Common Requirements for Building Inspection

This handout is only provided as a convenient source for basic information and does not address all the codes or any code amendments.

Below are listed the most common occurrences and questions for the building inspector. This list is by no means a complete guide to construction, plumbing and electrical. If you feel at any time uncomfortable with doing any of the work listed, Please hire a professional.

2009 International Building Code (https://codes.iccsafe.org/public/document/details/toc/745)

Illinois Plumbing code (ftp://www.ilga.gov/jcar/admincode/077/07700890sections.html)

Illinois energy conservation Code (http://www.successwithenergycode.com/midwest.php)

Wood Deck Construction (http://www.awc.org/pdf/codes-standards/publications/dca/AWC-DCA62012-DeckGuide-1405.pdf)

Pole Barn Construction (http://www.awc.org/pdf/codes-standards/publications/dca/AWC-DCA5-PostFrameBuildings-1012.pdf)

American Disabilities Act (https://www.ada.gov/2010ADAstandards_index.htm)

It is the responsibility of the person and or agent listed as the owner to obtain the proper inspections. The failure to obtain the proper inspections will result in uncovering the work.

RADON MITIGATION SYSTEM REQUIRED

New Radon Law Became Effective June *1*, 2013

• Per the State of Illinois, effective June 1, 2013, all new construction of single-family homes or dwellings containing 2 or fewer apartments, condominiums, or town houses must have **a passive radon system** (pipe) installed. The installation of this radon resistant construction may be performed by a residential building contractor, one of the subcontractors or a radon contractor during new residential construction. A passive radon mitigation system does not have a power fan.
Only a radon mitigation contractor licensed by the Illinois Emergency Management Agency may install a radon vent fan or upgrade this passive new construction pipe to an active **radon mitigation system.** A permit is required.
• Radon tests from more than 118,000 homes across Illinois found that more than 41 percent had radon levels above the recommended level for taking action. Radon is a colorless, odorless, tasteless radioactive gas that comes from the radioactive decay of naturally occurring uranium.
• Radon is the second leading cause of lung cancer in the U.S. and the leading cause among non-smokers. The limit before a radon mitigation system needs to be installed is 4 pCi/L (picocuries per liter of air) as set by the US Environmental Protection Agency. A picocurie is the most popular method of reporting radon levels and gets its name from Madame Curie. It represents the radioactivity associated with one gram of radium, according to the U.S. Radon Management, Inc., nationwide radon reduction experts.
• If a house has a passive mitigation system installed, but still tests over the limit, the passive (no power fan) system will need to be converted to an active (power fan added) radon mitigation system.
• While a homeowner or general contractor can install a passive mitigation system, only a state licensed radon mitigation contractor can activate an existing passive radon system or install an active mitigation system.
• Residents who have questions about radon should refer to the Illinois Emergency Management Association regarding radon at www.radon.illinois.gov.

Footing:

2009 International Building Code https://codes.iccsafe.org/public/document/details/toc/745

Conventional, 36" deep from bottom of footing to final grade.

8" thick minimum, in all soil types, 2 pieces of rebar floated in concrete bent around corners.

Must call for inspection after footing is dug before pour, at least 12 hour's notice

If spanning an old filled cistern or filled well, other provisions need to be addressed

4" of exposed footing on each side of foundation wall.

If an 8" block wall then total 16" min. If 2 story minimum wide 24" footing

Commercial application require a grounding of the rebar in the footing close to the electrical service location.

Foundation

2009 International Building Code

If a basement, preferably concrete walls 6" thick minimum with steel reinforcement, pinned to the footing.

Must call before pour after formed with steel in place.

If block, minimum 4 block foundation with ½" bolts every 6' and 2 on stub walls

Structure

2009 International Building Code

Treated bottom sill plate with foam sill fill or other approved product

Termite protection

2 x 12 headers above windows and doors on load bearing 2 x 4 walls, 16" OC

2 x 8 headers minimum above windows and doors on load bearing 2 x 6 walls 16" OC

Manufactured Truss type construction preferred. If ridge beam then substantial cross bracing required.

Wind protection system installed, either structural screws through both top plates into the truss or Hurricane straps with the proper nails in all pre punched holes.

Electrical -National Electric Code, current Version

If the owner is wiring the building, then a meeting with the inspector prior to preforming the work is required. All work must meet NEC code requirements.

Bedrooms wired independently with Arc Fault Protection

Ground fault protection for Garages, Kitchens, laundry, Bathrooms, outdoor receptacles within 4' of water source.

Residential: 1 phase, 4 wire electric supply after first disconnect.

Grounding block installed in Distribution Panel and all bare ground wires terminated to said block.

No more than 2 pieces of Romex in a ½" box connector

NFPA requires a 120v hardwired Smoke Detector with battery backup in the ceiling of each Bedroom and within 15' of the entrance to the bedroom. A carbon monoxide detector is required on each level. Could be a combination smoke and CO detector. It is recommended that all detectors in the apartment or home communicate with each other, either by wired communication or RF communication.

There are places you are forbidden to install Romex in Commercial buildings. Places exposed to physical damage, structures with a fire rating, places of assemblies such as occupancies over 50 people, structures below 3 floors are also allowed to be wired in Romex as long as that building does not meet one of the above limitations.

Churches, auditoriums, places with stages, theatres, schools, and other buildings where assembly may be intended, are forbidden to be wired in Romex.

To summarize:

Romex is approved for residential.

Commercial business, in the walls protected from fire for 15 minutes, Romex approved, all exposed wiring must be in conduit.

Assembly (50 people or more) are required to be in metal covered wiring.

Plumbing

If the owner is plumbing the building, then a meeting with the inspector prior to preforming the work is required. All work must meet Illinois plumbing code requirements. The owner must do the work themselves and must live in the home for 6 months after doing said work. Owner is not allowed to do plumbing on a rental apartment, home or business, a licensed plumber must be contracted.

The purpose for which a building is currently used. In the case of a single family residence, occupancy shall mean taking possession of and living in the premises as one's sole and exclusive residence for a period of not less than six months after the completion of construction.

Section 890.420 Pipe Cleanouts

Section 890.730 Floor Drains/Trench Drains

Section 890.1420 Stack Vents, Vent Stacks, Main Vents

Section 890.1370 Floor Drains

Section 890.520 Gasoline, Oil and Flammable Liquids

Section 890.TABLE G Building Drains