

ELECTRICAL INSPECTION BULLETIN

B-76-000

Temporary Electrical Installations



(Effective 2017/10/15)

Where applicable a municipal building permit shall be obtained and provided to the electrical inspection department upon request prior to connection of service from the utility.

Definitions

Residential Dwelling Unit-

A dwelling unit consisting of a detached house, one unit of row housing, or one unit of a semi-detached, duplex, triplex, or quadruplex house.

Commercial Facility –

A building with more than 50 percent of its floor space used for commercial activities in which they are constructed with the intent to resell for profit or to lease for income.

For the purposes of this bulletin, an apartment building consisting of more than 4 apartments, and having a single main overcurrent device ahead of the metering center, or where more than 50% of the floor space is deemed to be commercial space, the building shall be considered a commercial facility.

Temporary Support Structure-

A structure built to house or support electrical equipment utilized for supplying power to a premise or construction site on a temporary basis.

Temporary Service-

A temporary service shall include all portions of the temporary electrical installation from the consumer's service weatherhead to the point of utilization.

Electrical Installation-

The installation of any wiring in or upon any land, building, or premises from the point(s) where electric power or energy is delivered by the supply authority or from any other source of supply, to the point(s) where such power or energy can be used by any electrical equipment, and the installation includes the connection of any such wiring with any of the electrical equipment and any part of the wiring and also includes the maintenance, alteration, extension, and repair of such wiring.

Section 1 – General

1.1 All temporary wiring installations must conform to the applicable requirements of the latest edition of the CE Code Part I, with particular attention to Section 76 (Temporary Wiring), applicable NSPI bulletins and standards, and applicable Department of Labour and Advanced Education bulletins.

1.2 All aspects of a temporary electrical installation shall be performed under a valid wiring permit.

1.3 Residential temporary service installations under this bulletin shall be valid for a period of 1 year from the permit issue date.

1.4 Commercial temporary service installations under this bulletin shall be valid for a period of 2 years from the permit issue date.

1.5 Temporary wiring permit costs shall be calculated as per the current permit fee schedule as approved by the Nova Scotia Utility and Review Board.

1.6 Plans and specifications shall be submitted for review to the NSPI plans review department for all temporary electrical installations meeting the criteria of NSPI Bulletin B-2-014.

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1.7 Prior to energizing any portion of a temporary installation, either through a connection to the utility or through connection to an existing permanent installation, an inspection shall be performed to the point of utilization including but not limited to receptacles and / or any hard wired loads. A minimum of one branch circuit shall be installed.

1.8 All temporary electrical services, required to remain in place beyond the original permit expiration date, shall be subject to re-inspection. The current applicable permit fee shall be applied.

1.9 Temporary services shall be installed in accordance with the latest requirements of the C.E. Code, Part I and section 12.3 of the NSPI Utility Service Requirements document. Only one utility supply may be attached to a temporary service.

1.10 Except with the express permission from the NSPI inspection department, temporary wiring shall not be permitted to be interconnected with circuits of a permanent installation as stated in C. E. Code, Rule 76-014.

1.11 Temporary services found to be interconnected to a permanent installation without prior authorization from the inspection department may be subject to disconnection from the utility.

1.12 Temporary services and associated wiring shall be maintained in a safe working order at all times. Any portion of a temporary installation found in an unsafe condition may be ordered to be corrected immediately and will be subject to re-inspection at the electrical contractor's expense. Where repairs to the temporary installation cannot be isolated at the time of occurrence, the installation may be subject disconnection from the utility.

1.13 For connection to permanently installed service entrances see N.S. Power Inspection Bulletin B-2-016.1

Section 2 - Temporary Service Structure and Location Requirements

2.1 Temporary services shall be permitted to be mounted on the following:

(a) A pole properly located and installed in accordance with NSPI Distribution Standard SS-ED-22M, or,

(b) A service structure properly located, set and braced in accordance with NSPI Distribution Standards SS-ED-23M or 23MA, or,

(c) An underground fed service structure, located, set and braced in accordance with NSPI Distribution Standard 8U-ED-40M or,

(d) A construction shack / job trailer, that is equipped with a service of adequate height and provides adequate support, or,

(e) Other means acceptable to the supply authority, including but not limited to,

(i) A utility owned secondary service pole, or

(ii) A utility owned service pole that is supporting primary voltage and is dedicated to one customer, or

(iii) A tree that is sound and free of rot, and has a minimum diameter of 125 mm at the service attachment point; furthermore, there may be no limbs within a 1m radius of the attachment point.

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(iv) Where a temporary service is installed on a utility pole as permitted in a) and b) above, it shall be installed with the weatherhead at a height that will place it in the secondary zone. For a pole with open secondary, the weatherhead will be above the two hot legs and below the neutral, for a pole with service cable only (triplex) the weatherhead must be within 150 mm of the triplex attachment point. If primary voltage conductors are on the pole, or if the installer is uncertain of the voltage, then the installer will contact NSPI for a Safe Clearances Report before installing the service.

Section 3 - Temporary Service Structure Safety

3.1 In the interest of safety, temporary service structures must be capable of supporting supply and consumer's service equipment as well as ladders used by service crew personnel in making connections and disconnections.

3.2 Electrical contractors are responsible to ensure that temporary service structures comply with all applicable standards. All temporary service structures shall be thoroughly checked for adequate construction and strength prior to requesting a service inspection. Those installations considered to be inadequate will be rejected.

3.3 Temporary service structures installed in accordance with N.S. Power Overhead Distribution Standards SS-ED-22M and 23M shall be marked with a permanent marking (red exterior paint) at a point not less than 1520 mm from the base of the structure. The structure shall be installed with a minimum setting depth of 1520 mm in soil or 1220 mm in rock. Prior to connection, NSPI inspection personnel shall verify that the marking is at grade, backfilling has been completed and the structure is sound.

3.4 The use of ground rods, metal pipes, or rebar, driven into the ground and bent over the leg of the temporary support structure for stabilizers is not permitted. This practice creates an electrical hazard by developing a difference in potential between the service equipment and the stabilizer support materials. Temporary support structures shall be stabilized by the use of wooden stakes or platforms in accordance with the appropriate standards.

3.5 Temporary services found in an unsafe condition, as determined by the inspection department, may be subject to disconnection from the utility.

3.6 It is imperative that NSPI ensures temporary service structures are safe and pose no hazard to its employees and the general public. NSPI requests the support and cooperation of all parties involved in the matter of installing safe temporary service structures.

Section 4 - Temporary Service Electrical Requirements

4.1 Service and branch circuit conductors shall be provided with overcurrent protection in accordance with C.E Code, Part I, Rules 14-100 and 14-104.

4.2 Where more than two (2) circuits are required, an approved distribution center having a main breaker and sufficient overcurrent devices shall be installed to adequately protect all loads.

4.3 Receptacles serving motor loads such as electrical power saws, drills, etc. may be protected by circuit breakers or fuses having a maximum rating of 30 Amps, even though the receptacle is rated for only 15 Amps except as listed below.

4.4 Where receptacles are utilized to serve general light and power loads, the branch circuit shall be protected by overcurrent devices rated or set at not more than the ampere rating of the receptacle. (Rule 14-600).

4.5 Receptacles exposed to the weather shall be mounted in a weatherproof utility box suitable for outdoor use and shall

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be provided with a spring loaded gasketed cover plate as required by C.E. Code, Rule 26-702.

4.6 Receptacles installed in weatherproof enclosures shall be mounted in an approved general purpose surface mounted box.

4.7 Wiring methods for exposed locations shall be rigid conduit or approved armoured cable. Minimum conductor size shall be #12 AWG copper.

4.8 Non-metallic sheathed cable, minimum #12 AWG copper, may be used where receptacles are installed in enclosures, cabinets, etc. where not subjected to mechanical damage.

4.9 All fifteen (15) amp and twenty (20) amp receptacles connected to a temporary installation shall be protected by ground fault circuit interrupters of the Class A type.

4.10 Notwithstanding paragraph 4.3 within this section, any temporary wiring connected to a permanent installation, or originating from a temporary service and entering a building structure, shall have overcurrent protection installed in compliance with the requirements of the Canadian Electrical Code. (This includes all feeders and branch circuits to the point of utilization)

4.11 Temporary service raceways or cables installed on a supporting structure fed from an overhead utility service shall be of method as outlined in Rule 6-302.

4.12 Meter bases shall be located at a height not greater than 1.8 m or less than 1.4 m from grade.

4.13 All single and three phase socket type meter bases rated up to and including 200 Amp shall be of the heavy duty square type. Round meter bases are not acceptable.

4.14 Meter bases shall be readily accessible, of weatherproof construction, and shall not be located in boxes, cabinets, etc. (Rule 6-408).

4.15 Service entrance equipment (service box) shall be approved as "Service Entrance Equipment".

4.16 Breaker type service entrance equipment is preferred. Service breakers shall simultaneously disconnect all ungrounded conductors at the point of supply.

4.17 Fuse type service entrance equipment may be used. C.E. Code Rule 14-204 requires non-interchangeable fuses only. This means fuse adaptors must be installed in standard fuse holders.

4.18 The preferred method is to provide an approved 3R weatherproof type service entrance rated enclosure.

4.19 Non-weatherproof type equipment may be used if installed in a solidly constructed weatherproof box. This box may be of lumber or plywood not less than 20 mm (3/4") in thickness, suitably sealed and protected to withstand the exterior elements. A hinged door and provisions for locking shall be provided. The top of the box shall be sloped (minimum 10 degrees) and where practicable, the door shall be hinged at the top.

4.20 If the method outlined above is preferred, the meterbase shall be located outside the weatherproof box to provide access to NSPI metering personnel.

4.21 The grounding conductor shall be copper and may be bare, or insulated. If insulated, the grounding conductor shall be provided with a continuous green or green with yellow stripe. The minimum size grounding conductor for temporary

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services shall be #6 AWG.

4.22 The grounding conductor shall be attached to the grounding electrode in accordance with C.E. Code, Rule 10-906.

4.23 Grounding electrodes for stand-alone temporary services shall consist of either (a) One manufactured (3) meter ground rod or, (b) a manufactured ground plate.

4.24 Grounding electrodes for job trailers or construction shacks shall be installed in accordance with the requirements of CEC Rule 10-700.

4.25 Other grounding methods, as permitted by the C.E. Code, Rule 10-700 may be acceptable.

Note: Pipe, reinforcing steel, etc. will not be acceptable

Section 5 - Generator Driven Power Sources

5.1 Generator driven power sources used for construction power on a temporary basis shall be subject to wiring permit and inspections.

5.2 Notwithstanding 5.1, where the connection of six (6) pieces of certified cord connected electrical equipment or less for the entire site, are connected to one portable generator with a name plate rating of not more than 10 KW, a wiring permit and inspection is not required.

5.3 All electrical equipment must be properly certified for its use and application and be in good operating condition.

5.4 Installation of bonding and grounding conductors shall be in accordance with NSPI Bulletin B-28-900.

Notes

1) Temporary power shall be utilized by plug-in connections where possible. All hard wire installations must be performed by qualified personnel and may be subject to inspection prior to energization.

2) Where cables are run on the ground, they shall be protected from pedestrian and vehicular traffic and any other possible damage by use of mechanical protection, barrier or location.

3) Non-electrical sub-trades are **NOT** permitted to connect temporary wiring to any portion of the temporary or permanent wiring system except through the use of an approved plug in assembly.

4) All temporary wiring must be de-energized and removed from the permanent installation and the site upon completion of the project.

5) Failure to comply with the requirements of this bulletin may result in the refusal of a future temporary electrical service connection.

6) This bulletin supersedes NSPI bulletin B-76-000 dated November 15th 2015.