

City of Crystal Lake

Community Development Department

100 W. Woodstock Street
Crystal Lake, IL 60014
www.crystallake.org



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RESIDENTIAL ADDITIONS AND REMODELING

Please provide the following information when applying for a permit:

- Apply online using [City of Crystal Lake ez APP](#)
OR submit a [Building Permit Application](#)
Applications are available at City Hall or online at the City's website, www.crystallake.org.
- [Contractors List](#)
- Four copies of current Plat of Survey, showing the location of the proposed addition. All recorded easements, as well as existing improvements located on the property, shall be shown on the plat.
- Four sets of building plans. Plan set should include the following information: foundation plan, floor plans (include electrical, mechanical, plumbing, etc.), wall sections, exterior elevations, light/vent schedules, top of foundation elevation, basement floor slab elevation, and additional information as required for code compliance review. If prefabricated trusses are proposed, a truss certificate, signed and sealed by a State of Illinois Licensed Structural Engineer shall be submitted. **Construction documents should be drawn to scale.**
- Four copies of the site plan. This can be drawn on a Plat of Survey. Plans should include: existing and proposed building locations, setbacks, easements, existing and proposed grades, driveway, sidewalks, utility locations, soil erosion/sedimentation control methods, and all site improvements.
Note: City engineering details are available at City Hall and on the City's website, www.crystallake.org.
- Copy of plumber's license and State of Illinois Plumbing Registration (if applicable).
- An original copy of plumber's letter of intent on company letterhead with corporate seal or notarized (if applicable).
- Copy of roofer's state license (if applicable).
- Two copies of Res Check Energy Certificate-if completing the "Total UA Alternative" compliance method of the Energy Code.

Inspections

Please schedule all inspections by 4:00 P.M. the day before the inspection.

The following inspections are needed:

- Pre-pour footing
- Pre-pour foundation
- Backfill
- Pre-pour slab (if applicable)
- Electric service
- Rough Plumbing, Electrical, Framing, and HVAC
- Insulation
- Final Plumbing, Electrical, Framing, and HVAC

- Other

Please provide the following when requesting an inspection:

- Inspection type
- Address
- Date and time frame (am or pm)
- Permit number
- Name and telephone number of homeowner/contractor requesting an inspection

General Requirements

Foundations:

- All exterior walls must be supported on continuous concrete walls, minimum 42 inches below grade.
- A soils report may be required upon inspection of the footing.
- Dampproofing and drain tile required for all basement and crawlspace foundations.

Crawlspaces:

- Under-floor access to crawlspace shall be a minimum of 18 inches x 24 inches.
- Through the wall access to a crawl space shall be a minimum of 16 inches x 24 inches.
- Crawlspaces shall be provided ventilation unless open to the basement.
- A 6 mil. polyethylene or approved vapor retarder is required for all crawlspace floors.
- Crawlspaces are required to be insulated.
- A switched light source is required at the point of entry.

Floors:

- All floors must be designed to a minimum of 40 pounds per square foot (psf) live load.
- Sleeping rooms shall be designed to a minimum 30 psf live load.
- The ends of joists must not have less than 1 ½ inch bearing on wood or steel.
- All wood joists within 18 inches of exposed ground shall be of pressure preservative type.
- All structural loads must be designed to transfer to the foundation.

Walls:

- Braced wall panels are required at corners and every 25 feet on-center.
- Fire stopping is required in all concealed spaces including cove ceilings, soffits, drop ceilings and chases.

Roof:

- All rafter-to-plate connections shall have roof tie downs installed at every connection.
- Wood trusses require a registered design professional seal.
- Ice and water barrier shall be a minimum of 72 inches wide or extend from the lowest edges of all roof surfaces to a point not less than 24 inches inside the exterior wall line of the building whichever is greater.
- All roofs with a pitch between 2:12 and 4:12 shall have double underlayment.

Attics

- All attics over 30 inches in height shall have an access opening of at least 22 inches x 30 inches
- A switched light source is required at the point of entry.

Light/Ventilation:

- All habitable rooms require window area equaling 8 percent of the total floor area of the room, and window area openable to the outdoors equaling 4 percent of the room. Bathrooms, closets, halls, and storage rooms are not habitable.
- All exterior window glazing shall have a maximum U-factor of 0.32.

Emergency Escape:

- All first-floor bedrooms must have at least one window with a minimum net clear opening of 5.0 Square feet for egress. Second-floor bedrooms are required to have a minimum of 5.7 square feet net clear opening. The minimum width of the net clear opening of these egress windows is 20 inches and the height is 24 inches.

Exits:

- Two exits are required off the main floor of each dwelling unit (an exit through the garage does not comply).

Stairs:

- Risers – 7 ¾ inches maximum
- Treads – 10 inches minimum
- Open risers in stairs shall not permit the passage of a 4-inch sphere.

Handrails/Guardrails:

- Provide a graspable handrail between 34 and 38 inches in height on all stairs with more than 4 risers. Handrails must return to walls or newel posts.
- Guardrails must be at least 36 inches in height with intermediate balusters spaced a maximum of 4 inches on-center.

Landings:

- Landings are required to be 36 inches in the direction of travel and at least as wide as the stairway or door served. Landings are required on the top and bottom of each stairway and must be illuminated.

Insulation:

2015 International Energy Conservation Code

<i>U-factor</i>	<i>Skylight U-factor</i>	<i>Ceiling (R-value)</i>	<i>Wood framed walls (R-Value)</i>	<i>Mass Walls (R-Value)</i>	<i>Floors (R-Value)</i>	<i>Basement walls (R-Value)</i>	<i>Slabs (R-Value)</i>	<i>Crawl space (R-Value)</i>
.32 or less	.55 or less	49	20 or 13+5*	13/17	30*1	15/19	10, 2ft.	15/19

* 13+5 means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 40 percent or less of the exterior, insulated sheathing is not required where structural sheathing is used. If structural sheathing covers more than 40 percent of the exterior, continuous insulation R-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used- to maintain a consistent total sheathing thickness.

*1 Or insulation sufficient to fill the entire cavity, R-19 minimum.

/ # - The first number is the R-value for cavity insulation. The second number indicates continuous insulation.

- All new additions shall meet the current International Energy Conservation Code.
- All thermostats shall be programmable on a daily schedule.
- All supply duct work outside of the thermal envelope shall be insulated.

Electrical Requirements

- When interior alterations, repairs, or additions occur, the smoke alarm system must be updated to the current code: A minimum of one smoke detector is required to be located in each new bedroom, outside each bedroom, and one on each level of a home. All smoke detectors must be hardwired with battery backup.
- Carbon monoxide detectors are required within 15 feet of bedrooms.
- Arc fault current protection is required on all 15 and 20 amp branch circuits supplying receptacle outlets in bedrooms.
- All rooms shall have a switched light source or switched outlets.
- All junction boxes for ceiling fixtures shall be fan-rated when installed in the center of rooms.
- All garages are required to have receptacles for door openers.
- The use of non-metallic sheathed wiring is prohibited in Crystal Lake.
- Receptacles in finished areas shall be installed per the 6/12 rule (maximum 6 feet from each side of door openings and 12 lineal feet to next receptacle).
- A GFCI receptacle must be installed adjacent to each bathroom lavatory within 36 inches.
- Receptacles within six feet of a wet bar are required to be GFI protected.
- Notching and boring in floor joists and bearing walls shall comply with the 2006 IRC.
- Carbon monoxide detectors are required in every dwelling within 15 feet of every bedroom.

Plumbing Requirements

- All plumbing work shall comply with the current Illinois Plumbing Code and City of Crystal Lake Amendments.
- All plumbing not completed by the homeowner must be done by a licensed plumber who is registered in the State of Illinois. If the plumbing will be completed by the homeowner, a signed letter of intent must be submitted by the homeowner stating they will be completing the plumbing and will reside in the residence for a period of six months after the approved final inspection of the project. This letter must be an original and notarized.
- If any plumbing will be completed in conjunction with the remodeling, verify all vents will be properly connected or terminate through the roof.
- All shower compartments and shower-bath combinations must have an automatic safety water-mixing device with a maximum setting of 115 degrees Fahrenheit.

Please note that the information provided in this handout is general in nature. If you have specific questions or need additional information, please contact an Engineering and Building Departments representative at (815) 356-3605 or building@crystallake.org.