

IF WALLS COULD TALK

During a remodel, renovation, or purchase of a new home, the most important considerations are often hidden from view. All homes are intricate structures incorporating foundations, framing, plumbing, electrical, HVAC, lighting, and roof treatments. The problem is, you often cannot see you really need to worry about or address first!

If you are buying a home, your home inspector will only find the points on his check list; this is not a structural inspection and he is rarely a licensed structural inspector.

As a contractor, the worst part of any job is the unexpected. The secrets knowingly left behind by the past owner (who tried but failed) or the unscrupulous contractor (who bodged, patched, or jerry rigged) can leave a ticking time bomb for the new homeowner. These hidden secrets are often the difference between meeting a deadline and achieving an anticipated budget.

Building costs are always estimated at least 20% higher than the actual cost; an honest bid should always suggest you keep extra funds available for potential overruns. Bringing your open wall to current code can be a challenging prospect when the sheet rock is removed and key basic elements are missing. Historic homes generally have insufficient headers over windows and doors, and these all have to be upgraded to pass inspection. Upgrading is a sensible option it will allow your home's life to increase and add overall value.

Growing up in England, I cut my teeth on Bob Villa's "This Old House". Saturdays I welcomed him into my home, and enjoyed watching an American craftsman at work. "This Old House" and Bob in particular showed me the difference between English and American construction methods and practices. Well, wake up Texas, I can assure you Bob Villa is not building your house, or overseeing your addition, so the finished project could lack a little of that polish we all used to admire so much.

So how is your homes structure, and is it a well engineered home? Every home has to some degree structural and mechanical engineering. The structure deals with the key things that hold your house together in all weathers, and keep you safe. The base of every home starts with a sound foundation which extends down into the dirt to provide its stability.

There are two basic types of foundation in Texas, pier and beam (in older homes) and monolithic slab (in new homes). In the land of heaving expansive clay this is where your problems often start. Slabs are dependent on the sub-base and how strictly the construction basis was adhered to. Pier and beam homes are more likely to crack over doors and windows; minor settling of your home is a common problem.

If you have concerns over your foundation DO NOT call a foundation company; call a structural engineer, and commission your own independent report. An independent report covers the homeowner and provides a blue print for the repairs. I always obtain a structural engineers report for my clients, prior to soliciting on bids for foundation repairs. Every contractor is then quoting for the same work, everything is very clear for everyone and the engineer will inspect the work for you on completion. You need a stamped blue print from the engineer to obtain a permit and a stamped letter for the

inspector to place on file when you are finished. All foundations, especially those within city limits, require a permit; no matter what your contractor may have told you.

I always suggest steel piers for most of our repairs as they continually out-perform concrete. However, the key is getting to the rock. If you do not get to the rock, you are just postponing the eventuality of movement; pads are nothing more than a short term solution.

Inside your home, the stud frame supports the floors. Beams link rooms and spread loads evenly. Many beams today are made of strips of wood and plywood glued together; they are far stronger than comparatively sized lumber and a definite modern improvement. These beams are called laminated beams or joists and they are often used with a flooring system which involves manufactured I beams (another marvel of modern science). Spans are critical. Look out for sagging ceilings and bouncing floors. These could be a sign of over spanning, or insufficient lumber size. For example; many older homes were built with 2 x 4 ceiling joists and rafters which span long distances. This does not meet current code and can lead to a minefield of potential problems if you are trying to remodel an older home. Attics are always a good point of inspection, you can easily see if everything is straight and braces are missing. You can observe the condition of the lumber, look for insect damage and check to see if the attic is adequately ventilated. Check for termites; The British Builder's last two projects uncovered hidden and unexpected guests in the attic.

Mechanical engineering refers to the HVAC: heating, ventilating, and air conditioning. Make sure your contractor is licensed and registered with your city; many claim to be and are not. Most major repairs require a permit; you have to be TACL to obtain one.

For example, as part of a large remodel addition, we have just upgraded a client's existing system with a two speed high efficiency system designed by one of our HVAC specialists. Because this was planned and programmed at an early stage, we were able to incorporate some energy efficient changes to the design. This meant we were accurately able to predict the energy costs for the new unit, which should in theory heat and cool an additional 1000 sq ft with only a minimal monthly increase to the client's electricity bill. We always install exhaust fans in attics to reduce utility costs, it amazes me how many homes still don't have these simple energy savers.

Finally, remember that construction code is only a minimum construction requirement, and a good builder will always strive to improve on and not just meet its requirement. A good example of this is that code allows for bounce in a floor which I think is unsatisfactory. Well known and respected contractor Tom Silva agrees, and adds additional joists as we do. The lesson is, if you are custom building do more not less; a minimal cost may be added, but the benefits will be enjoyed by the owner for years to follow. A good contractor also understands that City Inspectors are there to protect the homeowner. They are frequently overworked, and it would be impossible to expect them to see every mistake, which is why you need to find an honest builder.

Good luck with your projects! For any advice or questions, please feel free to call or e-mail.

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