

Purpose

This guideline has been developed to help improve consistency with the installation, education and enforcement of foundation drainage involving residential commercial or industrial buildings constructed under Part 9 of the Alberta Building Code.



Code Reference

Current National Building Code – Alberta Edition Division B Section 9.14.

2015 Illustrated Users Guide – NBC 2015 Part 9 of Division B Housing and Small Buildings Section 9.14



Summary

The requirements within this Guideline are applicable to the foundation drainage for all residential, commercial or industrial buildings constructed without professional involvement, under Part 9 of the current National Building Code – Alberta Edition.



Conclusion

This Guideline provides clarity and direction from Rocky View County on their interpretation of the requirement for drainage around residential, commercial or industrial foundations, which are constructed without professional involvement. Based on the information provided within this Guideline, foundation drainage can be provided and installed in the following methods.

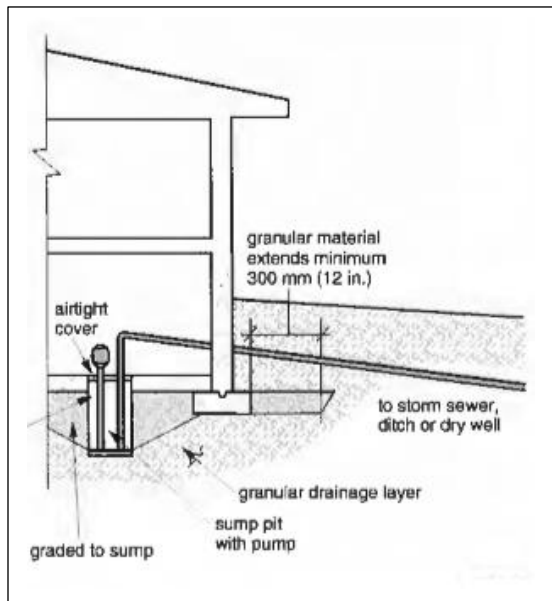
- 1) Drainage – Unless it can be shown to be unnecessary, the bottom of every exterior foundation wall shall be drained by drainage tile around the exterior, or by a layer of gravel or crushed rock. The water can be drained to a sewer, drainage ditch or dry well either by gravity or by a pump.
- 2) Drainage Tile – Where drainage tile is installed, it shall be not less than 100 mm (4”) in diameter, laid on undisturbed or well-compacted soil, and laid so that the top of the pipe is below the bottom of the floor slab or ground cover.
- 3) Foundation Drain – Foundation drains must drain to a sewer, drainage ditch or dry well.
- 4) Granular Drainage Layer – Where a granular drainage layer is installed, it shall be graded to that the entire area is drained to a sump, be laid on undisturbed or compacted soil to a minimum

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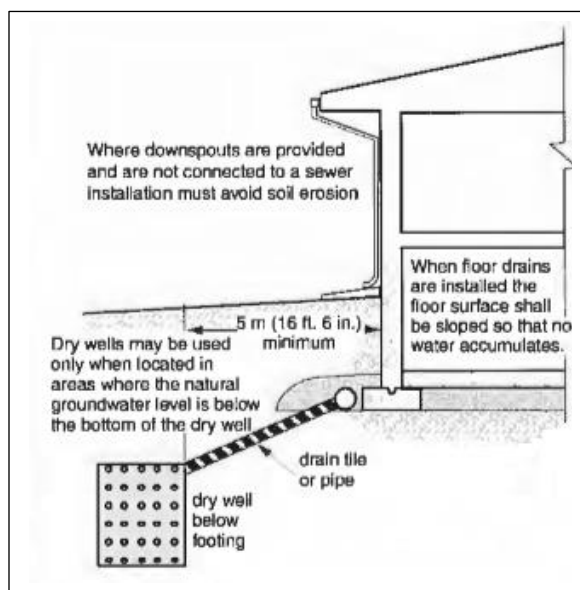
Foundation Drainage

depth of not less than 125 mm (5") beneath the footing and extend not less than 300 mm (12") beyond the outside edge of the footings. The granular material shall consist of crushed stone or other coarse clean granular material containing not more than 10% of material that will pass through a 4 mm sieve.

- 5) Sump Pit – When a sump pit is installed, the pit shall be at least 750 mm (30") in depth, 0.25 m² (2.7 ft²) in area, and provided with a cover. Where gravity drainage is not practical, an automatic sump pump shall be provided to discharge the water into a sewer, drainage ditch, or dry well.



- 6) Dry Well – Dry wells can only be used in areas where the natural ground water level is below the bottom of the dry well. When a dry well is installed, it shall be not less than 5 m (16'-5") from the building foundation. Drainage must be away from the building. Dry wells can be



lines with loose stone to create a large void, but are more commonly backfilled with large rocks or crushed stone that will readily accept drain water and allow it to percolate into the surrounding soil.

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Foundation Drainage

- 7) Dry Well Size – The size of a dry well depends on the amount of water to be drained and the porosity of the surrounding soil. Where you have porous soil conditions, a dry well of 1 – 1.5 m (3-5 ft) in diameter which extends below the frost level should be adequate for most house foundations. An impervious material such as polyethylene film should be placed between the stone fill and the less permeable soil such above.



Reference

Approval Date

- October 2024

Last Review Date

- October 2024