Galvanized		
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass		
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete		
	<input type="checkbox"/> Galvanized		
Screen			
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass	Slot No.	
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete		
	<input type="checkbox"/> Galvanized		
No Casing or Screen			
	<input checked="" type="checkbox"/> Open hole	16.76	36.57

Depth set at - Metres		Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From	To		
11.76	13.71	NEAT CEMENT SLURRY	- 454
13.71	0	BENTONITE SLURRY	- 123

Method of Construction			
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Driving	

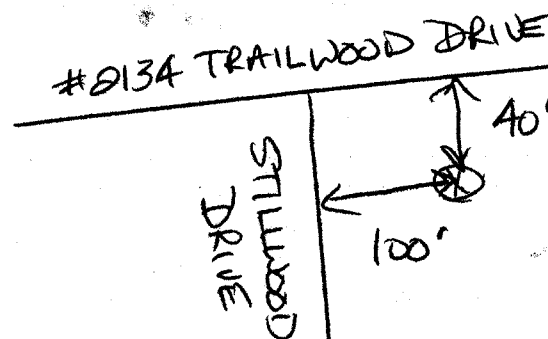
Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other) _____
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	_____
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	_____

Well Contractor/Technician Information	
Name of Well Contractor	Well Contractor's Licence No.
AIRROCK DRILLING CO LTD	TU119
Business Address (street name, number, city etc.)	
RR #1 RICHMOND ONT	K0A2Z0
Name of Well Technician (last name, first name)	Well Technician's Licence No.
HOSEAN DAN	T3058
Signature of Technician/Contractor	Date Submitted
[Signature]	yyyy mm dd 2005 05 22

### Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. <b>z 23248</b>	Date Well Completed <b>2005 04 27</b>
Was the well owner's information package delivered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Delivered <b>2005 04 27</b>

Ministry Use Only			
Data Source		Contractor	
Date Received		Date of Inspection	
YYYY	MM	YYYY	MM
DD			
Remarks		Well Record Number	

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- **All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.**
- Please print clearly in blue or black ink only.
- Ministry Use Only**

Well Owner's Information and Location of Well Information	
Well Owner Name	
Well Owner Address	
Well Owner City	
Well Owner State	
Well Owner Zip	
Well Owner Phone	
Well Owner Email	
Well Location	
Well Depth	
Well Diameter	
Well Construction	
Well Completion	
Well Production	
Well Status	

[illegible]

6643 30x11wood DR.				North Gower		39	
RR#/Street Number/Name				City/Town/Village		Site/Compartment/Block/Tract etc.	
GPS Reading				Unit Make/Model		Mode of Operation:	
NAD		Zone		Easting		Northing	
83		18		445174 E		4998222	
				Maxellan		u+m	
						<input type="checkbox"/> Undifferentiated <input type="checkbox"/> Differentiated, specify <input checked="" type="checkbox"/> Averaged	

**Log of Overburden and Bedrock Materials (see instructions)**

[illegible]

Hole Diameter			Construction Record				Test of Well Yield					
Depth	Metres	Diameter	Inside diam centimetres	Material	Wall thickness centimetres	Depth		Pumping test method	Draw Down		Recovery	
From	To	Centimetres				From	To		Time min	Water Level Metres	Time min	Water Level Metres
0	11.27	21.23						3 H.P. sub				
11.27	27.43	15.55						Pump intake set at - (metres) 15	Static Level	3.36		393
								Pumping rate - (litres/min) 40	1		1	
								Duration of pumping 1 hrs + 0 min	2		2	
								Final water level end of pumping 293 metres	3	3.70	3	3.36
								Recommended pump type. <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	3.78	4	
								Recommended pump depth. 15 metres	5	3.83	5	
								Recommended pump rate. 40 (litres/min)	10	3.93	10	
								If flowing give rate - (litres/min)	15	3.93	15	
									20	3.93	20	
									25	3.93	25	
								If pumping discontinued, give reason.	30	3.93	30	
									40	3.93	40	
									50	3.93	50	
									60	3.93	60	

[illegible]

Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other) _____
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	

Well Contractor/Technician Information	
Name of Well Contractor <i>Gilles Bourgeois</i>	Well Contractor's Licence No. <i>1414</i>
Business Address (street name, number, city etc.) <i>50 A Boulevard</i>	
Name of Well Technician (last name, first name) <i>Claude Boucher</i>	Well Technician's Licence No. <i>3310</i>
Signature of Technician/Contractor <i>Gilles Boucher</i>	Date Submitted YYYY MM DD <i>05/11/18</i>

**Location of Well**

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.

Hand-drawn diagram showing the location of a well. A vertical line represents a road labeled "Stillwood Dr." with "6643" written to its left. A horizontal line represents a lot line. A well is marked with a dot and labeled "35 m well" to its right. A north arrow points towards the top right corner.

Audit No. <b>z 40061</b>	Date Well Completed YYYY MM DD <b>05 11 18</b>
Was the well owner's information package delivered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date Delivered YYYY MM DD <b>05 11 18</b>

Ministry Use Only			
Data Source	Contractor		
Date Received	YYYY	MM	DD
DEC 20	2005		
Remarks	Well Record Number		

Instructions for Completing Form

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- All Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

MUN CON LOT

Ottawa Carleton  
RR#/Street Number/Name

Rideau - North Gower  
City/Town/Village

19/20 4  
Site/Compartment/Block/Tract etc.

Stillwood Drive, Maple Forest

North Gower

GPS Reading NAD Zone Easting Northing Unit Make/Model Mode of Operation: ☐ Undifferentiated ☒ Averaged  
8.3 18 44 51 45 499 82 79 Garmin ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth Metres	
				From	To
Brown	Hardpan	Boulders	Packed	0	9.14
Gray	Sand & Gravel			9.14	12.19
Gray	Hardpan			12.19	13.71
Gray	Limestone	Sandstone Layers	Hard	13.71	52.72

Hole Diameter		
Depth From	Metres To	Diameter Centimetres
0	17.98	22.75
17.98	52.72	15.23

Water Record	
Water found at Metres	Kind of Water
51.50	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
	Other: not tested
	<input type="checkbox"/> m <input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
	Other: <input type="checkbox"/> m <input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
After test of well yield, water was <input checked="" type="checkbox"/> Clear and sediment free <input type="checkbox"/> Other, specify	
Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Construction Record				
Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
Casing				
15.86	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	+ .45	17.98
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
		No Casing or Screen		
15.23	<input checked="" type="checkbox"/> Open hole	17.98	52.72	

Test of Well Yield				
Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
submersible				
Pump intake set at - (metres)	Static Level	5.61		
Pumping rate (litres/min)	1	6.17	1	5.57
Duration of pumping	2	6.23	2	5.57
Final water level end of pumping	3	6.23	3	5.57
Recommended pump type	4	6.26	4	5.64
Recommended pump depth	5	6.26	5	5.64
Recommended pump rate	10	6.28	10	5.64
If flowing give rate - (litres/min)	15	6.29	15	5.63
	20	6.30	20	5.63
	25	6.30	25	5.63
	30	6.30	30	5.62
	40	6.32	40	5.62
	50	6.33	50	5.61
	60	6.34	60	5.61

Plugging and Sealing Record		
Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From To		
17.98 0	Grouted - Cement	.63m3

Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air mud)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other)
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	

Well Contractor/Technician Information	
Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Business Address (street name, number, city etc.)	
Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician (last name, first name)	Well Technician's Licence No.
Miller, Stephen	T0097
Signature of Technician/Contractor	Date Submitted
	2006 6 20

Location of Well	
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.	
Audit No.	Date Well Completed
Z 46988	2006 6 16
Was the well owner's information package delivered?	Date Delivered
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2006 6 16

Ministry Use Only	
Data Source	Contractor
	1558
Date Received	Date of Inspection
JUL 11 2006	
Remarks	Well Record Number

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- Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.
- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.**
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

Ministry Use Only															
MUN								CON							LOT

Ottawa Carleton				Rideau				21		3	
RR#/Street Number/Name				City/Town/Village				Site/Compartment/Block/Tract etc.			
Lot 36, Maple Forest				North Gower							
GPS Reading		NAD Zone		Easting		Northing		Unit Make/Model		Mode of Operation:	
8 3		18		44 51 85		49 981 12		Garmin		<input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify	

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
Brown	Soil	Stones	Packed	0	3.65
Gray	Sandy Soil		Packed	3.65	7.01
Gray	Hardpan		Packed	7.01	10.05
Gray	Limestone		Medium	10.05	29.86
Gray & White	Sandstone		Hard	29.86	48.76

Hole Diameter		
Depth From	Metres To	Diameter Centimetres
0	11.88	22.75
11.88	48.76	15.07

Water Record	
Water found at Metres	Kind of Water
46.63	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:
not tested	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Gas <input type="checkbox"/> Salty <input type="checkbox"/> Minerals <input type="checkbox"/> Other:
After test of well yield, water was	
<input checked="" type="checkbox"/> Clear and sediment free <input type="checkbox"/> Other, specify	
Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Construction Record				
Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
Casing				
15.86	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	+ .45	11.88
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
15.07	<input checked="" type="checkbox"/> Open hole		11.88	48.76

Test of Well Yield				
Pumping test method	Draw Down	Recovery	Time min	Water Level Metres
submersible	Static Level			
Pump intake set at - (metres)	3.78			
Pumping rate - (litres/min)	5.87	1	8.91	
Duration of pumping	6.22	2	6.10	
Final water level end of pumping	7.01	3	4.87	
Recommended pump type	7.95	4	4.25	
Recommended pump depth	8.64	5	3.96	
Recommended pump rate	9.57	10	3.78	
If flowing give rate - (litres/min)	11.46	15	3.77	
If pumping discontinued, give reason.	12.29	20	3.78	
	12.53	25	3.78	
	12.65	30	3.78	
	13.47	40	3.78	
	13.54	50	3.78	
	13.58	60	3.78	

Plugging and Sealing Record		
Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
11.88	0 Grouted - Cement Slurry	.42m3

Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	
Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	
Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other)
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	

Well Contractor/Technician Information	
Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Business Address (street name, number, city etc.)	
Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician (last name, first name)	Well Technician's Licence No.
Miller, Stephen	T0097
Signature of Technician/Contractor	Date Submitted
	2006 11 03

Location of Well	
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.	
Audit No.	Date Well Completed
Z 58707	2006 11 02
Was the well owner's information package delivered?	Date Delivered
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2006 11 02

Ministry Use Only	
Data Source	Contractor
	1558
Date Received	Date of Inspection
JAN 25 2007	
Remarks	Well Record Number

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- Please print clearly in blue or black ink only.

Ministry Use Only

Address of Well Location (County/District/Municipality)

Ottawa - Carleton

Township

Kidean

Lot

20

Concession

3

RR# Street Number/Name

# 2121 Roger Stevens

City/Town/Village

North Gower

Site/Compartment/Block/Tract/etc.

GPS Reading

NAD

8 3

Zone

18

Easting

444967

Northing

4998642

Unit Make/Model

Magellan

Mode of Operation:

☐ Undifferentiated

☒ Averaged

☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth		Metres
				From	To	
	Sand, Boulders			0	12.19	12.19
	Gray Limestone			12.19	36.57	36.57

Hole Diameter

Depth

Metres

Diameter

From

To

Centimetres

0

36.57

14.59

Water Record

Water found at

Metres

36

Kind of Water

☒ Fresh

☐ Sulphur

☐ Gas

☐ Salty

☐ Minerals

Other:

TESTED

☐ m

☒ Fresh

☐ Sulphur

☐ Gas

☐ Salty

☐ Minerals

Other:

TESTED

After test of well yield, water was

☒ Clear and sediment free

☐ Other, specify

TESTED

Chlorinated

☒ Yes

☐ No

Construction Record

Inside diam

centimetres

15.88

Material

☒ Steel

☐ Fibreglass

☐ Plastic

☐ Concrete

☐ Galvanized

Wall thickness

centimetres

480

Depth

From

To

16.46

Casing

☐ Steel

☐ Fibreglass

☐ Plastic

☐ Concrete

☐ Galvanized

☐ Steel

☐ Fibreglass

☐ Plastic

☐ Concrete

☐ Galvanized

Screen

Outside diam

☐ Steel

☐ Fibreglass

☐ Plastic

☐ Concrete

☐ Galvanized

Slot No.

No Casing or Screen

☒ Open hole

15.85

36.57

Test of Well Yield

Pumping test method

Sub Pump

Pump intake set at

(metres)

30.48

Pumping rate

(litres/min)

571

Duration of pumping

hrs + min

1 + 0

Final water level end of pumping

metres

10.50

Recommended pump type

☐ Shallow

☒ Deep

Recommended pump depth

metres

30.48

Recommended pump rate

(litres/min)

91

If flowing give rate -

(litres/min)

20

If pumping discontinued, give reason.

Time min

Water Level Metres

Recovery

Time min

Water Level Metres

2

2.75

1

10.50

1

5.24

1

5.73

2

6.20

2

3.69

3

7.06

3

2.75

4

7.67

4

5

8.22

5

10

9.48

10

15

9.89

15

20

10.36

20

25

10.40

25

30

10.43

30

40

10.48

40

50

10.50

50

60

10.50

60

Plugging and Sealing Record

☒ Annular space

☐ Abandonment

Depth set at - Metres

From

To

15.85

12.80

Material and type (bentonite slurry, neat cement slurry) etc.

Neat Cement Slurry

Volume Placed (cubic metres)

0.227

12.80

0

Bentonite Slurry

0.613

Method of Construction

☐ Cable Tool

☐ Rotary (air)

☐ Diamond

☐ Digging

☐ Rotary (conventional)

☒ Air percussion

☐ Jetting

☐ Other

☐ Rotary (reverse)

☐ Boring

☐ Driving

Water Use

☒ Domestic

☐ Industrial

☐ Public Supply

☐ Other

☐ Stock

☐ Commercial

☐ Not used

☐ Irrigation

☐ Municipal

☐ Cooling & air conditioning

Final Status of Well

☒ Water Supply

☐ Recharge well

☐ Unfinished

☐ Abandoned, (Other)

☐ Observation well

☐ Abandoned, insufficient supply

☐ Dewatering

☐ Test Hole

☐ Abandoned, poor quality

☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor

AIR ROCK DRILLING CO LTD

Well Contractor's Licence No.

1119

Business Address (street name, number, city etc.)

RR#1 RICHMOND ONT L6A2Z0

Name of Well Technician (last name, first name)

DASMINIERS Ken

Well Technician's Licence No.

14

Signature of Technician/Contractor

Date Submitted

2007 07 27

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.

Audit No.

Z 65105

Date Well Completed

2007 06 28

Was the well owner's information package delivered?

☒ Yes

☐ No

Date Delivered

2007 06 28

Ministry Use Only

Data Source

Contractor

Date Received

Aug 07 2007

Date of Inspection

11119

Remarks

Well Record Number

Measurements recorded in: ☒ Metric ☐ Imperial

## Well Owner's Information

First Name <i>Mary and</i>	Last Name / Organization <i>Jo Construction</i>	E-mail Address <i>NA</i>		<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) <i>6639 Stillwood Drive</i>	Municipality <i>North York</i>	Province <i>Ontario</i>	Postal Code <i>K0A2E0</i>	Telephone No. (inc. area code) <i>613 838 2463</i>

## Well Location

Address of Well Location (Street Number/Name) 6639 Stillwood Drive		Township Osgood (Rideau)	Lot 4021	Concession 3
County/District/Municipality Ottawa		City/Town/Village North Gower	Province Ontario	Postal Code K0A2T0
UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number
NAD 83	18	445166	4998242	4m 1209- Lot 40
Other				

**Overburden and Bedrock Materials/Abandonment Sealing Record** (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
Brown	Clay	Silt, Boulder	Hard	0	4.6
Grey	Clay	Silt, Boulder	Hard	4.6	10.2
Grey	gravel		packed	10.2	10.9
Grey	limestone		layered	10.9	30.48

### Annular Space

Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
From	To		
0	12.8	Ciment grout	10 Bag

### Results of Well Yield Testing

After test of well yield, water was:		Draw Down		Recovery	
<input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	4.84		7.69
Pump intake set at (m/ft)		1	6.05	1	5.56
Pumping rate (l/min / GPM)		2	6.58	2	4.95
Duration of pumping		3	6.90	3	4.84
_____ hrs + _____ min		4	7.00	4	4.84
Final water level end of pumping (m/ft)		5	7.14	5	
If flowing give rate (l/min / GPM)		10	7.40	10	
Recommended pump depth (m/ft)		15	7.54	15	
Recommended pump rate (l/min / GPM)		20	7.56	20	
Well production (l/min / GPM)		25	7.54	25	
Disinfected?		30	7.60	30	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		40	7.60	40	
		50	7.61	50	
		60	7.69	60	

## Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned
			From	To	
15.55	Steel	0.48	4.6	12.8	
15.55	open Hole		12.8	30.48	

## Status of Well

☒ Water Supply  
☐ Replacement Well  
☐ Test Hole  
☐ Recharge Well  
☐ Dewatering Well  
☐ Observation and/or Monitoring Hole  
☐ Alteration (Construction)  
☐ Abandoned, Insufficient Supply  
☐ Abandoned, Poor Water Quality  
☐ Abandoned, other, *specify*  
☐ Other, *specify*

### Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		
			From	To	
					<input type="checkbox"/> Abandoned, Poor Water Quality
					<input type="checkbox"/> Abandoned, other, specify _____
					<input type="checkbox"/> Other, specify _____


### Water Details

Water found at Depth 26 (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Other, specify
Water found at Depth (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Other, specify
Water found at Depth (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Other, specify

## Hole Diameter

Depth (m/l)		Diameter (cm/in)
From	To	
0	12.8	21.23
12.8	30.48	15.55

## Well Contractor and Well Technician Information

Business Name of Well Contractor		Well Contractor's Licence No.	
Bourgeois's well Drilling		11414	
Business Address (Street Number/Name)		Municipality	
1182 900 East		Nation	
Province	Postal Code	Business E-mail Address	
Ontario	K0A3C0	NA	
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)		
6139875291	Michael Genier		
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted	
3493		2008/11/28	

### Map of Well Location

Please provide a map below following instructions on the back.

A hand-drawn map of the study area. A horizontal line at the top is labeled "North Creek". Below it, a vertical line is labeled "Trashwood". To the right of "Trashwood", a vertical line is labeled "Stillwood". Further right, a small circle is labeled "Well". A scale bar at the bottom right indicates "1 km". The number "416" is written on the right side of the map.

Comments:

Well owner's information package delivered

☐ Yes

☒ No

Date Package Delivered  
Y | Y | Y | Y | M | M | D  
Date Work Completed  
2 | 0 | 0 | 8 | 1 | 1 | 2

**Ministry Use Only**

Audit No. **Z 90529**

Received

Ministry of  
the Environment

A113230

W \_\_\_\_\_ (Print Below)

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page \_\_\_\_\_ of \_\_\_\_\_

## Well Owner's Information

First Name	Last Name / Organization <b>Grizzly Homes</b>	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) <b>PO Box 422, RR#4</b>	Municipality <b>Ashton</b>	Province <b>On</b>	Postal Code <b>K0A 1B0</b>

## Well Location

Address of Well Location (Street Number/Name) <b>2134 Maple Forest Drive</b>	Township <b>Rideau</b>	Lot <b>21</b>	Concession <b>3</b>
County/District/Municipality <b>Ottawa-Carleton</b>	City/Town/Village <b>North Gower</b>	Province <b>Ontario</b>	Postal Code
UTM Coordinates Zone Easting <b>NAD 8 3 18 445224</b>	Northings <b>4998033</b>	Municipal Plan and Sublot Number <b>4M-1209</b>	Other <b>S/L 32</b>

## Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
				From To
	Sand & Gravel	Boulders		0' 30'
Grey + Brown	Limestone			30' 88'
Grey + Brown	Limestone			88' 157'
Grey + Brown	Limestone			157' 162'

Annular Space		
Depth Set at (m/ft) From To 40' 0'	Type of Sealant Used (Material and Type) <b>Neat cement slurry</b>	Volume Placed (m³) <b>26.5</b>

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify <input type="checkbox"/> Commercial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Not used <input type="checkbox"/> Dewatering <input type="checkbox"/> Monitoring

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in) <b>6"</b>	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) <b>Steel</b>	Wall Thickness (cm/in) <b>.188"</b>	Depth (m/ft) From To <b>+2' 40'</b>	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify <input type="checkbox"/> Other, specify
<b>515/16"</b>	<b>Open Hole</b>		<b>40' 162'</b>	

Construction Record - Screen			Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From To	

Water Details		Hole Diameter	
Water found at Depth <b>88' (m/ft)</b>	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Depth (m/ft) From To <b>0' 40'</b>	Diameter (cm/in) <b>6"</b>
Water found at Depth <b>157' (m/ft)</b>	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	<b>40' 162'</b>	<b>515/16"</b>
Water found at Depth <b>(m/ft)</b>	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		

Well Contractor and Well Technician Information	
Business Name of Well Contractor <b>Air Rock Drilling Co. Ltd.</b>	Well Contractor's Licence No. <b>1119</b>
Business Address (Street Number/Name) <b>6659 Franktown Road, RR#1</b>	Municipality <b>Richmond</b>
Province <b>ON</b>	Postal Code <b>K0A 2Z0</b>
Business E-mail Address <b>air-rock@sympatico.ca</b>	

Bus. Telephone No. (inc. area code) <b>6138382170</b>	Name of Well Technician (Last Name, First Name) <b>Hogan, Dan</b>	Date Submitted <b>2011 03 31</b>
Well Technician's Licence No. <b>T3058</b>	Signature of Technician and/or Contractor 	

Results of Well Yield Testing			
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify <b>Not tested</b>		Draw Down	
If pumping discontinued, give reason:		Time (min)	Water Level (m/ft)
<b>X</b>		Static Level	<b>9.2'</b>
Pump intake set at (m/ft) <b>140'</b>		Time (min)	Water Level (m/ft)
Pumping rate (l/min / GPM) <b>12</b>		1	<b>15.5</b>
Duration of pumping <b>1</b> hrs + <b>0</b> min		2	<b>18.5</b>
Final water level end of pumping (m/ft) <b>28.9'</b>		3	<b>21.5</b>
If flowing give rate (l/min / GPM)		4	<b>24.6</b>
Recommended pump depth (m/ft) <b>100'</b>		5	<b>27.7</b>
Recommended pump rate (l/min / GPM) <b>12</b>		10	<b>27.9</b>
Well production (l/min / GPM) <b>12</b>		15	<b>28</b>
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		20	<b>28.1</b>
		25	<b>28.2</b>
		30	<b>28.2</b>
		40	<b>28.4</b>
		50	<b>28.7</b>
		60	<b>28.9'</b>

Map of Well Location	
Please provide a map below following instructions on the back.	
Comments: <b>#2134 Maple Forest Drive</b>	
Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered <b>20110325</b> Date Work Completed <b>20110328</b>
Ministry Use Only Audit No. <b>z119813</b> APR 26 2011	

Address of Well Location (Street Number/Name) <b>2130 Maple Forest Drive</b>		Township <b>Rideau</b>	Lot <b>21</b>	Concession <b>3</b>
County/District/Municipality <b>Ottawa-Carleton</b>		City/Town/Village <b>North Gower</b>	Province <b>Ontario</b>	Postal Code <b></b>
UTM Coordinates Zone <b>18</b>	Easting <b>445253</b>	Northings <b>4998049</b>	Municipal Plan and Sublot Number <b>4M-1209</b>	Other <b>S/L 33</b>

## Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
	Sand & Gravel	Clay		0' 26'
Grey	Limestone			26' 68'
Grey	Limestone			68' 156'
Grey	Limestone			156' 162'

Annular Space		
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/GP)
36' 0'	Neat cement slurry	20.3

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	
6"	Steel	.188	+2' 36'	
515/16"	Open Hole		36' 162'	

Construction Record - Screen			Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From To	

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)	Diameter (cm/in)
68' (n/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify	From To	
156' (n/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify	0' 36'	6"
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	36' 162'	515/16"

Well Contractor and Well Technician Information	
Business Name of Well Contractor <b>Air Rock Drilling Co. Ltd.</b>	Well Contractor's Licence No. <b>1119</b>
Business Address (Street Number/Name) <b>6659 Franktown Road, RR#1</b>	Municipality <b>Richmond</b>

Province <b>ON</b>	Postal Code <b>K0A 2Z0</b>	Business E-mail Address <b>air-rock@sympatico.ca</b>
Bus. Telephone No. (inc. area code) <b>6138382170</b>		
Name of Well Technician (Last Name, First Name) <b>Hogan, Dan</b>		
Well Technician's Licence No. <b>T3058</b>	Signature of Technician and/or Contractor 	Date Submitted <b>2011 03 31</b>

Results of Well Yield Testing			
After test of well yield, water was:	Draw Down	Recovery	
<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify <b>Not tested</b>	Time (min)	Water Level (m/ft)	Time (min)
If pumping discontinued, give reason:	Static Level	6.8'	10.7'
Pump intake set at (m/ft) <b>140'</b>	1	9.3	1 6.8
Pumping rate (l/min / GPM) <b>20</b>	2	10.7	2 6.8
Duration of pumping <b>1</b> hrs + <b>0</b> min	3	10.7	3 6.8
Final water level end of pumping (m/ft) <b>10.7'</b>	4	10.7	4 6.8
If flowing give rate (l/min / GPM)	5	10.7	5 6.8
Recommended pump depth (m/ft) <b>100'</b>	10	10.7	10 6.8
Recommended pump rate (l/min / GPM) <b>20</b>	15	10.7	15 6.8
Well production (l/min / GPM) <b>20+</b>	20	10.7	20 6.8
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	25	10.7	25 6.8
	30	10.7	30 6.8
	40	10.7	40 6.8
	50	10.7	50 6.8
	60	10.7	60 6.8

**Map of Well Location**

Please provide a map below following instructions on the back.

**Rogar Stevens Drive**

**Trailwood Drive** 1KM

**45'**

**#2130**

**Maple Forest Drive**

Comments: **Maple Forest Drive**

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered <b>2011 03 25</b>	Date Work Completed <b>2011 03 23</b>
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Ministry Use Only	
Audit No. <b>z119812</b>	Received <b>APR 26 2011</b>



Ontario

Ministry of  
the Environment

Well Tag No. (Place Sticker and/or Print Below)

A117425

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page \_\_\_\_\_ of \_\_\_\_\_

Well Owner's Information

First Name 1504107 Ontario Inc	Last Name / Organization da Lockwood Brothers Construction	E-mail Address	<input checked="" type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) 2010 Totem Ranch Road	Municipality Oxford Station	Province ON	Postal Code K0G 1T0
Telephone No. (inc. area code) 613 258 4225			

Well Location

Address of Well Location (Street Number/Name) 2127 Rodger Stevens Drive	Township Rideau	Lot 20	Concession 3
County/District/Municipality Ottawa	City/Town/Village North Gower	Province Ontario	Postal Code K0A 2T0
UTM Coordinates Zone NAD 83	Easting 184449564998590	Northing Plan 4R 16097	Municipal Plan and Sublot Number
Other			

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
Brown	Fill	Cement	Packed	0	3'
Brown	Clay	Stone's	Packed	3'	24'
Gray	Clay	Stone's	Packed	24'	47'
Gray	Limestone		Hard	47'	115'
Gray	Limestone	Sandstone	Hard	115'	141'

Annular Space		
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)
52'	40'	Cement Pressure Grouted
40'	0	Bentonite Pressure Grouted

Method of Construction		Well Use	
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial
<input checked="" type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial	
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify	

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
9 7/8"	Open Hole		0	52'
6 1/4"	Steel	0.188	0	52'
6 1/8"	Open Hole		52'	141'

Construction Record - Screen			Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To

Water Details		Hole Diameter	
Water found at Depth 128' (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From	To
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	0	52'
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	52'	141'
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		

Business Name of Well Contractor 1425486 Ontario Ltd ola Splash Well Drilling	Well Contractor's Licence No. 4877
Business Address (Street Number/Name) PO Box 1083	Municipality Prescott
Province ON	Postal Code K0E 1T0
Telephone No. (inc. area code) 39254885	Name of Well Technician (Last Name, First Name) Ferguson, Todd
Technician's Licence No. 478	Signature of Technician and/or Contractor Todd Ferguson
Date Submitted 2011/11/10	

Results of Well Yield Testing			
After test of well yield, water was: <input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify		Draw Down	
If pumping discontinued, give reason:		Time (min)	Water Level (m/ft)
Pump intake set at (m/ft) 120'		17.9	18.4
Pumping rate (l/min / GPM) 21 gpm		1	18.1
Duration of pumping 1 hrs + 0 min		2	18.2
Final water level end of pumping (m/ft) 18.4		3	18.3
If flowing give rate (l/min / GPM)		4	18.3
Recommended pump depth (m/ft) 120'		5	18.3
Recommended pump rate (l/min / GPM) 10 gpm		10	18.4
Well production (l/min / GPM)		15	18.4
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 150		20	18.4
		25	18.4
		30	18.4
		40	18.4
		50	18.4
		60	18.4

Map of Well Location

Please provide a map below following instructions on the back.

10

1 Mile to North

Rodger Stevens Drive

Comments:  
150 Chlorine after Drilling  
Chlorine after Yield Test

Well owner's Information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered 2011/11/04	Date Work Completed 2011/10/26
Ministry Use Only		
Audit No. 2138522		Received DEC 05 2011

Address of Well Location (Street Number/Name) <b>2126 Maple Forest Drive</b>				Township <b>Rideau</b>		Lot <b>21</b>		Concession <b>3</b>	
County/District/Municipality <b>Ottawa-Carleton</b>				City/Town/Village <b>North Gower</b>				Province <b>Ontario</b>	
UTM Coordinates				Municipal Plan and Sublot Number				Postal Code	
Zone	Easting	Northing							
NAD	8	3	18	445286	4998074		4M-1209	S/1 34	

**Overburden and Bedrock Materials/Abandonment Sealing Record** (see instructions on the back of this form)


[illegible]



Annular Space			
Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From	To		
47'	0'	Neat cement	32.8

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input checked="" type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, <i>specify</i> _____		<input type="checkbox"/> Other, <i>specify</i> _____		

Construction Record - Casing					Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Replacement Well
			From	To		
6 1/4"	Steel	188"	+2'	47'	<input type="checkbox"/> Recharge Well	<input type="checkbox"/> Dewatering Well
5 15/16"	Open Hole		47'	168'		
					<input type="checkbox"/> Alteration (Construction)	<input type="checkbox"/> Abandoned, Insufficient Supply
					<input type="checkbox"/> Other, specify	

Water Details		Hole Diameter	
Water found at Depth 102 (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested <input type="checkbox"/> Other, specify _____	Depth (m/ft) From	Diameter (cm/in)
Water found at Depth (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Other, specify _____	0'	47' 9 3/4"
Water found at Depth (m/ft) <input type="checkbox"/> Gas	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Other, specify _____	47'	168' 5 15/16"

Well Contractor and Well Technician Information									
Business Name of Well Contractor						Well Contractor's Licence No.			
Air Rock Drilling Co. Ltd.						1119			
Business Address (Street Number/Name)						Municipality			
6659 Franktown Road, RR#1						Richmond			
Province		Postal Code		Business E-mail Address					
ON		K0A 2Z0		air-rock@sympatico.ca					
Bus.Telephone No. (inc. area code)				Name of Well Technician (Last Name, First Name)					
6138382170				Hanna, Jeremy					
Well Technician's Licence No.		Signature of Technician and/or Contractor				Date Submitted			
T 3632						2013 7 31 2013 07 31			

Results of Well Yield Testing				
After test of well yield, water was:	Draw Down		Recovery	
<input type="checkbox"/> Clear and sand free	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
<input type="checkbox"/> Other, specify <b>Not tested</b>	Static Level	10.4'		77'
If pumping discontinued, give reason:	1	14.8	1	56.3
	2	17.3	2	43.2
Pump intake set at (m/ft)	3	19.7	3	34.6
150	4	22	4	27.3
Pumping rate (l/min / GPM)	5	24.2	5	20.9
20	10	33	10	10.4
Duration of pumping	15	38.6	15	10.4
1 hrs + 0 min	20	44.2	20	10.4
Final water level end of pumping (m/ft)	25	48.7	25	10.4
77'	30	53.2	30	10.4
If flowing give rate (l/min / GPM)	40	62.2	40	10.4
	50	70	50	10.4
Recommended pump depth (m/ft)	60	77'	60	10.4'
100' (3/4 HP - 157 PPM)				
Recommended pump rate (l/min / GPM)				
20				
Well production (l/min / GPM)				
20				
Disinfected?				
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

### Map of Well Location

Please provide a map below following instructions on the back.

Stillmead Drive

#2126 MAPLE FOREST DRIVE

1 km

75'

X

Comments:

3/4 HP - 15 GPM - SET @ 100 FT

Well owner's information package delivered	Date Package Delivered	<b>Ministry Use Only</b> Audit No. <b>z 155162</b> <b>AUG 19 2013</b>
	Date Work Completed	

**OFFICIAL CERTIFICATE OF ANALYSIS : 4102006**
**WORK REQUEST : 100315477**
**Report Date : 2024-10-01**
**Paterson Group**

9 Auriga Dr  
Nepean, Ontario  
K2E 7T9  
Attention : Alex Schopf

Reception Date : 2024-09-25

Project : PH4905

Sampler : NA

PO Number : 61375

Temperature : 15 °C

Analysis	Quantity	External Method
Alkalinity (Water, Automated)	2	Modified from SM 2320 B
Ammonia, Total (Water, Colorimetry)	2	Modified from EPA 350.1
Chloride (Water, IC)	2	Modified from SM 4110 B and C
Colour, Apparent (Water, Spectrophotometry)	2	Modified from SM 2120 C
Conductivity (Water, Automated)	2	Modified from SM 2510 B
DOC (Water, IR)	2	Modified from SM 5310 B
Escherichia coli (DC Plate)	2	Modified from MECP E3407
Fluoride (Water, Auto/ISE)	2	Modified from SM 4500-F A and 4500-F C
Hardness (Water, Calculation Only)	2	SM 2340 B
Ion Balance (Water, Calculation)	2	Modified from SM1030 E
Metals Scan (Water, ICP/MS)	2	Modified from EPA 200.8
Metals Scan (Water, ICP/OES)	2	Modified from SM 3120 B
Nitrate (Water, IC)	2	Modified from SM 4110 B and C
Nitrite (Water, IC)	2	Modified from SM 4110 B and C
pH (25°C) (Water, Automated)	2	Modified from SM 4500-H+ B
Phenols (Water, Colorimetry)	2	Modified from EPA 420.2
Sulphate (Water, IC)	2	Modified from SM 4110 B and C
Sulphide (Water, Colorimetry)	2	Modified from SM 4500-S2 D
Tannin and Lignin (Water, Spec)	2	Modified from SM 5550 B
TDS (Estimated)	2	Modified from SM 2510 A
Total Coliforms (DC Plate)	2	Modified from MECP E3407
Total Kjeldahl Nitrogen (Water, Colorimetry)	2	Modified from EPA 351.2
Turbidity (Water, Turbidimeter)	2	Modified from SM 2130 B
VOCs (Water, GC/MS)	1	Modified from EPA 8260

**Criteria :**
**A :** Ontario Regulation 169/03 (Non-Regulated Drinking Water)

**Sample status upon receipt :**

8059996 8059998

**Compliant**
**Notes :**

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

**Legend :**

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

\* : Analysis conducted by external subcontracting

^ : Analysis not accredited

## OFFICIAL CERTIFICATE OF ANALYSIS - EXCEEDENCE SUMMARY

Client : Paterson Group  
Project : PH4905

Reception Date : 2024-09-25

Eurofins Sample No	Client Sample Identification	Analyte	Result	Units	Exceeded Criteria		
					A	B	C
Colour, Apparent (Water, Spectrophotometry)							
8059996	TW1 - GW1	Colour (Apparent)	6	TCU	5		
8059998	TW1 - GW2	Colour (Apparent)	7	TCU	5		
Hardness (Water, Calculation Only)							
8059996	TW1 - GW1	Hardness as CaCO3 (Calculation)	226	mg/L	80-100		
8059998	TW1 - GW2	Hardness as CaCO3 (Calculation)	226	mg/L	80-100		
Metals Scan (Water, ICP/MS)							
8059998	TW1 - GW2	Iron	0.33	mg/L	0.3		
TDS (Estimated)							
8059996	TW1 - GW1	TDS (Estimated)^	508	mg/L	500		

## OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Eurofins Sample No :				8059996	8059998			
Matrix :				Groundwater	Groundwater			
Sampling Date :				2024-09-24	2024-09-24			
Client Sample Identification :				TW1 - GW1	TW1 - GW2			
Anions	RL	Unit	Criteria					
			A	B	C			
Chloride	0.5	mg/L	250			90.2	85.2	
Nitrate (as Nitrogen)	0.1	mg/L	10.0			<0.1	<0.1	
Nitrite (as Nitrogen)	0.1	mg/L	1.0			<0.1	<0.1	
Sulphate	1	mg/L	500			47	47	

Eurofins Sample No :				8059996	8059998			
Matrix :				Groundwater	Groundwater			
Sampling Date :				2024-09-24	2024-09-24			
Client Sample Identification :				TW1 - GW1	TW1 - GW2			
Calculations	RL	Unit						
Ion Balance (Calculation)^	0.1		1.01	1.00				

Eurofins Sample No :				8059996	8059998			
Matrix :				Groundwater	Groundwater			
Sampling Date :				2024-09-24	2024-09-24			
Client Sample Identification :				TW1 - GW1	TW1 - GW2			
General Chemistry	RL	Unit	Criteria					
			A	B	C			
Alkalinity (as CaCO3)	5	mg/L	500			229	236	
Colour (Apparent)	2	TCU	5			6	7	
Conductivity @ 25°C	5	µS/cm				781	766	
Dissolved Organic Carbon	0.5	mg/L	5			0.7	1.1	
Fluoride	0.1	mg/L	1.5			0.64	0.63	
Hardness as CaCO3 (Calculation)	1	mg/L	80-100			226	226	
pH @ 25°C	1		6.5-8.5			7.99	7.95	
Phenols-4AAP	0.001	mg/L				<0.001	<0.001	
Sulphide (S2-)	0.01	mg/L	0.05			<0.01	<0.01	
Tannin and Lignin	0.1	mg/L				0.1	<0.1	
TDS (Estimated)^	5	mg/L	500			508	498	
Turbidity	0.1	NTU	5			1.6	2.3	

## OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Eurofins Sample No :						8059996	8059998			
Matrix :						Groundwater	Groundwater			
Sampling Date :						2024-09-24	2024-09-24			
Client Sample Identification :						TW1 - GW1	TW1 - GW2			
Metals	RL	Unit	Criteria							
			A	B	C					
Metals Scan (Water, ICP/MS)										
Aluminum	0.01	mg/L	0.1			0.03	0.01			
Antimony	0.0005	mg/L	0.006			<0.0005	<0.0005			
Arsenic	0.001	mg/L	0.01			<0.001	<0.001			
Barium	0.001	mg/L	1			0.066	0.062			
Beryllium	0.0005	mg/L				<0.0005	<0.0005			
Boron	0.01	mg/L	5			0.20	0.20			
Cadmium	0.0001	mg/L	0.005			<0.0001	<0.0001			
Chromium	0.001	mg/L	0.05			<0.001	<0.001			
Cobalt	0.0002	mg/L				<0.0002	<0.0002			
Copper	0.001	mg/L	1			<0.001	<0.001			
Iron	0.03	mg/L	0.3			0.19	0.33			
Lead	0.001	mg/L	0.01			<0.001	<0.001			
Manganese	0.01	mg/L	0.05			<0.01	<0.01			
Mercury	0.0001	mg/L	0.001			<0.0001	<0.0001			
Molybdenum	0.005	mg/L				<0.005	<0.005			
Nickel	0.005	mg/L				<0.005	<0.005			
Selenium	0.001	mg/L	0.05			<0.001	<0.001			
Silver	0.0001	mg/L				<0.0001	<0.0001			
Strontium	0.001	mg/L				1.75	1.77			
Thallium	0.0001	mg/L				<0.0001	<0.0001			
Uranium	0.001	mg/L	0.02			<0.001	<0.001			
Vanadium	0.001	mg/L				<0.001	<0.001			
Zinc	0.01	mg/L	5			<0.01	<0.01			
Metals Scan (Water, ICP/OES)										
Calcium	1	mg/L				42	42			
Magnesium	1	mg/L				30	29			
Potassium	1	mg/L				8	8			
Sodium	1	mg/L	200			81	78			

Eurofins Sample No :						8059996	8059998			
Matrix :						Groundwater	Groundwater			
Sampling Date :						2024-09-24	2024-09-24			
Client Sample Identification :						TW1 - GW1	TW1 - GW2			
Microbiology	RL	Unit	Criteria							
			A	B	C					
Escherichia coli (DC)	0	CFU/100mL	0			0	0			
Total Coliforms (DC)	0	CFU/100mL	0			0	0			

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Eurofins Sample No :			8059996	8059998					
Matrix :			Groundwater	Groundwater					
Sampling Date :			2024-09-24	2024-09-24					
Client Sample Identification :			TW1 - GW1	TW1 - GW2					
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.154	0.153					
Total Kjeldahl Nitrogen	0.1	mg/L	0.231	0.236					

## OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Eurofins Sample No :				8059998					
Matrix :				Groundwater					
Sampling Date :				2024-09-24					
Client Sample Identification :				TW1 - GW2					
Volatile Organic Compounds	RL	Unit	Criteria						
			A	B	C				
VOCs (Water, GC/MS)									
1,1,1,2-Tetrachloroethane	0.5	ug/L				<0.5			
1,1,1-Trichloroethane	0.4	ug/L				<0.4			
1,1,2,2-Tetrachloroethane	0.5	ug/L				<0.5			
1,1,2-Trichloroethane	0.4	ug/L				<0.4			
1,1-Dichloroethane	0.4	ug/L				<0.4			
1,1-Dichloroethene	0.4	ug/L	14			<0.5			
1,2-Dibromoethane	0.2	ug/L				<0.2			
1,2-Dichlorobenzene	0.4	ug/L	200			<0.4			
1,2-Dichloroethane	0.2	ug/L	5			<0.2			
1,2-Dichloropropane	0.5	ug/L				<0.5			
1,3,5-Trimethylbenzene	0.3	ug/L				<0.3			
1,3-Dichlorobenzene	0.4	ug/L				<0.4			
1,4-Dichlorobenzene	0.4	ug/L	5			<0.4			
Acetone	5	ug/L				<5.0			
Benzene	0.5	ug/L	1			<0.5			
Bromodichloromethane	0.3	ug/L				<0.3			
Bromoform	0.4	ug/L				<0.4			
Bromomethane	0.5	ug/L				<0.5			
Carbon tetrachloride	0.2	ug/L	2			<0.2			
Chloroethane	0.2	ug/L				<0.5			
Chloroform	0.5	ug/L				<0.5			
Chloromethane	0.2	ug/L				<0.2			
cis-1,2-Dichloroethene	0.4	ug/L				<0.4			
cis-1,3-Dichloropropene	0.5	ug/L				<0.5			
Dibromochloromethane	0.3	ug/L				<0.3			
Dichloromethane	4	ug/L	50			<4.0			
Diethyl ether	5	ug/L				<5.0			
Ethylbenzene	0.5	ug/L	140			<0.5			
m/p-Xylene	0.4	ug/L				<0.4			
Methyl ethyl ketone (MEK)	2	ug/L				<2.0			
Methyl isobutyl ketone (MIBK)	5	ug/L				<5.0			
Methyl tert-butyl ether (MTBE)	2	ug/L				<2.0			
Monochlorobenzene	0.5	ug/L	80			<0.5			
o-Xylene	0.4	ug/L				<0.4			
Styrene	0.5	ug/L				<0.5			
Tetrachloroethylene (PCE)	0.3	ug/L	10			<0.3			
Toluene	0.4	ug/L	60			<0.4			
trans-1,2-dichloroethene	0.4	ug/L				<0.4			
trans-1,3-dichloropropene	0.5	ug/L				<0.5			
Trichloroethylene (TCE)	0.3	ug/L	5			<0.3			
Trichlorofluoromethane	0.5	ug/L				<0.5			
Vinyl chloride	0.2	ug/L	1			<0.2			
Xylene (Total)	0.5	ug/L	90			<0.5			
1,2-dichloroethane-d4 (surrogate)	0	%				113			
4-bromofluorobenzene (surrogate)	0	%				81			

**OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

			Eurofins Sample No :			8059998				
			Matrix :			Groundwater				
			Sampling Date :			2024-09-24				
			Client Sample Identification :			TW1 - GW2				
Volatile Organic Compounds			Criteria							
	RL	Unit	A	B	C					
Toluene-d8 (surrogate)	0	%				99				

Approved by :   
Emma-Dawn Ferguson, M.Sc.  
Environmental Chemist

Approved by :   
Jason Kennedy,  
Project Manager

## OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Alkalinity (Water, Automated)									
Method : Alkalinity (water, titration to pH 4.5, automated). Internal method: OTT-I-AT-WI45398.									
Alkalinity (as CaCO3)	mg/L	5	<5	99	95-105			1	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-30	
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	112	80-120	112	80-120	0	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-29 Analysis Date: 2024-10-01	
Chloride (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Chloride	mg/L	0.5	<0.5	102	80-120	105	80-120	2	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-27	
Colour, Apparent (Water, Spectrophotometry)									
Method : Colour (Water, Spectrophotometric). Internal method: OTT-I-SPEC-WI45980.									
Colour (Apparent)	TCU	2	<2	99	39-159			9	0-40
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-30 Analysis Date: 2024-09-30	
Conductivity (Water, Automated)									
Method : Conductivity (Water, Autotitrator). Internal Method: OTT-I-AT-WI45398.									
Conductivity @ 25°C	uS/cm	5	<5	101	98-102			1	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-30	
DOC (Water, IR)									
Method : Organic carbon (water, IR, combustion). Internal method: OTT-I-DEM-WI46148.									
Dissolved Organic Carbon	mg/L	0.5	<0.5	100	84-116	85	80-120	-	0-15
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-30 Analysis Date: 2024-10-01	
Escherichia coli (DC Plate)									
Method : Total Coliforms and E.Coli by MF (Water, DC plate). Internal method: OTT-M-BAC-WI45296.									
Escherichia coli (DC)	CFU/100mL	0	0					-	0-30
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-25 Analysis Date: 2024-09-26	
Fluoride (Water, Auto/ISE)									
Method : Fluoride by autotitrator, ion selective electrode. Internal method: OTT-I-AT-WI45398.									
Fluoride	mg/L	0.1	<0.10	98	90-110			-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-30	

## OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	114	70-130	-	0-20
Antimony	mg/L	0.0005	<0.0005	87	80-120	93	70-130	-	0-20
Arsenic	mg/L	0.001	<0.001	99	80-120	106	70-130	-	0-20
Barium	mg/L	0.001	<0.001	100	80-120	91	70-130	0	0-20
Beryllium	mg/L	0.0005	<0.0005	108	80-120	108	70-130	-	0-20
Boron	mg/L	0.01	<0.01	100	80-120	102	70-130	-	0-20
Cadmium	mg/L	0.0001	<0.0001	106	80-120	100	70-130	-	0-20
Chromium	mg/L	0.001	<0.001	100	80-120	105	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	102	80-120	94	70-130	-	0-20
Copper	mg/L	0.001	<0.001	110	80-120	93	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	101	70-130	-	0-20
Lead	mg/L	0.001	<0.001	110	80-120	86	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	99	70-130	-	0-20
Mercury	mg/L	0.0001	<0.0001	106	80-120	78	70-130	-	0-20
Molybdenum	mg/L	0.005	<0.005	90	80-120	100	70-130	-	0-20
Nickel	mg/L	0.005	<0.005	100	80-120	96	70-130	-	0-20
Selenium	mg/L	0.001	<0.001	102	80-120	101	70-130	-	0-20
Silver	mg/L	0.0001	<0.0001	117	80-120	93	70-130	-	0-20
Strontium	mg/L	0.001	<0.001	100	80-120	88	70-130	0	0-20
Thallium	mg/L	0.0001	<0.0001	104	80-120	87	70-130	-	0-20
Uranium	mg/L	0.001	<0.001	90	80-120	92	70-130	-	0-20
Vanadium	mg/L	0.001	<0.001	100	80-120	108	70-130	-	0-20
Zinc	mg/L	0.01	<0.01	110	80-120	88	70-130	-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-27	
Metals Scan (Water, ICP/OES)									
Method : Metals (Water, ICP/OES). Internal method: OTT-I-MET-WI48491.									
Calcium	mg/L	1	<1	104	86-115	101	70-130	1	0-20
Magnesium	mg/L	1	<1	100	91-109	100	70-130	-	0-20
Potassium	mg/L	1	<1	107	87-113	114	70-130	-	0-20
Sodium	mg/L	1	<1	106	85-115	107	70-130	-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-30 Analysis Date: 2024-09-25	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	106	80-120				
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-27	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	105	80-120				
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-27	
pH (25°C) (Water, Automated)									
Method : pH (Water, Automated Meter). Internal method: OTT-I-AT-WI45398.									
pH @ 25°C		1	5.71	100	97-103			1	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-30	

## OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : Paterson Group

Project : PH4905

Reception Date: 2024-09-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Phenols (Water, Colorimetry)									
Method : Phenols (Water, Colorimetry). Internal method: OTT-I-4AAP-WI46150.									
Phenols-4AAP	mg/L	0.001	<0.001	114	75-125	118	70-130	-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-27 Analysis Date: 2024-09-27	
Sulphate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Sulphate	mg/L	1	<1	105	90-110	110	80-120	1	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-27	
Sulphide (Water, Colorimetry)									
Method : Sulphide, S2- (Water, Colorimetry). Internal method: OTT-I-SPEC-WI45931.									
Sulphide (S2-)	mg/L	0.01	<0.01	100	80-120			-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-26	
Tannin and Lignin (Water, Spec)									
Method : Tannin and Lignin (Water, Spec), Internal method: OTT-I-SPEC-WI57693.									
Tannin and Lignin	mg/L	0.1	<0.1	92	80-120			-	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-30 Analysis Date: 2024-09-30	
Total Coliforms (DC Plate)									
Method : Total Coliforms and E.Coli by MF (Water, DC plate). Internal method: OTT-M-BAC-WI45296.									
Total Coliforms (DC)	CFU/100mL	0	0					-	0-30
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-25 Analysis Date: 2024-09-26	
Total Kjeldahl Nitrogen (Water, Colorimetry)									
Method : TKN (Water, colorimetry). Internal method: OTT-I-NUT-WI46201.									
Total Kjeldahl Nitrogen	mg/L	0.1	<0.100	98	70-130	111	70-130	3	0-20
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-27 Analysis Date: 2024-09-29	
Turbidity (Water, Turbidimeter)									
Method : Turbidity (Water, Turbidimeter). Internal method: OTT-I-TUR-WI46288.									
Turbidity	NTU	0.1	<0.1	103	80-120			-	0-30
Associated Samples : 8059996, 8059998								Prep Date: 2024-09-26 Analysis Date: 2024-09-26	

## OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : Paterson Group  
Project : PH4905

Reception Date: 2024-09-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
VOCs (Water, GC/MS)									
Method : Volatile Organic Compounds (Water, GC/MS). Internal method: AMVOMSE8.									
1,1,1,2-Tetrachloroethane	ug/L	0.5	<0.5	121	70-130	126	70-130	-	0-30
1,1,1-Trichloroethane	ug/L	0.4	<0.4	116	70-130	122	70-130	-	0-30
1,1,2,2-Tetrachloroethane	ug/L	0.5	<0.5	117	70-130	116	70-130	-	0-30
1,1,2-Trichloroethane	ug/L	0.4	<0.4	109	70-130	115	70-130	-	0-30
1,1-Dichloroethane	ug/L	0.4	<0.4	102	70-130	125	70-130	-	0-30
1,1-Dichloroethene	ug/L	0.4	<0.5	122	70-130	125	70-130	-	0-30
1,2-Dibromoethane	ug/L	0.2	<0.2	100	70-130	105	70-130	-	0-30
1,2-Dichlorobenzene	ug/L	0.4	<0.4	100	70-130	102	70-130	-	0-30
1,2-Dichloroethane	ug/L	0.2	<0.2	87	70-130	120	70-130	-	0-30
1,2-Dichloropropane	ug/L	0.5	<0.5	107	70-130	117	70-130	-	0-30
1,3,5-Trimethylbenzene	ug/L	0.3	<0.3	112	70-130	115	70-130	-	0-30
1,3-Dichlorobenzene	ug/L	0.4	<0.4	98	70-130	100	70-130	-	0-30
1,4-Dichlorobenzene	ug/L	0.4	<0.4	101	70-130	104	70-130	-	0-30
Acetone	ug/L	5	<5.0	117	70-130	89	70-130	-	0-30
Benzene	ug/L	0.5	<0.5	121	70-130	126	70-130	-	0-30
Bromodichloromethane	ug/L	0.3	<0.3	119	70-130	128	70-130	-	0-30
Bromoform	ug/L	0.4	<0.4	90	70-130	95	70-130	-	0-30
Bromomethane	ug/L	0.5	<0.5	87	70-130	87	70-130	-	0-30
Carbon tetrachloride	ug/L	0.2	<0.2	111	70-130	118	70-130	-	0-30
Chloroethane	ug/L	0.2	<0.5	101	70-130	112	70-130	-	0-30
Chloroform	ug/L	0.5	<0.5	121	70-130	127	70-130	-	0-30
Chloromethane	ug/L	0.2	<0.2	86	70-130	89	70-130	-	0-30
cis-1,2-Dichloroethene	ug/L	0.4	<0.4	118	70-130	125	70-130	-	0-30
cis-1,3-Dichloropropene	ug/L	0.5	<0.5	75	70-130	85	70-130	-	0-30
Dibromochloromethane	ug/L	0.3	<0.3	103	70-130	108	70-130	-	0-30
Dichloromethane	ug/L	4	<4.0	77	70-130	110	70-130	-	0-30
Diethyl ether	ug/L	5	<5.0	100	70-130	95	70-130	-	0-30
Ethylbenzene	ug/L	0.5	<0.5	129	70-130	110	70-130	-	0-30
m/p-Xylene	ug/L	0.4	<0.4	124	70-130	106	70-130	-	0-30
Methyl ethyl ketone (MEK)	ug/L	2	<2.0	124	70-130	124	70-130	-	0-30
Methyl isobutyl ketone (MIBK)	ug/L	5	<5.0	107	70-130	114	70-130	-	0-30
Methyl tert-butyl ether (MTBE)	ug/L	2	<2.0	110	70-130	113	70-130	-	0-30
Monochlorobenzene	ug/L	0.5	<0.5	110	70-130	114	70-130	-	0-30
o-Xylene	ug/L	0.4	<0.4	123	70-130	112	70-130	-	0-30
Styrene	ug/L	0.5	<0.5	123	70-130	106	70-130	-	0-30
Tetrachloroethylene (PCE)	ug/L	0.3	<0.3	82	70-130	86	70-130	-	0-30
Toluene	ug/L	0.4	<0.4	122	70-130	128	70-130	-	0-30
trans-1,2-dichloroethene	ug/L	0.4	<0.4	126	70-130	111	70-130	-	0-30
trans-1,3-dichloropropene	ug/L	0.5	<0.5	90	70-130	101	70-130	-	0-30
Trichloroethylene (TCE)	ug/L	0.3	<0.3	97	70-130	101	70-130	-	0-30
Trichlorofluoromethane	ug/L	0.5	<0.5	116	70-130	118	70-130	-	0-30
Vinyl chloride	ug/L	0.2	<0.2	95	70-130	108	70-130	-	0-30
Xylene (Total)	ug/L	0.5	<0.5				-		-
Associated Samples : 8059998									
Prep Date: 2024-09-26 Analysis Date: 2024-10-01									

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.



STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON K2E 7Y1 • Phone 613-271-5692, Fax 613-271-5222

CLIENT INFORMATION

INVOICE INFORMATION

100315477

Order #: ☒ YES ☐ NO

Company: Paterson Group

Contact: Alex Schopf

Address: 9 Auriga Drive

Telephone: 613-218-3444

Email: #1: earldley@patersongroup.ca, mlafamme@patersongroup.ca

Email: #2: aschopf@patersongroup.ca

Project: PH4905

TURN-AROUND TIME (Business Days)

☐ 1 Day\* (100%) ☐ 2 Day\*\* (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

\*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

\*\*For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).



Printed On: 2024-09-25 16:08:48

PO #: 61375

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City: Ottawa

☐ Storm Sewer, City: Ottawa

☒ ODWSOG

☐ PWQC

☐ O. Reg 347/558

☐ Other: \_\_\_\_\_

☐ None

☐ O. Reg 153

Table #: \_\_\_\_\_ Course / line, Surface / subsurface.

Type: Combind / Res-Park / Agr / GW / All Other / Sediment

☐ Incest Soil Table: \_\_\_\_\_ Type: \_\_\_\_\_

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04

☐ Yes ☐ No

RN# (Lab Use Only)

Sample ID

Date/Time Collected

Sample Matrix

# of Containers

PHC F1 - F4

BTEX

VOCs

PAHs

PCBs

Metals + Inorganics

Metals only

See attached paper

Subdivision Supply Bact 2 (Ec/TC only)

TSS

pH

Total Metals

Hg

September 24, 2024

September 24, 2024

GW

9

September 24, 2024

September 24, 2024

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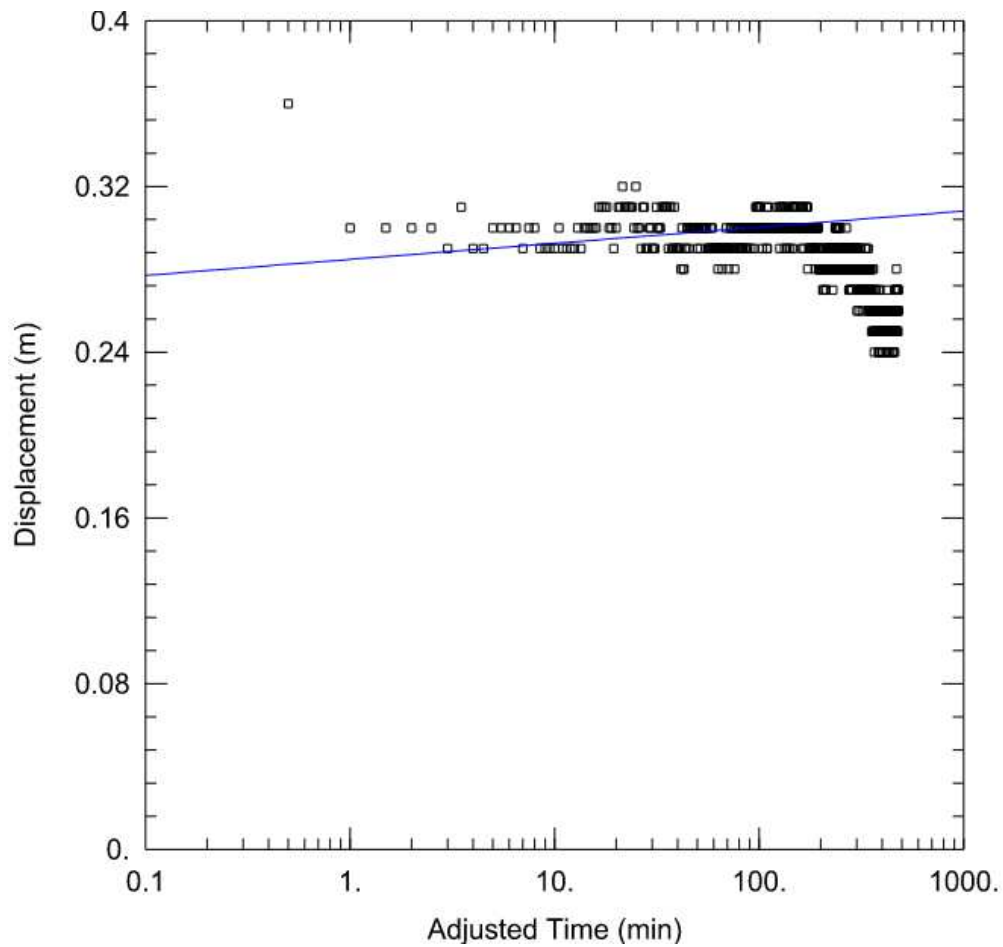
September 24, 2024

September 24, 2024

GW

**Pumping Test Analysis Report**

File No.	PH4905	Well ID:	TW1
Date:	Tuesday, September 24, 2024	Solution Method:	<b>Cooper-Jacob</b>
Client:	Ottawa Sivan Temple	Transmissivity (m <sup>2</sup> /day):	1970.7
Site Address:	2104 Roger Stevens Road	Discharge Rate (L/min)	58
Project:	Proposed Redevelopment	Analysis performed by:	AS



**Pumping Test Analysis Report**

File No. PH4905  
Date: Tuesday, September 24, 2024  
Client: Ottawa Sivan Temple  
Site Address: 2104 Roger Stevens Road  
Project: Proposed Redevelopment

Summary Table:		
Solution Method:	Well ID:	Transmissivity (m <sup>2</sup> /day):
Cooper-Jacob	TW1	1970.7
Average:		<b>1970.70</b>

MW1 inputs			
pH	7.95	A	0.17
TDS	498	B	2.09
Calcium	42	C	1.22
Alkalinity	236	D	2.37
Temp.	25		
		pHs =	7.961844256

Langelier Saturation Index (LSI) Calculation		(Langelier, 1936)
$LSI = pH - pH_s$ $pH_s = (9.3 + A + B) - (C + D)$ Where:		$A = (\log_{10} [TDS] - 1) / 10$ $B = -13.12 \times \log_{10} (°C + 273) + 34.55$ $C = \log_{10} [Ca^{2+} \text{ as } CaCO_3] - 0.4$ $D = \log_{10} [\text{alkalinity as } CaCO_3]$
		LSI = 0.0
LSI	Effect	
0.5 to 2	Water is super saturated and tends to precipitate a scale layer of calcium carbonate (scale forming but non-corrosive)	
0 to 0.5	Water is super saturated and tends to precipitate a scale layer of calcium carbonate (slightly scale forming and corrosive).	
0	Water is saturated (in equilibrium) with calcium carbonate. A scale layer of calcium carbonate is neither precipitated nor dissolved.	
0 to -0.5	Water is under saturated and tends to dissolve solid calcium carbonate (slightly corrosivebut non-scale forming).	
-0.5 to -2	Water is under saturated and tends to dissolve solid calcium carbonate (seriously corrosive).	



**PATERSON  
GROUP**

# SOIL PROFILE AND TEST DATA

## GEOTECHNICAL INVESTIGATION

2104 Roger Stevens Drive, Ottawa, Ontario

**DATUM:** Geodetic **EASTING:** 367934.449 **NORTHING:** 5000149.976 **ELEVATION:** 91.00

**PROJECT:** Proposed Hindu Temple

**FILE NO.** PG6832

**BORINGS BY:** CME 55 Low Clearance Drill

**REMARKS:**

**DATE:** September 19, 2023

**HOLE NO.** BH 1-23

SAMPLE DESCRIPTION	STRATA PLOT	SAMPLE		SAMPLE % RECOVERY	N VALUE or RQD	WATER CONTENT %	DEPTH (m)	Remoulded Shear Strength (kPa)					Peak Shear Strength (kPa)					Pen. Resist. Blows/0.3m (50 mm Dia. Cone)					Piezometer Construction
		No.	Type					0	25	50	75	100	0	25	50	75	100	0	25	50	75	100	
Ground Surface																							
EL 91 m																							
TOPSOIL							0																
0.05 m EL 90.95 m		AU 1	●				1																
		SS 2	▽	75	46																		
		SS 3	▽	60	50+		2																
GLACIAL TILL: Dense to very dense, brown silty sand to sandy silt with gravel, cobbles and boulders, trace clay		SS 4	▽	50	50+		3																
		SS 5	▽	58	50+		4																
		SS 6	▽	67	24		5																
4.95 m EL 86.05 m		SS 7	▽	25	50+		6																
End of Borehole							7																
Practical refusal to augering at 4.98m depth.							8																
(GWL @ 2.20m - Sep. 21, 2023)							9																
							10																
							11																
							12																
							13																
							14																

DISCLAIMER: THE DATA PRESENTED IN THIS LOG IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHO IT WAS PRODUCED. THIS LOG SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.

# SOIL PROFILE AND TEST DATA

## GEOTECHNICAL INVESTIGATION

2104 Roger Stevens Drive, Ottawa, Ontario

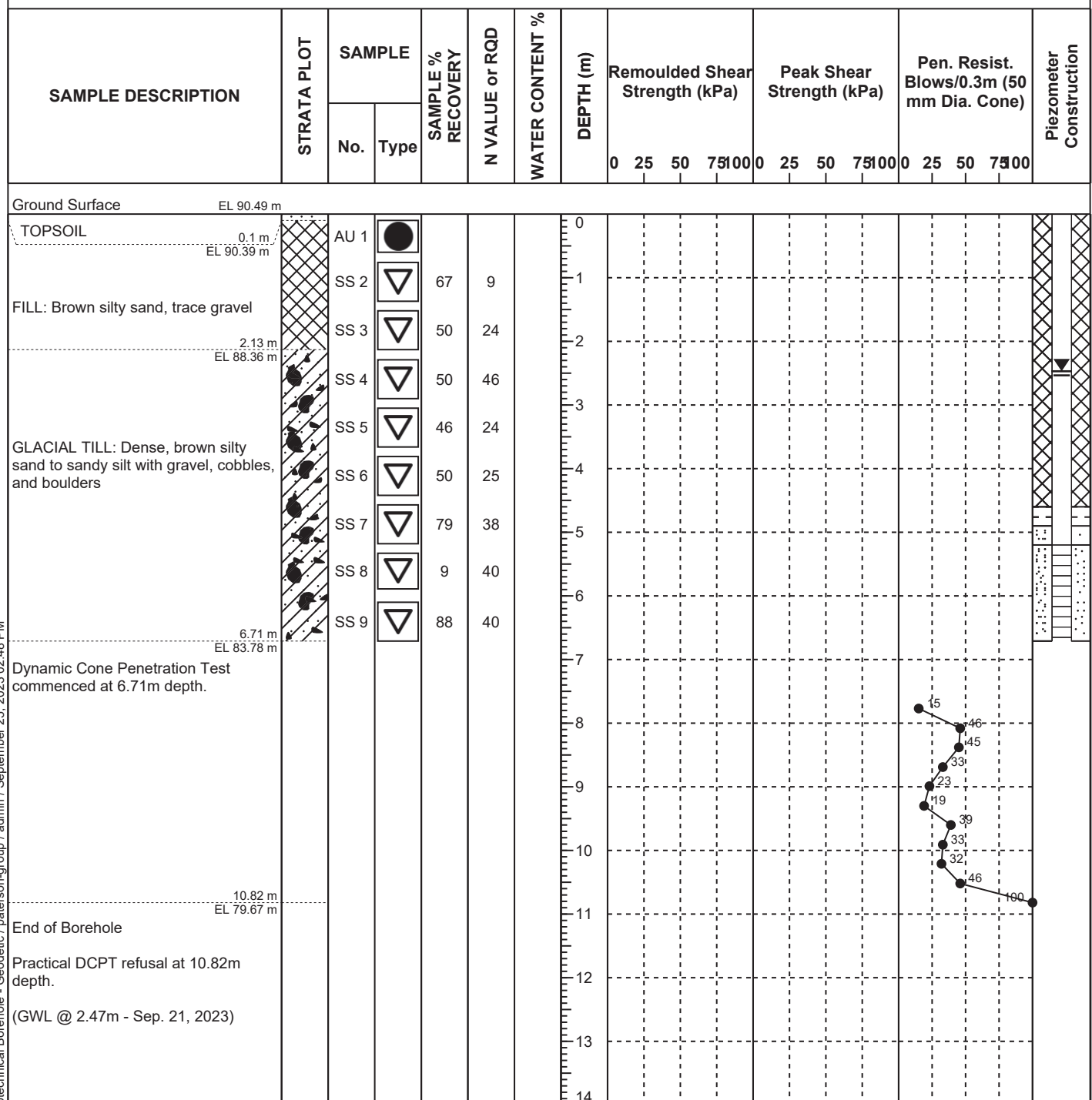
**DATUM:** Geodetic    **EASTING:** 367950.643    **NORTHING:** 5000130.909    **ELEVATION:** 90.49

**PROJECT:** Proposed Hindu Temple

**FILE NO.** PG6832

**BORINGS BY:** CME 55 Low Clearance Drill

**REMARKS:**
**DATE:** September 19, 2023

**HOLE NO.** BH 2-23


DISCLAIMER: THE DATA PRESENTED IN THIS LOG IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHO IT WAS PRODUCED. THIS LOG SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.

# SOIL PROFILE AND TEST DATA

## GEOTECHNICAL INVESTIGATION

2104 Roger Stevens Drive, Ottawa, Ontario

**DATUM:** Geodetic    **EASTING:** 367971.19    **NORTHING:** 5000144.833    **ELEVATION:** 90.23

**PROJECT:** Proposed Hindu Temple

**FILE NO.** PG6832

**BORINGS BY:** CME 55 Low Clearance Drill

**REMARKS:**

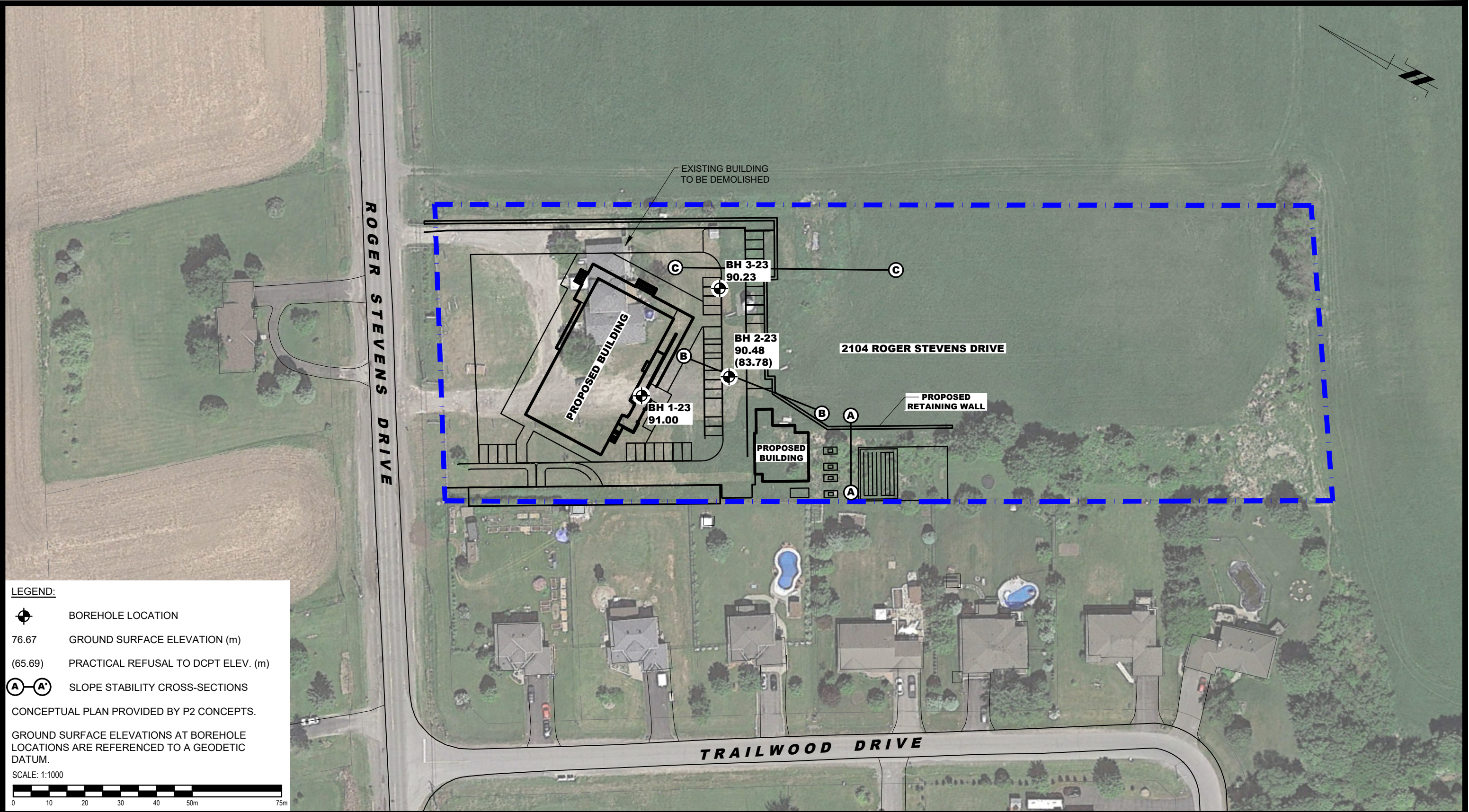
**DATE:** September 19, 2023

**HOLE NO.** BH 3-23

SAMPLE DESCRIPTION	STRATA PLOT	SAMPLE		SAMPLE % RECOVERY	N VALUE or RQD	WATER CONTENT %	DEPTH (m)	Remoulded Shear Strength (kPa)					Peak Shear Strength (kPa)					Pen. Resist. Blows/0.3m (50 mm Dia. Cone)					Piezometer Construction
		No.	Type					0	25	50	75	100	0	25	50	75	100	0	25	50	75	100	
Ground Surface							0																
EL 90.23 m																							
TOPSOIL		AU 1	●				0																
0.1 m																							
EL 90.13 m		SS 2	▽	50	6		1																
FILL: Brown silty sand, trace gravel		SS 3	▽	0	11		2																
1.35 m																							
EL 88.88 m		SS 4	▽	67	15		3																
GLACIAL TILL: Compact to very dense, brown silty sand to sandy silt with gravel, cobbles and boulders		SS 5	▽	33	33		4																
		SS 6	▽	79	16		5																
		SS 7	▽	67	30		6																
		SS 8	▽	67	18		7																
		SS 9	▽	71	50+		8																
6.71 m							9																
EL 83.52 m							10																
End of Borehole							11																
(GWL @ 2.57m - Sep. 21, 2023)							12																
							13																
							14																

DISCLAIMER: THE DATA PRESENTED IN THIS LOG IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHO IT WAS PRODUCED. THIS LOG SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.

PREDICTIVE NITRATE IMPACT ASSESSEMENT		
<b>Infiltration Factors</b>		
Topography	0.20	
Soil	0.40	
Cover	0.10	
<b>Total</b>	<b>0.70</b>	
<b>Site Characteristics</b>		
Area of Site :	20405	m <sup>2</sup>
Total of roof areas:	1040	m <sup>2</sup>
Total area of paved driveway areas:	4448	m <sup>2</sup>
Roof + paved driveway areas	5488	m <sup>2</sup>
Impervious Area	5488	m <sup>2</sup>
Percent Impervious Area =	27	%
Infiltration Area =	14917	m <sup>2</sup>
<b>Septic Effluent</b>		
Concentration of Effluent (Cs) =	20	mg/L
<b>Infiltration Calculation</b>		
Nitrate concentration in precipitation (C <sub>i</sub> ) =	0	mg/L
Surplus Water (Environment Canada)	378	mm/yr
Factored Water Surplus =	265	mm/yr
Infiltration % due to stormwater management measures	-	%
Infiltration rate from stormwater management measures =	0	mm/yr
Infiltration Flow Entering the System (Q <sub>i</sub> ) =	11	m <sup>3</sup> /day
<b>Mass Balance Model (MOEE, 1995)</b>		
$C_T = (Q_b C_b + Q_e C_e + Q_i C_i) / (Q_b + Q_e + Q_i)$ = Cumulative Nitrate Concentration		
Q <sub>b</sub> = flow entering the system across the upgradient area	0	m <sup>3</sup> /day
C <sub>b</sub> = background nitrate concentration	0	mg/L
Q <sub>e</sub> = flow entering the system from the septic drainfield	7.25	m <sup>3</sup> /day
C <sub>e</sub> = concentration of nitrates in the septic effluent	20	mg/L
Q <sub>i</sub> = flow entering the system from infiltration	11	m <sup>3</sup> /day
C <sub>i</sub> = Concentration of nitrates in the infiltrate	0	mg/L
<b>C<sub>T</sub> =</b>	<b>8.03</b>	<b>mg/L</b>
<b>Sewage Flow Volume</b>		
Daily Sewage Flow (Q <sub>s</sub> )=	<b>7.25</b>	<b>m<sup>3</sup></b>
<i>Notes: Site characteristic values were measured as approximate values from the available site plans and GeoOttawa.</i>		



**LEGEND:**

BOREHOLE LOCATION

76.67 GROUND SURFACE ELEVATION (m)

(65.69) PRACTICAL REFUSAL TO DCPT ELEV. (m)

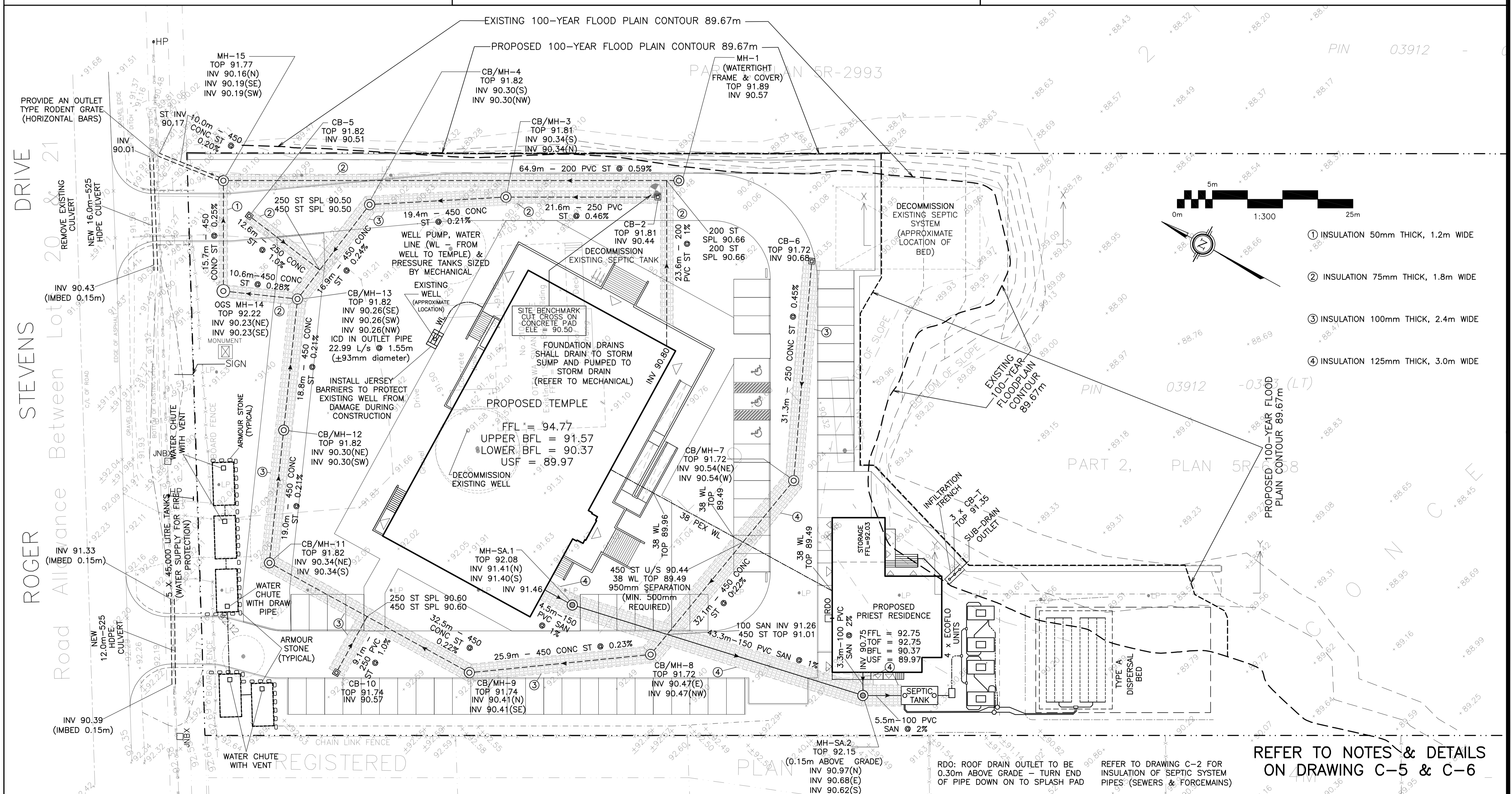
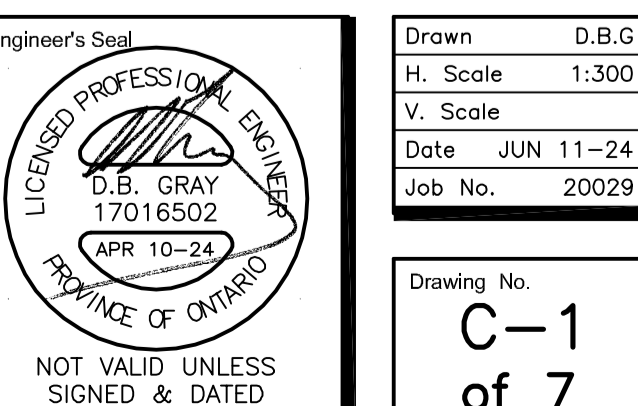
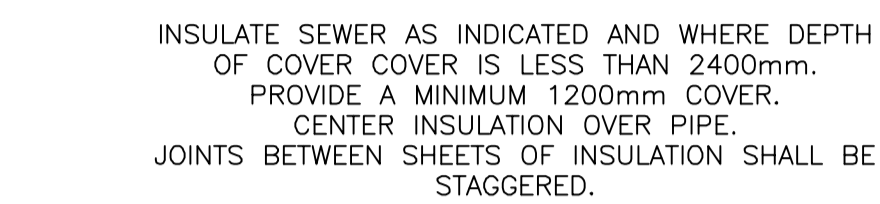
SLOPE STABILITY CROSS-SECTIONS

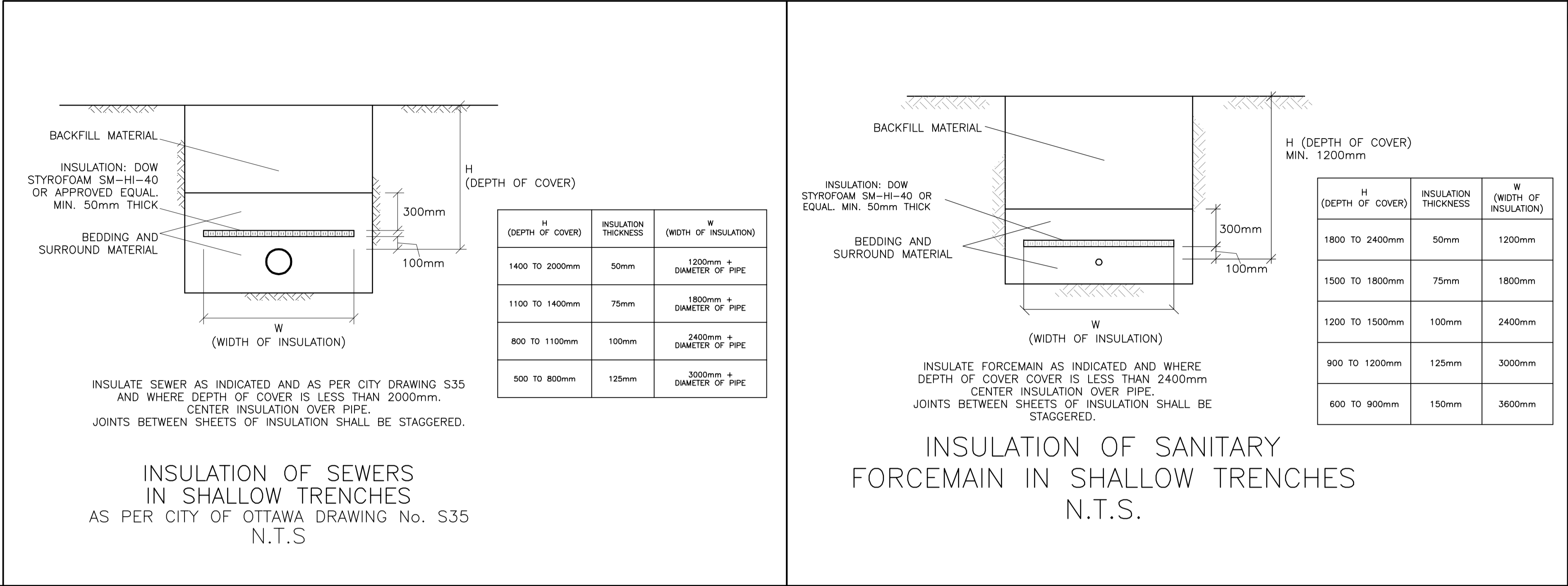
CONCEPTUAL PLAN PROVIDED BY P2 CONCEPTS.

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:1000

 9 AURIGA DRIVE OTTAWA, ON K2E 7T9 TEL: (613) 226-7381				OTTAWA SIVAN TEMPLE GEOTECHNICAL INVESTIGATION PROPOSED HINDU TEMPLE 2104 ROGER STEVENS DRIVE ONTARIO				Scale: 1:1000	Date: 09/2023
2				ADDED SLOPE STABILITY CROSS SECTION C-C TO PLAN				27/01/2025	DR
1				AS PER REVISED CONCEPTUAL PLAN				24/06/2024	OM
NO.				REVISIONS				DATE	INITIAL
				OTTAWA, Title:				TEST HOLE LOCATION PLAN	
								Drawn by: NFRV	Report No.: PG6832-1
								Checked by: OM	Dwg. No.: PG6832-1
								Approved by: SD	Revision No.: 2





LEGEND

FFL FIRST FLOOR ELEVATION

TOF TOP OF FOUNDATION

BFL BASEMENT FLOOR ELEVATION

USF UNDERSIDE OF FOOTING

PROPERTY LINE

CB CATCH BASIN

MH STORM MANHOLE

CB/MH CATCH BASIN/MANHOLE

MH SANITARY MANHOLE

SAN SANITARY SEWER

ST STORM SEWER

WL WELL WATER LINE

INV INVERT OF PIPE

RDO ROOF DRAIN OUTLET

EXISTING GRADE ELEVATION

KEY PLAN

7	APR 10-25	RE-ISSUED FOR APPROVAL
6	OCT 25-24	ISSUED FOR APPROVAL
5	OCT 18-24	ISSUED FOR COORDINATION
4	OCT 15-24	ISSUED FOR COORDINATION
3	SEP 20-24	ISSUED FOR COORDINATION
2	AUG 6-24	ISSUED FOR COORDINATION
1	JUL 11-24	PRELIMINARY
No.	DATE	REVISION

D.B. GRAY ENGINEERING INC.

Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermain

700 Long Point Circle  
Ottawa, Ontario

613-425-8044  
d.gray@dbgrayengineering.com

Project

PROPOSED HINDU TEMPLE  
2104 ROGER STEVENS DR  
NORTH GOWER, ONTARIO

Drawing Title

SEPTIC SYSTEM

Engineer's Seal

Drawn D.B.G.

H. Scale 1:300

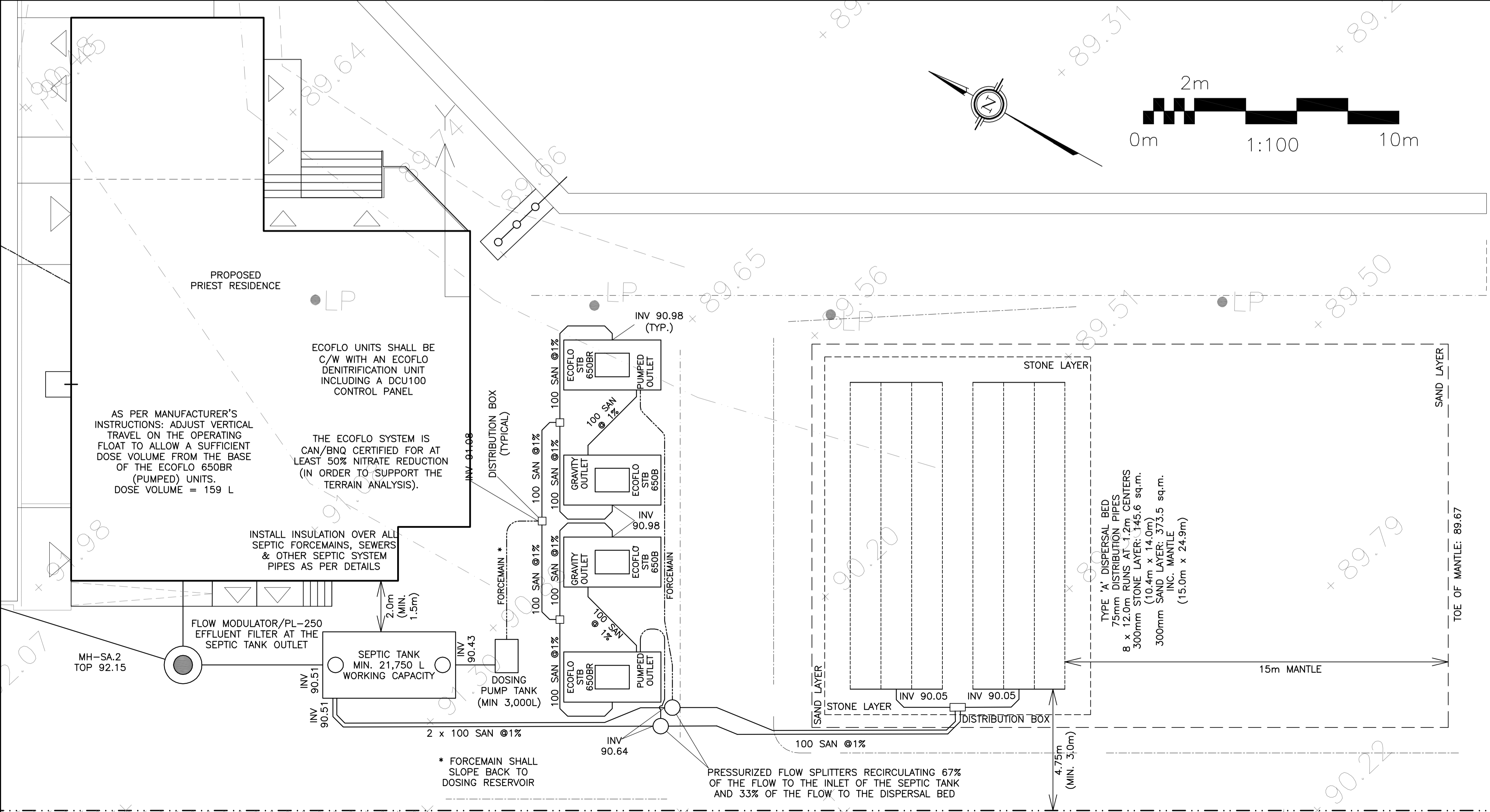
V. Scale

Date JUN 11-24

Job No. 20029

Drawing No.

C-2  
of 7



REFER TO NOTES & DETAILS  
ON DRAWING C-5 & C-6