

## CITY OF SAINT PAUL

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## Residential Dwelling Unit 2017 NEC Checklist (Final)

This checklist is a helpful guideline of common code requirements, but does not include all the requirements of the 2017 NEC.

2017 NEC revisions to this document in red.

MN Rule 3801.3780 & SPLC 33.03(e)(1), 33.09 – A final inspection shall be scheduled by the installer when the electrical work is complete prior to the wiring being utilized and the space occupied. If deficiencies are noted, they must be abated within 30 days or a citation may be issued with a mandatory court appearance.

MN Rule 3801.3620 & NEC 110.3 – All electrical luminaires and equipment shall be listed and labeled by a Nationally Recognized Testing Laboratory (NRTL), and installed in accordance with the manufacturer's listing instructions. Equipment that is not properly listed shall be evaluated per the State of Minnesota's Department of Labor and Industry Regulation 3801.3620.

SPLC 33.04(g)(4) & 33.09 – All electrical permit fees shall be paid before final approval of the electrical permit. A new electrical permit must be purchased for additional work not included on the original permit. A violation of Chapter 33 is a misdemeanor offense. \_\_\_NEC 200.11 - No grounded conductor shall be attached to any terminal or lead so as to reverse the designated polarity. \_\_\_NEC 406.4(A) –Receptacles installed on all new 15- and 20-ampere branch circuits shall be of the grounding type. NEC 406.5(A) & (D) – Receptacles shall be rigidly supported to the surface, and receptacle faces shall be flush or project from the faceplate. NEC 406.12 & 406.4(D) – All 125-volt 15 and 20 amp receptacles installed or replaced in dwelling units below 5'-6" shall be listed Tamper-Resistant. NEC 406.9 & 406.4(D) - Receptacles installed or replaced in a wet location shall be listed Weather-Resistant, and have a listed cover marked "extra duty" that will close when attachment cord cap is inserted. \_\_\_NEC 404.4(C) – Switches shall not be installed within tubs or shower spaces unless installed as part of a listed tub or shower assembly. NEC 404.9(B) – Switches shall be connected to the equipment grounding conductor and shall provide a means to connect a metal faceplate to the equipment grounding conductor. NEC 210.12 & 406.4(D) – A listed Arc-Fault Circuit Interrupter (AFCI) protection device shall be provided for branch circuits, in a dwelling unit, supplying outlets or devices in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sun rooms, rec. rooms, closets, hallways, laundry areas, or similar. Where branch circuits in the above areas are modified, replaced, or extended AFCI protection shall be provided. Replacement receptacles in the above areas shall be protected by an AFCI device or circuit breaker. NEC 210.8(A)& 406.4(D) – GFCI protection shall be provided for all 125-volt 15 and 20 amp receptacle outlets installed or replaced in bathrooms, garages/accessory buildings, outdoors, unfinished basements, crawl spaces, kitchen countertops, laundry areas, and within 6 ft. of the outer edge of a sink, bathtub, or shower stall. \_\_\_\_NEC 210.8(D) – Branch circuits or receptacle outlets that supply dishwashers shall be GFCI protected. NEC 210.8(E) – GFCI protection shall be provided for 120V lighting outlets in crawl spaces. NEC 680.71 – A hydro-massage bathtub shall be GFCI protected, and shall be supplied by an individual branch circuit. NEC 680.74 – The following parts shall be bonded together if they are within 5 ft. of the hydromassage tub and are not separated by permanent barriers: Metal fittings within or attached to tub, metal parts of electrical equipment associated with water circulating system, metal-sheathed cables, metal raceways, metal piping, all exposed metal surfaces, and electrical devices and controls. NEC 680.73 – Hydro-massage bathtub electrical equipment shall be accessible, and removable, without damaging the building finish. A receptacle mounted by an access panel to the tub shall be within 12" of the opening and facing the opening.

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NEC 680.74 – Properly bond all metal pipes and parts in contact with the water circulation system.

NEC 410.6 – All luminaires, lampholders, and retrofit kits shall be listed.
NEC 410.42 – Exposed metal parts of a luminaire shall be connected to the equipment grounding conductor.
NEC 410.10(D) – Bathtub or shower luminaires located within the outside dimension of the tub or shower to a height of 8 ft. above the tub rim of shower threshold shall be listed for a damp location. Where subject to shower spray the luminaire shall be listed for a wet location.
NEC 410.16(B) – Clothes closets shall not contain incandescent luminaires with open or partially enclosed lamps,or lampholders.
NEC 410.16(C) – Luminaires in clothes closets shall be installed with the following minimum clearances from the nearest point of the storage space.
12" - for completely enclosed surface-mounted incandescent or LED luminaires 6" - for recessed or surface mounted fluorescent luminaires 6" - for completely enclosed recessed incandescent or LED luminaires
NEC 410.10(A) – Luminaires installed in wet or damp locations shall be marked "suitable for wet location" or "suitable for damp location", and properly installed.
NEC 410.90 – Screw shell lampholders shall be used for lamps only. Screw shell adapters are not allowed.
NEC 411.4 – Low voltage lighting systems operating at 30 volts or less shall be part of a listed system, an assembly of listed parts may be permitted. Class 2 power sources shall also be listed. Listed installation instructions must be provided.
NEC 210.70(A) – At least one lighting outlet containing a switch or controlled by a wall switch shall be installed in spaces used for storage, or containing equipment that requires servicing.
NEC 110.12(A) – Unused openings in junction boxes, panelboards, and equipment shall be closed with knockout seals, breaker blanks, proper cable clamps, and/or junction box covers.
NEC 314.20 – Listed box extenders shall be installed where the front edge of a box used for a flush type cover, or device plate, is not flush with combustible materials, or is set back more than 1/4" on surfaces that are noncombustible.
NEC 314.21 – Wall or ceiling that are broken or incomplete around boxes where a flush type cover or faceplate will be installed shall be repaire A gap of 1/8" or less must be maintained around the edge of the box.
NEC 314.25 – All boxes shall be covered by a blank/junction box cover, faceplate, lampholder, luminaire, or luminaire canopy.
NEC 314.29 – Junction boxes and conduit bodies shall be accessible without having to remove any part of the building or structure.
NEC 422.16(B)(E) – Garbage disposals, dishwashers, trash compactors, range hoods, and other appliances shall be permitted to be cord-and-plu connected where the cord is identified as suitable for the purpose, and the appliance is listed for flexible cord connection in the installation instructions. If the built-in dishwasher is cord and plug connected, the receptacle shall be located in the cabinet adjacent to the dishwasher.
NEC 422.31(B) – Permanently connected appliances (1/8 HP or less motor) rated over 300 volt-amps shall be permitted to use the circuit breaker as a disconnecting means when the breaker is within sight of the appliance or lockable per article 110.25.
NEC 422.31(C) – Motor rated appliances rated over 1/8 HP are required to have a disconnecting means within sight of the appliance, unless the appliance is supplied with a code compliant unit switch.
NEC 110.3(B) – A receptacle outlet cannot be installed above an electric baseboard heater unless the installation instructions for the heater allowit.
NEC 110.3(B) - GFCI protection for a bath exhaust fan in the shower/tub area may be required, check the nameplate on the fan or the installatio instructions for this requirements.
NEC 400.8 – Flexible cords and cables shall not be used as a substitute for permanent wiring in a building.
NEC 300.5(B) & 300.9 – The interior of a raceway in a wet location, above or below grade, is considered a wet location (NM cable is not permitted in a wet location).