

Septic Guideline: Construction

Description		Required	Submission Status	Notes
Applicable Law	NVCA - Nottawasaga Valley Conservation Authority			
	LSRCA - Lake Simcoe Conservation Authority			
	MTO - Ministry of Transportation			
Forms	8a – 8g: Septic Design Forms	✓		
	Schedule 1: Designer Information	✓		
	Schedule 2: Sewage System Installer Information	✓		
Plans	Site Plan to include: <ul style="list-style-type: none"> • Property lines, buildings and site attributes • Tanks dispersal bed with dimensions & clearances • ALL surrounding potable water sources (types, locations, and clearances) • Site grading, drainage & swales 	✓		
	Cross Section to include: <ul style="list-style-type: none"> • Native and imported material labelled with depths • Existing and proposed grade 	✓		

Submission:

Applications shall be submitted through our online permit application software, Cloudpermit. For more information, visit our webpage at <https://www.oro-medonte.ca/municipal-services/building-information>

Test hole Inspection:

Where identified that proposed native time and high ground water shall be assessed. Excavate two 5' deep test holes **outside the existing septic envelope**. Book a test hole and site evaluation inspection online at <https://survey.simcoe.ca/surveys/inspectionbookings.aspx> or (705) 487-2171.

Permit Fees:

Fees will be calculated and invoiced through the workspace in accordance with the Fees & Charges By-law.

Engineered Lot Grading Design (ELG):

Where applicable; approved ELG and septic designs will be cross referenced during the permit review.

8a: Daily Flow - Residential Occupancy

SP# **Reason:**

End of Lifespan (or failure)
Maintenance or Repair
Development or relocation

Septic Construction:

New
Replacement
Repair

Septic Type:

Class 2 - Greywater System
Class 4 - Leaching Bed System
Class 5 - Holding Tank

Water source type:

Municipal water system
Private water system
Private well

Water source use:

New
Maintain existing
Decommission existing

Water conditioning system:

Backwash cycle discharges to the septic?
Yes No

Nitrogen reduction:

Yes, required

Fixture Units:

Fixture Type	Fixture Hydraulic Load	Building 1		Building 2	
		# of Fixtures	Total	# of Fixtures	Total
Bathroom Group - 2 pc	5.5				
Bathroom Group - 3 pc	6				
Bathroom Group - 4 pc	7.5				
Bidet	1				
Kitchen Sink	1.5				
Dishwasher	1.5				
Washing Machine	1.5				
Laundry Tub	1.5				
		Total		Total	

Residential Occupancies OBC 8.2.1.3.(1):**A. Dwelling - Daily Flow:** _____ L/day

Number of bedrooms: _____

Finished Area: _____ m²

Fixture Units: _____

B. Apartment - Daily Flow: _____ L/day

Number of Persons:

(2 per bedroom): _____

Total Daily Flow (A+B): _____ L/day

8b: Daily Flow - Other Occupancies

SP#

Reason:

End of Lifespan (or failure)
Maintenance or Repair
Proposed development or reno

Septic Construction:

New
Replacement
Repair

Septic Type:

Class 2 - Greywater System
Class 4 - Leaching Bed System
Class 5 - Holding Tank

Water source type:

Municipal water system
Private water system
Private well

Water source use:

New
Maintain existing
Decommission existing

Water conditioning system:

Backwash cycle discharges to the septic?

Yes No

Nitrogen reduction:

Yes, required

Other Occupancies OBC 8.2.1.3.(2) - Daily design flow:

	Description per OBC Table 8.2.1.3.B.	Volume	Calculated Flow
Establishment 1			
Establishment 2			
Establishment 3			
Establishment 4			

OBC Table 8.2.1.3. and Table notes:

- * The occupant load shall be calculated using OBC 3.1.17.
- * Where multiple calculations of volume is permitted, the calculation resulting in the highest flow shall be used for the establishment's daily flow.
- * Where a building contains more than one establishment, the total daily flow shall be the sum of daily flow for each establishment.

Total Daily Flow: _____ L/day

Design per OBC 8.7.4.:

Alternative Treatment Unit: Manufacturer: _____ Model: _____

1. Total daily flow (Q): _____ L/day
2. T-time of original controlling soil layer: _____ min/cm
3. Septic / treatment tank size: _____ L
4. Total distribution pipe $\geq 150\text{m}$ Yes No
5. Pump chamber size: _____ L

OBC 8.6.1.3. (4) - Sizing Example:

L = Total length of distribution pipe (m)

75mm (3") diameter distribution pipe

100mm (4") diameter distribution pipe

V = Effluent volume (L) pumped

V = 3.3 x _____ L = _____

V = 5.9 x _____ L = _____

6. Design Calculations:

A = Total finished floor area in m²

Q = Daily sanitary sewage flow in litres

T = Percolation t-time of the underlying native soil in min/cm (max 50 min)

Length of Distribution Pipe / Chamber

$$L = \frac{QT}{200 \text{ or } 300}$$

$$L = \underline{\hspace{2cm}}$$

$$L = \underline{\hspace{2cm}} \text{ m}$$

Loading Area

$$A = \frac{Q}{\text{Table 8.7.4.1.}}$$

$$A = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}} \text{ m}^2$$

7. Trench construction:

Absorption trench in insitu native soil per OBC 8.7.4.3.**Fill based absorption trench** in leaching bed fill per OBC 8.7.4.2.

8. Trench or loading area: Base excavation depth _____ mm **below existing grade.**

Design per OBC 8.7.5.:

Alternative Treatment Unit: Manufacturer: _____ Model: _____

1. Total daily flow (Q): _____ L/day
2. T-time of original controlling soil layer: _____ min/cm
3. Septic / treatment tank size: _____ L
4. Total distribution pipe 150m Yes No
5. Pump chamber size: _____ L

OBC 8.6.1.3. (4) - Sizing Example:

L = Total length of distribution pipe (m)

75mm (3") diameter distribution pipe

100mm (4") diameter distribution pipe

V = Effluent volume (L) pumped

V = 3.3 x _____ L = _____

V = 5.9 x _____ L = _____

6. Design Calculations:

A = Total finished floor area in m²

Q = Daily sanitary sewage flow in litres

T = Percolation t-time of the underlying native soil in min/cm (max 50 min)

Filter Bed Area

A = $\frac{Q}{(50, 75 \text{ or } 100)}$

A = _____

A = _____ m²

Expanded Contact Area

A = $\frac{QT}{850}$

A = _____
850

A = _____ m²

Loading Area

A = $\frac{Q}{\text{Table 8.7.4.1.}}$

A = _____

A = _____ m²

7. Base excavation depth _____ mm **below existing grade.**

Design per OBC 8.7.6.:

Required Treatment Unit: Manufacturer: _____ Model: _____

1. Total daily flow (Q): _____ L/day
2. T-time of original controlling soil layer: _____ min/cm
3. Septic / treatment tank size: _____ L
4. Total distribution pipe 150m Yes No
5. Pump chamber size: _____ L

OBC 8.6.1.3. (4) - Sizing Example:

L = Total length of distribution pipe (m)

75mm (3") diameter distribution pipe

100mm (4") diameter distribution pipe

V = Effluent volume (L) pumped

V = 3.3 x _____ L = _____

V = 5.9 x _____ L = _____

6. Design Calculations:

A = Total finished floor area in m²

Q = Daily sanitary sewage flow in litres

T = Percolation t-time of the underlying native soil in min/cm (max 50 min)

Length of Distribution Pipe / Chamber

$$L = \frac{Q}{50}$$

$$L = \text{_____ m}$$

7. Base excavation depth _____ mm **below existing grade.**

Design per OBC 8.7.7.:

Required Treatment Unit: Manufacturer: _____ Model: _____

1. Total daily flow (Q): _____ L/day
2. T-time of original controlling soil layer: _____ min/cm
3. Septic / treatment tank size: _____ L
4. Total distribution pipe 150m Yes No
5. Pump chamber size: _____ L

OBC 8.6.1.3. (4) - Sizing Example:

L = Total length of distribution pipe (m)

75mm (3") diameter distribution pipe

100mm (4") diameter distribution pipe

V = Effluent volume (L) pumped

V = 3.3 x _____ L = _____

V = 5.9 x _____ L = _____

6. Design Calculations:

A = Total finished floor area in m²

Q = Daily sanitary sewage flow in litres

T = Percolation t-time of the underlying native soil in min/cm (max 50 min)

Stone Layer

$$A = \frac{Q}{50 \text{ or } 75}$$

$$A = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}} \text{ m}^2$$

Sand Layer

$$A = \frac{QT}{400 \text{ or } 850}$$

$$A = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}} \text{ m}^2$$

7. Base excavation depth _____ mm **below existing grade.**

Design per OBC Act - Building Material Evaluation Commission:

Treatment Unit: Manufacturer: _____ Model: _____

1. Total daily flow (Q): _____ L/day
2. T-time of original controlling soil layer: _____ min/cm
3. Septic / treatment tank size: _____ L
4. Total distribution pipe 150m Yes No
5. Pump chamber size: _____ L

OBC 8.6.1.3. (4) - Sizing Example:

L = Total length of distribution pipe (m)

75mm (3") diameter distribution pipe

100mm (4") diameter distribution pipe

V = Effluent volume (L) pumped

V = 3.3 x _____ L = _____

V = 5.9 x _____ L = _____

6. Design Calculations:

A = Total finished floor area in m²

Q = Daily sanitary sewage flow in litres

T = Percolation t-time of the underlying native soil in min/cm (max 50 min)

Number of Pipes / Modules

$$A = \frac{Q}{\text{per BMEC}}$$

$$A = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}} \text{ m}^2$$

Sand Layer

$$A = \frac{QT}{400 \text{ or } 850}$$

$$A = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}} \text{ m}^2$$

7. Base excavation depth _____ mm **below existing grade.**

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			
<p>I _____ declare that (choose one as appropriate):</p> <p style="text-align: center;">(print name)</p> <p>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.</p> <p>Individual BCIN: _____</p> <p>Firm BCIN: _____</p> <p>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.</p> <p>Individual BCIN: _____</p> <p>Basis for exemption from registration: _____</p> <p>The design work is exempt from the registration and qualification requirements of the Building Code.</p> <p>Basis for exemption from registration and qualification: _____</p> <p>I certify that:</p> <ol style="list-style-type: none"> 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. <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 30%;"> <p>_____</p> <p style="text-align: center;">Date</p> </div> <div style="width: 60%;"> <p>_____</p> <p style="text-align: center;">Signature of Designer</p> </div> </div>			

NOTE:

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

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:			
<p>I _____ declare that:</p> <p style="text-align: center;">(print name)</p> <p>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;</p> <p><u>OR</u></p> <p>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.</p> <p>I certify that:</p> <ol style="list-style-type: none"> 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. <p>_____</p> <p style="display: flex; justify-content: space-between;"> Date Signature of applicant </p>			