

# PROSPECT HOME INSPECTIONS

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## Property Address:

1234 Your Street  
Your Town, GA 30XXX  
Your Subdivision Lot XXX

Your County Permit #XXXYYYZZZ, Permitted xx/xx/xx

## Date of Inspection:

xx/yy/zz

## Type of Inspection:

Framing and Rough – In Inspection

## Client:

ProSpect Client

## Introduction:

Per your request, I inspected your new home under construction at the above address. The inspection was performed between 1:30 and 5:30 PM on November xx, xxxx. This home is a two story, three bedrooms, two and one-half bath home built over an unfinished basement. It has an attached two car garage. Weather was clear and temperature was 50 degrees on arrival. Electrical, mechanical (HVAC) and plumbing rough-in installations are essentially complete. Porch and deck construction had not been started at time of inspection.

## Exterior:

1. Brick and stone veneer siding installation had not been started at time of inspection. Note requirement for felt behind veneer sidings.
2. Some overdriven nail holes are not sealed and another nail installed beside as required by the manufacturer, such as on back at basement level. Note that failure to install a product according to the manufacturer's installation instructions often voids the warranty.
3. Door thresholds are not properly supported, such as at back of main level and basement. **IRC R501.2 Requirements.** "Floor construction shall be capable of accommodating all loads according to R301 and of transmitting the resulting loads to the supporting structural elements."
4. Window on front of garage has a broken flange.
5. Window on front of garage has staple shot through the exposed finish window components.

6. OSB sheathing is nailed as much as nine inches or more on center in several places where visible. **IRC TABLE R602.3(1)** requires 6d common nails at 6 inches on center along edges of structural wall panels.

#### **Grounds/Appurtenances/Foundation Grading:**

1. Final grading is not complete. Currently, the lot does not have proper slope away from the foundation in some places, such as on the left side and behind the home at basement level. **IRC R401.3 Drainage.** "Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from foundation walls shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm)."

#### **Attic (General):**

1. Opening for gable vent on front is cut oversized.

#### **Roof/Ceiling Framing:**

1. Some ceiling joists do not have any bearing on ends, such as main level hallway (near half bath) . **IRC R801.2 Requirements.** "Roof and ceiling construction shall be capable of accommodating all loads imposed according to R301 and of transmitting the resulting loads to the supporting structural elements." **IRC R802.6 Bearing.** "The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) on masonry or concrete."
2. Outer bands supporting the ends of ceiling joists where tray ceiling is framed out have no bearing on front ends. Refer to **IRC R802.6** quoted above.
3. Truss plates are pulled loose at bottom of vertical chord of truss above entry foyer (first truss from outside wall). **IRC R802.10.4 Alterations to trusses.** "Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional. Alterations resulting in the addition of load (e.g., HVAC equipment, water heater) that exceeds the design load for the truss shall not be permitted without verification that the truss is capable of supporting such additional loading."
4. Lateral bracing is not installed for trusses. **IRC R802.10.3 Bracing.** "Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements specified in the construction documents for the building and on the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with TPI/HIB."
5. Vertical member at center of fourth truss from left side is badly cracked. Field repair does not conform to repairs generally found when designed by a professional engineer. Refer to **IRC R802.10.1** quoted above.
6. Near vertical member at center of sixth truss from left side is badly cracked. Field repair does not conform to repairs generally found when designed by a professional engineer. Refer to **IRC R802.10.1** quoted above.

7. Rafters for gable section at left front are 2 x 6 at 24 in. on center, No. 3 SPF, spanning as much as 10 ft 6 in. **IRC R802.5 Allowable rafter spans.** “Spans for rafters shall be in accordance with Table R802.5.1(1) through Table R802.5.1(8). For other grades and species and for other loading conditions, refer to the AF&PA Span Tables for Joists and Rafters. The span of each rafter shall be measured along the horizontal projection of the rafter.” **Table R802.5.1(1)** shows maximum span for rafters of this grade and spacing to be 8 ft 10 in.

### Wall Framing:

1. There are numerous twisted, bowed, warped, or misaligned studs, such as in the upper level left rear bedroom. This can affect straightness of walls, alignment of electrical outlets, etc. **IRC R601.2 Requirements.** “Wall construction shall be capable of accommodating all loads imposed according to R301 and of transmitting the resulting loads to the supporting structural elements.” **IRC Table 301.6** requires maximum deflection of interior walls and partitions to be H/180.
2. Several studs move easily, likely due to insufficient number or location of nails. **IRC TABLE R602.3(1)** requires two 16d common nails at top and bottom of each stud when face nailed.
3. Stud between left front bedroom and master bath is pulled loose at bottom.
4. Wall studs for exterior wall in back of family room are 2 x 6, No. 2 Hem Fir, spaced as much as 24 inches on center. Height of studs is approximately 18 ft 3 in. Wall moves easily when pushed. **IRC R601.2 Requirements.** “Wall construction shall be capable of accommodating all loads imposed according to R301 and of transmitting the resulting loads to the supporting structural elements.” **IRC R602.3.1 Stud spacing.** “In bearing walls, studs that are not more than 10 feet (3048 mm) in length shall be spaced not more than is specified in Table R602.3(5). In bearing walls, studs that are more than 10 feet (3048 mm) in height shall be spaced not more than specified in Table R602.3.1.” **Table R602.3.1** requires studs to be spaced at 16 inches on center. Other arrangements require engineered design. **IRC Table R602.3.1, footnote b** requires “Applicability of this table assumes the following: Snow load not exceeding 25 psf, but not less than 1310 psi determined by multiplying the AF&PA NDS tabular base design value by the repetitive use factor, and by the size factor for all species except southern pine, E not less than 1.6 by 10<sup>6</sup> psi, tributary dimensions for floors and roofs not exceeding 6 feet, maximum span for floors and roof not exceeding 12 feet, eaves not greater than 2 feet in dimension and exterior sheathing. Where the conditions are not within these parameters, design is required.”
5. Triple beam supporting floor, wall and roof framing for upper level is installed in approximately the center of the triple beam above the garage door opening. Recommend verifying with the beam supplier that the garage door beam is designed for the concentrated load. Refer to **IRC R601.2** quoted above.
6. Uplift straps are not installed at walls on each side of the garage door beam. **IRC R602.10.5 Continuous panel structural sheathing. Exception: (Georgia Amendment)** “Vertical wall segments, in the first story or one- or two-story buildings, next to garage openings shall be permitted to have a 6:1 height-to-width ratio (with height being measured from top of header to sill plate) when constructed

in accordance with the following provisions. Each panel shall have a length of not less than 15 inches (381 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8 – inch (9.53 mm) minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure R602.10.5. The wood structural panel sheathing shall extend up over the solid sawn or glued laminated header and shall be nailed in accordance with Figure R602.10.5. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall not be less than six feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with uplift capacity of not less than 1000 pounds (454 kg) shall fasten the header to the side of the inner studs opposite the sheathing. Two anchor bolts shall be installed in accordance with R403.1.6 and plate washers shall be a minimum of 2 inches by 2 inches by 3/16 inches (51 mm by 51 mm by 4.77 mm ) thick and shall be used on each bolt. This exception is only permitted in Seismic Design Categories A – C. (Effective January 1, 2005)

7. Anchor bolts are not installed in walls on each side of the garage door opening. Refer to **IRC R602.10.5 Exception (Georgia Amendment)** quoted above.
8. Note that inspector was unable to confirm nailing pattern for OSB on exterior of garage door opening. Nails should be installed in a three inch grid pattern. Recommend to verify with builder that sheathing is correctly nailed. Refer to **IRC R602.10.5 Exception (Georgia Amendment)** quoted above.
9. Due to above deficiencies, I recommend further evaluation by a registered professional engineer with training and experience in repairs of foundations, framing, etc. for wood framed structures. The engineer should provide a sealed letter either approving existing installation or drawings for corrective action needed. The engineer should verify that repairs are properly installed.

#### **Floor Framing:**

1. Ends of small truss above half bath do not have proper bearing. **IRC R501.2 Requirements.** “Floor construction shall be capable of accommodating all loads according to R301 and of transmitting the resulting loads to the supporting structural elements.” Refer to **IRC R502.6** quoted below.
2. Top chord of floor truss under half bath toilet has a large section removed. **IRC R502.11.3 Alterations to trusses.** “Truss members and components shall not be cut, notched, spliced or otherwise altered in any way without the approval of a registered design professional. Alterations resulting in the addition of load (e.g. HVAC equipment, water heater, etc.), that exceed the design load for the truss, shall not be permitted without verification that the truss is capable of supporting the additional loading.”
3. Some ends of band joists under stair landings (both levels) do not have any bearing. **IRC R502.6 Bearing.** “The ends of each joist, beam or girder shall have not less than 1.5 inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) on masonry or concrete except where supported on a 1- inch-by-4-inch (25.4 mm by 102 mm) ribbon strip and nailed to the adjacent stud or by the use of approved joist hangers.”

### Interior (General):

1. Fireblocking was not installed in numerous places, such as at electrical cables, water and drain piping, etc. at time of inspection. **IRC R602.8 Fireblocking required.** “Fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories, and between a top story and the roof space. Fireblocking shall be provided in wood-frame construction in the following locations:
  1. In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor level and at 10 foot (3048 mm) intervals both vertical and horizontal. Batts or blankets of mineral or glass fiber or other approved nonrigid materials shall be allowed as fireblocking in walls constructed using parallel rows of studs or staggered studs.
  2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
  3. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with R314.8.
  4. At openings around vents, pipes, and ducts at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion.
  5. For the fireblocking of chimneys and fireplaces, see R1001.16.
  6. Fireblocking of cornices of a two-family dwelling is required at the line of dwelling unit separation.”
2. Insulation is not installed in walls behind tubs and showers. These areas are difficult to insulate after tubs and showers are installed and are often overlooked or improperly insulated. **Georgia Supplements and Amendments to the 2000 International Energy Conservation Code** requires R-13 wall insulation.
3. There are gaps between tubs and wall framing, such as in the upper level front center bathroom. This can result in deflection of walls. Furring out the walls to compensate for the misalignment is a simple way to correct this issue.
4. There is a damaged area of floor sheathing in the family room.

### Basement (General):

1. Openings in draftstopping are not effectively sealed. **IRC R502.12 Draftstopping required.** “When there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1,000 square feet (92.9 m<sup>2</sup>). Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below draftstopping shall be provided in floor/ceiling assemblies under the following circumstances:
  1. Ceiling is suspended under the floor framing.
  2. Floor framing is constructed of truss-type open-web or perforated members.”

### Plumbing:

1. Shield plates for piping are incorrect type. They do not extend two inches below the top plate and two inches above the bottom plate as required. **IPC 305.8 Protection against physical damage.** “In concealed locations where piping, other than cast-

iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by shield plates. Protective shield plates shall be a minimum of 0.062-inch-thick (1.6 mm) steel, shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 2 inches (51 mm) above sole plates and below top plates.”

### **Foundation:**

1. Foundation anchors are wall straps that are improperly installed in some areas. Anchors are not installed within 12 inches of ends of plate sections. Several do not have any nails installed. Note that shot anchors are installed, but do not provide equivalent anchorage as the straps. **IRC R403.1.6 Foundation anchorage.** “When braced wall panels are supported directly on continuous foundations, the wall wood sill plate or cold-formed steel bottom track shall be anchored to the foundation in accordance with this section. In Seismic Design Categories D<sub>1</sub> and D<sub>2</sub>, the additional anchorage requirements of R602.11.1 shall apply for wood framing. In Seismic Design Categories D<sub>1</sub> and D<sub>2</sub> where continuous wood foundations in accordance with R404.2 are used, the force transfer shall have a capacity equal to or greater than the connections required by R602.11.1 or the braced wall panel shall be connected to the wood foundations in accordance with the braced wall panel-to-floor fastening requirements of Table R602.3(1). The wood sole plate at exterior walls on monolithic slabs and wood sill plate shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet (1829 mm) on center. Anchor bolts shall also be located within 12 inches (305 mm) from the ends of each plate section. In Seismic Design Categories D<sub>1</sub> and D<sub>2</sub>, anchor bolts shall also be spaced at 6 feet (1829 mm) on center and located within 12 inches (305 mm) from the ends of each plate section at interior braced wall lines when required by R602.10.9 to be supported on a continuous foundation. Bolts shall be at least 1/2 inch (12.7 mm) in diameter and shall extend a minimum of 7 inches (178 mm) into masonry or concrete. Interior bearing wall sole plates on monolithic slab foundations shall be positively anchored with approved fasteners. A nut and washer shall be tightened on each bolt to the plate. Sills and sole plates shall be protected against decay and termites where required by R322 and R323. Cold-formed steel framing systems shall be fastened to the wood sill plates or anchored directly to the foundation as required in R505.3.1 or R603.1.1.  
EXCEPTION: Foundation anchor straps, spaced as required to provide equivalent anchorage to 1/2-inch-diameter (12.7 mm) anchor bolts.”  
Note that another type of anchor, such as shot anchors will be needed to properly secure the plate to the foundation. The new type will need to be installed according to the manufacturer’s instructions or obtain a letter from a registered professional engineer or the manufacturer’s representative approving any combination of different types of anchors.

### **Front Landing:**

1. OSB sheathing is installed below the level of the front door threshold. Installation of concrete above the wood framing can result in a water entry point into the basement.

**Limitations of Inspection:**

This inspection was based on the 2000 International Residential Code (IRC), the 2000 International Plumbing Code (IPC), the 2000 International Energy Conservation Code (IECC), the 2000 International Building Code (IBC), and the 2002 National Electrical Code (NEC). Each of the codes has Georgia amendments, which are referenced where applicable. Reference to the amendments is noted at the individual code listed. These codes establish a minimum standard for the protection life, limb, health, property, and environment and for the safety and welfare of the customer, general public and the owners and occupants of residential buildings regulated by this code. This inspection is not intended to list all code violations and deficiencies, as the inspector was not present as the house was being built.

The scope of the inspection is a visual observation, with limited use of mechanical instruments, of readily accessible areas of the building, improvements, mechanical systems and appliances. Concealed, camouflaged or inaccessible conditions may not be disclosed. This inspection was performed in good faith and to the best of my ability.

Please call if you have any questions.

Gary L. Lewis

ICC Residential Combination Inspector # 5169112 - R5  
ICC Property Maintenance & Housing Inspector # 5169112 - 64  
ICC Plumbing Inspector # 5169112 - P5  
ICC Plumbing Plans Examiner # 5169112 - P3  
ICC Mechanical Inspector # 5169112 - M5  
ICC Mechanical Plans Examiner # 5169112 - M3  
ICC Residential Electrical Inspector # 5169112 - E1  
ICC Commercial Electrical Inspector # 5169112 - E2  
ICC Electrical Inspector # 5169112 - E5  
ICC Electrical Plans Examiner # 5169112 - E3  
ICC Building Inspector # 5169112 - B5  
ICC Building Plans Examiner # 5169112 - B3  
ICC Combination Inspector # 5169112 - C8  
ICC Combination Plans Examiner # 5169112 - C3  
Instructor, Birch Academy  
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Board of Directors, Georgia Association of Home Inspectors



**Overdriven nail in siding not properly repaired**



**Window stapled through exposed finish**



**Example of incorrect nailing on OSB sheathing**



**Examples of ceiling joists without proper bearing on ends**



**Damaged truss tie plate**



**Improperly repaired cracked truss member**



**Band and joist no bearing on ends example**



**Anchor bolts missing at walls in garage example**



**Floor truss no bearing on end**



**Fireblocking missing at plumbing penetration example**



**Shield plate does not extend two inches below top plate example**



**Foundation anchors not installed within 12 inches of ends of plate sections**