TOP TEN HOMEBUILDING DEFECTS OF 2020

In 2020, **Burgess Construction Consultants** helped homebuilders uncover and correct nearly 600,000+ defects. Now, after more than 160,000 inspections, Burgess has empirical data on which frame-stage defects impacted our clients most often in 2020.

#1 - Fire Blocks / Fire Stops Missing at Chase Walls

Fire Blocks/ Fire Stops will most likely always be at the top of the list. First, construction is complicated. Home designs today include increased ceiling heights and elevation changes that are often overlooked by framers and builders. Given intricate home designs, identifying the path fire and smoke may take through the home can become confusing if a trade is not well versed on the subject. Second, other trades often knock the fire blocks out or cause damage rather than properly working around the blocks.

#2 - Gaps or Holes in Sheathing

Holes are very easy to create in fiberboard and foam sheathings. The holes can be made out of necessity to complete a job; however, human error plays the largest role. When it is not clearly defined who is responsible to repair the damage, the errors often go unfixed. Requiring the trade that created the hole also be responsible for fixing it will not only result in smaller holes but they will be fewer and further between.

#3 - Electric Nail Guards Missing at Walls

Any bored holes must be 1¼″ from the nearest edge of the wood member. Most wall finish materials have attachment requirements which require about a ⅞″ penetration leaving a ⅜″ safety margin. Normal 2″ x 4″ wood framing members have only a 3 ½″ width for the electricians to work with. If you take the required clearance from each side, which adds up to 2 ½″, that leaves the electrician 1″ for a bored hole. If the 1¼″ requirement isn't met, a steel plate nail guard that is a minimum of 1/16″ thick and has the appropriate width and length to cover the area of wiring should be installed.

#4 - Plumbing Nail Guards Missing at Walls

The notes for Electric Nail Guards Missing at Walls also pertain to Plumbing Nail Guards. In previous versions of the code, the requirement for plumbing nail guards existed when holes or notches were within 1 ½″ of the nearest edge of the member. Now, for the 2015 IRC, the requirement is 1 ¼″; which brings the requirements for electric and plumbing nail guards in line with one another. Similar to electric nail guards, there is no requirement for a specific fastener or fastening pattern. Some nail guards come with their own fastening system and do not require the use of nails or screws.

#5 - Plate Penetrations Not Sealed

Often times, "Plate Penetrations Not Sealed" is called because of re-work or because a home is out of sequence. When re-work is performed, it is typically done after a home has been poly sealed. Periodically, we will inspect a home where every plate penetration needs to be sealed at low voltage or at all gas lines. This is typically a sign that the home is out of sequence or something was "forgotten" and added later.

#6 - Joist Hangers Missing

Joist hangers are often missed due to human error or not having enough supply on the job site. A thorough punch will help catch most missing joist hangers. Many builders often have extra joist hangers in the construction trailer; however, the trades are not always aware where the extra joist hangers are or how to get them.

#7 - Raw Wood Uncovered

Exposed raw wood is found in numerous locations throughout the home. Sometimes, brick returns or brick pockets are exposed. Other times, raw wood is found around cornice returns where 2 X lumber is installed as backing for the cornice but is still left exposed outside the Weather Resistant Barrier (WRB). Better planning of materials installation sequencing in these areas will help keep the raw wood inside the WRB.

#8 - Chases Incomplete or Not Sealed

“Chases Incomplete or Not Sealed” is really two defects in one. First, “Chases Incomplete” can almost be eliminated through communication. Trades should meet with Builders and discuss their needs for chases. Second, for “Chases Sealed” we see the following: chases missed by the poly seal crew, holes cut too large to fill with poly seal and improper material used to seal the chase (cardboard, sheathing, etc.). Allowable materials include: drywall of the proper thickness, 2 X lumber and OSB of the proper thickness.

#9 - Poly Missing at Brick Ledges / Corners

“Poly Missing at Brick Ledges/Corners” is another problem that is often caused by damage due to rework or improper installation. Improper installation includes not cutting and repairing at hold downs, installing poly too short or not installing poly at all.

#10 - Penetrations Not Sealed with Flashing

“Penetrations Not Sealed with Flashing” can exist when incorrect flashing is used, the proper material is not on site or a typical penetration has not been sealed. The picture to the left shows duct tape used as flashing. Another frequent error we see is trades using foam to flash the penetrations. Now, while foam can create an air barrier around the penetration, the porousness of the foam will not keep water out. Only approved materials should be used as flashing for penetrations.