

7 Creswell Drive  
Trenton, Ontario K8V 5R6  
www.quintewest.ca



A Natural Attraction

Tel: 613-392-2841  
Toll Free: 1-866-485-2841  
Fax: 613-392-7151  
building@quintewest.ca

Planning & Development Services

---

## **Procedures for an Application for a Sewage System Permit**

### **This Package Contains:**

1. Application for a Sewage System Permit
2. Ontario Building Code Application for a Permit to Construct or Demolish
3. Proposed Sewage Disposal System Design Form
4. Calculation Sheet
5. Ontario Building Code and Guide Sheet

The following forms must be completed and returned to the City of Quinte West along with the appropriate fee to complete the application.

1. Application for a Sewage System Permit  
Note: Owner's signature must be provided or a letter from the owner appointing an Authorized Agent.
2. Ontario Building Code Application for a Permit to Construct or Demolish
3. Proposed Sewage Disposal System Design Form for sewage systems described in the Ontario Building Code. Other approved sewage systems (B.M.E.C. approved)

The Building Code Act does not allow the issuance of permits based on incomplete applications.

Building Inspectors can only provide comments based on complete applications and plans. Therefore incomplete applications will be returned to the Owner, or their Authorized Agent.

Once the completed application has been reviewed, an inspector will visit the property to inspect the test hole and site. The applicant will be either issued a permit to install the system or the reasons provided as to why a permit cannot be issued.

Information provided in this package is limited, and it is the responsibility of the applicant to ensure compliance with all applicable sections of the Ontario Building Code.



A Natural Attraction

Building Services  
Telephone: (613)392-2841  
Fax: (613)392-7151  
E-mail: building@quintewest.ca

## Application for a Sewage System Permit

### OFFICE USE ONLY

|                                                                                                                                                    |                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Application number:                                                                                                                                | Permit number (if different): |
| Date received:                                                                                                                                     | Roll number:                  |
| Application submitted to: <u>City of Quinte West</u><br>(Name of municipality, upper-tier municipality, board of health or conservation authority) |                               |

- NAME OF OWNER: \_\_\_\_\_ TEL. NO.: \_\_\_\_\_  
MAILING ADDRESS: \_\_\_\_\_
  - PROPOSE TO: \_\_\_\_\_ A \_\_\_\_\_ OR \_\_\_\_\_  
Install or Repair Holding Tank, Leaching Bed System, Filter Bed, Other Treatment Unit and/or System Other (Privy, Greywater System). If other than a privy, specify make and model number
  - TYPE OF BUILDING: \_\_\_\_\_  
(Single Family Dwelling, Apartment Building, Motel, Etc.)
  - LOCATION: \_\_\_\_\_
  - STATE THE NUMBER OF:            
Bedrooms Showers & Bathtubs Wash Basins Laundry Units Toilets Kitchen Sinks Hot Tubs \* Swimming Pools\* Water Treatment Devices\*
- \*NOTE: these items should not drain water to a sewage disposal system.
- TOTAL AREA OF LIVING SPACE ON PROPERTY (includes guest cabins, bunkies, etc.): \_\_\_\_\_ m<sup>2</sup>
  - WATER SUPPLY:  Dug Well  Municipal System  Drilled Well ( Depth of Steel Casing) \_\_\_\_\_ Metres  
 Other \_\_\_\_\_  
 Proposed or  Existing

### IMPORTANT INFORMATION!

- If the application is for holding tank, a signed pump-out agreement must be attached.
- To determine the type and depth of soil in the proposed leaching bed, three test pits must be excavated to a MINIMUM DEPTH of 1.5 metres (or a least to rock or water) prior to inspection. Please advise when test pits are ready. It is suggested that a protective cover or fencing be placed over the hole.
- Post the completed Lot Identification Card, at the roadside, where it can be seen from the point of access to your lot.  
**Note: Are the test pits ready?** The inspection of the property will not be made until you notify us that the three test pits have been provided.

THE REVERSE SIDE OF THIS APPLICATION MUST BE COMPLETED!

**DIRECTIONS TO PROPERTY**

(Show Highway No., Secondary Road, Signs to Follow, Landmarks, 911 Address, Etc.)

A large, empty rectangular box with a thin black border, occupying the majority of the page below the text. It is intended for the user to write the directions to the property.



A Natural Attraction

Building Services  
 Telephone: (613)392-2841  
 Fax: (613)932-7151  
 E-mail: building@quintewest.ca

## Application for a Permit to Construct or Demolish

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

| For use by Principal Authority                                                                                                                                                                                                 |             |                                |                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------|----------------------------|
| Application number:                                                                                                                                                                                                            |             | Permit number (if different):  |                            |
| Date received:                                                                                                                                                                                                                 |             | Roll number:                   |                            |
| Application submitted to: <u>City of Quinte West</u><br><small>(Name of municipality, upper-tier municipality, board of health or conservation authority)</small>                                                              |             |                                |                            |
| 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 <sup>2</sup> ) |                            |
| B. Purpose of application                                                                                                                                                                                                      |             |                                |                            |
| <input type="checkbox"/> New construction <input type="checkbox"/> Addition to an existing building <input type="checkbox"/> Alteration/repair <input type="checkbox"/> Demolition <input type="checkbox"/> Conditional Permit |             |                                |                            |
| Proposed use of building                                                                                                                                                                                                       |             | Current use of building        |                            |
| Description of proposed work                                                                                                                                                                                                   |             |                                |                            |
| C. Applicant                                                                                                                                                                                                                   |             |                                |                            |
| Applicant is: <input type="checkbox"/> Owner or <input type="checkbox"/> 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 ( )            |

| <b>E. Builder (optional)</b>                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|
| Last name                                                                                                                                                                      | First name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Corporation or partnership   |                             |
| Street address                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Unit number                  | Lot/con.                    |
| Municipality                                                                                                                                                                   | Postal code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Province                     | E-mail                      |
| Telephone number ( )                                                                                                                                                           | Fax ( )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                              | Cell number ( )             |
| <b>F. Tarion Warranty Corporation (Ontario New Home Warranty Program)</b>                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                             |
| i.                                                                                                                                                                             | Is proposed construction for a new home as defined in the Ontario New Home Warranties Plan Act? If no, go to section G.                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| ii.                                                                                                                                                                            | Is registration required under the Ontario New Homes Warranties Plan Act?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| iii.                                                                                                                                                                           | If yes to (ii) provide registration number(s): _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <b>G. Required Schedules</b>                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                             |
| i.                                                                                                                                                                             | Attached 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 systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |                             |
| <b>H. Completeness and compliance with applicable law</b>                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                             |
| i.                                                                                                                                                                             | The 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).<br>Payment had been made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the <i>Building Code Act, 1992</i> , to be paid when the application is made. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| ii.                                                                                                                                                                            | This application is accompanied by the plans and specification prescribed by the applicable by-law, resolution or regulation made under clause (7)(1)(b) of the <i>Building Code Act, 1992</i> .                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> Yes | <input type="checkbox"/> 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 <i>Building Code Act, 1992</i> which enables the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.                                                                                                                                                                                                         | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| iv.                                                                                                                                                                            | The proposed building, construction or demolition will not contravene any applicable law.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <b>I. Declaration of applicant</b>                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                             |
| 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

| <b>A. Project information</b>                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Building number, street name                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                           | Unit number                                                                                                                                                                                       | Lot/con.        |
| Municipality                                                                                                                                                                                                                                                                                                       | Postal code                                                                                                                                                                               | Plan number/other description                                                                                                                                                                     |                 |
| <b>B. Individual who reviews and takes responsibility for design activities</b>                                                                                                                                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| Name                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                           | Firm                                                                                                                                                                                              |                 |
| Street address                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                           | Unit number                                                                                                                                                                                       | Lot/con/        |
| Municipality                                                                                                                                                                                                                                                                                                       | Postal Code                                                                                                                                                                               | Province                                                                                                                                                                                          | E-mail          |
| Telephone number ( )                                                                                                                                                                                                                                                                                               | Fax number ( )                                                                                                                                                                            |                                                                                                                                                                                                   | Cell number ( ) |
| <b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]</b>                                                                                                                                                                                          |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| <input type="checkbox"/> House<br><input type="checkbox"/> Small Buildings<br><input type="checkbox"/> Large Buildings<br><input type="checkbox"/> Complex Buildings                                                                                                                                               | <input type="checkbox"/> HVAC – House<br><input type="checkbox"/> Building Services<br><input type="checkbox"/> Detection, Lighting and Power<br><input type="checkbox"/> Fire Protection | <input type="checkbox"/> Building Structural<br><input type="checkbox"/> Plumbing – House<br><input type="checkbox"/> Plumbing – All Buildings<br><input type="checkbox"/> On-site Sewage Systems |                 |
| Description of designer's work                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| <b>D. Declaration of Designer</b>                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| I _____ declare that (choose on as appropriate):<br><div style="text-align: center;">(Print name)</div>                                                                                                                                                                                                            |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| <input type="checkbox"/> 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.<br><br>Individual BCIN: _____<br><br>Firm BCIN: _____ |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| <input type="checkbox"/> 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.<br><br>Individual BCIN: _____<br><br>Basis for exemption from registration: _____                        |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| <input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.<br>Basis for exemption from registration and qualification: _____                                                                                                                    |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| I certify that: <ol style="list-style-type: none"> <li>1. The information contained in this schedule is true to the best of my knowledge.</li> <li>2. I have submitted this application with the knowledge and consent of the firm.</li> </ol>                                                                     |                                                                                                                                                                                           |                                                                                                                                                                                                   |                 |
| _____<br>Date                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                           | _____<br>Signature of Designer                                                                                                                                                                    |                 |

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

## Schedule 2: Sewage System Installer Information

### A. Project information

|                              |             |                               |          |
|------------------------------|-------------|-------------------------------|----------|
| Building number, street name |             | 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<br>(    ) | Fax<br>(    ) | Cell number<br>(    ) |          |

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

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

### E. Declaration of applicant

I \_\_\_\_\_ declare that (choose on as appropriate):  
(Print name)

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



Building Services  
Telephone: (613)392-2841  
Fax: (613)932-7151  
E-mail: building@quintewest.ca

A Natural Attraction

## PROPOSED SEWAGE DISPOSAL SYSTEM DESIGN

Owner of Property: \_\_\_\_\_

- 1) TOTAL DAILY DESIGN SEWAGE FLOW: \_\_\_\_\_ LITERS PER DAY
- 2) NATIVE SOIL PERCOLATION RATE: \_\_\_\_\_ MIN/CM (Provide lab test if under 50)
- 3) SEPTIC TANK SIZE: \_\_\_\_\_ LITERS
- 4) LEACHING BED DESIGN: **Complete A or B, C & D**

**A. Absorption Trench System** \_\_\_\_\_ metres of piping

Fill Required: Yes No (Circle) Depth of Fill: \_\_\_\_\_ metres

Please indicate the depth of the bottom of the stone layer either above or below original grade:\*

Bottom of Stone Layer \_\_\_\_\_ metres Below/Above Original Grade (please circle)

**B. Filter Bed Size** \_\_\_\_\_ m<sup>2</sup> Filter Sand Contact Area \_\_\_\_\_ metres

Fill Required: Yes No (Circle) Depth of Fill: \_\_\_\_\_ metres

Please indicate the depth of the bottom of the stone layer either above or below original grade:\*

Bottom of Stone Layer \_\_\_\_\_ metres Below/Above Original Grade (please circle)

**C. Loading Rate Area** \_\_\_\_\_ m<sup>2</sup>

**D. 15 metre constructed mantle required:**

Yes No (Circle)

\*NOTE: At least 900mm above the high ground water table, rock or soil with a percolation time greater than 50 minutes.

### Side View Profile of Sewage System

NOTE: Show elevation above water table, bedrock or impermeable layer, existing grade etc.  
Show elevation of finished grade with respect to original grade.



**Proposed Design Site Plan**

Indicate North Point and show the following required information:

- |                                      |                           |                                                           |
|--------------------------------------|---------------------------|-----------------------------------------------------------|
| 1. Septic Tank and Leaching Bed      | 7. Existing Sewage System | 13. Topographical Features<br>(steep slopes, swamps etc.) |
| 2. Pump Chamber                      | 8. Driveways              | 14. Direction of Slope                                    |
| 3. Loading Rate Area                 | 9. Surface Waters         | 15. Direction of Surface and<br>Ground Water Flow         |
| 4. 15 metre Mantle Area              | 10. Property Lines        |                                                           |
| 5. Proposed Structure                | 11. Foundation Drain      |                                                           |
| 6. Water Supplies (incl. neighbours) | 12. Eavestrough Discharge |                                                           |

Note: The loading rate area and the 15 metre mantle area are to be free of structures.





A Natural Attraction

Building Services  
 Telephone: (613)392-841  
 Fax: (613)932-7151  
 E-mail: building@quintewest.ca

## Calculation Sheet

# Ontario Building Code Proposed Requirements – Residential Sewage Disposal System

Name: \_\_\_\_\_

### 1. Sewage Flow

a) Number of bedrooms: \_\_\_\_\_ = \_\_\_\_\_ Litres (1)

b) Living space: \_\_\_\_\_ m<sup>2</sup> **ADD**  
 Each 10 m<sup>2</sup> over 200 m<sup>2</sup> up to 400 m<sup>2</sup>: \_\_\_\_\_ x 100 = \_\_\_\_\_ Litres  
 Each 10 m<sup>2</sup> over 400 m<sup>2</sup> up to 600 m<sup>2</sup>: \_\_\_\_\_ x 75 = \_\_\_\_\_ Litres

**OR ADD** (whichever is the larger flow)

c) Total Fixture Units: \_\_\_\_\_ Litres (2)  
 Each Fixture Unit over 20: \_\_\_\_\_ x 50 = \_\_\_\_\_ Litres (3)

**Total Sewage Flow: (Q)** (Add 1 + 2 or 3) \_\_\_\_\_ Litres

### 2. Septic Tank Size

Residential Occupancy: Q Sewage Flow: \_\_\_\_\_ x 2 = \_\_\_\_\_ Litres (Minimum – 3600 Litres)  
 Commercial: Q Sewage Flow: \_\_\_\_\_ x 3 = \_\_\_\_\_ Litres

3. **Percolation rate from Test Hole Soil Conditions** T Time = \_\_\_\_\_ min/cm  
 Or Lab Test

### 4. Leaching Bed Size

Length of Pipe = Q Sewage Flow x T Percolation Time

$L = \frac{QT}{200} = \frac{X}{200} =$  \_\_\_\_\_ m. of pipe \_\_\_\_\_ ft. of pipe

### 5. Filter Bed Size

Q Sewage Flow  $\leq$  3000 Litres/Day: Q Sewage Flow  $\div$  75 = m<sup>2</sup>  
 \_\_\_\_\_  $\div$  75 = \_\_\_\_\_ m<sup>2</sup> of filter bed

Q Sewage Flow  $\geq$  3000 Litres/Day: Q Sewage Flow  $\div$  50 = m<sup>2</sup>  
 \_\_\_\_\_  $\div$  50 = \_\_\_\_\_ m<sup>2</sup> of filter bed

### 6. Filter Bed Contact Area of Filter Sand

Area =  $\frac{Q \text{ Sewage Flow} \times T \text{ Percolation Time}}{850} =$  \_\_\_\_\_ m<sup>2</sup> filter sand contact area

A =  $\frac{QT}{850} = \frac{X}{850} =$  \_\_\_\_\_ m<sup>2</sup> filter sand contact area

**Expanded filter sand contact area is to be no less than the filter bed size.**

### 7. Loading Rate for Fill-Based Absorption Trenches and Filter Beds

Loading Rates      Percolation Time      Loading Rate (L.m<sup>2</sup>/day)

|       |  |    |
|-------|--|----|
| 1-20  |  | 10 |
| 20-35 |  | 8  |
| 35-50 |  | 6  |
| >50   |  | 4  |

Q Sewage Flow  $\div$  Loading Rate = \_\_\_\_\_ m<sup>2</sup> of 250 mm of unsaturated soil or leaching bed fill

\_\_\_\_\_  $\div$  \_\_\_\_\_ = \_\_\_\_\_ m<sup>2</sup> of 250 mm of unsaturated soil or leaching bed fill

### TEST PIT CONDITIONS

|                |            |
|----------------|------------|
| Depth (metres) | Soil Types |
|----------------|------------|

0 \_\_\_\_\_

0.5 \_\_\_\_\_

1.0 \_\_\_\_\_

1.5 \_\_\_\_\_

Show Rock Elevation \_\_\_\_\_

Show Water Table      Spring HWT

# Ontario Building Code & Guides

**Table 7.9.4.3.**  
**Minimum Permitted Size of Fixture Outlet Pipe and Hydraulic Loads for Fixtures**

| Fixture                                                                                                           | Min. Size of Fixture Outlet Pipe, in. | Hydraulic Load, fixture units                                 |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------|
| Autopsy table                                                                                                     | 1½                                    | 2                                                             |
| Bathroom group                                                                                                    |                                       |                                                               |
| a) with flush tank                                                                                                |                                       | 6                                                             |
| b) with direct flush valve                                                                                        |                                       | 8                                                             |
| Bathtub (with or without shower)                                                                                  | 1½                                    | 1½                                                            |
| Bathtub: foot, sitz, or slab                                                                                      | 1½                                    | 1½                                                            |
| Bed pan washer                                                                                                    | 3                                     | 6                                                             |
| Beer cabinet                                                                                                      | 1½                                    | 1½                                                            |
| Bidet                                                                                                             | 1¼                                    | 1                                                             |
| Chinese range                                                                                                     | 1½                                    | 3                                                             |
| Clothes washer                                                                                                    |                                       |                                                               |
| a) domestic                                                                                                       | N/A                                   | 1½ with 2 in. trap                                            |
| b) commercial                                                                                                     | N/A                                   | 2 with 1½ in. trap                                            |
| Dental unit or cuspidor                                                                                           | 1¼                                    | 1                                                             |
| Dishwasher                                                                                                        |                                       | ½                                                             |
| a) domestic                                                                                                       | 1½                                    | no load when connected to garbage grinder or domestic sink    |
| b) commercial type                                                                                                | 2                                     | 3                                                             |
| Drinking fountain                                                                                                 | 1¼                                    | ½                                                             |
| Fish tank or tray                                                                                                 | 1½                                    | 1½                                                            |
| Floor drain                                                                                                       | 2                                     | 2 with 2 in. trap<br>3 with 3 in. trap                        |
| Garbage grinder                                                                                                   | 2                                     | 3                                                             |
| Icebox                                                                                                            | 1¼                                    | 1                                                             |
| Laundry tray                                                                                                      |                                       |                                                               |
| a) single or double units or 2 single units with common trap                                                      | 1½                                    | 1½                                                            |
| b) 3 compartments                                                                                                 | 1½                                    | 2                                                             |
| Lavatory                                                                                                          |                                       |                                                               |
| a) barber or beauty parlor                                                                                        | 1½                                    | 1½                                                            |
| b) dental                                                                                                         | 1¼                                    | 1                                                             |
| c) domestic type single, or 2 single with common trap                                                             | 1¼                                    | 1 with 1¼ in. trap<br>1½ with 1½ in. trap                     |
| d) multiple or industrial type                                                                                    | 1½                                    | 3                                                             |
| Potato Peeler                                                                                                     | 2                                     | 3                                                             |
| Shower drain                                                                                                      |                                       |                                                               |
| a) from 1 head                                                                                                    | 1½                                    | 1½                                                            |
| b) from 2 or 3 heads                                                                                              | 2                                     | 3                                                             |
| c) from 4 to 6 heads                                                                                              | 3                                     | 6                                                             |
| Sink                                                                                                              |                                       |                                                               |
| a) domestic and other small type with or without garbage grinders, single, double, or 2 single with a common trap | 1½                                    | 1½                                                            |
| b) other sinks                                                                                                    | 1½                                    | 1½ with 1½ in. trap<br>2 with 2 in. trap<br>3 with 3 in. trap |
| Urinal                                                                                                            |                                       |                                                               |
| a) pedestal, siphon jet or blowout type                                                                           | 2                                     | 4                                                             |
| b) stall, washout type                                                                                            | 2                                     | 2                                                             |
| c) wall                                                                                                           |                                       |                                                               |
| i) washout type                                                                                                   | 1½                                    | 1½                                                            |
| ii) other types                                                                                                   | 2                                     | 3                                                             |
| Water closet                                                                                                      |                                       |                                                               |
| a) with flush tank                                                                                                | 3                                     | 4                                                             |
| b) with direct flush                                                                                              | 3                                     | 6                                                             |

**Table 8.2.1.3.A.**  
**Residential Occupancy**

| Residential Occupancy                                                                                             | (litres) |
|-------------------------------------------------------------------------------------------------------------------|----------|
| Apartments, Condominiums, Other Multi-family Dwellings - per person <sup>1</sup>                                  | 275      |
| Boarding Houses                                                                                                   |          |
| a) Per person,                                                                                                    |          |
| i) with meals and laundry facilities, or,                                                                         | 200      |
| ii) without meals or laundry facilities, and                                                                      | 150      |
| b) Per non-resident staff per 8 hour shift                                                                        | 40       |
| Boarding School - per person                                                                                      | 300      |
| Dwellings                                                                                                         |          |
| a) 1 Bedroom Dwelling                                                                                             | 750      |
| b) 2 Bedroom Dwelling                                                                                             | 1100     |
| c) 3 Bedroom Dwelling                                                                                             | 1600     |
| d) 4 Bedroom Dwelling                                                                                             | 2000     |
| e) 5 Bedroom Dwelling                                                                                             | 2500     |
| f) Additional flow for <sup>(2)</sup>                                                                             |          |
| i) each bedroom over 5,                                                                                           | 500      |
| ii) A) each 10 m <sup>2</sup> (or part thereof) over 200 m <sup>2</sup> up to 400 m <sup>2</sup> <sup>(3)</sup> , | 100      |
| B) each 10 m <sup>2</sup> (or part thereof) over 400 m <sup>2</sup> up to 600 m <sup>2</sup> <sup>(3)</sup> , and | 75       |
| C) each 10 m <sup>2</sup> (or part thereof) over 600 m <sup>2</sup> <sup>(3)</sup> , or                           | 50       |
| iii) each fixture unit over 20 fixture units                                                                      | 50       |
| Hotels and Motels (excluding bars and restaurants)                                                                |          |
| a) Regular, per room                                                                                              | 250      |
| b) Resort hotel, cottage, per person                                                                              | 500      |
| c) Self-service laundry, add per machine                                                                          | 2500     |
| Work Camp/Construction Camp, semi-permanent per worker                                                            | 250      |

**Table 8.2.1.5.**  
**Clearance Distances for Sewage Systems**

| Clearance Distances for Class 1, 2 and 3 Sewage Systems |                                                               |                                                                                                      |                                                                                                                                     |                                                             |
|---------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
|                                                         | Minimum horizontal distance in metres from a spring used as a | Minimum horizontal distance in metres from a well with watertight casing to a depth of at least 6 m. | Minimum horizontal distance in metres from a lake, river, pond, stream, reservoir, or a spring not used as source of potable water. | Minimum horizontal distance in metres from a Property Line. |
| Earth Pit                                               | 15                                                            | 30                                                                                                   | 15                                                                                                                                  | 3                                                           |
| Privy                                                   |                                                               |                                                                                                      |                                                                                                                                     |                                                             |
| Privy Vault                                             | 10                                                            | 15                                                                                                   | 10                                                                                                                                  | 3                                                           |
| Pail Privy                                              |                                                               |                                                                                                      |                                                                                                                                     |                                                             |
| Greywater System                                        | 10                                                            | 15                                                                                                   | 15                                                                                                                                  | 3                                                           |
| Cesspool                                                | 30                                                            | 60                                                                                                   | 15                                                                                                                                  | 3                                                           |

**Table 8.2.1.6.A. (Septic Tank)  
Minimum Clearances for Treatment Units**

|               |      |
|---------------|------|
| Structure     | 15 m |
| Well          | 15 m |
| Lake          | 15 m |
| Pond          | 15 m |
| Reservoir     | 15 m |
| River         | 15 m |
| Spring        | 15 m |
| Stream        | 15 m |
| Property Line | 3m   |

**Table 8.2.1.6.B.  
Minimum Clearances for Distribution Pipe**

|                                                 |      |
|-------------------------------------------------|------|
| Structure                                       | 5m   |
| Well with a watertight casing to a depth of 6 m | 15 m |
| Any other well                                  | 30 m |
| Lake                                            | 15m  |
| Pond                                            | 15m  |
| Reservoir                                       | 15m  |
| River                                           | 15 m |
| A spring not used as a source of potable water  | 15 m |
| Stream                                          | 15 m |
| Property Line                                   | 3 m  |

**Table 8.2.1.6.C.  
Minimum Clearance for Holding Tanks**

|                                                          |       |
|----------------------------------------------------------|-------|
| Structure                                                | 1.5 m |
| Well with a watertight casing to a depth of at least 6 m | 15 m  |
| Any other well                                           | 15 m  |
| A spring                                                 | 15 m  |
| Property Line                                            | 3 m   |

\*NOTE:

1. All clearances are increased by twice the height that the leaching bed/filter bed is raised above the original ground.
2. Greywater systems must be maintained at least 5 metres from any structure.

**Table 2.  
Soil Percolation Rates**

| Soil Type<br>(unified soil classification)                              | Coefficient of Permeability<br>K - cm/sec. | Percolation Time -<br>T mins/cm. | Comment                                                    |
|-------------------------------------------------------------------------|--------------------------------------------|----------------------------------|------------------------------------------------------------|
| Coarse Grained -<br>More than 50% larger than #200                      |                                            |                                  |                                                            |
| G.W. - Well graded gravels, gravel-sand mixtures, little or no fines.   | 10                                         | <1                               | very permeable<br>unacceptable                             |
| G.P. - Poorly graded gravels, gravel-sand mixtures, little or no fines. | 10-1                                       | <1                               | very permeable<br>unacceptable                             |
| G.M. - Silty gravels, gravel sand-silt mixtures.                        | 10 <sup>-2</sup> -10 <sup>-4</sup>         | 4-12                             | Permeable to medium permeable depending on amount of silt. |
| G.C. - Clayey gravels, gravel-sand-clay mixtures.                       | 10 <sup>-4</sup> -10 <sup>-6</sup>         | 12-50                            | Important to estimate amount of silt and clay.             |
| S.W. - Well-graded soils, gravelly sands, little or no fines.           | 10 <sup>-1</sup> -10 <sup>-4</sup>         | 2-12                             | medium permeability                                        |
| S.P. - Poorly graded sands, gravelly sand, little or no fines.          | 10 <sup>-1</sup> -10 <sup>-3</sup>         | 2-8                              | medium permeability                                        |
| S.M. - Silty sands, sand-silt mixtures.                                 | 10 <sup>-3</sup> -10 <sup>-5</sup>         | 8-20                             | medium to low permeability                                 |
| S.C. - Clayey sands, permeability sand-clay mixtures.                   | 10 <sup>-4</sup> -10 <sup>-6</sup>         | 12-50                            | medium to low (depends on amount of clay)                  |

**Table 3.  
Approximate Relationship of Soil Types to Permeability and Percolation Time**

| Soil Type<br>(unified soil classification)                                                                               | Coefficient of Permeability<br>K - cm/sec. | Percolation Time -<br>T mins/cm. | Comment                     |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------|-----------------------------|
| Coarse Grained -<br>More than 50% larger than #200                                                                       |                                            |                                  |                             |
| M.L. - Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, clayey silts with slight plasticity. | 10 <sup>-5</sup> - 10 <sup>-6</sup>        | 20 - 50                          | medium to low permeability  |
| C.L. - Inorganic clays of low to medium plasticity gravelly clays, sandy clays, silty clays, lean clays.                 | 10 <sup>-6</sup> and less                  | over 50                          | unacceptable                |
| O.L. - Organic silts, organic silty clays of low depends plasticity; liquid limit less than 50                           | 10 <sup>-5</sup> and less                  | 20 - over 50                     | acceptable on clay content. |
| M.H - Inorganic silts, micaceous or diatomaceous fine sandy soil or silty soils, elastic silts                           | 10 <sup>-6</sup> and less                  | over 50                          | unacceptable                |
| C.H - Inorganic clays of medium to high plasticity, organic silts                                                        | 10 <sup>-7</sup> and less                  | over 50                          | unacceptable                |
| O.H - organic clays of medium to high plasticity organic silt; liquid limit over 50                                      | 10 <sup>-6</sup> and less                  | over 50                          | unacceptable                |

