

Evaluating Potential Foundation Crack Issue

~ Quality 1st Basement Systems.

HOMEOWNERS SOMETIMES GO MONTHS OR EVEN years without noticing that a crack has formed on their foundation walls. So when a home inspector discovers one behind a box or cabinet, it can be a very alarming experience.

What most homeowners don't realize is that all concrete foundations – even brand-new ones – are susceptible to cracks. The good news is that a the lion's share of these cracks are not a sign of foundation damage, and are instead cracks formed in the concrete as part of its curing process.

Concrete Curing Cracks

Cracks in foundation walls will often occur as the concrete cures and shrinks over time. These cracks can emerge many years after the concrete walls have been built and are not generally a threat to the foundation's structural integrity.

Shrinkage cracks tend to be very small hairline openings that are 1/16" wide or less. They're most commonly seen near the center of a span, maintaining a consistent width along the length of the crack.

Of course, the best course of action is to treat each crack discovered on a foundation wall as a potential structural issue. Keep an eye on the crack by marking the ends of the crack with a pencil to record its length. Date each mark, and check every few months to see if the length of the crack has increased.

Create a dated record of the width of the crack as well – and have a foundation expert inspect the crack if it widens enough that you can fit a dime in the opening.

It's also valuable to know if two sides of the crack are shifting unevenly, as this may be a sign of foundation settlement damage.

Draw several straight "alignment" marks along the width of the crack as well. If you find that, after a couple months, the lines no longer meet along the crack, this will be an indication that the foundation is experiencing damage due to settlement.

Foundation Settlement Damage

Signs Of A More Serious Foundation Issue

Foundations usually experience damage from the following four scenarios:

1. Foundation settlement damage most commonly shows damage in the form of vertical wall cracks, particularly along exterior doors and windows. You may also see tilting chimneys, cracks in the slab floor, and star-step cracks in brick or concrete block foundation walls. In some cases, exterior windows and doors may jam or stick when opening and closing.

2. Expansive clay soil damage will press on the foundation walls, casing them to bow or bulge inwards, to slide inwards along the bottom, and/or lean in at the top. Diagonal cracking at the corners of poured concrete walls is common, as is stair-step cracking along the foundation walls.

3. Frost heave damage is caused when soils freeze and expand, or when clay soils expand with moisture and push up on the foundation. This will generally damage slab floors but not foundation walls. Multiple cracks in a heaving slab floor will come together to form a point or enclosed loop where the heave pressure is greatest.

4. Crawl space structural issues most commonly form due to a rotting structure, inadequate support posts, or when crawl space supports sink into the soil. Telltale signs within the home include sagging, sloping, or uneven floors above the crawl space, cracks in interior walls, and a musty odor rising up from the crawl space.

Repairing structural issues is best done by a certified professional – such as our experts at [Quality 1st Basement Systems](#). We provide permanent, warranted solutions that install quickly and with minimal disruption to the foundation. It costs nothing to have one of our experts professionally evaluate the problem and provide a solution and written cost quote. For more information, call us at 732-697-0557 or visit us online at www.quality1stbasementsystems.com

Foundation Wall Damage Due To Expansive Clay Soils

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