APPROXIMATE SOIL PERCOLATION RATES (T-time)

The following are **estimated** ranges of soil percolation rates (T-times) measured in a rate of min/cm. Actual on-site soil conditions may vary significantly from estimates; it can be difficult to tell a 30 from a 50 just by looking at it.

Estimated T-times shall be determined by samples analyzed by the Unified Soil Classification System, the Soil Texture Classification from the USDA Soil Survey Manual, or percolation tests being conducted on in-situ soils.

Disputes about estimated T-times shall be resolved by sending in-situ soil samples to a Canadian Council of Independent Laboratories testing firm at the applicant's cost. The T-time will be determined by the falling head test and grain size analysis; the percent passing the 75 µm #200 sieve is to be included for silt content.

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

Sub-surface conditions encountered:		**Applicant's Use**		**Approved by Inspector**
Indicate depth to bedrock, T>50, &/or high ground water table (where present):	Depth (m)	Soil type	T-time	❑ Yes ❑ No

IMPORTED SEPTIC STONE AND LEACHING BED FILL CERTIFICATION

I, _____, certify that the materials used to construct the sewage system, under the application herein, meet Ontario Building Code requirements, and correspond to the percolation rate on the application and the soils analysis provided to the Township of Havelock-Belmont-Methuen:

NAME / NUMBER OF LICENSED AGGREGATE PIT	TYPE OF MATERIAL	T-TIME / SILT CONTENT	TESTING DATE (mm/dd/yyyy)
		/	
		/	
		/	

Note: *Leaching bed fill* means soil used to construct of conventional and chamber leaching beds, filter beds, dispersal beds, and area beds as prescribed under specific Building Materials Evaluation Commission authorizations. It may not include a requirement for other soils as prescribed by treatment unit manufacturers; check with the manufacturer before installation. The silt content of *leaching bed fill* must be included in the analysis.

The Township of Havelock-Belmont-Methuen may require you to submit soil samples for analysis.

_____ _____

Signature of Authorized Agent or Owner Date

DESCRIPTION	DWELLING				OTHER: _____			
	Total # of Existing	Total # of Proposed	# UNITS PER FIXTURE	**TOTAL FIXTURE UNITS**	Total # of Existing	Total # of Proposed	# UNITS PER FIXTURE	**TOTAL FIXTURE UNITS**
Bathroom group – 3 piece (toilet, sink, tub/shower)			**x 6.0 =**				**x 6.0 =**	
Additional toilet			**x 4.0 =**				**x 4.0 =**	
Bathtub or shower			**x 1.5 =**				**x 1.5 =**	
Additional sinks			**x 1.5 =**				**x 1.5 =**	
Kitchen sink			**x 1.5 =**				**x 1.5 =**	
Dishwasher			**x 1.0 =**				**x 1.0 =**	
Clothes Washer			**x 1.5 =**				**x 1.5 =**	
Laundry tub			**x 1.5 =**				**x 1.5 =**	
Other:_____			**x =**				**x =**	
FIXTURE UNITS	Total:				Total:			
FINISHED FLOOR AREA m²	Existing	Proposed	Total		Existing	Proposed	Total	
# OF BEDROOMS			Total:				Total:	

DESIGN FLOW CALCULATION TABLE				
Residential Occupancy			**Volume (L)**	**Flows**
(A) Bedroom flow	1 bedroom dwelling		750	
	2 bedroom dwelling		1100	
	3 bedroom dwelling		1600	
	4 bedroom dwelling		2000	
	5 bedroom dwelling		2500	
(B) Extra bedroom flow	Each bedroom over 5,		500	
(C) Living area flow	Each 10 m² (or part thereof) over 200 m² up to 400 m²,		100	
	Each 10 m² (or part thereof) over 400 m² up to 600 m², and		75	
	Each 10 m² (or part thereof) over 600 m², or		50	
(D) Fixture count flow	Each fixture unit over 20 fixture units		50	

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

Water Supply: ☐ **Proposed** ☐ **Existing**			
❑ Lake ❑ Shore well	❑ Drilled well Casing depth: ____ m	❑ Dug well ❑ Sandpoint	❑ Other (specify):_____

Provide proposed information instead of minimum requirements:

☐ **Septic Tank** ☐ **Class 5 Holding Tank**	❑ **Treatment Unit** ☐ **Digester Tank**
☐ New – proposed working capacity:_____ litres	☐ Level II ☐ Level III ☐ Level IV
☐ Use existing – size:_____ Permit _____	Make / model of treatment unit: _____

T-time (min/cm) of existing soil: _____	Subsurface detection method: _____	Pump required?	❑ No ❑ Macerating ❑ TBD ❑ Effluent

Mantle Loading Area Trench Bed, Leaching Chambers, Filter Bed **only**	Percolation Time (T) of Existing Soil, min/cm	1 < T ≤ 20	20 < T ≤ 35	35 < T ≤ 50	T > 50
	Loading Rates, (L/m²)/day	**10**	**8**	**6**	**4**
❑ Existing Soil (T ≤ 15) ❑ Imported Leaching Bed Fill	Q ÷ Loading Rate = _____ m² Length _____ m x Width _____ m				

Class 4 Trench Bed
Class 4 Leaching Chambers
Typical Drawing A

Total pipe length: $\frac{Q \times T}{\quad}$ = _____ m Raised height (above grade): _____ m

Conventional & Type I Leaching Chambers $\frac{Q \times T}{200}$ Type II Leaching Chambers $\frac{Q \times T}{300}$

Class 4 Filter Bed
Typical Drawing B

If Q ≤ 3000 L/day, Q÷75
If Q > 3000 L/day, Q÷50

Loading area: Q ÷ 75 / 50 = _____ m² If over 50 m², # of filter beds: _____

Contact area: $\frac{Q \times T}{850}$ = _____ m² Raised height (above grade): _____ m

Class 4 BMEC Bed
Typical Drawing C, D or E

Specified sand area: $\frac{Q \times T}{400}$ = _____ m² Length _____ m x Width _____ m

Number of modules: Q ÷ _____ = _____ Raised height (above grade): _____ m

Type A Dispersal Bed
Typical Drawing F, G, H or I

If Q ≤ 3000 L/day, Q÷75
If Q > 3000 L/day, Q÷50

Stone area: Q ÷ 75 / 50 = _____ m² Raised height: (above grade): _____ m

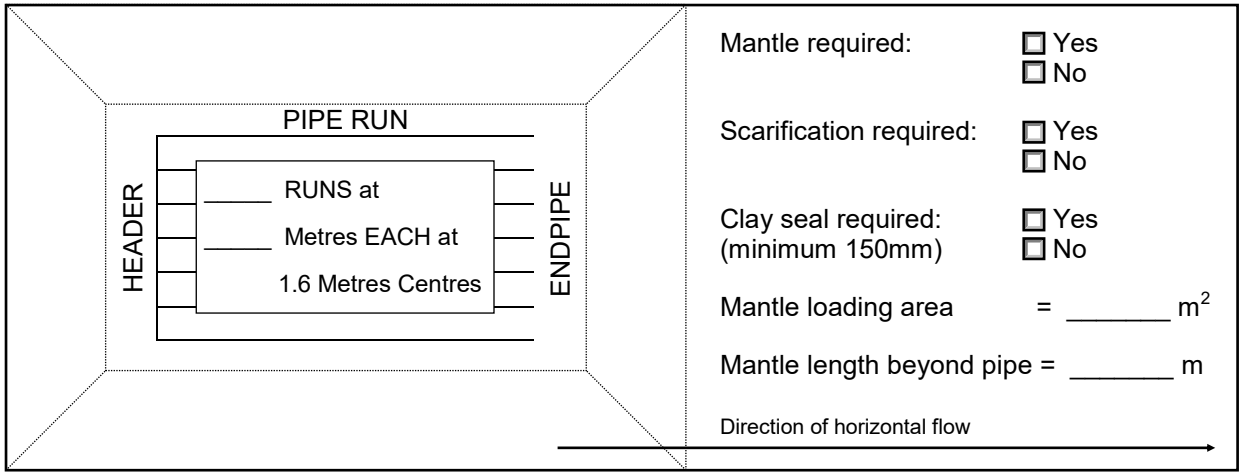
1<T≤15 sand area: $\frac{Q \times T}{850}$ = _____ m² T > 15 sand area: $\frac{Q \times T}{400}$ = _____ m²

The Township of Havelock-Belmont-Methuen INC 1998

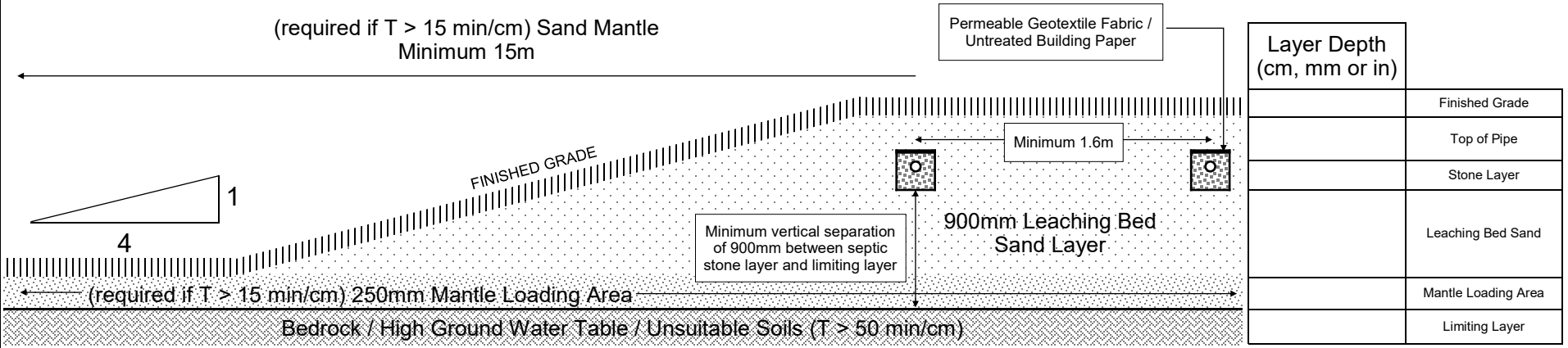
TYPICAL DRAWING A

BURIED OR RAISED LEACHING BED ABSORPTION TRENCH

Plan View (not to scale)



Cross-Section Profile (not to scale)



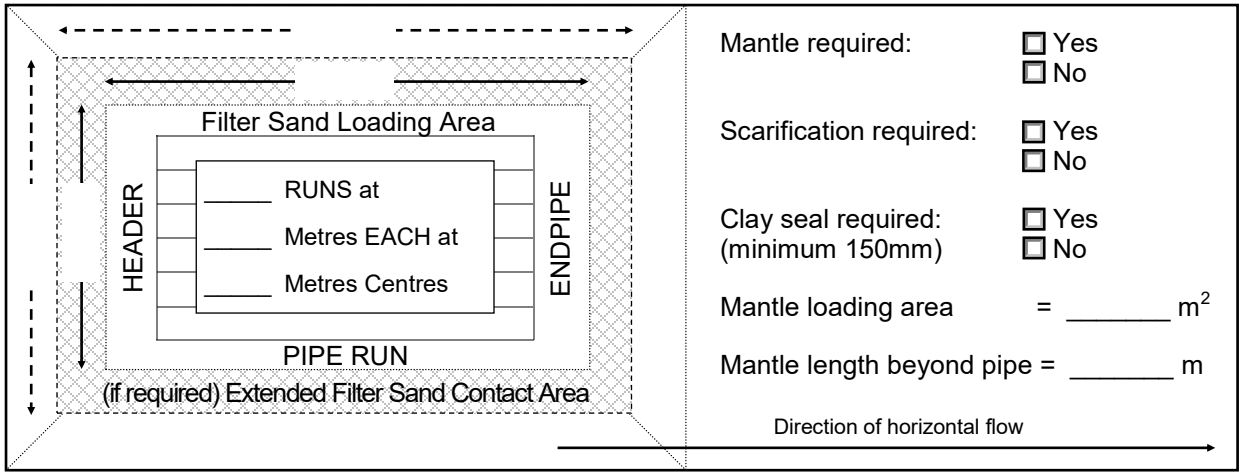
Layer Depth (cm, mm or in)	
	Finished Grade
	Top of Pipe
	Stone Layer
	Leaching Bed Sand
	Mantle Loading Area
	Limiting Layer

The Township of Havelock-Belmont-Methuen INC 1998

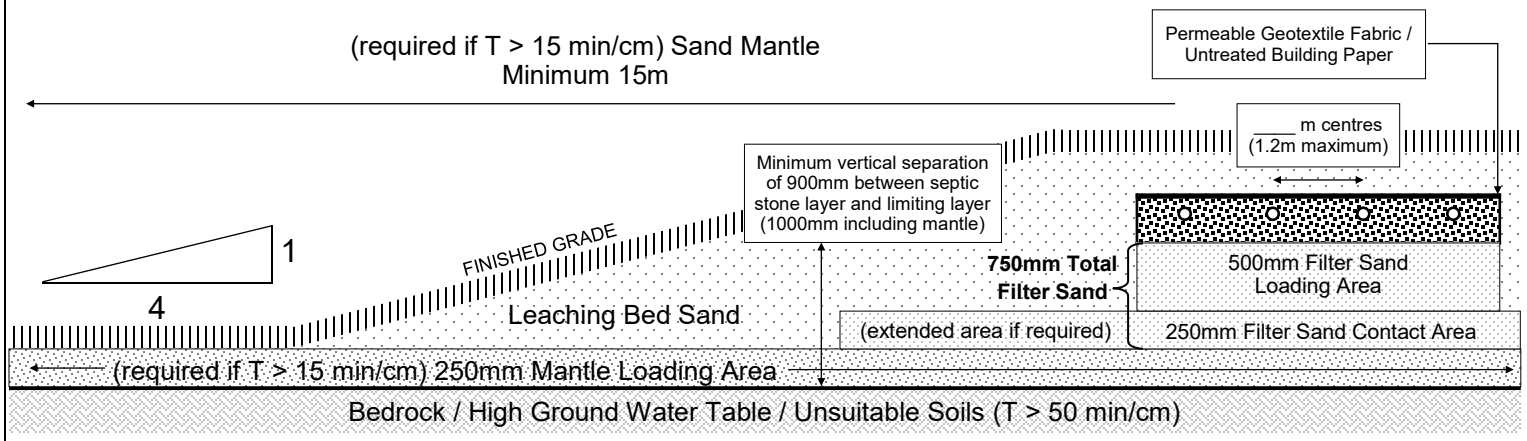
TYPICAL DRAWING B

BURIED OR RAISED FILTER BED

Plan View (not to scale)



Cross-Section Profile (not to scale)



Layer Depth (cm, mm or in)	
	Finished Grade
	Top of Pipe
	Stone Layer
	Filter Sand Loading Area
	Filter Sand Contact Area
	Mantle Loading Area
	Limiting Layer

Building Department
1 Ottawa St E PO Box 10
Havelock ON,
K0L 1Z0

Agent/Owner Authorization Form

A. Project Information

Street Address: _____

Proposed project:

_____

_____

B. Party to be authorized

Name: _____

Corporation or Partnership: _____

Address: _____ Lot/Con: _____

Phone #: _____ Cell #: _____ Email: _____

C. Declaration of Owner

I, _____ , being the Registered Owner of the above property hereby authorize the party stated in Section B of this form to make application for permit on my behalf to Building Department of the Township of Havelock-Belmont-Methuen in accordance with the applicable requirements of the Ontario Building Code for the purpose of the identified project.

Date: _____ Signature: _____

The Ontario Building Code states that “owner includes, in respect of the property on which the construction or demolition will take place, the registered owner, a lessee or mortgagee in possession”.

Note: This form is valid only for one access to Building Permit record application. Subsequent applications by an authorized agent will require a new agent authorization form completed by the current property owner.