



# Checklist

## Residential Solar Permit

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This checklist applies to rooftop solar panel installations at one- and two-unit residences. Commercial projects and solar projects that are not rooftop PV (e.g. ground-mounted, solar thermal, etc.) require a separate review process and cannot be expedited.

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### **Notes:**

- All contractors are required to be registered with Building & Development Services.
  - An Illinois-licensed design professional must prepare, sign, and seal the construction drawings.
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### **Checklist:**

- Building Permit Application (submitted online using the [Citizen Portal](#))
  - Construction drawings must include:
    - Construction design for the PV system and any supporting frame members.
      - Include PV array coverage percentage
      - Include roof slope
      - Indicate dimensioned roof access pathways
    - Attachment and flashing details.
    - One-line diagram showing all components of the system, including the PV array, inverter, power supply, disconnect, overcurrent protection, electrical panel, meter and ground.
    - Electrical calculations showing that all wire sizing has been determined with proper ampacity, conduit fill and ambient derating factors.
    - Any applicable site conditions.
  - Report with structural calculations from an Illinois State Licensed Architect or Structural Engineer verifying that the roof structure can support all imposed loads. If the roof is found to be structurally inadequate, reinforcement drawings by an architect or an engineer, and framing details, are required.
  - Specification sheets and installation manuals for all components, such as panels, inverters, supporting frames, and mounting hardware
  - Compliance with [Historic Preservation guidelines](#) (if applicable)
  - Copy of signed contract with construction cost
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### **Code Requirements:**

- All projects must comply with the [2020 National Electrical Code \(NEC\)](#), as [amended by the City of Evanston](#).
- Working clearances at the electrical panel and meter fitting must be maintained, in compliance with the 2020 NEC, Article 110.26.

- The electrical service shall have a compliant Grounding Electrode System, per 2020 NEC, Article 250.50.
  - Supply-side connections within the meter enclosure may only be permitted under limited circumstances, please contact ComEd prior to installation.
  - The electrical service drop, service riser, weather head, drip loop, point of attachment and meter must meet the minimum required horizontal and vertical clearances from structures, roofs, operable windows, pools, walkways, driveways, and other elements required by 2020 NEC, Article 230 and the [ComEd Red Book](#).
  - Service entrance cable is not permitted for the riser and service entrance to the panel ([Evanston amendment](#)).
  - A-base and ring-style meter fittings must be upgraded to ringless main disconnect-type meter fittings.
  - Electrical meters, PV inverters, and disconnect switches should not be located over stairs or in areas subject to physical damage.
  - 18-inch setbacks are required on both sides of the roof ridge where the PV arrays occupy 33% or less of the plan view roof area, per 2021 IRC, Section R324.6.2.
  - 36-inch setbacks are required on both sides of the roof ridge where the PV arrays occupy more than 33% of the plan view roof area, per 2021 IRC, Section R324.6.2.
  - All fire access pathways shall comply with the 2021 IRC.
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#### **Approvals Required:**

- Architectural Review
  - Zoning Review
  - Historic Preservation (if applicable)
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#### **Inspections:**

- Inspections may be scheduled by calling (847) 448-4311 ( Option 5).
  - Provide address, permit number and contact information
- Required Inspections
  - Rough Structural (if applicable) – required when reinforcement of the roof structure is necessary
  - Electrical Final