



Fire Repair/Restoration Typical Construction Notes

Codes (as applicable)

- 2012 International Residential Code & Northbrook Amendments
- 2011 National Electrical Code & Northbrook Amendments
- 2014 Illinois State Plumbing Code & Northbrook Amendments to 2006 International Plumbing Code
- 2012 International Mechanical Code Amended
- 2012 International Fuel Gas Code
- 2012 International Fire Code (applicable for new residences & additions/alterations that have an existing fire protection system)-separate permit submittal/review required
- 2015 International Energy Conservation Code

In an effort call your attention to some frequently overlooked code/construction requirements here in Northbrook, below are some code comments that may apply to your project and may not have been included on the attached permit drawings.

Number	Code Section	Comment
G 1	<i>Northbrook Municipal Code, Sec. 19-88 - Arabic numerals, at least three (3) inches in height, shall be placed on the building in a conspicuous place and shall be of a color which can be clearly seen against the background from the street.</i>	The permit address is required to be displayed as indicated.
G2	Applicable only for additions and alterations:	If there is an existing fire protection system (sprinklers) in the residence, a separate Fire Protection Permit Application submittal is required to be submitted for review and approval.
A 1	<i>2012 IRC R 302.5.1- Garage Opening Protection - Openings from a private garage directly into a room used for sleeping shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8" in thickness, solid or honeycomb core steel doors not less than 1 3/8", or 20 minute fire rated doors, equipped with a self-closing device.</i>	If the door into the garage is being replaced, it must comply with the code requirements.
A2	<i>2012 IRC R 302.5 amended - Garage Separation - All walls and ceilings of a garage adjacent to the residence to which it is attached shall be completely separated from the residence and its attic areas by means of 5/8" type x drywall applied to the garage side. All other walls shall be protected by 1/2 Inch drywall applied to the garage side.</i>	If the garage drywall is being replaced, it must comply with code requirements.
A3	<i>2012 IRC Section R 314- Smoke Alarm Locations - Smoke alarms shall be installed in the following locations: in each sleeping room; Outside each separate sleeping area in the immediate vicinity of the bedrooms; On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level; In general location of all heating equipment. 2012 IRC R314.3.1 Alterations, repairs and additions-When alteration, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard</i>	Provide smoke detectors in all required locations.

wired. **EXCEPTIONS:** *Inter connection and hard-wiring of smoke alarms in existing areas shall not be required where the alteration or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes; Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding. Or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.*

Code section: R314.4 - Power source-*In new construction, the required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be permitted to be battery operated when installed in a building without commercial power or in a building that undergoes alterations, repairs or additions regulated by Section R314.3.1.*

A4	<i>2012 IRC R 315 amended - Carbon Monoxide Detectors - Carbon monoxide detectors shall be installed – within 15’ of bedrooms. Power source same as smoke detectors.</i>	Provide carbon monoxide detectors in all required locations.
A5	<i>2012 IRC R 317.1 - Protection Against Decay - Location required - Protection from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative treated in accordance within AWWA UI for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWWA UI [locations: sill and sleepers in contact with concrete or masonry slab, wood structural floor when closer than 18” to the exposed ground or in crawl spaces or unexcavated areas within t the periphery of the building foundation, wood framing members that rest on concrete foundations -see code for all locations]</i>	Any new framed walls must have treated lumber (including the plate) where in contact with concrete.
A6	<i>2012 IRC Table R 503.2.1.1(2)</i>	Any replaced subfloor must meet code requirements.
A7	<i>2012 IRC Section R 803 - Roof Sheathing -</i>	Any replaced roof sheathing must meet code requirements.
A8	<i>2012 IRC R 703.2 - Felt Over Wall Sheathing - One layer of No. 15 asphalt felt or other approved weather resistive barrier shall be applied over sheathing of all exterior walls. EXCEPTION: <i>In detached accessory buildings, under exterior wall finish materials as permitted in Table R703.4, under paperbacked stucco lath when the paper backing is an approved weather-resistive sheathing paper.</i></i>	Under any new siding or masonry veneer, provide a code approved weather resistive membrane.
A9	<i>2012 IRC R 703.8 - Flashing - Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish Approved corrosion-resistant flashings shall be installed at all required locations including, but not limited to the following, exterior window and door openings, at the intersections of chimneys or other masonry construction with frame or stucco walls, under and the ends of masonry, wood or metal copings and sills, continuously above all projecting wood trim, where exterior porches, decks or stairs attach to a wall of floor assembly of wood-frame construction, at wall and roof intersections.</i>	At locations of new siding/windows/roofing/etc., provide flashing as required.
A10	<i>2012 IRC R 806.1 - Roof Ventilation - Ventilation required - Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by</i>	If the roof structure is being rebuilt, or insulation replaced, provide attic venting per code.

ventilating openings protected against the entrance of rain or snow.

Code Section: 2012 IRC R 806.2-806.3 - **Minimum vent area-**
The total net free ventilation area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted, provided that at least 40% and not more than 50% of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located at least 3' below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted.

Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1" space shall be provided between the insulation and the roof sheathing and at the location of the vent.

Code Section: 2012 IRC R 806.5 – **Unvented attic and unvented enclosed rafter assemblies.** –Unvented conditioned attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) are permitted under the following conditions...
[see code for conditions]

A11	2012 IRC R 905.2.7.1 - Ice Barrier – An ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches inside the exterior wall line of the building, except for detached accessory structures that contain no conditioned floor area.	If the roof structure is being rebuilt, provide Ice Shield Underlayment per code. (Municipal Amendment R301.2(1) affirmative for Ice Shield Underlayment)
I1	2015 IECC Energy Efficiency	Any opened walls or ceilings are required to be filled with insulation up to the prescriptive requirement R values indicated in the code. (R15 in 2x4 walls; R20 in 2x6 walls; R49 in ceilings as feasible.)

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