

STRUCTUAL ELEMENTS

All structures are dependent on the soil beneath them for support, but soils are not uniform. Some that might appear to be firm and solid can liquefy and become unstable during seismic activity. Also, there are soils that can expand to twice their volume with the influx of water and move structures with relative ease, raising and lowering them and fracturing slabs and other hard surfaces. In fact, expansive soils have accounted for more structural damage than most natural disasters. Regardless, foundations are not uniform, and conform to the structural standard of the year in which they were built. In accordance with our standards of practice, we identify foundation types and look for any evidence of structural deficiencies. However, cracks or deteriorated surfaces in foundations are quite common. In fact, it would be rare to find a raised foundation wall that was not cracked or deteriorated in some way, or a slab foundation that did not include some cracks concealed beneath the carpeting and padding. Fortunately, most of these cracks are related to the curing process or to common settling, including some wide ones called cold-joint separations that typically contour the footings, but others can be more structurally significant and reveal the presence of expansive soils that can predicate more or less continual movement. We will certainly alert you to any suspicious cracks if they are clearly visible. However, we are not specialists, and in the absence of any major defects we may not recommend that you consult with a foundation contractor, a structural engineer, or a geologist, but this should not deter you from seeking the opinion of any such expert.

VARIOUS HARD SURFACES:

Common Observations

- Hard surfaces, such as house walls, yard walls and walkways visible surfaces have no significant cracks that would tend to suggest structural movement.

STRUCTURAL ELEMENTS:

The Foundation Structure

- Foundation structure consist of full crawlspace area without finished floors.

The Floor Structure

- First floor structure consists of posts, piers, girders and joists sheathed with plywood or diagonal boards.

The Wall Structure

- Wall structure appears as conventionally framed with wooden studs.

The Ceiling Structure

- Visible portions of the ceiling structure consists of standard joists.

The Roof Structure

- Visible portions of the roof structure are conventionally framed with rafters, purlins, collar-ties, et cetera.

CRAWLSPACE FOUNDATION:

Crawlspace General Comments:

- Residence has raised foundation. Such foundations permit access, and provide a convenient area for distribution of water pipes, drain pipes, vent pipes, electrical conduits, and ducts. However, although raised foundations are far from uniform, most include concrete footings and walls that extend above ground with anchor bolts that hold the house onto the foundation, but the size and spacing of bolts vary. In absence of major defects, most structural engineers agree that the one critical issue with raised foundations is that they should be bolted. Our inspection of these foundations conforms to industry standards, which is that of a generalist and not a specialist, and we do not use any specialized instruments to establish that structure is level. We typically enter all accessible areas, to confirm that foundations are bolted and to look for any evidence of structural deformation or damage, but we may not comment on minor deficiencies, such as on commonplace settling cracks in stem walls and slight deviations from plumb and level in intermediate floor framing, which would have little structural significance. Interestingly, there is no absolute standard for evaluating cracks, but those that are less than 1/4" and which do not exhibit any vertical or horizontal displacement are generally not regarded as being structurally relevant. Nevertheless, all others should be evaluated by a specialist. However, in absence of any major defects, we may not recommend that you consult with a foundation contractor, a structural engineer, or a geologist, but this should not deter you from seeking the opinion of any such expert.

Crawlspace Type:

- Raised foundation of dwelling is full size crawlspace.

Access Doors:

- Crawlspace entrance located under deck of structure and appears adequately sized but access door is damaged (wont close) and should be repaired.



Crawlspace Method of Evaluation:

- Could not access all areas of foundation crawlspace due excessive moisture.

Crawlspace Observations:

- Soils within the crawlspace are moist. This can contribute to differential settling, and facilitate the growth of a variety of molds and fungi that can produce unhealthy conditions.