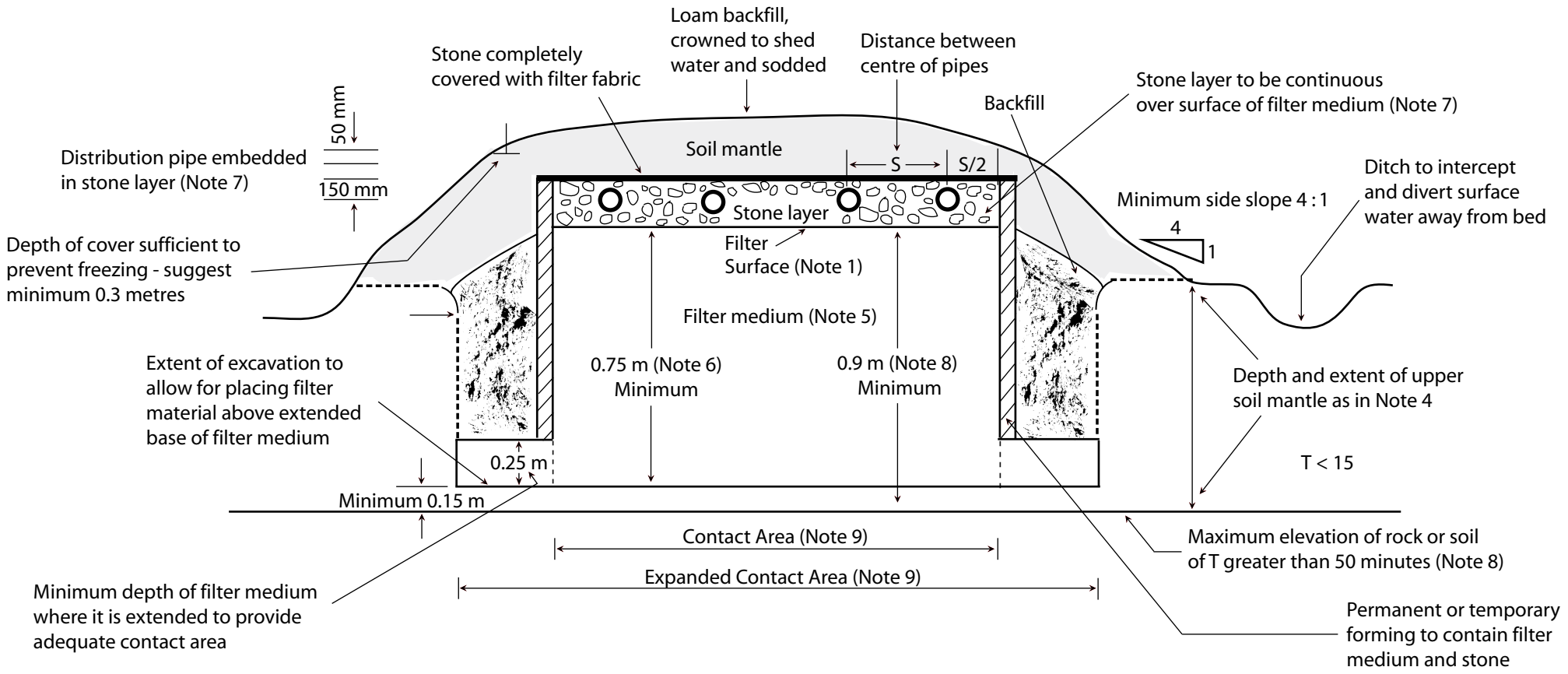
Leaching Beds: Example of Filter Bed



NOTES: Refer to Ontario Building Code for regulations governing filter type leaching beds

1) Maximum size of any one filter bed cannot exceed 50 square metres.

2) Permissible loading rates on surface of filter bed used with a septic tank.
   i) 75 litres/square metre (L/m²) for flows up to 3000 litres/day.
   ii) 50 litres/square metre (L/m²) for flows between 3000 - 5000 litres/day.

3) Permissible loading rate for filter beds used in conjunction with Secondary and Tertiary Treatment Units – 100 litres/square metre.

4) Filter beds may only be installed in-ground or partially in-ground if the existing on-site soils have a percolation time (T) < 15 minutes/cm. A soil mantle of T < 15 minutes/cm and at least 0.25 metres in depth is required to extend from the outer distribution pipes in any direction in which sewage effluent that has passed through the filter bed will flow. For mantle sizes refer to Application Kit or the Building Code.

5) Filter medium must be certified by a soil engineer to meet requirements of the Ontario Building Code.

6) Minimum depth of filter sand is 0.75 metres. Ensure that the filter sand is purchased from an approved pit supplier.

7) Distribution pipes are to be bedded in clean stone screened to between ¾ to 2.0 inches in size. This stone is typically referred to as 1 ¼ inch screened stone for field beds.

8) The surface of the filter sand must be at least 0.9 metres above rock or the groundwater table (GWT).

9) The base of the filter bed must be extended with filter sand to a thickness of at least 0.25 metres over an area meeting the following requirement – $\frac{Q \times T}{850}$ where Q is the design sewage flow and T is the percolation time of the existing on-site soils.

Alternate Description for Leaching Beds: Example of Filter Bed - Part 2

Note: This description is alternate text for screen reader users and other interested parties. It is not a representation of this information for builders or engineers. Refer to the Ontario Building Code for precise regulated requirements.

The diagram shows a cross section of a Typical Raised filter bed. It is a mound.

The surface of the mound is covered with Loam backfill crowned to shed water and is sodded. The depth of the cover is sufficient to prevent freezing. The suggested minimum is 0.3 metres. Beneath the soil cover is the stone layer buried inside the mound of filter sand.

There is a layer of filter fabric between the stone and the soil cover. Beneath the stone layer is a minimum of 0.75m of filter sand

The distance between the pipes are represented by a variable letter “S”. The distance between the outside pipe and the edge of the leaching bed is represented by “S” divided by 2. In other words, the distance from the outside pipe to the edge of the leaching bed is half the distance as there is between the pipes.

There is a minimum of 0.25 m of filter sand extended to provide an adequate contact area (Note 9)

The surface of the filter sand must be at least 0.9 m above rock or ground water table (Note 8)

Notes below the diagram are the following
(refer to Ontario Building Code for regulations governing filter type leaching beds):

1. Maximum size of any one filter bed cannot exceed 50 square metres.
2. Permissible loading rates on surface of filter bed used with a septic tank.
a. 75 litres/square metre (L/m2) for flows up to 3000 litres/day.
b. 50 litres/square metre (L/m2) for flows between 3000 – 5,000 litres/day.