CITY OF MARSHFIELD ENGINEERING

Maintaining proper drainage around your home

Ground water and stormwater runoff seeping into basements is a common problem, but can cause significant water damage to property and can be costly for homeowners. Basement seepage (also called infiltration flooding) occurs when water is absorbed by the soil and raises the level of the underground water table. Water seeps through the soil and eventually reaches the building foundations. Concrete is porous, and the water will also work its way into basements through cracks in the foundation walls or floor slab, through joints in the foundation, or through clogged window wells. We would like to provide some insight and suggest solutions along with preventative measures for typical basement water problems.

Keep them flowing

Having properly-installed eavestroughs (rain gutters) and downspouts on your house can reduce the likelihood of flooding / infiltration, etc. Catching water from the roof and directing it away from the walls of the house are critical factors in keeping the basements dry.

The job of eavestroughs, downspouts and downspout extensions are to divert water away from your foundation. Please be aware that they can become clogged with leaves, dirt or other debris, thus reducing their effectiveness, so it is very important to keep them clean.

Ensure that eavestroughs have enough slope to allow for optimum water movement towards the downspouts. Sometimes a sagging eavestrough can be repositioned to prevent pooling and reestablish the slope. If it cannot be repositioned, replace it.

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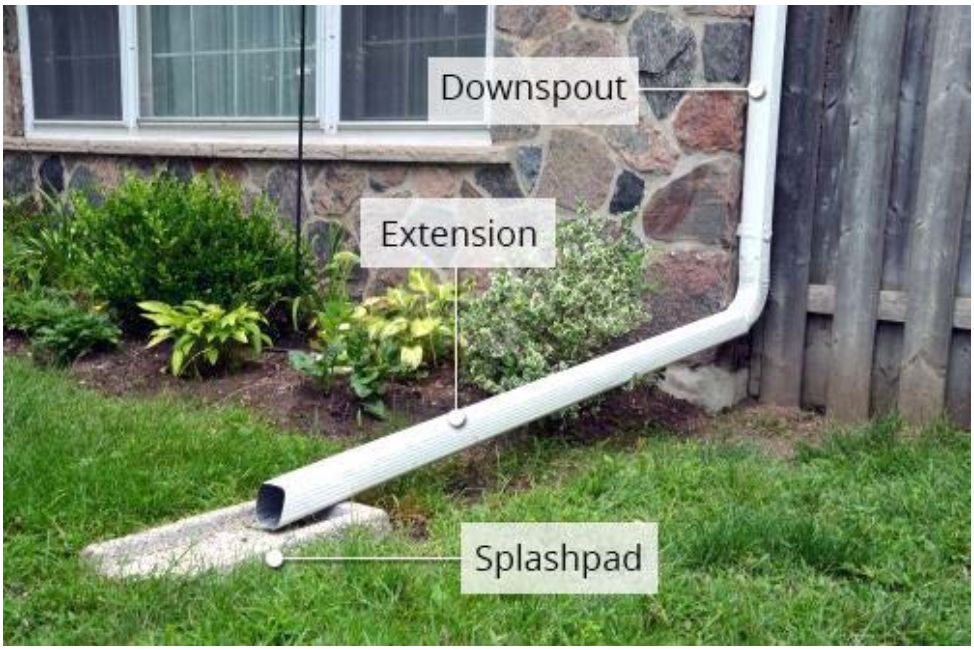
The right direction

If at all possible, the downspout should end in an elbow and *extension* that directs the water 5 to 6 feet away from your foundation. **However, make sure that it does not extend onto your neighbor's property.** The extension should be at a 30 degree or more angle in relation to the ground. Leave the extension down all of the time or put it down whenever rain or snowmelt is expected. Directing the down spout away from your neighbor's foundation will go a long way towards being neighborly. *Splash pads* may be used to direct the water that is discharged from the downspout extension, and they also reduce the chance of the water eroding a hole into the ground.



Get the rain water to flow away

Proper lot grading is one of the most important factors in preventing water from getting into a home. Regardless of the age of the house, proper grading of lots in mature neighborhoods can be vastly improved with some relatively simple measures.

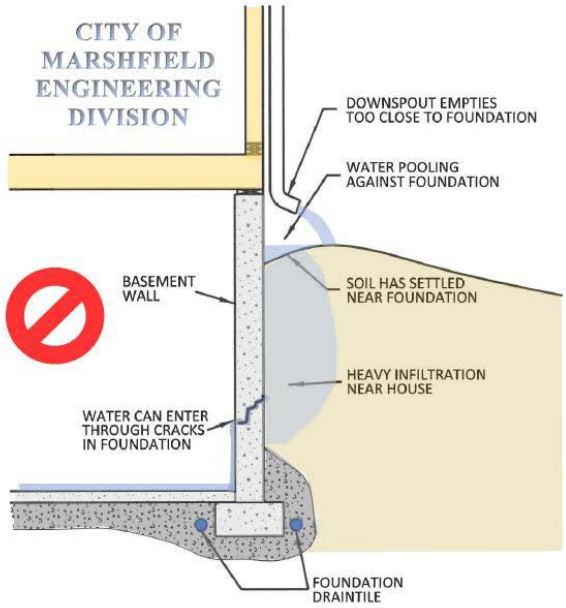
Remember, we are here to help! If you are unsure about the drainage pattern for your lot, you may contact a member of the Engineering team. As a courtesy service, we can provide you with drainage pattern information for your area, and may be able to offer advice for your particular drainage concern. It may be helpful if you have photos of your lot or situation.

Graded landscaping

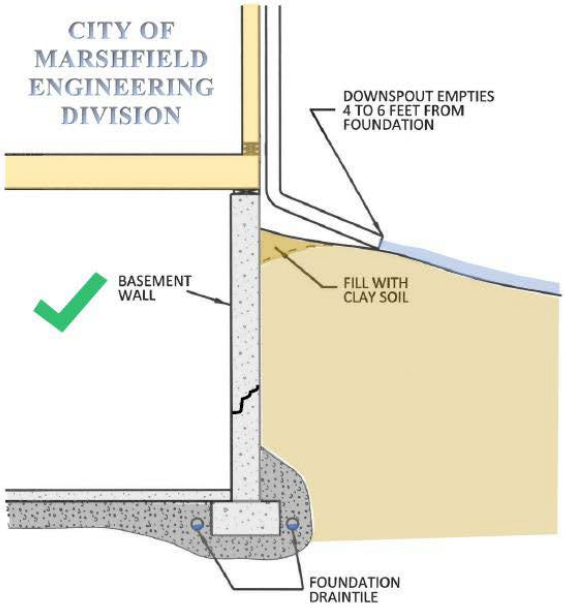
To ensure that surface water flows away from your foundation, make sure that there is a minimum slope of the ground from the outside wall. A minimum drop of 5 inches for the first 5 to 6 feet from the foundation is recommended. Add clay soil to achieve the recommended grade, compact it, then add sod or groundcover as desired.

Don't forget to backfill underneath stairs, steps and decks as well, using the same slope. Ground settles over time, so check the grade yearly and add soil where necessary.

Examples of Poor & Proper Graded Landscaping



POOR GRADING & SOIL SETTELMENT AROUND FOUNDATION CAN CAUSE SEEPAGE



PROPER GRADING AROUND FOUNDATION PREVENTS SEEPAGE