

# BANKS COUNTY BUILDING DEPARTMENT

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# Residential Checklist "Am I Ready For Inspection"

Attached is the residential checklist. It is intended as a tool for inspectors, builders and contractors in reference to the 2000 International Residential Code (IRC). This can be purchased through bookstores or at the International Code Council website <a href="www.iccsafe.org">www.iccsafe.org</a>. It is not all-inclusive or to replace the code, but to be used as a guide for normal inspection procedure. It will be updated as code cycles change and new building technologies come out. It is the responsibility of the builder and subcontractor to ensure the homes they construct are in full compliance with all applicable codes, laws, and ordinances. Banks County Building Department is partnered with these groups to ensure the health, safety and welfare of our community. This checklist serves as first and final notice of Banks County Building Department's intension to enforce the codes. We appreciate your cooperation with these procedures.

#### **Typical Inspection Procedure**

Under normal conditions the following sequence of inspections will be utilized. Alternate methods of construction may require additional inspections. It is the responsibility of the builder, or his authorized agent, to contact the department to request an inspection. Please have your permit number when calling. Every effort will be made to do the inspection on the next working day. Due to workload demand this is not always possible so please schedule accordingly. Inspections should be ready when calling or a re-inspection fee will be assessed. It is the responsibility of the builder to provide access and means for inspection. Work shall not be done beyond the point indicated in each successive inspection without approval of the building inspector or official. No building shall be used or occupied until final inspection is made and a certificate of occupancy is provided (IRC.109, 110).

- 1) **Footing Inspection:** When the footing/foundation is complete. Prior to the placement of concrete.
- 2) **Plumbing Under-Slab Inspection:** Plumbing test is on with fittings exposed. This may be done with foundation inspection.
- 3) **Foundation Inspection:** Prior to backfill, waterproofing and French drains in place, anchorage installed.
- 4) **Rough-In Inspection**: Prior to insulation or sheetrock. The house is dried-in, framing, HVAC, plumbing and electrical roughed-in at this time.
- 5) **Final Inspection**: Prior to occupancy or use, building is substantially complete with all code issues addressed. A certificate of occupancy will be issued (a two step process).

Inspections may be combined at the Inspector's discretion. For example, detached garages usually involve a combined footing and slab (monoslab). Modular homes, log homes or alternate methods will follow similar inspection procedures. Additional or courtesy inspections may be required as a design dictates. Any alternate method will require prior approval from the Building Official (IRC104). For example, a stick built home, otherwise built to the IRC can integrate pre-engineered building components without having to engineer the entire structure. Please feel free to contact the department with questions.

#### **Footing Inspection**

- 1) Work must be completed. Due to workload we are not able to give a specific time for the inspection beyond the date of the inspection. If time or weather is a factor, "Third Party Inspection Letters" are permitted with professional engineering (Georgia certification required).
- 2) The jobsite must be accessible. Silt fences must be installed. Gravel access drives are advised to keep mud from road.
- 3) Permit must be posted until completion of project. Please keep it dry, accessible and easily seen. 105.7
- 4) 911 address numbers must be posted at road with 3" or larger numbers. 321.1
- 5) Building setbacks less than 3 feet from a lot line or another building require firewall construction. 302.1
- 6) No mud or water is allowed in the footing. The builder responsible for the job is required to call and cancel the inspection if the inspection cannot be performed due to inclement weather. 109.3
- 7) Remove all vegetation, topsoil and organic material from the area inside the foundation. 408.4
- 8) All exterior footings shall be placed at least 12 inches below undisturbed ground. Formed footings are only allowed below the undisturbed grade plane (i.e. basements). 403.1.4
- 9) Footings must be level. "Hog outs" are not allowed. Stepped footing bulkheads must be properly in place at time of inspection to maintain a continuous level footing. Remove all wood prior to wall construction. "Cold" pours are not allowed without a design professional. *IRC403.1.5*
- 10) Rebar is required per code: two- No.4 or one -No.5. Wooden grade stakes, red brick chairs, inadequate concrete coverage and improper slice lap ties are not allowed. Rebar is a made grounding electrode and a minimum No. 4 AWG bare copper conductor must be bonded and extended to the electrical system. *IRC* 3508

#### **Under-Slab Inspection**

- 1) Slab inspections are required whenever any utility (plumbing, electrical or mechanical duct or condensate) are located underneath a slab.
- 2) Plumbing must be tested by a water or air pressure test. Drains (DWV) must have a minimum 10-foot head of water from the highest fitting connection or 5-psi air test. Straight runs may be covered but fittings must remain exposed. All supply lines must have either a water test of not less than 40psi or 50psi using air. Water tests are not recommended in rainy weather.
- 3) Properly size, fit and slope drains. 3005
- 4) Use proper primer and solvent. Do not mix ABS and PVC. 3003.2
- 5) Provide drain cleanouts prior to entering slab. 3005.2
- 6) Sleeve piping (DWV, water, gas etc.) through foundation walls and through concrete. Piping must be properly protected from impact and corrosion. 2603
- 7) Bearing points for columns and bearing walls should be formed and clearly defined at inspection.

### **Foundation Inspection**

- 1) 1/2" Anchor Bolts are required within 12 inches of each corner and the end of each sill plate and every 6 feet. Anchor straps are allowed per manufacturer's installation instructions, usually 3' on center. 403.1.6
- 2) All wood sills that rest on concrete or masonry or less than 8" from grade must be pressure treated. 319.1
- 3) Masonry construction to be engineered or by empirical design for Seismic group C for single-family dwellings. 606
- 4) Foundation wall thickness is based upon walls supported.
- 5) Maximum unbalanced fill (backfill) required:

4" pier and curtain walls - 2-feet

Hollow 8" CMU (concrete block) - 4-feet

Solid grouted 12" CMU (concrete block filled with concrete) - 6-feet

12" plain concrete wall (poured wall) - 8-feet

Any foundation wall that exceeds this would require engineering. Table 404.1.1(1)

- 6) Backfill should not be placed against the wall until the wall has sufficient strength, anchorage and bracing. 404.1.7
- 7) Waterproofing and foundation drainage ("french drains") should be inspected at this time. Foundation drainage shall positively slope to daylight as site conditions warrant. Exterior waterproofing and drainage system are required on all basements, storage spaces, and habitable spaces and when the inside grade of the crawl space is lower than the finished outside grade. 405, 406, 408.5
- 8) Masonry walls shall be solid units or grouted at a change in thickness. 606.2.3
- 9) An 18" by 24" crawl space access shall be maintained. A larger access may be required when equipment is located in the crawl space. 408.3
- 10) Crawl spaces shall be vented with a 1/1500 ratio with an approved vapor barrier installed. Notice: An 8" by 16" foundation vent does not equal one square foot of ventilation. 408.2
- 11) 8" CMU piers cannot exceed 80" height. Piers over 32" high must be filled solid and capped. 606.5
- 12) Generally, wood sills, pier caps and shims cannot exceed one two-by member. 301.6
- 13) Masonry walls shall be laterally supported. Usually with a 1/20 ratio. 606.8
- 14) Flashing and weep holes must be installed correctly. Drilling weep holes is not an acceptable practice. This may be inspected at later inspections. 703.7

#### **Rough-In Inspection**

- 1) All sub-trade rough-ins (plumbing, gas, mechanical and electrical) must be ready.
- 2) All masonry and rough framing completed. The structure must be dried-in, doors and windows installed, masonry fireplaces and roof flashing and shingles completed. Do not insulate except concealed walls such as behind showers and cantilevered floors. Do not stack sheetrock along walls. If a door or window is backordered, weatherproof the opening with poly. 701.2
- 3) Every dwelling must have one 3/0 by 6/8 side hinged exit door. Every sleeping room must have an **emergency egress window** or exit door. The window sash must clear open at least 20" wide, 24" tall, be within 44" of the floor and have an overall opening size of **5.7 net clear feet** (821"). A sleeping room is any room with a clothes closet, including basements and bonus rooms. 310
- 4) Every stair must be a **minimum** of 3 feet wide and have a 3'by 3' landing at the top and bottom. Stair headroom, measured from the slope of the stair, must be over 6'8". 311.5
- 5) Glazing of windows in hazardous locations must be **tempered** (i.e. doors, next to doors, over tubs, large picture windows, etc.) 308.4
- 6) All structural members, their size, spans and method of attachment are to be in accordance with the code. Any alternate material not prescribed in the code must be approved. 301.1.3
- 7) Cuts, notches and holes bored in laminated veneer lumber, glue-laminated members, or I-joists are not permitted beyond the manufacturer's installation guide. Truss members shall not be altered in any way without the approval of a design professional. Truss design drawings shall be provided. Use "hurricane clips" and room tie downs as specified per manufacturer (any rafter to plate connection with more than 175lbs of uplift). 502.8.2,502.11,802.10.1
- 8) All load bearing lumber must be grade stamped. 602.1
- 9) Any framing member that has been cut or notched beyond allowances must be reinforced. 602
- 10) Wall bracing according to Design Category C. Notice "let-ins" are not allowed on the bottom floor of a two story. 602.10.3, 606.5
- 11) Attic areas shall be ventilated. A 22" by 30" minimum attic access must be provided. A larger opening may be required when equipment is located in the attic. 807.1
- 12) Fire blocking shall be in place. Use ASTM E2136 caulk and other approved materials to seal each vertical and horizontal penetration at 10' (enclosed chases, floor/ceiling penetrations, soffits, stairs, tubs, etc.). Draftstop every 1000' square foot of concealed space. 502.12, 602.8
- 13) Plywood, OSB and EIFS require a weather resistant membrane (30# felt or house wrap, "Tyvek") between masonry veneer or stucco. Do not install an interior (conditioned side) vapor retardant. This will lead to moisture problems in the stud cavity. Foam plastic may be used if separated from the interior with sheetrock. 703,318
- 14) Flash porches, window and door sills, and nailing flanges per manufacturer. Wall sheathing should be at least 6" from grade. 703.8
- 15) Pull down stairs should be fire rated.

#### Plumbing Rough-In

- 1) Plumbing shall be roughed-in to all locations
- 2) Drain Systems shall be tested by water with no evidence of leaking. Fill to highest flood level rim. 2503.5.1
- 3) Water supply system shall be tested and proved water tight under a water pressure test not less than the working pressure of the system (min. 40psi) or by an air test not less than 50psi (100psi for pex.). 2503.6
- 4) Where piping is installed through holes in plates or study less than 1.5" from the nearest edge of the member, shield plates shall protect the pipe. 2603.2.1
- 5) Use anti-scald shower valves. 2708.3
- 6) Vent terminals min. 6" above roof. Roof boots should be installed. 3103.2606
- 7) Vent terminals shall not be within 10 feet horizontally of openings into the building unless it is at least 2 feet higher than the opening. 3103.5
- 8) The International Plumbing Code is a referenced standard and may be used in conjunction with the IRC.

#### Mechanical Rough-In

- 1) Gas pipe shall be run to all locations and pressure tested. Test must be gauged from the location of the meter through the foundation to the approximate location of all appliances. Minimum test is 20psi and the gauge must be calibrated to discern any leak.
- 2) Use only approved piping materials (copper, CSST, black steel and wrought iron). Properly size and support gas piping. No unions, couplings, bushings or flared fittings shall be in concealed locations. Protect copper or CSST piping when passing through wood members with shield plates. Protect piping against corrosion when passing through foundation walls and exposed in exterior locations. 2411-2417
- 3) Fireplaces, vented or un-vented, must be installed. If gas is to be used in such fireplace, the gas line must be tested. Fire block installed at ceiling. 2431
- 4) Fuel fired appliances are restricted in sleeping rooms, bathrooms and storage closets. See manufacturer's guidelines for exceptions. 2406
- 5) Air returns must be installed. Returns are prohibited in kitchens, bathrooms, garages and within 10' of fuel fired appliance. 1602.3
- 6) Supply boots must be installed and insulated in non-conditioned spaces conducive to condensation. 1601
- 7) Condensate and HVAC line sets should be installed and fire stopped.
- 8) All chimneys and vents shall be inspected for proper size and clearances. A mechanical draft venting system shall terminate at least 3 feet above any air inlet located within 10 feet. 2426.8
- 9) Clothes dryer exhaust duct shall be roughed-in. Maximum length not to exceed 25 feet. 2437
- 10) Bathroom exhaust fans must be installed in every bathroom and water closet and duct run to outside air.
- 11) The International Mechanical Code and The International Fuel Gas Code are referenced standards and may be used in conjunction with the IRC.

## **Electrical Rough-In**

- 1) The panel box to have the grounds and neutrals made up. No breakers are required. Service entrance must be run.
- 2) Wiring must be run to all locations
- 3) Service loads shall be computed in accordance with code. Services over 400 amps require a design professional. 3502
- 4) Unless the meter base and service panel are located back-to-back or next adjacent stud cavity, a four wire system with an exterior service disconnect is required. The sub-panel must isolate grounds from neutrals. *National Electrical Code (NEC) 230.70a* and *230.91a*
- 5) Two secondary ground rods are required where a made rebar ground was not installed or when a single electrode does not have a resistance to ground of less than 25 ohms.
- 6) A four-wire system is required for stoves and dryers. NEC 400.5 or 250.59b
- 7) Panel box locations must meet clearance (30" wide by 36" deep by 6'6" high) and cannot be located on a bathroom or clothes closet. 3305
- 8) Receptacle spacing on walls shall be not more than 12' apart, within 6' of any door and on any wall over 2' in length. 3801
- 9) A minimum two 20-amp circuits are required in the kitchen, one in the laundry, one in the bathroom. This mandates 12 gauge wire size. 3603
- 10) Kitchen countertop receptacle spacing is basically 2' on center with one receptacle required in any island, peninsula or countertop over certain size. 3801.4
- 11) Wiring shall be protected from abrasion. 3805.1.2
- 12) Holes closer than 1-1/4" from the edge of the stud or plate shall be protected by nail guards. 3702.3.2
- 13) Bond all metal water pipes. 3509.6
- 14) In the following areas UL listed fixtures must be used as they are designed: ceiling fans, wet and damp locations, recessed can lights. 3903
- 15) Smoke detector wiring must be installed. Smoke detectors shall be installed outside of each sleeping area in the immediate vicinity of the bedrooms, but in no case more than 10 feet away from the door. This includes basements, cellars and finished rooms in attics. R317.1

#### **Final Inspection**

- Building must be completed and ready for inspection. All life safety issues must be resolved. Warning: Buildings may not be occupied prior to final inspection being passed and a Certificate of Occupancy being issued by the Building Official. Please call the Building Department in advance if there is any question regarding this. The Building Department does not inspect cosmetic items, nor do a "punch list". The Certificate of Occupancy can be requested the following business day after the final has passed. Physical occupancy (move in furniture etc.) can occur as soon as the permit holder has obtained a verbal verification from the building inspector. 110.3
- 2) It is the permit holder's responsibility to ensure that the permit reflects the structure as built. Structural change orders must be properly permitted and inspected. 106.4
- 3) Emergency 911 address numbers must be permanently posted at the road. Numbers must be 3" or larger.
- 4) The exterior must be weatherproof and rodent proof.
- 5) The garage shall be separated from the residence and its attic area by not less than ½" sheetrock on the garage side (walls, ceiling, structural supports). Sheetrock must be butted tight and must be mud and taped one time to US Gypsum association standards. 309
- 6) Double cylinder (interior keyed) deadbolts are not allowed. 311.2
- 7) A 3' by 3' landing shall be provided outside of each exterior door. The door leading from the residence to a garage is considered an interior door. A door with two risers (16 ½") or less to grade is exempt from a landing requirement. 312
- 8) Stairs with four or more risers require a handrail. Handrail height shall be 34"-38" tall. Handrails must be graspable. Handrails on open side stairs over 30" from grade plane or finished floor shall be guards. Handrails must be on the inside wall of winders. 311.5.6 2003 IRC, S.C.B.C.C. amendment
- 9) Porches, decks, balconies, ramps over 30" above grade plane require guards. Guards must be a minimum 36" tall unless qualifying as handrails (34"). Guards cannot allow the passage of a 4" sphere and must resist a 200 lb. lateral load. Elevated screen porches require guards.
- 10) The crawl space shall have all construction debris removed. Seal all foundation penetrations. 408.4
- 11) All deck, porches and balconies must be completed and to code. 501.2
- 12) Enclosed accessible areas under stairs, including unfinished basements, must be sheetrock inside walls and soffit. 502.12
- 13) Chimney terminations must go 3' above the roof and 2' above any portion of the building within 10', 1001.6

## **Plumbing Final**

- 1) Cut off valve on the cold-water side to the water heater. 2903
- 2) The water heater temperature pressure relief valve must safely discharge to the outside of the building (except in basement). The discharge pipe should be constructed of copper or CPVC. 2803
- 3) Water lines in attics, garages and unconditioned spaces must be insulated against freezing. 2603.6
- 4) Provide backflow protection in accordance with the code. 2902
- 5) Provide pressure reducing valve and thermal expansion tank per code when water pressure exceeds 80psi. 2903
- 6) Cleanouts should be accessible. A septic cleanout within 5' of the foundation wall, but not closer than 18" should be provided. 3005.2
- 7) Air admittance valves must be installed per manufacturer's installation instructions. One main stack must run to the exterior. 3114

#### **Mechanical Final**

- 1) All utilities should be connected, tested and operational. The exception is gas grills and decorative appliances do not have to be installed at this time.
- 2) Gas log fireplaces shall have a shut off valve located outside the firebox but within 6' and in the same room. 2419.5
- 3) 2psi gas lines labeled.
- 4) All gas appliances except grills, lights, dryers, and ranges require sediment traps (drip legs).
- 5) Provide lintel to support masonry opening.
- 6) Fuel burning appliances shall be provided with make up air (outside air). 2407.7
- 7) Water heaters located in a garage must be protected from automobile impact. 1307.3
- 8) Gas appliances located in garage must be elevated a minimum 18" above the floor. 1307.3
- 9) Appliance installation shall conform to the listing and label of their manufacturer's installation instructions. Instructions shall remain attached to the appliance. 1307
- 10) B-vent clearance minimum 1" to combustibles. 1306
- 11) Install pan drain and condensate lines under attic appliance. Remove any loose fill insulation from pan drain
- 12) Attics and crawl spaces containing appliances shall be provided with a clear and unobstructed passageway not more than 20' from the access opening to the appliance. 1305
- 13) Duct work properly supported and insulated. Duct tape is not allowed for this purpose. 1601.3

#### **Electrical Final**

- 1) Smoke detectors shall be operable per the *IRC* and *NFPA 72 Fire alarm Standards*. Detectors shall be hardwired interconnected with battery backup located as per code. A monitored security system with integral fire alarm must meet the same standards as a "110" system; battery backup, loudly audible throughout the house and capable of operation without being monitored. Permit holder is responsible for providing a means to activate the detectors, without causing a false alarm, at time of final inspection. 317
- 2) Warning: Permanent power is contingent upon final inspection approval.
- 3) Ground fault interrupt receptacles (GFCI's) are required in all damp locations and the following: bathrooms, garages, kitchen countertops, outdoor, crawl space, unfinished basements and sinks. 3802
- 4) All switches and outlets must have covers on. Lighting fixtures must have operable bulbs in them. 3903
- 5) Circuit board must be legibly marked. Unused openings effectively closed. Properly identify conductors. 3304
- 6) No contamination of electrical equipment (paint over-spray, insect and bird nests etc.)
- 7) Circuit breakers sized to match the wire. 3605
- 8) Hydro-massage tub motors and GFCI's must be accessible (<u>readily</u> accessible at final inspection). 4109
- 9) Disconnects for water heater at unit unless electrical panel is visible from the water heater. Disconnects for HVAC at the unit but not behind it (placed to one side). 4001
- 10) In use covers required on damp or wet location outlets. NEC 406.8
- 11) A receptacle is required on the front and back of each dwelling unit, within 6'6a' of grade. 3801.7
- 12) A switch controlled lighting outlet is required in every habitable room, bath, hallway, stairway, attached garage, storage and appliance attics, crawlspaces, basements, and each exterior grade level exit. 3803
- 13) Bathtub and shower spaces cannot have switches, receptacles, pendant light fixtures, or ceiling fans. 3902,3903
- 14) Fixtures in clothes closets must be 24" from wall or 12" from the shelf. See code for exceptions. 3903.11
- 15) Arc fault breakers will be required on all bedroom outlet circuits. 3802.1

#### **Ethics and Administration**

The purpose of this checklist is to provide some guidelines and act as a reminder of items commonly missed in the past or major changes in the code. It is impossible to develop a complete list of all items without duplicating the codes. It is the responsibility of the permit holder, builder and contractors to insure that the homes they build are in full compliance with the code and all Laws and Ordinances. Banks County Building Department will charge a reinspection fee on any items from this checklist not addressed on the inspection. Other violations noticed and not corrected upon re-inspection will be charged a fee only at that time. This is to ensure the efficient allocation of resources involved with the inspection process. This will allow for shorter delays between inspections and hopefully fewer violations being found. Reinspection fees must be paid in the office prior to rescheduling an inspection. Inspectors cannot take money, gifts or favors. Please do not offer to "buy you a lunch" or "let me by this time". We do appreciate your cooperation and would like to hear from you.