OFFICE USE ONLY

Permit #
Receipt #
Date Rec'd

NORTH BAY - MATTAWA CONSERVATION AUTHORITY

APPLICATION FORM & PROPOSAL FOR ON-SITE SEWAGE SYSTEM BUILDING PERMIT

NOTE: The property owner, applicant, designer and installer of the sewage system retain full responsibility for knowing the requirements of the Building Code Act & Ontario Building Code and ensuring that the sewage system is designed in accordance with the regulatory requirements and installed in accordance with the approved plans. By submitting this document you agree that the information provided can be shared with your local municipality and/or designer/installer and/or other persons as deemed necessary or involved in the project on the property in question.

If the listed applicant is not the property owner, please provide a **Letter of Authorization** from the registered property owner.

A guide to this application form is available from North Bay – Mattawa Conservation Authority's offices in either North Bay or Parry Sound. The guide is also available online at nbmca.ca.

Owner communication method: ❑ **Mail** ❑ **E-mail** ❑ **Fax** ❑ **Pick Up**
Installer communication method: ❑ **Mail** ❑ **E-mail** ❑ **Fax** ❑ **Pick Up**

1. Name of property owner	2. Name of installer ❑ Licensed ❑ Unknown ❑ Owner Install
Phone no. (_____)	Phone no. (_____)
Email	Email

PROPERTY INFO *REQUIRED: Provide a copy of a property legal document such as a property tax bill or deed*				
Property Address				
Municipality				
Lot	Con.	Sub-lot	Plan	Parcel
Assessment roll no.				

Directions to lot: _____

_____

_____

_____

The proposed system will be (check appropriate box):

❑ **CLASS 2: GREYWATER PIT**

❑ **CLASS 3: CESSPOOL**

❑ **CLASS 4: LEACHING BED/TANK** ❑ Tank & bed ❑ Tank only ❑ Bed only ❑ Treatment unit

❑ **CLASS 5: HOLDING TANK**

Application for a Permit to Construct or Demolish

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

For use by Principal Authority	
Application number:	Permit number (if different):
Date received:	Roll number:

Application submitted to: NORTH BAY-MATTAWA CONSERVATION AUTHORITY
(Name of municipality, upper-tier municipality, board of health or conservation authority)

A. Project information

Building number, street name			Unit number	Lot/con.
Municipality	Postal code	Plan number/other description		
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
Description of proposed work	

C. Applicant Applicant is: Owner or Authorized agent of owner

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

D. Owner (if different from applicant)

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

E. Builder (optional)

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

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

i. Is proposed construction for a new home as defined in the *New Home Construction Licensing Act*, 2017? If no, go to section G.	☐ Yes	☐ No
ii. Is a licence required under the *New Home Construction Licensing Act, 2017*?	☐ 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 _____ declare that:
(print name)

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

_____ _____
Date Signature of applicant

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

Schedule 1: Designer Information

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

A. Project Information

Building number, street name			Unit no.	Lot/con.
Municipality	Postal code	Plan number/ other description		

B. Individual who reviews and takes responsibility for design activities

Name		Firm		
Street address			Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail	
Telephone number	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

D. Declaration of Designer

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

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

Individual BCIN: _____

Firm BCIN: _____

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

Individual BCIN: _____

Basis for exemption from registration: _____

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

Basis for exemption from registration and qualification: _____

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 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 practice, a limited license to practice, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

A. Project Information

Building number, street name			Unit number	Lot/con.
Municipality	Postal code	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 _____ declare that:
(print name)

☐ 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 Signature of applicant

Schedule 3: Site Evaluation Form

TEST PIT

Sub-surface conditions encountered:

Indicate depth to bedrock, T>50, &/or ground water table (where present):	Depth (m)	Applicant's Use: Soil type	Applicant's Use: T-time	Inspector's Use: Soil type	Inspector's Use: T-time
Test hole(s) available for inspection: (YES) NO					

Water Supply:	❑ **Proposed**	❑ **Existing**	
❑ Lake	❑ Drilled well	❑ Dug well	❑ Other (specify): _____

Shore road allowance owned: N/A YES NO Municipal zoning _____

Has the lot been previously severed? YES NO Zoning approval(s) attached? YES NO

Lot dimensions: Frontage (m) _____ Depth (m) _____ Area (m^2) _____

Inspector's Report:

Date: _____

Time: _____

Weather: _____

Person(s) in attendance

Watercourses on lot: YES NO Name:

SRA owned: N/A YES NO

Applicable Law: N/A

MTO HYDRO EP OTHER: _____

Increased municipal setbacks required: YES NO

O.Reg. 177/06 (North Bay office only): YES NO

Slope _____

Vegetation _____

Suitable for in-ground installation: YES NO PARTIAL

Proposed height of raised bed (m): _____

Increased setbacks required? YES NO

Setback distances adhered to: YES NO

MLA existing: YES NO PARTIAL

Proposal acceptable & meets OBC requirements?

YES NO Acceptable with changes

_____

_____

_____

Inspector's signature: _____

Date: _____

Comments/concerns/additional information required:

_____

_____

_____

PERMIT # OFFICE USE ONLY

Property address_____

Schedule 4: Design Criteria

DESCRIPTION	DWELLING #1		BOATHOUSE		SLEEPING CABIN		Other:_____		# UNITS PER FIXTURE	FIXTURE UNITS
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed		
Bathroom group (toilet, sink, tub/shower)									x 6 =	0.0
Additional toilet									x 4 =	0.0
Bathtub or shower(*)									x 1.5 =	0.0
Additional sinks(**)									x 1.5 =	0.0
Kitchen sink(**)									x 1.5 =	0.0
Dishwasher									x 1 =	0.0
Washing machine									x 1.5 =	0.0
Laundry tub									x 1.5 =	0.0
Other:_____										0.0
FIXTURE UNITS	0.0		0.0		0.0		0.0		Total:	**0.0**
FINISHED FLOOR AREA		m^2		m^2		m^2		m^2	Total:	**0.00** m^2
# OF BEDROOMS									Total:	0

* Tub/shower combos count as 1.5 units
** Sinks whether double or single count as 1.5 units

DESIGN FLOW CALCULATION TABLE				
Residential Occupancy			**Volume (L)**	**Flows**
Bedroom flow (A)	1 bedroom dwelling		750	
	2 bedroom dwelling		1100	
	3 bedroom dwelling		1600	
	4 bedroom dwelling		2000	
	5 bedroom dwelling		2500	
Extra bedroom flow (B)	Each bedroom over 5,		500	0
Living area flow (C)	Each 10 m^2 (or part thereof) over 200 m^2 up to 400 m^2,		100	0
	Each 10 m^2 (or part thereof) over 400 m^2 up to 600 m^2, and		75	0
	Each 10 m^2 (or part thereof) over 600 m^2, or		50	0
Fixture count flow (D)	Each fixture unit over 20 fixture units		50	0

Daily Design Sewage Flow, Q = _____ liters/day A + (B or C or D)

OFFICE USE ONLY

_____ APPROVED _____ NOT APPROVED DATE: _____

PERMIT #
OFFICE USE ONLY

Property address_____

Schedule 5: Proposal to Construct

Propose to _____ a Class _____ sewage system to serve _____
(construct, install, alter, extend, enlarge, replace, etc.) (facility: e.g. single family dwelling, motel, etc.)

Is the land currently vacant? YES NO Additions / renovations proposed? YES NO

If replacing, is there a permit for the system on the property? YES NO Permit # _____

Is the existing system failing? YES (NO) Explain: _____

Is there more than one system on the property? YES NO Permit # _____

Will the proposed system service more than one building? YES NO List: _____

Provide proposed information rather than minimum requirements:

❑ Class 2 Greywater Pit	❑ Class 3 Cesspool (For flow calculations see OBC Part 8, 8.4.1.2(2): Q cannot exceed 1000 L/D)			
Type of Class 1 on site:	❑ Privy ❑ Composting ❑ Chemical ❑ Other: _____			
Wall structure:	❑ Cement block ❑ Rock ❑ Wood ❑ Other: _____			
Sidewall area: m^2	Length: m	Width: m	Depth: m	Type of cover: _____

❑ Septic Tank	❑ Class 5 Holding Tank	❑ Treatment Unit	❑ Digester Tank
❑ New ❑ Use existing Size _____ Permit #_____		❑ Level II ❑ Level III ❑ Level IV	
Proposed working capacity: _____ Liters		Make / Model of treatment unit: _____	

T-time (min/cm): _____ Method of subsurface detection: _____	Pump required? ❑ No ❑ Effluent ❑ Raw ❑ TBD

❑ Class 4F Filter Bed	Number of beds: _____ Raised height (above grade): _____m	Bed area: _____ m^2 Contact Area: _____ m^2
Mantle loading area: _____m^2 ❑ Native ❑ Imported	Length _____m x Width _____m	

❑ Class 4 Trench Bed	Total length: _____m	Raised height (above grade): _____m
Mantle loading area: _____m^2 ❑ Native ❑ Imported	Length _____m x Width _____m	

❑ Type A / B	Stone area: _____m^2 Sand area: _____m^2	Sand area: ❑ Native (supply sieve analysis) ❑ Imported Raised height (above grade): _____m

❑ SBT / BNQ / BMEC / Other (Fill accordingly)	

OFFICE USE ONLY

_____ APPROVED _____ NOT APPROVED DATE: _____

PERMIT #
OFFICE USE ONLY

Property address_____

Schedule 6: Site Plan Diagram

Designer on file:	Installer on file:

DRAWING REQUIREMENTS: PLEASE CHECK (IF ATTACHING A SEPARATE DIAGRAM PLEASE ENSURE THESE ARE INDICATED)

- ❑ **1 Copy of site plan submitted**
- ❑ Property owners name and property address (civic);
- ❑ Lot size, property dimensions, roads, existing rights-of-way, easements, or municipal/utility corridors;
- ❑ Show and identify neighboring properties, including wells (indicate if none);
- ❑ Show location and size of all proposed and existing sewage system components (tanks, pump chambers, alarms, distribution bed) and the test pits;
- ❑ Show the direction of surface water flow, as well as any surface water (i.e. creek, pond, lake) on or adjacent to the property and provide the common name;
- ❑ Indicate directions of North on the site plan;
- ❑ Indicate distances to all utilities (i.e. telephone, HYDRO lines above and below ground); and
- ❑ **Show the distances from <u>pipes in bed and tank</u> to ALL buildings, structures, property lines, surface water, easements, rights-of-way, driveways and wells (including neighboring wells)**

PROPOSED DISTANCES (Actual, <u>not</u> minimum)

Distribution pipe (or stone area) distances:

to closest structure: _____ m
to closest lot line: _____ m
to well on lot: _____ m
to neighboring wells: _____m / _____m
to surface water: _____m

Septic tank/Treatment unit distances:

to closest structure: _____m
to closest lot line: _____m
to well on lot: _____m
to neighboring wells: _____m / _____m
to surface water: _____m

OFFICE USE ONLY

_____ APPROVED _____ NOT APPROVED DATE: _____

PERMIT # OFFICE USE ONLY

Property address_____

Schedule 7: Cross Sectional Diagram

Designer on file:	Installer on file:

DRAWING REQUIREMENTS: PLEASE CHECK (IF ATTACHING A SEPARATE CROSS SECTION PLEASE ENSURE THESE ARE INDICATED)

❑ **1 Copy of Cross-Sectional Diagram Submitted**

- ❑ Property owners name and property address (civic);
- ❑ Depth of topsoil;
- ❑ Depth of crushed stone;
- ❑ Depth of filter medium used;
- ❑ Depth and dimensions of contact area required;
- ❑ Depth to bedrock/groundwater table;
- ❑ Depth to hardpan/soils T-time >15min/cm;
- ❑ Height above/below existing grade of ground surface;
- ❑ Show side slopes of bed/mantle;
- ❑ Existing grade/finished grade; and
- ❑ Distance between pipes.

Depth to bedrock/GWT/
hardpan/soils T-time >50: _____m

Check appropriate: ❑ Dug In ❑ Raised ❑ 3 sides open

Proposed raised height above existing grade : _____m

Existing grade: _____

Finished side slope ratio: _____

OFFICE USE ONLY

_____ APPROVED _____ NOT APPROVED DATE: _____

NORTH BAY - MATTAWA
CONSERVATION
AUTHORITY

LETTER OF AUTHORIZATION

On-site Sewage Systems

Authorization to submit an application for a Sewage System Building Permit by a person other than the legal owner.

I_____, being the legal owner of the property described as

Lot_____, Concession_____, Pt. _____, Plan_____,

Parcel_____, in the Municipality/Township of _____,

District of_____, located at

Civic address_____, and having a

Tax Assessment Roll Number of _____,

Authorize_____, to submit an application to the North Bay-Mattawa Conservation Authority for a sewage system building permit to authorize the construction of an on-site sewage system at the above noted property.

Dated at _____ City/Town

Signature of Legal Owner _____ Date _____

15 Janey Ave., North Bay, ON P1C 1N1 P: (705) 474-5420 E: septic.northbay@nbmca.ca nbmca.ca
90 Bowes St., Suite 202, Parry Sound, ON P2A 2L7 P: (705) 746-7566 E: septic.parrysound@nbmca.ca nbmca.ca

APPLICATION GUIDE

NORTH BAY - MATTAWA CONSERVATION AUTHORITY

ON-SITE SEWAGE SYSTEM BUILDING PERMIT

NOTE: The following information is provided to assist you when submitting an application for a building permit to North Bay - Mattawa Conservation Authority (NBMCA). The best way to expedite your application is to provide accurate and complete information. Incomplete or inaccurate information may result in your application not being accepted by NBMCA or returned to you to make corrections prior to processing. ***It is recommended that the applicant refer to the Ontario Building Code (www.ontario.ca/buildingcode) for the current construction requirements. It will be necessary, at minimum, to download Part 8 of the Ontario Building Code to complete all calculations required to design a sewage system.***

The first page of the application assists our administrative staff to quickly identify the property address where the proposed work will take place, the property's legal owner and the licensed installer.

Grey areas noted on the application are for office use only.

Be sure to include which method of communication is preferred, so that we know how to contact you for permit pick-up, general communication etc.

PROPERTY INFORMATION

The property address is the 911 address. The municipality is the municipality in which the property is located and is identified on your property tax bill. The legal description (lot, concession, plan, sub-lot, and parcel numbers) is also listed on your property tax bill.

DIRECTIONS TO LOT

Provide directions from North Bay or Parry Sound (whichever office corresponds to the lot in question) to the construction site. For example; *North Bay – Hwy 11 south to Hwy "A" west to Hwy "B" to village "C", turn left onto ABC Road, property is third lot on left hand side of the road. Property is marked with a sign on the post indicating the Doe property. D*o not make reference to buildings under construction or temporary structures as they might not be there when the second or final inspection is carried out.

Indicate which type of system you are applying for at the bottom of the first page. This will be a quick reference for office and field personnel.

APPLICATION FOR A PERMIT TO CONSTRUCT OR DEMOLISH

This part of the application is two pages in length. This form is required by legislation under the Ontario Building Code and must be completed.

A. **Project information**: Provides information on the project. If the property does not already have a building or unit number then you must contact your municipal office to obtain one. Remember to record the estimated value of the project. *Area of work* refers to the size of the property. Roll number and lot number can be found on your tax bill or obtained from your municipal office.

B. **Purpose of Application**: This section is used to describe the type of permit you are applying for. Check the appropriate box and also describe the scope of the project.

C. **Applicant**: Unless you are the legal owner of the property (see Project Information section on first page) you should check authorized agent and supply a letter of authorization.

D. **Owner**: This is the information pertaining to the legal owner of the property. This section must be completed if the applicant is different than the owner. The address here should be the address where the owner resides and where you want the permit and the Final Completion Inspection report to be mailed. Remember that the time frame between the Sewage System Building Permit being issued and the issuance of the Notice of Completion may be a year or longer.

E. **Builder**: This section only needs to be completed if you are proposing to build a building and you are using a builder as defined by the Ontario Building Code. This section is generally not included when filling out a Sewage System Permit Application.

F. **Tarion Warranty Corporation (Ontario New Home Warranty Program - ONHWP)**: In general, a new home which is designed to be used on a year-round basis and is going to be sold as a new home, or is constructed in its entirety by a contractor for the owner must be registered with the ONHWP or Tarion Warranty Corporation. Reference should be made to the ONHWP Act for clarification of details. Section F must be completed whether or not you are registering the home construction.

G. **Required Schedules**: Your application must include all 7 schedules (see below).

H. **Completeness and Compliance with Applicable Law**: All boxes must be checked yes. Section iv) is referring to applicable law which could include any number of organizations including the municipality in question, MTO, MOECC, Bell Canada or Hydro One (etc.). Each of these agencies must be contacted prior to submitting an application to the NBMCA if there is any question that the sewage system may affect the agency in question.

I. **Declaration of the Applicant**: As outlined previously. If the person signing the application is someone other than the legal owner, the applicant must have a letter of authorization completed and signed by the legal owner to be submitted with the application.

Schedule 1: Designer Information: Must be filled out by the designer of the project. If it is the installer of the septic system, he/she must fill out Schedule 1 A, B, C and D. Installers, if they are installing the system, are exempt from registration but they must provide individual BCIN numbers in the appropriate section and their basis for exemption is "registered installer". Homeowners who are designing their own system are exempt from registration and qualification requirements of the Ontario Building Code. Date and sign your name.

Schedule 2: Sewage System Installer Information: This section is to be completely filled out when there is an installer on the project. Anyone other than a licensed installer (ex: homeowner) who will be acting as the installer must fill out sections A, B and E.

Schedule 3: Site Evaluation Form: This form contains the soil and water table information which must be assessed to complete the design requirements for a Sewage System Building Permit. The designer shall complete the appropriate sections of this form, leaving shaded areas for the inspector to complete.

Test Pit: The *Approximate Soil Percolation Rates T-time* chart provides some common soil percolation rate ranges; remember to select the highest number of a range identified for the design. Soil type, groundwater and bedrock levels will determine the raised height of a sewage system, including contact area, and mantle loading area requirements.

The charts provided are for guidance only and are not intended as complete design guidelines.

APPROXIMATE SOIL PERCOLATION RATES (T-time)

The following are **estimated** ranges of soil percolation rates (T-times) measured in a rate of min/cm. Actual on-site soil conditions may vary significantly from estimated ranges. Differences in estimated T-times shall be resolved by samples analyzed by the Unified Soil Classification System and/or percolation tests being conducted on in-situ soils.

Soil Type	Sand	Sandy Loam	Loam	Silty Loam	Clay Loam	Silt - Clay
T-time (min/cm)	10	12 - 20	17 - 25	20 - 30	30 - 40	40 - 50

Texture Class	Feel Test	Moist Cast Test	Ribbon Test	Estimated T-time (min/cm)
Sand	Grainy with little floury material	No cast	None	10
Loamy Sand	Grainy with slight amount of floury material	Very weak cast, no handling	None	10 - 15
Silty Sand	Grainy with moderate amount of floury material	Weak cast, no handling	Almost flakes if sand portion is very fine or fine sand	17 - 20
Sandy Loam	Grainy with moderate amount of floury material	Weak cast, allows careful handling	Barely ribbons	17 - 25
Loam	Fairly soft and smooth with evident graininess	Good cast, readily handled	Thick and very short (< 2.5 cm)	17 - 25
Silt Loam	Floury with slight graininess	Weak cast, allows careful handling	Flakes, rather than ribbons	20 - 25
Silt	Very floury	Weak cast, allows careful handling	Flakes rather than ribbons	20 - 30
Sandy Clay Loam	Very substantial graininess	Moderate cast	Short and thick (2.5 - 5 cm)	20 - 30
Clay Loam	Moderate graininess	Strong cast	Fairly thin breaks readily barely supports own weight	20 - 30
Silty Clay Loam	Smooth and floury	Strong cast	Fairly thin, breaks readily barely supports own weight	30 - 35
Sandy Clay	Substantial graininess	Strong cast	Thin, fairly long (5 - 7.5 cm), holds own weight	35 - 40
Silty Clay	Smooth	Very strong	Thin, fairly long (5 - 7.5 cm), holds own weight	40 - 50
Clay	Smooth	Very strong	Very thin, very long (> 7.5 cm)	> 50
MANTLE LOADING RATE :	T-time 1 - 20: Q/10; T-time 21 - 35: Q/8; T-time 36 - 50: Q/6; T-time > 50: Q/4			

Excerpt from: Field Manual for Describing Soils in Ontario, Denholm & Schut, 1993 Revised

Water Supply: Be sure to check off whether or not it is **Existing** or **Proposed** and which type of water supply will be used on the property.

Additional information: If the property in question is located on a lake / waterbody, indicate whether or not the Shore Road Allowance is owned (you may have to contact the municipality if you do not know this information off hand). This is very important as this is a property line to which appropriate setbacks must be met. The municipality should also be consulted as to whether or not there are special zoning considerations required for the lot. If none, indicate "N/A".

Comments/Concerns/Additional Information Required: Here the applicant can indicate if there are any other special considerations for the lot (ex. Part 11 setbacks proposed).

Schedule 4: Design Criteria: This sheet shall be completed to determine the *Total Daily Design Sewage Flow (Q = liters / day)*. For reference purposes NBMCA has provided a Design Flow Calculation Table in this schedule. This section must be completed to determine the minimum size of sewage system required. The charts are provided for guidance only and are not intended as complete design guidelines. It is recommended that the applicant refer to the Ontario Building Code (www.ontario.ca/buildingcode) for the current construction requirements. Be sure to complete this sheet clearly and accurately as it will be a part of your permit sent to the Township/Municipality, owner and contractor.

Schedule 5: Proposal to Construct: The first section is to inform NBMCA of proposed development and existing conditions on the project site. This will assist the inspector in determining whether or not the proposal is appropriate for the specified location or whether more information is required (ex. additional existing permits pulled etc.). Be sure to fill out each field in this section clearly and accurately as this page will form part of your permit sent to Township/Municipality, owner and contractor.

Class 2: Greywater Pit / Class 3: Cesspool: This section should be filled out when applying for either a greywater pit or a cesspool. Note that the Total Daily Design Sewage Flow (Q) for both systems cannot exceed 1000 L/day. If further assistance is required for this, contact the corresponding office.

Septic Tank / Treatment Unit / Class 5: Holding Tank: Check the appropriate box to indicate whether the septic tank/treatment unit/holding tank will be new, a replacement or existing. If the application is for a tank replacement only (without a bed replacement), check the appropriate box on the first page of the application package. If the proposed use of the building is residential, multiply "Q" by two to size the septic tank. If the proposed use is non-residential, multiply "Q" by three to size the septic tank. Consult Part 8 of the Ontario Building Code (OBC) for sizing requirements of treatment units and holding tanks. When using a treatment unit tank, specify the make / model and level of treatment (OBC Table 8.6.2.2.) in the appropriate box. The BMEC or CAN/BNQ approval must be attached to the application for the inspectors review. The OBC minimum accepted tank size for residential use is 3600 L.

Leaching Bed: The leaching bed can be a filter bed, trench bed, Type A / B bed or shallow buried trenches. The trench and filter beds can be used with a septic tank or Other Treatment Unit, but, Type A or B beds and shallow buried trenches must include an Other Treatment Unit (OBC 8.6.2.2). When an Other Treatment Unit is proposed, the BMEC or CAN/BNQ approval must be attached to the application. If the application is for a bed replacement only, check the appropriate box on the first page of the application.

A minimum of 2 test holes should be provided at every site. The test hole in the bed area should be as deep as the proposed sewage system (ex. for a fully dug in filter bed the inspector should see a 1.5 meter deep test hole). The second test hole should be 15 meters in the direction of flow and be as deep as the mantle loading area is proposed to be on the cross section (ex. for a fully raised filter bed the test hole should be 30cm deep, but for a fully dug in filter bed the mantle loading area test hole should also be 1.5 meters deep).

For bed applications check the appropriate box if a pump is proposed / existing and which type it is. Indicate the proposed method of subsurface detection (ex. tracer wire or rebar), as well as the T-time from Schedule 3 in the spaces provided.

Filter Bed: If "Q" is less than 3000 liters/day the filter bed area in square meters is Q / 75 (Q is the daily design sewage flow from Schedule 4). Q / 50 must be used if your "Q" exceeds 3000 liters/day. The number of filter beds needed is determined by the requirement that no one filter bed can be less than 10 square meters or more than 50 square meters. When the filter bed area is larger than 50 square meters, divide the calculated area by 2 to determine the size of each bed required.

Contact area is calculated using QT / 850 *(Q is the daily design sewage flow from Schedule 4, T is the T-time from Schedule 3 and the result is the total bed size in meters squared)*. The minimum raised height of a bed is calculated by taking 1.5 meters and subtracting the depth to ground water table and/or hardpan and/or bedrock and/or impervious soil.

Filter Graph: An up-to-date filter graph (tested within 2 years of the submission date to NBMCA) which meets OBC requirements 8.7.5.3.(3), and includes the volume of filter sand imported to the site, will be required prior to or upon Substantial Completion Inspection or the inspection will not pass until submitted.

Trench Bed: The trench bed length is calculated as QT / 200 (Q is the daily design sewage flow from Schedule 4, T is the T-time from Schedule 3 and the result is the total bed length in meters). If an Other Treatment Unit is utilized, the formula becomes QT / 300, also resulting in meters of total bed length. A pump is mandatory when the total trench bed length is 150 meters or larger. The minimum vertical separation from the bottom of the stone in the trench to ground water table and/or hardpan and/or bedrock and/or impervious soil is 900mm. Test holes must be dug to find out if this separation can be achieved and this will determine whether or not a dug in, partially raised or fully raised system can be proposed.

Type A or B Bed: OBC 8.7.1.2.(1) references that the design and installation of a Type A or Type B dispersal bed shall be carried out by a person competent in this field of work. The requirements as set out in Part 8 of the OBC for a Type A Dispersal Bed can be found under section 8.7.7. and for a Type B Bed can be found under section 8.7.8.

Sieve Analysis: An up-to-date sieve analysis (tested within 2 years of the submission date to NBMCA) which meets OBC requirements 8.7.7.1.(1)(4), and includes the volume of sand imported to the site, will be required prior to or upon Substantial Completion Inspection or the inspection will not pass until submitted.

Shallow Buried Trench (SBT): OBC 8.7.1.2.(1) references that the design and installation of a shallow buried trench bed shall be carried out by a person competent in this field of work. Construction requirements as set out in Part 8 of the OBC for a Shallow Buried Trench can be found under section 8.7.6.

Piping used in shallow buried trenches must be pressurized and therefore a pump is always required. Shallow buried trench length is calculated using Table 8.7.3.1. of the Ontario Building Code.

BNQ / BMEC / Other (ex. Other Treatment Unit): Consult the CAN/BNQ or BMEC approval to determine the design criteria and to calculate the stone area, sand area, and the raised height of the bed proposed. The manufacturer of the treatment unit technology should also be consulted in regards to the installation, use, maintenance (maintenance agreements), training and continuing education where this application is to be used. When using a treatment unit, specify the make / model and level of treatment (OBC Table 8.6.2.2.).

Class 4 Mantle Loading Area Requirements: Indicate in the appropriate box if a native or imported mantle is proposed. The mantle loading area must extend for a distance of at least 15 meters beyond the outer distribution pipes in the direction of flow and cover a total area as required by the calculation provided in Part 8 of the OBC Section 8.7.4.1..

Schedule 6: Site Plan Diagram provides a plan view of the property. These can be surveys or drawings providing they are accurate and LEGIBLE. The site plans must be large and clear but shall not exceed a paper size of 11"x17". The site plan must include PROPOSED setbacks (NOT the minimum requirements of the OBC). There is also a section where the proposed distances from the distribution pipe and tank to the **CLOSEST** elements on the lot are also required. This is meant as a quick reference for the inspector to see if there would be any issues with the proposal that could be identified immediately. The applicant must provide one (1) copy of the proposal.

Note: Sample drawings are included at the end of the application guide.

- ❑ Property owner's name and property address (civic);
- ❑ Lot size, property dimensions, roads, existing rights-of-way, easements, or municipal/utility corridors;
- ❑ Show and identify neighboring properties, including wells (indicate if none);
- ❑ Show location and size of all proposed and existing sewage system components (tanks, pump chambers, alarms, distribution bed) and the test pits;
- ❑ Show the direction of surface water flow, as well as any surface water (i.e. creek, pond, lake) on or adjacent to the property and provide the common name;
- ❑ Indicate direction of North on the site plan;
- ❑ Indicate distances to all utilities (i.e. telephone, HYDRO lines above and below ground); and
- ❑ Show the distances from pipes in bed and tank to ALL buildings, structures, property lines, surface water, easements, rights-of-way, driveways and wells (including neighbouring wells).

Schedule 7: Cross Sectional Diagram provides a cross-sectional view of the sewage system. The cross section should be accurate, LEGIBLE, large and clear but shall not exceed a paper size of 11"x17". The cross section must include PROPOSED depths (NOT the minimum requirements of the OBC).The applicant must provide one (1) copy of the proposal.

- ❑ Property owners name and property address (civic);
- ❑ Depth of topsoil;
- ❑ Depth of crushed stone;
- ❑ Depth of filter medium used;
- ❑ Depth and dimensions of contact area required;
- ❑ Depth to bedrock/groundwater table;
- ❑ Depth to hardpan/soils T-time >15min/cm;
- ❑ Height above/below existing grade of ground surface;
- ❑ Show side slopes of bed/mantle;
- ❑ Existing grade/Finished grade; and
- ❑ Distance between pipes.

Letter of Authorization: This form (or a personalized variation of it) must be filled out and signed by the legal owner if the applicant is not the owner. A PDF version of this can be found on the website indicated below.

Fee Schedule: Pay the appropriate fee with the submission of your application. The current fee schedule can be found on the website indicated below. An application will not be processed until fee payment is received.

FURTHER INFORMATION OR ASSISTANCE

To submit your application OR for further information/assistance, contact North Bay – Mattawa Conservation Authority's on-site sewage system team.

15 Janey Avenue
North Bay, Ontario
P1C 1N1

Telephone: (705) 474-5420

Email: septic.northbay@nbmca.ca
Web: nbmca.ca

90 Bowes Street, Suite 202
Parry Sound, Ontario
P2A 2L7

Telephone: (705) 746-7566

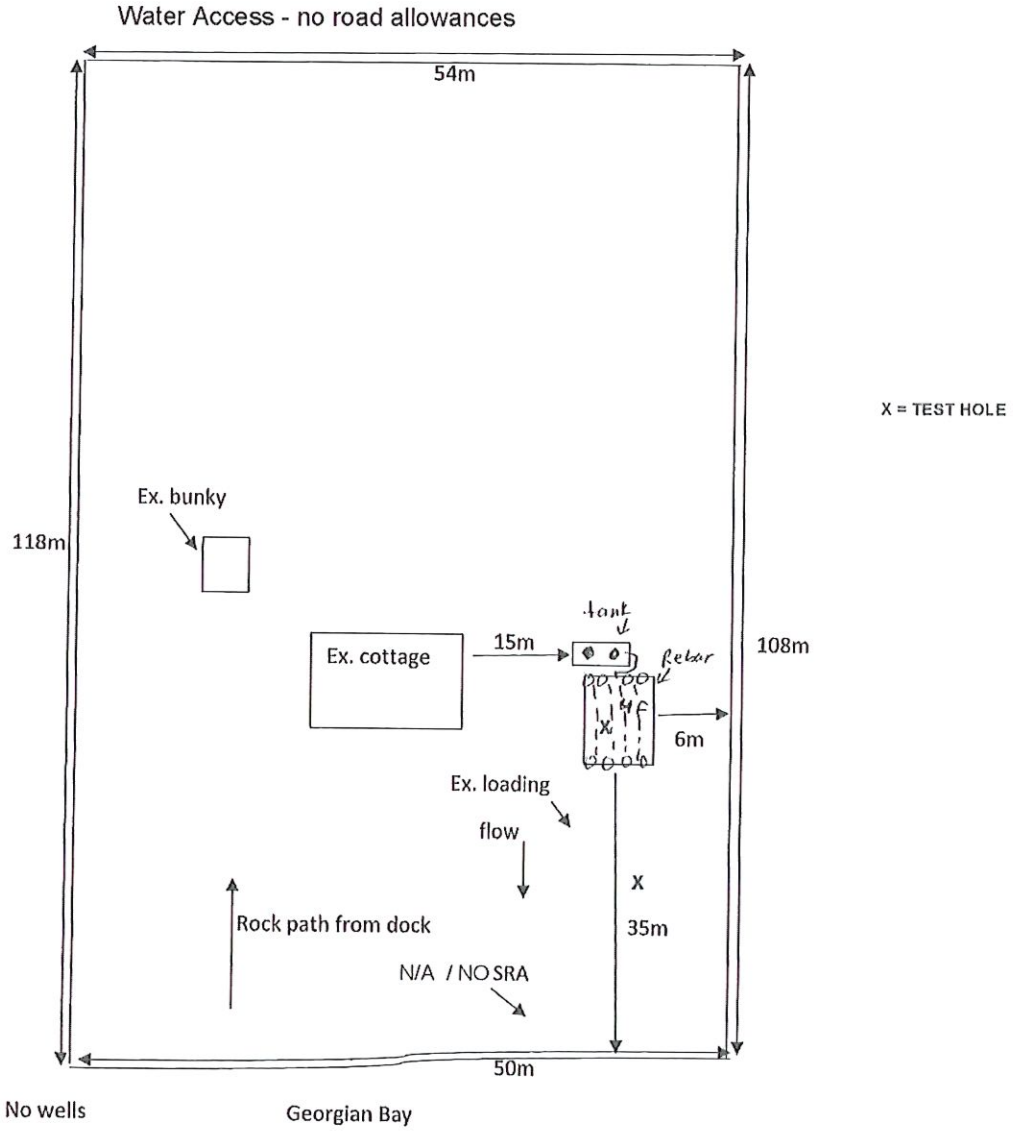
Email: septic.parrysound@nbmca.ca
Web: nbmca.ca

SAMPLE DRAWINGS

REMINDER: The site plans provide both an plan view of the property and cross-sectional view of the sewage system. These can be surveys or drawings as long as they are accurate, LEGIBLE, large and clear, but shall not exceed a paper size of 11"x17". The applicant must provide one (1) copy each of the site plans (plan view and cross-sectional).

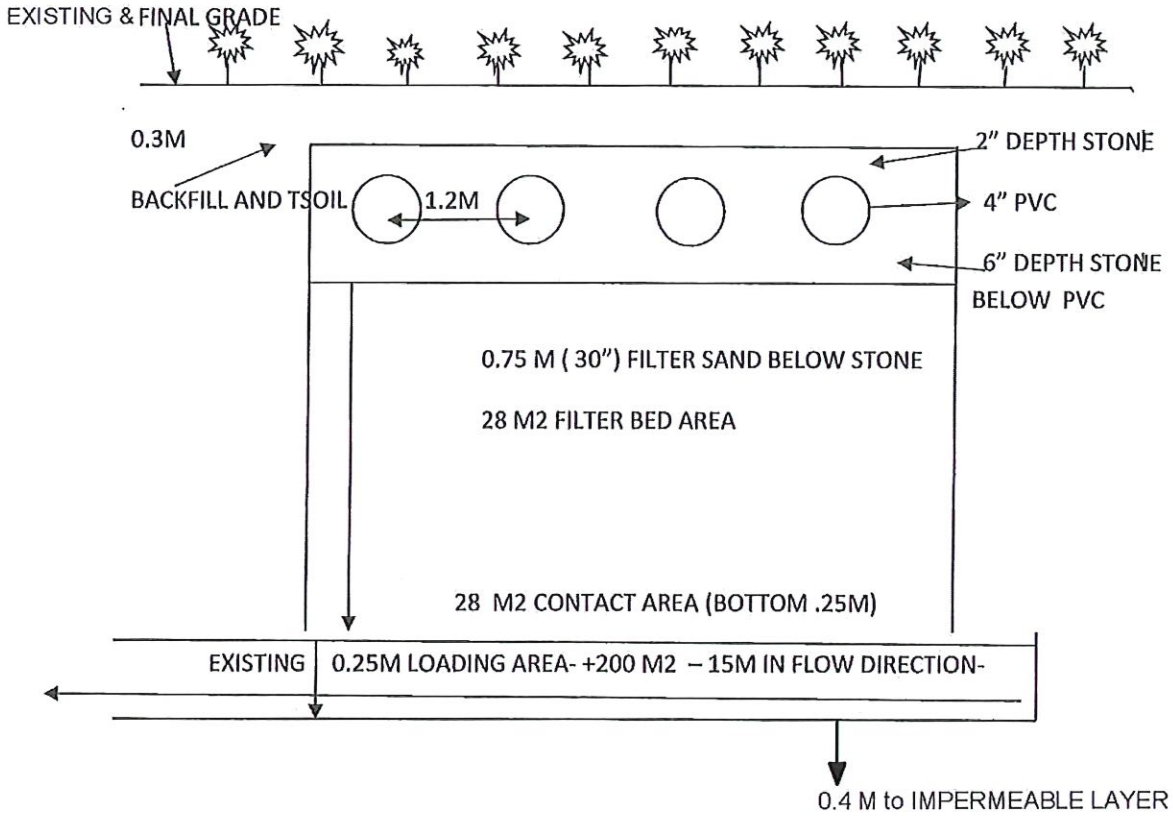
Property Owner 1, Property Information

^ NORTH Arrow



This site plan (above) and cross section (below) for "Property Owner 1" are good examples for a property with an existing cottage, replacing a system in an existing location. There is also an existing bunky on the lot which has also been drawn in in the above site plan. Any fixtures, floor area and bedrooms from the bunky as well as the cottage would be included in the Total Daily Design Sewage Flow (Q) on Schedule 4: Design Criteria. The designer has indicated that there are no wells, as well as the fact that the Shore Road Allowance (SRA) is N/A / No SRA (meaning that on this specific portion of this waterbody there is no SRA and therefor the inspector does not need to be concerned about that property line). Note that the lot dimensions are clearly marked and all of the site indicators (including location of test holes, name of water body, existing loading, direction of flow etc.) are clear and legible making it easy for the inspector to quickly recognize lot features and therefor complete a timely inspection.

Property Owner 1, Property Information

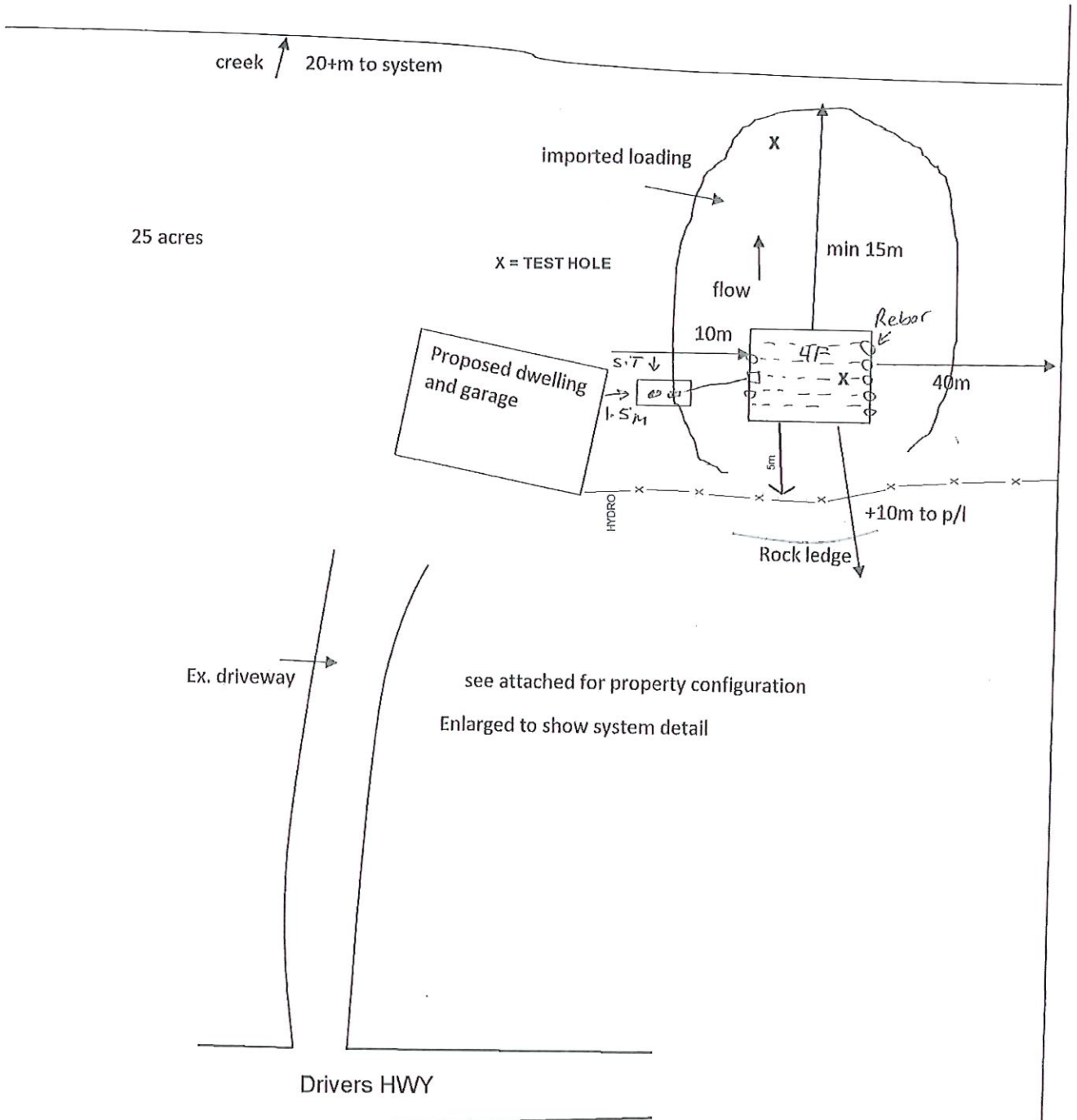


REBAR TO BE USED TO MARK RUNS AND HEADER LINE

This cross section depicts a fully dug in system (note: existing and final grade at the top). This would mean that 1.5m + of natural in situ sandy soil with an appropriate t-time was present on the lot and that a test hole demonstrating this was seen upon the site inspection. This is an example of a stone and pipe application in a 4F filter bed. No expanded contact area was required here and the MLA is existing and is shown to extend the minimum of 15m in direction of flow. The subsurface detection proposed is also indicated to the inspector on the bottom.

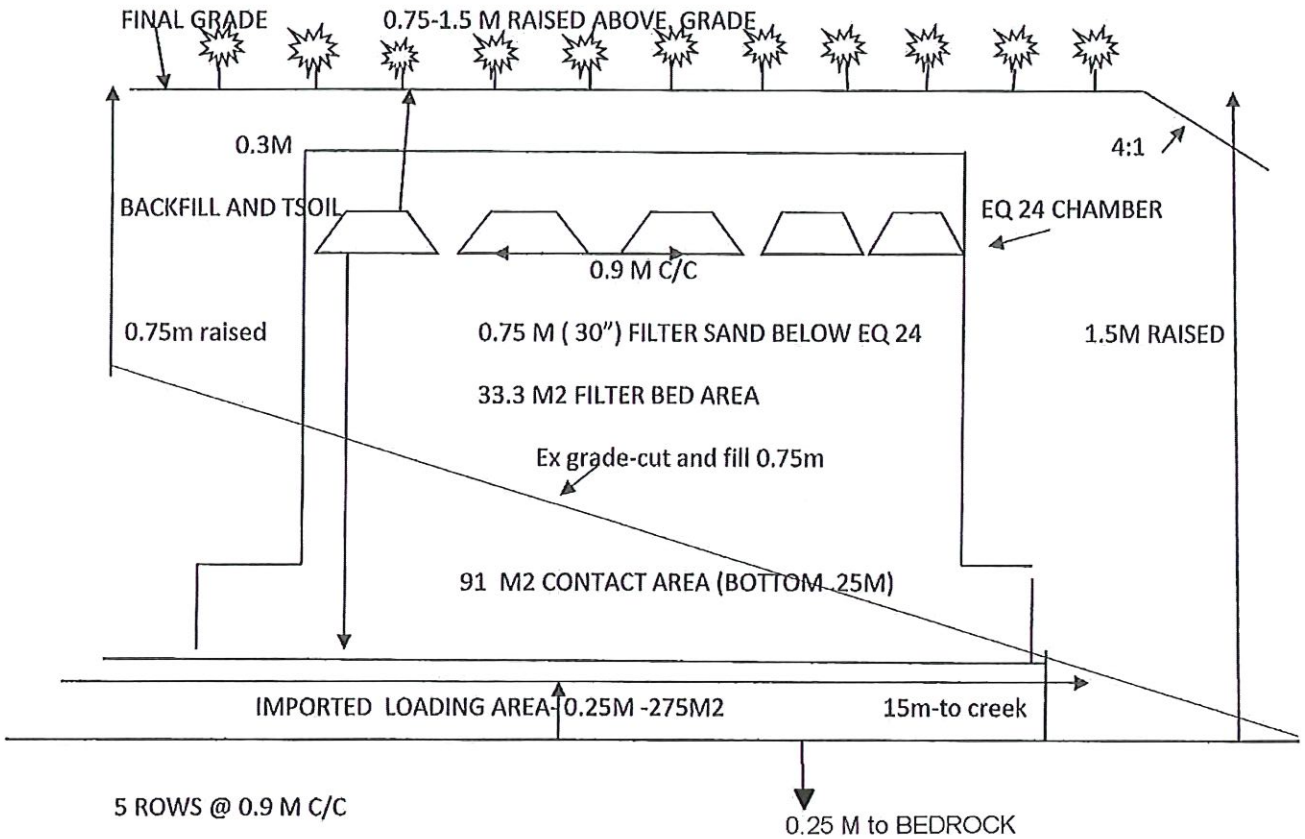
Property Owner 2, Property Information

^ NORTH Arrow



This site plan for Property Owner 2 is an example where a MTO Land Use Permit MAY be required. The designer must contact MTO for properties adjacent to highways and MTO maintained corridors. If a Land Use Permit is required, it must be supplied to the NBMCA together with the Application for the Sewage System. This is an example of a vacant lot with a PROPOSED dwelling and garage. These are important things to note on the appropriate pages of the application (ex. Proposed & Current Use of Building on the MMAH prescribed Application for a Permit to Construct of Demolish page 1 or 4) as it makes it easier for the inspector to identify the site they will be visiting, as well as filling out the Permit pages appropriately. Note the important site features which were added: HYDRO, rock ledge, creek, existing driveway.

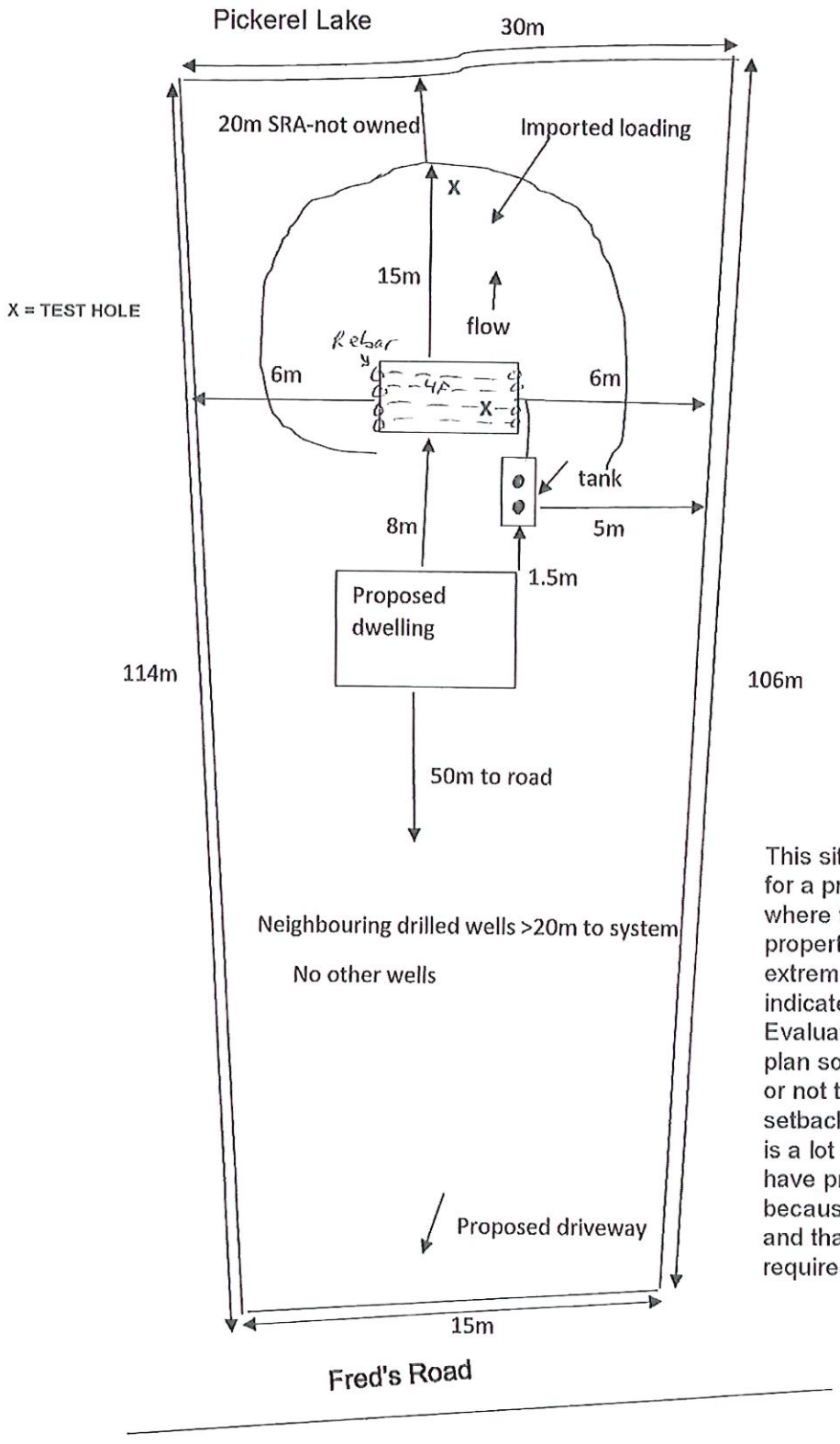
Property Owner 2, Property Information



The cross section for Property Owner 2 is for a system utilizing chambers. This cross section is depicting a system which is partially dug in (on the back end) and fully raised (on the front end). This is because the existing grade/ natural slope of the property allowed for this type of proposal. This can be proposed when the bottom of the contact area comes out at the existing grade when backed into a slope. This system is 0.75 - 1.5 m raised above grade, this should be also indicated in the appropriate section of Schedule 5 as well as here on the cross section diagram. The loading area is imported and extends 15m to the creek. An expanded contact area has also been indicated on this cross section. This would indicate a native soil with less sand and more silts is present on the site (indicative of soils with a T-time greater than 15).

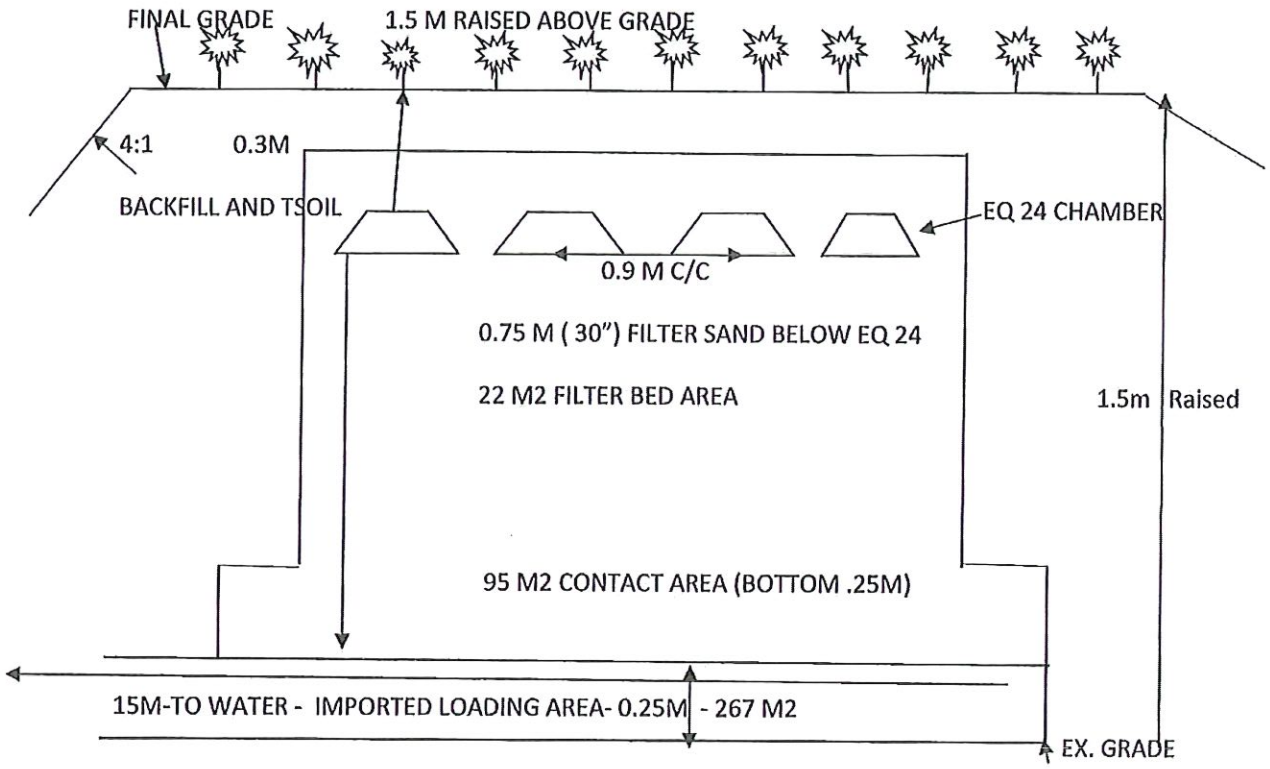
Property Owner 3, Property Information

^ NORTH Arrow



This site plan for Property Owner 3 is for a proposed dwelling on a lake where the SRA is not owned by the property owners. This information is extremely important and must be indicated on Schedule 3: Site Evaluation Form as well as the site plan so the inspector knows whether or not to include the additional setbacks required (because SRA line is a lot line). In this site plan they have proposed 15m to the SRA line because it is in the direction of flow and that is the minimum distance required for a mantle loading area.

Property Owner 4, Property Information



4 ROWS @ 0.9 M C/C

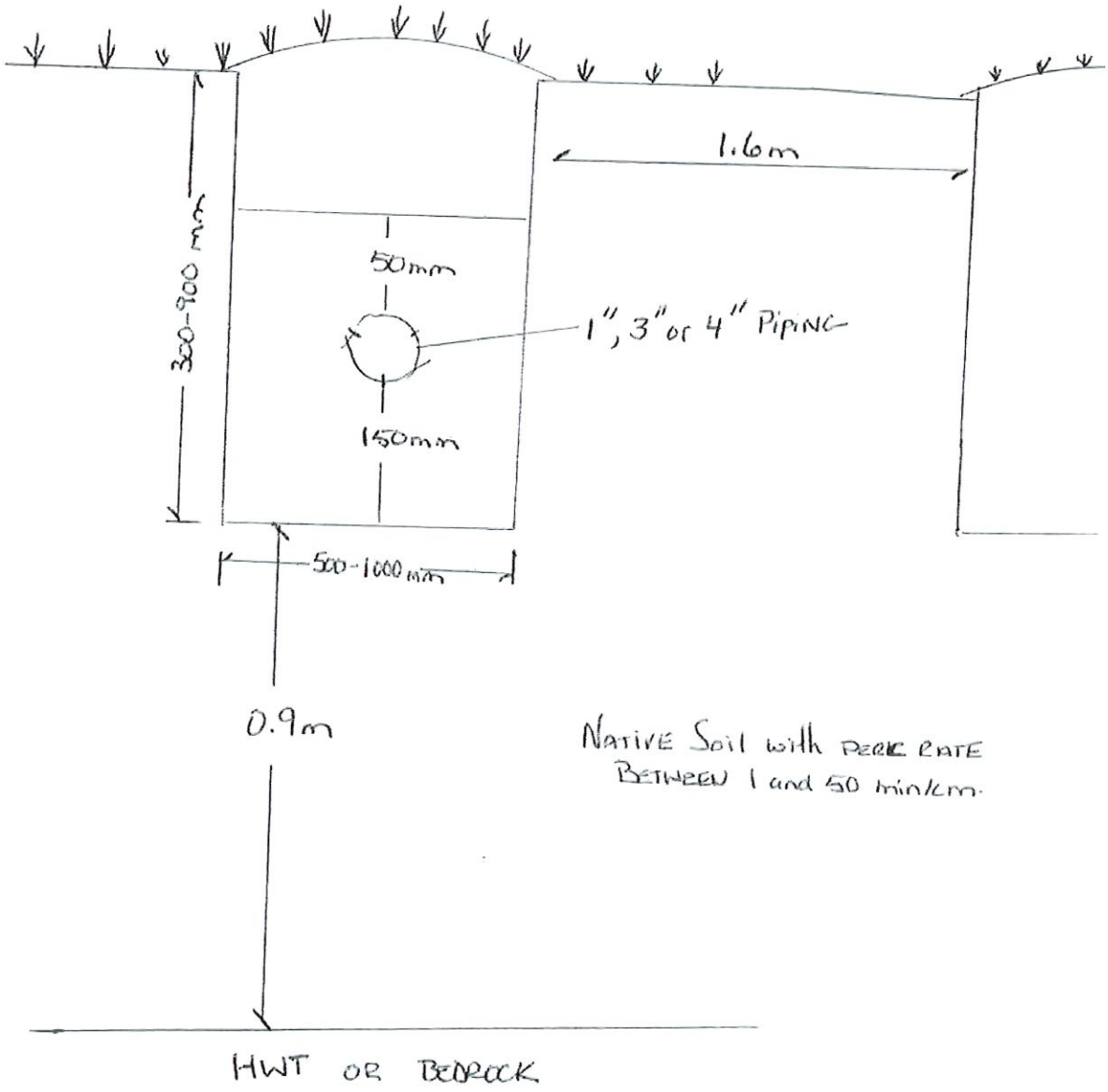
4 INFILTRATOR CHAMBERS PER ROW = 22 M2 BED AREA

REBAR TO BE USED TO MARK RUNS AND HEADER LINE / D.BOX

This cross section for Property Owner 3 depicts a fully raised, fully imported filter bed system with an expanded contact area and utilizing chambers.

CONVENTIONAL TRENCH CROSS SECTIONAL VIEW

This is an example of a Class 4 Trench Bed cross section.



NOT TO SCALE