



Lot xxxxxxxxxx, Spring Hill, TN

A+ HOME INSPECTIONS

d.b.a. A+ SERVICES, LLC

State of Tennessee Home Inspector License ID Number 129

GREI (General Real Estate Inspectors) of America #TN-061909-01

ASHI (American Society of Home Inspectors) certified member # 244471

National Environmental Health Association (NEHA), NHRP Certification ID number 102158RT

182 Trinity Rd., Franklin, TN 37067 (615) 791-7433 Steve Traylor, ACI, owner/inspector

PRE-DRYWALL INSPECTION REPORT

Evaluation of property at: **Lot xxxxxxxx, Spring Hill, TN**
Inspection is performed for: xxxxxxxx
Time of the inspection was: June 21, 2019 10:00 AM

As requested, a visual inspection was performed today at the above referenced home. So far, the home appears well built, using good construction practices. Following are a few items, which need to be addressed.

Please note that some of the items need to be done prior to drywall.

All directions are as if you are standing at street, and facing the front of the home.

PRE-DRYWALL ITEMS:

Framing / Structural:

1. Roof truss A8 above middle of opening to rear sunroom was broken-off and field-patched with OSB (oriented strand board).



- 2.
3. No field modifications are allowed without written approval from the roof truss engineer.
4. Local building codes should be involved in this structural defect.



- 5.
6. The rear 7 feet of this truss was broken off and missing.



- 7.
8. A piece of another roof truss was scabbed onto the side of this one.
9. Some badly damaged roof trusses cannot be fixed, and must be replaced.
10. Several nails used to scab the new piece onto the broken truss missed, and were sticking out of the bottom of the roof truss where they are not structurally secure, and would cause humps in the drywall ceiling.



- 11.
12. Bottom chord of roof truss was uneven where scabbed.
13. Even a slightly sagging truss could cause a dip in the drywall ceiling where a lot of daylight from the sunroom will shine across ceiling.



- 14.

15. Where did the new section of roof truss that was scabbed onto the side of the broken truss come from?



16.
17. The roof trusses appeared to come from 84 lumber.



18.
19. Code IBC 2303.4.5 / IRC R502.11.3 & R802.10.4 address **Alterations to trusses**. “Truss members and components shall not be cut, notched, drilled, spliced or otherwise altered in any way without written concurrence and approval of a registered design professional.”
20. DO NOT repair without a Truss Repair Design Drawing (TRDD). Repairing a truss prior to receiving a TRDD could result in additional cost or an un-repairable condition. DO NOT install a broken or damaged truss until a repair has been made.
21. Here is one of many links to truss repairs. However, it is up to the design engineer to design the repair.pdf. <https://www.sbcindustry.com/system/files/sbca/educationalprogram/node/pdf/1158/educationppttrussrepair.pdf>.
22. Please note: **Depending on the extent of damage, some trusses cannot be repaired and must be replaced.**
23. Provide detailed letter from truss design engineer with his State of TN engineer’s stamp.

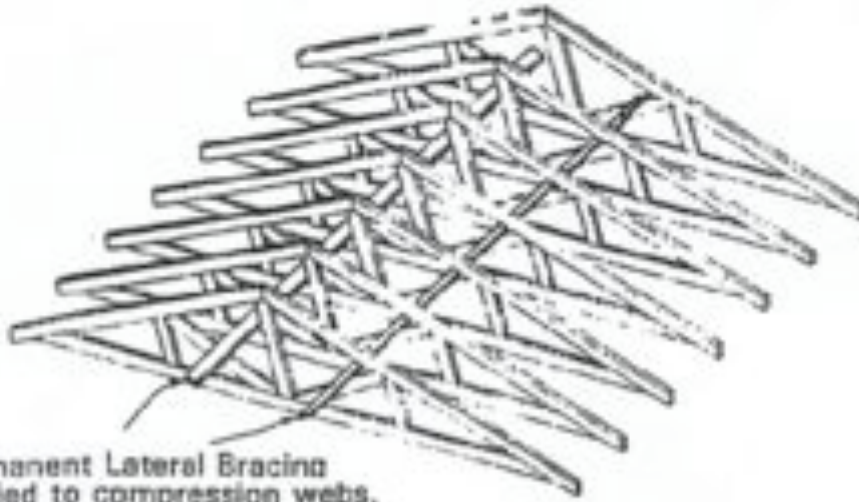
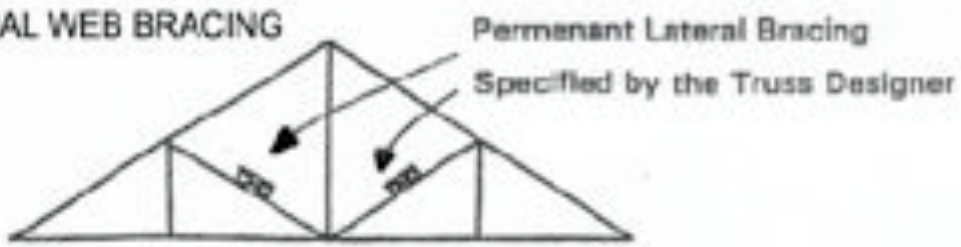


24.
25. Lateral bracing was missing from a lot of the roof trusses.



26.
27. Permanent, continuous lateral bracing should be installed per roof truss engineer. It is usually applied to the diagonal compression webs of the roof trusses.

LATERAL WEB BRACING



28.
29. In front right bedroom ceiling, bottoms of roof trusses were not even with bottom of beams.



30.
31. End of the short wall was very loose in kitchen. Reinforce end of wall with metal Simpson straps, other metal fasteners, or posts through floor.



32.
33. Some wall framing was not straight. My six-foot level showed some wood wall studs out of plumb, which could result in uneven drywall, base and crown molding.



- 34.

35. Handrail was missing from attic stairs in garage.



36.
37. Shim out walls so drywall returns straight and evenly at tubs and shower wall flanges.

38. Remove humps, nails, electric staples, and imperfections; and check for un-even spots on wall framing prior to drywall.

39. Attach roof trusses properly at top of interior walls with truss clips to prevent truss uplift, which causes gaps at top of interior walls in the winter. Here is one of many links describing this phenomenon:

<http://www.askthebuilder.com/truss-uplift-and-ceiling-cracks/>.



40.
41. Roof trusses are nailed to tops of interior walls here.

42. Shower walls need to have waterproof wallboard like used in Master shower.



43.
44. Why was the back wall of the left rear bedroom framed out for large windows looking out onto the patio, then filled-in?



45.
46. Ensure all metal nail guards properly protect water lines from drywall screws.



47.
48. Shower seats are preferred to be made of concrete blocks in lieu of wood.



- 49.
- 50. Ensure no untreated wood is in contact with concrete.



- 51.

Insulation and caulk:

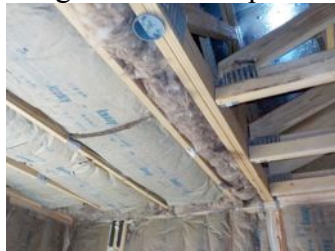
- 1. Paper vapor barrier was missing from several pieces of wall batt insulation, like above front door in right front bedroom, above some windows, and others.



- 2.
- 3. Ensure pipes located at exterior walls are insulated well on the OUTSIDE of these pipes to prevent freezing and busting.



- 4.
- 5. Paper vapor barrier was missing from several pieces of ceiling batt insulation too.



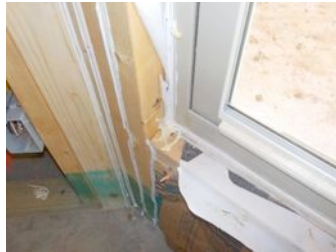
- 6.
- 7. Batt insulation stops short under the attic flooring in places where blown insulation may not be blown back under the attic flooring.



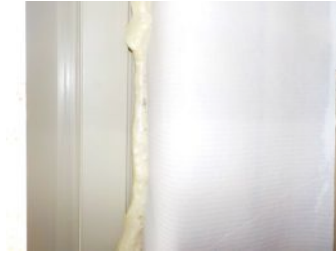
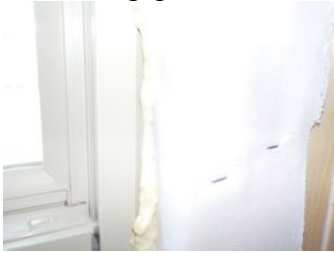
- 8.
- 9. Some batt insulation was missing at eaves.



- 10.
- 11. Flashing and house wrap did not extend all the way inside to cover bare wood windowsills and jambs in places.



- 12.
- 13. Fill ALL gaps around doors and windows. Great Stuff expanding foam did NOT fill some gaps.



- 14.
- 15. Remove debris prior to drywall. Do NOT close it up inside walls.



- 16.
- 17. FYI- Garage is insulated.



- 18.
- 19. Caulk gaps better around all doors and windows inside and outside.
- 20. Prior to drywall, remove humps, nails sticking out, imperfections, and check for un-even spots.

21. Do NOT drill through bottom windowsills for alarm contacts.

Electrical:

1. Ensure wires are pulled to all light locations prior to drywall.



- 2.
3. Is there a dedicated electric outlet in garage for the garage door opener since it must be a GFCI ground fault circuit? Do NOT put it on the same circuit with all the outside electric outlets and other garage outlets so it does not nuisance trip.
4. Is there a dedicated electric outlet in garage that is not on a GFCI ground fault circuit for refrigerator or freezer?
5. Ensure all phone, fax, cable, security, intercom, sound wiring, etc... is in place prior to drywall.
6. Ensure all windows, doors, motions, sirens, and smoke detectors are wired for security system. Do NOT drill through windowsills.
7. Consider installing electric outlet in family room floor.

MISC.

1. Ensure dust and debris off top of how firebox prior to drywall.



2.

Roof:

1. Ensure roofing/house is 100% watertight prior to drywall, so there is no chance of rot or mold caused by water intrusion.

Call buyer for re-inspection of the pre-drywall items, before covering them up with drywall.

OTHER MISC. ITEMS (not related to pre-drywall)

Grading and Backfilling:

1. Building codes 401.3, 406.3.5 and 1806.5.5 require the ground immediately adjacent to the foundation to be sloped away from the building at a continuous slope of 5% (6" minimum drop) for a minimum distance of 10 feet.



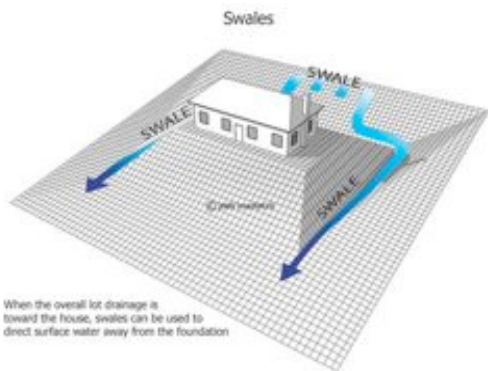
- 2.
3. Building code 1803.3 Site grading states. *"The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall."*



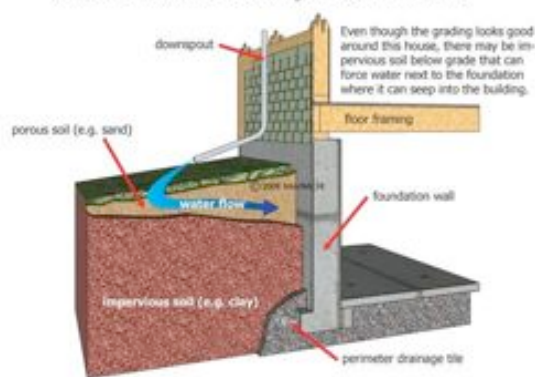
- 4.
5. I recommend the ground slope away from the house at least 1" per foot for at least 10'-0".
6. Please grade yard now to drain away from the house at a minimum of one inch per foot for ten feet minimum on all sides of the home. Do not wait until house is finished to grade it properly.
7. Presently, it is flat around the outside of the house, where water puddles are standing when it rains.
8. Ground will need to SLOPE AWAY from front of the house for AT LEAST 10 FEET too, per codes.



- 9.
10. Create a shallow ground swale if needed, at least ten feet from front of home to divert water AWAY from the slab.



Water Penetration Due to Subgrade Soil Conditions



- 11.
12. Provide a better swale along the right side and rear of the house to ensure water runs AWAY from house.



- 13.
- 14. Ensure water will drain off the yards quickly without any ponding.



- 15.
- 16. Fill gullies prior to sod.



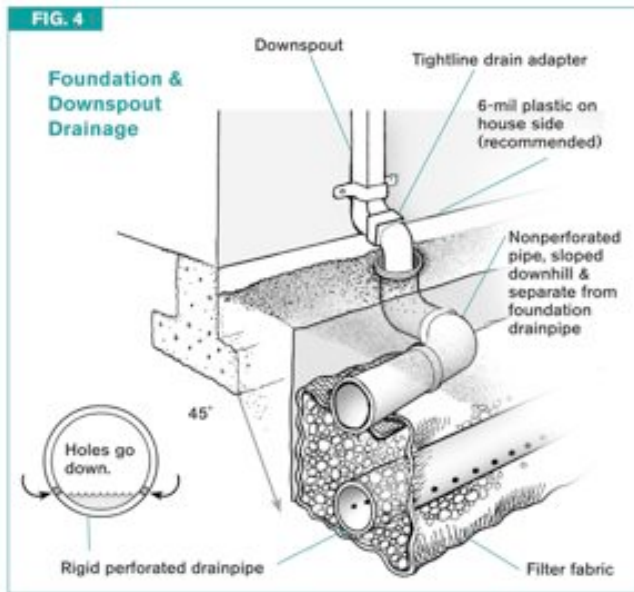
- 17.
- 18. Clean up sharp nails and other hazards and debris from jobsite now and prior to backfilling and sod.



- 19.
- 20. Add downspout extensions on all downspouts to help prevent water in crawl space. Per code 801.3, roof drains must discharge at least 5 feet from footing or to an approved drain system in expansive soils, like clay soils we have here in most of Middle TN.
- 21. Remove any wood scraps, like form boards, before backfilling around the house or pouring concrete slabs.
- 22. Ensure impervious backfill soil, like clay, is used around house to carry water away from house.
- 23. I did not see a French drainpipe around the outside of the house. I recommend it to drain out away from house to offer greater protection from ground water entering.
- 24. Ensure flat areas are not created on either side of front porch. Slope areas to drain AWAY from home to help eliminate front porch steps from settling. See concrete notes below.
- 25. Add compacted dirt up against and sloping away from house immediately, so water does not stand at footings.
- 26. Add extra compacted dirt to prevent ground from settling and leaving trench around house, due to water running off roof since gutters are not up yet.
- 27. Slope compacted clay dirt out at one inch per foot for ten feet minimum all the way around the house.
- 28. Lay straw over mud and dirt around perimeter of home to help keep mud splatters off brick, until gutters and downspouts are installed.
- 29. Ensure all utility trenches have a gravel base and are backfilled and properly compacted in lifts to avoid any future settling of trenches. I often see these trenches settle when not backfilled properly.
- 30. Ground is washed out some from erosion in left yard. Stabilize bank and add permanent means of erosion

control so it does not happen again.

31. Where applicable, install sleeves under concrete walks, drives and slabs for downspout extensions, irrigation, wiring, gas lines, etc...
32. Add downspout extensions on all downspouts to help prevent moisture under the house.
33. Ensure downspout extensions are buried separate from French drains so there is no chance that leaves from the gutters will clog the French drainpipes.



34.

Concrete:

2. I do not see a concrete footing for the front porch steps to be installed.
3. When there is no footing under the front porch steps, I often find front steps settled down a few inches, even 6", creating a fall hazard. This is because the front porch usually has a proper footing and the steps do not. This creates differential settling and a fall hazard.
4. It is very important that the front porch steps do not settle since codes do not allow more than 3/8" difference in stair riser heights and no more than 7 3/4" in riser heights.
5. For front porch steps, ensure concrete footings for steps are poured on a well-compacted base, under front porch steps to help prevent settling of steps.
6. Do NOT simply pour front steps on top of dirt or gravel or concrete walk, without a proper concrete footing.
7. Bottom of front porch step footings should be a minimum of 12" below the 6" frost depth. Therefore, bottom of footings should be a minimum of 18" below grade. A turndown footing is acceptable if it on a well compacted base and spread wide at its base and at least 18" below grade. Contact buyer for inspection of front step footings prior to pouring front walk and front porch steps.
8. Ensure any wood scraps are removed before concrete slabs are poured, like at front porch.
9. Provide adequate slope on driveway, away from the garage doors.
10. Do not pour driveway over any wood, as it may invite termites. Thicken driveway at garage slab to reduce chance of settling.
11. Ensure concrete outside of the step-up at garage door slopes out AWAY from garage to ensure water does not enter garage.



- 12.
13. Keep traffic off concrete driveway for at least 28 days after it is poured.
14. Ensure that ALL exterior concrete pads slope away from the house; like driveway, patio, hvac pads on left end of house, walks, etc. Provide a thickened turndown, poured on compacted base where concrete pads join house to help prevent settling up next to the house.
15. There are not enough proper control joints in the concrete slabs. There are NO control joints in the rear porch floor slab, and there should be. Control joints are planned for cracks, which allow for movements caused by temperature changes and drying shrinkage. In other words, when the concrete cracks, you want to have an active role in deciding where it will crack and that it will crack in a straight line instead of randomly. According to the Portland Cement Association, control joints should be placed at two times the concrete slab thickness in feet for a maximum aggregate size of less than 3/4 inch. Therefore, **if slab is 4" thick, control joints should be every 8 feet, in both directions.**



- 16.
17. **Cut joints deep enough. Cut joints 25% of the depth of the slab.** A 4" thick slab should have joints 1" deep. Grooving tools cut joints in fresh concrete. Saw cut cuts joints as soon as the concrete is hard enough that the edges abutting the cut do not chip from the saw blade. Joints can be saw cut into concrete after it is cured too.



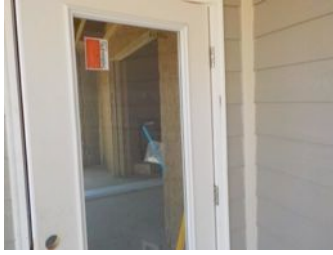
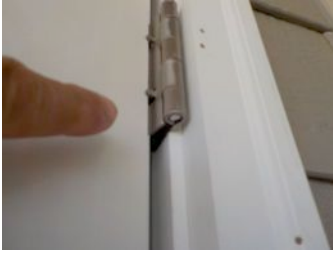
18.

Exterior:

1. Carefully clean paint off windows to prevent scratching.



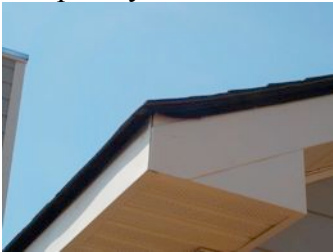
- 2.
3. Rear pedestrian door to outside had its hinges on the OUTSIDE, and they are not the special hinges made for external use. Therefore, a thief could quickly and easily tap out the hinge pins and pull the door off from outside. Here is one of many links online showing security stud hinges: http://www.lowes.com/pd_39744-1277-838557_0_?productId=3356222. Non-removable hinge pins are also recommended.



- 4.
- 5. Close all windows to keep rain out.



- 6.
- 7. Bare wood was showing between pieces of aluminum trim on some exterior corner. Wrap all corners completely and seal watertight.



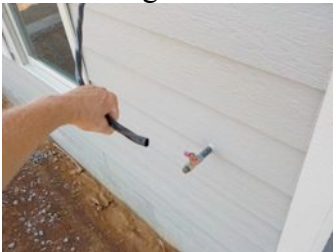
- 8.
- 9. Gaps between but joints in siding were wider than I usually see.



- 10.
- 11. Rear porch post was bowing under load.



- 12.
- 13. What is large electrical cable near rear outside gas line for?



- 14.

HVAC:

1. I did not see a float switch in the emergency overflow pan in the attic.



- 2.
3. Ensure a/c unit is sized properly for this square footage so it pulls humidity out of the house properly.
4. Insulate the a/c Freon lines well.

ATTIC

1. Eliminate trip hazard across floored attic walkway.



- 2.
3. The long access to remove hvac unit from attic was very narrow. It was almost the same dimension as the hvac unit.



- 4.

Misc.

1. I recommend a radon test prior to closing. We offer testing. Radon pipe was installed for the builder's benefit. It is NOT a radon mitigation system.



- 2.
3. Protect, clean and caulk exterior aluminum thresholds. Replace thresholds later, if dented.
4. Seal all penetrations through floors, like at plumbing pipes.
5. Provide drain pan with drain in laundry room for washing machine.
6. Finish exterior trim so gutters and downspout can be installed as soon as possible.
7. FYI- Following are just some extra photos I took:



Please understand that there are limitations to this inspection. Many components of the property are not visible during the inspection and very little historical information was provided in advance of the inspection. Masons are laying bricks on the front outside at this time, so I could not see a lot of the front outside.

Be sure to call us for a final detailed home inspection and 48-hour radon test prior to closing.

All evaluations and comments are based on my personal opinion after visual inspection of readily accessible areas and no warranty; either expressed or implied is made because of this partial inspection.

Please note that I have not provided a copy of this report to anyone except your realtor.

If you have any questions, please do not hesitate to call.

Thank you,

Steve Traylor, ACI

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