



Home Building: What Could Possibly Go Wrong?

by Walt Keaveny, Risk Manager, MS, PE, PG

The building code of Hammurabi, King of the Babylonian Empire, is the earliest known building code, written in 2200 B.C. The code assessed penalties if a building was not properly constructed. An especially onerous code provision specified that, "If a builder builds a house and does not make its construction firm and the house collapses and causes the death of the owner, that builder shall be put to death." Further, "If it causes the death of the son of the owner, then the son of the builder shall be put to death." Today, home builders don't risk death, but they certainly risk expensive claims and all-too-common construction defect



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litigation. The lawyers, the cost, and the damage to business and reputation may make some builders feel that the death penalty in ancient times may have been more palatable. Why then, after thousands of years of home building, are there still major problems? Let's explore what could go wrong?

Similar to ancient times, homes are still mostly built by hand. They are also still built on land with highly variable conditions including grades, soils and groundwater. This is in strict contrast, to

building cars, which are largely assembled by robotics on carefully monitored assembly lines. Builders are challenged to achieve high quality construction with low risk of problems. Builders must not only be skilled craftsman, but also excellent project managers with intimate knowledge of applicable construction codes and standards. Unfortunately, despite builders' best efforts, unforeseen problems often occur. In fact, according to the International Code Council, 51% of building department inspections fail the first time.

Home construction is very complex and multi-faceted. The whole process starts with a geotechnical engineer exploring subsurface conditions, and a civil engineer and surveyor to plan and lay out site improvements. Then an architect designs the home, and finally a structural engineer configures the foundation and framing. Once the design is completed, according to the National Association of Home Builders (NAHB), a builder constructs the average home by coordinating the work of 22 subcontractors. These subcontractors, and various suppliers represent over 250 people that work on the job site in the 3- to 6-month course of building a home. Surprisingly, well over 100,000 parts and materials are used to build an average home. A single error or omission by any of the design team or workers, or a defective part or material can and often does cause problems.

Builders and home buyers alike often wonder why building department inspectors don't catch all the problems. A primary reason is that inspectors are



3-6
MONTHS
TO COMPLETE
A HOUSE

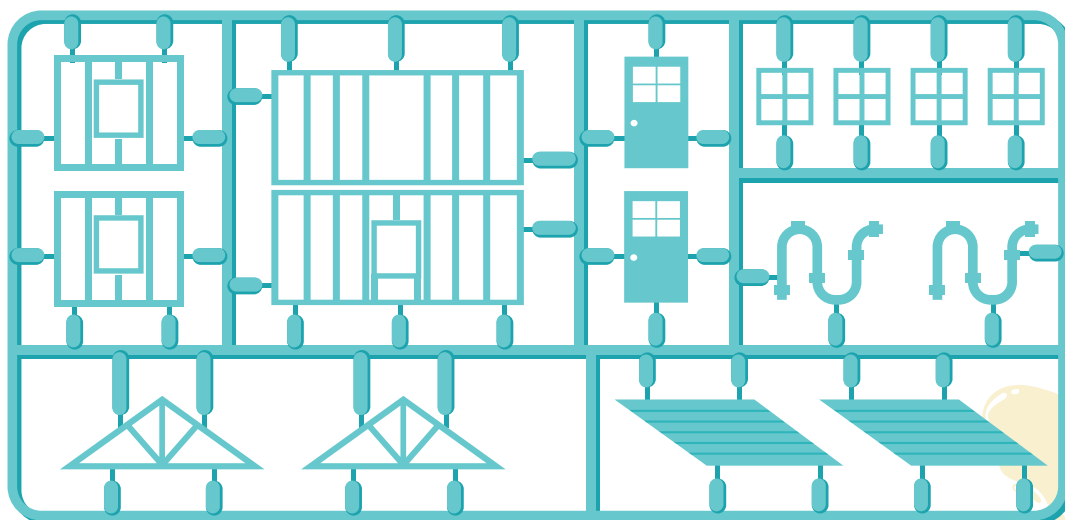
22
SUBCONTRACTORS



250
PEOPLE
THAT WORK
ON A JOB SITE



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generally focused on life safety issues, such as electric shock, fire prevention and natural gas hazards. Most often they don't tend to concentrate on the common high-liability risks, such as engineering design, underlying soils, structural fill compaction, adequacy of foundation and framing, and water penetration. It is important to note that "a house can pass all code requirements and still have latent defects that are subject to liability under implied warranties (1)."

Implied warranties for new homes are recognized by courts in all 50 states. For the builder's protection, it is important to replace the implied warranty, interpreted by the courts, with a written limited express warranty. "An express warranty is

the builder's or remodeler's (warrantor's) written or oral promise that is expressly made to the home buyer or homeowner that the work will meet certain standards and, if it does not, that warrantor will stand behind the work by making repairs or by replacing defective components (1)." The warranty standards are referred to as performance standards. There is a key difference between building standards and performance standards. Building standards, typically building codes, specify how to build a home. Performance standards specify how the performance of a home will be judged during applicable workmanship, systems and structural warranty terms.

Finally, an express warranty should

mandate legal binding arbitration, recognized in all 50 states, by which any disputes between builders and home buyers may be resolved. Arbitration, in accordance with the Federal Arbitration Act, "provides a mechanism for resolving disputes without the expense and delay that generally occur in a lawsuit (1)." Arbitration proceedings conducted in the home are almost always preferred over litigation conducted in a courtroom.

Since homes are still hand-made by hundreds of workers using many thousands of parts and materials, on lots with a wide variety of conditions, unforeseen problems can and will occur. These days, builders need not fear risk of punishment by death, but rather liability for expensive claims and all-too-common construction defect litigation. Builders can help manage their risk by providing a comprehensive new home warranty for the benefit of both the builder and the home buyer.

An express warranty is the builder's or remodeler's (warrantor's) written or oral promise that is expressly made to the home buyer or homeowner that the work will meet certain standards.



(1) Warranties for Builders and Remodelers (2nd Edit.), D. S. Jaffe, David Crump, and F. K. Watson, BuilderBooks a service of the NAHB, 2007.



Mr. Keaveny is the Risk Manager and Principal Engineer for the leading new home warranty company, 2-10 Home Buyers Warranty. He earned a Bachelor's degree in Geological Engineering and a Masters in Geotechnical Engineering. He is licensed as both a Professional Engineer and a Professional Geoscientist, and has over 30 years of diverse engineering experience. He serves on the Construction Performance Standards Committee for the Texas Association of Builders, and is an invited speaker and author. Mr. Keaveny's work on the subject of structural claims has been published in major newspapers and has drawn international interest.



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