



## Residential Inspection Checklist – Electrical

The intended use of this checklist is for preparation of an inspection. This is only a general list and is not intended to address all circumstances. Please refer to the 2017 National Electrical Code, 2018 International Residential Code and the City adopted amendments to the codes.

Please verify the following before calling for the framing inspection:

PERMITS AND PLANS
<input type="checkbox"/> Job address shall posted on in a visible location. <input type="checkbox"/> Permit and approved plans are on site and accessible to the inspector. <input type="checkbox"/> Prior to scheduling the inspection, the contractor or person doing the work has reviewed the approved plans and can assure that the construction being inspected is consistent and complete.
ELECTRICAL ROUGH
<input type="checkbox"/> Electrical conduit install below building slab shall not be in contact with concrete. <input type="checkbox"/> Concrete encased electrode shall be in place and inspected on footing and foundation stage. <input type="checkbox"/> All vertical and horizontal framing members that have been notched or bored meet R602.6. <input type="checkbox"/> All penetrations at top plates and exteriors walls sealed with approved materials. <input type="checkbox"/> Two ¾" spare conduits from the panel board terminate in attic. <input type="checkbox"/> All electrical boxes shall be rigidly secured to the building structure. <input type="checkbox"/> Wiring where run parallel with the framing member or furring strip, the wiring shall be not less than 1 ¼" inches from the edge of a furring strip or a framing member such as a joist, rafter or stud or shall be physically protected. <input type="checkbox"/> Bored holes in framing members for wiring shall be located not less than 1 ¼" inches from the edge of the framing member or shall be protected with a minimum 0.0625 inch steel plate or sleeve, a listed steel plate or other physical protection. <input type="checkbox"/> Wiring supported and secured by approved methods at intervals not exceeding 4 ½ feet and within 12" inches of every cable entry into enclosures such as outlet boxes, junction boxes, cabinets, or fittings. <input type="checkbox"/> The outer jacket of NM cable shall be secured to the box and extend into the box a minimum of ¼" inch. <input type="checkbox"/> The minimum length of conductors, including grounding conductors, at all boxes shall be 6" inches and shall be long enough to extend at least 3" inches outside the box. <input type="checkbox"/> Box fill, the volume of electrical boxes shall be sufficient for the number of conductors, devices, and cables clamps contained within the box. Nonmetallic boxes are marked with their cubic inch capacity. <input type="checkbox"/> All ground wires and other wires in box must be spliced and pigtailed for rough in inspection. <input type="checkbox"/> Type NM cable shall not be installed in spaces specifically fabricated for environmental air. Section (300.22) <input type="checkbox"/> Junction boxes shall be installed so that the wiring contained in them can be rendered accessible without removing any part of the building. <input type="checkbox"/> Boxes used as the sole support for a ceiling suspended paddle fan shall be listed, marked, and not used as sole support for fans weighing more than 70 lbs. <input type="checkbox"/> Flat cables shall not be stapled on edge. <input type="checkbox"/> For types NM and SE cable, bends shall be so made, and other handling shall be such that the cable will not be damaged and the radius of the curve of the inner edge of any bend shall be not less than five times the diameter of the cable. <input type="checkbox"/> Cables in attics or roof spaces provided with access shall be installed as specified in Sections (E3802.2.1) and (E38.2.2.2) IRC and (320.3 & 334.23) NEC. <input type="checkbox"/> Where subject to physical damage cables shall be protected as per Section (E3802.3.2) IRC.

## ELECTRICAL ROUGH (CONTINUED)

- Direct buried cable or raceways shall be installed in accordance with the minimum cover requirements of Table (E38.3.1) IRC and Table (300.5) NEC.
- Wiring and boxes installed at locations where smoke detectors and carbon monoxide detectors are required.
- Bonding of metallic and CSST gas piping.
- Two or more 20 ampere small appliance branch circuits required in kitchen, pantry, breakfast room, dining rooms or similar areas shall serve all wall and floor receptacles outlets, all countertop outlets and receptacle outlets for refrigeration equipment. Small appliance branch circuits shall have no other outlets.
- One 20 ampere branch circuit shall be provided to supply the laundry receptacle outlet(s). Such circuits shall have no other outlets.
- One 20 ampere branch circuit shall be provided to supply the bathrooms(s) receptacle outlet(s). Such circuits shall have no other outlets. When the 20 ampere circuit supplies a single bathroom outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with 210.23(A)(1) and (A)(2).
- One 120 volt 20 ampere branch circuit shall be installed to supply receptacle outlets in attached garages and in detached garages with electric power. This circuit shall have no other outlets. This circuit shall be permitted to supply readily accessible outdoor receptacle outlets.
- At least one receptacle, accessible at grade level and no more than 6.5 feet above grade, shall be installed at the front and back of a dwelling unit.
- At least one receptacle outlet shall be installed in areas designated for the installation of laundry equipment.
- In each attached garage and in each detached garage with electric power, at least one receptacle outlet shall be installed in each vehicle bay and not more than 5.5 feet above the floor.
- At least one receptacle outlet shall be installed in accessory buildings with electric power.
- At least one receptacle outlet shall be installed in each separate unfinished portion of a basement.
- At least one receptacle outlet shall be installed in hallways of 10' feet or more.
- A 125 volt, single phase, 15 or 20 ampere rated receptacle outlet shall be installed at an accessible location for the servicing of heating, air conditioning and refrigeration equipment. The receptacle shall be located on the same level and within 25' feet of the heating, air conditioning and refrigeration equipment. The receptacle outlet shall not be connected to the load side of the equipment disconnecting means.
- At least one lighting outlet containing a switch or controlled by a wall switch shall be installed for attics used as storage or containing equipment requiring servicing. The lighting outlet shall be provided at or near the equipment requiring servicing.
- At least one wall switch controlled lighting outlet shall be installed in hallways, stairways, attached garages and detached garages with electric power.
- For dwelling units, attached garages, and detached garages with electric power, at least one wall switch controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit.
- Where one or more lighting outlet(s) are installed for interior stairways, there shall be a wall switch at each floor level, and landing level that includes an entryway, to control the lighting outlet(s) where the stairway between floor levels has six risers or more.
- A hydro massage tub (with a recirculating piping system, designed to discharge water upon each use) shall be supplied by an individual branch circuit and shall have ground fault circuit interrupter protection.
- Hydro massage bathtub equipment shall be accessible without damaging the building structure.
- Sharing of neutrals not allowed.
- Receptacle outlets in habitable rooms shall be installed so that no point measured horizontally along the floor line in any wall space is more than 6 feet from a receptacle outlet. A receptacle shall be installed in each wall space 2 feet or more.
- At kitchen countertops, receptacle outlets shall be installed so that no point along the wall line is more than 24 inches measured horizontally from a receptacle outlet in that space. Counter top separated by range tops, sinks or refrigerators are separate spaces.

### ELECTRICAL ROUGH (CONTINUED)

- A receptacle outlet shall be installed at each counter space 12 inches or wider, and at each island counter or peninsular space 24 inches by 12 inches or greater. Receptacles shall not be located not more than 20 inches above a countertop, or where mounted below a countertop less than 6 inches beyond the support base, not more than 12 inches below the countertop.
- Recessed lighting fixtures installed in insulated ceilings or installed within ½" inch of combustible material shall be approved for insulation contact and labeled Type IC.
- Luminaires in clothes closets shall comply with Section 410.16
- Luminaires in bathtub and shower areas shall comply with Section 410.10(D).
- Incandescent luminaires with open or partially enclosed lamps and pendant fixtures or lamp holders are not permitted in clothes closets.
- Panelboards shall not be installed in clothes closets and bathrooms.
- Main disconnect shall be installed outside.
- Main service is grounded to concrete encased electrode with approved connection and bonded to all other equipment. The ground wire not smaller than #6.
- The connection to the concrete encased electrode shall be made accessible.
- Sufficient working space shall be provided around electrical equipment, The depth of that space in the direction of access to live parts shall be a minimum of 3 feet. The minimum width of that space in front of electrical equipment shall be the width of the equipment or 30 inches whichever is greater. This work space shall be clear and extend from floor to a height of 6.5' feet. This space shall not be used for storage.
- Listed anti-oxidant compound shall be used on all aluminum conductor terminations, unless product information specifically states that it is not required.
- Conductor sizes for 120/240 volt 3 wire, single phase dwelling service and feeders are correct.

### ELECTRICAL FINAL

- All 120 volt, single phase, 15 and 20 ampere branch circuits supplying outlets or devices installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through(6).
- Ground fault Circuit Interrupter (GFCI) protection required for outlets serving kitchen countertops, bathrooms, hydro massage tubs, garages and unfinished accessory buildings or basements. GFCI protection is also required for outlets within 6' feet of a sink and outside receptacles.
- In addition to GFCI protection all 15 and 20 amp, 125 and 250 volt receptacles installed outdoors shall be listed as weather resistant.
- All 125 volt, 15 and 20 amp receptacles installed in dwelling units shall be listed tamper resistant. This includes receptacles installed outdoors, in basements and in garages.
- Every circuit and circuit modification shall be legibly identified as to its clear evident and specific purpose or use in sufficient detail on a directory located on the face or inside of the electrical panel doors.
- All conductors protected with over current protection devices accordance with their ampacity.
- Test Arc Fault Circuit Interrupter (AFCI) at the electrical panel.
- Locate concrete encased electrode connection and must be accessible.
- All receptacles in garage are GFCI.
- Test all GFCI receptacles in garage.
- If HVAC installed in attic check for required lighting, receptacle, wiring that may obstruct pathway, all 120 volt and low voltage wiring for HVAC.
- All light fixtures, receptacles, switches, cover plates, panel covers, and disconnect covers are installed.
- Test and verify all required receptacles and outlets are on AFCI overcurrent protection device.
- Test and verify all required locations of GFCI receptacles.
- Verify all lighting in closets for code required clearances and code approved lighting fixtures.

**ELECTRICAL FINAL (CONTINUED)**

- Test and verify required GFCI receptacles and all other receptacles outside. All outside receptacles shall be listed as weather resistant and covers are weatherproof.
- Verify all electrical connections and required outlets including low voltage and disconnecting means (where Required) outside for HVAC condenser.
- Verify all code required clearances for service equipment and disconnecting means.