Assessment of Adequacy of Servicing Report – Rev.4

2545 9th Line Road Metcalfe, Ontario

ASB Greenworld Ltd

October 10, 2024

→ **The Power of Commitment**

Contents

Figure index

Appendices

1. Introduction

1.1 Purpose of this Report

GHD Limited (GHD) was retained by ASB Greenworld Limited (ASB or "the Client") to complete this Assessment of Adequacy of Servicing Report in support of ASB's acquisition and future occupation of the property located at 2545 9th Line Road, in Metcalfe, Ontario (Site or Property). This report is required as part of ASB's Zoning By-law Amendment (ZBLA) and Site Plan Control (SPC) applications being submitted to the City of Ottawa.

It is understood that ASB initially proposes to use the operational portion of the Site for storage and distribution of garden products. Additional planning and studies may be required based on future development and increased operations to be implemented by ASB, as applicable.

This report presents the various services available at the Site including but not limited to water supply, stormwater management, and septic systems. It is noted that no municipal services are currently provided at the Site. This report summarizes the details from Site inspections and studies/calculations for the services provided at the Site.

1.2 Scope and Limitations

This report: has been prepared by GHD for ASB Greenworld Ltd and may only be used and relied on by ASB Greenworld Ltd for the purpose agreed between GHD and ASB Greenworld Ltd.

GHD otherwise disclaims responsibility to any person other than ASB Greenworld Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

2. Site Description

2.1 Location

The Site has the municipal address of 2545 9th Line Road and is located roughly 500 metres (m) north of the intersection of Victoria Street and 9th Line Road Street in Metcalfe, Ontario which is within the City of Ottawa limits. The Site fronts onto 9th Line Road on the west side and is surrounded by agricultural and forest lands on all sides. The operational portion of the Site covers an area of approximately 14.3 hectares (ha) and is currently developed with several buildings and warehouses, and asphalt and gravel parking areas. The remainder of the Property is surrounded by agricultural fields and forested areas, for a total property area of approximately 40.1 ha.

A Site Location Map and a Site Plan are provided on **Figure 1** and **Figure 2**, respectively.

2.2 Site Characteristics

The Site is relatively flat with local topography sloping radially outward from the central developed area. Mapping indicates topographic relief is on the order of 10 m across the Site. Based on a review of historical aerial imagery, the built portion of the Site has been present at the Site since prior to 1976 with the majority of the current buildings being developed at that time. Buildings consist of an office building on the west side, vacant mushroom buildings, along the west and several operational buildings in the central part of the Site. Approximately 15 percent impervious cover consists of parking areas, driveway areas, and buildings, with the remainder of the Site consisting of approximately 85 percent pervious cover made up of crop lands, forests, lawns and vegetated fields.

Surface water from the Site is drained by an intermittent tributary to the North Castor River. The north branch of the tributary originates west of 9th line and flows through the north part of the Site, then south and leaves the property at the east part of the property. The south branch of the tributary appears to originate near the south part of the Site and flows east where it confluences with the north branch within an unevaluated wetland prior to flowing north along the east part of the Site.

Along 9th Line Road stormwater generally sheet flows over very gently sloped lawns towards 9th Line Road and is drained by roadside vegetated swales north/south to the tributaries. Similarly on the north side stormwater sheetflows over lawn areas to the north branch of the tributary. Along the east side stormwater drains via sheetflow and then via some vegetated swales to the north tributary. Along the south side stormwater sheetflows over lawn areas to forest areas eventually to the south branch of the tributary.

3. Services Capacity

3.1 Water Supply

Based on past Site assessments, GHD observed four drilled water supply wells on the Site, including the following:

- Two drilled wells were located within well pits to the north of the office building (TW-1 and M-1; 0.15 m diameter wells) to supply water to office and former mushroom building.
- One drilled well was located above grade within a pump house near the central storage building (TW-2; 0.15 m diameter well) to supply water to fire water reservoir (refer to Section 3.2) and other auxiliary buildings.
- One drilled will located within a well pit to the east of the Donut Factory building on the northern portion of the Site (0.15 m diameter well to supply water.

The location of the four water supply wells is presented on **Figure 2**. All four wells were fitted with well seals to facilitate venting, piping and electrical. Well records were not provided to GHD for these water supply wells, and GHD was not able to definitively match any of the MECP database well records to the Site wells. The publicly available MECP well records indicate construction dates in the 1970s, prior to Ontario Regulation 903 (O.Reg. 903). The well records indicate that the wells installed and mapped to the Site were constructed with 0.15 m diameter steel casings that were installed to depths of 6 m or greater. **NOTE: It is ASB's current plan to have TW-1 and M-1 decommissioned in 2024/2025 in accordance with O.Reg. 903 due to previous testing results and vicinity to the northwestern septic field, as well as decommissioning the well by the Donut Factory building due to removal of the commercial operations.** TW-2 will remain but will only be used to replenish the fire water reservoir (see Section 3.2), and not for any other potable water use.

On May 7-8, 2024, ASB hired Air Rock Drilling Co. Ltd (Air Rock) to install a new water supply well (TW-3) south of the Office Building. The location of the new well is presented in **Figure 2**, and well record details are provided in **Appendix A**, including note that well installed with 30 metre casing. It is understood that ASBs current proposed potable water usage will only be for the office building (kitchen and bathrooms) using TW-3. Staffing is proposed to consist of 2-5 employees to start with a potential of up to 10-15 employees. In reference to Section 8 of the Ontario Building Code, subsection 8.2.1.3. – Sewage System Design Flows, the water usage for a warehouse with 15 staff, three loading bays and 260 square metres (m^2) of office space would be on the order of 2,550 litres per day (L/day).

Designs flows are conservative in nature with actual daily usage typically two to three times less. **Table 3.1** provides the calculations that were utilized to estimate the maximum daily water usage of the proposed development.

Table 3.1 Water Usage

Volume (L)	Establishment	Quantity	Water Usage (L)
75	Office Building: per each 9.3 m^2 of floor space	260 m^2 /9.3 m^2 ≈ 28	2,100
150	Warehouse: Per loading bay	3	450
		TOTAL:	2,550

Based on the proposed current and future development details provided to GHD, the maximum daily water usage of the proposed development is estimated to be 2,550 L/day that would include up to 15 staff. The client has indicated that there is no process water involved with the operations and has no current plans for water use beyond the office and up to 15 staff. The pumping test at TW-3 was conducted for twelve (12) hours at a constant rate of 68.1 L/min (18 US gallon per minute), providing a total water volume of 49,032 L of water, which substantially exceeds the estimated maximum daily water usage.

3.2 Fire Water Supply

The primary objective is to deliver an adequate water supply to protect the on-Site buildings and prevent a fire from spreading to adjacent structures. To do this, the "minimum supply of water in litres" is calculated for each individual building on Site.

The Site is serviced with an approximately 227 cubic metre (m^3) (227,000 L) above grade concrete basin inside the Fire Water Building located in the centre of the Site, with water for the basin supplied from water supply well TW-2 (assumed pumping capacity of 75 L/min).

The adequate water supply criteria for firefighting are outlined in the 2012 Ontario Building Code (OBC) using "**Subsection A-3.2.5.7**", "**Subsection 3.1.2.1 of Division B**", and "**Subsection A-3.1.2.1 (1)**".

Some assumptions are considered in fire water supply calculation as follows.

1. The on-Site buildings are all from combustible materials and that their roof assemblies, mezzanines, loadbearing walls, columns and arches do not have fire-resistance rating.
2. The floor assemblies are fire separations but with no fire-resistance rating.
3. The storage building contains a limited quantity of combustible material.
4. The height of each on-Site building is estimated.
5. The water supply of mushroom buildings is not calculated as the building will not be utilized and are planned for demolition within three (3) years.

The water supply is proportionally related to water supply coefficient, building volume and spatial coefficient, which are explained in detail in Subsection A-3.2.5.7 of OBC. The volume of each on-Site building for this calculation is listed in Table 3.2.

Table 3.2 Volume of on-site buildings

Item	Building name	Area [m^2]	Height [m]	Volume [m^3]	
1	Office	1,175	4.5	5,287	
2	Fire Water Building	193	3	578	
3	Aeration Building	107	3	322	
4	Compost Drying Building 1	1,029	4.5	4,628	
5	Compost Drying Building 2	1,785	4.5	8,032	

Item	Building name	Area [m^2]	Height [m]	Volume [m^3]	
6	Donut Factory	359	4.5	1,615	
7	Compost Building	1,367	4.5	6,151	
8	Storage Building	1,004	4.5	4,517	
9	Waste Collection Building	35	3	105	

Table 3.3 shows the water supply in litres for each individual building on Site. The detailed calculations are done in **Appendix B** of this report.

Table 3.3 Minimum water supply of on-site buildings

Item	Building	Water supply Coefficient (K)	Volume [m^3]	S_{total}	Minimum supply of water [Liter]
1	Office	23	5287	1	121,602
2	Fire Water Building	28	578	1.5	24,281
3	Aeration Building	28	322	1	9,006
4	Compost Drying Building 1	28	4628	1.5	194,394
5	Compost Drying Building 2	28	8032	2	449,795
6	Donut Factory	28	1615	1	45,225
7	Compost Building	28	6151	1	172,231
8	Storage Building	28	4517	1	126,483
9	Waste Collection Building	28	105	1	2,930

Based on the provided inputs and calculation method in OBC, the required minimum water supply is obtained for almost all on-Site building for the firefighting purposes (below fire water capacity of 227 m^3). The required water supply of Compost Drying Building 2 (approximately 450 m^3) does exceed the maximum water supply of the Site (227 m^3), because of the small exposure distance to its surrounding buildings. However, this building is an open building made of steel beams and concrete base as shown in below photos. The building will be used to store compost material which will have a 60% moisture and of low combustible loading.

The OBC permits buildings to not require an on-Site water supply if the building is a low hazard industrial occupancy and it's determined by the chief building official that the combustible loading in the building is insignificant.

Photos: The compost drying building in different views including a) Wide-angle view and b) Close-up view.

(a)

(b)

3.3 Septic System

The Site is serviced with existing traditional septic tanks/pump chambers and subsurface disposal beds. It is understood that two septic systems are located on the Site, with one located to the northwest of the office building and the second located east/southeast of the former mushroom building. The septic systems were inspected by a licensed contractor, Green Valley Environmental (GVE), with their findings presented in a letter report dated October 25, 2022 (refer to **Appendix C**), with applicable notes referenced below. GHD also contacted the Ottawa Septic System Office (OSSO) which provided septic records for the Site (**refer to Appendix D**).

Office Building Septic System

It is understood that GVE has been retained to design and install a replacement system in the location of the existing septic system off the northwest corner of the Office Building. A copy of the GVE's septic system design and permitting documentation are presented in **Appendix E**. As part of the design, GVE took into account a number of possible constraints and/or concerns, including but not limited to:

a. Septic sewage system includes a raised bed due to the shallow overburden/thin soils which may be potentially hydrogeological sensitive including a 15 m mantle.
b. Setbacks to the adjacent watercourses / open channels located to the north & east of the existing septic sewage system. This includes the 15 m setback from the top of bank and 30 m setback requirement from the 'normal highwater mark'; the point where water can rise within the channel before spilling across the adjacent land. This was assumed to be the top-of-slope; however, the open channels were constructed using a consistent cross-section. Note that the water depth will not reach the top-of-slope at upstream ends of the open channels due to the gradient of the channel and lower spill elevation. The setbacks from the septic sewage system to the watercourses are shown on GVE's Septic Permit Drawing No. SP7075-24-ATB (**Appendix E**).
c. Septic sewage system is within the headwaters of the South Nation River (South Nation Conservation Authority) and not within any regulatory areas or floodplains.
d. Septic sewage system is located on a relatively flat surface away from any defined valley slopes or ravines.

The septic system design for the system should be provided to the OSSO to support the rezoning of the property.

Former Mushroom Building Septic System

The second septic system is dedicated to the former Mushroom Building and consists of two septic tanks to the east of the building (connected to two separate bathrooms) and a septic bed to the southeast of the building. The septic tanks had broken concrete lids and inside walls, and the partition walls were rotted. ASB is not intending to use the Former Mushroom Building and associated bathrooms at this time, and upon future demolition of the building these septic tanks should also be decommissioned. The OSSO should be contacted to initiate the decommission process for the mushroom building septic system. Septic system needs for future development will be planned/approved as required.

3.4 Stormwater

The management of stormwater under current conditions is described in Section 2.2 above. The majority of the site drainage flows over large tracts of pervious lawns/agricultural lands and swales prior to entering intermittent tributaries that flow through the Site. Stormwater drainage patterns and amounts are anticipated to have remained similar to present conditions for several decades. As the majority of the Site is pervious and drainage patterns and stormwater quantity will remain the same as it has for decades and the receiving watercourses flow through several low-lying areas, we anticipate no concerns with stormwater servicing capacities.

Water quality is anticipated to be of good quality as the majority of the operations will involve inside storage of materials. The minor amounts of road wear from trucks and loading equipment is anticipated to be managed with flow over existing lawns and vegetated swales, which will remove the majority of any particulates in the stormwater.

4. Environmental Compliance Approvals

Current Environmental Compliance Approvals (ECAs) associated with the Site include Amended Certificate of Approval (C of A) No. 6569-6DRHP2 for Industrial Sewage Works originally issued to Continental Mushroom Corporation in 2005, which is for a wastewater recovery and re-use system including a series of ponds and pumps for the former mushroom operations. This ECA was transferred to "ASB Greenworld Ltd." per letter from the Ontario Ministry of Environment, Conservation, and Parks (MECP) dated July 11, 2024. A copy of the ECA and MECP Letter is presented in **Appendix F**. Although limited to no use of the current wastewater system are required or planned at this time, ASB will not operate this wastewater system until the system has been fully maintained.

An ECA Sewage Works Amendment is not required at this time as the proposed Phase 1 and 2 activities consisting of raw material storage is consistent with the mushroom composting operations and will be conducted within indoor spaces. Should future modifications be required to the existing sewage works, ASB will conduct the required consultation and potential ECA amendments.

From a ECA waste perspective, it is GHD's understanding that:

– Phase 1 and phase 2 raw materials are not classified as waste and any compost received meet the requirements of Category AA or A compost in the Ontario Compost Quality Standards, which would exempt the site from requiring a Waste Transfer Process ECA.
– Raw materials will be stored indoors. This practice is in alignment with the previous site operations and the current Industrial Sewage Works ECA.

In consultation with GHD, ASB understands that a Waste ECA could be necessary for Phase 3 leaf and yard waste composting. During consultation with MECP on other leaf and yard waste projects, the MECP noted there are exemptions to O.Reg. 347 for requiring an ECA for leaf and yard waste composting. Part 5 under O.Reg. 101/94 provides exemption requirements; if a compost site is to be exempt, the site, operations and compost quality must meet the stringent requirements set out herein. ASB will pre-consult with the MECP prior to commencing the planning phase for Phase 3 and will submit ECA applications, as require, at that time.

5. Signatures

We trust this report meets your immediate needs. Should any questions arise regarding any aspect of our report, please contact our office.

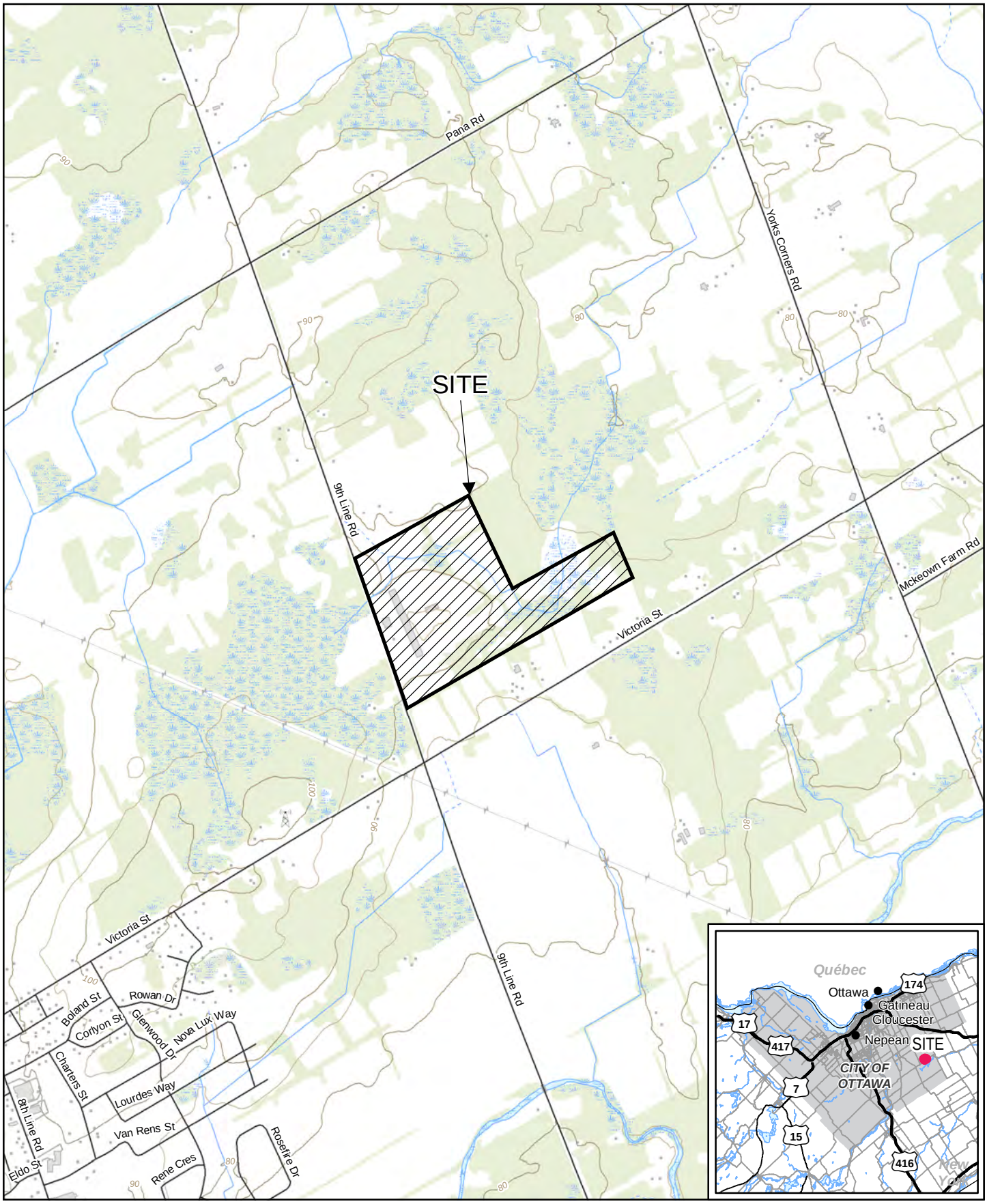
All of Which is Respectfully Submitted,

GHD

Steve Gagne, H.S.Bc.
Associate, Project Director

Warren Croft, P.Eng.
Project Manager

Figures



Paper Size ANSI A

0 130 260 390 520

Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 18N

N

GHD

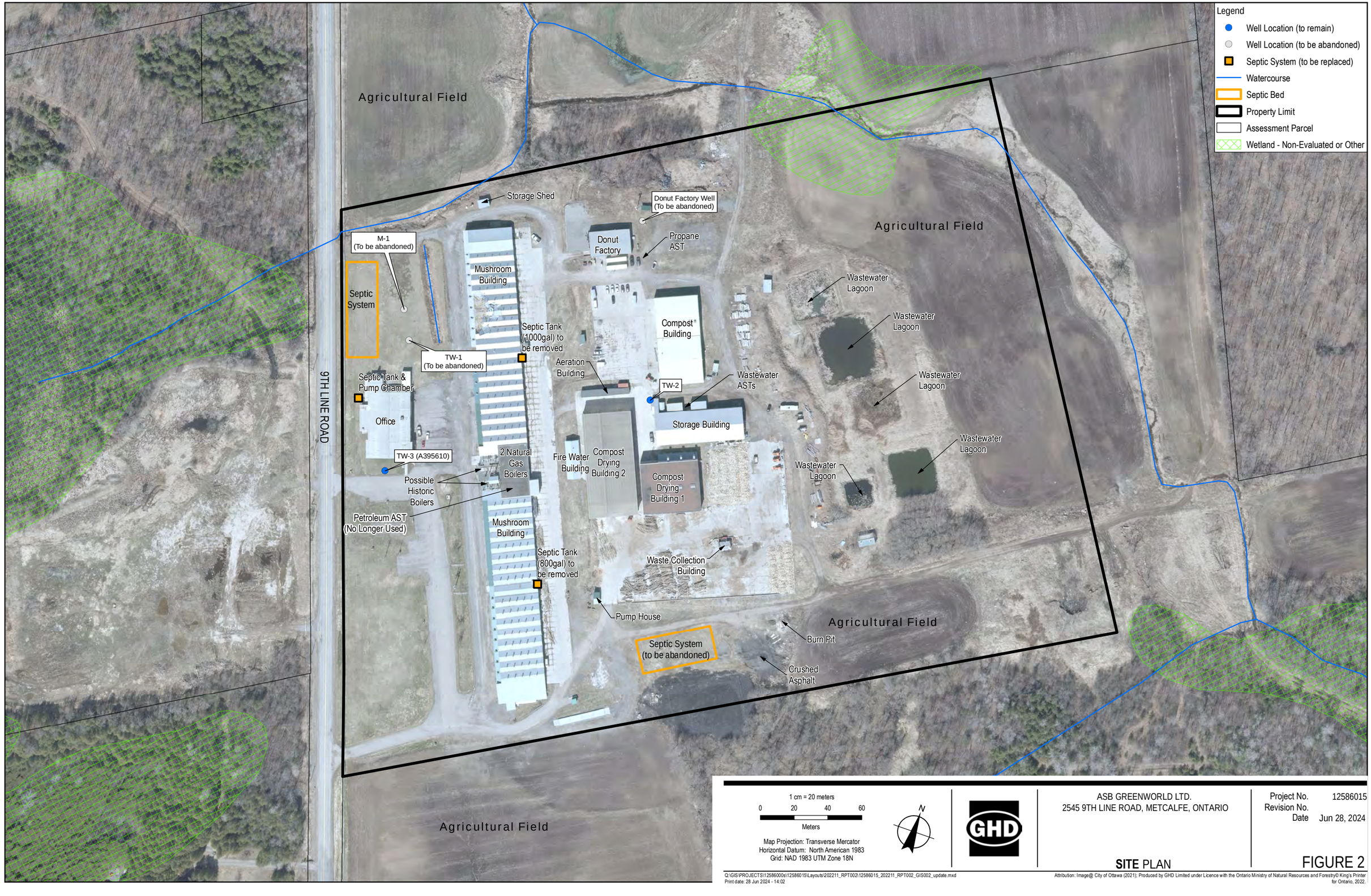
ASB GREENWORD LTD.
2545 9TH LINE ROAD, METCALFE, ONTARIO

Project No. 12586015
Revision No. -
Date **Dec 15**, 2022

SITE LOCATION MAP

FIGURE 1

Q:\GIS\PROJECTS\12586000s\12586015\Layouts\202207_RPT001\12586015_202207_RPT001_GIS001.mxd
Print date: 27 Jul 2022 - 14:42



1 cm = 20 meters

0 20 40 60

Meters

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 18N

N

GHD

ASB GREENWORLD LTD.
2545 9TH LINE ROAD, METCALFE, ONTARIO

SITE PLAN

Project No. 12586015
Revision No.
Date Jun 28, 2024

FIGURE 2

Q:\GIS\PROJECTS\12586000s\12586015\Layouts\202211_RPT002\12586015_202211_RPT002_GIS002_update.mxd
Print date: 28 Jun 2024 - 14:02

Appendices

Appendix A

Fire Water Estimate Calculations

Ontario — Ministry of the Environment, Conservation and Parks

Well T... Tag#:A395610 ...elow)

A395610

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name/Organization	E-mail Address	☐ Well Constructed by Well Owner
ASB	GREENWORLD LTD		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
33291 Plank line road	Mount Elgin	Ont	N0J 1N0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
#2545 9TH LINE ROAD	08500DE	PL 19 20	9

County/District/Municipality	City/Town/Village	Province	Postal Code
OTTAWA CARLETON	METCALFE	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Date
NAD 8 3	18	464454	5010790	Plan SR-3169 # 23-0011	2007-12-

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	Depth (m/ft) To
	Brown Soil & Boulders			0'	10'
	Black & Grey limestone			10'	248'
	Grey lime stone	w/ white Sand stone		248'	266'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
100'	90'	Neat Cement Slurry	10.92
90'	0'	Bentonite Slurry	46.20

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☒ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used ☒ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2'	100'
6"	Open Hole	X	100'	266'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From (m/ft)	Depth To	Diameter (cm/in)
258 ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	0'	100'	9 3/4"
260 ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	100'	266'	6"
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 250'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 42'2"

If flowing give rate (l/min/GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min/GPM): 20

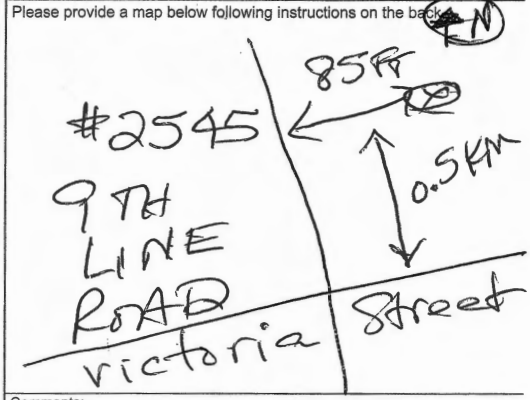
Well production (l/min/GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	16.7"		42'2"
1	25.6	1	27.7
2	30.5	2	21.4
3	33.7	3	18.7
4	35.7	4	17.9
5	37.2	5	17.2
10	40.5	10	16.8
15	41.4	15	16.7
20	41.6	20	16'7"
25	41.8	25	
30	41.9	30	
40	42.1	40	
50	42.2	50	
60	42'2"	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1 HP - 20 GPM Set @ 100 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
AR Rock Drilling Co LTD	7681

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Frankford road	Richmond	Ont	K0A2Z0	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6138382176	HANNA Jeremy	TB632		2024-05-31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2024-05-08	2024-05-07

Ministry Use Only

Audit No. Z379001

Received

0506E (2020/06) © Queen's Printer for Ontario, 2020

Ministry's Copy

Appendix B

Green Valley Environmental Septic Inspection

Appendix B - Minimum Water Supply Calculations

Building	Hazard Classification	Water sup. Coef (K)	Area (A) [m2]	Height (H) [m]	Volume (V) [m3]	Side 1 (N)	Side 2 (S)	Side 3 (E)	Side 4 (W)	Side_total	Q [L]
Office	D	23	1174.9	4.5	5287.05	0	0	0	0	1	121602.15
Mushroom Building	F-3	28	3892.86	6	23357.16	0	0	0	0	1	654000.48
Mushroom Building	F-3	28	3491.58	6	20949.48	0	0	0	0	1	586585.44
Fire Water Building	F-3	28	192.71	3	578.13	0	0	0.5	0	1.5	24281.46
Aeration Building	F-3	28	107.21	3	321.63	0	0	0	0	1	9005.64
Compost Drying Building 1	F-3	28	1028.54	4.5	4628.43	0	0	0	0.5	1.5	194394.06
Compost Drying Building 2	F-3	28	1784.9	4.5	8032.05	0	0	0.5	0.5	2	449794.8
Donut Factory	F-3	28	358.93	4.5	1615.185	0	0	0	0	1	45225.18
Compost Building	F-3	28	1366.91	4.5	6151.095	0	0	0	0	1	172230.66
Storage Building	F-3	28	1003.83	4.5	4517.235	0	0	0	0	1	126482.58
Waste Collection Building	F-3	28	34.88	3	104.64	0	0	0	0	1	2929.92

Notes:
It is assumed that the storage building will contain a limited quantity of combustible material

Appendix C

Ottawa Septic System Office Documents

Green Valley Environmental Inc.

October 25, 2022

Re: Septic System Inspection Report

Property: 2545 9th Line Rd, Metcalfe, ON K0A 2P0

Dear Joseph Draper,

Further to your request, this firm has carried out septic tank pump-out and an evaluation of the existing sewage systems servicing the Office building and the Mushroom building. The purpose of these work has been to carry out a field investigation to determine the current condition of the sewage systems, to visually inspect the disposal field area, pump chamber, septic tanks and to report on any unsafe conditions and/or signs of any systems failing.

Attached is a report on each of the systems servicing the Office building and Mushroom building. The systems are identified as per attached site layout labeled by GHD. Summary of findings as follows:

Office Building Septic System: Here, septic system consists of septic bed with 4 runs of 30m each, septic tank is 800gal (3600L) and pump chamber (200 gal) with pump. Four test holes were dug on the septic bed and as per our findings, there was no bio-mat build up found and no standing water found which means the septic bed condition is good. Septic tank was pumped-out at the time of inspection and it was filled with gravels on the bottom. Septic tank needs a repair and needs risers/lids. Pump chamber connection to the septic bed is unknown and needs a new pump if it is connected to the septic bed. The existing septic system is not to the current building code as the daily design flow of the Office Building (assuming 15 employees and 1200 sq. m. of floor space) is 9675 L/day and it will need an 11,500 L septic tank along with the treatment unit, pump chamber with pump, distribution box and a shallow buried trench bed with 12 runs of 28.34m each (assuming the soil type is Clay) to meet the building code requirements. See sketch #1 on the inspection report and images of existing septic system attached to it.

6107 First Line Rd. • P.O. Box 882 Manotick, Ontario, K4M 1A7 • Phone: (613) 692-2616 • Fax: (613) 692-1802
www.gvegroup.ca

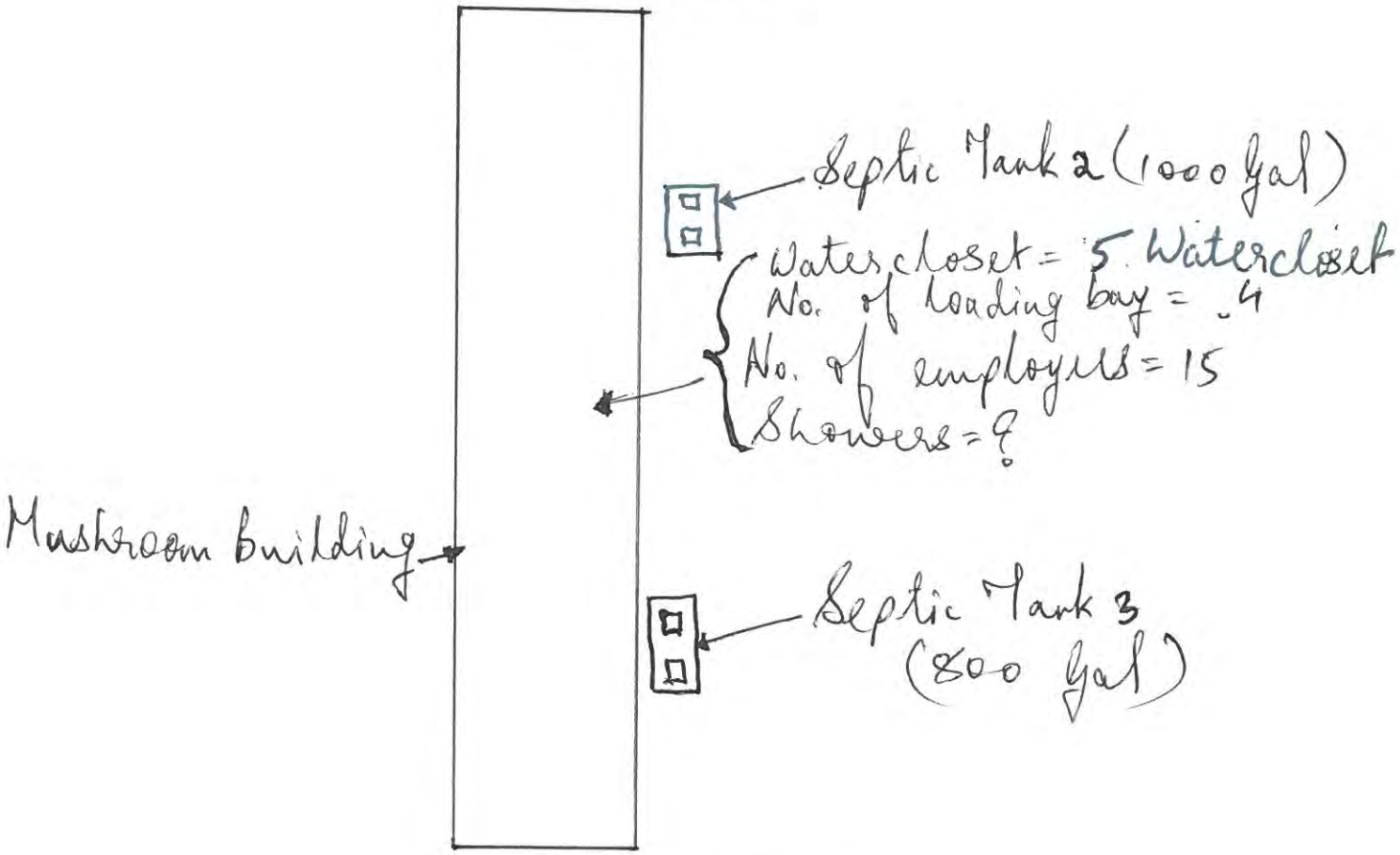
Mushroom Building: Here, septic system consists of two septic tanks (1000gal and 800gal) and a septic bed. Septic tanks were pumped-out at the time of inspection. Septic tanks had broken concrete lids, inside walls and partition walls are rotted. It is recommended to have the septic tanks replaced with new ones and meet the current building code requirements. Septic bed was not inspected as per the instructions provided at the time of inspection. The daily design flow of the Mushroom Building (assuming 5 water closet and 4 loading bays) is 5350 L/day and it will need a 6000 L (or two 3600L) septic tank/s along with the treatment unit, pump chamber with pump, distribution box and a shallow buried trench bed with 7 runs of 26.16m each (assuming the soil type is Clay) to meet the building code requirements.

Regards,
Davis Patel
Qualified Septic System Designer
(BCIN: 119685)

6107 First Line Rd. • P.O. Box 882 Manotick, Ontario, K4M 1A7 • Phone: (613) 692-2616 • Fax: (613) 692-1802
www.gvegroup.ca

Green Valley Environmental Inc.

SKETCH – 2



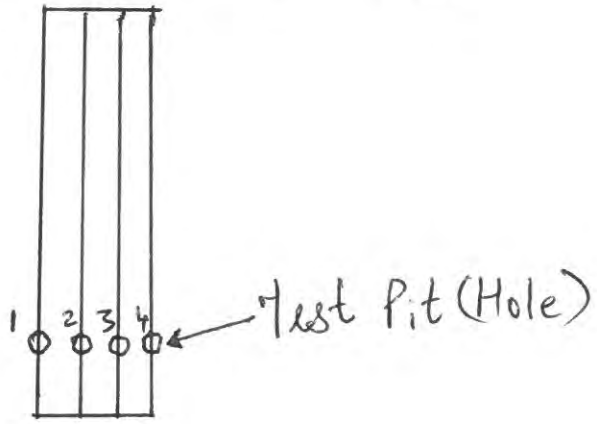
TESTHOLE DESCRIPTION

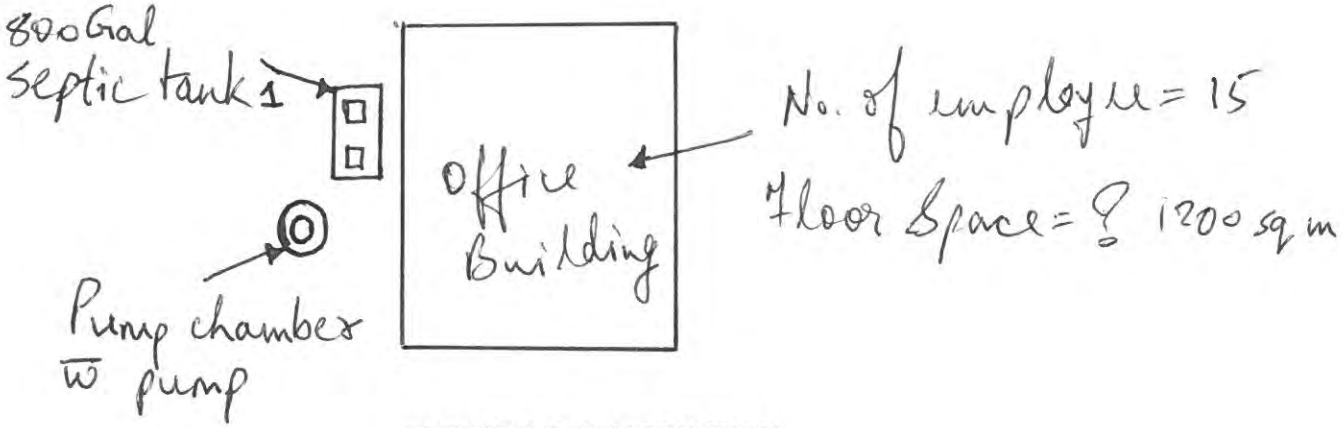
* Septic Tanks 1 & 2 : Not good condition.
* Septic tanks are rotted from inside and broken lids. Needs replacement.

6107 First Line Rd. • P.O. Box 882 Manotick, Ontario, K4M 1A7 • Phone: (613) 692-2616 • Fax: (613) 692-1802
www.gvegroup.ca

Green Valley Environmental Inc.

SKETCH – 1





TESTHOLE DESCRIPTION

* 1, 2, 3, 4 — Test holes looks good. No bio-mat found
* Septic Tank needs repair on the inside and new risers and lids required.
* Pump Chambers not in good condition. Unknown connection of the pump chamber/pump to the septic Bed.

6107 First Line Rd. • P.O. Box 882 Manotick, Ontario, K4M 1A7 • Phone: (613) 692-2616 • Fax: (613) 692-1802

www.gvegroup.ca


2545 9TH LINE RD
A0
A1
A2
A3
SEPTIC TANK
1000gal
SEPTIC BED
SEPTIC TANK &
PUMP CHAMBER
OFFICE BUILDING
MUSHROOM BUILDING
SEPTIC TANK
800gal
CON 8
LOT 10
40m
-8399644.789 5661403.575 Meters

ASB Greenworld
2545 9th Line Rd.

Warehouse			
0 Watercloset	950	Per Washroom	0 L/day
3 Loading Bay	150	Per Loading Bay	450 L/day
0 Floor Drains	125	Per FD(not pressurized)	0 L/day
Sub-Total			450 L/day

Office			
15 Employees	75	Per Employee	1125 L/day
260m²	75	Per 9.3m²	2100 L/day
Governing flow			2100 L/day

Total	2550 L/day

Appendix D

Ottawa Septic System Office Documents

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

File Search Reply – Match Found

Information per applicant

To	Steve Gagne	**Date:**	December 14, 2022
Email:	steve.gagne@ghd.com	**Phone:**	705-768-6350

From:	Ottawa Septic System Office
Phone:	613.692.3571 – Press "4" for the Septic office
Email:	septic@rvca.ca

Follow up Inquiries Please Reference: **FS-22-169**
Archive file(s) 95-310

Civic Address: **2545 9th Line Road**
Former Township: **Osgoode**
Property Owner Last Name: **12586015**

Lot *19&20* **Con:** *9* **Part:** *2* **Plan:** *5R3469*

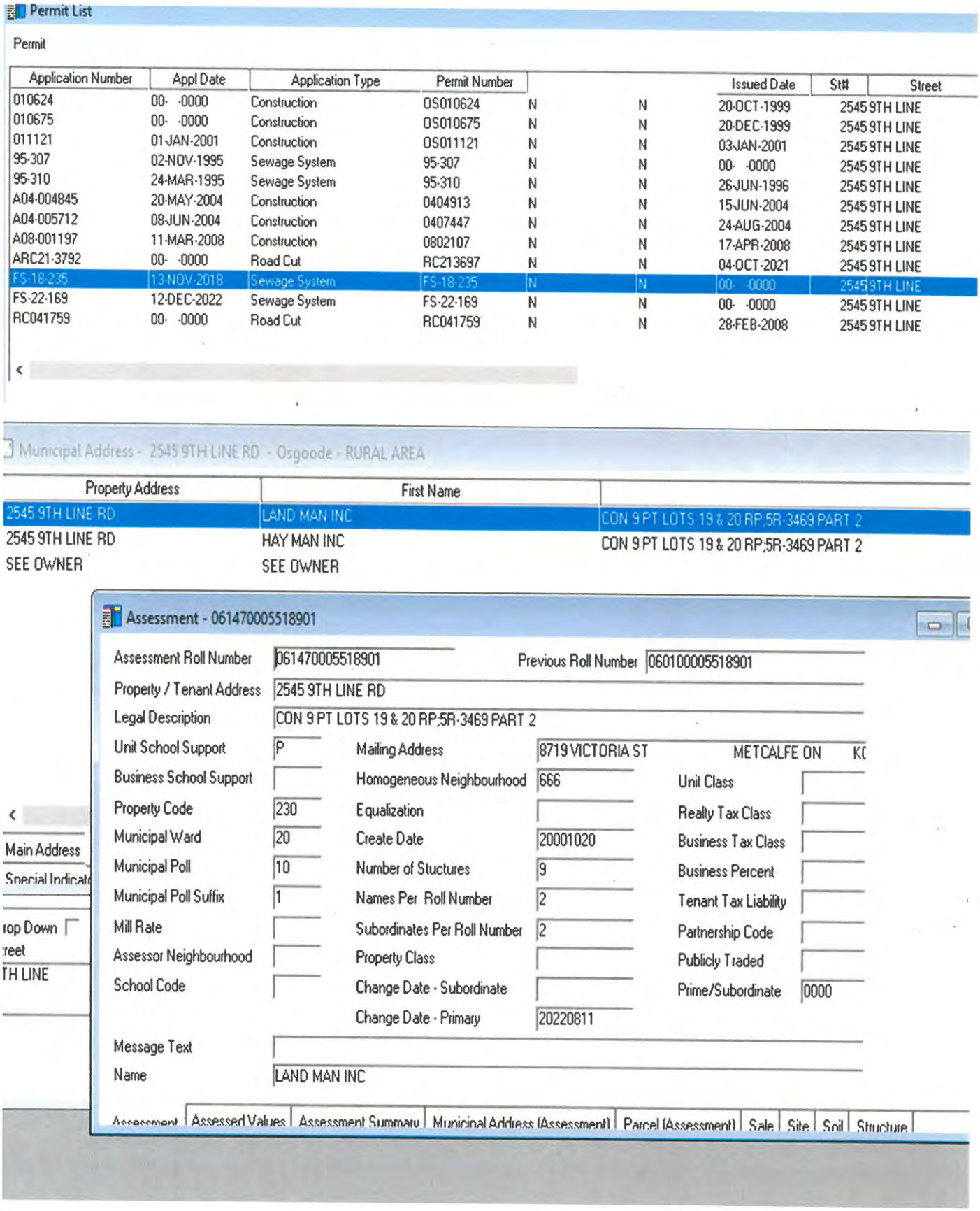
	Septic system designed per the attached records for:	Real estate feature listing obtained via the internet:
~~Bedrooms~~	0	
Bathrooms	8 Toilets 1 Urinal 7 Sinks	
Square M	32 workers	

Attachment(s):

- As-Built Drawings
- Permit
- Use Permit (Certificate of Completion)

The foregoing information is given for your convenience only. Supplementary requests are necessary for conformity with other legislation such as flood plain or shoreline works. ***It should be clearly understood that you must satisfy yourself as to whether the premises and the existing or proposed use thereof is or would be in conformity with all applicable regulations.*** *For further information please contact the Ottawa Septic System Office staff at the number listed above. Thank you for contacting the Ottawa Septic System Office.*

Part 8 Inspector: Alex Dekleine



Permit List

Permit

Application Number	Appl Date	Application Type	Permit Number			Issued Date	St#	Street
010624	00- -0000	Construction	OS010624	N	N	20-OCT-1999	2545	9TH LINE
010675	00- -0000	Construction	OS010675	N	N	20-DEC-1999	2545	9TH LINE
011121	01-JAN-2001	Construction	OS011121	N	N	03-JAN-2001	2545	9TH LINE
95-307	02-NOV-1995	Sewage System	95-307	N	N	00- -0000	2545	9TH LINE
95-310	24-MAR-1995	Sewage System	95-310	N	N	26-JUN-1996	2545	9TH LINE
A04-004845	20-MAY-2004	Construction	0404913	N	N	15-JUN-2004	2545	9TH LINE
A04-005712	08-JUN-2004	Construction	0407447	N	N	24-AUG-2004	2545	9TH LINE
A08-001197	11-MAR-2008	Construction	0802107	N	N	17-APR-2008	2545	9TH LINE
ARC21-3792	00- -0000	Road Cut	RC213697	N	N	04-OCT-2021	2545	9TH LINE
FS-18-235	13-NOV-2018	Sewage System	FS-18-235	N	N	00- -0000	2545	9TH LINE
FS-22-169	12-DEC-2022	Sewage System	FS-22-169	N	N	00- -0000	2545	9TH LINE
RC041759	00- -0000	Road Cut	RC041759	N	N	28-FEB-2008	2545	9TH LINE

Municipal Address - 2545 9TH LINE RD - Osgoode - RURAL AREA

Property Address	First Name	
2545 9TH LINE RD	LAND MAN INC	CON 9 PT LOTS 19 & 20 RP;5R-3469 PART 2
2545 9TH LINE RD	HAY MAN INC	CON 9 PT LOTS 19 & 20 RP;5R-3469 PART 2
SEE OWNER	SEE OWNER	

Assessment - 061470005518901

Assessment Roll Number	061470005518901	Previous Roll Number	060100005518901		
Property / Tenant Address	2545 9TH LINE RD				
Legal Description	CON 9 PT LOTS 19 & 20 RP;5R-3469 PART 2				
Unit School Support	P	Mailing Address	8719 VICTORIA ST	METCALFE ON	K(
Business School Support		Homogeneous Neighbourhood	666	Unit Class	
Property Code	230	Equalization		Realty Tax Class	
Municipal Ward	20	Create Date	20001020	Business Tax Class	
Municipal Poll	10	Number of Stuctures	9	Business Percent	
Municipal Poll Suffix	1	Names Per Roll Number	2	Tenant Tax Liability	
Mill Rate		Subordinates Per Roll Number	2	Partnership Code	
Assessor Neighbourhood		Property Class		Publicly Traded	
School Code		Change Date - Subordinate		Prime/Subordinate	0000
		Change Date - Primary	20220811		
Message Text					
Name	LAND MAN INC				

Assessment | Assessed Values | Assessment Summary | Municipal Address (Assessment) | Parcel (Assessment) | Sale | Site | Soil | Structure

Main Address

Special Indicat

rop Down

reet

TH LINE

Assessment - 061470005518901

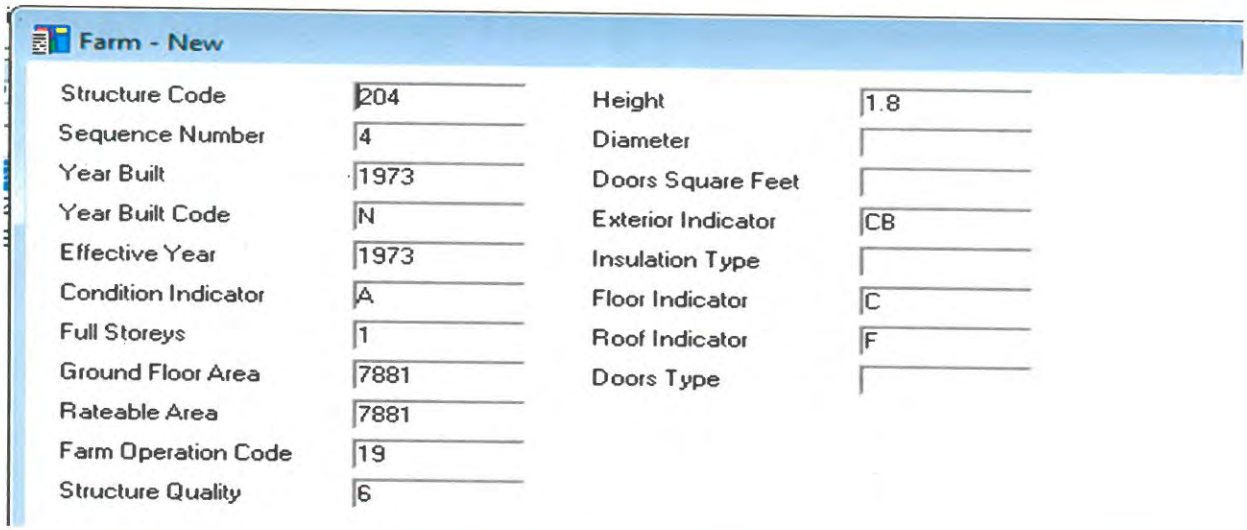
Sequence Number	Structure Code	Code Description
6	203	
5	203	
4	204	
3	216	
2	204	
1	509	
7	204	
8	229	
9	508	

Farm - New

Structure Code	203	Height	1.8
Sequence Number	6	Diameter	
Year Built	1975	Doors Square Feet	
Year Built Code	N	Exterior Indicator	CS
Effective Year	1975	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	1	Roof Indicator	G
Ground Floor Area	37654	Doors Type	
Rateable Area	37654		
Farm Operation Code	19		
Structure Quality	5		

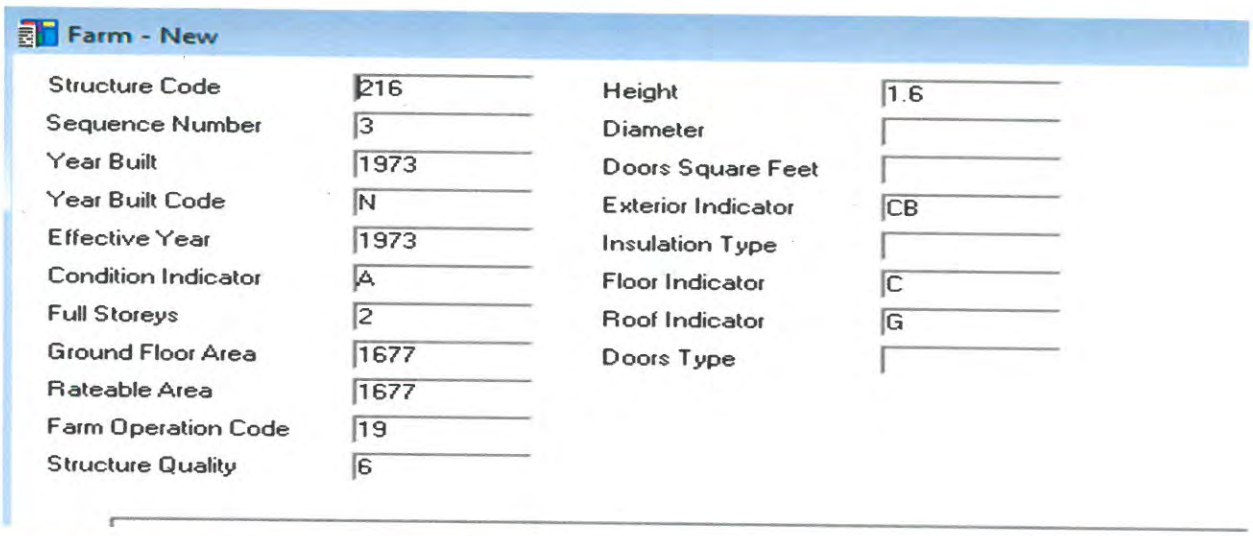
Farm - New

Structure Code	203	Height	1.6
Sequence Number	5	Diameter	
Year Built	2000	Doors Square Feet	
Year Built Code	E	Exterior Indicator	CS
Effective Year	2000	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	1	Roof Indicator	G
Ground Floor Area	9600	Doors Type	
Rateable Area	9600		
Farm Operation Code	19		
Structure Quality	5		



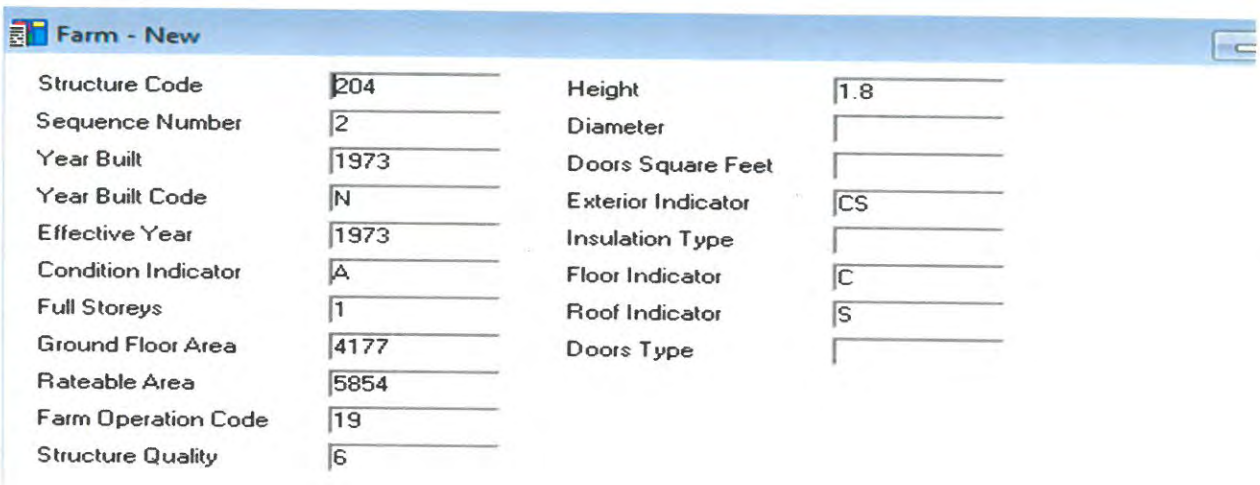
Farm - New

Structure Code	204	Height	1.8
Sequence Number	4	Diameter	
Year Built	1973	Doors Square Feet	
Year Built Code	N	Exterior Indicator	CB
Effective Year	1973	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	1	Roof Indicator	F
Ground Floor Area	7881	Doors Type	
Rateable Area	7881		
Farm Operation Code	19		
Structure Quality	6		



Farm - New

Structure Code	216	Height	1.6
Sequence Number	3	Diameter	
Year Built	1973	Doors Square Feet	
Year Built Code	N	Exterior Indicator	CB
Effective Year	1973	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	2	Roof Indicator	G
Ground Floor Area	1677	Doors Type	
Rateable Area	1677		
Farm Operation Code	19		
Structure Quality	6		



Farm - New

Structure Code	204	Height	1.8
Sequence Number	2	Diameter	
Year Built	1973	Doors Square Feet	
Year Built Code	N	Exterior Indicator	CS
Effective Year	1973	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	1	Roof Indicator	S
Ground Floor Area	4177	Doors Type	
Rateable Area	5854		
Farm Operation Code	19		
Structure Quality	6		

Commercial - New

Structure Code	509	Building Height	1.6
Sequence Number	1	Basement Finished Area	
Construction Character		Heat Type Indicator	NO
Quality Indicator	6.5	Air Conditioning Indicator	N
Shape Indicator	A	Effective Year	1986
Year Built	1986	Part Storeys	0
Build Year Code	N	Ground Floor Area	0
Condition Indicator	A	Unit Number	
Full Storeys	1	Basement Area	
Total Area	10560		
Estimated Character Quality			

Farm - New

Structure Code	204	Height	1.4
Sequence Number	7	Diameter	
Year Built	1975	Doors Square Feet	
Year Built Code	N	Exterior Indicator	CS
Effective Year	1975	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys	1	Roof Indicator	G
Ground Floor Area	6970	Doors Type	
Rateable Area	6970		
Farm Operation Code	19		
Structure Quality	6		

Farm - New

Structure Code	229	Height	1.6
Sequence Number	8	Diameter	
Year Built	2005	Doors Square Feet	
Year Built Code	N	Exterior Indicator	PC
Effective Year	2005	Insulation Type	
Condition Indicator	A	Floor Indicator	C
Full Storeys		Roof Indicator	S
Ground Floor Area	12800	Doors Type	
Rateable Area			
Farm Operation Code	19		
Structure Quality	2		

Commercial - New

Structure Code	508	Building Height	2.6
Sequence Number	9	Basement Finished Area	
Construction Character		Heat Type Indicator	NO
Quality Indicator	4	Air Conditioning Indicator	N
Shape Indicator	A	Effective Year	2005
Year Built	2005	Part Storeys	0
Build Year Code	N	Ground Floor Area	0
Condition Indicator	A	Unit Number	
Full Storeys		Basement Area	
Total Area	18000		
Estimated Character Quality			

Contraventions - Could not generate description

Seq Number	1
Compliance Date	21-DEC-2012
Reference & Section	18 B.C. A.
Test and Sample Required	Provide letter from structural engineer confirming that settlement of soils supporting structure is within tolerable limits allowed by 2006 ontario building code and that settlement will not be detrimental to building structure. (Refer to soils consultant letter by Golder Associates - project 03-1120-0204 dated Feb. 25, 2009 regarding supporting soils)
Amended Compliance Date 1	00- -0000
Amended Compliance Date 2	00- -0000
Amended Compliance Date 3	00- -0000
Date Complied	00- -0000

Municipal Address - 2545 9TH LINE RD - Osgoode - RURAL AREA

Application Number	Application Type	Date	Brief Description
PC2022-0142	Pre-App Consultation	25-MAY-2022	Proposal to re-use the existing facilities, previously used for a mushroom growing operation, fo
PC2018-0107	Pre-App Consultation	18-APR-2018	Production of cannabis fresh, fried and oil, packaging of cannabis, storing cannabis products
05-Jan-005	Compliance	04-JAN-2005	
D06-03-22-0121	Historical Land Use Inv.	07-JUL-2022	HLUI

Ministry of Environment and Energy
Ontario

Application Form And Certificate Of Approval For A Class 2 – 6 Sewage System

Do not complete shaded areas

Application No. 82(19620-9)310
Fee Receipt No. 0440
Date Received June 22/95

Personal information contained on this form is collected under the authority of the Environmental Protection Act, Part VIII. It is used to facilitate the issuance of a Certificate of Approval as prescribed in Section 77 of the Act. Questions should be directed to the Ministry's District Office in your area.

1. Name and mailing address (number, street, city, town, etc.) of owner
CONTINENTAL MUSHROOM CORP (1989)
2595 9th LINE RD.
METCALFE, ONT K0A 2P0
Tel. no. (613) - 821 1411
Alternate Tel. no. (613 - 821 1262

2. Name and address (number, street, city, town, etc.) of installer
TO BE DETERMINED
Tel. no. ( ) –

3. Propose to INSTALL a Class 4 sewage system to serve FARM OFFICE BLDG.
(construct, install, alter, extend, enlarge) (facility: e.g. single family dwelling, motel, etc.)

4. Property location

Region/County/District	Ward, Township, Town	Lot No.	Conc.No.	Sub Lot No.	Plan No.	Area of lot (m^2)
OTTAWA CARLETON	OSGOODE TWP	19+20				100 ACRES

5. State number of

Bedrooms/motel units	People	Flush toilets	Urinals	Washbasins	Showers & bathtubs
	32	8	1	7	

Total fixture units: 48.5
Assessment Roll No.: 0601 000055 18901

6. Water supply
☐ Proposed or ☒ Existing
☐ Dug or bored well ☒ Drilled well ☐ Municipal ☐ Other

7. Attach completed sketch on Page 2. List other attachments.
GOLDER REPORT 961-2731

8. Relationship to severance (if applicable)
☐ Lot approval pending
☐ Lot approved, under Severance Application No.

9. Directions to lot (Highway No., secondary roads, signs to follow, etc.)
HWY 31 to RR#6 EAST ON RR#6 to 9th LINE RD, NORTH ON 9th LINE FOR 0.5 km. - Sign - CONTINENTAL MUSHROOM

10. I certify that the above information is complete and correct and that, if approved, the work will conform with Provincial requirements for sewage systems and local Municipal By–laws.

Name and address of agent (if agent is completing this form) – number, street, city, town, etc.
FOR CONTINENTAL MUSHROOM.
R P Lenglen [illegible] Golder [illegible]
1796 Courtwood Cr.
Ottawa Ont.
Tel no. (613) 224-5928

Signature of owner or agent (if agent is completing this form): [signature]
Date: June 26/96

11. Inspector's Report

Inspection time and date
1:30 ☐ A.M. ☑ P.M. JUNE 3, 19 96

Weather: SUNNY
Representing owner: —

Leaching bed design criteria
Depth to rock: m. Design H.W.T.: m.

Requirements
Length of distribution pipe: 120 metres
Working capacity of septic/holding tank: EXISTING litres

Sub–surface conditions encountered

Rock & G.W.T.	Depth (m)	Soil type
	0	REFER TO
	0.25	ENGINEERING
	0.50	REPORT:
	0.75	GOLDER ASSOCIATES
	1.00	FILE: 961-2731
	1.25	JUNE 1996
	1.50	

☑ Conditions of approval and reasons (e.g. fill, grading, drainage improvements, design sewage flows)
or
☐ Reasons where proposal not acceptable (add additional pages, if required)
SEE APPENDIX "G"
"G"

OFFICE COPY

Ministry of Environment and Energy

Ontario

APPLICATION NUMBER
82(19E209)310

12. LOT DIAGRAM AND SEWAGE SYSTEM PLAN: Draw to scale indicating north point and showing:
   (a) Location of sewage system components (eg. tanks, leaching bed). Locate and show horizontal distances from system to adjacent existing or proposed buildings, water supplies (including neightbours), existing on-site sewage systems, driveways, property lines, lakes, rivers, water courses, swimming pools.
   (b) Lot dimensions, topographic features (e.g. swamps, steep slopes) near system.
   (c) If any part of proposal conforms to specific standard drawing, give reference number(s).

(1) INSTALL AS PER ENGINEERING DRAWINGS.

961-2731 (FIGURE 2) MAY 1/96
961-2731 (FIGURE 3) MAY 1/96

GOLDER ASSOCIATES.

(2) INSTALLATION TO BE SUPERVISED AND CERTIFIED BY A CONSULTING ENGINEER.

A Certificate of Approval for this application is refused for the reasons given in Section 11 Page 1

Inspected and Recommended by	Refused Director	Date

CERTIFICATE OF APPROVAL

Application approved and this Certificate of Approval under Section 77 of the Environmental Proctection Act is hereby issued for the proposal outlined on Pages 1 and 2 of the application and its attachments as amended by the requirements and conditions of Section 11 provided that the sewage system shall be completed and a Use Permit issued within 12 months of the issue hereof or such extended period as the Director on application allows. DO NOT OPERATE THE SYSTEM UNTIL A USE PERMIT IS ISSUED.

Inspected and Recommended by	Issued Director	Date
Terry L. Davidson	Terry L. Davidson	JUNE 26/96

Under Section 139 of the Environmental Protection Act, an applicant may appeal a decision by writing to the Director and to the Environmental Appeal Board, 112 St. Clair Avenue West, Suite 502, Toronto, Ontario, M4V 1N3 within 15 days of receipt of the decision.

APPENDIX "C"

- install as per lot diagram page 2 and typical drawing "____"
- appendix "G" must be completed and returned prior to the installation inspection
- appendix "B" (filter medium) and weight bills must be completed and returned prior to the installation inspection
- Refer to Pumping requirements here attached
- Refer to Holding tank (Class 5) requirements here attached
- Trees within _____ metres of the leaching bed must be removed
  (Silver Maples, Willows: 8 metres min. → Others: 6 metres min.)
- Inlet and outlet of the septic tank must be sealed properly to ensure a watertight connection.
- After the mandatory installation inspection and prior to the issuance of a Use Permit:
  1. The leaching bed and septic tank must be covered.
  2. The mantles (if required) must be in place and all conditions of the Certificate of Approval must be met.
  3. Three (3) holes, from an outside corner to another (in a diagonal) must be provided. The openings must expose the paper or gravel on top of the distribution pipes.
  4. The four (4) corners of the bed must be staked.
- install as per Engineering Drawing(s) Number

Drawing No.	Date	Company/Consultant
961-2731(FIG2)	MAY 1/96	GOLDER ASSOCIATES
961-2731(FIG3)	MAY 1/96	GOLDER ASSOCIATES

- installation to be supervised by a consulting engineer with written certification that the system is installed as per Ontario Regulation 358 and the Certificate of Approval (indicate Certificate of Approval N°).

JUNE 26/96
Date

Terry L. Davidson
Designated Director
Part VIII

APPENDIX "G"
PRIVATE SEWAGE DISPOSAL SYSTEM
INSTALLER'S AS BUILT REPORT

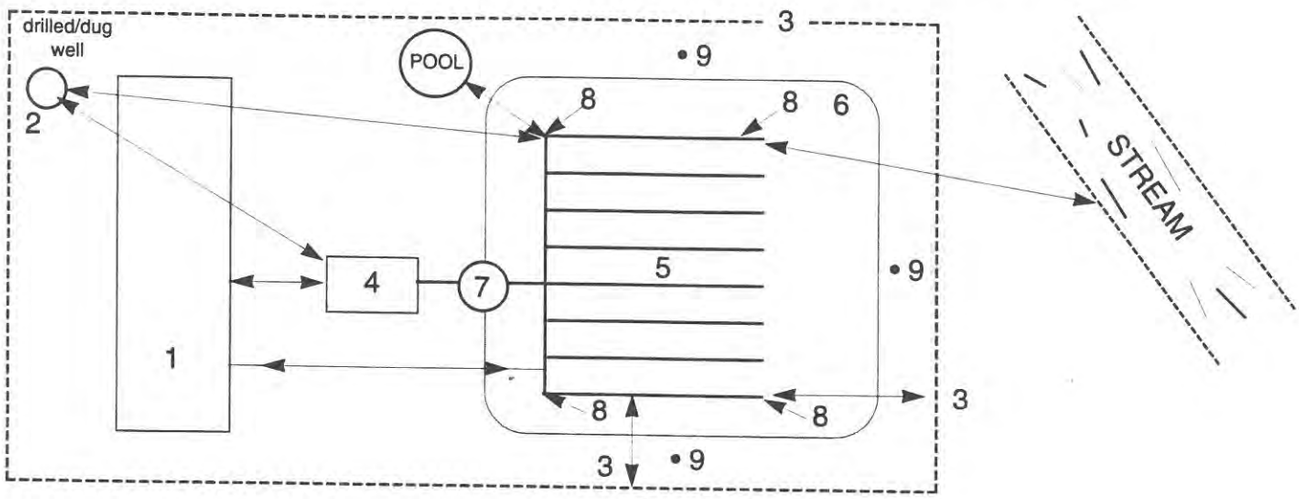
NOTE: The Use Permit Inspection will not be initiated until the approving Authority receives this report completed in full.

Permit #: 82(19&20~~9~~) 310 Applicant's Name: _____

Installed By: _____ Date of Installation: _____

NOTE: The following must be detailed on the back of this sheet as per the example below.

1. structure
2. well – dug or drilled
3. property lines
4. septic tank
5. tile bed (show runs)
6. mantle extension(s)
7. pump chamber & distribution box (if applicable)
8. elevation of tile obvert (top of tile) at 4 outside corners
9. original grade elevation reference on Certificate of Approval (3 areas outside of fill mantle area to be shown)



Septic Tank Volume: _____ Litres Diameter of Tile: _____

Septic Tank manufactured by: _____ _____ Runs of _____ Metres each

Estimated "T" time of imported fill _____ min./cm.

The following measured horizontal distances must be shown in metric to the nearest centimetre:

- septic tank & tile bed to any well within 35 metres
- septic tank and tile bed to structure that is being serviced
- tile bed to any structure (including pools, driveways) if less than 10 m.
- tile bed to property lines. If greater than 15 m. show > 15 m.
- tile bed and septic tank to stream/municipal/water body if applicable

NOTE: Before submitting this report, the applicant or agent must ensure the following conditions have been met:

1) The well is installed;
2) The immediate area surrounding the tile bed or filter bed is free of excavated impermeable material (i.e.) clay, silt);
3) The permeable, backfill required between the trenches and the finished grade and the material needed to establish the mantle (if requested) is adjacent to the system.

I hereby certify that the septic tank system as described in this report was installed in accordance with the Regulations and the Certificate of Approval No. _____.

_____
Property Owner's Signature

_____
Installer's Licence #

_____
Installer's Signature

Ottawa-Carleton Septic System Office
Bureau des systèmes septiques d'Ottawa-Carleton

Installation Report • Rapport d'installation

Certificate of Approval No: 84(19&20-9)316 Weather: SUNNY
Name of Owner: CONTINENTAL MUSHROOM Representing Owner:
Date: AUGUST 9/96 Time: 11:05 AM Installer: DAN & HORRIS
*Well must be installed prior to the issuance of a Use Permit

Section A — Class 4 & 4 F.M.

Septic tank/holding tank: EXISTING Other:
Make and model: Distance:
❑ steel ☑ concrete ❑ fiberglass ❑ on-site Sketch: (if not installed as per C. of A.)
☑ prefabricated
Inlet: Outlet: SEAL
Lids: Baffles:

Section B — Leaching Bed

Location: SIDE YARD Distances:
Type: CLASS 4 Structure(s): House:
Height: OK Header: ❑ level Lot Lines: Wells*: OK
Runs: 4 Length: 30m Watercourses: Tree:
Gravel Size: 3/4 Thickness: OK Between Trenches: 1.6m
Paper: ☑ yes ❑ no Slopes: (X) Mantles: metres in direction(s)
Ends capped: ❑ yes ❑ no Interconnect ☑ NOTE thickness:
Pipes: Diameter ☑ 3 inch ☑ 4 inch Elevations: (if required)
Make: PVC - ROYAL Header: Ends:

Section C — Class 6 only

Audible & visual failure warning alarm installed
❑ yes ❑ no
❑ Proprietary aerobic sewage treatment plant:

Section D — Sections A, B & C

❑ pump chamber
❑ pump present
❑ floats installed
❑ electrical wiring
❑ alarm
❑ forced main: ❑ check valve ❑ frost protection installed
❑ joints sealed properly
❑ other:

Section E — Section A, B & C

Distribution Box
❑ sealed joints ❑ baffle or other
❑ level ❑ compacted base
❑ frost protection number of outlets:
Diagram:

Section F — Class 5 only

Audible & visual failure warning alarm installed
❑ yes ❑ no
❑ prefabricated
❑ poured on-site

Section G — Class 2 & 3 only

Side wall Construction:
Cover Construction:
Minimal 0.6 metre of earth for :
Sides: ❑ yes ❑ no
Bottom: ❑ yes ❑ no

☑ Picture(s) taken
❑ Passed ❑ Not Passed (see remarks)
Inspected by: TERRY K. DAVIDSON
Remarks: SEAL OUTLET OF TANK
MANTLE TO BE COMPLETED.

❑ For re-inspection, call 692-0160 or 1-800-459-5975. Please ensure that ALL noted deficiencies have been rectified prior to calling for a re-inspection.

Ottawa-Carleton Septic System Approvals
Bureau des systèmes septiques d'Ottawa-Carleton

Final Grading Inspection

OVERCAST

Applicants Name: CONTINENTIAL MUSHROOM

Applicants #: 82(19&20-9)310 Date: NOV 1/96 Time: 2:50PM

Present on site: BRIAN STRATON & DAN MORRIS

Inspector: TERRY K. DAVIDSON Date: _____

1) Is the finished elevation at the correct elevation relative to the reference grade (refer to Bench March on Certificate of Approval)? OK

2) Depth of cover measured from the top of the crushed stone layer.

X_1= 42 cm X_2= 35 cm X_3= 40 cm Photograph taken: _____

3) Description of type of earth cover measured from the top of the distribution pipes. SAND + TOPSOIL

4) Is the top of the bed shaped to shed water? ☑ yes ☐ no

5) Is the side slope visible? ☑ yes ☐ no

6) Length of Mantle:

L_1= _____ m L_2= _____ m L_3= _____ m L_4= _____ m

7) Does the depth of mantle (D) exceed .25m? ☐ yes ☐ no

8) Description of mantle material: _____

9) If required, was frost protection placed over the

i) septic tank	☐ yes	☐ no
ii) pumping chamber	☐ yes	☐ no
iii) distribution box	☐ yes	☐ no
iv) forced main	☐ yes	☐ no

10) Is all drainage directed away from the tile bed?

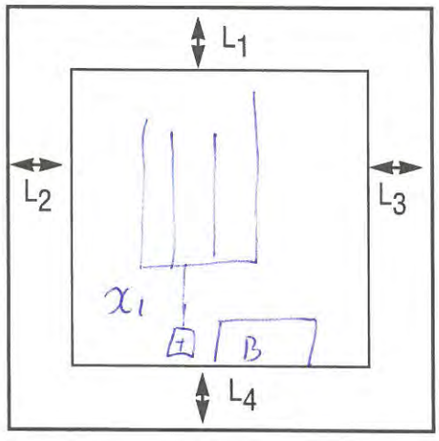
11) Was a photograph of the complete system taken? ☐ yes ☑ no

12) Inspection accepted ☑ yes ☐ no

13) For re-inspection, call 692-0160 or 1-800-459-5975.

14) Comments:

SEAL OUTLET PIPE



OFFICE BLGD.

Ministry of Environment & Energy
Ontario

USE PERMIT
FOR CLASS 4, 5, 6 SEWAGE SYSTEMS

APPLICATION NO. 82(19:20)310

INSPECTION DETAILS	TIME 2:50 pm	DATE NOV 1/96	WEATHER OVERCAST
REPRESENTING:	THE OWNER —		THE INSTALLER DAN MORRIS

1. Work authorized by the Certificate of Approval has been satisfactorily completed and includes:

a) Septic tank/holding tank of working capacity of _____ Litres constructed of steel ☐ concrete ☐ fibreglass ☐ on site ☐ or prefabricated ☐ to serve _____ (no. of bedrooms or units).

MAKE AND MODEL, IF PREFABRICATED TANK EXISTING

b) Leaching bed of total 120 metres of 100 mm(millimetres) diameter distribution pipe of PVC - ROYAL _____ (type and product description e.g. manufacturer(s) and material of which pipe is made) laid in 4 runs and fed by GRAVITY (gravity, siphon, pump).

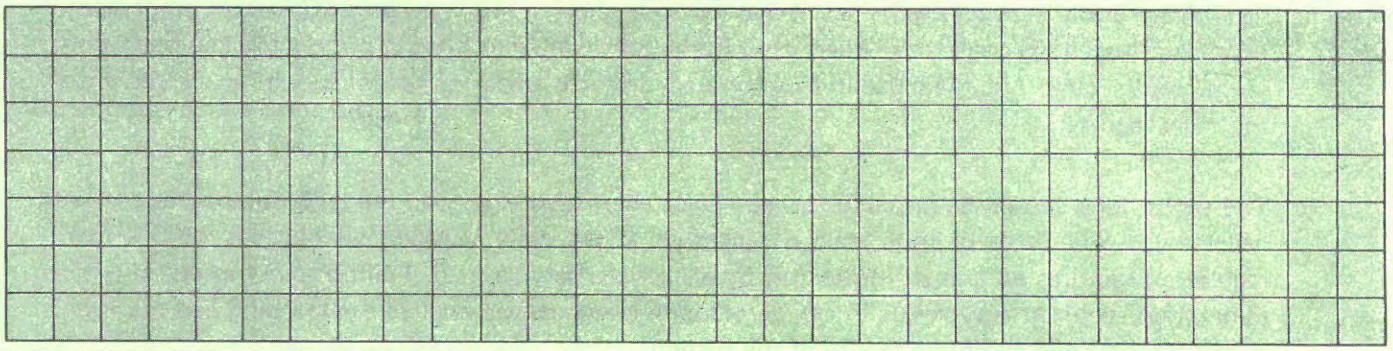
c) Proprietary Aerobic System: (Manufacturer) _____ (Model) _____

d) Other details _____

2. Location

a) System components installed as shown on application supporting Certificate of Approval ☑

b) If located other than in (a) use space below for sketch and dimensions from permanent points of reference sufficient to facilitate future location of tank and leaching bed including orientation of pipe runs.



3. The following work remains to be completed:–

☐ Backfill System and Complete ☐ Finish Grading to Shed Run-off and Divert Water Around Leaching Bed

☑ Stabilize All Sloped Surfaces SEED OR SOD ☐ Other .....

USE PERMIT

Under Section 78 of the Environmental Protection Act, and subject to the provisions of the Act and Regulations a Permit is hereby issued to (Owner) CONTINENTAL MUSHROOM CORP for the use and operation of the Class 4 sewage system constructed/installed/enlarged/extended/altered persuant to the Certificate of Approval issued under the above application number in accordance with the application and Certificate of Approval with any changes indicated above and located on Lot PT 20 Concession 9 Ward/Township/Municipality OSGOODE Region/District/County R.M.O.C. Plan No. _____ Sub-Lot No. _____

INSPECTED AND RECOMMENDED BY	PERMIT ISSUED BY	DATE ISSUED
Jerry K. Davidson	Jerry K. Davidson DIRECTOR	SEPT 4/98

Note: Section 76(a) of the Act provides that no change can be made to any building(s) or structure(s) in connection with which this sewage system is used, if the operation or effectiveness of the sewage system will or is likely to be affected by the change, unless a new Certificate of Approval is obtained.

Section 139 of the Act provides that an applicant for a permit may appeal a decision to refuse to issue a permit. Written notice of appeal must be forwarded to the Director (who refused to issue the permit) and to the Environmental Appeal Board, 112 St. Clair Avenue West, Suite 502, Toronto, Ontario M4V 1N3 within 15 days of receipt of a permit.

WARNING: UNDER NO CIRCUMSTANCES SHOULD A HOMEOWNER ENTER A SEPTIC TANK. NOXIOUS GASES WHICH ARE HEAVIER THAN AIR REMAIN IN THE TANK AFTER THE TOP IS REMOVED, AND HAVE CAUSED DEATH BOTH TO THE ORIGINAL VICTIM AND TO THOSE WHO ATTEMPT TO RESCUE HIM FROM THE TANK.

1042 (01/95)

OFFICE COPY

Ottawa-Carleton Septic System Office
Bureau des systèmes septiques d'Ottawa-Carleton

Mississippi Valley Conservation Authority

OFFICE DE PROTECTION DE LA NATURE DE LA VALLÉE RIDEAU / RIDEAU VALLEY CONSERVATION AUTHORITY

South Nation River Conservation Authority
Société d'aménagement de la rivière Nation-Sud

December 4, 1995
File: P190

Continental Mushroom Corp. (1989) Ltd.
c/o Mr. Lyle Whitham, General Manager
2545 9th Line Road
Metcalfe, Ontario
K0A 2P0

Re: Lot 19 & 20, Concession 9
Township of Osgoode

Dear Sir,

Thank you for your fax dated on December 4th past, providing information of the soils type and percolation rates. With this information, we have now completed our review of your applications for three (3) Certificates of Approval.

By our calculations, the daily flow for which the sewage systems should be designed (as per the MANUAL OF POLICY, PROCEDURES AND GUIDELINES FOR PRIVATE SEWAGE DISPOSAL SYSTEMS) exceed 4 500 litres/day for two (2) of the three beds (office excluded).

Accordingly the systems are considered to be a non-standard systems and are to be designed and installed according to the M.O.E.E. requirements described in the attached information.

In order to process the Certificates of Approval, we will require that a consulting engineer's report be submitted to demonstrate how the requirements for a non-standard system have been met. We realize that these requirements will further delay the repairs of the malfunctioning systems, but we are obliged, in our capacity as agents for the Ministry of Environment and Energy, to ensure that these requirements are met, so that the systems will function properly without negative impact on the Environment.

The estimated daily average flow for the office will not exceed 4 500 litres therefore it is not considered a non-standard system. Although the proposed size of the replacement system is inadequate and must be re-evaluated. The Ottawa-Carleton Septic System Office is an Approval Agency, not a design consultant, therefore it is the responsibility of the proponent to demonstrate that the system design meets all the requirements of the Act, the Regulations and the Design Manual.

If you have any questions, please contact Denis Longpré or the undersigned. Thank you in advance for your patience and cooperation.

Yours truly,

Terry K. Davidson, P.Eng.
Director Part VIII
Environmental Protection Act

TKD/djl

Golder Associates Ltd.

1796 Courtwood Crescent
Ottawa, Ontario, Canada K2C 2B5
Telephone (613) 224-5864
Fax (613) 224-9928

REPORT ON

TERRAIN AND HYDROGEOLOGICAL ASSESSMENT

PROPOSED REPLACEMENT SEPTIC SEWAGE DISPOSAL SYSTEMS

CONTINENTAL MUSHROOM CORP. (1989) LTD

METCALFE, ONTARIO

Submitted to:

Continental Mushroom Corp. (1989) Ltd.
2545 9th Line Road
Metcalfe, Ontario
K0A 2P0

DISTRIBUTION:

4 copies - Continental Mushroom Corp. (1989) Ltd.
2 copies - Golder Associates Ltd.

May 1996

961-2731

Golder Associates Ltd.

1796 Courtwood Crescent
Ottawa, Ontario, Canada K2C 2B5
Telephone (613) 224-5864
Fax (613) 224-9928

May 14, 1996

961-2731

Continental Mushroom Corp. (1989) Ltd.
2545 9th Line Road
Metcalfe, Ontario
K0A 2P0

Attention: Mr. L. Whitham
General Manager

RE: TERRAIN AND HYDROGEOLOGICAL ASSESSMENT
PROPOSED REPLACEMENT SEPTIC SEWAGE SYSTEMS
CONTINENTAL MUSHROOM CORP. (1989) LTD.
METCALFE, ONTARIO

Dear Sirs

This letter reports the results of a terrain and hydrogeological investigation carried out at the above site near Metcalfe, Ontario. The purpose of this investigation was to determine the general soil and groundwater conditions in the area of the two proposed septic tile fields and based on an interpretation of the factual information obtained, to provide a design for the two proposed septic systems. Also, the hydrogeological aspects of one of the proposed septic systems was to address the Ontario Ministry of the Environmental and Energy (MOEE) Reasonable Use Criteria for groundwater.

DESCRIPTION OF PROJECT AND SITE

Continental Mushroom operates a mushroom growing facility just east of the Town of Metcalfe on 9th Line road (see Key Plan, Figure 1). This facility is near the Town of Metcalfe, however the town has no communal water or wastewater servicing, and for this reason, the only practical option for Continental Mushroom is to utilize bedrock wells and septic systems for its on-site water

supply and wastewater handling requirements. Evaluations are, however, presently underway to assess the provision of communal servicing for the town of Metcalfe.

The septic systems presently include three separate tanks and fields servicing two buildings, namely the main office shipping building and production houses building as shown on Figure 2, Site Plan. The location of five bedrock wells is also presented on the Site Plan. Several wells logs for bedrock wells on the Continental Mushroom property from Ontario Ministry of the Environment and Energy data files is presented in Attachment A.

The three septic field systems have failed to varying degree and are to be replaced with two new septic tile bed systems, one for the main office/shipping building in the same general location as the present field and the second to replace the two septic tile bed systems servicing the production houses buildings. The two fields for the production houses are proposed to be combined into one larger tile bed system more at the back of the property (approximately 100 metres southeast of the production houses buildings) in order to be further away from areas of high traffic and activity, shallow bedrock and water supply wells.

Based on available geological information and the results of a previous subsurface investigation for on-site building foundations, it is expected that the site is underlain by an extensive deposit of native silty sand glacial till overlain by fill materials. Geology maps of the area indicate the bedrock underlying the site consists of dolostone of the Oxford formation.

PROCEDURE

The field work for this investigation was carried out on April 18, 1996, at which time 13 test pits were put down within the two areas proposed for the replacement septic system leaching beds using a backhoe supplied and operated by the owner. Test pits TP-1 to TP-5 were excavated near the main office/shipping building with the remaining (TP-6 to TP-13) were excavated back of the production house building as located on the Site Plan, Figure 2. The test pits were advanced to depths of 0.90 to 1.4 metres near the main office/shipping building and 0.3 to 1.8 metres at the back of the property. The soil types encountered in the test pits were classified based on visual and tactile examination of the materials exposed in the walls of the test pits. The groundwater conditions were observed in the test pits during the short period of time that the test pits were left

open at the time of the field work. The field work was supervised by a member of our engineering staff who directed the test pitting operation and logged the subsurface conditions at the test pits. A description of the subsurface conditions encountered in each of the test pits put down during this investigation is given in the Record of Test Pits, Table 1, following the text of this report. The approximate locations of the test pits are shown on the Site Plan, Figure 2.

The ground surface elevations within each of the two areas of the proposed septic system development were determined by Golder Associates Ltd. The elevations of the main office shipping building were referenced to a temporary benchmark (TBM) described as the northwest corner of main office/shipping building foundation. The elevations for the proposed, combined, septic field systems to the southeast of the main production house building was based on a temporary benchmark (100.00) at the southeast corner of the production house building. The temporary benchmarks were assigned an elevation of 100.00 metres as referenced to local datum. The ground surface elevations within the area of the site proposed for the septic system were also determined by Golder Associates Ltd. with reference to the temporary benchmark. A contour plan of the two proposed septic development areas is shown on Figure 2.

SUBSURFACE CONDITIONS

A detailed description of the subsurface conditions encountered in the test pits is given on the Record of Test Pits, Table 1. The test pit logs indicate the subsurface conditions at the specific test locations only. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted. The following is a summarized account of the subsurface conditions at the site for each of the two proposed septic tile bed replacement areas:

Main Office/Shipping Building

The results of the test pits indicate that the area of the proposed septic system leaching bed (TP-1 to TP-5) are underlain by about a 0.3 to 1.4 metre thickness of silty sand till over dolostone bedrock. The water well records for the existing wells at the site (see Figure 2 and Attachment A) indicate that the wells vary from approximately 30 to 90 metres depth with water bearing zones no shallower than 27.5 metres. A review of a surficial geology map of the site area, available well records for existing water wells in the area of the site as well as the results of previous test pits put

down at proposed septic system location indicates that the silty sand and glacial till deposits are continuous in this area.

The on-site drill logs for the existing wells at the site indicate that the silty sand glacial deposits are underlain by limestone/dolostone and possibly sandstone at depth.

The results of observations within TP-1 to TP-5 indicate that the groundwater level in the area of the proposed septic leaching bed for the main office/shipping building is at a depth of about 1 metre below the existing ground surface with a general flow to the north. For the production houses building, the overburden is thicker to the south with the topography grading to the southeast. The groundwater levels follow the topography with groundwater flow toward the bushed area to the southeast.

PROPOSED EXPANSION OF SEPTIC SEWAGE DISPOSAL SYSTEM

General

This section of the report provides engineering guidelines concerning the geotechnical and hydrogeological aspects of the project, based on our interpretation of the existing test hole data and present project requirements. Contractors bidding on or undertaking the works should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction and make their own interpretation of the factual data as it affects their proposed construction techniques, safety, schedule and equipment capabilities.

The professional services retained for this project include only the geotechnical and hydrogeological aspects of the subsurface conditions at the site. The presence or implications of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off site sources are outside the terms of reference for this project and have not been investigated or addressed.

Design Considerations

The results of the test pits put down within each of the two proposed septic field development areas indicate very similar soil types based on the field descriptions and on the grain-size distribution of Figure 4. The hydraulic conductivity for these two soils is essentially the same based on estimates from Hazen (D^2_{10} = k cm/sec) and Sherand ($0.36D^2_{15}$ = k cm/sec) and is in the order of 1×10^{-4} centimetres per second. This hydraulic conductivity is the equivalent of a "T" time of approximately 12 minutes per centimetre.

Main Office/Shipping Building

The concept for the proposed septic leaching bed is to develop a new, fully raised field while utilizing the present septic tank. The old septic field and piping will be totally removed with the waste soil being hauled to the back of the property while the plastic piping will be recycled or landfilled.

Once the old septic bed has been removed, the base of the excavation, namely the native glacial till, will be scarified to ensure a good hydraulic connection between the septic bed materials and native soils. The fully raised bed will consist of silty sand with an in place, long term percolation rate of approximately 10 minutes per centimetre.

It is understood that the proposed leaching bed will serve approximately 32 employees. The maximum volume of septic effluent expected to be handled by the septic system is estimated at 2400 litres per day. Details of the septic effluent volume calculations are given in Attachment B. The classification of this waste is sewage of domestic origin, toilet waste and water sink waste. Based on a design percolation rate of 10 minutes per centimetre for the compacted silty sand fill for the leaching bed, a minimum total leaching bed tile length of 120 metres is required. Further design and construction details are provided in the attached Figures 2 and 4. These figures show the location of the septic tank, the leaching bed and mantle layout, and pertinent site features within the proposed leaching bed area.

Production House Building

The concept for the sanitary wastes from the production house building is to develop one new field away from traffic and building run-off areas to replace the two poorly operating systems, each servicing half of the production house building. The present septic tanks are proposed to be incorporated in the overall design, however, one new pumping chamber near the most southerly septic tank is proposed to distribute the wastewater flows, alternatively to each half of the proposed field.

The design flow for the proposed septic field system is based on measured water consumption of approximately 2600 litres per day (December 1995 to March 1996) for 70 employees in half of the production houses building and this figure was doubled to accommodate the 70 employees in the other, identical half of the structure. Based on a "T" time of 10 minutes per centimetre, the septic field requires 260 metres of tile pipe with 300 metres incorporated into the design.

The design calculations for the pump chambers and septic field system are outlined in Attachment B while the design drawings and layout are presented in Figures 2, 3 and 4, respectively.

Reasonable Use of Groundwater Considerations (Production House Building only)

In terms of the potential off-site impact of the septic waste, MOEE Guideline B-7 (MOEE, 1994b) addresses the level of off-site contaminant impact on groundwater considered acceptable by the MOEE and defines the level of impact on groundwater beyond which some form of migration measure(s) would be warranted.

Under MOEE Guideline B-7, a change in the quality of groundwater on adjacent properties will only be acceptable if the quality is not degraded in excess of 50 percent of the difference between background concentrations and established water quality criteria for aesthetic related parameters, and 25 percent of the difference between background conditions and established water quality criteria for health related parameters.

To obtain a general indication as to the potential impact of septic effluent on the properties adjoining the Continental Mushroom site, a nitrate dilution model was utilized. The water balance method was used to estimate dilution and effects using a net potential infiltration of 220 millimetres per year for the Metcalfe area. A daily effluent loading of 5200 litres per day for the septic system was assumed. The nitrate dilution calculation is provided in Attachment C.

With regard to treatment and dispersal of effluent from the leaching beds, a maximum nitrate concentration of approximately 0.8 milligrams per litre was defined by calculating the theoretical area required to reduce the concentration of nitrate in the effluent from an assumed 40 milligrams per litre (mg/L) (as N) to 2.5 mg/L (as N) or lower at the property boundary by dilution as a result of the infiltration of meteoric water only. The site area of 40 hectares is nearly three times larger than the theoretical minimum area requirements determined using the nitrate dilution model. The nitrate dilution model does not include any nitrate loss from nutrient uptake or denitrification. Therefore, it is concluded that the impact of the proposed development on groundwater at the property lines would be acceptable.

Also the presence of the thicker silty sand glacial deposits to the south will act as a barrier to significant downward migration of the effluent to the underlying bedrock aquifer. The silty sand till is indicated to extend well out beyond the area of the proposed leaching bed. Accordingly, the effluent plume from the septic system will be quite isolated from and is therefore not a significant potential contaminant source to the local water supply. This conclusion is further verified by the present septic systems which have had no measurable impact to the several on site water wells. Consequently, moving the field to greater separation distances would essentially eliminate the potential for well water impact. Furthermore, the water well records for on-site wells (Attachment A) indicate at least 27 metres of lowly permeable bedrock to the shallowest water bearing seams in any of the wells.

CONSTRUCTION CONSIDERATIONS

Construction of the leaching bed and mantle should be carried out using equipment which will not over compact the granular materials and render them relatively impermeable. In this regard, it is suggested that only light, track mounted equipment be used.

In order to ensure that the guidelines in this report have been interpreted as intended by the owner, it is suggested that the owner and/or his contractor contact the geotechnical engineer prior to starting construction to discuss his proposed methodology. It is also considered important that the materials proposed for use for the septic system be approved by the geotechnical engineer before use and that the construction of the leaching bed be inspected by the geotechnical personnel throughout construction.

ADDITIONAL CONSIDERATIONS

This report and the attached Figures 2 and 4 showing details of the design of the proposed septic systems have been prepared for the sole use of the owner. It is understood that the owner, Continental Mushroom Corp. (1989) Ltd. will be constructing the proposed septic system using a local contractor. It is recommended that Golder Associates Ltd. review the proposed construction design with the designated contractor and that a practical field monitoring program be developed for quality control during construction.

We trust this report provides sufficient information for your purposes. If you have any questions concerning this report, please contact our office.

Yours truly,

GOLDER ASSOCIATES LTD.

R.D. Sinclair, P.Eng.
Senior Environmental Engineer

RDS:dc
rpt-001.doc

Attachments

Table X
Figures 1 to 4
Attachments A to C

TABLE X

RECORD OF TEST PITS

Test Pit Number	Depth (metres)	Soil Description
TP1	0.00 - 0.12	TOPSOIL
	0.12 - 0.91	Dark brown SANDY SILT with CLAY and cobbles and GRAVEL (fill)
	0.91 - 1.22	Brown SANDY SILT and GRAVEL
	1.22	End of test pit
		Bucket refused at 1.22 m - bedrock appeared competent, therefore BEDROCK assumed at depth of 1.22 m.
		Water at 1.22 m below ground surface. Sample was taken.
TP2	0.00 - 0.09	TOPSOIL
	0.09 - 0.88	Red brown SILTY SAND with cobbles and GRAVEL (till)
	0.88	End of test pit
		Refusal at 0.88 m in nesting boulders.
		Test pit dry upon completion of excavating.
TP3	0.00 - 0.09	TOPSOIL
	0.09 - 1.07	Brown SILTY SAND with cobbles and small boulders
	1.07	End of test pit
		Nesting of boulders at 1.07 m Less silty from 0.76 m to bottom of test pit
		Refusal occurred at 1.07m in fractured bedrock

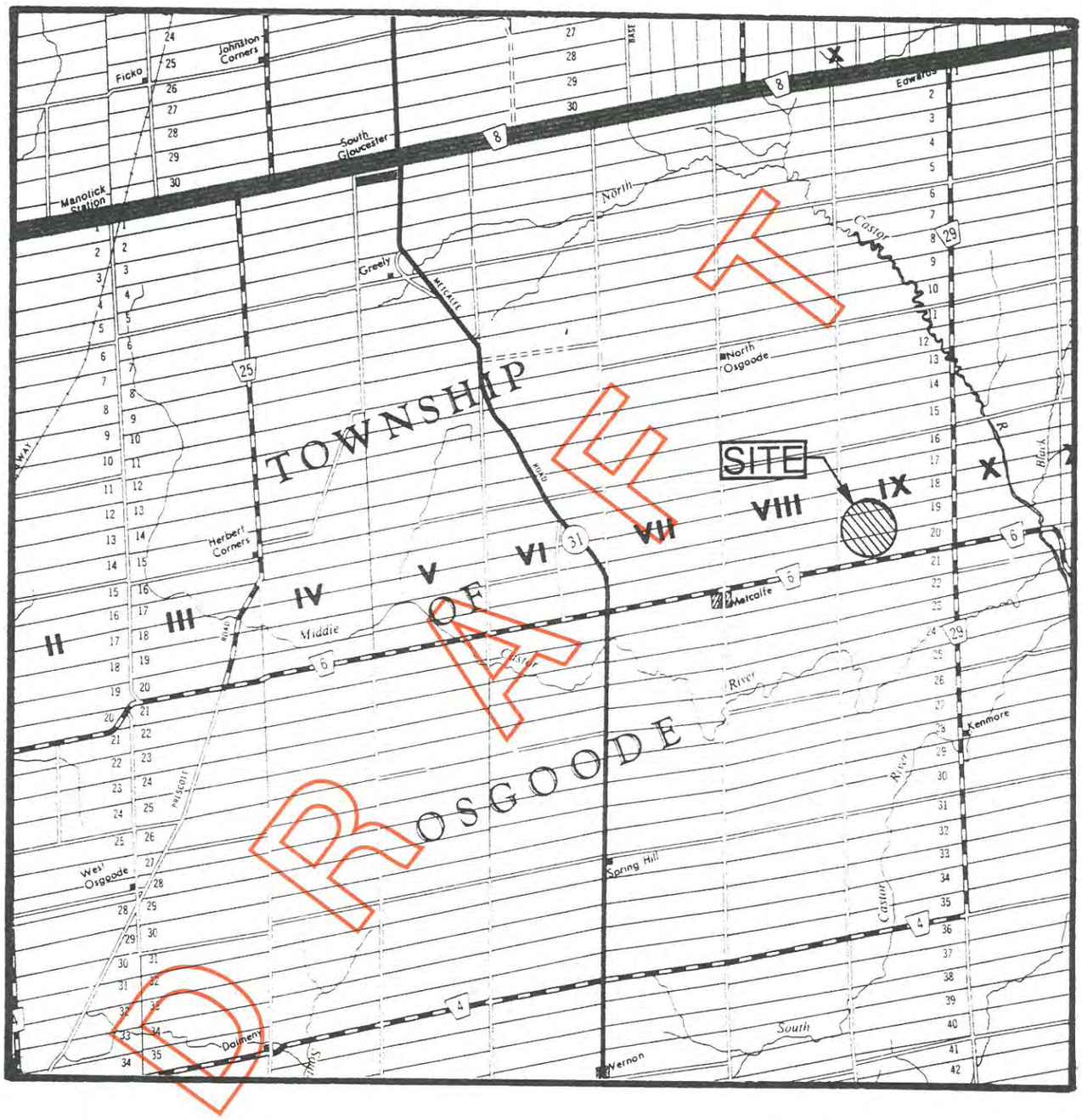
Test Pit Number	Depth (metres)	Soil Description
TP4	0.00 - 0.09	TOPSOIL
	0.09 - 1.16	Red brown SILTY SAND with GRAVEL, cobbles and boulders (glacial till)
	1.16 - 1.43	Grey-brown and red-brown SANDY SILT to GRAVEL
	1.43	End of test pit
		Water encountered in test pit
		Uneven suface at bottom of test pit - probably boulders
TP5	0.00 - 0.08	TOPSOIL
	0.08 - 0.52	Fine brown SAND, some GRAVEL
	0.52 - 0.61	Fine grey SAND (fill)
	0.61 - 1.31	Brown SILTY SAND, cobbles, boulders (till)
	1.31	End of test pit (BEDROCK)
		Test pit dry upon completion of excavating
TP6	0.00 - 0.12	TOPSOIL
	0.12 - 0.88	Grey-brown fine-medium SAND with GRAVEL and cobbles (glacial till)
	0.88	End of test pit (BEDROCK)
		Surface runoff, water table not determined.

Test Pit Number	Depth (metres)	Soil Description
TP7	0.00 - 0.08	Organic material
	0.08 - 0.30	Grey-brown fine-medium SAND with GRAVEL and cobbles (glacial till)
	0.30	End of test pit
		Bedrock is composed of badly fractured, generally flat lying limestone or dolomite.
TP8	0.09	BEDROCK encountered
TP9	0.00 - 0.30	TOPSOIL - very organic
	0.30 - 1.22	Grey-brown fine-medium SAND with GRAVEL, cobbles and boulders
	1.22	End of test pit (BEDROCK)
		Test pit dry upon completion of excavation
TP10	0.00 - 1.07	BACKFILL (boulder-sized) mixed with GLACIAL TILL
	1.07 - 1.83	Fine red-brown SILTY SAND with GRAVEL, cobbles, occasional boulder
	1.83	End of test pit

Test Pit Number	Depth (metres)	Soil Description
TP11	0.00 - 0.09	TOPSOIL - very organic
	0.09 - 1.34	Fine red-brown SILTY SAND with GRAVEL, cobbles and occasional boulder (till)
	1.34	End of test pit Water encountered at bottom of test pit.
TP12	0.00 - 0.06	TOPSOIL
	0.06 - 1.46	Fine red-brown SILTY SAND with GRAVEL, cobbles and occasional boulder (dry till)
	1.46	End of test pit
TP13	0.00 - 0.15	TOPSOIL - very organic
	0.15 - 1.77	Fine-medium grey-brown SAND with GRAVEL, cobbles and some boulders (till)
	1.77	End of test pit (BEDROCK)

KEY PLAN

FIGURE 1



SCALE : 1 : 100,000

SPECIAL NOTE
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT

Date MAY 03 1996
Project 961-2731

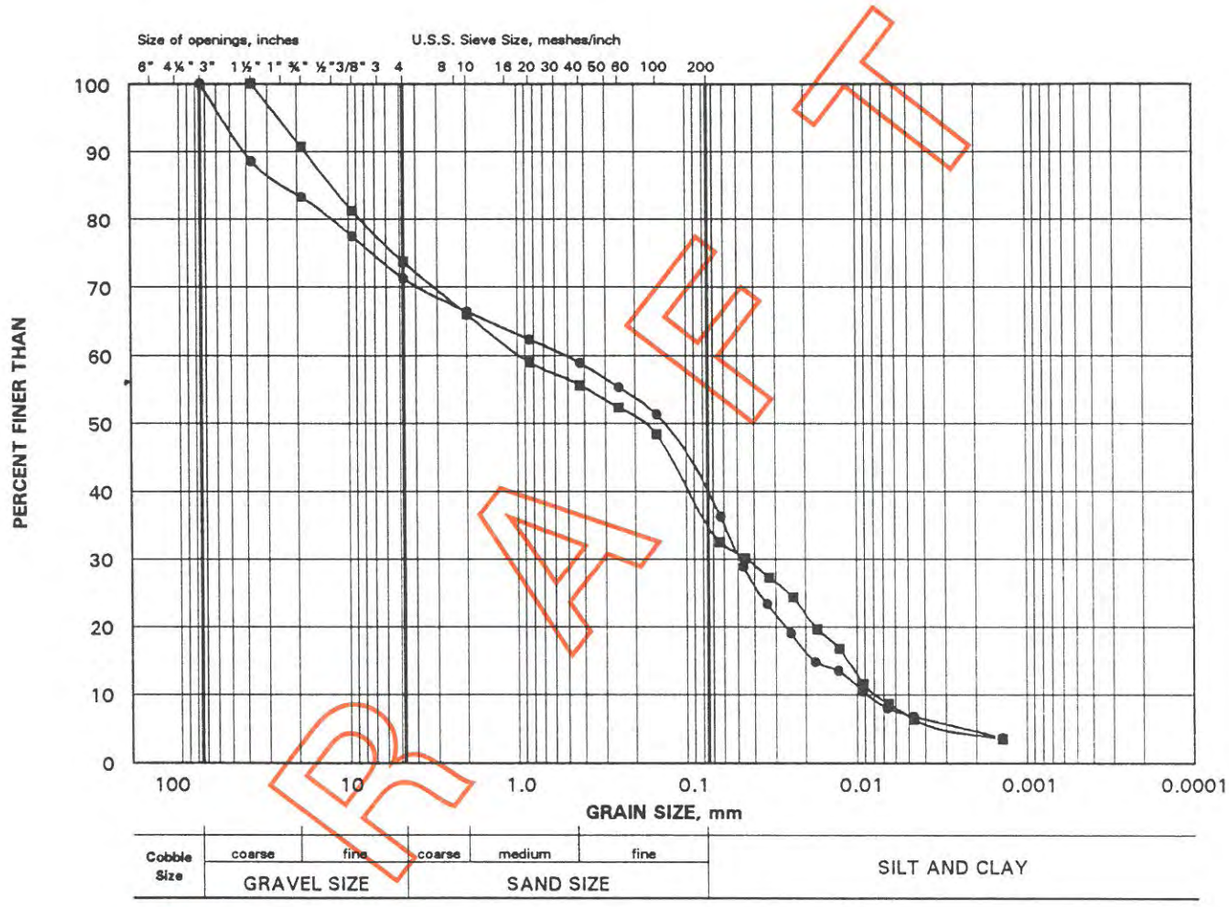
Golder Associates

Drawn K.M
Chkd. BS

GRAIN SIZE DISTRIBUTION

FIGURE 4

SILTY SAND (GLACIAL TILL)



LEGEND		
SYMBOL	TEST PIT	SAMPLE
●	2	Composite
■	11	Composite

ProGrain ver. 2.01

Project 961-2730

Golder Associates

ATTACHMENT A

WATER WELL LOGS

CONTINENTAL MUSHROOM CORP. (1989) LTD.
METCALFE, ONTARIO

CON	9	12	15- 10665	463445 5013460	280	05/70	1558	5	FR	106	20	30	5	1/00 DO	MOHAUPT H GREY LMSN 0012 GREY LMSN 0090 BRWN LMSN 0108
CON	9	13	15- 13998	464940 5013640	245	04/74	1558	6	FR	195	10	50	20	1/00 DO	MCVEY JIM BLCK SAND 0001 BLCK LMSN 0030 BLCK LMSN 0160 GREY SNDS 0198
CON	9	13	15- 12264	465160 5013960	240	10/72	1517	5	FR	78	FLW	58	6	1/00 DO	KORTEWEG S BRWN TPSL 0002 BLUE CLAY 0040 BRWN SAND 0053 BRWN LMSN ROCK SHLE 0078
CON	9	13	15- 17644	465199 5013799	250	05/81	1517	6	FR	78	10	15	15	1/00 DO	MACKIE P GREY LMSN STNS 0038 BRWN LMSN STNS 0080
CON	9	14	15- 10888	463690 5012678	300	08/70	1517	5	FR	120		80	8	1/00 DO	MACKIE G BRWN SHLE 0005 BLCK ROCK 0120
CON	9	14	15- 12039	463813 5012736	290	08/72	1558	6	FR FR FR	120 138 148	20	100	5	1/00 DO	ROBERTS RON BRWN TPSL GRVL 0006 GREY LMSN 0051 GREY LMSN 0150
CON	9	14	15- 15781	465200 5013870	242	12/76	1558	6	FR	92	7	50	8	2/00 DO	LARCH HOMES LTD BRWN CLAY LOOS 0004 GREY CLAY PCKD 0020 BLUE CLAY SOFT 0031 RED CLAY STNS PCKD 0034 RED HPAN GRVL HARD 0037 RED LMSN VERY SOFT 0045 BLUE LMSN SOFT 0095
CON	9	15	15- 11794	464335 5012285	305	06/72	1517	5	FR	94	FLW	70	8	1/30 DO	JOTURCOTTE SNDS 0073 GRNT 0078 SNDS 0100
CON	9	15	15- 13800	465375 5013145	245	06/73	3658	6	FR FR	90 161	FLW	75	25	2/00 DO	BROWN D J BRWN SAND GRVL FILL 0002 GREY LMSN 0004 GREY LMSN 0164
CON	9	15	15- 13232	465424 5013047	245	05/73	1558	6	FR	291	40	120	6	1/00 DO	LARCH HOMES LIMITED GREY SAND GRVL 0048 RED SHLE 0090 GREY LMSN 0294
CON	9	16	15- 12274	464020 5012000	305	10/72	1836	6	FR	175	50	120	10	1/00 DO	EMERY J SAND 0003 LMSN 0180
CON	9	16	15- 18088	464299 5012199	308	11/82	1558	6	FR FR	110 162	38	50	24	1/00 DO	EMERY J BRWN CLAY BLDR SNDY 0005 GREY LMSN MCRD 0130 BLCK LMSN 0167
CON	9	17	15- 12091	464135 5011539	300	09/72	1836	6	FR		10	110	120	1/00 DO	WITHNALL L P TPSL 0002 GREY LMSN SHLE 0160
CON	9	17	15- 7663	464190 5011390	310	06/62	1505	5	FR	130	28	130	7	1/00 DO	MCLAREN C CLAY MSND STNS 0004 GREY LMSN 0138
CON	9	17	15- 11453	465660 5012510	262	09/71	1517	5	FR	50	10	15	15	1/00 DO	MCDONALD A H GREY CLAY BLDR 0008 GREY SNDS 0051
CON	9	19	15- 16652	464500 5010580	300	08/78	1558	8	FR FR	45 62	30	30	30	1/00 CO	CONTINENTAL MUSHROOM BRWN CLAY SAND BLDR 0009 GREY LMSN 0020 GREY LMSN VERY HARD 0050 BLCK LMSN HARD 0065
CON	9	19	15- 12298	464525 5010585	302	09/72	1505	6	FR	297	21	120	18	10/00 CO IN	CONTINENTAL MUSHROOM BRWN TPSL SAND 0004 GREY LMSN SNDS 0305
CON	9	19	15- 14164	464541 5010555	300	05/74	1836	6	FR	85	35	85	15	1/00 IN	CONTINENTAL MUSHROOM BLDR 0003 LMSN 0090
CON	9	19	15- 7664	464550 5010570	290	01/61	1802	6	FR	57	13	57	3	1/00 DO	VANDERTILAART W BLDR CLAY 0010 ROCK LMSN 0075
CON	9	19	15- 14336	464593 5010535	300	10/74	1836	6	FR	250	22	230	25	1/00 IN	CONTINENTAL MUSHROOM GRVL 0004 LMSN 0220 SNDS 0250
CON	9	19	15- 14335	464629 5010589	300	10/74	1836	6		DRY					CONTINENTAL MUSHROOM LMSN 0225
CON	9	19	15- 13261	465978 5011538	265	03/73	1517	5	FR	115	FLW	100	4	1/10 DO	CELMS CHARLES BRWN TPSL 0002 GREY LMSN 0117
CON	9	20	15- 12297	464505 5010455	294	09/72	1505	6	FR	280	18	120	7	10/00 IR	CONTINENTAL MUSHROOM BRWN TPSL SAND 0003 GREY LMSN SNDS 0287

MUNICIPALITY CONCESSION ETC	LOT	UTM WELL NO	EASTING NORTHING	ELEV FEET	DATE	DRILLER	CSG DIA INS	KIND OF WATER	WATER FOUND FEET	STAT LVL FEET	PUMP LVL FEET	TEST RATE GPM	TEST TIME HR/MN	WATER USE	OWNER/LOG/SCREEN DEPTHS IN FEET TO WHICH FORMATIONS EXTEND
OSGOODE TOWNSHIP (CONTINUED....)															
CON	9 20	15- 12279	464508 5010410	295	11/72	1836	6	FR	90	20	95	20	1/00	IN	CONT MUSHRM CORP LTD GREY LMSN 0095
CON	9 20	15- 14107	464719 5010196	290	06/74	2308	5	FR FR	28 45	10	30	20	2/00	DO	WAYMANN CARL R HPAN 0008 LMSN 0050
CON	9 20	15- 7665	464890 5010290	280	12/55	1526	4	FR	21 46	9	19	2	2/00	DO	MCKEWN H TPSL 0002 LMSN 0046
CON	9 20	15- 7666	465230 5010500	280	04/63	3601	4	FR	50	14	16	6	1/00	DO	MARION R CLAY TPSL 0010 LMSN 0051
CON	9 20	15- 10586	466220 5011080	287	05/70	3504	6	FR		15	25	10	1/00	CO DO	DILLA BOUGH D W TPSL CLAY MSND 0005 GREY LMSN 0061
CON	9 21	15- 13795	464780 5010027	275	07/73	3658	6	FR FR FR	30 121 267	22	50	40	2/00	DO	VANNOORT DWIGHT BRWN CLAY TPSL 0003 GREY LMSN 0260 GREY SNDS 0270
CON	9 21	15- 13804	464799 5010106	275	06/73	3658	6	FR FR	85 282	28	90	15	2/00	DO	HARBER BRWN CLAY GRVL SAND 0003 GREY LMSN 0262 GREY SNDS 0284
CON	9 21	15- 14341	465198 5010233	280	10/74	1517	5	FR	55	20		20	1/20	DO	ROSS HUGH GREY HPAN 0008 GREY SNDS 0060
CON	9 21	15- 15465	465999 5010799	295	07/76	3644	6	FR FR	64 80	20	75	5	1/00	DO	DUBORD J GREY GRVL 0002 GREY LMSN 0084
CON	9 21	15- 12090	466325 5010830	289	10/72	3504	6	FR FR	80 100	10	90	2	/30	DO	HAARSMA J BLUE LMSN 0100
CON	9 22	15- 9853	465560 5009810	285	01/68	1802	6	FR	150	30	80	7	/30	DO	ZANBELT JOHN PRDR 0100 LMSN 0165
CON	9 22	15- 7667	465570 5009820	285	10/59	1526	4	FR	58	9	16	3	2/00	DO	HARRISON E GRVL 0006 RED HPAN 0012 RED SHLE 0060
CON	9 22	15- 7668	465590 5009770	285	06/60	1802	6	FR	90	22	97	5	2/00	ST DO	WOODS H BLUE CLAY 0025 GREY LMSN 0097
CON	9 23	15- 7669	464900 5009210	260	07/63	1503	5	FR	54	3	11	10	1/00	DO	FROLICH R CLAY 0020 BLDR GRVL 0024 LMSN 0055
CON	9 24	15- 13266	465126 5008707	260	02/73	1517	5	FR	92	12	25	20	1/00	DO	VANDAM D T BRWN TPSL 0002 GREY HPAN 0014 BRWN LMSN 0094
CON	9 25	15- 7670	465420 5008530	255	06/53	2308	4	FR	30	10	15	2	5/00	DO	POAPET E GREY HPAN 0030 GRVL 0032
CON	9 25	15- 7671	466900 5009140	260	06/63	3504	6	SU	156	25	100	15	/30	ST DO	KINGSBURY K MSND BLDR 0016 LMSN 0160
CON	9 26	15- 15102	465353 5008137	262	10/75	1517	6	FR	63	8	20	15	1/10	DO	WYSTEANSKI JOHN BRWN HPAN BLDR 0026 BRWN GRVL SAND 0032 BRWN LMSN 0065
CON	9 26	15- 7673	466070 5008170	250	03/61	1526	4	FR	43	4	21	4	2/00	DO	YANON G BLCK TPSL 0007 GREY LMSN 0043
CON	9 26	15- 7674	466980 5009140	255	11/67	3504	6	FR	82	18	40	5	1/00	ST DO	KINGSBURY K BLDR GRVL 0019 LMSN 0084
CON	9 26	15- 7672	466990 5009100	260	06/53	2308	4	FR	50	25	30	3	5/00	CO DO	BOWMAN G GREY CLAY HPAN 0050 GRVL 0055
CON	9 27	15- 7675	467060 5008310	255	12/59	3113	4	FR	54	9	17	14	1/00	DO	MCINTYRE J TPSL STNS 0008 HPAN 0037 BLCK LMSN 0054

ATTACHMENT B

DESIGN CALCULATIONS
SEPTIC SEWAGE DISPOSAL SYSTEMS
CONTINENTAL MUSHROOM CORP. (1989) LTD.

A) MAIN OFFICE/SHIPPING BUILDING SYSTEM
B) PRODUCTION HOUSE, BUILDING SYSTEM

ATTACHMENT B

ESTIMATED SEWAGE FLOWS

A) MAIN OFFICE/SHIPPING BUILDING

Staff - 35 Persons

Summary of Operations

7 days per week - 1 shift (8 hours)

Flow Calculation

Based on 75 litres per staff person per day

32 x 75 = 2,400 litres

Total = 2,400 litres per day

Leaching Bed

Capacity required, 2,400 litres per day (Q)

T time selected = 10 minutes per centimetre

Total length of tile $L = \frac{QT}{200} = \frac{2,400\ (10)}{200} = 120$ metres

Length of tile provided in design = 120 metres

The tile field is to consist of one tile field containing 120 metres of perforated, 100 millimetre diameter tile

Septic Tank

User tank presently in place.
Gravity flow system.

ATTACHMENT B (continued)

B) PRODUCTION HOUSE BUILDING

2 x 70 = 140 employees

Summary of Operations

7 days per week, one shift day (8 hours)

Flow Calculation

Based on measured water consumption

Measured flow (half of building) = 2,600 litres per day (each half of building has identical operation)

Total = 5,200 litres per day

Leaching Bed

Capacity required, 5,200 litres per day (Q)

T time selected = 6 minutes per centimetre

Total length of tile $L = \frac{QT}{200} = \frac{5,200\ (10)}{200}$ = 260 metres

Length of tile provided in design = 300 metres

The tile field is to consist of two tile fields, each containing 150 metres of 100 millimetre diameter perforated tile.

ATTACHMENT B (continued)

Septic Tank

Using two tanks presently in place

Pumping Station

The effluent will be pumped to each of the leaching beds by a double pumping system complete with pumps, floats and alarm. The pumps will alternate with each cycle, thereby, dosing each half of the bed on successive pumping cycles.

The quantity of effluent discharge from the dosing chamber shall not be less than 3/4 of the total interior volume of the distribution pipe in each of the septic tile fields. The distribution pipe will have a 100 millimetre diameter.

- Length of distribution pipe = 150 metres in each tile field

- Volume of distribution pipe = $\frac{\pi D^2}{4} \times 100 = 1.18\ m^3 = 1178$ litres

- Minimum dosing volume = 0.75 x 1178 = 885 litres

Therefore, a minimum of 885 litres must be pumped from the dosing chamber with each pumping cycle. Dosing volume selected, 900 litres

Pumps

Pumps will discharge effluent from the chamber for not more than 20 minutes per cycle. Fifteen minutes per pump cycle selected. The pumps will alternate between pumping cycles.

Minimum pumping rate = $\frac{900 \text{ litres}}{15 \text{ minutes}}$ = 60 litres per minute

Pump flow rate = 60 litres per minute (14 Imperial gallons per minute)

ATTACHMENT B (continued)

Forcemain

Criteria: Minimum velocity 0.8 metres/second
Maximum velocity 2.5 metres/second

Design: $Q = VA$ Where Q = Flow volume
V = Flow velocity
A = Area of pipe

Flow velocity selected, 1.5 metres/second

$$A = \frac{Q}{} = \frac{0.001\ m^3/second}{1.5\ m/second} = 0.00067\ m^2$$

$$A = \frac{\pi D^2}{4} = 0.0067\ m^2 \text{ where D = pipe diameter}$$

$$D^2 = \frac{0.0067 \times 4}{\pi} = 0.029 \text{ metres}$$

D = 29 millimetres or 1.25 inches

ATTACHMENT C

NITRATE DILUTION CALCULATIONS
SEPTIC SYSTEM DESIGN
CONTINENTAL MUSHROOM CORP. (1989) LTD.
METCALFE, ONTARIO

ATTACHMENT C

Nitrate Dilution Calculation

$$NO_{3\,(Boundary\ mg/L)} = \frac{Total Mass of Nitrate}{Total Water Volume} = \frac{Background \& Septic Waste}{Infitlration \& Septic Waste}$$

Mass of Nitrate-Nitrogen

Background Nitrate = 0 mg/L (assumed)

Septic Waste = 40 mg/L x 5200 l/day x 365 day/year = 7.6×10^7 mg/L/year

Liquid Volumes

Net Potential Infiltration = 0.22 metres/year (for area)

Total Infiltration = 40 hectares x 0.22 metres/year = 88,000,000 litres per year

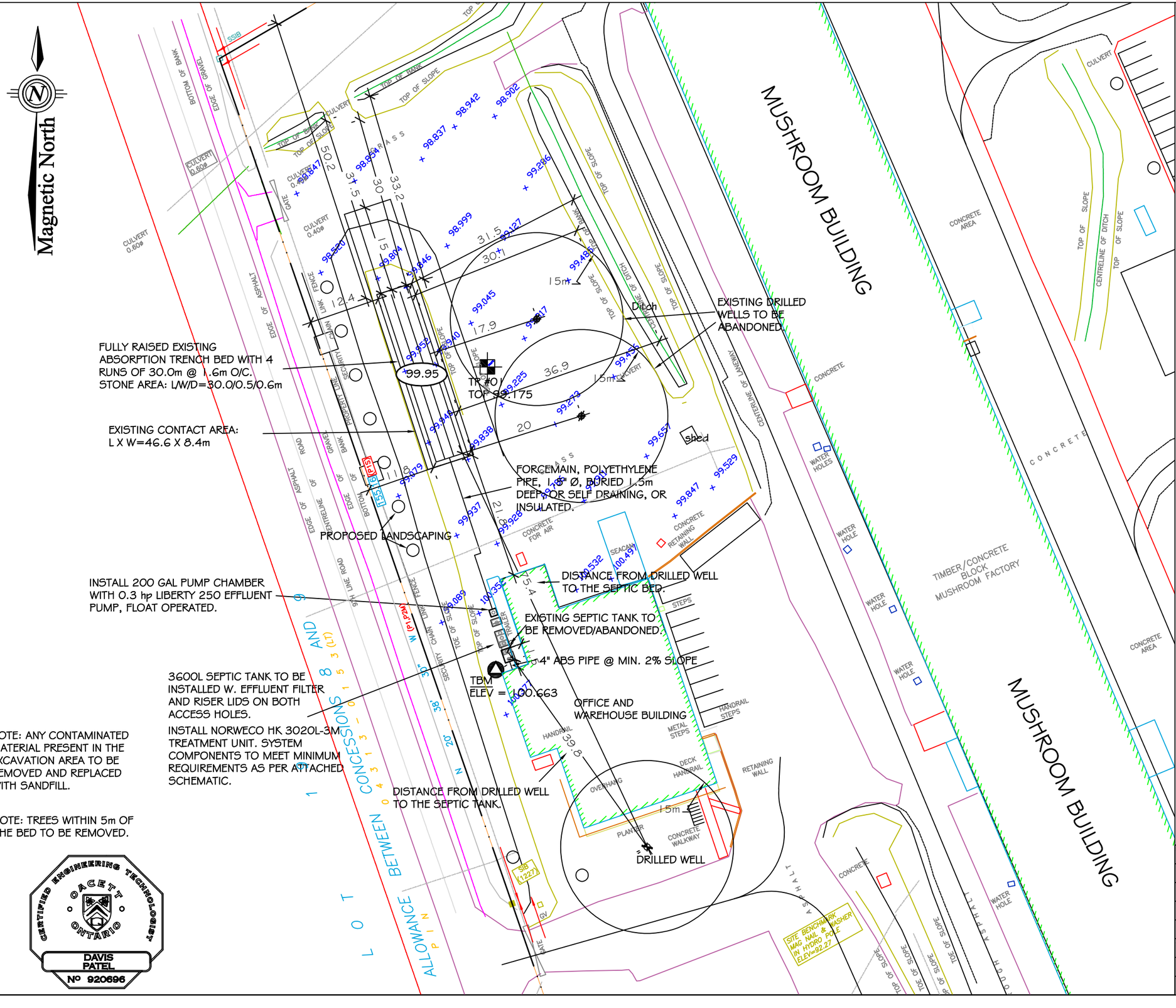
Septic Flow = 5200 litres per day x 365 days per year = 1,900,000 litres per year

$$NO_{3(Boundary)} = \frac{7.6x10^7\ mg/year}{9x10^7\ l/year} = 0.84\ mg/L$$

Require approximately 14 hectares to provide dilution to 2.5 mg/L or approximately 20 hectares if the main office/shipping building is included.

Appendix E

Office Building Septic System Design



NOTES:

1. ALL TREATMENT UNITS AND LEACHING BED ARE TO BE INSTALLED IN ACCORDANCE WITH MINIMUM OBC CLEARANCE DISTANCES. ANY OMISSIONS OR INACCURACIES SHALL BE BROUGHT TO THE ATTENTION OF GVE AND OSSO.

2. CARE IS TO BE EXERCISED DURING CONSTRUCTION ACTIVITIES NEAR OVERHEAD HYDRO WIRES.

3. EXISTING ELEVATIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

4. SOIL CONDITIONS ARE ACCURATE FOR THE LOCATIONS SHOWN. CONTRACTOR MUST CONTACT THE DESIGN ENGINEER OR REGULATORY AUTHORITY SHOULD SOIL CONDITIONS DIFFER.

5. ALL DIMENSIONS AND CONDITIONS TO BE VERIFIED ON SITE, FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALE.

6. UTILITY LOCATES SHALL BE COMPLETED PRIOR TO ANY EXCAVATION.

7. THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

8. THIS DOCUMENT IS COPYRIGHT PROTECTED AND IS THE SOLE PROPERTY OF GVE GROUP. THIS DRAWING SHALL NOT BE ALTERED IN ANY MANNER.

9. EXISTING LOT SERVICED WITH A DRILLED WELL.

METRIC:

DISTANCES AND ELEVATIONS SHOWN ON THIS PLAN ARE IN METERS AND MAY BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

LEGEND:

	PROPOSED ELEVATION
X	EXISTING ELEVATION
	EXISTING WORKS
	PROPOSED SEWAGE WORKS
	FENCE LINE
	PROPERTY LINE
TBM	TEMPORARY BENCH MARK (DESCRIPTION: UNDERSIDE OF SIDING)
	TEST PIT LOCATION

SEPARATION DISTANCES:

1. MINIMUM CLEARANCE FROM SEPTIC PIPE TO:
   LOT LINE = 5.0m
   HOUSE = 7.0m
   DRILLED WELL = 17.0m

2. MINIMUM CLEARANCE FROM TREATMENT UNITS TO:
   LOT LINE = 3.0m
   HOUSE = 1.5m
   DRILLED WELL = 15.0m

CERTIFIED ENGINEERING TECHNOLOGISTS ONTARIO
DAVIS PATEL
№ 920696

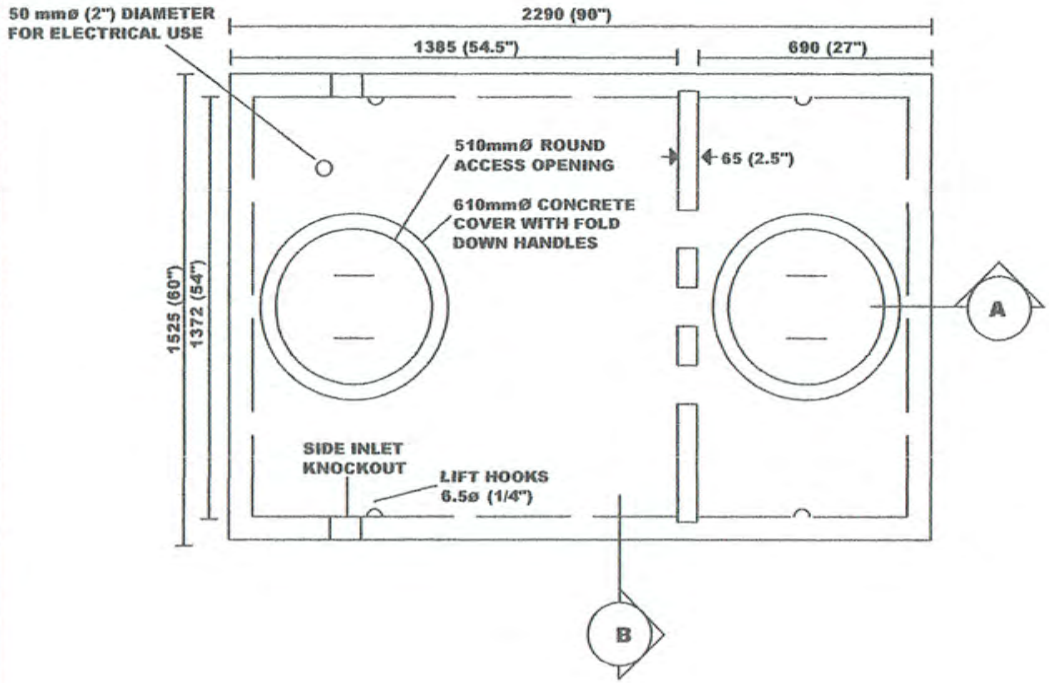
Drawn by: DP	Designed by: DP	Checked by: WS	
Rev.	Description	Date	Approved

Township	Plan#	Lot	Sublot	Con	Drwg. No.: SP7075-24-ATB

County: METCALFE	Civic Address: 2545 9TH LINE RD.	Date: 12/06/24	Scale: 1:650

GREEN VALLEY ENVIRONMENTAL

On-Site Sewage Treatment Plan for the Residence of:
ASB GREENWORLD

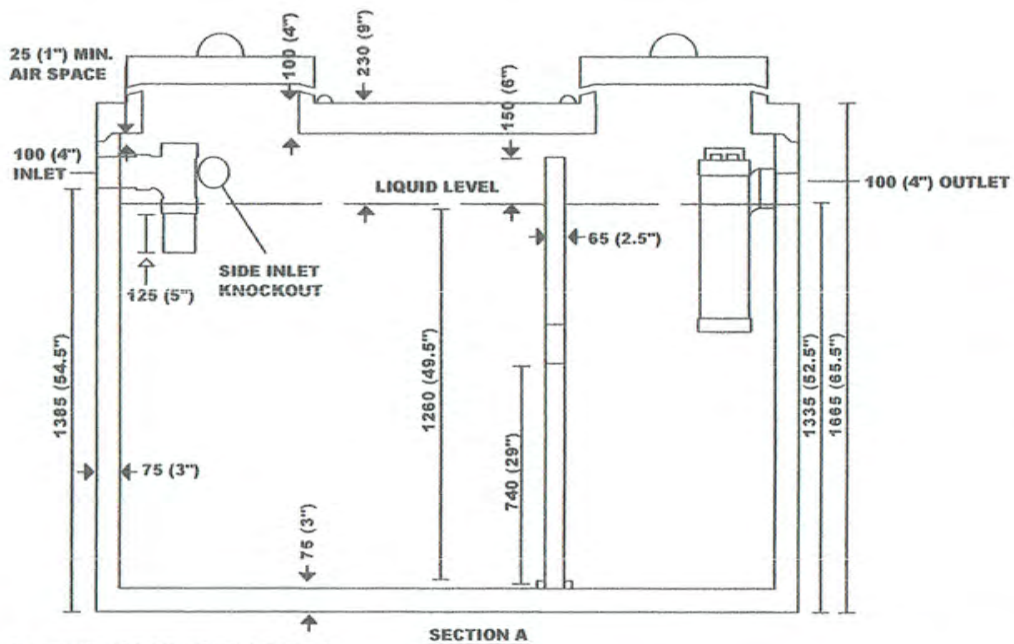


SPECIFICATIONS:

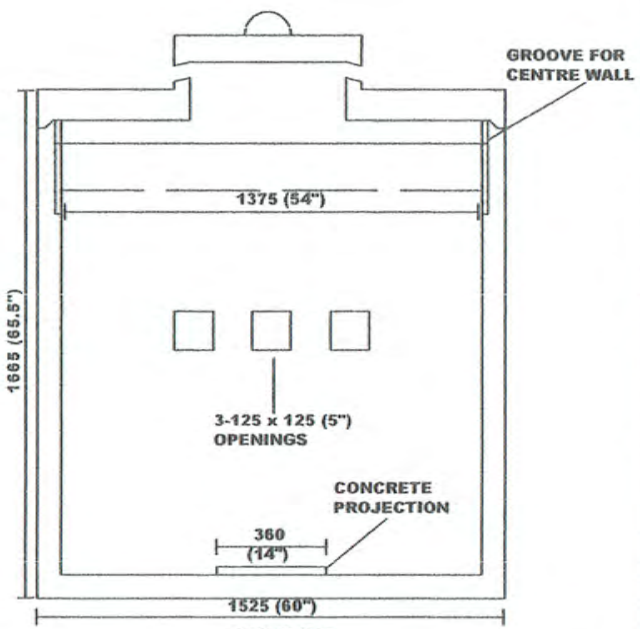
NOMINAL TANK SIZE	3600 LITRES (800 GAL) SEPTIC OR PUMP TANK	
CAPACITY	3603 LITRES (793 GAL) TO OUTLET	
	4268 LITRES (939 GAL) TO UNDERSIDE OF LID	
	2860 LITRES (629 GAL) PER VERTICAL METRE	
WEIGHT	TOP SLAB	=853 Kg (1880 lbs.)
	TANK SECTION	=2829 Kg (6237 lbs.)
	ASSEMBLED WEIGHT	=3682 Kg (8117 lbs.)

NOTES:

1) CONCRETE TO BE 32 MPa WITH 5-8% AIR ENTRAINMENT
2) CONCRETE MIX IS NON-SULPHATE RESISTANT
3) MINIMUM CONCRETE COVER OVER REINFORCEMENT IS 25mm (1")
4) CERTIFIED MAXIMUM BURIAL DEPTH = 0.6m (2')
5) OUTLET EFFLUENT FILTER MEETS OR EXCEEDS CODE
6) CHAMBER DIVIDER IS CAST SEPARATELY
7) NO CENTER JOINT IN TANK
8) 100 mm (4") PVC COUPLINGS WITH OUTSIDE RING ARE CAST-IN AT INLET AND OUTLET FOR WATER TIGHT CONNECTION
9) PRODUCT IS FACTORY ASSEMBLED. ASSEMBLED TANK LIFTED USING A HARNESS ASSEMBLY.



SECTION A



SECTION B

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED

Product No.

MAC-3600

MacGregor Concrete Products (Beachburg) Limited
CONCRETE SEPTIC TANK
3,603 LITRES WORKING CAPACITY
(800 GALLONS)

SERIES A-1

norweco®

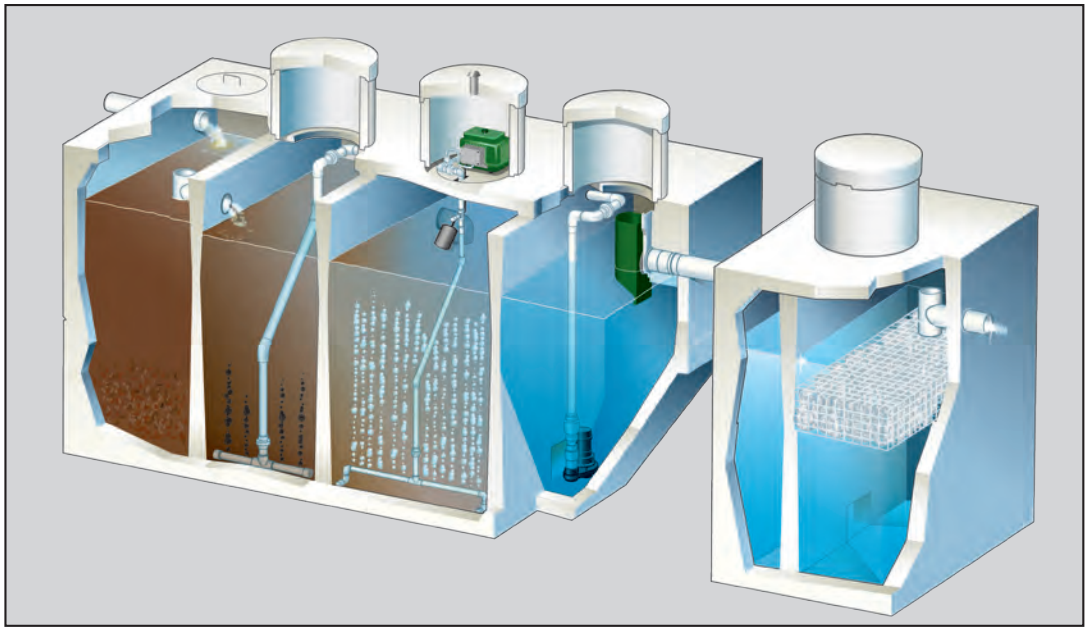
HYDRO-KINETIC®

WASTEWATER TREATMENT SYSTEM
MODEL 600 FEU

SPECIFICATIONS

GENERAL SPECIFICATIONS

The contractor shall furnish and install one complete Hydro-Kinetic wastewater treatment system with all necessary parts and equipment as described in the following specifications. Treatment of the domestic wastewater shall be accomplished by the extended aeration process with non-mechanical flow equalization, pretreatment of the influent and filtration of the final effluent. The treatment system shall provide primary, secondary and tertiary treatment of the wastewater flow, denitrification, and if required, chlorination/dechlorination or ultraviolet disinfection of the effluent prior to discharge. All treatment processes shall be contained within reinforced precast concrete tankage meeting the requirements of ACI Standard 318. The wastewater treatment system shall be a Hydro-Kinetic Model 600 FEU as manufactured by Norweco, Inc., Norwalk, Ohio, USA.



The wastewater treatment system shall include precast concrete tankage providing separate pretreatment, anoxic, aeration, clarification and final filtration chambers. The tankage shall be furnished with cast-in-place inlets, submerged transfer ports, access risers with removable covers, cast-in-place molded plastic vent assembly, cast-in-place clarification outlet coupling and cast-in-place outlet tee. Principal items of electro-mechanical equipment supplied with the Hydro-Kinetic system shall be a Model A100 air pump, Model SD103 recirculation pump, UL Listed Service Pro Model 801P electrical control center with MCD technology, flow equalization device and Hydro-Kinetic FEU filter for final filtration of system effluent.

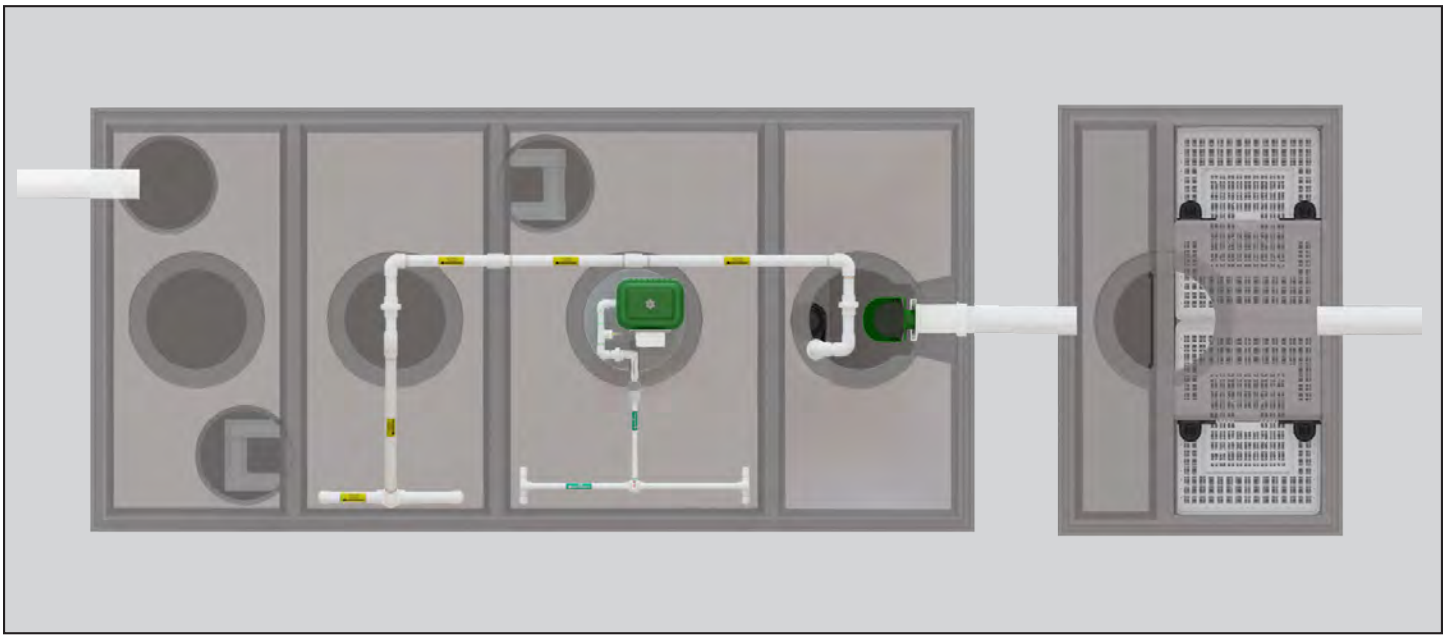
HYDRO-KINETIC®

OPERATING CONDITIONS

Total holding capacity of the system shall provide a minimum of 70 hour retention of the daily flow. The pretreatment chamber shall provide at least 15 hour retention, the anoxic chamber shall provide at least 15 hour retention, the extended aeration chamber shall provide at least 21 hour retention, the clarification chamber shall provide at least 7 hour retention and the Hydro-Kinetic filter shall provide at least 12 hour retention of the daily flow. The non-mechanical flow equalization device shall increase individual chamber and total system retention time in direct proportion to loading. Design of the system shall include a compartmented tank and non-mechanical flow equalization device to insure successful treatment performance without upset even when the significant runoff period is six hours. Hydraulic design considerations of the system and flow equalization device shall be such that intermittent peak flow factors as high as four shall not upset hydraulic reliability within the system. Capability of the system to perform as outlined, when built by an approved manufacturer, shall be certified by an independent testing laboratory and approved for use by the local governing regulatory agency.

PRETREATMENT CHAMBER

All domestic wastewater shall be preconditioned while passing through the pretreatment chamber prior to being introduced to the anoxic chamber. The outlet of the pretreatment chamber shall be equipped with a discharge tee that extends vertically into the liquid so that only the preconditioned flow from the center area of the chamber is displaced to the anoxic chamber. The discharge tee and transfer port shall be of adequate size to handle a peak flow factor of four without restricting the outlet and disturbing hydraulic displacement to the anoxic chamber. A removable inspection cover shall be cast into the top of the pretreatment chamber to allow tank and transfer tee inspection. As a safety measure, the uncovered opening shall be small enough to insure that the tank cannot be entered for inspection or service.



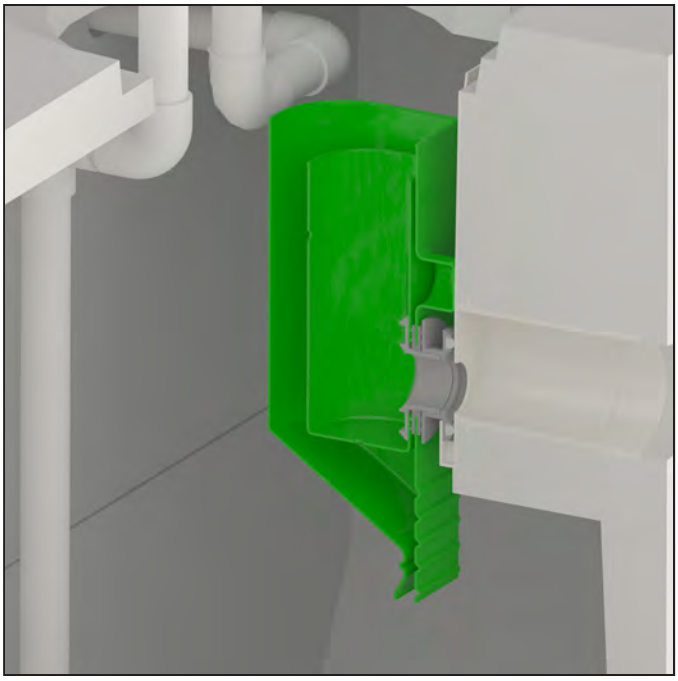
ANOXIC CHAMBER

The anoxic chamber shall provide in excess of 15 hour retention of the equalized daily flow. In the anoxic chamber, low oxygen levels shall compel facultative heterotrophic bacteria to use nitrate-bound oxygen in their respiratory process. Nitrified liquid from the clarifier shall enter the chamber in measured doses and nitrogen compounds shall be converted to harmless nitrogen gas which shall escape into the atmosphere. Overall design of the chamber shall insure that effective mixing and suspension of the biomass is maintained in an anoxic condition to insure consistent biological denitrification. Systems that have not been performance certified to reduce Total Nitrogen (TN) to less than 10 mg/L shall not be considered for this application.

AERATION CHAMBER

The extended aeration chamber shall provide in excess of 21 hour retention of the equalized daily flow. The chamber shall be of sufficient size to provide a minimum of 80 cubic feet of tank capacity per pound of applied BOD. The aeration chamber length-width-depth ratio shall be designed to insure uniform tank mixing and provide optimum treatment. The aeration chamber(s) shall be an integral part of the system flow path and constructed of properly reinforced 5,000 PSI, 28 day compression strength precast concrete. All castings used to construct the precast concrete tankage shall be monolithic units with external and internal walls incorporated into each section.

FINAL CLARIFICATION CHAMBER



The final clarification chamber shall consist of 5 functionally independent zones operating together to provide satisfactory settling and clarification of the equalized flow. An inlet zone shall be provided and shall dissipate transfer turbulence at the flow inlet of the clarification chamber. A recirculation pump in the settled sludge zone shall transfer a portion of the wastewater back to the anoxic chamber. Liquid is then displaced into the hopper zone of the clarifier. In this zone, settling by gravity takes place. Three of the four sidewalls are slanted to form a hopper which directs all settled material back to the settled sludge zone. Clarified liquid from the hopper zone shall be displaced into the final settling zone to provide additional clarification of the liquid. The liquid is finally displaced to the outlet zone where the treated effluent shall pass through the flow equalization device and be discharged from the final clarification chamber.

FLOW EQUALIZATION DEVICE

The system shall include a non-mechanical, demand use, flow equalization device. The device shall be installed with the design flow equalization port located below the normal liquid level of the clarifier. If intermittent flow rates exceed the capacity of the design flow port, flow shall be held upstream until the intermittent flow dissipates. If the intermittent flow continues to increase, the liquid level may reach a sustained flow equalization port. With both ports in use, flow through the system increases while continuing to provide flow equalization to upstream and downstream processes. A peak flow equalization port is supplied but should not be required in a properly sized system. The device shall control normal residential flow rates and reduce typical residential flow surges. The flow equalization rate shall be dependent upon the specific loading pattern and the duration of flow surges. At the 600 GPD (gallons per day) NSF Standard 40/245 design loading schedule, minimum performance of the device shall equalize daily flow an average of 50%.

HYDRO-KINETIC® FILTER

Significant reduction of organic matter shall occur in the treatment system prior to the Hydro-Kinetic filter. This Bio-Film reactor shall provide final treatment of the effluent to a near pristine state. Flow equalized liquid from the clarifier shall enter the influent chamber, travel down and be evenly distributed beneath the filtration media. The effects of gravity shall cause solids to settle to the bottom of the tank. As liquid travels up through the proprietary attached growth media, further reduction of organic matter shall take place. Additional settling and consolidation of solids shall take place downstream of the filter media. After passing through the filtration media for final polishing, the highly treated liquid shall flow into the final effluent zone before exiting the Hydro-Kinetic filter through the outlet tee.

MODEL 600 FEU

SERVICE PRO® MODEL 801P ELECTRICAL CONTROL CENTER

The Model 801P control center with MCD technology shall provide Monitoring, Compliance and Diagnostic functions for the treatment system. The pre-wired controls shall be mounted in a lockable NEMA rated enclosure designed specifically for outdoor use. The control center shall be a UL Listed assembly and shall include a time clock, alarm light, reset button, power switch, power light, phone/network light, recirculation pump light, air pump light, high water light and auxiliary alarm light. A pre-programmed time clock shall control the recirculation pump to insure that approximately 400% of the average daily flow is returned to the anoxic chamber. The control center shall monitor recirculation pump current, air pump operation, high water and auxiliary alarm circuitry. In the event of an alarm from the air pump or auxiliary input, the audible and visual alarms shall activate and the optional telemetry system shall report the condition. If abnormal operation of the recirculation pump is detected, a diagnostic sequence shall begin and the visual alarm shall activate. After a factory programmed recovery interval, an automatic restart attempt shall be initiated. If normal pump operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate and the optional telemetry system shall report the condition to the Service Pro monitoring center.

SERVICE PRO® MONITORING CENTER

The Service Pro monitoring center shall include a 256 bit encrypted password protected website for interface with the monitoring center database. Access to the secure website shall be obtained through a unique user name and password that provides tiered access to data from monitored treatment systems. Access level tiers shall include distributors, service providers, regulatory agencies and individual system owners. Distributors and service providers shall be able to create accounts, enter serial numbers for system equipment, maintain service records and grant regulatory agencies access to the information. The monitoring center shall have the capability to schedule future service inspections and provide notification. Individual system owners shall be able to view information regarding their own systems, as well as download instructional information. Integrity of stored data shall be maintained through the use of multiple servers operating in geographically isolated locations.

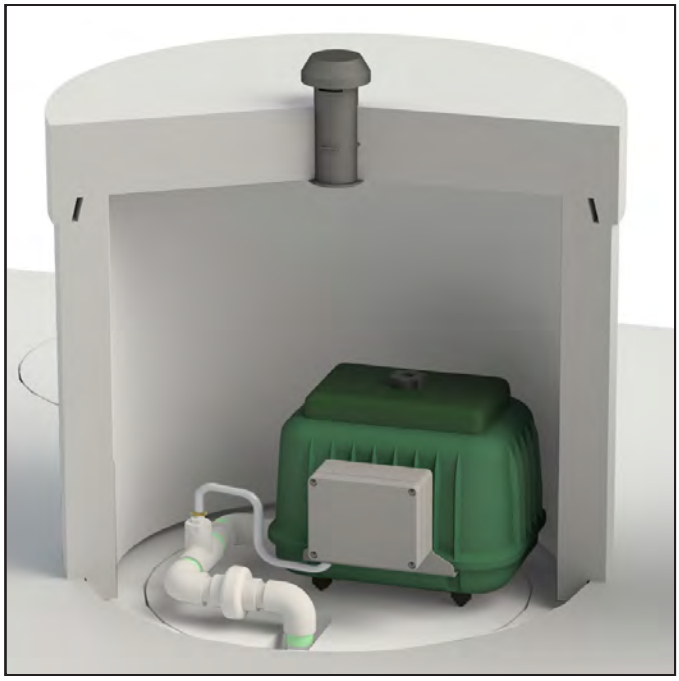
MODEL AT 1500 ULTRAVIOLET DISINFECTION SYSTEM (Optional)

The Hydro-Kinetic system shall be furnished complete with a Model AT 1500 ultraviolet disinfection system. The AT 1500 system shall incorporate a turbulence inducer and dual-pass design to insure pathogenic organisms receive maximum exposure to the ultraviolet light source. Effluent fecal coliform concentrations shall be consistently reduced to less than 200 mg/L. The ultraviolet disinfection system shall be UL Listed under Standard 979 as a residential treatment device and shall include a disinfection chamber, turbulence inducer, extension riser, quartz tube, Teflon cover, ultraviolet bulb and controls. An interlock switch shall be furnished to automatically disable the ultraviolet light source when the disinfection chamber is accessed. Ultraviolet disinfection systems without a residential UL Listing and an interlock switch have not demonstrated compliance with international electrical standards for safety and reliability and shall not be considered for this application.

SPECIFICATIONS

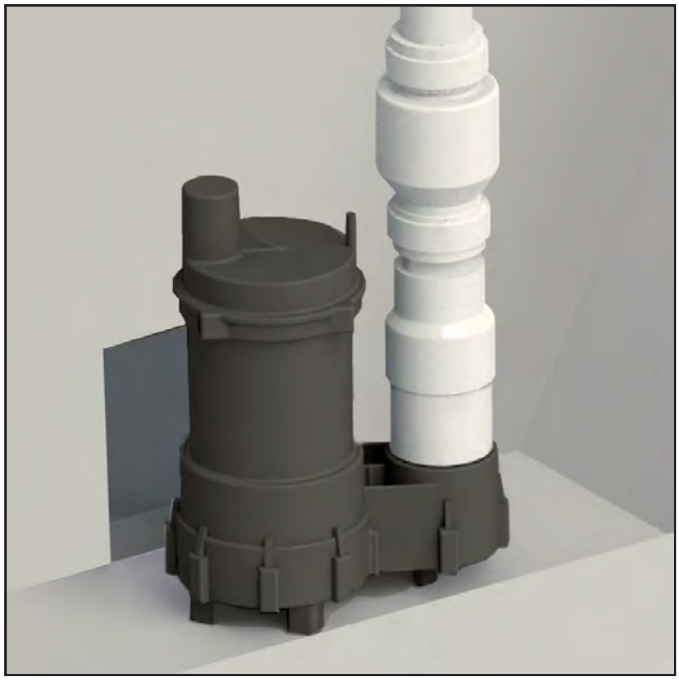
CERTIFIED PERFORMANCE

The wastewater treatment system shall be certified to operate for 12 consecutive months at the rated daily capacity without routine service. This performance shall be demonstrated by a continuous 12 month evaluation performed by an independent ANSI accredited, third-party testing facility. The evaluation shall consist of 2 consecutive ANSI/NSF Standard 40 and 245 evaluations back-to-back, including the stress sequences, with no maintenance allowed in between. When the first six-month evaluation is complete, the second full six-month evaluation shall immediately begin. For the entire certification protocol, the system shall achieve a total test average for the consecutive 12 month period of less than 5 mg/L Biochemical Oxygen Demand (CBOD), less than 5 mg/L Total Suspended Solids (TSS), and less than 10 mg/L Total Nitrogen (TN) in the effluent. Systems unable to meet these effluent quality parameters for at least 12 months of continuous testing by an independent ANSI accredited, third-party testing facility without service do not provide the desired level of effluent quality or service frequency, and shall not be considered for this application.



MODEL A100 AIR PUMP

The Model A100 air pump shall be configured to allow remote mounting or installation within the access riser above the aeration chamber. When installed in the access riser, fresh air shall enter through a molded plastic vent assembly or integral perimeter vent in the access cover above the air pump. Fresh air shall enter the air pump through a filter located under the housing cover and be introduced below the liquid surface through a prefabricated diffuser assembly. Only the plastic diffuser assembly and the air piping shall be installed in contact with the liquid. The Model A100 air pump shall be wired for 115 volt, single phase, 60 cycle operation. The air pump shall include impact-resistant rubber diaphragms and valves which prolong operational life. The unique design and construction shall provide easy maintenance, excellent cooling and quiet operation. The air pump shall continue aerating and mixing the aeration chamber even during high water conditions. Treatment systems that interrupt air delivery during high water conditions disrupt biological activity and shall not be considered for this application.



MODEL SD103 RECIRCULATION PUMP

The Model SD103 submersible recirculation pump shall be wired for 115 volt, single phase, 60 cycle operation and shall be installed in the clarification chamber. The pump motor shall be ⅓ horsepower, operating at 3000 RPM. All openings in the flow path of the recirculation pump shall be of sufficient size to permit the passage of a ¾" diameter sphere. The pump shall be designed to be non-overloading throughout the entire pump curve and shall draw less than 7 full load amps. The pump motor shall contain moisture resistant windings and shall be securely mounted inside an oil-filled, watertight housing for maximum pump life. The stator housing and casing shall be of high grade cast iron or thermoplastic construction.

BLUE CRYSTAL® CHLORINATION SYSTEM (Optional)

The Hydro-Kinetic system shall be furnished complete with a tablet feeder and a six month supply of Blue Crystal disinfecting tablets. Blue Crystal tablets shall be specifically formulated for consistent chlorine dosage and effluent disinfection to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. The tablets shall be manufactured from pure calcium hypochlorite and contain a minimum of 70% available chlorine. Each tablet shall be 2⅝" diameter, compressed to a 1" thickness, weigh approximately 5 ounces and be white in color with blue crystals for easy identification. The tablets shall dissolve in direct proportion to the flow rate, releasing controlled amounts of chlorine.

BIO-MAX® DECHLORINATION SYSTEM (Optional)

The Hydro-Kinetic system shall be furnished complete with a tablet feeder and a six month supply of Bio-Max dechlorination tablets. The dechlorination tablets shall contain 92% sodium sulfite as the active ingredient and shall be specially formulated to chemically neutralize both free and combined chlorine. Each tablet shall be 2⅝" diameter, compressed to a 13/16" thickness, weigh approximately 5 ounces and be green in color for easy identification. The tablets shall dissolve slowly, releasing controlled amounts of chemical for the instantaneous removal of residual chlorine from the system effluent.

LIMITED WARRANTY

The wastewater treatment system shall be covered by a two year limited warranty. The Model A100 air pump, Model SD103 recirculation pump, Service Pro Model 801P control center and any other Hydro-Kinetic components purchased from the manufacturer shall be warranted to be free from defects in material and workmanship, under normal use and service, for a period of two years from the date of purchase. A warranty registration card shall be attached to the system before shipment from the factory. A means to register the wastewater treatment system for warranty protection via the internet shall be provided by the manufacturer for the convenience of the distributor, customer and regulatory agency. The distributor shall provide details of the limited warranty to the regulatory agency, contractor and customer as required.

EQUIPMENT MANUFACTURER

The equipment specified herein shall be the product of a manufacturer having a minimum of seven years experience in the construction of prefabricated wastewater treatment equipment and systems. Bids shall be prepared on the basis of the equipment and material specified herein for purposes of determining the low bid. This is not done, however, to eliminate other products or equipment of equal quality and efficiency. If equipment is to be substituted, approval of such substitution must be made prior to execution of any order. It is assumed that substitution will result in a reduction of cost to the contractor and that if accepted, these savings will be passed along by a reduction in the base bid.

PROGRESS THROUGH SERVICE SINCE 1906

norweco®

Engineering the future of water and wastewater treatment

DISTRIBUTED LOCALLY BY:

220 REPUBLIC STREET
NORWALK, OHIO, U.S.A. 44857
TELEPHONE (419) 668-4471
FAX (419) 663-5440
www.norweco.com

NON-RESIDENTIAL

☒ Commercial

☐ Industrial

☐ Institutional

PO Box 599, 3889 Rideau Valley Drive, Manotick, Ontario K4M 1A5

T (613) 692-3571 ext 4 F (613) 692-1507 septic@rvca.ca info@rvca.ca www.rvca.ca

Rideau Valley Conservation Authority

SEPTIC OFFICE

SEPTIC FILE # 24-040

OTTAWA

SEPTIC PACKAGE
IMPORTANT INFORMATION - PLEASE READ

Attached is your Septic Sewage Permit package. A **minimum of two (2) inspections are required** before your proposed Septic system can be approved for use (additional inspections may be required for clay soils/bedrock and/or re-inspections).

- All inspections must be requested by writing/email.
- It is the responsibility of the Homeowner/Installer to provide a copy of the Part 8 permit to the plan examiner at client service/building department.
- All construction documents must be received prior to issuing the Certificate of Completion.

Special Note

- A permit is valid for **12 months** from the original date of issuance noted in the "permit date".
- If lapsed, it **may be renewed only once** for a period of 12 months *from the date of expiry.*
- No person shall make a material change or cause a material change to be made to a plan, specification, document, or other information based on which the permit was issued without notifying / filing detail with and obtaining the authorization of the Chief Building Official. (Building Code Act 1992, c23, s.8 (12))

Septic Sewage System Permit Construction/Inspection Requirements

If you submit early, and an inspector arrives before you are finished, you could be subject to a $200.00 re-inspection fee.

1. **Subgrade/Scarification/Clay Soils/Bedrock (if stated on permit)** – In Clay soils/Bedrock, a site preparation inspection is required. The total contact area must be properly prepared. Scarification must be done under dry conditions prior to importing leaching bed fill.
2. **Installation Inspection – 2nd inspection**

When the septic system is substantially completed (i.e. before the final fill is placed over the septic tank and leaching bed system) an Installation inspection is always required. Prior to any inspection request, the following documents are **mandatory and must** be submitted;

- As-built components page and As-built drawings
- Engineers Letter – if the system is engineered
- Weigh bill
- Grain Size Analysis
- Maintenance Agreement
- ESA Permit number
- Schedule 2 – Installer information

3. **Final Grading Inspection – 3rd Inspection**

When construction of the Septic System is complete, a final grading inspection is required. Before a Certificate of Completion can be issued, the following is **mandatory and must** be completed:

- The leaching bed and Septic tank must be covered with sand fill, topsoil and graded accordingly
- All conditions of the Septic permit & comments on the installation inspection report must be met
- The depth of cover & material type must be identified by inspection pipes or holes placed over trenches at four (4) corners of the bed
- The four (4) corners of the bed must be stake.

Green Valley Environmental Inc.

LETTER OF AUTHORIZATION

Owner: ASB Greenworld Ltd

Address: 332911 Plank Line Road.
c/o Shawna McDonald Hayman Inc. 613-227-3907

Phone No.: 519-688-3413 **Cell No.:** 519-788-0375

Work No.: **Fax No.:**

LOCATION OF PROPERTY:

Lot No.:

Concession No.: CON 9 LOTS 19+20 RP

Sub lot/Part No.:

R. Plan No.: 5R-3469 PT #2

Civic Address: 2545 9th Line Road.

Municipality: Metcalfe

Roll No.:

R.V.C.A. RECEIVED
FEB - 5 2024
SEPTIC FILE #
24-040
OTTAWA

Commercial: **(provide description of building and intended use)**
Office + Warehouse

I, the above – mentioned authorize Green Valley Environmental Services to act as my agent to apply for and obtain a sewage system permit from the responsible Approval Agency.

Signature: ASB Date: 2024, 01, 29
2024, 01, 30

6107 First Line Rd. • P.O. Box 882 Manotick, Ontario K4M 1A7 • Phone: (613) 692 2616 • Fax: (613) 692 1802
www.gvegroup.ca

Application for a Permit to Construct or Demolish

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

R.V.C.A. RECEIVED
FEB - 5 2024

For use by Principal Authority	
Application number:	Permit number (if different): SEPTIC FILE # 24-040
Date received:	Roll number: OTTAWA

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

A. Project information

Building number, street name	Unit number	Lot/con.
2545 9th Line Rd.		19/9

Municipality	Postal code	Plan number/other description
Metcalfe	K0A 2P0	

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

B. Purpose of application

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

Proposed use of building	Current use of building
Commercial	Commercial (Warehouse + Office)

Description of proposed work
Install a treatment unit and use the existing septic bed for the existing commercial building.

C. Applicant

Applicant is: Owner or ✓Authorized agent of owner

Last name	First name	Corporation or partnership
Patel	Dawn	Green Valley Environmental

Street address	Unit number	Lot/con.
6107 First Line Rd.		

Municipality	Postal code	Province	E-mail
North Gower	K4M 1A7	ON	engineering@gvegroup.ca

Telephone number	Fax	Cell number
(613) 692-2616	( )	( )

D. Owner (if different from applicant)

Last name	First name	Corporation or partnership
Vanklaveren	Mark	ASB Greenworld Ltd.

Street address	Unit number	Lot/con.
25		

Municipality	Postal code	Province	E-mail

Telephone number	Fax	Cell number
( )	( )	( )

E. Builder (optional)

Last name	First name	Corporation or partnership (if applicable)

R.V.C.A. RECEIVED
FEB - 5 2024

SEPTIC FILE #
24-048

Street address		Unit number	Lot/con.

Municipality	Postal code	Province	E-mail
OTTAWA			

Telephone number ( )	Fax ( )	Cell number ( )

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

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

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

G. Required Schedules

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

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

H. Completeness and compliance with applicable law

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

I. Declaration of applicant

I David Patel (print name) declare that:

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

Date 23 Jan, 2024 Signature of applicant David

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

R.V.C.A. RECEIVED
FEB - 5 2024

SEPTIC FILE #
24-040

Schedule 1: Designer Information

OTTAWA

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

A. Project Information

Building number, street name: 2545 9th Line Rd.		Unit no.	Lot/con.: 19/9
Municipality: Metcalfe	Postal code: K0A 2P0	Plan number/ other description	

B. Individual who reviews and takes responsibility for design activities

Name: Davis Patel		Firm: Green Valley Environmental Inc.	
Street address: 6107 First Line Rd.		Unit no.	Lot/con.
Municipality: North Gower	Postal code: K4M 1A7	Province: ON	E-mail: engineering@agvegroup.ca
Telephone number: (613) 692-2616	Fax number: ( )		Cell number: ( )

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

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

Description of designer's work: Design a treatment system and existing absorption trench bed for existing commercial building

D. Declaration of Designer

I Davis Patel declare that (choose one as appropriate):
(print name)

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

Individual BCIN: 119685

Firm BCIN: 16035

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

Individual BCIN: _____

Basis for exemption from registration: _____

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

Basis for exemption from registration and qualification: _____

I certify that:

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

Date 23 Jan, 2024 Signature of Designer

NOTE:

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

R.V.C.A. RECEIVED
FEB - 5 2024

24-040

OTTAWA

Schedule 2: Sewage System Installer Information

A. Project Information				
Building number, street name 2545 9th Line Rd.			Unit number	Lot/con. 19/9
Municipality Metcalfe	Postal code K0A 2P0	Plan number/ other description		

B. Sewage system installer

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

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

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

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

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

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

E. Declaration of Applicant:

I Davis Patel (print name) declare that:

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

OR

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

I certify that:

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

Date Jan 23, 2024 Signature of applicant

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

R.V.C.A. RECEIVED
FEB - 5 2024

Do Not Complete
Permit# ~~SEPTIC FILE #~~
Revision # _____
Date ~~24-040~~

OTTAWA

Schedule 4
Proposed Services
Complete Sections 1 thru 7

1. **Engineered**
   - ☐ Yes
   - ☑ No

2. **Water supply**
   - ☐ Proposed
   - ☑ Existing

3. **Type of work proposed**
   - ☐ New Installation
   - ☐ Replacement
   - ☑ Alteration

4. **Type of Well**
   - ☐ Dug/bored/Sandpoint well
   - ☑ Drilled well
   - ☐ Municipal
   - ☐ Other

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

6. Sewage Design Flow **Other Occupancies**
   Design Flow 2550 L/day
   Detailed sewage flow calculations:
   - Warehouse → 3 Loading bays x 150 = 450 L/day
   - Office → 15 Employees x 75 = 1125 L/day
   - OR → 260 m² → (75 per 9.3 m²) = 2100 L/day

7. **Type of System**
   - ☑ Treatment Unit Norweco HK 3020
   - ☐ Class 2 – Leaching Pit
   - ☐ Class 3 – Cesspool
   - ☐ Class 4 – Shallow Buried Trench

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

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

R.V.C.A. RECEIVED
FEB - 5 2024

SEPTIC FILE #
Do Not Complete
Permit No 24-040
Revision No
Date OTTAWA

Schedule 5
Sewage System Details

Type of System Treatment Unit (Schedule 4)
Septic/~~Holding~~ Tank Size: 3600 Litres Make: MacGregor
Septic Tank Effluent Filter Make: POLYLOK Model: PL250

Treatment Unit – Make & Model Norweco 3020 HK
Number of Units: 1
Refer to Typical Drawing # PC-5-1169
Mantle Information:
Native or imported =15m in _____ direction(s)

Other: _____
Pump(s) required Liberty 250/0.3hp
Pump Rate FLOAT L/15min
Note: Alarm required for all pumping systems

Slope subgrade Existing % slope
_____ direction(s)

Site to be Scarified (If clay) YES (NO)
Clay Seal Required (If bedrock) YES (NO)

☐ **Trench** Existing
Distribution Pipe Length 120 m
Loading Area 392 m²
Type of Chamber N/A
Length of Chamber N/A m

☐ **Dispersal Bed**

☐ **BMEC** ☐ **Type A** ☐ **Type B**
Stone _____ m²
Sand _____ m²
Pipe _____ m²
Linear Loading _____ L/m²

☐ **Shallow Buried Trench**
Pipe Length _____ m

☐ **Filter Media Bed**
Stone _____ m²
Extended Base _____ m²
Pipe _____ m
Weight of Filter Media _____ Kg
Loading Area _____ m

☐ **Tank/Treatment Unit/Pump Chamber Replacement** ONLY
☐ **Effluent Filter & Riser** ONLY

Construction Notes: Any contaminated Material present in the excavation area to be removed and replaced with sandfill. Trees within 5m of the Septic System to be removed.

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

R.V.C.A. RECEIVED
FEB - 5 2024

Do Not Complete
Permit #
Revision # 24-040
Date
SEPTIC FILE #
OTTAWA

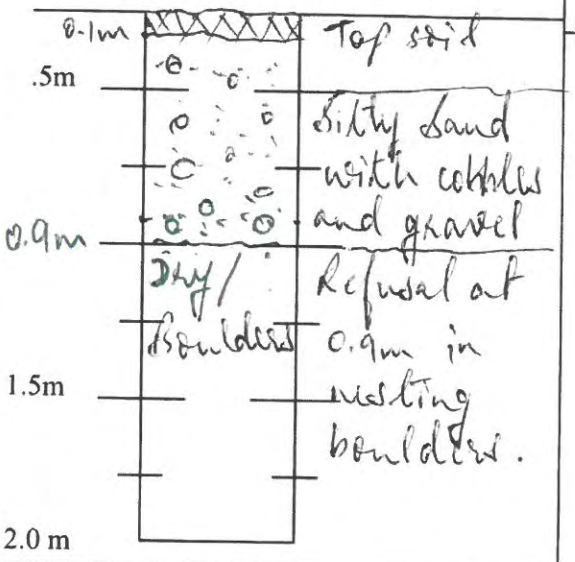
Schedule 6
Soil and Water Table Information
(Minimum depth of test pit: 2 metres)

Name of Applicant/Agent: David Patil
Date: June 12 2023 Time: 12 PM
Applicant/Agent Signature: David

Inspector:
Date: Time:
Inspector Signature:

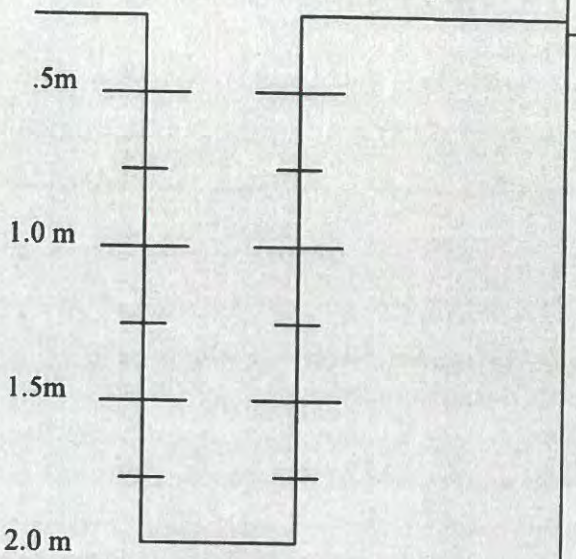
Test Pit 1

EG (99.175) | Soil Description | T



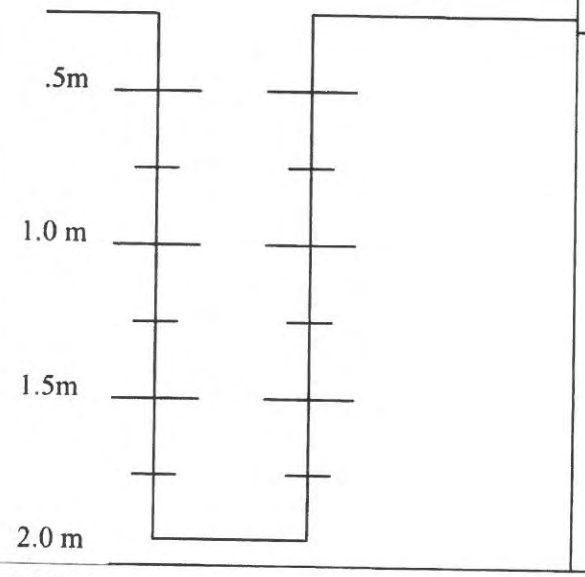
Test Pit 2

EG (……..) | Soil Description



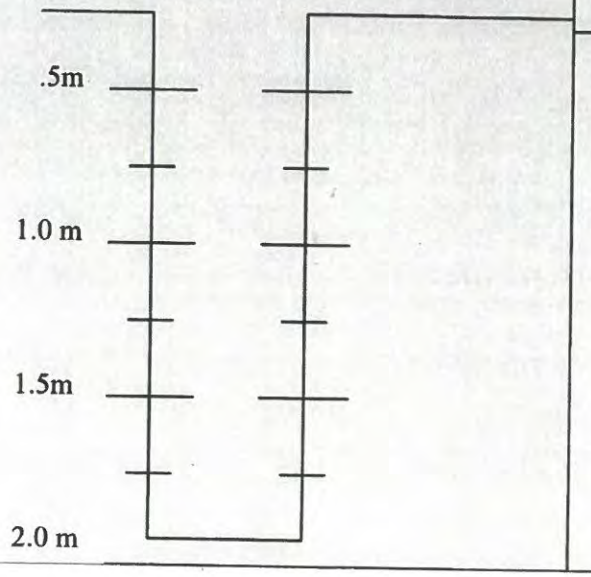
Test Pit 3

EG (……..) | Soil Description | T



Test Pit 4

EG (……..) | Soil Description | T



LEGEND

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

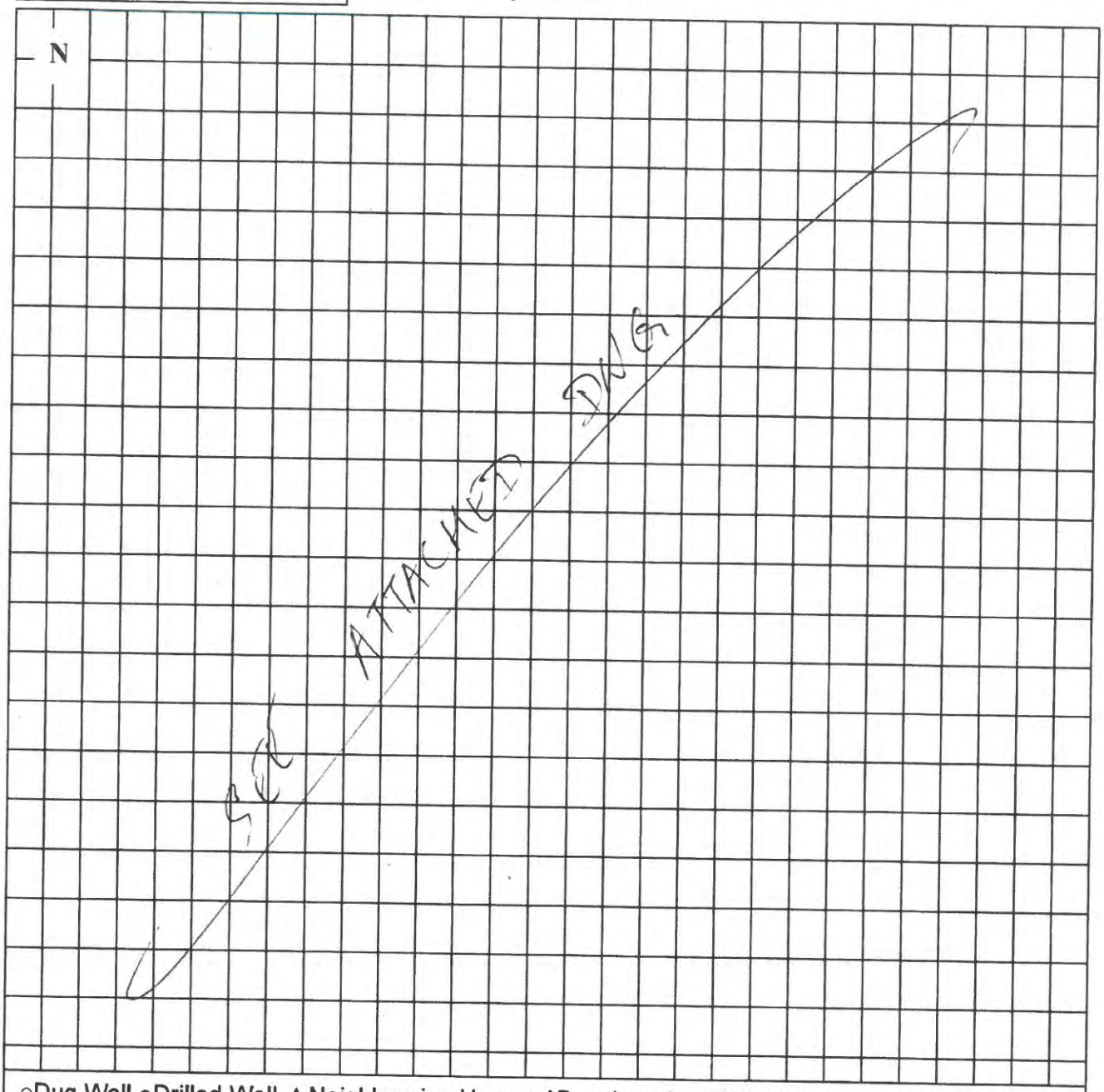
Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

Do Not Complete
Permit #
Revision # 24-040
Date

SEPTIC FILE #
OTTAWA

Scale: 1Block = NTS

Schedule 7
Layout Section



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

Elevations (metric only)
B.M. 100.663 m
B.M.Description Underside of siding
Exact Location NW corner of building

Min. of 5 elevations in proposed system area (in X pattern)
X_1 _____ X_2 _____
X_3 _____ X_4 _____
X_5 See attached dwg X_6 (toe) _____
X_7 _____ X_8 _____

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

R.V.C.A. RECEIVED
FEB - 5 2024

SEPTIC FILE #
Do Not Complete
Permit # 24-040
Revision #
Date OTTAWA

OFFICE + WAREHOUSE BUILDING

Schedule 8
Fixture unit count

Fixtures	# OFFICE	+	# WAREHOUSE	X	unit count	=	Fixture Count OFFICE	Fixture Count WAREHOUSE
Bathroom								
Bathroom group (**toilet, sink and tub or shower**) installed in the **same** room	1	+	0	X	6	=	6	–
Bathtub with/without overhead shower		+		X	1.5	=		–
Shower stall		+		X	1.5	=		
Wash basin (**SINK**) (1½inch trap)	7	+	0	X	1.5	=	10.5	–
Watercloset (**TOILET**) tank operated	8	+	0	X	4	=	32	–
Urinal (blow out type)	1	+	0	X	4	=	4	–
Kitchen								
Dishwasher		+		X	1	=		
Sink with/without garbage grinder(s), domestic and other small type single, double or 2 single with a common trap		+		X	1.5	=		
Other								
Domestic washing machine		+		X	1.5	=		
Combination sink and laundry tray single or double (Installed on 1½ trap)		+		X	1.5	=		
						***Total:**	52.5	–

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

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

Dave — Feb 02, 2024

Agent/~~Owner~~ signature **Date**

SEPTIC FILE #
24 - 040
OTTAWA

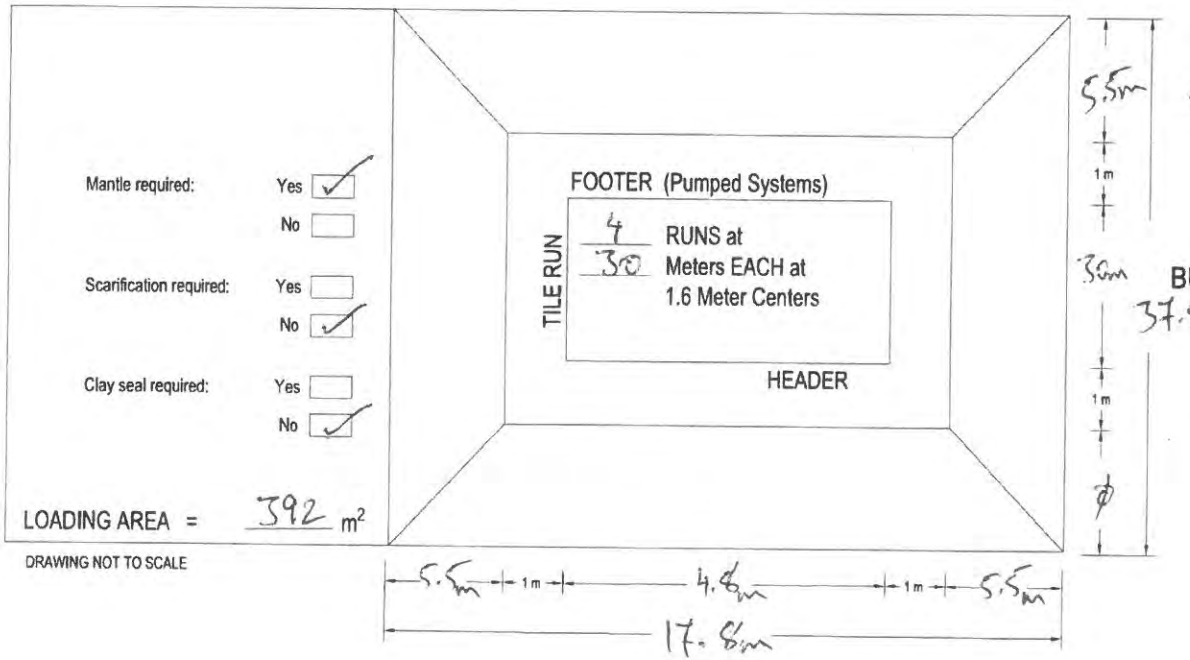
ASB Greenworld
2545 9th Line Rd.

Warehouse		
0 Watercloset	950 Per Washroom	0 L/day
3 Loading Bay	150 Per Loading Bay	450 L/day
0 Floor Drains	125 Per FD(not pressurized)	0 L/day
Sub-Total		450 L/day

Office		
15 Employees	75 Per Employee	1125 L/day
260m²	75 Per 9.3m²	2100 L/day
Governing flow		2100 L/day

Total	2550 L/day

Plan View

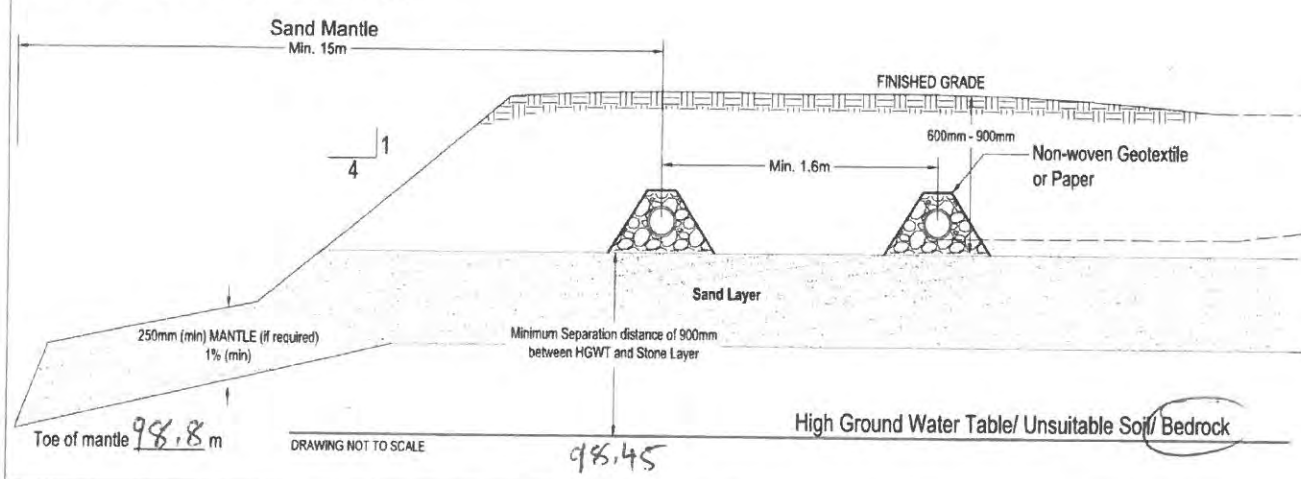


Ottawa Septic System Office / Bureau des systèmes septiques d'Ottawa

TYPICAL DRAWING A

BURIED OR RAISED TILE BED - ABSORPTION TRENCH METHOD

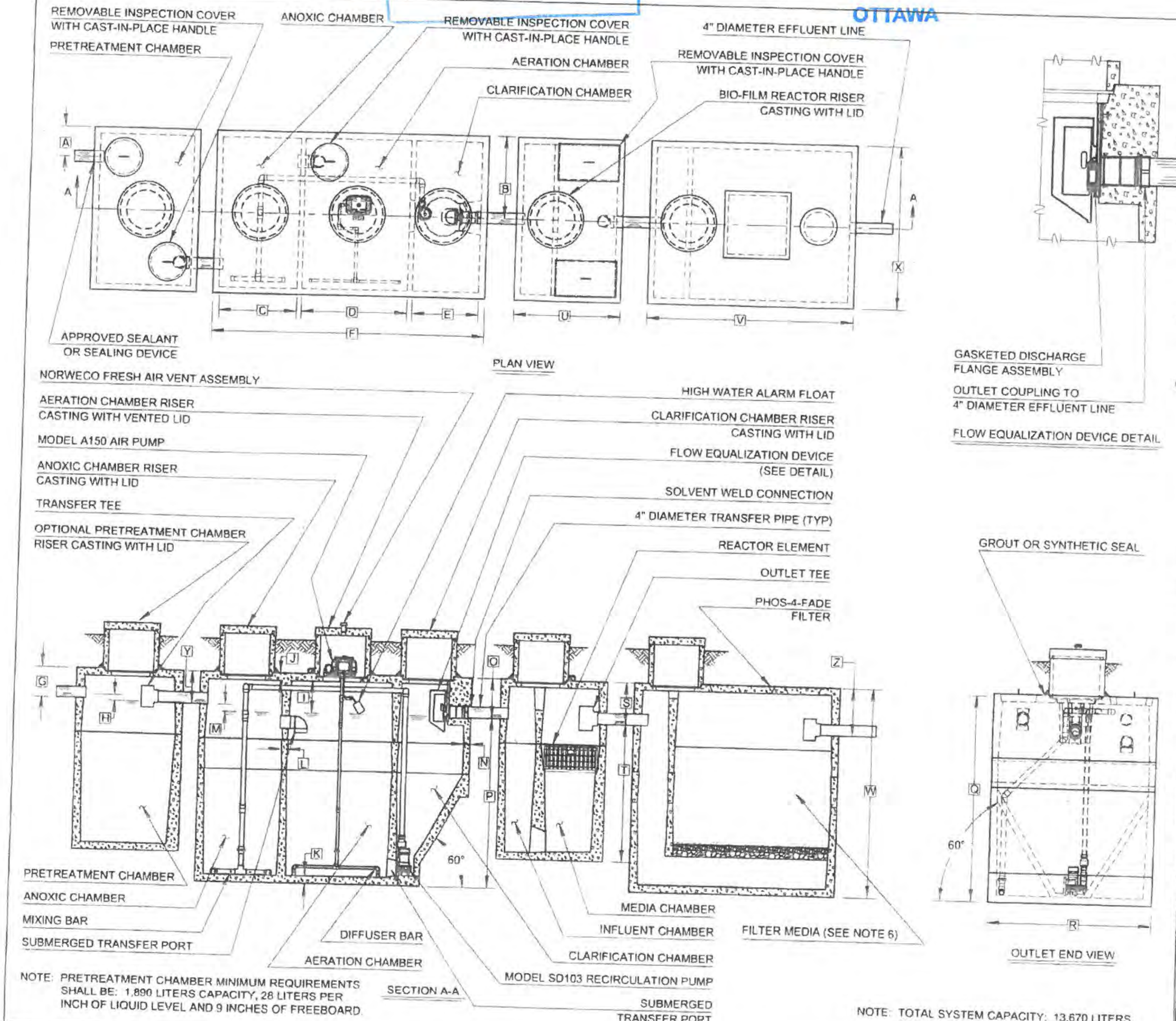
Cross-Section Profile



	Proposed Installation Grades	Approved Installation Grades	Existing Grade
Finished Grade	99.95		
Pipe invert	99.50		
Bottom of Clear Stone	99.35		
Bottom of Sand	98.90		

R.V.C.A. RECEIVED
FEB - 5 2024

SEPTIC FILE #
24-040
OTTAWA



NOTE: PRETREATMENT CHAMBER MINIMUM REQUIREMENTS SHALL BE: 1,890 LITERS CAPACITY, 28 LITERS PER INCH OF LIQUID LEVEL AND 9 INCHES OF FREEBOARD.

NOTE: TOTAL SYSTEM CAPACITY: 13,670 LITERS
RATED CAPACITY: 3,020 LITERS PER DAY

GENERAL NOTES

1. FALL THROUGH THE HYDRO-KINETIC® PLANT FROM INLET INVERT TO OUTLET INVERT IS SEVEN INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
2. ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND CASTINGS TO GRADE. INSPECTION COVERS MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
3. TANK REINFORCED PER ACI STD. 318
4. REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
5. AIR PUMP MAY BE MOUNTED INSIDE THE RISER ABOVE THE AERATION CHAMBER OR MAY BE REMOTE MOUNTED UP TO 100 FEET FROM TANK.
6. BOTTOM LAYER CONTAINS 3" OF 3/4" TO 1" BASE MATERIAL. MIDDLE LAYER CONTAINS 2" OF 3/8" TO 1/2" BASE MATERIAL. TOP LAYER CONTAINS 23" OF PHOS-4-FADE ADSORPTIVE MEDIA.

CAN/BNQ 3680-600 TREATMENT LEVEL
CLASS B - IV, D - I, N - I, P - II

PROJECT ENGINEER'S APPROVAL:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED.

DATE: ____
NAME: ____

CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED.

DATE: ____
NAME: ____

CRITICAL DIMENSIONS

A	1'- 0"	N	0'- 2 1/2"
B	2'- 9"	O	1'- 4"
C	2'- 8"	P	5'- 8"
D	3'- 7"	Q	7'- 0"
E	2'- 3"	R	5'- 6"
F	9'- 3"	S	1'- 5"
G	1'- 0"	T	4'- 7"
H	0'- 1"	U	3'- 7 1/2"
I	1'- 1"	V	7'- 0"
J	0'- 3"	W	7'- 0"
K	0'- 3"	X	5'- 6"
L	0'- 2"	Y	1'- 1"
M	0'- 3"	Z	1'- 7"

U.S. AND FOREIGN PATENTS PENDING

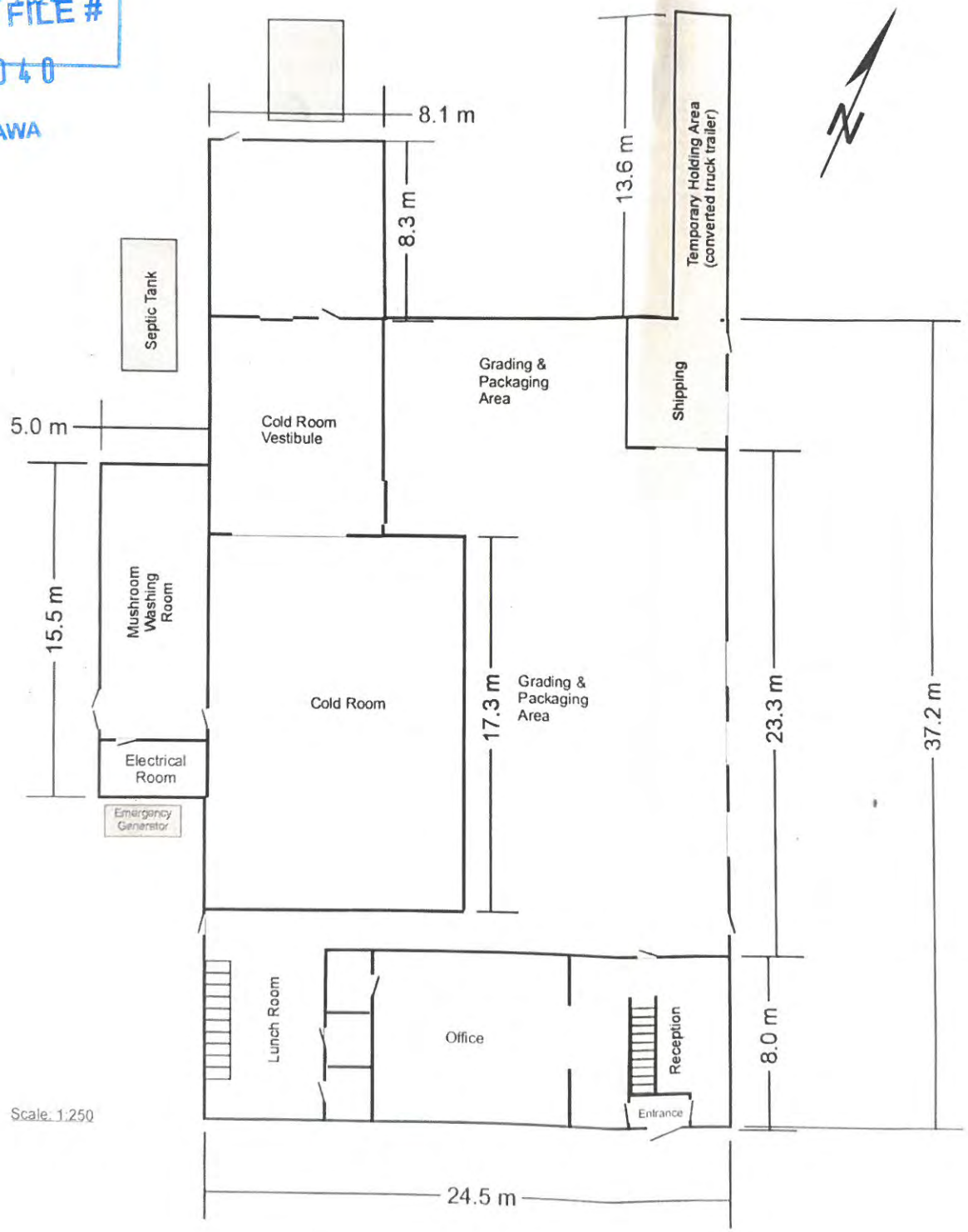
norweco®

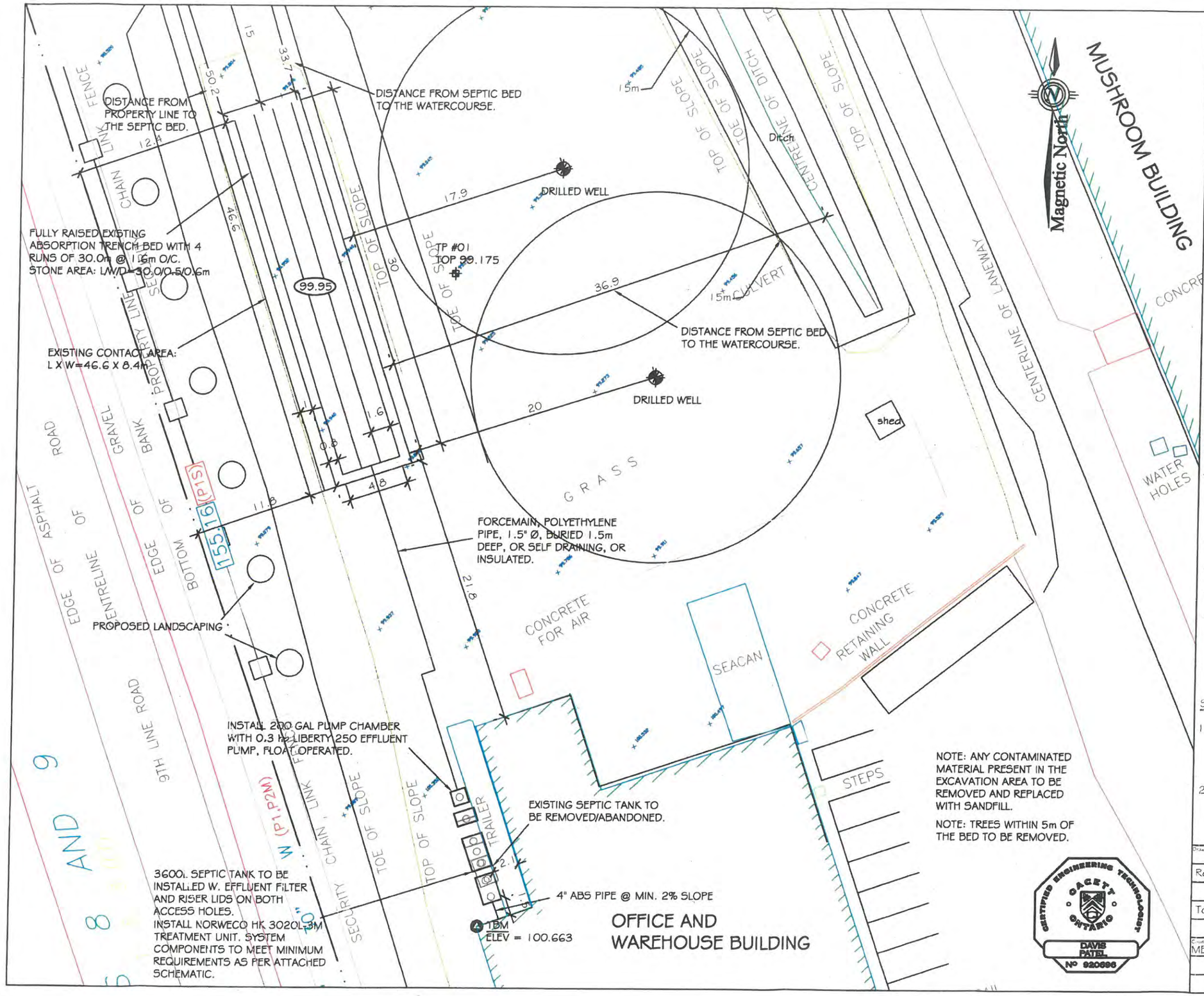
HYDRO-KINETIC® MODEL WASTEWATER TREATMENT SYSTEM WITH EXTERNAL PRETREATMENT CHAMBER AND PHOS-4-FADE FILTER

© MMXVII

01-10-2017 | A
NPD
JMM
05-27-2016
NTS
PC-5-1169

Office and Grading & Packaging Building





NOTES:

1. ALL TREATMENT UNITS AND LEACHING BED ARE TO BE INSTALLED IN ACCORDANCE WITH MINIMUM OBC CLEARANCE DISTANCES. ANY OMISSIONS OR INACCURACIES SHALL BE BROUGHT TO THE ATTENTION OF GVE AND OSSO.

2. CARE IS TO BE EXERCISED DURING CONSTRUCTION ACTIVITIES NEAR OVERHEAD HYDRO WIRES.

3. EXISTING ELEVATIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

4. SOIL CONDITIONS ARE ACCURATE FOR THE LOCATIONS SHOWN. CONTRACTOR MUST CONTACT THE DESIGN ENGINEER OR REGULATORY AUTHORITY SHOULD SOIL CONDITIONS DIFFER.

5. ALL DIMENSIONS AND CONDITIONS TO BE VERIFIED ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALE.

6. UTILITY LOCATES SHALL BE COMPLETED PRIOR TO ANY EXCAVATION.

7. THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

8. THIS DOCUMENT IS COPYRIGHT PROTECTED AND IS THE SOLE PROPERTY OF GVE GROUP. THIS DRAWING SHALL NOT BE ALTERED IN ANY MANNER.

9. EXISTING LOT SERVICED WITH A DRILLED WELL.

METRIC:

DISTANCES AND ELEVATIONS SHOWN ON THIS PLAN ARE IN METERS AND MAY BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

LEGEND:

⬭	PROPOSED ELEVATION
x	EXISTING ELEVATION
———	EXISTING WORKS
———	PROPOSED SEWAGE WORKS
—o—o—	FENCE LINE
—·—	PROPERTY LINE
TBM	TEMPORARY BENCH MARK (DESCRIPTION: UNDERSIDE OF SIDING)
⊞	TEST PIT LOCATION

SEPARATION DISTANCES:

1. MINIMUM CLEARANCE FROM SEPTIC PIPE TO:
   LOT LINE = 5.0m
   HOUSE = 7.0m
   DRILLED WELL = 17.0m

2. MINIMUM CLEARANCE FROM TREATMENT UNITS TO:
   LOT LINE = 3.0m
   HOUSE = 1.5m
   DRILLED WELL = 15.0m

CERTIFIED ENGINEERING TECHNOLOGIST ONTARIO DAVIS PATEL Nº 920696

R.V.C.A. RECEIVED
FEB - 5 2024
SEPTIC FILE #
24-040
OTTAWA

Drawn By: DP	Designed By: DP	Checked By: WS	
Rev.	Description	Date	Approved
Township	Plan# / Lot / Sublot / Con	Dwg. No.: SP7075-23-ATB	
County: METCALFE	Civic Address: 2545 9TH LINE RD.	Date: 22/01/24	Scale: 1:300

GREEN VALLEY ENVIRONMENTAL

On Site Sewage Treatment Plan for the Residence of:
ASB GREENWORLD

DISTANCE FROM PROPERTY LINE TO THE SEPTIC BED.

DISTANCE FROM SEPTIC BED TO THE WATERCOURSE.

DISTANCE FROM SEPTIC BED TO THE WATERCOURSE.

FULLY RAISED EXISTING ABSORPTION TRENCH BED WITH 4 RUNS OF 30.0m @ 1.6m O/C.
STONE AREA: LW/D=30.0/0.5/0.6m

EXISTING CONTACT AREA: LX W=46.6 X 8.4m

PROPOSED LANDSCAPING

INSTALL 200 GAL PUMP CHAMBER WITH 0.3 hp LIBERTY 250 EFFLUENT PUMP, FLOAT OPERATED

3600L SEPTIC TANK TO BE INSTALLED W. EFFLUENT FILTER AND RISER LIDS ON BOTH ACCESS HOLES. INSTALL NORWECO HK 3020L-BM TREATMENT UNIT. SYSTEM COMPONENTS TO MEET MINIMUM REQUIREMENTS AS PER ATTACHED SCHEMATIC.

FORCEMAIN, POLYETHYLENE PIPE, 1.5" Ø, BURIED 1.5m DEEP, OR SELF DRAINING, OR INSULATED.

EXISTING SEPTIC TANK TO BE REMOVED/ABANDONED.

TBM ELEV = 100.663

4" ABS PIPE @ MIN. 2% SLOPE

OFFICE AND WAREHOUSE BUILDING

Ditch

Magnetic North

CENTERLINE OF LANEWAY

Feb 20/24

CERTIFIED ENGINEERING TECHNOLOGIST
DAVIS PATEL
ONTARIO
No 920896

NOTES:

1. ALL TREATMENT UNITS AND LEACHING BED ARE TO BE INSTALLED IN ACCORDANCE WITH MINIMUM OBC CLEARANCE DISTANCES. ANY OMISSIONS OR INACCURACIES SHALL BE BROUGHT TO THE ATTENTION OF GVE AND OSSO.

2. CARE IS TO BE EXERCISED DURING CONSTRUCTION ACTIVITIES NEAR OVERHEAD HYDRO WIRES.

3. EXISTING ELEVATIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

4. SOIL CONDITIONS ARE ACCURATE FOR THE LOCATIONS SHOWN. CONTRACTOR MUST CONTACT THE DESIGN ENGINEER OR REGULATORY AUTHORITY SHOULD SOIL CONDITIONS DIFFER.

5. ALL DIMENSIONS AND CONDITIONS TO BE VERIFIED ON SITE, FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALE.

6. UTILITY LOCATES SHALL BE COMPLETED PRIOR TO ANY EXCAVATION.

7. THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

8. THIS DOCUMENT IS COPYRIGHT PROTECTED AND IS THE SOLE PROPERTY OF GVE GROUP. THIS DRAWING SHALL NOT BE ALTERED IN ANY MANNER.

9. EXISTING LOT SERVICED WITH A DRILLED WELL.

METRIC:

DISTANCES AND ELEVATIONS SHOWN ON THIS PLAN ARE IN METERS AND MAY BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

LEGEND:

⬭	PROPOSED ELEVATION
x	EXISTING ELEVATION
———	EXISTING WORKS
———	PROPOSED SEWAGE WORKS
—o—o—	FENCE LINE
—·—	PROPERTY LINE
TBM	TEMPORARY BENCH MARK (DESCRIPTION: UNDERSIDE OF SIDING)
▚	TEST PIT LOCATION

SEPARATION DISTANCES:

1. MINIMUM CLEARANCE FROM SEPTIC PIPE TO:
LOT LINE = 5.0m
HOUSE = 7.0m
DRILLED WELL = 17.0m

2. MINIMUM CLEARANCE FROM TREATMENT UNITS TO:
LOT LINE = 3.0m
HOUSE = 1.5m
DRILLED WELL = 15.0m

R.V.C.A. RECEIVED
FEB - 5 2024
SEPTIC FILE #
24-040
OTTAWA

Drawn by: DP	Designed by: DP	Checked by: WS	
Rev.	Description	Date	Approved

Township	Plan#	Lot	Sublot	Con	Drwg. No.: SP7075-23-ATB
County: METCALFE	Civic Address: 2545 9TH LINE RD.				Date: 22/01/24 Scale: 1:500

GREEN VALLEY ENVIRONMENTAL

On Site Sewage Treatment Plan for the Residence of:
ASB GREENWORLD

TOPOGRAPHICAL PLAN OF SURVEY

OF PART OF

LOTS 19 AND 20
CONCESSION 9

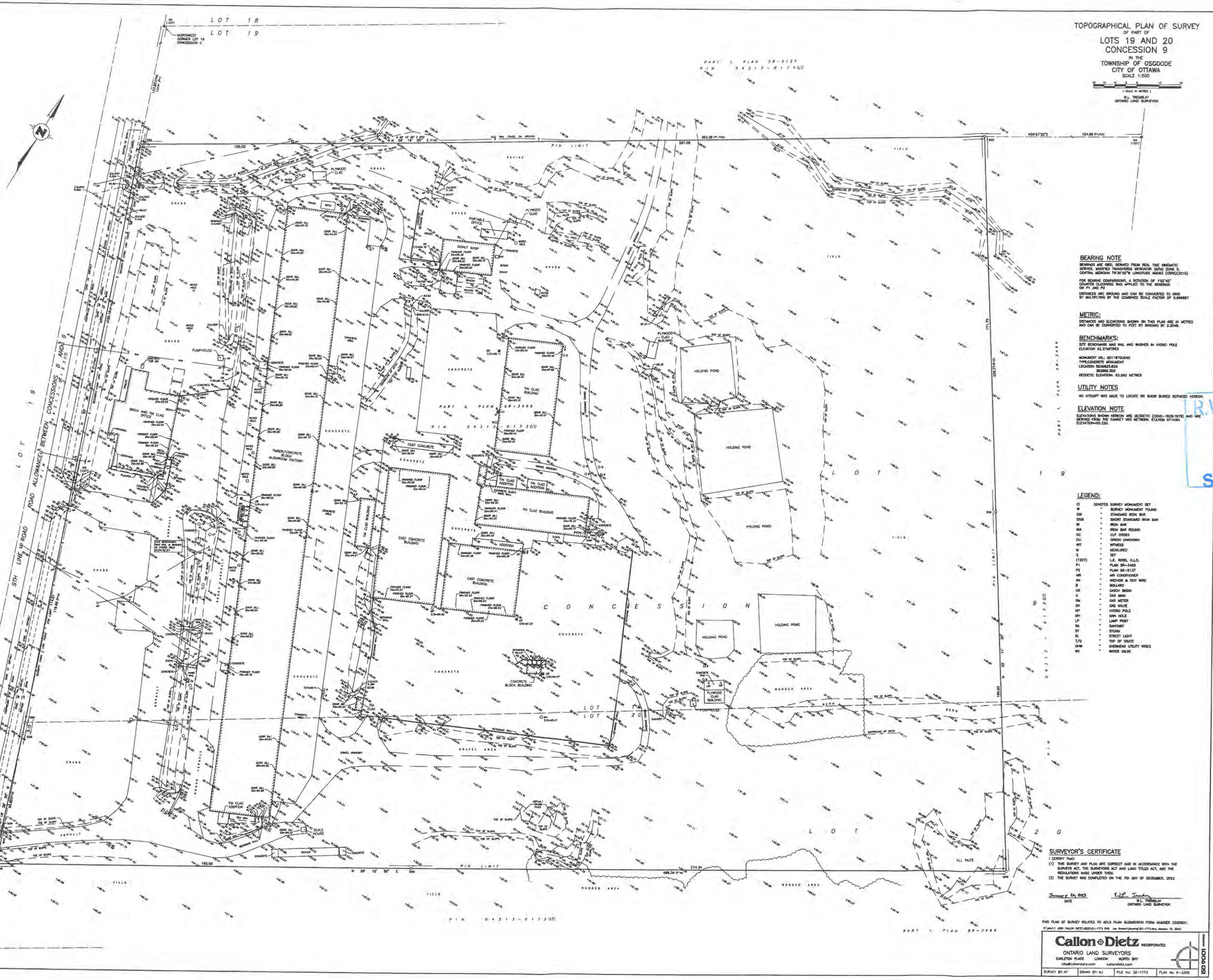
IN THE

TOWNSHIP OF OSGOODE
CITY OF OTTAWA

SCALE 1:500

(SCALE IN METRES)

W.L. TREMBLAY
ONTARIO LAND SURVEYOR



BEARING NOTE

BEARINGS ARE GRID, DERIVED FROM REAL TIME KINEMATIC SERVICE, MODIFIED TRANSVERSE MERCATOR (MTM) ZONE 9, CENTRAL MERIDIAN 76°30'00"W LONGITUDE, NAD83 (CSRS)(2010)

FOR BEARING COMPARISONS, A ROTATION OF 1°02'45" COUNTER CLOCKWISE WAS APPLIED TO THE BEARINGS ON P1 AND P2

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999957

METRIC:

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

BENCHMARKS:

SITE BENCHMARK MAG NAIL AND WASHER IN HYDRO POLE
ELEVATION 92.574METRES

MONUMENT NO.: 0011870040
TYPE:CONCRETE MONUMENT
LOCATION: 5036825.826
383889.300
GEODETIC ELEVATION: 83.950 METRES

UTILITY NOTES

NO ATTEMPT WAS MADE TO LOCATE OR SHOW BURIED SERVICES HEREON.

ELEVATION NOTE

ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928:1978) AND ARE DERIVED FROM THE CANNET MIS METRONIC STATION OTTAWA ELEVATION=65.330.

LEGEND:

☐	DENOTES	SURVEY MONUMENT SET
IR	=	SURVEY MONUMENT FOUND
SIB	=	STANDARD IRON BAR
SSIB	=	SHORT STANDARD IRON BAR
IB	=	IRON BAR
IBR	=	IRON BAR ROUND
CC	=	CUT CROSS
CU	=	CROSS UNKNOWN
WIT	=	WITNESS
M	=	MEASURED
S	=	SET
(1227)	=	L.E. ROBEL, O.L.S.
P1	=	PLAN 5R-3462
P2	=	PLAN 5R-5137
AIR	=	AIR CONDITIONER
AN	=	ANCHOR & GUY WIRE
B	=	BOLLARD
CB	=	CATCH BASIN
C	=	GAS MAIN
GM	=	GAS METER
GV	=	GAS VALVE
HP	=	HYDRO POLE
MH	=	MAN HOLE
LP	=	LAMP POST
SA	=	SANITARY
ST	=	STORM
SL	=	STREET LIGHT
T/G	=	TOP OF GRATE
OHW	=	OVERHEAD UTILITY WIRES
WV	=	WATER VALVE

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

(1) THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND LAND TITLES ACT, AND THE REGULATIONS MADE UNDER THEM.

(2) THE SURVEY WAS COMPLETED ON THE 7th DAY OF DECEMBER, 2022

January 26, 2023
DATE

W.L. TREMBLAY
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO ADLS PLAN SUBMISSION FORM NUMBER 2202801.

Callon Dietz INCORPORATED
ONTARIO LAND SURVEYORS
DARLINGTON PLACE LONDON NORTH BAY
info@callondietz.com callondietz.com

SURVEY BY: KT	DRAWN BY: HJ	FILE No: 32-1773	PLAN No: X-3309

Land Man Inc. Site & Landscape Plan for Zoning By-Law & Official Plan Amendments

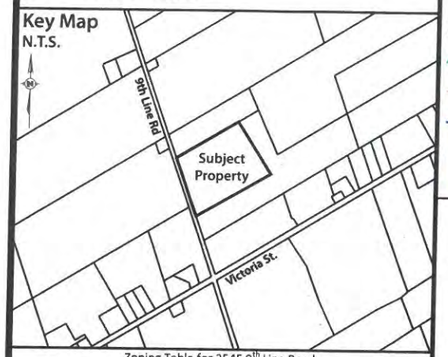
2545 9th Line Road
Part Lots 19 and 20, Concession 9
Geographic Township of Osgoode
CITY OF OTTAWA

Applicant: ASB Greenworld Ltd.
332911 Plank Line Rd
Mount Elgin, ON N0J1N0

Engineer: GHD Limited
179 Colonnade Road South
Suite 400
Ottawa, Ontario K2E 7J4

Surveyor: Callon Dietz Inc.
19 Roe Street
Carleton Place, ON K7C 0N3

Key Map
N.T.S.



Legend

- Wooded Area
- Fire Route (12m Radii)
- Overhead Wires
- UP Utility Pole
- AN Anchor

Zoning Table for 2545 9th Line Road

Zone Provisions	Current Zone Requirements (RU Zone)	Proposed Zone Requirements (RG Zone)	Existing / Proposed Standards
Lot Width (min)	50m	30m	335.7m
Lot Area (min)	0.8ha	0.4ha	14.285ha
Front Yard (min)	10m	15m	**11.3m** (office)
Rear Yard (min)	10m	15m	**187.5m** (storage)
Interior Side (min)	5m	8m (other cases)	**22.4m** (mushroom facility not in use) **89.5m** (building with production line)
Corner Side (min)	10m	12m	N/A
Height (max)	12m	15m	Varies (5 – 10m)
Lot Coverage (max)	20%	50%	10.1% (all buildings)
Parking (min)**	Office – 9 spaces Facility – 41 spaces	Office – 9 spaces Facility – 41 spaces	Office – 9 spaces Facility – 50 spaces
Bicycle Parking (min)	6 spaces (1/1000sqm)	6 spaces (1/1000sqm)	6 spaces
Open Storage (max)	None	a) Not permitted within required Front Yard b) Screened from public streets and residential uses/zones	Located Outside of the Required Front Yard with Tree Screening Proposed along the Public Road

** - All parking for the site was calculated based on the light industrial use rate, 0.8 spaces/100sqm for the first 5,000sqm of GFA, 0.4 spaces/100sqm above 5,000sqm of GFA, only buildings to be used were included

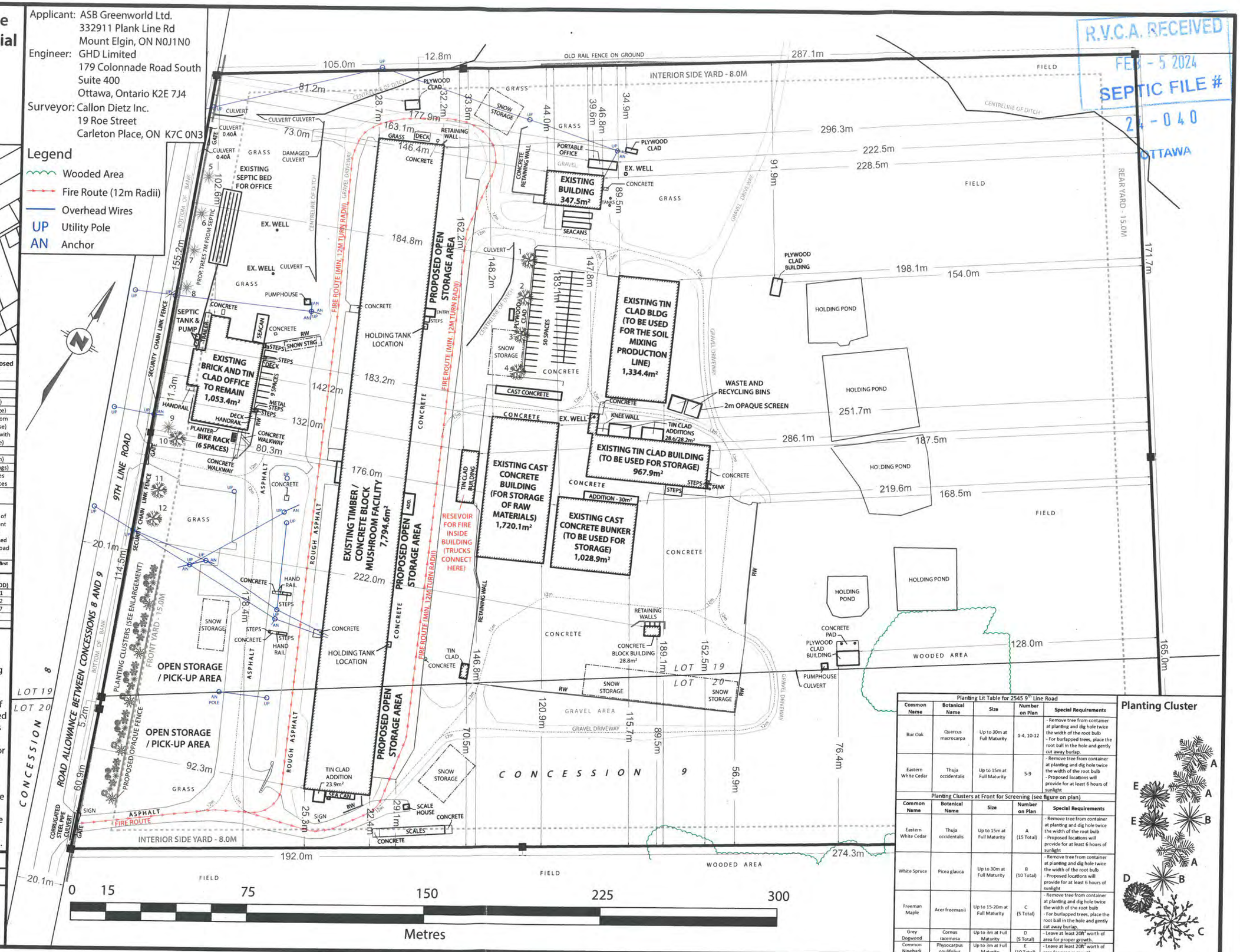
REV#	Revision	By	Date (YY/MM/DD)
1	Site & Landscape Plan Issued for Review	C. Clarke	23/02/01
2	Revised per Comments dated April 24, 2023	C. Clarke	23/05/12
3	Revised per Comments dated November 2, 2023	C. Clarke	23/11/27

Notes:

1. Phase I of the site plan for the new use will utilize existing on-site buildings for operations. No new buildings and no building demolition is proposed at this time.
2. Open storage will be directed to the concrete area east of the existing timber / concrete block building previously used for mushroom production. Open storage / Pick-up of goods is proposed beyond the required front yard of 15m.
3. Existing driveways and site accesses will be maintained for the proposed use. **The current fire route with access to the on-site fire suppression reservoir is shown.**
4. New plantings are proposed along the front of the site as screening. A new mix of plantings in clusters with an opaque fence is shown to screen the open storage / pick up area.
5. Boundary and dimensions of the subject property and the locations of all on-site features derived from a topographic plan of survey completed by Callon Dietz in January of 2023.

Version Date: November 27, 2023
File No. 22-130 | Drawn By: CC

ZanderPLAN
Your rural land planning experts
40 Sunset Boulevard, Perth, ON K7H 2Y4 613-264-9600



Planting Lit Table for 2545 9th Line Road

Common Name	Botanical Name	Size	Number on Plan	Special Requirements
Bur Oak	Quercus macrocarpa	Up to 30m at Full Maturity	1-4, 10-12	- Remove tree from container at planting and dig hole twice the width of the root bulb - For burlapped trees, place the root ball in the hole and gently cut away burlap.
Eastern White Cedar	Thuja occidentalis	Up to 15m at Full Maturity	5-9	- Remove tree from container at planting and dig hole twice the width of the root bulb - Proposed locations will provide for at least 6 hours of sunlight

Planting Clusters at Front for Screening (see figure on plan)

Common Name	Botanical Name	Size	Number on Plan	Special Requirements
Eastern White Cedar	Thuja occidentalis	Up to 15m at Full Maturity	A (15 Total)	- Remove tree from container at planting and dig hole twice the width of the root bulb - Proposed locations will provide for at least 6 hours of sunlight
White Spruce	Picea glauca	Up to 30m at Full Maturity	B (10 Total)	- Remove tree from container at planting and dig hole twice the width of the root bulb - Proposed locations will provide for at least 6 hours of sunlight
Freeman Maple	Acer freemanii	Up to 15-20m at Full Maturity	C (5 Total)	- Remove tree from container at planting and dig hole twice the width of the root bulb - For burlapped trees, place the root ball in the hole and gently cut away burlap.
Grey Dogwood	Cornus racemosa	Up to 3m at Full Maturity	D (5 Total)	- Leave at least 20ft² worth of area for proper growth.
Common Ninebark	Physocarpus opulifolius	Up to 3m at Full Maturity	E (10 Total)	- Leave at least 20ft² worth of area for proper growth.

Planting Cluster

Rideau Valley Conservation Authority

Permit
Part 8 – Sewage System
Ontario Building Code

Do Not Complete
Permit No 24-040
Revision No
Date
Related Application

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

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

Inspected & Recommended by: Ryan Hiemstra
Owner: ASB Greenworld Ltd.
Inspection Date & Time:
Weather:
Civic Address: 2545 9th Line Road
Legal: Con 9, Lot 19 & 20 RP
In the former Township/City of Osgoode

Design Flow for Commercial / Institutional / Industrial (as per Table 8.2.1.3.B)

Q: 2550 L/day

pretreatment tank 3600 L
effluent filter YES
pump rate 0.3 HP L/15 MIN
treatment unit Norweco 3020 HK
number of units 1

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

ELEVATION ☐ In Ground ☐ Partially Raised ☐ Fully Raised

TYPE OF SYSTEM

❒ **Trench**
○ **Pipe and Stone or** ○ **Chambers**
type of chamber
loading area m^2
total trench length m
trench configuration

❒ **Dispersal Bed**
○ BMEC ○ Type A ○ Type B
stone m^2
sand m^2
pipe
weight of sand kg

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

❒ **Filter Media Bed**
stone m^2
extended base m^2
pipe
weight of filter media kg
loading area m^2

❒ **Class 5 Holding Tank**

■ **Septic Tank Only**

Manager, Septic System Approvals: [signature] Permit Date: FEBRUARY 20, 2024
Comments: 1. Replace existing septic tank with Norweco 3020HK treatment unit

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

Manager, Septic System Approvals: Revision Date:
Comments:

NOTE: For further details, refer to corresponding application.

Appendix F

Site Environmental Compliance Approval

Ministry of the Environment, Conservation and Parks
1st Floor
135 St Clair Ave W
Toronto ON M4V 1P5
Fax: (416) 314-8452
Telephone: (437) 882-3042

Ministère de l'Environnement, de la Protection de la nature et des Parcs
135 av St Clair O
Toronto ON M4V 1P5
Télécopieur : (416) 314-8452
Téléphone : (437) 882-3042

Ontario

July 11, 2024

Michael Watcher, Chief Executive Officer
McMillan
40 University Ave, No. Suite 904
Toronto, Ontario
M5J 1T1

To whom it may concern:

Re: Notification of Change of Ownership
Reference Number 2077-D73NNU

The Ministry of the Environment (the "Ministry") acknowledges receipt of your letter dated July 10, 2024 requesting a change in company ownership*:*

FROM: Land Man Inc.

TO: ASB Greenworld Ltd.

By this letter, the Ministry advises you that your notification of change in company ownership has been registered in our records for the following Approval(s):

[Approval(s) – Project type: Sewage]:

6569-6DRHP2

The Ministry will not be providing you with an amended approval(s) to reflect the change in company ownership. Therefore, this letter must be appended to its corresponding approval(s). The ownership change will be included in any future amended approval(s).

If you have any questions regarding the above, please contact me at the above phone number.

Yours truly,

Namee Choi

cc: District Office - MECP Toronto

File Storage Number: 0359

Ontario

Ministry of the Environment

Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
INDUSTRIAL SEWAGE WORKS
NUMBER 6569-6DRHP2

Continental Mushroom Corporation (1989) Ltd.
P.O. Box 520
Metcalfe, Ontario
K0A 2P0

Site Location: Continental Mushroom Corporation (1989) Ltd.
2545 9th Line Road (Lots 19 & 20, Concession 9)
Ottawa City

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

wastewater recovery and re-use system to eliminate the discharge of storm run-off and the process wastewater generated from the facility at the above location, as follows:

PROPOSED WORKS

- one (1) pond with an approximate volumetric capacity of 500 cubic metres (100,000 imperial gallons) with approximate dimensions of 23 square metres by 1 metre deep, to provide additional storage capacity for the prevention of overflow from the works to the North Castor River;

EXISTING WORKS

- four (4) submersible pumps each rated at 5.0 litres/second at 7.2 of TDH to elevate wastewater from collection sumps at the mushroom growing building and packaging area to a gravity line which flows to an in-ground tank (Tank A);

- one (1) in-ground concrete tank (Tank A) with a volumetric capacity of 22,500 litres complete with a submersible pump rated at 5.0 litres/second at 7.2 metres of TDH for transfer of the wastewater to an adjacent tank (Tank B);

- one (1) in-ground concrete tank (Tank B) with a volumetric capacity of 45,000 litres complete with a submersible pump rated at 6.2 litres/second at 6.8 metres of TDH for return of screened wastewater either to the Mushroom Growing Building or to discharge to a catch basin/manhole;

- one (1) catch basin/manhole (MH S1) for collection of run-off from areas east of Mushroom Growing Building, west of Tunnel Building, west of Compost Production Wharf and the wastewater flow from Tank B prior to discharge by gravity to Tank D;

- one (1) in-ground concrete tank (Tank D) with a volumetric capacity of 22,500 litres and equipped with a pump rated at 4.5 litres/second at 5.0 metres of TDH for collection of washwater from the Tunnel Building, Machine Storage Building and catch basin/manhole (MH S1) with discharge to a screen (Kason Model K40-1-53 vibrating screen) for removal of suspended solids and then to Pond # 1;

- one (1) waterproof lined recovery pond (Pond # 1) with a volumetric capacity of 450,000 litres and equipped with aeration nozzles to minimize anaerobic condition, associated odour problem and to prevent freezing of the wastewater during winter months;

- one (1) pump and piping system for transfer of wastewater to Tank B and to the two (2) above ground storage tanks (45,000 litres and 54,000 litres) located adjacent to Machine Storage Building for re-use of the wastewater;

- one (1) overflow detention pond (Pond # 2) with a volumetric capacity of 675,000 litres for storage of any excess

wastewater discharged from the Pond # 1 as backup;

- one (1) emergency pond (Pond # 3) with a volumetric capacity of 414,000 litres for storage of wastewater, if any, discharged from Pond # 2 as backup;

- one (1) twinned pair tanks (Tank F) with a total volumetric capacity of 180,000 litres for collection of run-off from Compost Production Wharf via one (1) 13,500 litre capacity tank and one (1) screen (Kason Cross Flow Sieve);

- one (1) pump rated at 10.0 litres/second at 6.0 metres of TDH for transfer of run-off from the Tank F to the Compost Production Wharf for use in compost production;

- one (1) emergency overflow pond (Pond # 4) with a volumetric capacity of 166,500 litres for storage of run-off in the event of overflow from Tank F; and

- all other appurtenances essential for proper operation of the aforementioned sewage works;

all in accordance with the following documents:

1. The Application for Approval of Industrial Sewage Works dated November 23, 2001 and the associated documents submitted by the Manager, Continental Mushroom Corporation (1989) Ltd., Metcalfe, Ontario.

2. The Application for Approval of Industrial Sewage Works dated April 4, 2005 submitted by Lyle Whitham, the Manager, Continental Mushroom Corporation (1989) Ltd., Metcalfe, Ontario and all supporting information.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"*Certificate*" means this entire certificate of approval document, issued in accordance with Section 53 of the Ontario Water Resources Act, and includes any schedules;

"*Director*" means any *Ministry* employee appointed by the Minister pursuant to section 5 of the Ontario Water Resources Act;

"*District Manager*" means the District Manager of the Ottawa District Office of the *Ministry*;

"*Ministry*" means the Ontario Ministry of the Environment;

"*Owner*" means Continental Mushroom Corporation (1989) Ltd. and includes its successors and assignees;

"*Works*" means the sewage works described in the *Owner*'s application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate*.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate*, the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate*.

(2) Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate*, the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(3) Where there is a conflict between the listed submitted documents, and the application, the application shall take

precedence unless it is clear that the purpose of the document was to amend the application.

2. EXPIRY OF APPROVAL

The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate*.

3. CHANGE OF OWNER

The *Owner* shall notify the *District Manager* and the *Director*, in writing, of any of the following changes within thirty (30) days of the change occurring:

(a) change of *Owner*;

(b) change of address of the *Owner*;

(c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager*; and

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager*.

4. OPERATION AND MAINTENANCE.

(1) The *Owner* shall ensure that the design minimum liquid retention volume(s) is maintained at all times.

(2) The *Owner* shall inspect the *Works* at least once a year and, if necessary, clean and maintain the *Works* to prevent the excessive buildup of sediments, oil/grit, and/or vegetation.

(3) The *Owner* shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the owner's offices for inspection by the *Ministry*. The logbook shall include the following:

(a) the name of the *Works*;

(b) the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed; and

(c) the date of each spill within the catchment area, including follow-up actions / remedial measures undertaken.

5. SLUDGE HANDLING

The owner shall handle and dispose of the sludge generated from the *Works* in accordance with Part V of the Environmental Protection Act.

6. RECORD KEEPING

The *Owner* shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this *Certificate*.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment..

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to approved works and to ensure that subsequent owners of the works are made aware of the certificate and continue to operate the works in compliance with it.

4. Condition 4 is included to require that the *Works* be properly operated and maintained such that the environment is protected .

5. Condition No. 5 is included to ensure that sludge generated from the works is disposed of in an acceptable manner.

6. Condition 6 is included to require that all records are retained for a sufficient time period to adequately evaluate the long-term operation and maintenance of the *Works*.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 9511-55QLME issued on February 21, 2002.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 4th day of July, 2005

Mohamed Dhalla, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

KD/
c: District Manager, MOE Ottawa.
Robert Stiles, NOTRA Inc.