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## May's Preferred Realtor Network Topic: Talking Cracks- When to Worry, When Not To

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### Should I be worried about that crack?



The most frequent question that we get asked at home shows, on the phone, or over the internet is, "My foundation is cracking, should I be concerned?". Naturally, it's hard to give an answer because cracks need to be checked out physically. That answer is not very helpful for

the most part, so I've devoted a lot of time to researching this question and developing some guidelines to help out prospective homeowners with early detection. There are two truths that I keep running into as I work: concrete foundations leak because they are porous and wick moisture, and concrete cracks because it's a hard, solid substance surrounded by changing soil.

### Why did this foundation crack?

Cracking in concrete is a natural phenomenon because it is strong in compression, but very weak in tension. When a concrete foundation wall encounters stress forces from outside elements like expansive soil, the portions of the wall that are experiencing tension will crack. Some of the forces that can act against your foundation on a regular basis include: seasonal temperature changes, seasonal soil swelling and shrinking due to weather and watering, and changes to grading due to landscaping or soil erosion over time.



Occasionally, the addition or removal of plants, shrubs, or trees can also affect your concrete foundation.

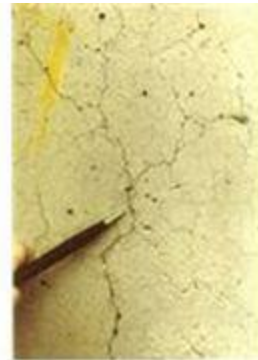
*Shrubs near home place stress on foundation*

### Tiny Vertical Cracks



Most residential foundation walls are designed to withstand the forces present in standard/ normal soil conditions. In some cases, foundation walls have been reinforced, or otherwise altered due to high ground water or soil concerns. You will usually see cracking occur in three ways: vertically, horizontally, or diagonally from a stress concentration.

Just because a wall has cracked doesn't mean that it has failed as long as the crack is small and unchanging. If the crack is 1/8 inch or less, is nearly vertical, has no lateral separation (spreading), is not very deep, and does not have moisture present, then it should be monitored, but action is not usually required. This type of crack is a shrinkage crack and occurs as moisture in the wall evaporates, causing the concrete to shrink into voids created by the escaping water.



### Horizontal Cracks

Horizontal cracks require more attention. A horizontal crack is concrete's way of ripping or splitting due to excess tension in that area. According to *Residential Concrete Magazine*, all horizontal cracking should be checked out by foundation repair industry professional as soon as



possible because these cracks tend to grow rapidly.

Additionally, they indicate that expansive soils are pressing inward on the home, causing wall bowing. Thankfully, bowing walls are pretty easy to remedy and relatively quick to fix.



### Diagonal, Tapered Cracks



You may notice cracks spreading out from a corner diagonally. Whenever concrete forms a sharp angle, there is a stress concentration that almost always results in a tiny, surface crack. These cracks are called "concentric cracks". If these cracks deepen, thicken, or grow, it is time to consult an expert about reinforcing the area since the stress concentration is breaking down the concrete.



There is one type of crack that is always a concern: tapered cracks. If a crack is larger at one end, it indicates shifting and other movement in the foundation. If you'd like more information about tapered cracks, please visit our blog by clicking [here](#).

### Concerned about the Cost of Foundation Repair?

If you're concerned about a potential foundation problem, then I would recommend having a Systems Design Specialist come out for a free estimate. Our Design Specialists will evaluate the structure, give you a scope of work, some tips to help minimize foundation movement, and a price. It's nice to have a piece of mind, especially when it's a home's stability at stake.

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