

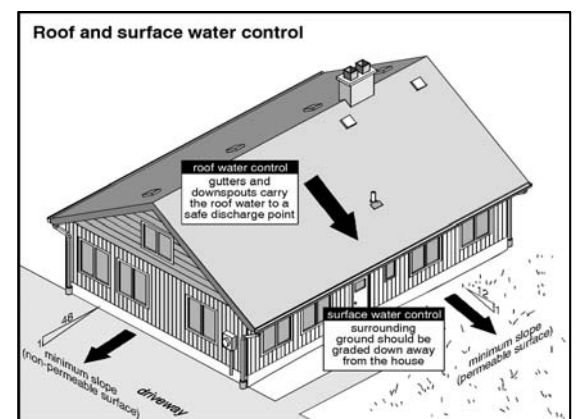


Does Water Drainage Affect Your Homes Foundation?

The most common cause of foundation movement is the seasonal shrinking and swelling of expansive soils. The degree of soil movement is determined by the amount of expansive material in that soil and the variation of its moisture content. During the wetter months, the moisture content of expansive soil increases and the soil swells. At times, the soil will swell enough to raise foundations higher than their desired elevation. "Basically, it will lift your house. During the drier months when the moisture decreases, the soil shrinks and achieves its lowest moisture content, allowing foundations to settle.

If water stays undetected and does not drain properly, then the water will soak into the soil. This causes the area where the standing water is to swell up more than the adjacent swells. The water will get under the footings and fill any voids. This water can lift the foundation ever so slightly; then as the hot weather and hot winds start to dry out the soil, this water wicks up away from the footings and leaves voids again under he footings. However the ground dries out first where the hot wind is hitting the house. Which means one corner of the home is not supported because of the dry voids while the opposite corner is still supported due to the water present. This creates a fulcrum and that is where foundation cracking starts.

When building a house foundation, the first thing to do is make sure that the ground is good, smooth and slopes away from where the location of the home will be. Make sure the top of the foundation or slab stick is up height enough out of the ground. If not, then it is possible to create sloping grounds with adequate drainage. By having sloping grounds, it directs water away from the house and it drains naturally. If a builder follows model building codes, then they will know the requirement states that the ground slope should be at least six inches down in the first ten feet of distance away from the house.



Where the natural site slopes towards the home, swales should be installed to direct the surface water away from the foundation. A French drain, when properly installed will keep sub-terrain water away from the foundation.

Another important factor is to waterproof the home. One can start with downspouts, making sure they are not dumping rain water where it will pool against the foundation of the house. Where the downspouts are open ended, there should be an extension hose or splash block to direct the water or rain water away from the home. Keep it at a safe distance. The gutters must slope towards the downspouts. Keep your gutters clean to allow proper drainage and prevent Ice Damming in the winter. Landscape gardens or flower beds should have drain holes to keep water from being trapped and held against the foundation. The soil should stay damp but you should not see puddles accumulating from poor drainage.

Plumbing leaks are another common cause of foundation movement. These problems are often created during the initial construction of a home or building; however, leaks may not occur for many years. Our experience has been that plumbing leaks, whether they are in supply lines or in waste lines, always cause foundation and/or floor movement. If major foundation movement exists, plumbing tests are often recommended to check for plumbing leaks.

