

DRYWELL DESIGN CALCULATIONS

Drywells are an integral part of stormwater management. They provide a means of reducing runoff from a property by allowing the water to seep into the ground and recharging the groundwater.

Per Section §146.8 of the Township of Long Hill Land Use Ordinance, drywells are required for any new impervious areas such as roof areas, patios, driveways, recreation courts, etc. that are over 400 square feet in size. This provision applies to the **cumulative total** of new impervious areas. (Example: A 350 SF addition and a 100 SF patio; the cumulative total is 450 SF and a drywell is required.)

Drywells shall have the capacity to store a volume equal to four (4) inches of runoff from the impervious areas. The following information can be used to help size drywells if you do not have a design by an engineer.

To determine the required size of the drywell, **divide** the total impervious area (A) by 100, then **multiply** that number (B) by the corresponding tank volume/foot (C). This will provide the **required depth** of the drywell for a given diameter tank.

CALCULATIONS:

The total new impervious area _____ Square Feet
(A)

_____ ÷ 100 = _____
(A) (B)

_____ x _____ = _____ vertical linear feet (VLF)
(B) (C) *The required drywell depth below the pipe bottom.*

For 6' Diameter Drywell: Use C = 0.6 (0.6 VLF of drywell tank is required per 100 SF of impervious area)

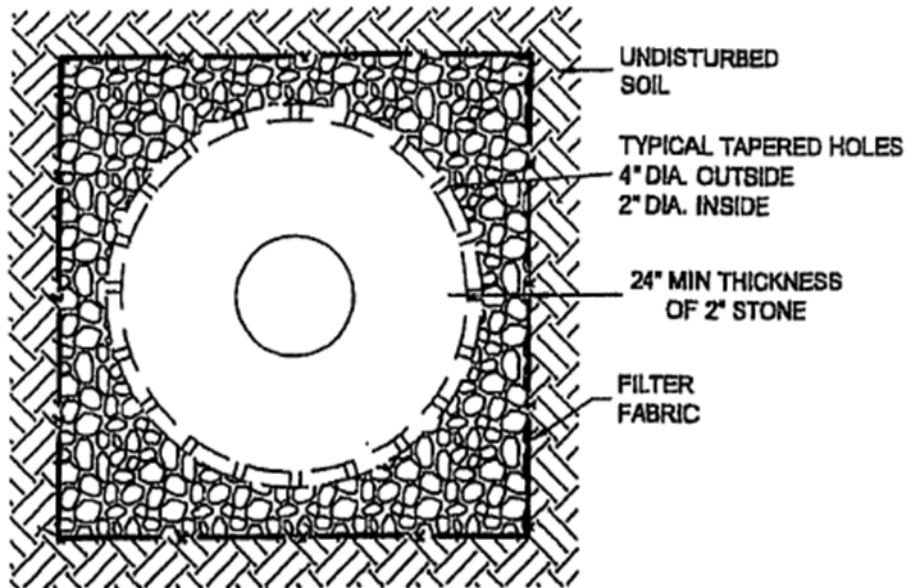
For 8' Diameter Drywell: Use C = 0.4 (0.4 VLF of drywell tank is required per 100 SF of impervious area)

EXAMPLES: (See construction details on the next page)

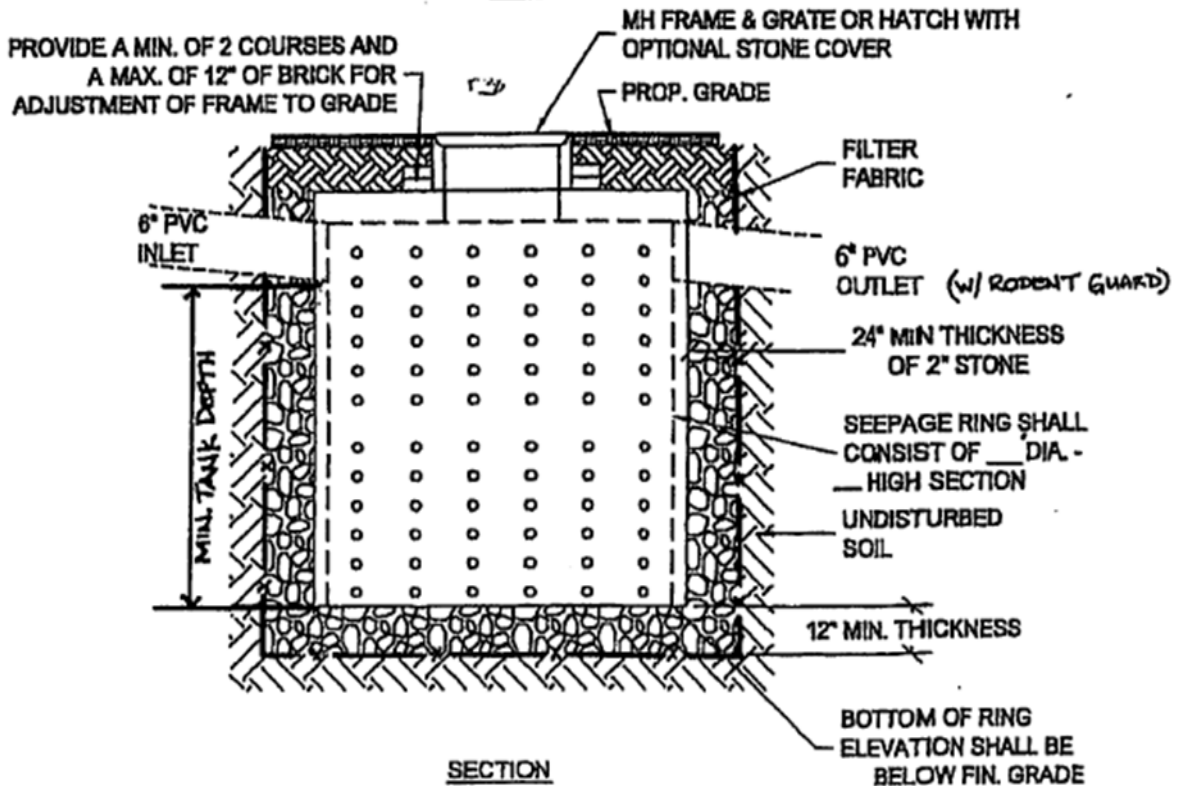
- 1) A 700 SF addition is proposed. The total new impervious area is 700 SF (A)
 $700 (A) \div 100 = 7 (B)$ Using a 6' diameter drywell, (C) = 0.6
 $7 (B) \times 0.6 (C) = 4.2$ VLF required – Therefore, the drywell tank must be at least 4.2 feet deep, below the pipe bottom.
- 2) A 1,000 SF addition and a 500 SF patio are proposed. The total new impervious area is 1,500 SF (A)
 $1,500 (A) \div 100 = 15 (B)$ Using an 8' diameter drywell, (C) = 0.4
 $15 (B) \times 0.4 (C) = 6.0$ VLF required – Therefore, the drywell tank must be at least 6 feet deep, below the pipe bottom.
- 3) Total new impervious area is 1,330 SF (A)
 $1,330 (A) \div 100 = 13.3 (B)$ Using a 6' diameter drywell, (C) = 0.6
 $13.3 (B) \times 0.6 (C) = 7.98$ VLF required – Therefore, the drywell tank must be at least 8 feet deep, below the pipe bottom.
 You can use 1 / 6' tank 8' deep or 2 / 6' tanks 4' deep

NOTE: Please attach this calculation page and the drywell detail page to your Lot Grading Plan.

DRYWELL CONSTRUCTION DETAIL



PLAN



SECTION