

ANSWER TO THE QUESTION

Why do we need Building Codes and Inspections?

Think about it! We have all heard the horror stories...

New guy in the city built my deck—now it is falling down and he has gone out of business

Bank won't loan me money on my house due to it not being structurally sound

Tornado came through the city last month and a lot of new contractors are in the city limits ripping people off

Business Navigator staff and our codes/rules are here to:

- Protect the citizens of the city from sub-standard practices and materials.
- Protect lives and property from fire, flood, hurricanes, tornados, and earthquakes.
- Lower insurance rates on new construction.
- Make the places where you live, work, eat and shop safe.



CONSTRUCTION HANDBOOK

This booklet is provided free of charge to the citizens and contractors of the City to better understand how the building/inspection process works.

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BUILDING PERMITS
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INSPECTIONS
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CITY OF HARTSVILLE ADOPTED CODES

2015 INTERNATIONAL RESIDENTIAL CODE (IRC)

2015 INTERNATIONAL BUILDING CODE (IBC)

2015 INTERNATIONAL FIRE CODE (IFC)

2015 INTERNATIONAL MECHANICAL CODE (IMC)

2015 INTERNATIONAL FUEL/GAS CODE (IFGC)

2012 INTERNATIONAL PLUMBING CODE (IPC)

2014 NATIONAL ELECTRICAL CODE (NEC)

2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

2015 INTERNATIONAL PROPERTY MAINTENANCE CODE (IPMC)

In June of 1997, Governor Beasley signed into law the SC Building Code Act, which made it mandatory for all towns, cities, and counties to adopt the Standard Building Code and related codes by June 2000.

MOBILE/MANUFACTURED HOMES

Manufactured homes must meet the following requirements before Electric and Water is released.

1. Must meet local Wind Zone requirements.
2. Must meet all zoning and setback requirements.
3. Have an approved moving permit issued.
4. Tiedown requirements per manufactured home requirements for the local windzone. (Handbook must be at location when inspector is present.)
5. Water cutoffs accessible.
6. Sewer connected and cleanout installed.
7. Dryer vented to exterior.
8. Disconnect for AC unit installed.
9. Electrical pole installed
 - A. 4 wire system to house
 - B. In conduit 18” below grade
 - C. Mail breaker at pole
10. Minimum 3’x3’ landing and steps at each exterior door.

MODULAR HOMES

Homes that are classified as MODULAR must meet the following criteria:

1. Be stamped by a SC engineer and approved by the SC LLR.
2. Foundations must be designed by a SC engineer.
3. Foundations must be installed up to local codes.
4. Plans must be submitted to the Building Department just as in stick built houses.
5. All foundations, steps, porches, and set backs must meet all zoning and building department requirements.
6. No axle or tongues may be left on or under the unit.
7. Electrical service installed on house not on a pole.
8. Water cutoff installed and line to street inspected.
9. Sewer connected and cleanout installed.
10. Dryer vented to exterior.
11. Disconnect for AC unit installed.
12. Minimum 3' x 3' landing and steps at each exterior door.

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Note: If power has been off for more than 6 months, the electrical service of the building shall be brought up to code to meet today's standards.

BUSINESS LICENSES

The City requires that all companies doing business within the city limits either obtain or purchase a business license.

Who has to obtain a business license?

- All contractors doing work in the City.
- All plumbing, electrical, heat/air, gas contractors
(Separate permit required for each of these trades)
- All sub-contractors (*i.e. grading, sheetrock, roofers, painters, flooring, etc.*)
- All suppliers (*i.e. dumpster, port-o-let, etc.*)

Are there any other licenses required to get a permit?

- The City requires all contractors to carry the
- appropriate state licenses.

What happens if the contractor or sub-contractor is not licensed or does not obtain a permit?

- Any official of the City may put a STOP WORK ORDER on the job — *Causing delays until the matter can be resolved.*

Note: Homeowners working on their own personal property are not required to have a business license, but permits are required. The homeowner must take a disclosure agreement from the City to the Courthouse in Darlington to be filed with their deed. The property may not be sold or rented for two (2) years, and the homeowner is held liable for the work for thirteen (13) years. After taking the paperwork to Darlington, the permit may be picked up by homeowners providing no work is contracted or labor paid for.

CERTIFICATE OF OCCUPANCY

A Certificate of Occupancy will only be issued after all inspections have been completed and corrections signed off.

If a person or business occupies the property before a Certificate of Occupancy is issued and displayed (commercial) then a stop work order will be issued, all utilities turned off and legal matters investigated.

Business –Change of Occupancy Classification—If a business has a change in the type of business, there a multiple factors that are considered—please feel free to call us for discussion.

FIRE INSPECTIONS (COMMERCIAL)

Plan Reviews—The local Fire Marshal is asked to review all commercial plans and make any suggestions on the fire safety of the building. Occupancy content of the building will be established at this time.

Rough— The Fire Marshal has the right to enter any building during construction and before walls or ceilings are covered up when requested by the Business Navigator staff.

Final—The Fire Marshal will be called out on all commercial jobs after all inspections have been signed off and before a Certificate of Occupancy is issued.

NOTE: If a business is moving into an existing location and no change of occupancy is required—the local fire marshal has the right to inspect the building.

FINAL INSPECTION

REQUIRED INSPECTIONS

FINAL—When all systems are in and working

We will look for

- Shingles nailing patterns and installation
- 5/8 drywall on garage walls and ceiling
- Brick installation and mortar joint thickness
- Foundation / attic ventilation
- Handrails / guardrails—size and spacing
- Insulation values in attic / crawlspace
- Door from garage to house

Note: *Any inspections missed will result in a Stop Work Order being issued.*

Common Mistakes

- Door from house to garage has a window in it
- Windows not tempered glass
 - 18” or less to floor
 - Within 24” of door swing
 - Within 5’ of tub drain
- Draft stopping not installed where duct/chimney
- Chimneys improper height above roof
- Not sufficient ventilation in attic/foundation

Temporary Power

Temporary power may be requested up to 90 days before the final inspection is done.

Note: If building is occupied before a final inspection the power will be interrupted and stop work order issued.

PERMITS

Who is required to purchase permits?

- Any homeowner or contractor who is building, adding on an addition, or remodeling an existing structure within the city (*i.e. new houses, re-roofing, additions, storage sheds, garages, etc.*)
- Contractors doing electrical, plumbing, gas, or heating/air work are required to get a separate permit.

Note: Permit card must be placed in plain view of the street and be protected from the weather—if permit is not posted—re-inspection fees apply.

When are Building Permits not required?

- In special cases a building permit/inspection may not be required. This is based on codes. It is the responsibility of the contractor or homeowner to inquire before starting any type of work.

What happens if I fail to get a Building Permit?

- A **STOP WORK** order is placed on the property and all work is stopped until the appropriate permit is issued.
(If work does not cease fines will be issued)
- The price of the permit is automatically doubled the first time and tripled every other time during a twelve (12) month period.
- Electrical and water service to the property will not be turned on.

How much do Permits cost?

- The cost of the permits are based on the dollar amount of the project, calculated by Business Navigator staff.

PLAN REVIEW (RESIDENTIAL)

Plan reviews are required on all additions and renovations to houses, as well as new construction.

Note: Any residential structure over three (3) stories or two (2) apartments is considered commercial.

What is a Plan Review?

The building official will review all drawings and specs for the work and determine if it meets the current codes. This will usually save the contractor delays and headaches with the inspector, as most problems are brought to the attention of the contractor before construction begins.

Is there a charge for this service?

This service will be half (1/2) the cost of the permit fee. Please keep in mind that the plan review takes time, so please allow at least 10 work-ing days for the review to be completed.

What should I bring for the plan review?

- Address and tax map number
- Two (2) sets of plans/specs—*(one set will be returned)*
- Plot plan showing locations of lot dimensions and setbacks to property lines.

Note: Failure to bring any of these items will result in delaying the permitting process.

Plan review may be waived based on special circumstances that may not require a review.

Since I have had a Plan Review, can problems still arise on the construction site?

A plan review does not relieve the contractor from abiding by the adopted building codes for the project. It only acts as an overall re-view of the building process.

PLUMBING INSPECTIONS

REQUIRED INSPECTIONS

- Slab—All water and drain lines
- Rough—All water and drain lines installed.
- Final—All fixtures installed.

We will look for:

Slab

- Correct slope on all sewer lines
- 10 foot head pressure on all lines
- Proper cleanouts and locations

Rough

- Water pressure on all lines—100psi
- Pressures on all sewer lines
(1 story slab houses excluded)
- Proper sewer and vent sizing

Final

All fixtures installed

Gas Lines

- Rough—30psi test min 24 hours
- Final—Accessible cutoffs on all appliances

Note: *Any inspections missed will result in a Stop Work Order being issued.*

Common Mistakes

- Sewer line connection covered up before inspection
- No head pressure on sewer lines
- Improper cleanouts on sewer lines
- Not all fixtures installed for final inspection
- Water heater T&P not drained to exterior
- Water heater not installed in pan/drain when in attic
- Gas water heaters in garages not 18” off floor and protected
- Broken gages on water gas test

HEATING /AIR INSPECTIONS

REQUIRED INSPECTIONS

- Rough—When all duct work is in
- Finish—All registers are in and unit is working

We will look for:

Rough

- All equipment installed in attic
- All ductwork properly sized
- All ductwork properly sealed (for leaks)
(Mastic or approved tape)

Final

- All equipment in and running
- Proper insulation on refrigerant lines
- All frills (firedampers if required)
- Proper sealing of all draft stops between floor and attic
- Walkboards to attic units
- Pan and drain lines installed

Note: Any inspections missed will result in a Stop Work Order being issued.

Common Mistakes

- Attic fan coil and pan is on same drain and not drained to exterior
- No drain pan and float switch
- 30" walkboard not installed to service the attic unit
- Dryer vents not to the exterior of the building

Gas Vents

- Not properly sized
- Not terminated to the exterior of the building
Watch location of gas vents to windows/roofs
- Gas ranges **MUST** have vented range hood

PLAN REVIEW (COMMERCIAL)

Plan Reviews are required on all Commercial Projects

(i.e. renovations of any kind whether structure is involved or not, new construction, business classification is changing)

Is there a charge for the plan review?

This service will be half (1/2) the cost of the permit fee.

How long does a plan review take?

The plan review takes time so please allow at least 10 business days (maybe longer for larger projects) for the review to be completed. Larger projects could take several weeks.

What should I bring for the plan review?

- Address and tax map number
- Two (2) sets of plans/specs—*(one will be returned)*
- Plot plan showing locations of lot dimensions and setbacks to property lines
- Any soil, wind or seismic data available
- Plan review fee

Note: Failure to bring any of the items will result in delaying the process and obtaining a permit.

INSPECTIONS

Inspections must take place at various stages during the construction process. These inspections are outlined on p. 6 and at the beginning of each trade.

How do I schedule an inspection?

- Plan your work and call at least 1 business day prior to the inspection taking place. You will need to give the following information when calling:
 - Name (contractor)
 - Address of inspection
 - Permit Number
 - Type of inspection
(i.e. footer, slab, framing, electrical, etc.)
- Date needed

At the end of the day the inspections requested, will be given to the inspector—and he/she will schedule the next days inspections based on availability.

Note: *Priority will be given to those pouring footers/concrete.*

If you call the following morning—the appropriate time will be available as to when the inspector will be there.
(morning or afternoon)

What if I am not there for the inspection?

The inspector will conduct the inspection.

Note: If permit card is not present, **NO INSPECTION** will be done.

If the inspector cannot enter the property, it will be noted on the inspection report and a re-inspection will have to be requested and the fee paid.

ELECTRICAL (FINAL) INSPECTIONS

REQUIRED INSPECTIONS

FINAL—Temporary power is on and all systems are in and operating

We will look for:

- All switches and receptacles/plates installed
- Building ground and connection
- Panel properly labeled
- GFCI protection on all kitchen, garage, exterior, and bath circuits
- Garage door reverses properly
- Smoke detectors in every bedroom and interconnected

Common Mistakes

- Power not on for final inspection
- Not all receptacles and plates installed
- Not all fixtures hung
- Flex exceeding 6' to AC unit
- Ground rod not minimum 8' buried
- Other systems connected to the ground rod (tel/TV)
- Smoke detectors not properly wired
- Garage door does not reverse

Note: *Any inspection missed will result in a Stop Work order being issued.*

ELECTRICAL (SERVICE UPGRADES)

When upgrading a service a permit must be obtained and the entire system up-graded to meet code (this does not necessarily mean re-wiring the entire building).

- Smoke detectors—bedrooms and on every level
- Kitchen circuits
- GFCI—Kitchen/Baths/Garage/Exterior
- Disconnects on all HVAC units
- Lights/Receptacle in attic/basement

ELECTRICAL (ROUGH) INSPECTIONS

REQUIRED INSPECTIONS

- **Slabs** - All pipes are in and covered
- **Framing** - When all wiring is in, staples and sheetrock are ready to be installed

We will look for:

- Slabs—All pipes are buried and covered with minimum two (2) inches dirt
- Panel location
- Small appliance circuits (*Kitchen*)
- Correct size of wires/service
- All grounds tied together with correct connector
- Ceiling fans with boxes
- Wire staples –correct location
- Four (4) wire systems to all appliances with clocks (*stoves, dryers, etc.*)
- Bath fans vented to exterior
- Smoke detectors in every bedroom and level and interconnected

Note: Any inspection missed will result in a Stop Work Order being issued.

Common Mistakes

- Panel under stairs or behind door
- Kitchen circuits supply dishwasher or lights
- Grounds not crimped together
- Other wires in same box as 120 volt wires (*speaker controls*)
- Ceiling fans with no pancake boxes
- Four (4) wire branch circuit to dryer/stove
- Bath fans vented to attic not exterior (*eve or ridge vent OK*)

REQUIRED INSPECTIONS

FOOTER

The following constitutes the normal inspection procedure for a normal new construction or addition.

Building—*When all footers are dug & steel is in*

SLAB/OPEN FLOOR

- **Plumbing**—*All sewer lines have 10' head pressure and ditches are still uncovered*
- **Electrical**—*When all wires/circuits are installed*
- **Building**—*When all plastic and wire is in place / or floor framing complete*

ROUGH INSPECTIONS

- **Plumbing/Gas**—*All lines are installed and have been pressure tested*
- **Electrical**—*When all wires/circuits are installed*
- **Heat/Air**—All duct work/air handler installed
- **Building**—*When all framing, insulation & hurricane tie-downs are complete.*

Note: (*No brick, siding or underpinning installed*)

All rough inspections may be done at same time except insulation.

FINAL

- **Plumbing/Gas**—*Fixtures in/system complete*
 - **Electrical**—*Fixtures, service complete*
- Note:** *Must be on for final inspection*
- **Heat/Air**—*System complete and running*
 - **Building**—*Building complete*

All final inspections may be done at the same time.

POWER/CERTIFICATE OF OCCUPANCY

- **Temporary Power**—*can be requested for ninety (90) working days before final inspection.*
- **Certificate of Occupancy**—*may be picked up at Fire Department after all inspections are completed and all fees have been paid*

RE-INSPECTIONS AND FEES

If an inspection is turned down a re-inspection fee must be paid before the re-inspection can be scheduled. The cost for re-inspections are as follows:

- 1st—\$25.00
- 2nd—\$50.00
- 3rd or more—\$75.00 (each)

FOUNDATIONS/CONCRETE INSPECTIONS

REQUIRED INSPECTIONS

- Lot lines identified and marked
- After footer has been dug and reinforcing steel has been installed on chairs—before concrete is poured
- Before slab is poured—ply and wire installed

We will look for:

- Proper street address and permit
- Identify property lines and setbacks
- Spread footers
 - Check size and depth
 - Bottom of trenches for undisturbed soil
 - Check reinforcing wire/steel for size and placement
- Slabs
 - Compaction of soil
 - Termite protection
 - Vapor barrier
 - Reinforcing wire
- Piers
 - Piers will be inspected during the framing inspection

NOTE: *Any inspections missed will result in a Stop Work Order being issued.*

Common Mistakes

- Footer insufficient min. depth 12” below frost zone
(*ground level*)
- Concrete footers are min. 8” thick, 2500 psi concrete
- Improper overlap of reinforcing rods
(*rule of thumb 2’ overlap*)
- Hurricane tie downs not properly placed
(*Insufficient spacing*)
- Footer not sized as shown on plans

FRAMING INSPECTIONS

REQUIRED INSPECTIONS

- After all framing members are installed
- All hurricane tiedowns are in place and secured
- **NOTE: No exterior siding/brick are installed**
Roofing & Insulation are encouraged to be installed

We will look for:

- Block placement under house
Cap block in place
- Foundation tie downs
Placement, number and fastener
- Correct size and placement of all framing material
Cutting and notching
- Number of nails in framing and plywood sheeting
Cutting of plywood
- Brick - *ties and placement*
- Hurricane tie-downs at rafter tails and on porches
- Window placement (tempered?)
- Window sill height/size in bedrooms

Note: *Any inspections missed will result in a Stop Work Order being issued.*

Common Mistakes

- Brick ties not properly spaced
- Not enough nails in the shingles for the wind zone
- Three nails in the ledger board at each joist
- Rafter cuts improper
- Hurricane straps not properly installed
- Plywood/OSB does not reach the top plate