

# City of Crystal Lake

## Community Development Department

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100 W. Woodstock Street  
Crystal Lake, IL 60014  
[www.crystallake.org](http://www.crystallake.org)



Phone (815) 356-3605  
Fax (815) 404-2107  
[building@crystallake.org](mailto:building@crystallake.org)

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## SOLAR PANEL SYSTEMS

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](http://www.crystallake.org).
- **Four sets of plans** and 1 set of supporting documents. All plans to be sealed by an appropriate design professional.
- **Site Plan** / Plat of survey (if not on an existing structure) indicating setbacks
- **Array layout** / including all existing equipment, roof openings, and fire setbacks.
- **Structural** load calculations. / Photovoltaic anchorage system to the structure
- **Building elevations** showing proposed electrical equipment and the total building height with the proposed equipment on the roof.
- **One-line electrical diagram** including but not limited to: array configuration, array wiring sets, combiner/junction box (UL 1741), conduit/wiring from array to inverter, DC grounding system, disconnecting means, inverter, conduit/wiring from inverter to utility point of connection, AC grounding and system grounding, point of connection attachment method.
- Manufacturer's cut sheets for all components
- Installation instructions.
- Plans/details/notes on electrical connections to existing service.
- Approval from Downtown Business Association, Homeowner Association or other regulatory authority as applicable

### Inspections:

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

The following inspections are needed for a photovoltaic system:

- Foundation (if applicable)
- Underground electrical (if applicable)
- Rough electrical (before placing modules, mounting brackets in place, box covers removed, AC/DC disconnects readily accessible and within sight).
- Electrical service panel (cover removed)
- Final (after all work is complete, provide roof access, fire clearances, grade restored).

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:**

- Use of non-metallic sheathed wiring is prohibited.
- Solar installations must comply with structural requirements of the 2018 International Residential Code (or Chapter 16 of the 2018 International Building Code)
- Solar installations must comply with Chapter 14 of the 2018 International Mechanical Code.
- Solar installations must comply with electrical requirements (including grounding and bonding) of Article 690 of the 2014 National Electric Code.
- Solar installations must comply with potable water protection requirements of the 2014 Illinois Plumbing Code.
- Panel location and placement should follow the requirements of section 605.11 of the 2018 International Fire Code (pending Fire review).
- The system shall be installed per the manufacturer's installation instructions.
- The system shall be certified by the Solar Rating and Certification Corporation (SRCC) or another nationally recognized certification entity.
- All equipment shall be listed for use. PV modules must be listed to UL 1703. PV rack mounting system must be UL 2703 Listed. Inverter and Rapid Shutdown equipment must be UL 1741 Listed.

**Crystal Lake Unified Development Ordinance (UDO):**

- Solar energy systems for all uses not to exceed 15 feet above the maximum height allowed for the principal building in that district. (UDO, section 3-300(C)(1)(d))

Please note that the information provided in this handout is general in nature. If you have specific questions or need additional information, please contact a Community Development Department representative at (815) 356-3605 or [building@crystallake.org](mailto:building@crystallake.org).