For Office Use Only: File Number ANPL: Related File Number Pre-consultation Meeting Application Submitted Complete Application	Application Fee Conservation Authority Fee Well & Septic Info Provided Planner Public Notice Sign
Check the type of planning	application(s) you are submitting.
☐ Consent/Severance/Bour☐ Surplus Farm Dwelling SMinor Variance☐ Easement/Right-of-Way	ndary Adjustment Severance and Zoning By-law Amendment
Property Assessment Roll	Number: * 543-050-29900-0000
A. Applicant Information Name of Owner	ESLEY READINGS
It is the responsibility of the countries ownership within 30 days of	owner or applicant to notify the planner of any changes in such a change.
Address	885 Southdale Rd. W #404
Town and Postal Code	London, Ont. NGPOCS 519-282-0831,
Cell Number	Same as above
Email	Lesley Readings (a) smail com
Name of Applicant O	WNER IS APPLICANT
Address	
Town and Postal Code	
Phone Number	
Cell Number	
Email	



ı	Name of Agent	LEN GIRARD, P. ENG.				
A	Address	312 EDIE BLUD.				
7	Town and Postal Code	PORT ROWAN NOE IMO				
F	Phone Number	519-410-6589				
C	Cell Number	ře .				
E	mail	leonardgirard@icloud.com				
	Please specify to whom a Il correspondence and r wner and agent noted a	Il communications should be sent. Unless otherwise directed, otices in respect of this application will be forwarded to the				
\Box	Owner	■ Agent ■ Applicant				
e B	NONE					
	Location, Legal Des	cription and Property Information				
1.	Block Number and Urk	ude Geographic Township, Concession Number, Lot Number,				
	LOT 20					
	MORFOLK (1.1.7 30117 0179				
		S: 19 WOODSTOCK AVE, PORT ROWAN				
	Present Official Plan D	esignation(s):				
		SORT RESIDENTIAL				
2.		sion or site specific zone on the subject lands?				
	☐ Yes 웹 No If yes, p					
3.	Present use of the subj	ect lands:				



4	Please describe all existing buildings or structures on the subject lands and whether they are to be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application: SEE ATTACKS TO BE DAISED, DEVOLTED & ENABLED
5.	
6.	Please describe all proposed buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
7.	Are any existing buildings on the subject lands designated under the <i>Ontario Heritage Act</i> as being architecturally and/or historically significant? Yes \(\Bar{\text{No}} \) No \(\bar{\text{R}} \) If yes, identify and provide details of the building:
8.	If known, the length of time the existing uses have continued on the subject lands: 30 YRS+ (WITH CURRENT DWNZD) LIKELY 100 YRS TOTAL
9.	Existing use of abutting properties: COTTAGES
10.	Are there any easements or restrictive covenants affecting the subject lands? ☐ Yes No If yes, describe the easement or restrictive covenant and its effect:



C. Purpose of Development Application

Note: Please complete all that apply. Failure to complete this section will result in an incomplete application.

1. Site Information (Please refer to Zoning By-law to confirm permitted dimensions)

	Existing	Permitted	Provision	Proposed	Deficiency
Lot frontage	12.22m	15m		12.22 m	191
Lot depth	51.941m			51.94(m	
Lot width	12.22m			12.22m	
Lot area	1101.476m2			0,11ha	
Lot coverage	73.45m² 6.67°/6	15%		96.062m² 8.72°/	12
Front yard	7.35m	6 m		7.35m	
Rear yard	33.5m	9 m		33.54	
Height '	6.5m	9.1m		9.75 m	0.65m
Left Interior side yard	2.34n	1.2 m		2.34m	
Right Interior side yard	2 .93m	1.2m		2.93m	9
Exterior side yard (corner lot)					
Parking Spaces (number)	2	2		3	
Aisle width					
Stall size		3m x 5.8m			
Loading Spaces		,			
Other LIVING SPACE			150	192.124m² 17.44%	



2.	Please explain wh By-law:	y it is not possible to comply with the provision(s) of the Zoning
M.A. 3.	Consent/Severan severed in metric to Frontage:	ce/Boundary Adjustment: Description of land intended to be units:
	Depth: Width:	
	Lot Area:	
	Present Use:	
	Proposed Use:	
	Proposed final lot s	size (if boundary adjustment):
	If a boundary adjus	stment, identify the assessment roll number and property owner of
	the lands to which	the parcel will be added:
N.A.	Description of land Frontage:	intended to be retained in metric units:
	Depth:	
	Width:	
	Lot Area:	
	Present Use:	
	Proposed Use:	
	Buildings on retaine	ed land:
M.A.4.	Easement/Right-ounits: Frontage:	f-Way: Description of proposed right-of-way/easement in metric
	Depth:	
	-	



	Width:
	Area:
	Proposed Use:
N.A.	 Surplus Farm Dwelling Severances Only: List all properties in Norfolk County, which are owned and farmed by the applicant and involved in the farm operation
	Owners Name:
	Roll Number:
	Total Acreage:
	Workable Acreage:
	Existing Farm Type: (for example: corn, orchard, livestock)
	Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
	Date of Land Purchase:
	Owners Name:
	Roll Number:
	Total Acreage:
	Workable Acreage:
	Existing Farm Type: (for example: corn, orchard, livestock)
	Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
	Date of Land Purchase:
	Owners Name:
	Roll Number:
,	Total Acreage:
	Workable Acreage:
ŀ	Existing Farm Type: (for example: corn, orchard, livestock)
ı	Owelling Present?: ☐ Yes ☐ No If yes, year dwelling built
I	Date of Land Purchase:



Owners Name:
Roll Number:
Total Acreage:
Workable Acreage:
Existing Farm Type: (for example: corn, orchard, livestock)
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
Date of Land Purchase:
Owners Name:
Roll Number:
Total Acreage:
Workable Acreage:
Existing Farm Type: (for example: corn, orchard, livestock)
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
Date of Land Purchase:
Note: If additional space is needed please attach a separate sheet.
D. All Applications: Previous Use of the Property
Has there been an industrial or commercial use on the subject lands or adjacent lands? ☐ Yes No ☐ Unknown
If yes, specify the uses (for example: gas station, or petroleum storage):
2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites? ☐ Yes ■ No ☐ Unknown
B. Provide the information you used to determine the answers to the above questions:



N.A.4.	If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? \square Yes \square No
E.	All Applications: Provincial Policy
1.	Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the <i>Planning Act, R.S.O. 1990, c. P. 13?</i> A Yes
	If no, please explain:
2.	It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? Yes No
	If no, please explain:
	EX. COTTAGE USE TO CONTINUE
	Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? ☐ Yes To No.
	NOT APPLICABLE
	Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.



₽,	All Applications: Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable.
	Livestock facility or stockyard (submit MDS Calculation with application)
	☐ On the subject lands or ☐ within 500 meters – distance
	Wooded area ☐ On the subject lands or ☐ within 500 meters – distance
	Municipal Landfill ☐ On the subject lands or ☐ within 500 meters – distance
	Sewage treatment plant or waste stabilization plant ☐ On the subject lands or ☐ within 500 meters — distance
	Provincially significant wetland (class 1, 2 or 3) or other environmental feature On the subject lands or within 500 meters – distance LAKE EDIE ADMENT
	Floodplain The Subject lands or within 500 meters – distance LPRCA
	Rehabilitated mine site ☐ On the subject lands or ☐ within 500 meters – distance
	Non-operating mine site within one kilometre ☐ On the subject lands or ☐ within 500 meters – distance
	Active mine site within one kilometre ☐ On the subject lands or ☐ within 500 meters – distance
	Industrial or commercial use (specify the use(s)) ☐ On the subject lands or ☐ within 500 meters — distance
	Active railway line ☐ On the subject lands or ☐ within 500 meters – distance
	Seasonal wetness of lands ☐ On the subject lands or ☐ within 500 meters – distance
į	Erosion ■ On the subject lands or □ within 500 meters – distance LAKG ERIE ARFACENT
4	Abandoned gas wells □ On the subject lands or □ within 500 meters – distance



F.	Αl	Applications: Servicing and Access					
1.	Ind	Indicate what services are available or proposed: Water Supply					
		Municipal piped water Individual wells		Communal wells Other (describe below) SAND POINT			
	Se	ewage Treatment	-				
		Municipal sewers		Communal system			
		Septic tank and tile bed in good working order		-			
	Sto	orm Drainage					
		Storm sewers Other (describe below)		Open ditches			
2.	Exi	sting or proposed access to subject lands:					
		Municipal road		Provincial highway			
		Unopened road		Other (describe below)			
	Naı	me of road/street:		,			
G.	All	Applications: Other Information					
1.	Doe	es the application involve a local business? 🗆 Y	'es	No a			
		es, how many people are employed on the subje					
2.	ls thap	nere any other information that you think may be lication? If so, explain below or attach on a sep	us ara	eful in the review of this te page.			



H. Supporting Material to be submitted by Applicant

In order for your application to be considered complete, folded hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

- √1. Concept/Layout Plan
- √2. All measurements in metric
 - 3. Existing and proposed easements and right of ways
- √4. Parking space totals required and proposed
- √5. All dimensions of the subject lands
- 6. Dimensions and setbacks of all buildings and structures
- √7. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
- √8. Names of adjacent streets
- ✓9. Natural features, watercourses and trees

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

- On-Site Sewage Disposal System Evaluation Form (to verify location and condition)
- ☐ Environmental Impact Study
- Geotechnical Study / Hydrogeological Review
- ☐ Minimum Distance Separation Schedule
- ☐ Record of Site Condition

Your development approval might also be dependent on Ministry of Environment Conservation and Parks, Ministry of Transportation or other relevant federal or provincial legislation, municipal by-laws or other agency approvals.

All final plans must include the owner's signature as well as the engineer's signature and seal.



I. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required it is their solicitor's responsibility on behalf of the owner for the registration of all transfer(s) of land to the County, and/or transfer(s) of easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County:

Permission to Enter Subject Lands

Owner

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

Freedom of Information	
For the purposes of the Municipal Freedom of authorize and consent to the use by or the information that is collected under the author 13 for the purposes of processing this application of the purposes of processing this application. Owner/Applicant/Agent Signature	disclosure to any person or public body any ity of the <i>Planning Act. R.S.O.</i> 1990, c. <i>R.</i>
J. Owner's Authorization	
If the applicant/agent is not the registered ow application, the owner must complete the aut	ner of the lands that is the subject of this horization set out below.
I/Welands that is the subject of this application.	_am/are the registered owner(s) of the
I/We authorize	to make this application on ersonal information necessary for the shall be your good and sufficient
Ohlinar	
Owner	Data

*Note: If property is owned by an Ontario Ltd. Corporation, Articles of incorporation are required to be attached to the application.



Date

K. Declaration Lesley Readings	LONDON, ONTARIO
solemnly declare that:	010/010/1/1/10
all of the above statements and the statements of transmitted herewith are true and I make this solbelieving it to be true and knowing that it is of the under oath and by virtue of <i>The Canada Evidence</i>	lemn declaration conscientiously
In	Sesley Readings Owner/Applicant/Agent Signature



A Commissioner, etc.

PROPERTY DESCRIPTION: ' LOT 20 REGISTERED PLAN 252 NORFOLK COUNTY TOPOGRAPHIC SURVEY FOR: LESLEY READINGS ACTUAL NORTH #19 WOODSTOCK AVENUE P.I.N. 50114-0144 AVEUNE SCALE 1:100 WOODSTOCK (6.096 WAVE - REGISTERED PLAN 252) 0 1 2 3 4 5 UETRE5 METRIC DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONSERTED TO FEET BY DIMPOND BY 0.5048 CAUTION

- THIS IS NOT A PLAN OF SHIVEY AND SHALL NOT BE USED EXCEPT FOR THE PROPRIES WORLAND IN THE TREE BLOCK

- DO NOT CONNEY FROM BUS PLAN NOTES (1) - PROPERTY DWINESONS AND AS SHOWN ON BUNNETUTS REAL PROPERTY MODEL TO SHOW THE TERRET RESERVED LTD., PROJECT 22-18348, GAYDS TERRET R 2022 POMACU 20-MARK MARK STRUMENT & 2023

STR REGISTRANCE STRUCTURE STRUCTURE OF MIGHIN POLE 12.15m of 15 ft of 15 server processor and the colored electrons of 15 server processor haven a decorate electrons of 15 server processor have to softwar according to the colored colored to 15 server processor have the colored colored to 15 server processor and 15 server proces (3) - THIS SKETCH WAS COMPLETED FROM FIELD WORK COMPLETED ON THE TITM DAY OF JANUARY, 2023 (4) — THIS FRAT OF CHANGET, CLUCO

(4) — THIS FROMERTY IS BOTH SUBJECT TO A RIGHT-OF-WAY AND TOOSTHER WITH
A RIGHT-OF-NAY AS SET OUT OF RECISIONED INSTRUMENTS INTOGOD?
AND INSUSESS. LEGEND LLOU-TYPE

- AREA OF 10 20 = 43.2 SOUNCE METES

- DRELLING LAREA (DRELLINGS DE 17 9 K

- DRELLING LAREA (DRELINGS DE 17 9 K

- DRELLING LAREA (DRELLINGS DE 17 9 K

- DRELLING DIV a 177 Alm. - O DENOTES DECIDUOUS THREE - DEMOTES HYDRO POLE
- (HTS) DENOTES NOT TO SCALE 6 107 107 12.229 "E" LOT BEACH ERIE LAKE KIM HUSTED SURVEYING -TD.

ONTARIO LAND SURVEYOR

SO HAMNY STREET, ILLSOSHURI, ONTARIO, 1489 348

PROJECT 22-1834910PO | 1882 6555 6516

PROJECT 22-1834910PO | 1882 6555 6516

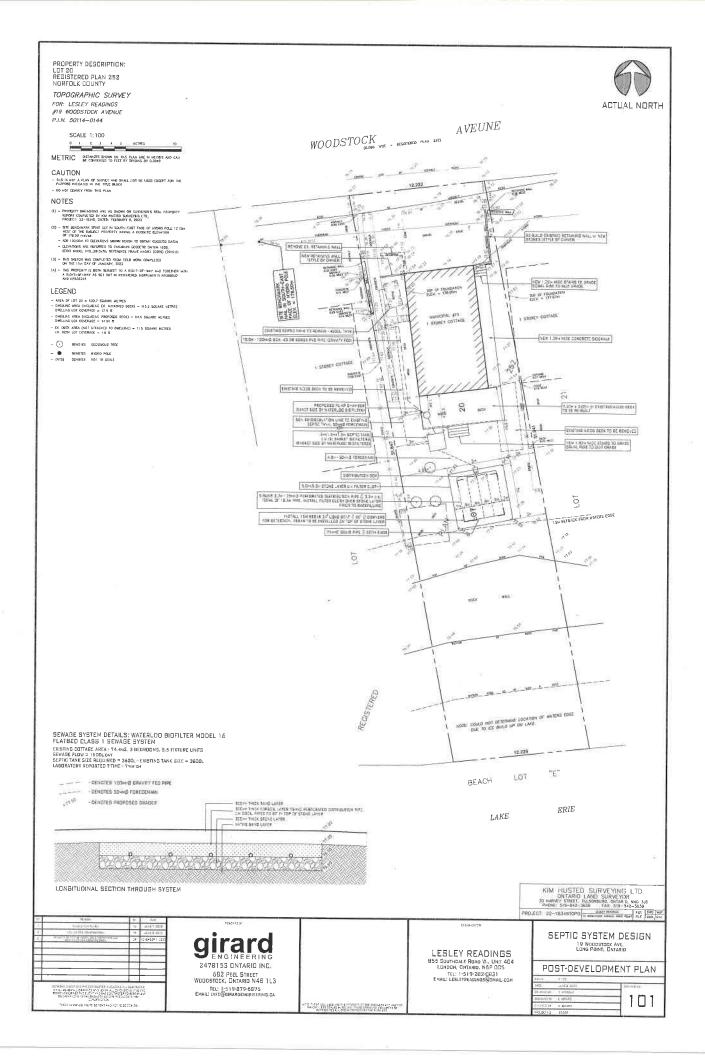
PROJECT | 22-1834910PO | Girard ENGINEERING 2478153 ONTARIO INC. SEPTIC SYSTEM DESIGN 19 Waddetock Ave. Lang Parit, Distant LESLEY READINGS
855 SOUTHDALE ROAD W., UNIT 404
LONDON, DIVARID, NOF DES 682 PEEL STREET
WOODSTOCK, ONTARIO N4S) L3
TEL: 1:519-879-6875
EMAIL: INFO@GIRARDENGINEERING.CA

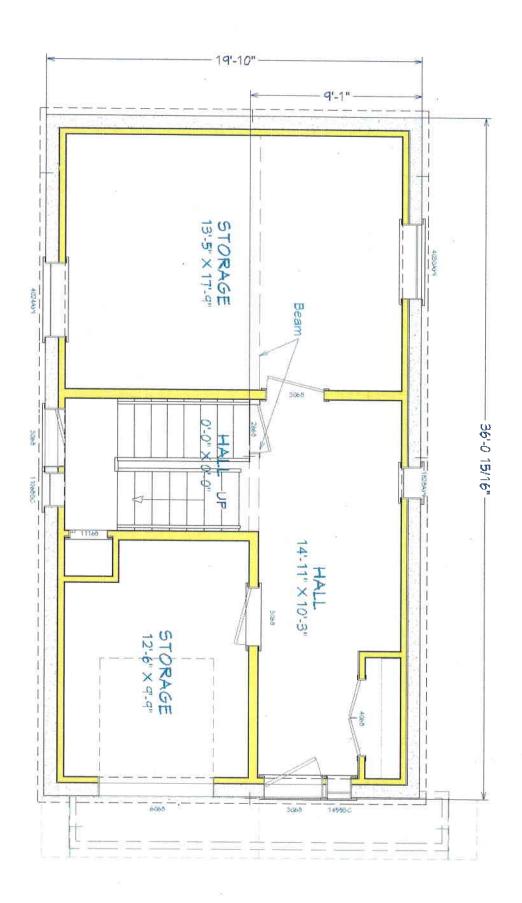
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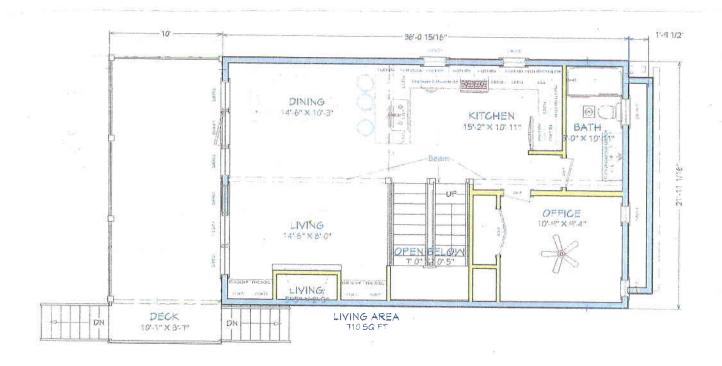
TEL: 1-519-282-0831 EMAIL: LESLEYREADINGS@GMAIL, DOM

PRE-DEVELOPMENT PLAN

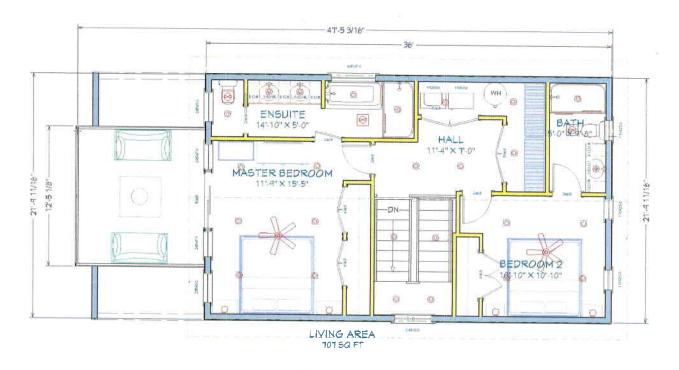
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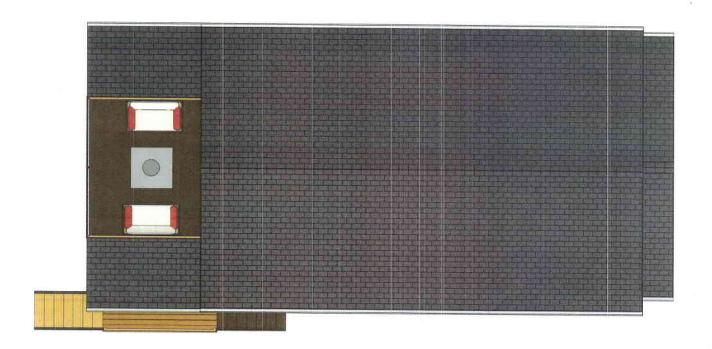














PROPERTY DESCRIPTION: LOT 20 REGISTERED PLAN 252 NORFOLK COUNTY

TOPOGRAPHIC SURVEY



FOR: LESLEY READINGS
#19 WOODSTOCK AVENUE
P.I.N. 50114-0144

SCALE 1: 100

0 1 2 3 4 5 METRES 10

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

CAUTION

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

- DO NOT CONVEY FROM THIS PLAN

NOTES

- (1) PROPERTY DIMENSIONS ARE AS SHOWN ON SURVEYOR'S REAL PROPERTY REPORT COMPLETED BY KIM HUSTED SURVEYING LTD., PROJECT: 22-18349, DATED: FEBRUARY 8, 2023
- (2) SITE BENCHMARK SPIKE SET IN SOUTH-EAST FACE OF HYDRO POLE 12.15m WEST OF THE SUBJECT PROPERTY HAVING A GEODETIC ELEVATION
- OF 178.50 metres

 ADD 100.00m TO ELEVATIONS SHOWN HERON TO OBTAIN GEODETIC DATUM

 ELEVATIONS ARE REFERRED TO CANADIAN GEODETIC DATUM 1928,
- (3) THIS SKETCH WAS COMPLETED FROM FIELD WORK COMPLETED
- ON THE 11th DAY OF JANUARY, 2023

 (4) THIS PROPERTY IS BOTH SUBJECT TO A RIGHT-OF-WAY AND TOGETHER WITH A RIGHT-OF-WAY AS SET OUT IN REGISTERED INSTRUMENTS NR390532

GEOID MODEL HT2_2010v70, REFERENCE FRAME NAD83 (CSRS) (2010.0)

LEGEND

- AREA OF LOT 20 = 632.7 SQUARE METRES
 DWELLING AREA (INCLUDING EX. ATTACHED DECK) = 113.2 SQUARE METRES DWELLING LOT COVERAGE = 17.9 %
- DECK AREA (NOT ATTACHED TO DWELLING) = 11.5 SQUARE METRES DECK LOT COVERAGE = 1.8 %
- DENOTES HYDRO POLE(NTS) DENOTES NOT TO SCALE
- DENOTES DECIDUOUS TREE

& DRIVE 8.75 (NTS) TOP OF FOUNDATION

ELEV. = 178.00m TOP OF FOUNDATION
ELEV. = 177.67m MUNICIPAL #19 1 STOREY COTTAGE 1 STOREY COTTAGE 1 STOREY COTTAGE 21 10 WALL ROCK NOTE: COULD NOT DETERMINE LOCATION OF WATERS EDGE DUE TO ICE BUILD UP ON LAKE. 12.229

AVEUNE

WOODSTOCK(6.096 WIDE - REGISTERED PLAN 252)

KIM HUSTED SURVEYING LTD.

ONTARIO LAND SURVEYOR

30 HARVEY STREET, TILLSONBURG, ONTARIO, N4G 3J8

PHONE: 519-842-3638 FAX: 519-842-3639

PROJECT: 22-18349TOPO

LESLEY READINGS REF: DWG. WLP

19 WOODSTOCK AVENUE, LONG POINT FILE CKD. K.H.

ERIE

Revision:	BY:	DATE:
ISSUED FOR REVIEW	TS	JUNE 7, 2023
ISSUED FOR CONSTRUCTION	TS	JUNE 8, 2023
REVISED AS PER MUNICIPALITIES COMMENTS AND RE-ISSUED FOR CONSTRUCTION	DF	NOVEMBER 1, 2023
	ISSUED FOR REVIEW ISSUED FOR CONSTRUCTION REVISED AS PER MUNICIPALITIES COMMENTS AND	ISSUED FOR REVIEW TS ISSUED FOR CONSTRUCTION TS REVISED AS PER MUNICIPALITIES COMMENTS AND

BOTH THE CLIENT AND THE CONTRACTOR, INCLUDING ALL SUB-TRADES, SHALL REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CLIENT AND THE CONTRACTOR TO REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

THESE DRAWINGS ARE TO BE READ AND NOT TO BE SCALED.



LESLEY READINGS

855 SOUTHDALE ROAD W., UNIT 404
LONDON, ONTARIO, N6P 0C5

TEL: 1-519-282-0831
EMAIL: LESLEYREADINGS@GMAIL.COM

DESIGNED FOR:

LOT

BEACH

LAKE

SEPTIC SYSTEM DESIGN

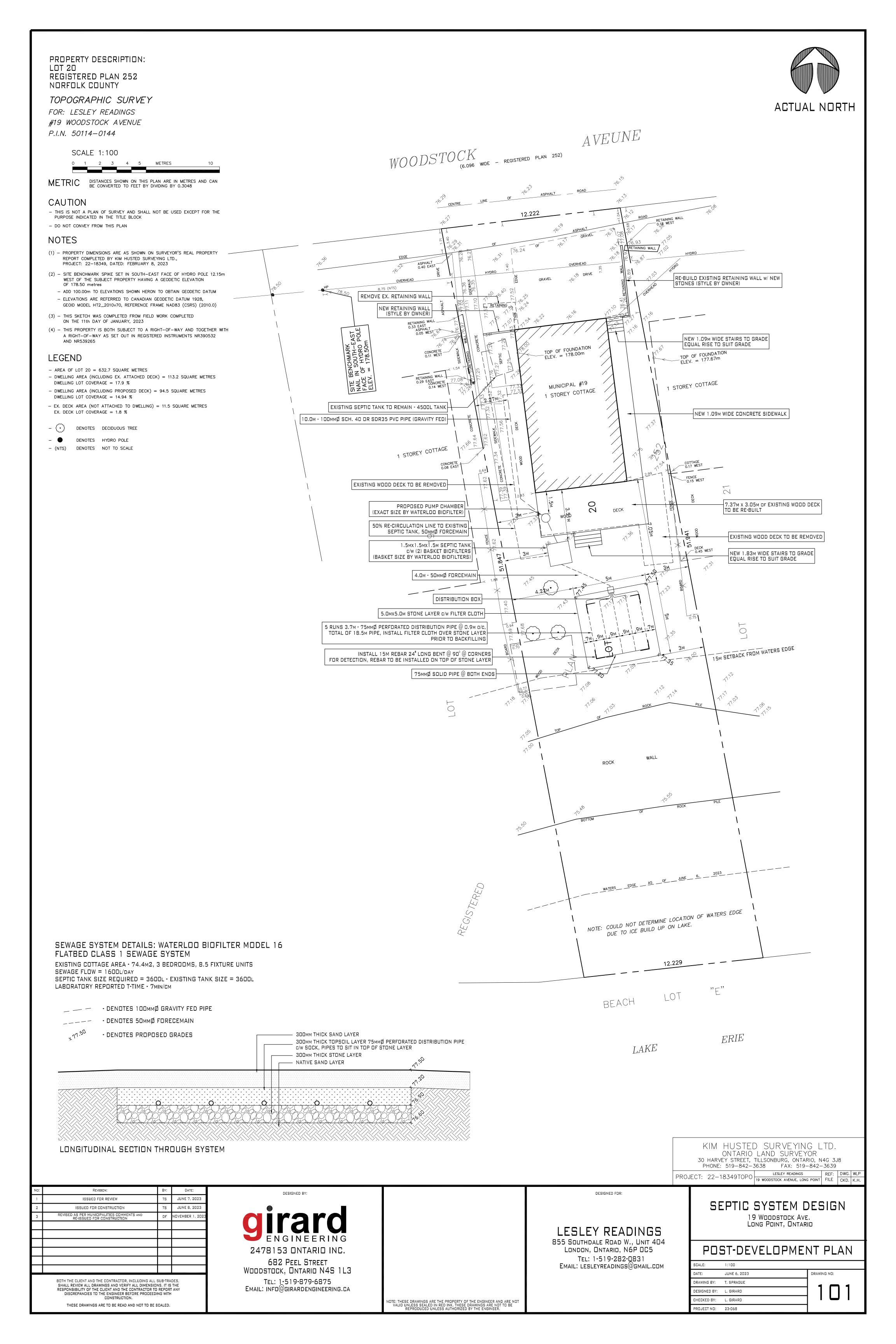
19 WOODSTOCK AVE.
LONG POINT, ONTARIO

PRE-DEVELOPMENT PLAN

SCALE:	1:100	
DATE:	JUNE 6, 2023	DRAWING NO:
DRAWING BY:	T. SPRAGUE	1 -
DESIGNED BY:	L. GIRARD	7 1 11 1
CHECKED BY:	L. GIRARD	ָ ר

PROJECT NO: 23-068

NOTE: THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEER AND ARE NOT VALID UNLESS SEALED IN RED INK. THESE DRAWINGS ARE NOT TO BE REPRODUCED UNLESS AUTHORIZED BY THE ENGINEER.





Lesley Readings - Homeowner

Inspection Property: 19 Woodstock Ave, Long Point, ON

Environmental Health Inspection – Wastewater Treatment System (WTS) Evaluation:

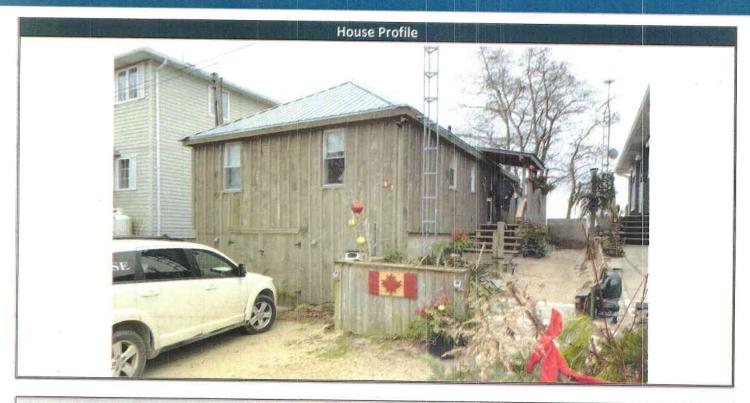
As per the Operation and Maintenance Section 8.9 of the Ontario Building Code and Guide for Sewage Systems (OBC).

	Project Overview
Client	Lesley Readings – Homeowner
Property address	19 Woodstock Ave, Long Point, ON
Property description	Single family residential dwelling
Reason for evaluation	Capacity Assessment & WTS Component Locate
Intent of evaluation	To determine if the WTS is being operated and maintained in substantial compliance with the relevant sections of the Ontario Building Code
Scope of visual assessment	Exterior WTS components, indoor plumbing fixture connections

Statement of Understanding:

- The evaluation included efforts to determine the locations or probable locations of the WTS components, and to
 provide recommendations for appropriate WTS operation, maintenance, upgrades or repairs that will promote
 the ongoing functionality and performance of the system.
- The evaluation did include hand shovel excavation into a representative test pit exposing the aggregate, pipe material and soil moisture conditions there, but did not include comprehensive excavation of the leaching field for determination of the exact location and construction of all buried components, or complete assessment or verification of all subsurface soil conditions such as 'bio-mat' development beyond the representative test pit.
- Due to the impacts of future occupant usage on the functioning of any WTS, ESSE cannot assess how long any WTS will function before failing.
- Proper use and maintenance of the system including accessing, inspecting and measuring the accumulated solids in the septic tank at 2-3 year intervals and respecting the limits of the system for peak loading capacity, will assist in maintaining the functional capabilities of the system.
- Pump outs of the system should be performed when measurements of the solids in the septic tank determine at least 30% of the volume is occupied by sludge and scum.
- All of the components of the WTS appear to be contained within the approximated property boundaries, although a review of a current survey for the property was not completed, and the exact location of leaching field components was not confirmed.
- If in the future the WTS should malfunction for any reason, the owner of the property would be required to repair or replace the system to meet the current requirements of the Ontario Building Code Act.

ESSE CANADA



Parameter	Deficient	Functional	Good	N/A
Septic Tank Accessibility Lids Risers		1		
Condition of Septic Tank		1		
Septic Tank Capacity	Х	Undersized for propos	sed configuration of h	ome
Septic Tank Clearance Distances	Х	Does not meet minimum separation distances		
Condition of Inlet Baffle	Х	Missing		
Condition of Discharge Baffle		/		
Pump Chamber Construction		1		
Leaching Field Condition		1		
Leaching Field Clearance Distances	Х	Does not meet minimum separation distances		
Landscape Setbacks	Х	Does not meet minimum separation distances		

The contemporary daily design flow for the home is 1600 L/day based on a 3-bedroom dwelling with 74.4 m² of above grade floor space and 8.5 fixture units. Section 8.2.2.3 (a) of the OBC states that in a residential occupancy, the minimum working capacity of a septic tank should be the greater of 3600 L or twice the daily design sewage flow for the dwelling to provide appropriate retention time for the settling and separation of solids and liquids (i.e. 3600 L compared to 3600 L installed).



DESIGN FLOW CALCULATIONS & SOIL ANALYSIS

EXISTING DESIGN FLOW			
Fixture Type	Fixture Unit Value	Total Fixtures	Total Fixture Unit Count
Bathroom Group	6	1	6
Sink	1.5	1	1.5
Dishwasher	1	1	1
Clothes Washer	1.5	0	0

Total Fixture Units	8.5
---------------------	-----

Daily Design (3 Bedrooms)	1600
Additional Fixtures (none over 20)	0
Living Space Above Ground 74.4m ²	0
Total Daily Design Flow (Q)	1600
Minimum Working Capacity Tank Size (L)	3600

	PROPOSED DESIG	N FLOW	
Fixture Type	Fixture Unit Value	Total Fixtures	Total Fixture Unit Count
Bathroom Group	6	2	12
Sink	1,5	1	1.5
Dishwasher	1	1	1
Clothes Washer	1,5	1	1.5

16

Daily Design (4 Bedrooms)	2000
Additional Fixtures (none over 20)	0
Living Space Above Ground 148.8m ²	0
Total Daily Design Flow (Q)	2000
Minimum Working Capacity Tank Size (L)	4000

SOIL AN	ALYSIS
Laboratory Reported T-Time	T = 7 min/cm

	SOIL CL	ASSIFICATION	
Gravel: 0%	Sand: 99%	Silt: 1%	Clay: 0%

ANALYSIS

The existing septic tank is adequately sized for the existing configuration of the home, however is undersized for the proposed configuration of the home. In order to accommodate the proposed addition of square footage and fixture units, the use of advanced wastewater treatment and dispersal options will need to be implemented.

Although a number of options are available, ESSE recommends the design and use of either the Waterloo Biofilter Flatbed system, or the Infiltrator ATL system. In either circumstance, septic tank capacity will need to be a minimum of 4000L, and come equipped with a pump chamber.

Additional details in the following section.



IMPLICATIONS & PROPOSED CAPACITY CALCULATIONS

A sample of the soil adjacent to the leaching field was collected and found to have a t-time of 7 (T = 7), which is typical of the soils in the given region.

As preciously identified, by today's design flow calculations the existing system is undersized for the home's proposed configuration. In consideration of the proposed addition and related additional fixture units, the septic system requires a minimum of an additional 400L in daily design flow, 400L in working capacity (tank size). This may be achieved through a number of different strategies which allow for component replacement and addition, while still preserving the landscaping and features of the property.

To accommodate the additional capacity requirements, two capacity adjustments to the system's configuration will need to occur:

1) Septic Tank Capacity & Treatment Improvement:

In order to provide the appropriate septic tank capacity, retention, and settling time, an advanced (tertiary) treatment unit installed in series to the new septic tank will be required. As demonstrated in the 'Proposed Design Flow' calculation table, an additional 400L in daily design flow, and a minimum of 400L in working capacity (tank size) are needed. This can be achieved by installing a new septic tank, with a recommendation of 4500L in size.

Secondary to the installation of tertiary treatment, the installation of a pump tank (or pump chamber), which would time dosed to the absorption field, will also be needed in order to accommodate the conveyance of the treated effluent.

2) Absorption Field Capacity Improvement:

Using the t-time of 7, we would be able to accommodate the addition, and preserve the landscaping of the property, by installing an advanced dispersal option. Our calculations shown below demonstrate the total area needed to accommodate the advanced dispersal field area needed:

$$A = \frac{Q \circ T}{400} = \frac{2000 \circ 7}{400} = 35 \text{m}^2$$

Given the existing footprint of the property, careful consideration will need to be given to the accommodation of setback and separation distances required by the Ontario Building Code (OBC). Although a number of options are available, ESSE recommends the design and use of either the Waterloo Biofilter Flatbed system, or the Infiltrator ATL system. Their configurations are outlined below:

Proposed Infiltrator ATL System Configuration

Septic Pump Dispersal to 35m²
Tank Chamber Infiltrator ATL Dispersal Bed

Proposed Waterloo-Biofilter System Configuration

Septic Pump Dispersal to 35m²

Tank Chamber Area bed below Flatbed



GENERAL INSPECTION FINDINGS & SUMMARY

- 1. The WTS is a Class 4 system consisting of a septic tank, distribution box and leaching field located in the side yard;
 - The concrete, single-compartment septic tank is ±3600 L in volume
 - The leaching field is constructed of corrugated 'Big-O' pipe in subsurface gravel absorption trenches, occupying an estimated area of 2 m by 10 m.
- 2. The system components were reported to be original to the construction of the house and are approximated to be over 40 years in age:
 - With regular use and maintenance, the typical effective lifespan of the leaching field soil is 35 to 45 years due to accumulating organic and biological material in the soil matrix
 - Therefore, the existing leaching field is at or closely approaching the end of a typical life expectancy.
- 3. Based on measurements of accumulated solids in the septic tank (±35% by volume), a pump out of the tank is not presently required (±\$400):
 - It is unknown when the system was last pumped;
 - A pump out of the septic tank is typically conducted when the solids accumulation inside of the septic tank reaches one third of the working capacity of the tank, or 33% by volume;
 - Ensure that the system is filled with clean water following the pump-out.
- 4. The WTS was found to not be in substantial compliance with Section 8.9 of the OBC;
 - The septic tank is under-sized for the proposed configuration of the home;
 - Inspection of the leaching field determined that leaching field distribution laterals are clogged with bio-mat and sand, limiting the system's ability to treat and disperse effluent. It has been determined that the leaching field has failed and requires complete replacement;
- 5. As the existing components will be nearing the end of the expected lifespan of a standard system, emphasis should be placed on repair, maintenance, upgrades, and remediation tasks that may provide renewed value and extended functionality of the existing system, even in the event the proposed addition does not occur;
 - When planning for long-term onsite wastewater treatment and disposal it is important to note that full WTS replacement typically costs \$25,000 to \$35,000;
- 6. In the event the proposed addition does occur, based on the age (40+ years), design and construction of the existing system components in their current configuration, it is the opinion of ESSE that the system will require complete replacement (Approx. \$35,000-\$45,500) in order to provide the property with safe, reliable means of wastewater treatment and dispersal.



Required Work to Accommodate Addition

 In order to provide the home's addition and property with a reliable, long term means of wastewater treatment and dispersal, complete WTS replacement should be anticipated/is required (Approx. \$35,000 to \$45,000).

Recommendations for No Addition

- To improve septic tank access for inspection and maintenance, consider installing sealed risers to grade level over both the inlet and discharge access lids (±\$1100);
- Following riser installation, upgrade the outlet baffle with an effluent filter assembly, to more comprehensively prevent suspended solids from entering the leaching field (±\$200 for materials);
 - Effluent filter cartridges require a rinse cleaning 1-2 times per year to maintain system flow rates (this service is offered by ESSE);
 - The filter may reduce organic loading to the field by up to 50%, providing a cost-effective method of improving field longevity.
- A septic tank pump-out is recommended in order to remove accumulated sludge and scum (±\$400);
- Given the age of the system, consider the benefits of using an engineered biological augmentation process (e.g. Biologic SR2 or equivalent) for improving bacterial digestion of waste in the septic tank and leaching field as a valuable but low-cost ongoing maintenance procedure for this system (\$90 per year);
- To help restore some of the functional capacity of the leaching field, dose the field with a remediation formula made up of bacteria and enzymes specially designed to help break down & digest organic matter and sludge within the distribution system (±\$75 per 6 oz. dose);
- Strong consideration should be given to the installation of a high-level alarm or alerting device in the septic tank, to help prevent sewage backups and other unwanted damages (±\$400)
 - The alarm unit (e.g. Sewage Alert or equivalent) helps prevent sewage back-ups by triggering an audible and visual alarm if high levels are reached in the septic tank, providing a warning that the septic system's ability to receive wastewater is compromised, and requires attention.



Design Considerations for New WTS/Septic Tank/Leaching Field

- The new septic tank should have a minimum volume of twice the daily design flow of the future configuration
 of the home and come equipped with sealed risers to grade over the inlet and discharge access ports to provide easy access for solids
 measurement, inspection, and pump outs;
- The new system configuration will require a pump chamber in order to effectively and safely convey the system's effluent;
- The tank should also come equipped with PVC 'TY' baffles on the inlet and discharge pipes entering and exiting the tank. The discharge baffle should be fitted with an effluent filter which functions as an additional measure to help prevent solids from entering the leaching field;
 - Note that the effluent filter requires routine cleaning to prevent potential restrictions of flow and back up into the home as the filter clogs with solids;
 - Cleaning is easily accomplished by removing the filter from the baffle housing, rinsing off solids back into the inlet compartment of the tank and reinstalling it inside the housing;
 - Recommended frequency of cleaning is 1-2 times per year, dependent on usage;
- Based on the available area on the property, an advanced dispersal treatment solution will be needed. Options to consider:
 - Waterloo Biofilter Flat Beds are constructed of lightweight shells containing patented Biofilter filter media. Flat Bed treatment units are modular. Wastewater is dosed to the Flat Beds via a small pump chamber with an electric pump. Treated effluent gravity-drains out the bottom of the Flat Beds and flows directly into a disposal bed beneath. Flat Beds are installed flush to grade and landscaped into the property with the supplied mulch or other porous covering. No distribution piping is required in the disposal bed resulting in a smaller system footprint and faster installation. With their low profile, Flat Beds can be installed in areas of high groundwater or bedrock without destroying the aesthetics of the property. Flat Beds operate in a single-pass mode. The only moving part is a single high-quality, energy efficient 1/2 horsepower effluent pump that operates intermittently throughout the day.
 - The Infiltrator ATL (Advanced Treatment Leaching Field) is a passive advanced leaching field treatment system designed as an environmentally friendly alternative to traditional stone and pipe drain-fields. The ATL system is a sand-lined treatment and dispersal leaching field system consisting of 6 simple components. The Infiltrator ATL is a proprietary system consisting of six components. Upon entering the Infiltrator ATL, septic tank effluent progresses through each of the 6 individual treatment components as follows. Upon exiting the specified system sand, the treated effluent is dispersed in the native soil.
- It is strongly advised that the client consult with a registered septic designer or professional engineer to evaluate the property to
 determine the most suitable options to install a new system which would meet all current OBC requirements. ESSE is happy to assist
 in this process;
 - Note that in respect to the new system's design, the installation of a sand filter bed dispersal may also be considered given the ideal native soil conditions. However, the property's challenging configuration for setback distances may not meet local requirements and design provisions.
- Note that the installation of an advanced or tertiary treatment system does reduce the land footprint required to accommodate the construction of a new absorption field;
 - The installation of an advanced treatment unit in this manner would help extend the lifespan of the new leaching field indefinitely, and preserve the property's landscaping and vegetation;
 - A tertiary unit produces a higher quality of effluent to discharge back into the environment and therefore requires a smaller dispersal area;
 - Note that tertiary treatment systems do require annual maintenance at an additional expense of approximately \$250-\$500/year ongoing as per the OBC.

ESSE CANADA

Wastewater Treatment System Photos



1, Septic tank location

2. Septic tank location – access below wooden cover





3. Septic tank access

4. Pump (siphon) chamber location





5. Septic tank and pump chamber configuration

6. Septic tank and pump chamber configuration

ESSE CANADA



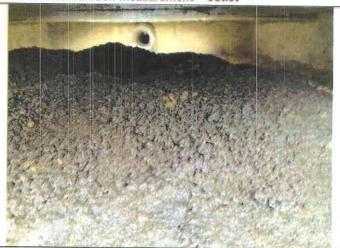




8. Solids accumulation measurement – outlet



9. Solids accumulation measurement – pump chamber



10. Interior condition of tank



11. Septic tank inlet



12. Septic tank inlet - detail

ESSE CANADA

Wastewater Treatment System Photos 13. Septic tank outlet 14. Septic tank outlet - baffle detail 15. Pump chamber – with sewer line inspection camera 16. Pump chamber - interior

17. Pump chamber - interior

18. Pump chamber – corrugated 'Big-O'

Wastewater Treatment System Photos



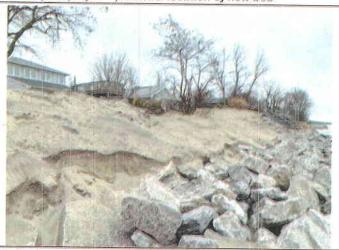
13. Backyard profile – potential location of new bed



14. Backyard profile – potential location of new bed



15. Backyard profile - potential location of new bed



16. Backyard profile - potential location of new bed



17. Distribution lateral pipe material



18. Distribution lateral pipe material



SITE DIAGRAM - Existing

Note: all dimensions and locations approximate





POTENTIAL SITE DIAGRAM #1- Waterloo Biofilter Flatbed

Note: all dimensions and locations approximate



35 W/



POTENTIAL SITE DIAGRAM #2 - Infiltrator ATL System

Note: all dimensions and locations approximate





For more information regarding on-site septic system operations and maintenance as well as a comprehensive list of qualified industry professionals, please visit the Ontario Onsite Wastewater Association Website at www.oowa.org

ESSE trusts that this is the information that you require. Please contact the undersigned with any questions related to this report or for further information and support regarding operating, maintaining or upgrading the WTS.

Inspected & Reviewed by:

Rick Esselment,

remo

BSc., BASc., DOHS, CPHI(c)

Certified Public Health Inspector #4490

Certified Sewage Disposal System Inspector/Installer BCIN #15244

Prepared by:

Jane Zima - ESSE Canada, Project Manager

Prepared by:

Deanna Simpson – ESSE Canada, Project Manager

Limitations and Warranty:

This report is for the exclusive use of the client, and their agents, and is neither an endorsement nor condemnation of the subject property.

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with the level of care and skills normally exercised by qualified professionals currently practicing in this area of environmental assessment and are in accordance with the outline of work required for this project. No other warranty, expressed or implied is made.

The findings contained in this report are based upon conditions as they were observed at the time of investigation. No assurance is made regarding changes in conditions subsequent to the time of investigation. No assurances can be made about latent defects or deficiencies with system construction or function that was not reasonably identifiable using currently accepted protocols for inspection and investigation.

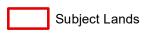
No assurance is made regarding the accuracy of this information. Site research performed herein relies on information and reports supplied by others. No attempt has been made to independently verify the accuracy of any such information, unless specifically noted in our report.

CONTEXT MAP

Geographic Township of SOUTH WALSINGHAM



Legend

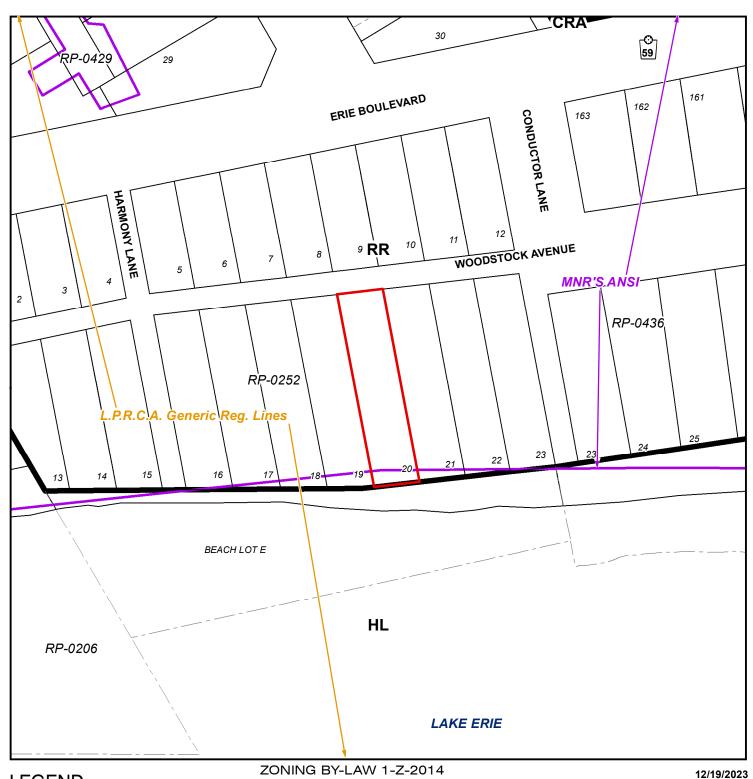


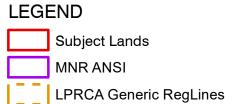
2020 Air Photo

10 5 0 10 20 30 40 Meters

ZONING BY-LAW MAP

Geographic Township of SOUTH WALSINGHAM



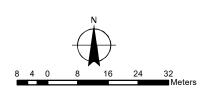


(H) - Holding

CRA - Resort Area Commercial Zone

HL - Hazard Land Zone

RR - Resort Residential Zone



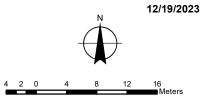
CONCEPTUAL PLAN

Geographic Township of SOUTH WALSINGHAM



Legend





CONCEPTUAL PLAN

Geographic Township of SOUTH WALSINGHAM



Legend

