Ontario Electrical Safety Code Section 75

Proposed Changes – OESC 26th Edition

Consultation Paper

September 11, 2014
The proposed changes are highlighted in red (ex. 75-123) beside the existing rule which is indicated with strikethrough (ex. 75-150) marks. Detailed Code amendments are indicated in the rule as SEE DETAILED CODE PROPOSAL which is included in this document.

The proposal also includes changes to specifications and tables.

**Code Proposal**

---

**Section 6**

6-112 Support for the attachment of overhead supply or consumer’s service conductors
(see Appendix B)

_delete CE Code Rule 6-112(1) and replace with:

1) A means of attachment shall be provided for all supply or consumer's service conductors in accordance with the following:
   a) A single point of attachment as identified in figure 1 of specification 35 utilizing a 16mm bolt with a 5mm x 50mm x 100mm backing plate with 5mm x 50mm x 50mm washers; or
   b) A two hole bracket point of attachment as identified in figure 3 of specification 35
      i) In wood frame walls attached with a minimum of two, 9.5mm diameter by 100mm long lag screw penetrating at least 75mm into the solid wood utilizing prebored pilot holes plus counterbores for proper installation; or
      ii) In brick block or concrete walls with a minimum of two, 9.5mm diameter by 47mm long expanding type sleeve anchor or equivalent installed in a 50mm clearance hole; or
   c) A single point of attachment as identified in figure 1 of specification 35 utilizing a 16mm thru bolt with a 5mm x 50mm x 50mm washers or equivalent for a pole
   d) A single point of attachment as identified in Specification 35 figure 4 utilizing a 12mm u-bolt when attached to a service mast

1) A means of attachment shall be provided for all supply or consumer's service conductors.

-delete CE Code Rule 6-112(2) and replace with:

(2) The point of attachment of supply or consumer service conductors shall not exceed 9 m above grade or sidewalk and shall be located such that the clearance of supply conductors at any point above finished grade shall be not less than the following:
   a) 4.5 m on properties accessible to pedestrians and passenger vehicles only; or
   b) 6 m on properties accessible to commercial and farm vehicles.

(2) The point of attachment of supply or consumer's service conductors shall not exceed 9 m above grade or sidewalk and shall be located such that the clearance of supply conductors at any point above finished grade shall be not less than the following:
   a) across highways, streets, lanes, and alleys: 5.5 m;
   b) across driveways to residential garages: 4 m;
   c) across driveways to commercial and industrial premises: 5 m; and
   d) across ground normally accessible to pedestrians only: 3.5 m.

(3) Exposed service conductors that are not higher than windows, doors, and porches shall have a clearance of not less than 1 m from the windows, doors, or porches.

-delete CE Code Rule 6-112(4) and replace with:
(4) Where service masts are used, they shall
   a) Be of metal and assembled from components suitable for service mast use;
   b) Shall be attached to the building as shown in specification 28; and
   c) Guyed, if required in accordance with Rule 6-118

(4) Where service masts are used, they shall be of metal and assembled from components suitable for service mast use.

(5) Rigid steel conduit of a minimum nominal size of 63 trade size shall be permitted to be used for the purpose of Subrule (4), provided that all other requirements for a service mast are complied with.

Delete CE Code Rule 6-112(6)

(6) Bolts shall be used for securing the support at the point of attachment, and if attached to wooden structural members, the latter shall be not less than 38 mm in any dimension.

(7) The supply or consumer’s service conductor support shall not be attached to the roof of a structure, except as permitted in Subrule (8).

(8) Notwithstanding Subrule (7), it shall be permitted to fasten the upper service mast support and the eye bolt, to which a guy wire is attached, to a main structural member of the roof such as a roof rafter, a roof truss, or the equivalent.

SEE DETAILED CODE PROPOSAL

6-116 Consumer’s service head location

The consumer’s service head or equivalent shall be installed:

(a) in compliance with the requirements of the supply authority; and

(b) in such a position that the point of emergence of the conductors from the consumer’s service head or the equivalent is a minimum of 150 mm and a maximum of 300 mm above the support for attachment of the overhead service conductors.

(c) notwithstanding subrule (b) for central metering installations on a pole the emergence of the secondary service conductors from the weatherhead shall be permitted to be installed as per the appropriate dimensions as identified in specification 41

SEE DETAILED CODE PROPOSAL

6-118 Guys on service masts

(1) Where the distance from the upper support clamp on the service mast to the point of attachment exceeds 1.5 m, or where the span exceeds 30 m, or the weather loaded tension is known to exceed 270 kg (600 lbs), the mast shall be guyed in accordance with Specification 28.

(2) Guy wires shall

   (a) be of stranded steel;
   (b) have a diameter of at least 6 mm (1/4 in); and
   (c) be galvanized or corrosion resistant.

SEE DETAILED CODE PROPOSAL

Section 30

30-002 Special terminology (see Appendix B)

In this Section, the following definitions apply:

Cabinet lighting system — a complete, extra-low-voltage lighting assembly consisting of a plug-in power
supply having a Class 2 output, luminaires, wiring harness, and connectors, intended for surface or recessed mounting under a shelf or similar structure or in an open or closed cabinet.

**Cable lighting system** — a permanently connected extra-low-voltage lighting system that comprises an isolating-type transformer with bare secondary conductors for connection to one or more luminaire heads.

**Landscape lighting system** — an extra-low-voltage lighting system consisting of an isolating-type power supply, luminaire assemblies, and fittings to provide flood or decorative lighting for gardens, walkways, patio areas, or similar outdoor locations and for specific indoor locations such as atriums and malls.

**Recessed luminaire** — a luminaire that is designed to be either wholly or partially recessed in a mounting surface.

**Recessed luminaire, Type IC** (intended for insulation contact) — a recessed luminaire designed for installation in a cavity filled with thermal insulation and permitted to be in direct contact with combustible materials and insulation.

**Recessed luminaire, Type IC, inherently protected** (intended for insulation contact) — a recessed luminaire that does not require a thermal protective device and cannot exceed the maximum allowable temperatures under all conceivable operating conditions.

**Recessed luminaire, Type Non-IC** (not intended for insulation contact) — a recessed luminaire designed for installation in a cavity with minimum dimensions and spacings to thermal insulation and combustible material.

**Recessed luminaire, Type Non-IC, marked spacings** (not intended for insulation contact) — a recessed luminaire designed for installation in a cavity where the clearances to combustible building members and thermal insulation are specified by the manufacturer.

**Undercabinet lighting system** — a complete, extra-low-voltage lighting assembly consisting of a plug-in power supply having a Class 2 output, luminaires, wiring harness, and connectors, intended for surface mounting only under a shelf or similar structure or in an open or closed cabinet.

**Roadway lighting systems** — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on a Municipal or a Provincial right of way.

**SEE DETAILED CODE PROPOSAL**
30-1007 Pole mounted clearances
1) Where pole-mounted luminaires are installed on poles carrying the conductors of a primary line, the luminaire shall be at least 3 m below the primary conductors.
2) Notwithstanding Subrule (1) where the supply authority owns the distribution pole, the clearance requirements are permitted to meet the third party attachment requirements of the supply authority.

SEE DETAILED CODE PROPOSAL

30-1012 Pole-top branch circuit wiring
Pole-top branch circuit wiring, exclusive of leads provided with the floodlights to which they are connected, shall be run
(a) as lead-sheathed cable or rubber- or thermoplastic- insulated moisture- resistant types of conductors installed in rigid conduit;
(b) as mineral-insulated cable, aluminum-sheathed cable, or copper-sheathed cable; or (c) where a deviation has been allowed in accordance with Rule 2-030, as insulated or uninsulated exposed wiring, provided that
(i) the wiring is supported on suitable insulators;
(ii) the wiring is controlled by a switch that can be locked in the OFF position; and
(iii) the pole is provided with a prominent sign warning against climbing it until the switch is off.
(c) in accordance with section 75

SEE DETAILED CODE PROPOSAL

30-1020 Switching of floodlights
1) Switches controlling floodlights shall comply with the following:
   (a) a switch on the primary side of a transformer shall be capable of making and interrupting the full load on the transformer;
   (b) switches controlling floodlights from the secondary side of a transformer shall have a current rating not less than 125% of the current requirements of the floodlights controlled;
   (c) switches shall be capable of being operated without exposing the operator to danger of contact with live parts, either by remote operation or by proper guarding; and
   (d) switches shall be capable of being locked in the OFF position.
2) Where pole-mounted luminaires are controlled from more than one point by switches, each switch shall be wired and connected so that the identified (neutral) conductor runs directly to the luminaire(s) controlled by it.

SEE DETAILED CODE PROPOSAL
30-1300 Roadway lighting systems

(1) Roadway lighting systems shall be installed in accordance with Rule 2-024(3) and Rules 30-1000 to 30-1036, except that Rule 30-1006(1) need not apply.

(2) In-line fuseholders shall be acceptable to satisfy the requirements of Rules 30-1002 and 30-1008, for single luminaires fed from overhead distribution systems where a dedicated roadway lighting bus is not available.

(3) Grounding and bonding of roadway lighting luminaires shall be as required by the Authority Having Jurisdiction over the infrastructure installed on the public right of way.

(4) Notwithstanding Subrule (1) for high and low voltage line installations on public right of ways, for the purpose of roadway lighting systems or traffic control systems, CSA C22.3 No. 1, Overhead systems, or the Ontario Provincial Standards shall be permitted.

SEE DETAILED CODE PROPOSAL
Section 75- Installation of powerlines and wiring of buildings

SEE DETAILED CODE PROPOSAL

75-002 Special terminology (see Appendix B)

75-002 Special terminology
In this Section, the following definitions apply:

ACSR — aluminum conductor, steel reinforced.

Classified — poles graded according to strength whereby the minimum circumferential dimensions are determined so that all poles of the same class, regardless of length, will withstand the same horizontal force applied in accordance with CSA O15 series for wood poles; CSA G40.21 series for steel poles; CSA A14 series for concrete poles and ASCE Manual No. 104 for fibre-reinforced polymer.

CMS — Central Metering System.

Distribution system — the system by which electrical power or energy is distributed to the receiving equipment and includes components such as primary line, secondary line, services, distribution transformers, distribution equipment, and other equipment of a similar nature.

Free-standing pole — a pole structure and base assembly that is installed with engineering direction without the use of guys.

Lines —
   - Primary line — a distribution system operating at more than 750 V but not more than 50 000 V phase-to-phase.
   - Secondary line — a distribution system operating at 750 V or less.

Neutral-supported cable — two or three insulated conductors and a bare neutral.

Open wire bus — a secondary line conductor with a weatherproof covering on the phase conductors and includes a bare neutral.

PCP — wood poles treated with pentachlorophenol.

Pole-mounted lighting systems — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on private premises.

Power conductor — a conductor that conveys electrical power or energy and is not part of a communication circuit.
Roadway lighting systems — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on a Municipal or a Provincial right of way.

Pipeline – those items through which gases, liquids, or solids are conveyed, including pipe, components, and any appurtenances attached thereto, up to and including the isolating valves used at stations and other facilities.

SEE DETAILED CODE PROPOSAL

75-004 General requirements (see Appendix B)

(1) Where the work consists of the installation of a service, the contractor shall consult the supply authority shall be consulted as to the layout of the service and the location of the transformer and meter, to ensure regarding compliance with applicable codes or standards under a rule or by-law of the supply authority.

(2) Where the work consists of the installation of conductors over or under a railway, a plan of the crossing endorsed by the railway company with an approval of the work shall be submitted to the inspection department, the contractor shall submit to the inspection department a plan of the crossing endorsed by the railway company with an approval of the work.

(3) Where approval is required from the supply authority by this Rule, such approval shall be obtained prior to commencement of any work with respect to the installation.

(4) Where the conductors of a primary or secondary line crosses over or under a public road, the crossing shall not be made without written permission from both the supply authority and the authority having jurisdiction over the road, and shall have the minimum clearance as specified in Rule 75-706(1).

(5) Where the work consists of the installation of overhead or underground circuits traversing navigable waterways, including commercial, recreational, and secondary waterways, permission shall be obtained from the authorities having jurisdiction of the waterway.

(6) Where the work consists of the installation of overhead or underground circuits traversing above ground or underground pipeline systems, permission shall be obtained from the authorities having jurisdiction of the pipelines.

SEE DETAILED CODE PROPOSAL

Poles

75-006 Joint use of poles for communications circuits and power conductors

Power conductors and communication circuits shall not be carried on common poles unless written consent for the joint use of the poles is obtained from the supply authority and the operators of the communication circuits.
75-100 Poles

All secondary line, primary line, and transformer poles shall be new, classified, and made of

(a) wood;
(b) steel;
(c) concrete;
(d) fibre-reinforced polymer; or
(e) other acceptable material as authorized by the inspection department.

75-104 Setting of poles

(1) Where a pole having a length shown in column 1 of Table 104 is set in earth, the butt end of the pole shall be buried to a depth at least that prescribed in column 2 of Table 104.

(2) Where a pole having a length shown in column 1 of Table 104 is set in solid rock using a rock auger, the butt end of the pole shall be buried to a depth at least that shown in column 2 of Table 104, less
   (a) 30 cm for fair rock and limestone; or
   (b) 60 cm for solid rock, granite or massive limestone.

(3) Where poles are installed on slopes or hillsides, the depth of the hole shall be measured from the lower side of the opening.

(4) Corner and dead-end poles shall be offset away from anchor, or raked towards the anchor in accordance with Specifications 3 and 4.

(5) Pole mounts are acceptable on rock for wood poles, in accordance with Specification 5, when in accordance with a code or standard under a rule or by-law of the supply authority.

Pole mounts are acceptable for wood poles on rock.

(6) Where it is impossible impracticable to employ the above methods, poles shall be cribbed in accordance with
   (a) Specification 6 — Swamp cribbing with steel culvert section for wood poles; or
   (ii) Specification 7 — Swamp cribbing with steel culvert section for wood poles with butt of pole not reaching solid earth at normal setting depth.
   (b) when bedrock is encountered, pole setting reduction using filled steel culverts as a partial substitute shall be permitted for normal soil setting depth, provided that
      (i) the use of steel culverts is limited to situations where the lack of readily available equipment for rock removal (by blasting or drilling);
      (ii) the number of steel culverts, when used, is limited to two adjacent pole locations; and
      (iii) the installation is conducted in accordance with Specification 8.
   (c) Swamp cribbing for steel poles shall be permitted to be used only where permitted by and in accordance with the manufacturer’s instructions.
75-106 Equipment attached to poles

(1) No electrical equipment shall be attached to the poles of a supply authority without permission of the supply authority.

(2) Equipment mounted on a wood pole shall be mounted on the same 1/3 continuous pole circumference leaving the remaining 2/3 of the continuous pole circumferences clear for climbing purposes when not accessible by an aerial device.

(3) Stainless steel bands shall not be used as the sole support for electrical equipment installed on wooden poles.

(4) Electrical equipment installed on metal or concrete poles shall be permitted to be supported by stainless steel strapping and buckles that shall have a minimum support strength of 4.5 kN.

(5) Field drilling of steel, concrete and fiber-reinforced poles for supporting electrical equipment shall not be permitted.

(6) Notwithstanding subrule (5), field drilling of steel, concrete and fiber-reinforced poles shall only be permitted with the pole manufacturers engineered drawings and adherence to an approved drilling procedures supplied by the manufacturer.

SEE DETAILED CODE PROPOSAL

75-120 Wood poles

(1) The pole “Species — Treatment” combinations listed in Table 102 are acceptable for new installations.

(2) Notwithstanding Rule 75-100, pressure-treated pine and butt-treated western cedar used poles for new lines can be re-used may be installed provided: that the poles are classified, are not more than 10 years old, have no visible signs of damage, and their re-use is lawful under Rule 2-030.
   (a) the poles are classified;
   (b) have no visible signs of damage;
   (c) are listed in Table 102; and
   (d) have been authorized by the inspection department before the pole is set in the ground.

(3) Wood poles shall adhere to the following requirements:
   (a) a transformer pole shall be a minimum of class 5 and in accordance with the requirements of Table 103;
   (b) a single-phase primary line pole or a secondary line pole shall be a minimum of class 7; or
   (c) a three-phase primary line pole shall be a minimum of class 5; or
   (d) meet the requirements of the supply authority when the supply authority’s equipment and lines are installed on the poles.

(4) Notwithstanding Rule 75-100, a used wood pole may be used on secondary lines only after its condition has been checked by the inspection department and before the pole is set in the ground.

SEE DETAILED CODE PROPOSAL

75-140 Steel pole requirements

(1) The poles shall be manufactured in compliance with the designs used to assign classes and other applicable requirements in CSA C22.3 No. 1.
(2) The poles shall be galvanized.
(3) Evidence of compliance with Subrules (1) and (2) shall be included in a report from a certification organization or from a professional engineer.

(4) Notwithstanding Rule 75-100, a used steel pole can be used on secondary lines only after it is authorized by the inspection department prior to being set in the ground.

(4) The baseplate and top cap shall be installed.

(5) Notwithstanding Rule 75-100, used poles for new lines may be installed:
   (a) provided the poles are classified;
   (b) have no visible signs of damage; and
   (c) have been authorized by the inspection department before the pole is set in the ground.

SEE DETAILED CODE PROPOSAL

75-142 Steel pole installations in known corrosive soils (see Appendix B)
Additional below-grade corrosion protection shall be required for steel poles set directly in soil where there is knowledge or a history of aggressive corrosion of steel or iron in the soil.

SEE DETAILED CODE PROPOSAL

75-144 Marking of steel poles (see Appendix B)

(1) The poles shall be side marked above the ground line in accordance with Table 104, with manufacturer’s code or trademark and with the last two digits of the year of manufacture, pole class, and length.

(2) The pole class marking used for pole design loads shall have equivalency with the wood pole classes 1, 2, 3, 4, 5, and 6 as set out in CAN/CSA-O15, where the equivalency is based on the requirements for Grade 2 construction as defined in CSA C22.3 No. 1.

The pole class shall be marked with the wood pole equivalency of Grade 2 construction as defined in CSA C22.3 No. 1 for classes 1, 2, 3, 4, and 5 as set out in CAN/CSA-O15.

SEE DETAILED CODE PROPOSAL

75-160 Concrete poles

(1) Concrete pole shall be manufactured in accordance with CAN/CSA A14-Concrete Poles; and

(2) Concrete poles shall have provision for grounding of the reinforcing metal of the pole.

SEE DETAILED CODE PROPOSAL

75-162 Concrete pole selection (see Appendix B)

(1) Accepted pole classes shall be in accordance with the equivalencies in Table 101.

(2) Notwithstanding Rule 75-100, a used concrete pole may be used on secondary lines only after its condition has been checked by the inspection department and before the pole is set in the ground.

Notwithstanding Rule 75-100, used poles for new lines can be used provided:
(a) the poles are classified;
(b) have no visible signs of damage; and
(c) have been authorized for use by the inspection department before the pole is set in the ground.

SEE DETAILED CODE PROPOSAL

75-180 Fibre-reinforced polymer poles (see Appendix B)

(1) Fibre-reinforced polymer poles shall be manufactured in accordance with ASCE Manual 104, “Recommended Practice for Fibre Reinforced Polymer Products for Overhead Utility Line Structures”.

(2) Fibre-reinforced polymer pole shall be side marked above the ground line in accordance with Table 104, with manufacturer’s code or trademark, and with the last two digits of the year of manufacture, pole class, and length.

SEE DETAILED CODE PROPOSAL

75-182 Marking of fibre-reinforced polymer poles

(1) Fibre-reinforced polymer poles shall be side marked above the ground line in accordance with Table 104, with manufacturer’s code or trademark, and with the last two digits of the year of manufacture, pole class, and length.

(2) The pole class shall be marked with the wood pole equivalency of Grade 2 construction as defined in CSA C22.3 No. 1 for classes 1, 2, 3, 4, and 5 as set out in CAN/CSA-O15.

SEE DETAILED CODE PROPOSAL

75-184 Depth of setting of Fibre-reinforced polymer poles

Depth of setting for Fibre-reinforced polymer poles shall be as per manufacturer’s installation instructions but in no case less than Table 104.

SEE DETAILED CODE PROPOSAL

Framing

75-200 Pole Framing

(1) Poles used in primary lines shall be framed according to the following Specifications:
   Specification 9 — Primary, 1-phase, 2.4 to 8 kV, maximum span 90 m.
   Specification 10 — Primary, 1-phase, 2.4 to 16 kV, maximum span 90 m.
   Specification 11 — Primary, 3-phase, 2.4/4.16 to 8.0/13.8 kV.
   Specification 12 — Primary, 3-phase, 2.4/4.16 to 16/27.6 kV.
   Specification 13 — Primary, 3-phase, line angles 4°–90°, 2.4/4.16 to 16/27.6 kV.
   Specification 14 — Primary, 3-phase, crossarm, 2.4/4.16 to 16/27.6 kV.
   Specification 15 — Primary, 3-phase, underbuilt, 2.4/4.16 to 16/27.6 kV.
   Specification 16 — Primary, 3-phase, 44 kV.
   Specification 17 — Primary, 3-phase, line angles 4°–90°, 44 kV.
   Specification 18 — Primary, 3-phase, crossarm, 44 kV.
(2) The distance from the top of a steel pole down to the top bolt for pole line hardware shall be permitted to be 10 cm rather than the 15 or 20 cm used for wood poles.

SEE DETAILED CODE PROPOSAL

SEE DETAILED SPECIFICATIONS PROPOSAL

75-202 Crossarms (see Appendix B)

(1) Crossarms, if made of wood shall
   (a) be Douglas Fir, Western Larch, Western Hemlock, Yellow Cypress, Jack Pine, or Lodgepole Pine; and
   (b) have dimensions in accordance with Specification 29 and be at least 120 mm wide and 95 mm thick.

(2) Steel crossarms shall have dimensions in accordance with Specification 30.

(3) Fibre-reinforced polymer crossarms shall be manufactured in accordance with ASCE Manual 104.

SEE DETAILED CODE PROPOSAL

Anchors and Guys

75-300 Anchoring for change of line direction and guy requirements

(1) Arrangement of guys and anchoring for change of line direction shall be in accordance with Specification 26.

(2) Arrangement of guys and anchoring for dead-end construction shall be in accordance with Specification 26.

(2) Notwithstanding Subrule (1), a guy is not required for a dead-ended temporary secondary service tap where the span does not exceed 10 m.

(3) Transformer or terminal poles fed from underground circuits with no overhead distribution shall have three down guys placed approximately 120° apart and attached below the transformer equipment.

(4) Subrule 3 does not apply to free-standing terminal poles.

(4) Guys shall not be required for support of a free-standing terminal pole where the specific pole installation includes a design drawing for the pole and supporting base, and the design drawing shall be from the pole manufacturer or shall be signed by a professional engineer.

(5) Storm guys shall be installed for long tangent lines between guyed angled structures and shall not exceed 5 spans.

(6) The number and placing of guys on steel poles, in addition to meeting the requirements of this Code, shall be in accordance with the manufacturer's recommendations.

SEE DETAILED CODE PROPOSAL

75-304 Anchor distance from pole and guy attachment ratio

(1) The distance of an anchor from its pole shall be at least one-third the height of the pole above ground.

(2) Guying ratios (Height: Lead Distance) shall be between 3:1 and 2:3.
75-306 Guy wires and guards

(1) Guy wires shall
(a) be of 7-strand steel;
(b) have a diameter of at least 9 mm (3/8 in), grade 1300 (grade 180); and
(c) be class B coating weight galvanized.

(2) Arrangement of guys shall be in accordance with Specifications 25, 26, and 39.

(3) Suitable guys shall be required for dead-ended temporary service that is mounted on a treated post and for spans greater than 10 m.

(4) Notwithstanding Subrules (2) and (3), a guy is not required for dead-ended temporary service that is mounted on a pole and where the span does not exceed 10 m.

(5)(2) Guy guards shall be installed at all locations.

(6)(3) The guy guard shall be made of plastic and shall be coloured bright yellow to provide good visual identification for public safety.

(7) Where two or more guys are attached to one anchor, a guy guard shall be installed on both the innermost and outermost down guys.

(8) Guys shall not be required for support of a free-standing terminal pole where the specific pole installation includes a design drawing for the pole and supporting base, and the design drawing shall be from the pole manufacturer or shall be signed by a professional engineer.

SEE DETAILED CODE PROPOSAL

75-308 Guys on poles and anchors

(1) A guy wire shall be attached to the pole with an approved fitting shown in Specification 27 in the manner prescribed in Specification 3 and in such a way that there is no contact between the guy wire fitting or its mounting bolt and any ground wire on the pole.

(1) A guy wire shall be attached to the pole:
(a) With an approved fitting shown in Specification 27
(b) In the manner prescribed in Specification 3
(c) In such a way that there is no contact between the guy wire fitting or its mounting bolt and any ground wire on the pole
(d) As identified in the framing requirements of Rule 75-200

(2) Acceptable pre-formed guy grips may be used in place of the approved fitting mentioned in Subrule (1)(a).

(3) The back of an insulator through bolt shall not be used as an attachment point for guys.

(4) A guy wire shall be attached to the anchor with a minimum of three 3-bolt clamps.

(5) Notwithstanding Subrule (4), where other than grade 1 construction is employed the minimum number of 3-bolt clamps shall be two.

(6) Acceptable pre-formed guy grips or automatic guy wire strain deadends may be used in place of the approved methods mentioned in Subrule (4) and (5).

SEE DETAILED CODE PROPOSAL
75-310 Strain insulator on pole guys

(1) Every guy shall have a strain insulator installed in the manner prescribed in Specification 25, and pre-formed guy grips suitable for the purpose may be used instead of 3-bolt clamps.

(1) Strain insulators shall be installed in all guy assemblies. The strain insulator shall:
   (a) be located as prescribed in Specification 25 and 25.1 such that under broken guy conditions the insulator will fall below all power attachments;
   (b) fall above the communication attachment if present;
   (c) fall no less than 250cm above grade.

(2) A second strain insulator at a point below the point of possible contact of the conductor and guy wire shall be installed in accordance with Specification 25 where
   (a) the guyed pole carries a transformer or a fused switch; and
   (b) the breaking of a guy wire could cause a part of the guy wire below the strain insulator to fall against a conductor carried by the pole.

(2) Where the span between the guyed pole and stub pole crosses over or under conductors operating at a potential of more than 150 V to ground, a second strain insulator shall be installed to isolate the section of the span guy between the crossing conductors and the stub pole and not less than 250 cm from the stub pole, in accordance with Specification 25.1

(3) Notwithstanding subrule (1), guys directly attached to steel poles need not have a strain insulator, and the attachment hardware shall be suitable for the pole.

SEE DETAILED CODE PROPOSAL

75-312 Span guy construction

(1) Where a span guy shall be installed, it shall be constructed in the manner prescribed in Specification 4.

(2) Where the span between the guyed pole and stub pole crosses over or under conductors operating at a potential of more than 150 V to ground, a second strain insulator shall be installed in the span at a point between the power conductors and the guyed pole and not less than 2.5 m from the stub pole, in accordance with Specification 25.

SEE DETAILED CODE PROPOSAL

75-314 Guying of steel poles

(1) Notwithstanding Rule 75-310, guys directly attached to steel poles need not have a guy insulator, and the attachment hardware shall be suitable for the poles.

(2) The number and placing of guys, in addition to meeting the requirements of this Code shall be in accordance with the manufacturer’s recommendations.

(3) The baseplate and top cap recommended by the manufacturer for the poles shall be installed.

(4) Clamps for the neutral conductor shall be a type designed for the poles.

(5) Spool-type insulating supports shall not be permitted.
(6) The distance from top of the pole down to the top bolt for pole line hardware shall be permitted to be 10 cm rather than the 15 or 20 cm used for wood poles.

(7) Swamp cribbing shall be permitted to be used only where permitted by and in accordance with the manufacturers’ instructions.

SEE DETAILED CODE PROPOSAL

75-316 Guys on service masts

(1) Where the distance from the upper support clamp on the service mast to the point of attachment exceeds 1.5 m, or where the span exceeds 30 m, or the weather loaded tension is known to exceed 270 kg (600 lbs), the mast shall be guyed in accordance with Specification 28.

(2) Guy wires shall
   (a) be of stranded steel;
   (b) have a diameter of at least 6 mm (1/4 in); and
   (c) be galvanized or corrosion resistant.

SEE DETAILED CODE PROPOSAL

Insulators

75-402 Insulators on steel poles

(1) Insulators that may be mounted directly on grounded steel structures are specified in Table 100.

(2) Clamps for the neutral conductor shall be a type designed for the poles

(3) Spool-type insulating supports shall not be permitted.

SEE DETAILED CODE PROPOSAL

75-406 Attachment of secondary service conductors

(1) Secondary service conductors shall
   (a) terminate on a dead-end rack of a type shown in Specification 35; or
   (b) be attached to a pole in accordance with either Specification 36, 37, 38 or 39; or
   (c) be attached to the timber framing of a building by a one wire rack such as shown in Figure 1 of Specification 35.

(2) Where it is necessary to install an approved service mast to meet the requirements of Rule 6-112, the mast shall be attached to the building as shown in Specification 28 and guyed, if necessary, in accordance with the Note to Specification 28.

SEE DETAILED CODE PROPOSAL

Conductors

75-502 Overhead secondary line conductors

(1) Overhead cables shall be
   (a) neutral-supported cables of Type NS75 or Type NS90 or
   (b) Open wire buss
(2) Individual conductors of the moisture-resistant, rubber-insulated type suitable for exposed wiring where exposed to the weather as specified in Table 19 and lashed together with a messenger cable, shall be
   (a) stranded; and
   (b) not less than No. 12 AWG copper or No. 10 AWG aluminium.

(3) RWU type cables are acceptable for aerial installation and can be lashed together with a messenger cable provided they are sunlight resistant rated and so marked.

**SEE DETAILED CODE PROPOSAL**

### 75-504 Compression Connections

Compression connectors are required for all overhead current carrying connections. Connectors for all overhead current-carrying connections shall be compression or wedge type.

**SEE DETAILED CODE PROPOSAL**

### 75-506 Submarine power cable

Submarine power cables shall be manufactured to one of the following Standards:

(a) ICEA S-95-658/NEMA WC70;
(b) ICEA S-96-659/NEMA WC71;
(c) ICEA S-93-639/NEMA WC74; or
(d) CSA C68.10; or
(e) CSA C68.5

**SEE DETAILED CODE PROPOSAL**

### Spans and Sags

#### 75-604 Sag between poles or between poles and buildings

Open wire bus, neutral-supported cable, and ACSR shall be installed so that the sag of the conductors between poles or between poles and a building is determined by using Tables 105 or 107 to 112 whichever is applicable to the size and type of conductor being installed and with respect to applicable span and temperature.

**SEE DETAILED CODE PROPOSAL**

#### 75-606 Sag between pole and building

Open wire bus, neutral-supported cable, and ACSR shall be installed so that the sag of the conductors between a pole and a building is determined by using Tables 105 or 107 to 112, whichever is applicable to the size and type of conductor being installed and with respect to applicable span and temperature.

**SEE DETAILED CODE PROPOSAL**
75-702 Clearances in service span
Where the voltage of power conductors is not more than 750 V, the distance separation between the power conductors at maximum sag and a communication drop-wire at line of sight in the service span from a pole to a building shall be not less than 300 mm.

SEE DETAILED CODE PROPOSAL

Clearances

75-706 Primary and secondary lines clearances

(1) The poles that support the phase conductor of a primary line shall be so located and of such height as to afford a clearance of 7 m measured vertically between the conductors under maximum sag conditions and the ground.

(2)(1) Notwithstanding Subrule (1) For high voltage line installations, where plans are submitted for examination to the inspection department, the clearances listed in the vertical separation between conductors under maximum sag conditions and the ground shall meet the requirements of Table 34. are acceptable.

(3)(2) The primary line neutral shall be not less than 6.1 m above finished grade.

(4)(3) Conductors of a secondary line shall have a minimum 6.1 m measured vertically between the conductors under maximum sag conditions and the ground be located such that the clearance at any above finished grade measured vertically between the conductors under maximum sag conditions and the ground shall be not less than the following:

(a) 4.5 m on properties accessible to pedestrians and passenger vehicles only; or
(b) 6.1 m on properties accessible to commercial and farm vehicles.

(4) Where conductors are installed over a public road, the vertical separation between conductors under maximum sag conditions and finished grade shall meet the requirements of Table 34.

(5) Notwithstanding Subrule (1) for high and low voltage line installations on public right of ways, for the purpose of roadway lighting systems or traffic control systems, CSA 22.3 No.1-06, Overhead systems or the Ontario Provincial Standards shall be permitted.

SEE DETAILED CODE PROPOSAL

75-708 Clearances of conductors from buildings (see Appendix B)

(1) An overhead primary line conductor shall meet the requirements of Table 33 be kept at least 3 m at maximum conductor swing measured from a vertical drop at maximum conductor swing horizontally from a building.

(2) Primary line conductors shall not be installed over buildings unless the installation is lawful under Rule 2-030, and work shall not begin until the plans and specifications for the work are approved in accordance with Rule 2-010.

(3) No building, mobile home or structure shall be placed or constructed within at least 3 m at maximum conductor swing measured horizontally from the nearest conductor of an overhead primary line.
(4)(3) Where the maximum conductor swing is not known, a distance of 1.8 m shall be used.

(5)(4) An overhead secondary line conductor shall be kept at least 1 m measured from a vertical drop at maximum conductor swing horizontally from any building except where necessary to connect to the electrical wiring of a building.

SEE DETAILED CODE PROPOSAL

75-710 Clearances for conductors from other structures (see Appendix B)

(1) Notwithstanding Rule 36-110, conductors of an overhead primary line shall meet the minimum clearance requirements of Rule 75-708(1),(2) and (3) from a structure; and
  (a) not be located closer than 12 m measured horizontally from silos to the closest conductors, with the conductor at rest;
  (b) not be located closer than 12 m measured horizontally over wells from which pump rods may be lifted and come in contact with the conductors at rest;
  (c) except for free standing engineered structures, have sufficient clearance from free-standing poles that support flood or area lighting, signs, flagpoles, antennae, or other similar structures so as to permit the structure to fall in an arc, without touching the conductors at rest;
  (d) not be located within 6 m, measured horizontally from wind-mills or similar structures to the closest conductor, with the conductor at rest;
  (e) have a minimum vertical clearance of 3.1 m above fencing at maximum sag.

(2) Conductors of a secondary line shall not be installed closer than 1 m measured horizontally from structures.

(2) An overhead secondary line conductor shall meet the minimum clearance requirements of Rule 75-708(3)(4).

(3) The poles and equipment associated with a primary or secondary line shall be located and suitably protected so as to avoid the possibility of damage from contact with vehicles.

SEE DETAILED CODE PROPOSAL

75-712 Tree trimming

(1) The owner of a private line shall provide clearance to the line from trees and other forms of woody growth in compliance with a code or standard under a rule or by-law of the supply authority concerning tree trimming.

(2)(1) Where there is no applicable code or standard under a rule or by-law of the supply authority concerning tree trimming, all trees and woody growth adjacent to a line shall be trimmed and maintained so that a minimum clearance to the nearest conductor measured radially from the conductor at rest horizontally at maximum conductor swing and vertically at maximum sag shall be
  (a) 1 m for secondary lines; and
  (b) 4 m for primary lines.

SEE DETAILED CODE PROPOSAL
75-806 Grounding overhead installations

Grounding for pole-mounted equipment, hardware, crossarms, and/or a system neutral shall be installed in accordance with Specification 34, 38, 40, 41, 42, 43, 44 and 45.

SEE DETAILED CODE PROPOSAL

75-810 Grounding a service box on a transformer pole

1. Where a service box is installed on a transformer pole it shall be grounded as required by section 10, and the supply authority owns the transformation,
   a. the pole-top equipment/system ground conductor and ground electrode shall be installed at the pole by the supply authority;
   b. the contractor shall install a grounding conductor, connect one end to the identified neutral conductor in the service box, bond it to the non-current carrying metal parts of the electrical equipment, and extend at least 500 mm of the ground conductor outside of the service equipment for connection to the supply authority ground conductor; and
   c. the supply authority shall connect the service ground conductor to the supply authority ground wire.
2. The neutral conductor shall be installed and connected in the service box.
3. The neutral conductor shall be installed with both the line and the load conductors on the service pole.
4. Where the transformation is privately owned, the owner shall supply and install all grounding and bonding.

SEE DETAILED CODE PROPOSAL

75-812 Neutral voltage mitigation devices installed on transformer poles

1. The device shall be approved.
2. All grounding conductors shall be insulated (minimum 600 V) and shall be not less than No. 4 AWG copper.
3. Each grounding conductor shall have mechanical protection up to the neutral voltage mitigation device and be installed in accordance with Specification 34.
4. Primary and secondary ground electrodes shall be spaced not less than 5 m apart.
5. A permanent warning sign shall be installed directly below the device and shall read: “WARNING — Primary and secondary grounding conductors shall be interconnected prior to disconnecting this device for service or removal” or the equivalent.

SEE DETAILED CODE PROPOSAL
Services

75-900 Service box installation

(1) When metering equipment is installed outdoors, the midpoint of the meter shall be located 1750 ± 100 mm, from finished grade, in accordance with Specifications 28 and 40.

(2) Where a service box is installed on a transformer pole, no equipment other than that shown in Specification 41 shall be placed on the pole, except that one temporary service may be attached in addition to the permanent service.

(3) Service boxes shall not be installed on poles located on a public road.

SEE DETAILED CODE PROPOSALS

75-902 Central Metering System (CMS):

The following requirements shall apply to the Central Metering System (CMS):

(a) a standard pole-mounted distribution transformer without a secondary breaker or pole-mounted switch may be used to supply multi-building service installations when;
   (i) there is no customer owned equipment between the transformer(s) and supply authority interface (excluding surge arresters and conductor); and
   (ii) written assurance has been received from a supply authority stating it owns and controls the transformer(s);

(b) the method of entry of conductors into a building shall be in accordance with Rules 6-206 and 6-302;

(c) each building shall have a disconnecting means and where the disconnecting means is a service box, it shall be installed as per section 6; main service box at point of entry;

(d) the service equipment shall be bonded to the neutral;

(e) a ground electrode shall be installed at each service box in accordance with Rule 10-700;

(f) new overhead yard wiring shall be
   (i) neutral-supported cable with a minimum of No. 2 AWG aluminum, and when in parallel, shall comply with Rule 12-108; and
   (ii) notwithstanding Item (i), open wire bus shall be permitted where circuit ampacity exceeds 200 A;

(g) the minimum ampacity of overhead or underground conductors feeding more than one service or building shall be based on 80% of the sum of the ratings of all service boxes supplied;

(h) transformer pole hardware and metering equipment shall be in accordance with Specifications 41, 42, and 43;

(i) if metering is located on other than a transformer pole, the meter socket shall be connected to the ground electrode and the system neutral in accordance with Specification 34;

(j) pole top switches shall be installed to the following requirements:
   (i) the switch shall be approved for the purpose;
   (ii) the minimum rating of a transfer switch shall be equal to or greater than 80% of the sum of all service boxes supplied;
(iii) the minimum clearances on the pole shall be those shown on Specification 41;
(iv) underground services shall be in accordance with the requirements of Rule 6-300; and
(v) pole-top transfer switches used in conjunction with Central Metering Systems shall be installed in accordance with Specification 41;

(k) all equipment mounted on a pole shall be mounted on the same 1/3 continuous pole circumference leaving the remaining 2/3 of the continuous pole circumference clear for climbing purposes; or

(l) CMS-type service shall not have more than four subdivisions of the service extending from a transformer one pole.

SEE DETAILED CODE PROPOSALS

75-904 Pole top transfer device

Pole-top switches transfer devices shall be installed to the following requirements:
(a) the switch transfer device shall be approved for the purpose;
(b) the minimum rating of a transfer switch device shall be equal to or greater than 80% of the sum of all service boxes supplied;
(c) the minimum clearances on the pole shall be those shown on Specification 41;
(D) underground services shall be in accordance with the requirements of Rule 6-300; and
(e) pole-top transfer switches used in conjunction with Central Metering Systems shall be installed in accordance with Specification 41;

SEE DETAILED CODE PROPOSALS

75-1000 Pole-mounted luminaires, roadway lighting systems

(1) Where pole-mounted luminaires are installed on poles carrying the conductors of a primary line, the luminaire shall be at least 3 m below the primary conductors.
(2) Where luminaires are installed on a pole, there shall be signs cautioning that high voltage is present and advising that lamp changing shall be done only by qualified persons.
(3) Notwithstanding Subrule (1) where the supply authority owns the pole-mounted luminaires, the clearance requirement does not apply.
(4) Where pole-mounted luminaires are controlled from more than one point by switches, each switch shall be wired and connected so that the identified (neutral) conductor runs directly to the luminaire(s) controlled by it.
(5) The identified conductor of the circuit supplying the pole-mounted luminaire shall be permitted to be connected to the neutral conductor of a feeder or subfeeder.
(6) Each lighting circuit shall have adequate overcurrent protection, for example, a weatherproof in-line fuseholder assembly is acceptable for this purpose.
(7) All non-current-carrying metal parts of a luminaire shall be bonded to ground in accordance with Section 10.

SEE DETAILED CODE PROPOSALS
75-1002 Roadway lighting systems

(1) Roadway lighting systems shall be installed in accordance with Rule 2-024(3) and Rules 30-1000 to 30-1036, except that Rule 30-1006(1) need not apply.

(2) In line fuseholders shall be acceptable to satisfy the requirements of Rules 30-1002 and 30-1008, for single luminaires fed from overhead distribution systems where a dedicated roadway lighting bus is not available.

SEE DETAILED CODE PROPOSAL
### Table 33

**Horizontal clearances from adjacent structures*** (including protuberances)
(See Rules 26-302, and 36-110, 75-708 and Appendix B.)

<table>
<thead>
<tr>
<th>Maximum system voltage†, kV</th>
<th>Clearance, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 46.0</td>
<td>3</td>
</tr>
<tr>
<td>69</td>
<td>3.7</td>
</tr>
</tbody>
</table>

*See Appendix B.
†For ungrounded systems, the maximum system voltage is the phase-to-phase voltage, and for grounded systems it is the phase-to-ground voltage.

### Table 34

**Vertical ground clearances for open line conductors***
(See Rule 36-110, and 75-706(2) and Appendix B.)

<table>
<thead>
<tr>
<th>Maximum system voltage†, kV</th>
<th>Minimum vertical clearances above ground, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 25.0</td>
<td>6.1</td>
</tr>
<tr>
<td>34.5</td>
<td>6.7</td>
</tr>
<tr>
<td>46</td>
<td>7</td>
</tr>
<tr>
<td>69</td>
<td>7.6</td>
</tr>
</tbody>
</table>

*See Appendix B.
†For ungrounded systems, the maximum system voltage is the phase-to-phase voltage, and for grounded systems it is the phase-to-ground voltage.
### Table 102

**Wood pole species and treatment combinations**  
(See Rule 75-120)

<table>
<thead>
<tr>
<th>Treatment preservative</th>
<th>Acceptable wood pole species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>Coast Douglas fir</td>
</tr>
<tr>
<td>CCA-PEG</td>
<td>Interior Douglas fir</td>
</tr>
<tr>
<td>CCA-ET (oil)</td>
<td>White spruce</td>
</tr>
<tr>
<td>CCA</td>
<td>Red spruce</td>
</tr>
<tr>
<td>ACQ</td>
<td>White pine</td>
</tr>
<tr>
<td></td>
<td>Jack pine</td>
</tr>
<tr>
<td></td>
<td>White pine</td>
</tr>
<tr>
<td></td>
<td>Red pine</td>
</tr>
<tr>
<td></td>
<td>Lodgepole pine</td>
</tr>
<tr>
<td></td>
<td>South yellow pine*</td>
</tr>
<tr>
<td></td>
<td>Ponderosa pine</td>
</tr>
<tr>
<td></td>
<td>Western hemlock</td>
</tr>
<tr>
<td></td>
<td>Alaska yellow cedar</td>
</tr>
<tr>
<td></td>
<td>Western red cedar</td>
</tr>
<tr>
<td>CCA — WR</td>
<td>Red pine</td>
</tr>
<tr>
<td>Copper naphthenate</td>
<td>Coast Douglas fir</td>
</tr>
<tr>
<td></td>
<td>Jack pine</td>
</tr>
<tr>
<td></td>
<td>Red pine</td>
</tr>
<tr>
<td></td>
<td>Lodgepole pine</td>
</tr>
<tr>
<td></td>
<td>South yellow pine</td>
</tr>
<tr>
<td></td>
<td>Western red cedar</td>
</tr>
</tbody>
</table>

*Southern Yellow Pine — Penta, which shall have a minimum of .38 pcf (pounds per cubic foot) of treatment preservative level, be kiln dried, and be marked “SPP.38” and “KD”.

**SEE DETAILED CODE PROPOSAL**

### Table 104

**Depth of setting of poles in soil**  
(See Rules 75-104, 75-122, 75-144, 75-146, 75-164, 75-166, and 75-180)

<table>
<thead>
<tr>
<th>Pole length, m (ft)</th>
<th>Minimum depth of pole (m)</th>
<th>Max. height of marking (m) above grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 (30)</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>10.7 (35)</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>12.2 (40)</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>13.7 (45)</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>15.2 (50)</td>
<td>2.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Col. 1 Col. 2 Col. 3

*Wood poles only.*  

**Note:** As per CAN/CSA-O15-1990

**SEE DETAILED CODE PROPOSAL**
Table 105

Sag of neutral-supported cable
(ruling span — 30.0 m)
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Temp. °C</th>
<th>Span, m</th>
<th>Triplex: 2-No. 4 Polyethylene AL. 1-No. 4 Bare ACSR</th>
<th>Triplex: 2-No. 2 Polyethylene AL. 1-No. 2 Bare ACSR</th>
<th>Triplex: 2-No. 1/0 Polyethylene AL. 1-No. 1/0 Bare ACSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>−29</td>
<td>15</td>
<td>127, 279, 508, 787</td>
<td>203, 432, 762, 1194</td>
<td>254, 584, 1016, 1575</td>
</tr>
<tr>
<td>−18</td>
<td>15</td>
<td>152, 330, 559, 838</td>
<td>203, 457, 813, 1270</td>
<td>279, 584, 1041, 1626</td>
</tr>
<tr>
<td>0</td>
<td>15</td>
<td>152, 356, 635, 914</td>
<td>229, 483, 864, 1346</td>
<td>279, 610, 1092, 1702</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
<td>178, 406, 711, 1118</td>
<td>229, 533, 940, 1473</td>
<td>279, 635, 1143, 1778</td>
</tr>
<tr>
<td>32</td>
<td>15</td>
<td>203, 432, 762, 1194</td>
<td>254, 559, 991, 1549</td>
<td>305, 660, 1168, 1829</td>
</tr>
</tbody>
</table>

(Continued)

Table 105 (Concluded)

<table>
<thead>
<tr>
<th>Temp. °C</th>
<th>Span, m</th>
<th>Triplex: 2-No. 3/0 Polyethylene AL. 1-No. 1/0 Bare ACSR</th>
<th>Triplex: 2-No. 4/0 Polyethylene AL. 1-No. 3/0 Bare ACSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>−29</td>
<td>15</td>
<td>305, 686, 1194, 1880</td>
<td>406, 889, 1600, 2489</td>
</tr>
<tr>
<td>−18</td>
<td>15</td>
<td>305, 686, 1219, 1905</td>
<td>406, 914, 1626, 2540</td>
</tr>
<tr>
<td>0</td>
<td>15</td>
<td>305, 711, 1245, 1956</td>
<td>406, 940, 1651, 2591</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
<td>330, 711, 1270, 1981</td>
<td>432, 940, 1676, 2616</td>
</tr>
<tr>
<td>32</td>
<td>15</td>
<td>330, 737, 1321, 2057</td>
<td>432, 965, 1727, 2692</td>
</tr>
</tbody>
</table>

Ruling span formula:

\[
\text{Ruling span} = \frac{\text{average span} + 2}{3} (\text{maximum span} - \text{average span})
\]

SEE DETAILED CODE PROPOSAL
Table 107
Sags and tensions for #2 ACSR (6/1) with 60 m (200 ft) ruling span
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Sags, cm</th>
<th>Tension</th>
<th>Wind, N/m²</th>
<th>Ice, mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>−20 °C</td>
<td>40 m</td>
<td>21</td>
<td>1.2</td>
<td>400</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>27</td>
<td>0.8</td>
<td>450</td>
<td>0.0</td>
</tr>
<tr>
<td>−10 °C</td>
<td>50 m</td>
<td>33</td>
<td>0.7</td>
<td>500</td>
<td>0.0</td>
</tr>
<tr>
<td>0 °C</td>
<td>55 m</td>
<td>40</td>
<td>0.6</td>
<td>600</td>
<td>0.0</td>
</tr>
<tr>
<td>10 °C</td>
<td>60 m</td>
<td>48</td>
<td>0.6</td>
<td>700</td>
<td>0.0</td>
</tr>
<tr>
<td>20 °C</td>
<td>65 m</td>
<td>55</td>
<td>0.5</td>
<td>800</td>
<td>0.0</td>
</tr>
<tr>
<td>30 °C</td>
<td>70 m</td>
<td>60</td>
<td>0.5</td>
<td>900</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td>74</td>
<td>0.5</td>
<td>1000</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Sags, cm</th>
<th>Tension</th>
<th>Wind, N/m²</th>
<th>Ice, mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>−20 °C</td>
<td>40 m</td>
<td>64</td>
<td>1090</td>
<td>400</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>82</td>
<td>1090</td>
<td>450</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>50 m</td>
<td>101</td>
<td>1090</td>
<td>500</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>55 m</td>
<td>122</td>
<td>1090</td>
<td>600</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>60 m</td>
<td>145</td>
<td>1090</td>
<td>700</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>65 m</td>
<td>170</td>
<td>1090</td>
<td>800</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>70 m</td>
<td>197</td>
<td>1090</td>
<td>900</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td>227</td>
<td>1090</td>
<td>1000</td>
<td>0.0</td>
</tr>
<tr>
<td>30 °C</td>
<td>40 m</td>
<td>55</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>70</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>50 m</td>
<td>86</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>60 m</td>
<td>104</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>65 m</td>
<td>124</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>70 m</td>
<td>146</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td>169</td>
<td>109</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>50 °C</td>
<td>40 m</td>
<td>63</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>80</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>50 m</td>
<td>99</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>60 m</td>
<td>119</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>65 m</td>
<td>142</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>70 m</td>
<td>167</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td>193</td>
<td>95</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>100 °C</td>
<td>40 m</td>
<td>80</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>101</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>50 m</td>
<td>125</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>60 m</td>
<td>151</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>65 m</td>
<td>180</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>70 m</td>
<td>211</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td>245</td>
<td>75</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

SEE DETAILED CODE PROPOSAL
Table 108

Sags and tensions for #2 ACSR (6/1) with 75 m (250 ft) ruling span
(See Rule 75-604 and 75-606.)

**Initial sags and tensions for stringing**

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55 m</td>
<td>60 m</td>
</tr>
<tr>
<td></td>
<td>Sag, cm</td>
<td>lb</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>34</td>
<td>41</td>
</tr>
<tr>
<td>–10 ºC</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>0 ºC</td>
<td>49</td>
<td>58</td>
</tr>
<tr>
<td>10 ºC</td>
<td>58</td>
<td>68</td>
</tr>
<tr>
<td>20 ºC</td>
<td>64</td>
<td>76</td>
</tr>
<tr>
<td>30 ºC</td>
<td>71</td>
<td>84</td>
</tr>
</tbody>
</table>

**Final sags and tensions for design**

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cond. temp., Wind, N/m²</td>
<td>Ice, mm</td>
</tr>
<tr>
<td></td>
<td>Sag, cm</td>
<td>lb</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>400</td>
<td>12.5</td>
</tr>
<tr>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

SEE DETAILED CODE PROPOSAL
Table 109

Sags and tensions for #1/0 ACSR (6/1) with 60 m (200 ft) ruling span

(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sag cm</td>
<td>lb</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>23</td>
<td>426</td>
</tr>
<tr>
<td>–10 ºC</td>
<td>27</td>
<td>345</td>
</tr>
<tr>
<td>0 ºC</td>
<td>33</td>
<td>288</td>
</tr>
<tr>
<td>10 ºC</td>
<td>38</td>
<td>249</td>
</tr>
<tr>
<td>20 ºC</td>
<td>43</td>
<td>220</td>
</tr>
<tr>
<td>30 ºC</td>
<td>48</td>
<td>198</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td>Sag cm</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>56</td>
</tr>
<tr>
<td>30 ºC</td>
<td>54</td>
</tr>
<tr>
<td>50 ºC</td>
<td>63</td>
</tr>
<tr>
<td>100 ºC</td>
<td>80</td>
</tr>
</tbody>
</table>

**SEE DETAILED CODE PROPOSAL**
Table 110

Sags and tensions for #1/0 ACSR (6/1) with 75 m (250 ft) ruling span
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Sag, cm</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>–20 °C</td>
<td>35</td>
<td>513</td>
<td>2.3</td>
<td>12</td>
</tr>
<tr>
<td>–10 °C</td>
<td>42</td>
<td>426</td>
<td>1.9</td>
<td>10</td>
</tr>
<tr>
<td>0 °C</td>
<td>51</td>
<td>360</td>
<td>1.9</td>
<td>8.4</td>
</tr>
<tr>
<td>10 °C</td>
<td>58</td>
<td>313</td>
<td>1.4</td>
<td>7.3</td>
</tr>
<tr>
<td>20 °C</td>
<td>64</td>
<td>278</td>
<td>1.2</td>
<td>6.5</td>
</tr>
<tr>
<td>30 °C</td>
<td>73</td>
<td>251</td>
<td>1.1</td>
<td>5.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Wind, N/m²</th>
<th>Ice, mm</th>
<th>Sag, cm</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td></td>
<td></td>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
<td>70 m</td>
</tr>
<tr>
<td>–20 °C</td>
<td>400</td>
<td>12.5</td>
<td>91</td>
<td>109</td>
<td>128</td>
<td>148</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 °C</td>
<td>0</td>
<td>0</td>
<td>82</td>
<td>97</td>
<td>114</td>
<td>132</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 °C</td>
<td>0</td>
<td>0</td>
<td>94</td>
<td>112</td>
<td>131</td>
<td>152</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 °C</td>
<td>0</td>
<td>0</td>
<td>120</td>
<td>143</td>
<td>168</td>
<td>194</td>
<td>223</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SEE DETAILED CODE PROPOSAL
Table 111

Sags and tensions for #3/0 ACSR (6/1) with 60 m (200 ft) ruling span
(See Rule 75-604 and 75-606.)

**Initial sags and tensions for stringing**

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span 40 m</th>
<th>45 m</th>
<th>50 m</th>
<th>55 m</th>
<th>60 m</th>
<th>65 m</th>
<th>70 m</th>
<th>75 m</th>
<th>Tension lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>–20 ºC</td>
<td>21</td>
<td>27</td>
<td>33</td>
<td>40</td>
<td>51</td>
<td>56</td>
<td>65</td>
<td>75</td>
<td>686</td>
<td>1.2</td>
<td>10.3</td>
</tr>
<tr>
<td>–10 ºC</td>
<td>27</td>
<td>34</td>
<td>42</td>
<td>51</td>
<td>61</td>
<td>72</td>
<td>83</td>
<td>95</td>
<td>554</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>0 ºC</td>
<td>33</td>
<td>42</td>
<td>51</td>
<td>62</td>
<td>74</td>
<td>87</td>
<td>101</td>
<td>116</td>
<td>462</td>
<td>0.8</td>
<td>6.9</td>
</tr>
<tr>
<td>10 ºC</td>
<td>37</td>
<td>47</td>
<td>58</td>
<td>71</td>
<td>86</td>
<td>99</td>
<td>114</td>
<td>131</td>
<td>398</td>
<td>0.7</td>
<td>5.9</td>
</tr>
<tr>
<td>20 ºC</td>
<td>43</td>
<td>55</td>
<td>67</td>
<td>82</td>
<td>96</td>
<td>114</td>
<td>132</td>
<td>152</td>
<td>351</td>
<td>0.6</td>
<td>5.3</td>
</tr>
<tr>
<td>30 ºC</td>
<td>48</td>
<td>60</td>
<td>74</td>
<td>90</td>
<td>107</td>
<td>126</td>
<td>146</td>
<td>167</td>
<td>317</td>
<td>0.6</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Final sags and tensions for design**

| Loading condition | Span | Cond. temp. | Wind, N/m² | Ice, mm | 40 m | 45 m | 50 m | 55 m | 60 m | 65 m | 70 m | 75 m | Tension lb | kN | % RTS |
|-------------------|------|-------------|------------|---------|------|------|------|------|------|------|------|------|------|-----------|----|-------|
|                   |      | –20 ºC      | 400        | 12.5    | 50   | 63   | 78   | 94   | 112  | 131  | 152  | 175  | 1756      | 7.7 | 26.3  |
|                   |      | 30 ºC       | 0          | 0       | 54   | 69   | 85   | 103  | 122  | 143  | 166  | 191  | 282       | 1.3 | 4.2   |
|                   |      | 50 ºC       | 0          | 0       | 61   | 77   | 95   | 115  | 137  | 161  | 186  | 214  | 247       | 1.1 | 3.7   |
|                   |      | 100 ºC      | 0          | 0       | 79   | 100  | 124  | 150  | 178  | 209  | 242  | 278  | 192       | 0.8 | 2.9   |

SEE DETAILED CODE PROPOSAL
Table 112

Sags and tensions for #3/0 ACSR (6/1) with 75 m (250 ft) ruling span
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
<td>70 m</td>
<td>75 m</td>
</tr>
<tr>
<td>-20 ºC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>35</td>
<td>42</td>
<td>50</td>
<td>57</td>
<td>66</td>
</tr>
<tr>
<td>-10 ºC</td>
<td></td>
<td>42</td>
<td>51</td>
<td>59</td>
<td>69</td>
<td>79</td>
</tr>
<tr>
<td>0 ºC</td>
<td></td>
<td>51</td>
<td>60</td>
<td>71</td>
<td>82</td>
<td>94</td>
</tr>
<tr>
<td>10 ºC</td>
<td></td>
<td>58</td>
<td>68</td>
<td>80</td>
<td>93</td>
<td>107</td>
</tr>
<tr>
<td>20 ºC</td>
<td></td>
<td>67</td>
<td>79</td>
<td>93</td>
<td>108</td>
<td>124</td>
</tr>
<tr>
<td>30 ºC</td>
<td></td>
<td>73</td>
<td>86</td>
<td>101</td>
<td>118</td>
<td>135</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
<td>70 m</td>
<td>75 m</td>
</tr>
<tr>
<td>Wind, N/m²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice, mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
<td>70 m</td>
<td>75 m</td>
</tr>
<tr>
<td>-20 ºC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>12.5</td>
<td>81</td>
<td>96</td>
<td>113</td>
<td>131</td>
<td>150</td>
</tr>
<tr>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
<td>82</td>
<td>97</td>
<td>114</td>
<td>132</td>
</tr>
<tr>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
<td>93</td>
<td>111</td>
<td>130</td>
<td>151</td>
</tr>
<tr>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
<td>119</td>
<td>141</td>
<td>166</td>
<td>193</td>
</tr>
</tbody>
</table>

SEE DETAILED CODE PROPOSAL
OESC Code Rule 6-112

Description of the change: Amend Rule

Background

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within general section 6

Rationale

Added Subrule (1)
Ontario Bulletin 75-3-* has had the requirements of proposed subrule (1) for years. The requirements for the point of attachment are consistent with industry practices and provide clarification and clear direction within the Rule to ensure a safe installation, this direction is consistent with the published installation requirements.

Amend Subrule (2)
Subrule (2) is the existing adopted Ontario Amendment for the attachment point of a supply or consumer service conductor. The rule as written appears to dictate the height of the supply authority’s conductor which falls under Distribution Regulation 22/04. Deleted clearances of 4.5m and 6.0m have been added as a proposal to Rule 75-706(3).

Added Subrule (4)
Subrule references Specification 28 which provides a clear and concise graphic representation of a service mast installation; the reference is removed from Section 75 and relocated to section 6 as the requirements are applicable to all services.

Delete Subrule (6)
Subrule is deleted as it is no longer required. Subrule (1) and (4) provide clear direction.
6-112 Support for the attachment of overhead supply or consumer’s service conductors
(see Appendix B)

Delete CE Code Rule 6-112(1) and replace with:
1) A means of attachment shall be provided for all supply or consumer’s service conductors in accordance with the following:
   a) A single point of attachment as identified in figure 1 of specification 35 utilizing a 16mm bolt with a 5mm x 50mm x 100mm backing plate with 5mm x 50mm x 50mm washers; or
   b) A two hole bracket point of attachment as identified in figure 3 of specification 35
      i) In wood frame walls attached with a minimum of two, 9.5mm diameter by 100m long lag screw penetrating at least 75mm into the solid wood utilizing prebored pilot holes plus counterbores for proper installation; or
      ii) In brick block or concrete walls with a minimum of two, 9.5mm diameter by 47mm long expanding type sleeve anchor or equivalent installed in a 50mm clearance hole; or
   c) A single point of attachment as identified in figure 1 of specification 35 utilizing a 16mm thru bolt with a 5mm x 50mm x 50mm washers or equivalent for a pole
   d) A single point of attachment as identified in Specification 35 figure 4 utilizing a 12mm u-bolt when attached to a service mast

Delete CE Code Rule 6-112(2) and replace with:
(2) The point of attachment of supply or consumer service conductors shall be not less than 4.5 m nor more than 9 m above sidewalk or grade. level and shall be located such that the clearance of supply conductors at any point above finished grade shall be not less than the following:
   (a) 4.5 m on properties accessible to pedestrians and passenger vehicles only; or
   (b) 6 m on properties accessible to commercial and farm vehicles.

(2) The point of attachment of supply or consumer’s service conductors shall not exceed 9 m above grade or sidewalk and shall be located such that the clearance of supply conductors at any point above finished grade shall be not less than the following:
   (a) across highways, streets, lanes, and alleys: 5.5 m;
   (b) across driveways to residential garages: 4 m;
   (c) across driveways to commercial and industrial premises: 5 m; and
   (d) across ground normally accessible to pedestrians only: 3.5 m.

(3) Exposed service conductors that are not higher than windows, doors, and porches shall have a clearance of not less than 1 m from the windows, doors, or porches.

Delete CE Code Rule 6-112(4) and replace with:
(4) Where service masts are used, they shall
   a) Be of metal and assembled from components suitable for service mast use;
   b) Shall be attached to the building as shown in specification 28; and
   c) Guyed, if required in accordance with Rule 6-118

(4) Where service masts are used, they shall be of metal and assembled from components suitable for service mast use.

(5) Rigid steel conduit of a minimum nominal size of 63 trade size shall be permitted to be used for the purpose of Subrule (4), provided that all other requirements for a service mast are complied with.

Delete CE Code Rule 6-112(6)
(6) Bolts shall be used for securing the support at the point of attachment, and if attached to wooden structural members, the latter shall be not less than 38 mm in any dimension.

(7) The supply or consumer’s service conductor support shall not be attached to the roof of a structure, except as permitted in Subrule (8).

(8) Notwithstanding Subrule (7), it shall be permitted to fasten the upper service mast support and the eye bolt, to which a guy wire is attached, to a main structural member of the roof such as a roof rafter, a roof truss, or the equivalent.
OESC Code Rule 6-116

Description of the change: Amend Rule

Background

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within general section 6

Rationale

This amendment recognizes the specific requirements for Central metering services and the amended height requirements when a service is built in accordance with Specification 41. Subrule (c) recognizes Specification 41. Specification 41 is a graphic representation of installation requirements for Central metering for secondary drop-leads 4/0 AWG and smaller. With this specific type of installation the service head is installed below the metering CT on the pole and below the support for attachment of the overhead service conductors.

Code Proposal:

6-116 Consumer’s service head location

The consumer’s service head or equivalent shall be installed:
(a) in compliance with the requirements of the supply authority; and
(b) in such a position that the point of emergence of the conductors from the consumer’s service head or the equivalent is a minimum of 150 mm and a maximum of 300 mm above the support for attachment of the overhead service conductors.
(c) notwithstanding subrule (b) for central metering installations on a pole the emergence of the secondary service conductors from the weatherhead shall be permitted to be installed as per the appropriate dimensions as identified in specification 41

Return to Proposed Changes

OESC Code Rule 6-118

Description of the change: Add Rule

Background

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within general section 6

Rationale

This is deleted Rule 75-316 from the Ontario Amendments. It identifies when guys are required for service masts, references Specification 28 to illustrate the requirements to guy a service mast and provides clarification on materials to be utilized for guying. All are consistent with standard trade practice.
Code Proposal:

6-118 Guys on service masts

(1) Where the distance from the upper support clamp on the service mast to the point of attachment exceeds 1.5 m, or where the span exceeds 30 m, or the weather loaded tension is known to exceed 270 kg (600 lbs), the mast shall be guyed in accordance with Specification 28.

(2) Guy wires shall
(a) be of stranded steel;
(b) have a diameter of at least 6 mm (1/4 in); and
(c) be galvanized or corrosion resistant.

Return to Proposed Changes

OESC Code Rule 30-002

Description of the change: Amend Rule

Background

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within amendatory section 30.

Rationale

The definition of Roadway lighting Systems is relocated from Rule 75-002 to 30-002.

Code Proposal:

30-002 Special terminology (see Appendix B)

In this Section, the following definitions apply:
Cabinet lighting system — a complete, extra-low-voltage lighting assembly consisting of a plug-in power supply having a Class 2 output, luminaires, wiring harness, and connectors, intended for surface or recessed mounting under a shelf or similar structure or in an open or closed cabinet.
Cable lighting system — a permanently connected extra-low-voltage lighting system that comprises an isolating-type transformer with bare secondary conductors for connection to one or more luminaire heads.
Landscape lighting system — an extra-low-voltage lighting system consisting of an isolating-type power supply, luminaire assemblies, and fittings to provide flood or decorative lighting for gardens, walkways, patio areas, or similar outdoor locations and for specific indoor locations such as atriums and malls.
Recessed luminaire — a luminaire that is designed to be either wholly or partially recessed in a mounting surface.
Recessed luminaire — a luminaire that is designed to be either wholly or partially recessed in a mounting surface.

Recessed luminaire, Type IC (intended for insulation contact) — a recessed luminaire designed for installation in a cavity filled with thermal insulation and permitted to be in direct contact with combustible materials and insulation.

Recessed luminaire, Type IC, inherently protected (intended for insulation contact) — a recessed luminaire that does not require a thermal protective device and cannot exceed the maximum allowable temperatures under all conceivable operating conditions.

Recessed luminaire, Type Non-IC (not intended for insulation contact) — a recessed luminaire designed for installation in a cavity with minimum dimensions and spacings to thermal insulation and combustible material.

Recessed luminaire, Type Non-IC, marked spacings (not intended for insulation contact) — a recessed luminaire designed for installation in a cavity where the clearances to combustible building members and thermal insulation are specified by the manufacturer.

Undercabinet lighting system — a complete, extra-low-voltage lighting assembly consisting of a plug-in power supply having a Class 2 output, luminaires, wiring harness, and connectors, intended for surface mounting only under a shelf or similar structure or in an open or closed cabinet.

Roadway lighting systems — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on a Municipal or a Provincial right of way.

Return to Proposed Changes

OESC Code Rule 30-1007

Description of the change: Added new rule

Background

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within amendatory section 30.

Rationale

Nowhere in section 30 (Permanent outdoor floodlighting installations) is there a Rule that addresses the installation of luminaires installed on poles containing primary lines. Rule 75-1000(1) and (3) are amended and relocated to section 30-1007(1) and (2) respectively under a new heading Pole mounted clearances. Subrule (2) has been amended to recognize that the supply authority is responsible for all equipment installed on their distribution poles under
Ontario Reg. 22/04 and any luminaire installed on their pole would need to meet the 3\textsuperscript{rd} party attachment requirements of the supply authority.

**Code Proposal:**

<table>
<thead>
<tr>
<th>30-1007 Pole mounted clearances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Where pole-mounted luminaires are installed on poles carrying the conductors of a primary line, the luminaire shall be at least 3 m below the primary conductors.</td>
</tr>
<tr>
<td>2) Notwithstanding Subrule (1) where the supply authority owns the distribution pole, the clearance requirements are permitted to meet the third party attachment requirements of the supply authority.</td>
</tr>
</tbody>
</table>

**OESC Code Rule 30-1012**

**Description of the change:** Amend rule

**Background**

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within amendatory section 30 as well as amend section 30 to remove Rules contained in section 75 for installation of lines.

**Rationale**

Deleted Subrule (c)

Subrule (c) deleted and replaced with “in accordance with section 75”.

Subrule (c) requires a deviation in accordance with Rule 2-030 every time a luminaire is to be installed on a pole with insulated or un-insulated exposed wiring. The deviation requirement is not required as safe installation requirements are already published in section 75. It further provided requirements on the installation method of the branch wiring as well as signage requirements on the pole that is already covered in more detail in section 75. Section 75 deals directly with the safe installation methodology and signage requirements for pole top branch wiring. In an effort to eliminate duplication as well as provide clear and concise direction regarding line installations the reference to section 75 is included as the alternative.
OESC Code Rule 30-1020

Description of the change: Amend rule

**Background**

Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within amendatory section 30 as well as amend section 30 to remove Rules contained in section 75 for installation of lines.

**Rationale**

Added subrule (2) as this was existing relocated Rules 75-1000(4).

**Code Proposal:**

### 30-1020 Switching of floodlights

1) Switches controlling floodlights shall comply with the following:
   (a) a switch on the primary side of a transformer shall be capable of making and interrupting the full load on the transformer;
   (b) switches controlling floodlights from the secondary side of a transformer shall have a current rating not less than 125% of the current requirements of the floodlights controlled;
   (c) switches shall be capable of being operated without exposing the operator to danger of contact with live parts, either by remote operation or by proper guarding; and
   (d) switches shall be capable of being locked in the OFF position.

2) Where pole-mounted luminaires are controlled from more than one point by switches, each switch shall be wired and connected so that the identified (neutral) conductor runs directly to the luminaire(s) controlled by it.
OESC Code Rule 30-1300

Description of the change: Added new rule

Background
Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within amendatory section 30.

Rationale
Rule 75-1002(1) and (2) are relocated to Rule 30-1300(1) and (2) respectively. Rule 75-706(5) is relocated to Rule 30-1300(4).

Subrule (3) recognizes that the Authority having Jurisdiction has specific requirements regarding any installation on its plant.

Code Proposal:

30-1300 Roadway lighting systems

(1) Roadway lighting systems shall be installed in accordance with Rule 2-024(3) and Rules 30-1000 to 30-1036, except that Rule 30-1006(1) need not apply.
(2) In-line fuseholders shall be acceptable to satisfy the requirements of Rules 30-1002 and 30-1008, for single luminaires fed from overhead distribution systems where a dedicated roadway lighting bus is not available.
(3) Grounding and bonding of roadway lighting luminaires shall be as required by the Authority Having Jurisdiction over the infrastructure installed on the public right of way.
(4) Notwithstanding Subrule (1) for high and low voltage line installations on public right of ways, for the purpose of roadway lighting systems or traffic control systems, CSA C22.3 No. 1, Overhead systems, or the Ontario Provincial Standards shall be permitted.

Return to Proposed Changes

OESC Code Section 75

Description of the change: Amend Section title

Background
Ontario amendatory Section 75 – Installation of lines and wiring of buildings is being amended to remove any Rules which should be contained within general Section 6 and amendatory Section 30.

Rationale
Section 75 deals specifically with the installation of lines as defined in Rule 75-002 Special Terminology.

Lines are defined as a distribution system, with further definition relating to the specific operating voltage. The reference to “and wiring of buildings” is misleading as not all installations referenced in Section 75 deal with buildings, additionally other sections of the OESC deal with wiring of buildings.
Code Proposal:

Section 75 – Installation of powerlines and wiring of buildings.

Return to Proposed Changes

OESC Code Rule 75-002

Description of the change: Addition and removal of definitions

Background
Rule 75-002 Special terminology is definitions which apply to specific rules in Section 75.

Rationale
Deletion for the term “PCP”:
PCP is not referenced within Section 75 and already has a descriptor within Table 102. For consistency with the other pole treatment types, the special terminology definition should be deleted as it provides no value.

Addition for the term “Pipeline”:
Definition is required to be added to identify the intent of the application described in Rule 75-004 General requirements. Appendix B has been added as additional information.

Deletion for the term “Pole mounted lighting systems”:
The definition of Pole mounted lighting systems is to be added into Section 30 Installation of lighting equipment where it belongs. Section 75 scope applies to the installation of primary and secondary lines.

Deletion for the term “Roadway lighting systems”:
The definition of Roadway lighting systems is to be added into Section 30 Installation of lighting equipment where it belongs. Section 75 scope applies to the installation of primary and secondary lines.

Code Proposal:

75-002 Special terminology (see Appendix B)

75-002 Special terminology
In this Section, the following definitions apply:

ACSR — aluminum conductor, steel reinforced.

Classified — poles graded according to strength whereby the minimum circumferential dimensions are determined so that all poles of the same class, regardless of length, will withstand the same horizontal force applied in accordance with CSA O15 series for wood poles; CSA G40.21 series for steel poles; CSA A14 series for concrete poles and ASCE Manual No. 104 for fibre-reinforced polymer.

CMS — Central Metering System.

Distribution system — the system by which electrical power or energy is distributed to the receiving equipment and includes components such as primary line, secondary line, services, distribution transformers, distribution equipment, and other equipment of a similar nature.

Free-standing pole — a pole structure and base assembly that is installed with engineering direction without the use of guys. includes phase conductors and includes a bare neutral.
**Lines**

- **Primary line** — a distribution system operating at more than 750 V but not more than 50 000 V phase-to-phase.
- **Secondary line** — a distribution system operating at 750 V or less.

**Neutral-supported cable** — two or three insulated conductors and a bare neutral.

**Open wire bus** — a secondary line conductor with a weatherproof covering on the PCP — wood poles treated with pentachlorophenol.

**Pole-mounted lighting systems** — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on private premises.

**Power conductor** — a conductor that conveys electrical power or energy and is not part of a communication circuit.

**Roadway lighting systems** — a system of luminaires, poles, sign luminaires, underpass illumination, cables, power supply equipment, control system, and associated materials required to provide illumination on a roadway or associated appurtenances on a Municipal or a Provincial right of way.

**Pipeline** — those items through which gases, liquids, or solids are conveyed, including pipe, components, and any appurtenances attached thereto, up to and including the isolating valves used at stations and other facilities.

---

**Appendix B Rule 75-002**

**Pipelines:**

(1) Pipelines include all associated branches, extensions, tanks, reservoirs, pumps, racks, compressors, loading facilities, and other outside works.

(2) A pipeline does not include pipe-type electric power cables.

(3) Pipelines can be above-ground or underground.

---

**Return to Proposed Changes**

**OESC Code Rule 75-004**

**Description of the change:** Amend Rule

**Background**

General Requirements contain information to assist the applicant of other obligations when installing overhead or underground powerlines.

**Rationale**

Amend Subrule (1)

The wording has been changed to be consistent with current code language. The second change ensures compliance with the supply authority requirements not just a consultation with the supply authority.

Amend Subrule (2)

The wording has been changed to be consistent with current code language.

Amend Subrule (4)

The wording has been changed to be consistent with current code language. The removal and relocation of clearance requirements has been placed under the heading Primary and Secondary line clearances in Rule 75-706(4).
Added Subrule (5)
Added Subrule to identify the applicant has an obligation to acquire approval from the Authority Having Jurisdiction (AHJ) when installing overhead and underground powerlines under or over navigational waterways.

Added Subrule (6)
Added Subrule to identify the applicant has an obligation to acquire approval from the AHJ when installing overhead or underground powerlines crossing over or under pipelines. Pipeline owners are required by regulation to control activity on the pipeline right of ways.

Added Appendix B note for Subrule (5) to identify some or all of the AHJ’s involved in the approval.

**Code Proposal:**

<table>
<thead>
<tr>
<th>Code Proposal:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>75-004 General requirements (see Appendix B)</strong></td>
</tr>
<tr>
<td>(1) Where the work consists of the installation of a service, the contractor shall consult the supply authority shall be consulted as to the layout of the service and the location of the transformer and meter, to ensure regarding compliance with applicable codes or standards under a rule or by-law of the supply authority.</td>
</tr>
<tr>
<td>(2) Where the work consists of the installation of conductors over or under a railway, a plan of the crossing endorsed by the railway company with an approval of the work shall be submitted to the inspection department. The contractor shall submit to the inspection department a plan of the crossing endorsed by the railway company with an approval of the work.</td>
</tr>
<tr>
<td>(3) Where approval is required from the supply authority by this Rule, such approval shall be obtained prior to commencement of any work with respect to the installation.</td>
</tr>
<tr>
<td>(4) Where the conductors of a primary or secondary line crosses over or under a public road, the crossing shall not be made without written permission from both the supply authority and the authority having jurisdiction over the road. and shall have the minimum clearance as specified in Rule 75-706(1).</td>
</tr>
<tr>
<td>(5) Where the work consists of the installation of overhead or underground circuits traversing navigable waterways, including commercial, recreational, and secondary waterways, permission shall be obtained from the authorities having jurisdiction of the waterway.</td>
</tr>
<tr>
<td>(6) Where the work consists of the installation of overhead or underground circuits traversing above ground or underground pipeline systems, permission shall be obtained from the authorities having jurisdiction of the pipelines.</td>
</tr>
</tbody>
</table>

**Appendix B Rule 75-004(5)**

The authority having jurisdiction may be one or more of the following; Transport Canada, Canadian Coast Guard and or a provincial body. Navigable waters include all bodies of water that you can navigate from one place to another by any type of floating vessel for transportation, recreation or commerce.

Return to Proposed Changes
OESC Code Rule 75-006

Description of the change: Delete entire Rule

Background
The use of privately owned poles for joint use of power and communications circuits does not require the owner to seek approval from the Supply Authority or the Communication circuit operator as the pole is the private property of the owner. Currently the Communication Companies require 3rd party approval as per Ont. Regulation 22/04 if they are to install their system on the Supply Authority’s poles.

Rationale
Removal of this rule will eliminate confusion since this only applies to public right of ways.

Code Proposal:

<table>
<thead>
<tr>
<th>75-006 Joint use of poles for communications circuits and power conductors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power conductors and communication circuits shall not be carried on common poles unless written consent for the joint use of the poles is obtained from the supply authority and the operators of the communication circuits.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes

OESC Code Rule 75-100

Description of the change: Amend Subrule

Background
The current rule is written allowing other materials to be used for the support of overhead wiring. However, the rule does not inform the user that it has to be authorized by the Authority Having Jurisdiction.

Rationale
This proposal will eliminate any confusion on who deems the other material as acceptable or not. The addition to sub rule (e) requires the applicant to receive approval from the authority having jurisdiction to determine if the “other acceptable material” meets the intent of the OESC’s definition of acceptable (not presenting an undue hazard to persons or property under the circumstances). This addition provides clarification on who is responsible for making this determination.
**OESC Code Rule 75-104**

Description of the change: Amend Rule

**Background**
Currently the way the rule is written, the private owner of the poles and powerlines are required to receive approval from the supply authority when using a pole mount into rocks. The rule also requires the pole mount to be installed as per specification 5 which is based on one manufacturer’s product.

**Rationale**
Amend Subrule (5)
The supply authority has no jurisdiction on privately owned land; as such reference for supply authority requirements has been removed. Manufacturers of rock mounts contain different installation methods. Referring to a specification may contradict manufacturer’s installation instruction, as such the specification has been deleted and its reference as well.

Add new Subrule (6)(c)
The Subrule has been relocated from Rule 75-314(7) “Guying of steel poles” which was located under the incorrect rule. This is an amendment to the general requirements of 75-104 for the use of swamp cribbing.
OESC Code Rule 75-106

Description of the change: Amend Rule

Background
Inspectors have been asked if field drilling into a concrete or steel pole is permitted. There currently are no rules preventing field drilling, however done incorrectly can jeopardize the integrity of the pole.

75-104 Setting of poles

(1) Where a pole having a length shown in column 1 of Table 104 is set in earth, the butt end of the pole shall be buried to a depth at least that prescribed in column 2 of Table 104.

(2) Where a pole having a length shown in column 1 of Table 104 is set in solid rock using a rock auger, the butt end of the pole shall be buried to a depth at least that shown in column 2 of Table 104, less
   (a) 30 cm for fair rock and limestone; or
   (b) 60 cm for solid rock, granite or massive limestone.

(3) Where poles are installed on slopes or hillsides, the depth of the hole shall be measured from the lower side of the opening.

(4) Corner and dead-end poles shall be offset away from anchor, or raked towards the anchor in accordance with Specifications 3 and 4.

(5) Pole mounts are acceptable on rock for wood poles, in accordance with Specification 5, when in accordance with a code or standard under a rule or by-law of the supply authority. Pole mounts are acceptable for wood poles on rock.

(6) Where it is impossible impracticable to employ the above methods,
   (a) poles shall be cribbed in accordance with
      (i) Specification 6 — Swamp cribbing with steel culvert section for wood poles; or
      (ii) Specification 7 — Swamp cribbing with steel culvert section for wood poles with butt of pole not reaching solid earth at normal setting depth.
   (b) when bedrock is encountered, pole setting reduction using filled steel culverts as a partial substitute shall be permitted for normal soil setting depth, provided that
      (i) the use of steel culverts is limited to situations where the lack of readily available equipment for rock removal (by blasting or drilling);
      (ii) the number of steel culverts, when used, is limited to two adjacent pole locations; and
      (iii) the installation is conducted in accordance with Specification 8.
   (c) Swamp cribbing for steel poles shall be permitted to be used only where permitted by and in accordance with the manufacturer’s instructions.
Rationale
Amend Subrule (2)
Subrule only applies to equipment installed on wood poles for climbing purposes only. Concrete, steel and fibre-reinforced poles can only be accessible by aerial device. The use of aerial devices is commonly used to access poles. Climbing a pole is only required when the location doesn't permit aerial device access. Therefore if a pole is located in an area which is accessible by an aerial device, the 2/3 pole circumference clear for climbing clearance is not required. OSHA does not permit the climbing of a pole when accessible by an aerial device; this change will recognize the OSHA requirements and bring the section into conformance.

Add Subrule (5)
Subrule (5) does not to permit the drilling of concrete, steel and fiber-reinforced pole manufactures. When done in an incorrect manner, penetrating the surface of a concrete or steel pole may introduce corrosion of the material and may weaken the pole.

Add Subrule (6)
Subrule (6) will only permit drilling in specific locations of their poles and with special permission by pole manufacturers engineered drawing and drilling procedures.

Code Proposal

75-106 Equipment attached to poles

(1) No electrical equipment shall be attached to the poles of a supply authority without permission of the supply authority.

(2) Equipment mounted on a wood pole shall be mounted on the same 1/3 continuous pole circumference leaving the remaining 2/3 of the continuous pole circumferences clear for climbing purposes when not accessible by an aerial device.

(3) Stainless steel bands shall not be used as the sole support for electrical equipment installed on wooden poles.

(4) Electrical equipment installed on metal or concrete poles shall be permitted to be supported by stainless steel strapping and buckles that shall have a minimum support strength of 4.5 kN.

(5) Field drilling of steel, concrete and fiber-reinforced poles for supporting electrical equipment shall not be permitted.

(6) Notwithstanding subrule (5), field drilling of steel, concrete and fiber-reinforced poles shall only be permitted with the pole manufacturers engineered drawings and adherence to an approved drilling procedures supplied by the manufacturer.
OESC Code Rule 75-120

Description of the change: Amend Rule

Background
There have been discrepancies in regards to customer owned poles installed which will support supply authority’s equipment. The supply authority has asked for a higher rated class pole above the OESC’s requirements.

Rationale
Amend Subrule (2)
The language has been amended for ease of understanding. Industry practice has determined that the species of the pole has no bearing on the acceptability of a used pole. The merit of utilizing a used pole is now judged based on the criteria established in subrules (a) to (d). The 10 year age restriction is unnecessary based on the other criteria.

Added Subrule (3)(d)
Subrule (3)(d) has been added to include the requirements of the supply authority when the supply authority’s equipment and lines are installed on customer owned poles. Since the supply authority is fully responsible for all their equipment and lines under Ontario Regulation 22/04 regardless where it is located, they may require a higher class pole to support their equipment or lines.

Delete Subrule (4)
Subrule (4) has been deleted as it is now captured in amended subrule (2)

Code Proposal

75-120 Wood poles

(1) The pole “Species — Treatment” combinations listed in Table 102 are acceptable for new installations.

(2) Notwithstanding Rule 75-100, pressure-treated pine and butt-treated western cedar used poles for new lines can be re-used may be installed provided: that the poles are classified, are not more than 10 years old, have no visible signs of damage, and their re-use is lawful under Rule 2-030.
   (a) the poles are classified;
   (b) have no visible signs of damage;
   (c) are listed in Table 102; and
   (d) have been authorized by the inspection department before the pole is set in the ground.

(3) Wood poles shall adhere to the following requirements:
   (a) a transformer pole shall be a minimum of class 5 and in accordance with the requirements of Table 103;
   (b) a single-phase primary line pole or a secondary line pole shall be a minimum of class 7; or
   (c) a three-phase primary line pole shall be a minimum of class 5; or
   (d) meet the requirements of the supply authority when the supply authority’s equipment and lines are installed on the poles.

(4) Notwithstanding Rule 75-100, a used wood pole may be used on secondary lines only after its condition has been checked by the inspection department and before the pole is set in the ground.
OESC Code Rule 75-140

Description of the change: Amend Rule

Background

Currently the rule does not permit the use of a used steel pole to be used for primary lines. If a steel pole is in a state of good repair, there should be no reason not to permit the pole to be used for primary lines.

Rationale

Delete Subrule (4)
Delete existing subrule (4) and replace with new subrule (4), This Subrule should not restrict used poles to secondary line only. Steel poles should be permitted to be used for primary or secondary as long as they are in a state of good repair and are acceptable to the inspection department. This change is consistent with the amended used pole rule 75-120.

Add Subrule (5)
This Rule is relocated from Rule 75-314(3) “Guying of steel pole”. It confirms that the top and bottom plate are required to be installed and fall under the heading of steel poles not the heading of guying of steel poles.

Code Proposal

75-140 Steel pole requirements
(1) The poles shall be manufactured in compliance with the designs used to assign classes and other applicable requirements in CSA C22.3 No. 1.
(2) The poles shall be galvanized.
(3) Evidence of compliance with Subrules (1) and (2) shall be included in a report from a certification organization or from a professional engineer.
(4) Notwithstanding Rule 75-100, a used steel pole can be used on secondary lines only after it is authorized by the inspection department prior to being set in the ground.
(4) The baseplate and top cap shall be installed.
(5) Notwithstanding Rule 75-100, used poles for new lines may be installed:
(a) provided the poles are classified;
(b) have no visible signs of damage; and
(c) have been authorized by the inspection department before the pole is set in the ground.

Return to Proposed Changes

OESC Code Rule 75-142

Description of the change: Added reference to Appendix B

Background

The information provided in the Appendix B note refers to corrosion protection not marking of steel poles. Currently Appendix B note references the incorrect Rule 75-144 “Marking of steel poles”.

Rationale
Adding reference to Appendix B will clarify the intent of the rule. Currently the Appendix B note which describes corrosion protection is referencing Rule 75-144 Marking of steel poles instead of Rule 75-142.

Code Proposal

75-142 Steel pole installations in known corrosive soils (see Appendix B)
Additional below-grade corrosion protection shall be required for steel poles set directly in soil where there is knowledge or a history of aggressive corrosion of steel or iron in the soil.

Appendix B Rule 75-144-142
For situations where aggressive corrosion exists, the steel pole manufacturer shall be consulted for appropriate additional below-grade corrosion protection such as polyurethane coatings or other proven methods. Where the embedded section of a steel pole is fully coated, proper grounding can be achieved by utilizing the threaded insert provided above the groundline on the pole to connect to a driven ground rod.

Return to Proposed Changes

OESC Code Rule 75-144

Description of the change: Remove reference to Appendix B and amend Rule

Background
Currently the way the Subrule is written, would allow someone to design to other than grade 2 requirements and not mark it. The information provided in the Appendix B note refers to corrosion protection not marking of steel poles.

Rationale
Removing reference to Appendix B will avoid confusion to this rule. This Appendix B reference to has been added to rule 75-142 "Steel pole installations in known corrosive soils"

Amending Subrule (2) ensures proper design and markings in conformance with the original design criteria utilized for section 75.

Code Proposal

75-144 Marking of steel poles (see Appendix B)
(1) The poles shall be side marked above the ground line in accordance with Table 104, with manufacturer's code or trademark and with the last two digits of the year of manufacture, pole class, and length.

(2) The pole class marking used for pole design loads shall have equivalency with the wood pole classes 1, 2, 3, 4, 5, and 6 as set out in CAN/CSA-O15, where the equivalency is based on the requirements for Grade 2 construction as defined in CSA C22.3 No. 1.

(2) The pole class shall be marked with the wood pole equivalency of Grade 2 construction as defined in CSA C22.3 No. 1 for classes 1, 2, 3, 4, and 5 as set out in CAN/CSA-O15.

Return to Proposed Changes
OESC Code Rule 75-160

Description of the change: Remove Subrule (2)

**Background**
Concrete poles contain reinforcing bars twist tied together with metal wire. Manufacturing standards requires the reinforcing metal of the pole to have provision for grounding.

**Rationale**
Subrule (2) is not required since this is a product standard requirement as indicated in Subrule (1).

**Code Proposal**

<table>
<thead>
<tr>
<th>75-160 Concrete poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Concrete pole shall be manufactured in accordance with CAN/CSA A14-Concrete Poles; and</td>
</tr>
<tr>
<td>(2) Concrete poles shall have provision for grounding of the reinforcing metal of the pole.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes

OESC Code Rule 75-162

Description of the change: Amend Subrule (2)

**Background**
Currently the rule does not permit the use of a used concrete pole to be used for primary lines. If a concrete pole is in a state of good repair, there should be no reason not to permit the pole to be used for primary lines.

**Rationale**
Delete existing Subrule (2) and replace with new Subrule. This Subrule should not restrict used poles to secondary line only, concrete poles should be permitted to be used for primary or secondary as long as they are in a state of good repair and are acceptable to the inspection department. This change is consistent with the amended used pole Rule 75-120.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-162 Concrete pole selection (see Appendix B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Accepted pole classes shall be in accordance with the equivalencies in Table 101.</td>
</tr>
<tr>
<td>(2) Notwithstanding Rule 75-100, a used concrete pole may be used on secondary lines only after its condition has been checked by the inspection department and before the pole is set in the ground.</td>
</tr>
<tr>
<td>(2) Notwithstanding Rule 75-100, used poles for new lines can be used provided:</td>
</tr>
<tr>
<td>(a) the poles are classified;</td>
</tr>
<tr>
<td>(b) have no visible signs of damage; and</td>
</tr>
<tr>
<td>(c) have been authorized for use by the inspection department before the pole is set in the ground.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes
OESC Code Rule 75-180

Description of the change: Amend Subrule (1) and delete Subrule (2)

**Background**
To be consistent with other pole type requirements of Section 75, Subrule (2) has been located to new Rule 75-182 Marking of Fibre-reinforced polymer poles.

**Rationale**
Amend Subrule (1)
Spelling of “Fiber” in the title of the manual changed since this is the American published document.

Delete Subrule (2)
Deleted and relocated to new Rule 75-182 Marking of Fibre-reinforced polymer poles to be consistent with other pole types.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-180 Fibre-reinforced polymer poles (see Appendix B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Fibre-reinforced polymer poles shall be manufactured in accordance with ASCE Manual 104, “Recommended Practice for Fibre Fiber-Reinforced Polymer Products for Overhead Utility Line Structures”.</td>
</tr>
<tr>
<td>(2) Fibre-reinforced polymer pole shall be side marked above the ground line in accordance with Table 104, with manufacturer’s code or trademark, and with the last two digits of the year of manufacture, pole class, and length.</td>
</tr>
</tbody>
</table>

OESC Code Rule 75-182

Description of the change: Added new rule

**Background**
New code rule to be consistent with other pole type requirements of Section 75

**Rationale**
Added new code rule to be consistent with other pole type requirements in Section 75. New Subrule (2) added to provide clarification on grade of construction and marking requirements for pole class.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-182 Marking of fibre-reinforced polymer poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Fibre-reinforced polymer poles shall be side marked above the ground line in accordance with Table 104, with manufacturer’s code or trademark, and with the last two digits of the year of manufacture, pole class, and length.</td>
</tr>
<tr>
<td>(2) The pole class shall be marked with the wood pole equivalency of Grade 2 construction as defined in CSA C22.3 No. 1 for classes 1, 2, 3, 4, and 5 as set out in CAN/CSA-O15.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes
OESC Code Rule 75-184

Description of the change: Added new rule

**Background**
New code rule to be consistent with other pole type requirements of Section 75

**Rationale**
Added new code Rule to be consistent with other pole type requirements in Section 75.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-184 Depth of setting of Fibre-reinforced polymer poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth of setting for Fibre-reinforced polymer poles shall be as per manufacturer's installation instructions but in no case less than Table 104.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes

OESC Code Rule 75-200

Description of the change: Added new Subrule

**Background**
The installation of overhead primary and secondary lines is illustrated in the Specifications Section of the OESC. As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
The addition of Subrule (2) was relocation from Rule 75-314(6). It has been relocated under this heading as it amends Subrule (1) under this heading. The relocation is consistent with the rearrangement of the certain rules under the appropriate headings.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-200 Pole Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Poles used in primary lines shall be framed according to the following Specifications:</td>
</tr>
<tr>
<td>Specification 9 — Primary, 1-phase, 2.4 to 8 kV, maximum span 90 m.</td>
</tr>
<tr>
<td>Specification 10 — Primary, 1-phase, 2.4 to 16 kV, maximum span 90 m.</td>
</tr>
<tr>
<td>Specification 11 — Primary, 3-phase, 2.4/4.16 to 8.0/13.8 kV.</td>
</tr>
<tr>
<td>Specification 12 — Primary, 3-phase, 2.4/4.16 to 16/27.6 kV.</td>
</tr>
<tr>
<td>Specification 13 — Primary, 3-phase, line angles 4°–90°, 2.4/4.16 to 16/27.6 kV.</td>
</tr>
<tr>
<td>Specification 14 — Primary, 3-phase, crossarm, 2.4/4.16 to 16/27.6 kV.</td>
</tr>
<tr>
<td>Specification 15 — Primary, 3-phase, underbuilt, 2.4/4.16 to 16/27.6 kV.</td>
</tr>
<tr>
<td>Specification 16 — Primary, 3-phase, 44 kV.</td>
</tr>
<tr>
<td>Specification 17 — Primary, 3-phase, line angles 4°–90°, 44 kV.</td>
</tr>
<tr>
<td>Specification 18 — Primary, 3-phase, crossarm, 44 kV.</td>
</tr>
<tr>
<td>(2) The distance from the top of a steel pole down to the top bolt for pole line hardware shall be permitted to be 10 cm rather than the 15 or 20 cm used for wood poles.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes
OESC Code Rule 75-202

Description of the change: Added new Subrule

**Background**

Fiber-reinforced polymer crossarms are a new technology which is becoming commonly known in the industry.

**Rationale**

New subrule (3) added to recognize the use of fibre-reinforced polymer crossarms. ASCE Manual 104 is a recognized reference in CSA 22.3 No. 1 Overhead Systems. Appendix B note added as a reference to the current ASCE Manual.

**Code Proposal**

75-202 Crossarms *(see Appendix B)*

1. Crossarms, if made of wood shall
   a. be Douglas Fir, Western Larch, Western Hemlock, Yellow Cypress, Jack Pine, or Lodgepole Pine; and
   b. have dimensions in accordance with Specification 29 and be at least 120 mm wide and 95 mm thick.

2. Steel crossarms shall have dimensions in accordance with Specification 30.

3. Fibre-reinforced polymer Crossarms shall be manufactured in accordance with ASCE Manual 104.

**Appendix B Rule 75-180, 75-202**

The use of fiber-reinforced poles and Crossarms shall adhere to the design principles of CSA C22.3 No.1 Overhead Systems.

**Reference publication**

ASCE (American Society of Civil Engineers)

Manual 104-2003, Recommended Practice for Fibre Fiber-Reinforced Polymer Products For Overhead Utility Line Structures, as referenced in CSA C22.3 No. 1.

Return to Proposed Changes

OESC Code Rule 75-300

Description of the change: Amend rule

**Background**

Amendment to entire rule to clean up and align anchor and guying requirement rules.

**Rationale**

Amend heading-
Amend Title to reflect the fact the Subrules below are all requirements and that they are not only for change of direction but for any anchoring or guying requirements

Amend Subrule (1)
Deleted text as specification 26 is all inclusive of dead end and change of direction arrangements.
Delete Subrule (2)
Deleted text as specification 26 is all inclusive of dead end and change of direction arrangements.

Added new Subrule (2)
Old Rule 75-306(4) is amended to provide clarification and exemption for no guying requirements less than 10m for secondary service taps; primary service taps and transformer installations would still need guys. This rule deals with the arrangement of a guy and when it is not required, it amends Subrule (1) and should be placed with Subrule (1).

Amend Subrule (3)
Rule amended to include terminal poles guying requirements in addition to transformer poles. The installation of a pole top switch would need to meet the requirements of guying unless specifically engineered otherwise. This amendment recognizes that any terminal pole will require guying.

Delete Subrule (4)
Deleted as it is now a requirement of subrule (3)

Added new Subrule (4)
Added to recognize that free-standing poles when engineered for a specific application, will be accepted with the appropriate documentation. This amended Rule is taken from Old amended Subrule 75-306(8) as it deals with the question of when guying is required and has been relocated to the heading of Anchoring and Guy requirements.

Added new Subrule (5)
Added to recognize industry practice storm guying applications. Specification 26 provides direction to storm guying yet no subrule existed identifying when they would be required. This subrule provides guidance on this requirement.

Added new Subrule (6)
Relocated from Subrule 75-314(2) under this heading as it deals with the requirements of anchoring and guying for steel poles and is in addition to Subrule (1).
Code Proposal

75-300 Anchoring for change of line direction and guy requirements
(1) Arrangement of guys and anchoring for change of line direction shall be in accordance with Specification 26.
(2) Arrangement of guys and anchoring for dead-end construction shall be in accordance with Specification 26.
(2) Notwithstanding Subrule (1), a guy is not required for a dead-ended temporary secondary service tap where the span does not exceed 10 m.
(3) Transformer or terminal poles fed from underground circuits with no overhead distribution shall have three down guys placed approximately 120° apart and attached below the transformer equipment.
(4) Subrule 3 does not apply to free-standing terminal poles.
(4) Guys shall not be required for support of a free-standing terminal pole where the specific pole installation includes a design drawing for the pole and supporting base, and the design drawing shall be from the pole manufacturer or shall be signed by a professional engineer.
(5) Storm guys shall be installed for long tangent lines between guyed angled structures and shall not exceed 5 spans.
(6) The number and placing of guys on steel poles, in addition to meeting the requirements of this Code, shall be in accordance with the manufacturer’s recommendations.

Return to Proposed Changes

OESC Code Rule 75-304

Description of the change: Amend rule

Background
Amend rule to include the guy attachment point on the pole.

Rationale
The Attachment point on the pole is already prescribed in the framing requirements of Rule 75-200 and the appropriate specifications. This amendment ties the guy height and anchor distance to each other under this revised heading.

Code Proposal

75-304 Anchor distance from pole and guy attachment ratio
(1) The distance of an anchor from its pole shall be at least one-third the height of the pole above ground.
(2) Guying ratios (Height: Lead Distance) shall be between 3:1 and 2:3.

Return to Proposed Changes
OESC Code Rule 75-306

Description of the change: Amend rule

**Background**
General clean up of rule. Added additional rules to the color and number of guy guards required on a guy wire.

**Rationale**

**Amend Subrule (1)(b)**
Added size & strength of guy wire in metric and imperial.

**Amend Subrule (1)(c)**
Added galvanization requirement for guy wires; Class A is dry/desert, Class C is salt-laden or foggy, Class B is elsewhere.

**Delete Subrule (2)**
Relocated to Rule 75-300(1) Anchoring and guy requirements, as this Subrule pertains to the arrangement of guys.

**Delete Subrule (3)**
This Subrule is already covered in Rule 75-300(1)

**Delete Subrule (4)**
This Subrule is already covered in Rule 75-300(2)

**Re-number Subrule (5) to (2)**

**Re-number Subrule (6) to (3) and amend Subrule**
Provide color requirements as guy guards are manufactured in different colors, this amendment provides clarification on the color requirements. Guy guards are intended for protection of the guy as well as a visible marker to avoid damage, or injury.

**Add new Subrule (4)**
In areas of excessive snow, the guy guards may become buried in snow and not visible. This amendment recognizes the potential safety risk this may cause in areas near skiers and snowmobilers and requires 2 guards installed one above the other on the same guy in these areas.

**Re-number Subrule (7) to (5)**

**Delete Subrule (8)**
Deleted as it is now relocated to Rule 75-300 (4) Anchoring and guy requirements
### 75-306 Guy wires and guards

(1) Guy wires shall
   (a) be of 7-strand steel;
   (b) have a diameter of at least 9 mm (3/8 in), grade 1300 (grade 180); and
   (c) be class B coating weight galvanized.

(2) Arrangement of guys shall be in accordance with Specifications 25, 26, and 39.

(3) Suitable guys shall be required for dead-ended temporary service that is mounted on a treated post and for spans greater than 10 m.

(4) Notwithstanding Subrules (2) and (3), a guy is not required for dead-ended temporary service that is mounted on a pole and where the span does not exceed 10 m.

(5) Guy guards shall be installed at all locations.

(6) The guy guard shall be made of plastic and shall be coloured bright yellow to provide good visual identification for public safety.

(7) Two guy guards shall be installed one above the other on the same guy in areas where the snow depth may be excessive such as near ski slopes or snowmobile trails.

(8) Where two or more guys are attached to one anchor, a guy guard shall be installed on both the innermost and outermost down guys.

### OESC Code Rule 75-308

**Description of the change:** Amend Subrule (1) and add new Subrules (4), (5) and (6)

**Background**
Section 75 contains no rules on how to attach a guy wire to the anchor.

**Rationale**

**Amend Subrule (1)**
Re-wrote Subrule to now list the requirements into item numbers. Also added item (d) to identify where the guys will be attached to the pole since other rules in section 75 does not identify the attachment location of the guy to the pole; this will close the loop on the framing requirements of 75-200.

**Added Subrules (4) (5) and (6)**
This change addresses the connection methods at the anchor and the number of 3-bolt clamps required which the OESC is silent. It is also a place to consider inclusion of automatic guy wire strain deadends.

According in CSA C83-96 Communications and Power Line Hardware, Item Standard C863.52-96 defines the holding strength of a guy clamp by the slip strength test. The Slip Strength Test states:“The clamp shall have a minimum slip strength of 26 kN (5824 lbf) for 3mm of slip when tested with an 8mm (5/16") galvanized steel strand.” Testing on 9mm (3/8”), galvanized steel strand has shown that slip occurs at a similar tensile force.
8mm (5/16") steel strand, with 1 guy clamp
- Minimum - Single Clamp Slip Test (no safety factor applied): 5824 lbf or 26 kN
- Grade 1300, Maximum allowed Design Load, grade 2 construction: 9500 lbf or 42.4 kN

9mm (3/8") steel strand, with 1 guy clamp
- Minimum - Single Clamp Slip Test (no safety factor applied): 5824 lbf or 26 kN
- Grade 1300, Maximum allowed Design Load, grade 2 construction: 10900 lbf or 48 kN

**Code Proposal**

<table>
<thead>
<tr>
<th>75-308 Guys on poles and anchors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1)</strong> A guy wire shall be attached to the pole with an approved fitting shown in Specification 27 in the manner prescribed in Specification 3 and in such a way that there is no contact between the guy wire fitting or its mounting bolt and any ground wire on the pole.</td>
</tr>
<tr>
<td><strong>(2)</strong> Acceptable pre-formed guy grips may be used in place of the approved fitting mentioned in Subrule (1)(a).</td>
</tr>
<tr>
<td><strong>(3)</strong> The back of an insulator through bolt shall not be used as an attachment point for guys.</td>
</tr>
<tr>
<td><strong>(4)</strong> A guy wire shall be attached to the anchor with a minimum of three 3-bolt clamps.</td>
</tr>
<tr>
<td><strong>(5)</strong> Notwithstanding Subrule (4), where other than grade 1 construction is employed the minimum number of 3-bolt clamps shall be two.</td>
</tr>
<tr>
<td><strong>(6)</strong> Acceptable pre-formed guy grips or automatic guy wire strain deadends may be used in place of the approved methods mentioned in Subrule (4) and (5).</td>
</tr>
</tbody>
</table>

**OESC Code Rule 75-310**

**Description of the change:** Amend entire rule

**Background**
Amend entire rule to clarify the attachment locations of a guy insulator to avoid further confusion.

**Rationale**

**Amend Subrule (1)**
Subrule (1) has been revised to clarify the strain insulator location as prescribed in Specification 25 and new Specification 25.1.

**Amend Subrule (2)**
Subrule (2) has been revised to include the relocated Subrule 75-312(2). By eliminating 75-312(2) and replacing existing 75-310 clarification is provided. Additionally, Rule 75-310 deals with the location of a strain insulator not the construction of a span guy.
New Subrule (3)
Subrule (1) was relocated from Rule 75-314(1) since this rule specifically prescribes strain insulators on pole guys.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-310 Strain insulator on pole guys</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Every guy shall have a strain insulator installed in the manner prescribed in Specification 25, and pre-formed guy grips suitable for the purpose may be used instead of 3-bolt clamps.</td>
</tr>
<tr>
<td>(1) Strain insulators shall be installed in all guy assemblies. The strain insulator shall:</td>
</tr>
<tr>
<td>(a) be located as prescribed in Specification 25 and 25.1 such that under broken guy conditions the insulator will fall below all power attachments;</td>
</tr>
<tr>
<td>(b) fall above the communication attachment if present</td>
</tr>
<tr>
<td>(c) fall no less than 250cm above grade.</td>
</tr>
<tr>
<td>(2) A second strain insulator at a point below the point of possible contact of the conductor and guy wire shall be installed in accordance with Specification 25 where</td>
</tr>
<tr>
<td>(a) the guyed pole carries a transformer or a fused switch; and</td>
</tr>
<tr>
<td>(b) the breaking of a guy wire could cause a part of the guy wire below the strain insulator to fall against a conductor carried by the pole.</td>
</tr>
<tr>
<td>(2) Where the span between the guyed pole and stub pole crosses over or under conductors operating at a potential of more than 150 V to ground, a second strain insulator shall be installed to isolate the section of the span guy between the crossing conductors and the stub pole and not less than 250 cm from the stub pole, in accordance with Specification 25.1</td>
</tr>
<tr>
<td>(3) Notwithstanding subrule (1), guys directly attached to steel poles need not have a strain insulator, and the attachment hardware shall be suitable for the pole.</td>
</tr>
</tbody>
</table>

**Return to Proposed Changes**

**OESC Code Rule 75-312**

Description of the change: Delete 75-312(2)

**Background**

General clean up rule.

**Rationale**

Delete Subrule (2)
Relocated to 75-310(2) “Strain Insulator on guy poles” since the rule specifically deals with the requirements of a strain insulator.
OESC Code Rule 75-314

Description of the change: Delete entire rule

**Background**
General clean up rule. The current rule contains sub rules which do not pertain to the guying requirements of a steel pole.

**Rationale**
Delete Subrule (1)
Subrule (1) relocated to Rule 75-310(3) since this rule specifically prescribes strain insulators on pole guys.

Delete Subrule (2)
Subrule (2) relocated to 75-300(7). This rule deals with the arrangement of guys for steel poles and belongs under the 75-300 heading.

Delete Subrule (3)
Subrule (3) relocated to 75-140(4) as this rule is a requirement of a steel pole.

Delete Subrule (4)
Subrule (4) relocated to rule 75-402(2) as this rule deals with insulators on steel poles and belongs under that heading.

Delete Subrule (5)
Subrule (5) relocated to 75-402(3) as this rule deals with insulators and belongs under that heading.

Delete Subrule (6)
Subrule (6) relocated to Rule 75-200(2) as this rule amends the framing requirements as identified in 75-200

Delete Subrule (7)
Subrule (7) relocated to 75-104(7) as this is an amendment to the general requirements of 75-104(6) for the use of swamp cribbing.
Code Proposal

**OESC Code Rule 75-316**

Description of the change: Delete entire rule

**Background**
General clean up rule. The current rule contains sub rules pertaining to overhead service equipment.

**Rationale**
The application of this rule pertains to the support of a service mast. This rule is being relocated to Section 6- Service and service equipment new Ontario Amendment Rule 6-118.

**Code Proposal**

75-316 Guys on service masts

(1) Notwithstanding Rule 75-310, guys directly attached to steel poles need not have a guy insulator, and the attachment hardware shall be suitable for the poles.

(2) The number and placing of guys, in addition to meeting the requirements of this Code shall be in accordance with the manufacturer’s recommendations.

(3) The baseplate and top cap recommended by the manufacturer for the poles shall be installed.

(4) Clamps for the neutral conductor shall be a type designed for the poles.

(5) Spool-type insulating supports shall not be permitted.

(6) The distance from top of the pole down to the top bolt for pole line hardware shall be permitted to be 10 cm rather than the 15 or 20 cm used for wood poles.

(7) Swamp cribbing shall be permitted to be used only where permitted by and in accordance with the manufacturers’ instructions.
**OESC Code Rule 75-402**

Description of the change: Add new Subrules

**Background**
As a general cleanup, other rules in Section 75 dealing with insulators on steel poles are combined into one rule.

**Rationale**
Add Subrule (2)
Relocated from Rule 75-314(4) as this rule deals with insulators on steel poles and belongs under the steel pole insulator heading rather than its existing heading of guying on steel poles.

Add Subrule (3)
Relocated from 75-314(5) as this rule deals with insulators on steel poles and belongs under the steel pole insulator heading rather than its existing heading of guying on steel poles.

**Code Proposal**

<table>
<thead>
<tr>
<th>75-402 Insulators on steel poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Insulators that may be mounted directly on grounded steel structures are specified in Table 100.</td>
</tr>
<tr>
<td>(2) Clamps for the neutral conductor shall be a type designed for the poles</td>
</tr>
<tr>
<td>(3) Spool-type insulating supports shall not be permitted.</td>
</tr>
</tbody>
</table>

[Return to Proposed Changes]

**OESC Code Rule 75-406**

Description of the change: Delete Subrules

**Background**
As a general cleanup, Rule 75-406 contains rules about service masts placed in the wrong section.

**Rationale**
Delete Subrule (1)(c)
In order to avoid duplication, Subrule (1)(c) has been deleted since service mast requirements already exist in Section 6 of the OESC.

Delete Subrule (2)
In order to avoid duplication, Subrule (2) has been deleted since service mast requirements already exist in Section 6 of the OESC.
OESC Code Rule 75-502

Description of the change: Revised Subrule

Rationale
Revised Subrule (3)
Table 19 of the OESC permits RWU to be utilized in raceways and in underground installations; it does not identify RWU as an approved wiring method for exposed wiring. Due to the robust nature of RWU type cables, subrule (3) permits the use of RWU type cables for aerial installation. RWU type cables are certified in accordance with CSA standard C22.2 No. 38 and when marked with “SR” is suitable to be installed outdoors exposed to sun. Rule 2-130 requires insulated electrical wiring and cables installed and used where exposed to direct rays of the sun to be specifically approved for the purpose and be so marked. As RWU comes in both sunlight resistant and non-sunlight resistant types, it is prudent to identify the requirement for sunlight resistance rating to avoid any confusion/contradiction with the code.

Code Proposal

75-502 Overhead secondary line conductors
(1) Overhead cables shall be
(a) neutral-supported cables of Type NS75 or Type NS90 or
(b) Open wire buss
(2) Individual conductors of the moisture-resistant, rubber-insulated type suitable for exposed wiring where exposed to the weather as specified in Table 19 and lashed together with a messenger cable, shall be
(a) stranded; and
(b) not less than No. 12 AWG copper or No. 10 AWG aluminium.
(3) RWU type cables are acceptable for aerial installation and can be lashed together with a messenger cable provided they are sunlight resistant rated and so marked.
OESC Code Rule 75-504

Description of the change: Amend Rule

Background
Currently the rule permits only one type of connector to be used; revised to include other options.

Rationale
Revised rule to recognize wedge type connectors are acceptable on overhead to meet current industry practice.

Code Proposal

75-504 Compression Connections
Compression connectors are required for all overhead current carrying connections. Connectors for all overhead current-carrying connections shall be compression or wedge type.

OESC Code Rule 75-506

Description of the change: Amend Subrule

Background
Submarine cables are used in installations when the cables are required to cross a body of water. The rule recognizes current manufacturing standards.

Rationale
The availability of HV submarine cable is limited, and there is more availability of cables from this particular standard. This standard is a recognized standard for Primary Shielded and Concentric Neutral Cable for Distribution Utilities.

Code Proposal

75-506 Submarine power cable
Submarine power cables shall be manufactured to one of the following Standards:
(a) ICEA S-95-658/NEMA WC70;
(b) ICEA S-96-659/NEMA WC71;
(c) ICEA S-93-639/NEMA WC74; or
(d) CSA C68.10; or
(e) CSA C68.5
OESC Code Rule 75-604

Description of the change: Amend Rule

Background
General revision to Rule 75-604 to avoid duplication of rules.

Rationale
Amended heading and expanded text to eliminate duplication of 75-606

Code Proposal

<table>
<thead>
<tr>
<th>75-604 Sag between poles or between poles and buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open wire bus, neutral-supported cable, and ACSR shall be installed so that the sag of the conductors between poles or between poles and a building is determined by using Tables 105 or 107 to 112 whichever is applicable to the size and type of conductor being installed and with respect to applicable span and temperature.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes

OESC Code Rule 75-606

Description of the change: Delete Rule

Background
General revision to Rule 75-606 to avoid duplication of rules.

Rationale
Rule is redundant as this is captured in Rule 75-604.

Code Proposal

<table>
<thead>
<tr>
<th>75-606 Sag between pole and building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open wire bus, neutral-supported cable, and ACSR shall be installed so that the sag of the conductors between a pole and a building is determined by using Tables 105 or 107 to 112 whichever is applicable to the size and type of conductor being installed and with respect to applicable span and temperature.</td>
</tr>
</tbody>
</table>

Return to Proposed Changes

OESC Code Rule 75-702

Description of the change: Amend Rule

Background
This rule specifies the in span clearance between the communication wire and the supply conductor.
Rationale
The addition of “at maximum sag” will provide clarification on where the measurements are to be taken on a span going to a building. “distance” is changed to “separation” for consistency within the section. “at line of sight” is added to also provide clarification and be consistent with other rules in the section. This clarification provides consistent application of the measuring criteria already utilized everywhere in the code, specifically with specification 4.

Code Proposal

75-702 Clearances in service span
Where the voltage of power conductors is not more than 750 V, the distance separation between the power conductors at maximum sag and a communication drop-wire at line of sight in the service span from a pole to a building shall be not less than 300 mm.

Return to Proposed Changes

OESC Code Rule 75-706

Description of the change: Amend Rule

Background
The wording in the current rule has caused some confusion when to build a primary line to the requirements of the rule or refer to Table 34. Furthermore, the secondary line clearance requirements were different as specified in Section 6.

Rationale
Subrule (1)(2)
Delete Subrule (1) to eliminate conflict between Subrule 1 and 2. The clearance requirements whether reviewed or not by the plan department shall be consistent. The existing wording within subrule (2) would permit a lower clearance height based entirely on submission and not on approval of the submission. The notion that plan submission should permit a lower clearance requirement is false as the drawings submitted don’t include any relevant information that would necessitate the difference in clearance heights.

Subrule 2
Renumbered to subrule (1) and is amended providing clarification on where the measurements are taken. This amendment is consistent with all the other Rules relating to measuring.

Subrule (3)
Renumbered to subrule (2) and clarified to meet the minimum height of 6.1m as required by Table 34. The modifications to subrule (2)(3) reflect the need for the primary neutral to be higher. Based on the new Rule (3) a 30Ft pole would be acceptable for a primary line built in accordance with the specifications. This would then negate the need of Rule 75-102(a) requiring a 40ft pole. This would leave a 10 stock on top of the line for no reason. With the differentiation of the primary neutral from the secondary, Rule 75-102(a) would be followed and appropriate heights for conductors would be acknowledged.

Subrule (4)
Renumbered to subrule (3) and amended to align and provide consistency with rule 6-112 clearance rules.
New Subrule (4)
The amendment and relocation of the clearances in subrule 75-004(4) to this Rule is appropriate with harmonizing the location of specific rules with the appropriate Rule Title. The amendment of subrule (1) to meet the requirements of Table 34 and the reference to subrule (1) in the old Rule 75-004(4) is also consistent with harmonizing the clearances in the section.

Subrule (5)
Deleted and relocated to Rule 30-1300 under Roadway lighting systems as this subrule deals specifically with Roadway lighting systems and Traffic control systems.

Code Proposal

75-706 Primary and secondary lines clearances

(1) The poles that support the phase conductor of a primary line shall be so located and of such height as to afford a clearance of 7 m measured vertically between the conductors under maximum sag conditions and the ground.

(2) Notwithstanding Subrule (1) For high voltage line installations, where plans are submitted for examination to the inspection department, the clearances listed in the vertical separation between conductors under maximum sag conditions and the ground shall meet the requirements of Table 34.

(3) The primary line neutral shall be not less than 6.1m above finished grade. is an acceptable secondary conductor and shall have the same minimum vertical clearance as specified in Subrule (4).

(4) Conductors of a secondary line shall have a minimum 6.1m measured vertically between the conductors under maximum sag conditions and the ground. be located such that the clearance at any above finished grade measured vertically between the conductors under maximum sag conditions and the ground shall be not less than the following:

(a) 4.5 m on properties accessible to pedestrians and passenger vehicles only; or
(b) 6.1 m on properties accessible to commercial and farm vehicles.

(5) Where conductors are installed over a public road, the vertical separation between conductors under maximum sag conditions and finished grade shall meet the requirements of Table 34.

(6) Notwithstanding Subrule (1) For high and low voltage line installations on public right-of-ways, for the purpose of roadway lighting systems or traffic control systems, CSA 22.3 No.1-06, Overhead systems or the Ontario Provincial Standards shall be permitted.

Return to Proposed Changes
OESC Code Rule 75-708

Description of the change: Amend Rule

**Background**
The wording in the current rule has caused some confusion when to build a primary line to the requirements of the rule or refer to Table 34. Furthermore, the secondary line clearance requirements were different as specified in Section 6.

**Rationale**

**Subrule (1)**
Amended Subrule to include voltages over 69kV by referencing Table 33. Clarification of how the measurements are to be taken is required and the wording amended to be consistent with other rules.

**Subrule (1) and (4)**
Amended Subrules to reflect the current practices established by ESA for inspecting lines. It prevents lines from being installed within safe limits of buildings.

**Subrule (3)**
Deleted Subrule. It is the responsibility of the building authorities to determine if the construction of a building home or structure under a primary line meets the requirements of the OBC.

**Subrule (4)**
Renumbered to subrule (3) – it has also been amended to provide clarification and be consistent with subrule (1).

**Subrule (5)**
Renumbered to subrule (4) – is amended to provide clarification on how the measurement is to be made and is consistent with subrule (1).

**Appendix B note**
Added to clarify the OBC requirements of all buildings to include accessible projections.
Code Proposal

<table>
<thead>
<tr>
<th>Code Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>75-708 Clearances of conductors from buildings (see Appendix B)</strong></td>
</tr>
<tr>
<td>(1) An overhead primary line conductor shall meet the requirements of Table 33 be kept at least 3 m at maximum conductor swing measured from a vertical drop at maximum conductor swing horizontally from a building.</td>
</tr>
<tr>
<td>(2) Primary line conductors shall not be installed over buildings unless the installation is lawful under Rule 2-030, and work shall not begin until the plans and specifications for the work are approved in accordance with Rule 2-010.</td>
</tr>
<tr>
<td>(3) No building, mobile home or structure shall be placed or constructed within at least 3 m at maximum conductor swing measured horizontally from the nearest conductor of an overhead primary line.</td>
</tr>
<tr>
<td>(4) Where the maximum conductor swing is not known, a distance of 1.8 m shall be used.</td>
</tr>
<tr>
<td>(5) An overhead secondary line conductor shall be kept at least 1 m measured from a vertical drop at maximum conductor swing horizontally from any building except where necessary to connect to the electrical wiring of a building.</td>
</tr>
</tbody>
</table>

**Appendix B Rule 75-708**

Article 3.1.19.1 of the Ontario Building Code (OBC) contains clearance requirements when locating a building adjacent to above ground electrical conductors. Horizontal clearances from the building are to include balconies, fire escapes, flat roofs or other accessible projections beyond the face of the building.

Clearance requirements apply to all buildings which fall under Part 3 (buildings of major occupancy and exceeding 3 storeys) and Part 9 (buildings three or fewer storeys) of the OBC.

Clearance of conductors to mobile homes shall meet the same clearance requirements as a building.

---

Return to Proposed Changes

OESC Code Rule 75-710

Description of the change: Amend Rule

**Background**

The amendment of Rule 75-710 will clarify the clearance requirements from structures.

**Rationale**

Amend Title

Amended to be more descriptive of the subrule, and make it consistent with the other clearance rules.

Subrule (1)

The subrule currently specifies specific structure requirements but neglects any unidentified structures that may fall through the cracks. This amendment ensures the minimum requirements for buildings are also applied to other structures. Ontario has had fatalities with workers coming in contact with primary conductors while working on a sign.
**Subrule (1)(b)**
Amended to provide the same clearance requirements as identified in subrule (a). With the removal of pump rods from a well a safe distance is required. Drill rigs typically extend 10m above grade. For consistency with subrule (c) and simplify requirements, 12m was chosen as the appropriate safe distance.

**Subrule (1)(c)**
The exception of free standing structures is to acknowledge an engineered structure is different than a freestanding structure that may fall into the line. The addition of ‘sign’ ensures this Rule would be consistent with the requirements of the building code which classifies a sign as having the same clearance requirements as a building. Ontario has had fatalities with workers coming in contact with primary conductors while working on a sign.

**Subrule (2)**
Amended to be consistent with the minimum requirements of buildings in regards to secondary conductors.

**Subrule (3)**
Deleted Subrule since Rule 2-200 already requires all electrical equipment to be installed and guarded against mechanical damage so that adequate provision is made for the safety of persons and property.

**Appendix B note**
Added to clarify the intent of Subrule (c) to what is considered as a free standing engineered structure.
75-710 Clearances for of conductors from other structures (see Appendix B)

(1) Notwithstanding Rule 36-110, conductors of an overhead primary line shall meet the minimum clearance requirements of Rule 75-708(1),(2) and (3) from a structure; and

(a) not be located closer than 12 m measured horizontally from silos to the closest conductors, with the conductor at rest;

(b) not be located closer than 12m measured horizontally over wells from which pump rods may be lifted and come in contact with the conductors at rest;

(c) except for free standing engineered structures, have sufficient clearance from free-standing poles that support flood or area lighting, signs, flagpoles, antennae, or other similar structures so as to permit the structure to fall in an arc, without touching the conductors at rest;

(d) not be located within 6 m, measured horizontally from wind-mills or similar structures to the closest conductor, with the conductor at rest; and

(e) have a minimum vertical clearance of 3.1 m above fencing at maximum sag.

(2) Conductors of a secondary line shall not be installed closer than 1 m measured horizontally from structures.

(2) An overhead secondary line conductor shall meet the minimum clearance requirements of Rule 75-708(3)(4).

(3) The poles and equipment associated with a primary or secondary line shall be located and suitably protected so as to avoid the possibility of damage from contact with vehicles.

Appendix B

75-710(c) Free standing engineered structures are structures such as wind turbines, communication towers and transmission towers which are engineered to self support and do not rely on lateral supports.
OESC Code Rule 75-806

Description of the change: Amend Rule

Background
The current rule does not address other overhead equipment to be grounded. The amendment will illustrate other means of grounding.

Rationale
Currently Specification 34 only identifies the ground guard and a single note to connect to the ground conductor. The addition of the other specifications provides clarification and consistency on what equipment and how it is to be connected to the down ground.

Code Proposal

75-806 Grounding overhead installations

Grounding for pole-mounted equipment, hardware, crossarms, and/or a system neutral shall be installed in accordance with Specification 34, 38, 40, 41, 42, 43, 44 and 45.

OESC Code Rule 75-810

Description of the change: Amend Rule

Background
Since the supply authority falls under the requirements of Ontario Regulation 22/04 Electrical Distribution Safety this prescriptive rule is not required.
Rationale
Delete Subrules (1) (a), (c)
Subrules are deleted as the Rule dictates what the supply authority must do. This is erroneous as the supply authority is exempt from the OESC and is required to follow Ontario Regulation 22/04 Electrical Distribution Safety. The supply authority is required to have standards of their own.

Delete Subrule (1)(b)
Subrule deleted as it provides direction on what the supply authority requirements may be.

Delete Subrule (2)(3)(4)
Subrules are deleted as the requirements for grounding of services is already prescribed in section 10, thus referencing section 10 eliminates duplication of Rules in the OESC and provides clarification.

Code Proposal

75-810 Grounding a service box on a transformer pole

Where a service box is installed on a transformer pole it shall be grounded as required by section 10. and the supply authority owns the transformation,

(a) the pole-top equipment/system ground conductor and ground electrode shall be installed at the pole by the supply authority;

(b) the contractor shall install a grounding conductor, connect one end to the identified neutral conductor in the service box, bond it to the non-current carrying metal parts of the electrical equipment, and extend at least 500 mm of the ground conductor outside of the service equipment for connection to the supply authority ground conductor; and

(c) the supply authority shall connect the service ground conductor to the supply authority ground wire.

(2) The neutral conductor shall be installed and connected in the service box.

(3) The neutral conductor shall be installed with both the line and the load conductors on the service pole.

(4) Where the transformation is privately owned, the owner shall supply and install all grounding and bonding.

Return to Proposed Changes

OESC Code Rule 75-812

Description of the change: Amend Rule

Background
Editorial

Rationale
Subrule (3)
Editorial change to provide clarification of the Rule.
OESC Code Rule 75-900

Description of the change: Amend Rule

Background
General cleanup of Section 75 to relocate rules which apply to Section 6 Services and service equipment.

Rationale
Subrule (1)
Deleted Subrule (1) since the height of the meter is in conformance with the requirements of the supply authority. Specification 40 has been deleted from this rule as it does not contain a service box as reflected in this rule.

Subrule (2)
Renumbered to Subrule (1)

Subrule (3)
Subrule (3) has been deleted. Public right of ways are governed under who owns the infrastructure and not by private ownership as identified in Section 75.

Code Proposal

75-900 Service box installation

(1) When metering equipment is installed outdoors, the midpoint of the meter shall be located 1750 ± 100 mm, from finished grade, in accordance with Specifications 28 and 40.

(2) Where a service box is installed on a transformer pole, no equipment other than that shown in Specification 41 shall be placed on the pole, except that one temporary service may be attached in addition to the permanent service.

(3) Service boxes shall not be installed on poles located on a public road.
OESC Code Rule 75-902

Description of the change: Amend Rule

**Background**
General cleanup of Section 75.

**Rationale**

Subrule (a)
Subrule has been amended recognizing that secondary breaker or pole-mounted switches may be permitted, but this Rule permits an installation without them. Building has been changed to service to recognize that CMS may feed other services than on a building. The addition of the two Subrules is a reflection of Bulletin 36-11-5. It permits the omission of the disconnecting means for CMS when the supply authority owns and operates the transformer. Additionally, this acknowledges the practice of padmount transformers as being an alternate to pole top transformers.

Subrule (b)
Subrule (b) is deleted as it is already covered in Section 6 and is removed to eliminate duplication.

Subrule (c)
Subrule (c) renumbered to Subrule (b) and amended to identify that all services at a building must be in conformance to Section 6. This cleans up duplication in Section 6. Additionally, this rule recognizes new Rule 10-208 for grounding and bonding in farms that will be in effect in the 2015 code, which would require the service to be installed at a different location than the barn, yet still requiring a disconnecting means at the building.

Subrule (d)
Subrule (d) has been deleted. This rule is already covered in Section 10 and may be removed due to duplication.

Subrule (e)
Subrule (e) has been deleted. This rule is already covered in Section 6 and Section 10 and may be removed due to duplication.

Subrule (f)
Subrule (f) renumbered to Subrule (c).

Subrule (g)
Subrule (g) renumbered to Subrule (d).

Subrule (h)
Subrule (h) renumbered to Subrule (e).

Subrule (i)
Subrule (i) has been deleted. This Rule is already covered in Rule 75-806.

Subrule (j)
Subrule (j) has been amended and relocated to new Rule 75-904 Pole top transfer device.

Subrule (k)
Subrule (k) has been deleted. This Rule is already covered in Rule 75-106(2).
Subrule (l)
Subrule (l) renumbered to Subrule (g) and amended to clarify the restriction is only required for a transformer pole. When a non-transformer pole is utilized, additional services may be permitted due to the additional space provided by no transformer.

Code Proposal

75-902 Central Metering System (CMS):

The following requirements shall apply to the Central Metering System (CMS):

(a) a standard pole-mounted distribution transformer without a secondary breaker or pole-mounted switch shall may be used to supply multi-building service installations when:

(i) there is no customer owned equipment between the transformer(s) and supply authority interface (excluding surge arresters and conductor); and

(ii) written assurance has been received from a supply authority stating it owns and controls the transformer(s);

(b) the method of entry of conductors into a building shall be in accordance with Rules 6-206 and 6-302;

(c) each building shall have a disconnecting means and where the disconnecting means is a service box, it shall be installed as per section 6; main service box at point of entry;

(d) the service equipment shall be bonded to the neutral;

(e) a ground electrode shall be installed at each service box in accordance with Rule 10-700;

(f) new overhead yard wiring shall be

(i) neutral-supported cable with a minimum of No. 2 AWG aluminum, and when in parallel, shall comply with Rule 12-108; and

(ii) notwithstanding Item (i), open wire bus shall be permitted where circuit ampacity exceeds 200 A;

(g) the minimum ampacity of overhead or underground conductors feeding more than one service or building shall be based on 80% of the sum of the ratings of all service boxes supplied;

(h) transformer pole hardware and metering equipment shall be in accordance with Specifications 41, 42, and 43;

(i) if metering is located on other than a transformer pole, the meter socket shall be connected to the ground electrode and the system neutral in accordance with Specification 34;

(j) pole-top switches shall be installed to the following requirements:

(i) the switch shall be approved for the purpose;

(ii) the minimum rating of a transfer switch shall be equal to or greater than 80% of the sum of all service boxes supplied;

(iii) the minimum clearances on the pole shall be those shown on Specification 41;

(iv) underground services shall be in accordance with the requirements of Rule 6-300; and

(v) pole-top transfer switches used in conjunction with Central Metering Systems shall be installed in accordance with Specification 41;
Return to Proposed Changes

OESC Code Rule 75-904

Description of the change: Add new Rule

Background
General cleanup of Section 75.

Rationale
This rule is relocated Rule 75-902(j) from the heading Central Metering Systems as it is applicable to CM and non-CM services. The references are amended to reflect all pole top transfer devices not just switches.
Delete Subrule (d) and (e) as no applicable to Rule and already covered in Subrule (c).

Code Proposal

75-904 Pole top transfer device
Pole-top switches transfer devices shall be installed to the following requirements:
(a) the switch transfer device shall be approved for the purpose;
(b) the minimum rating of a transfer switch device shall be equal to or greater than 80% of the sum of all service boxes supplied;
(c) the minimum clearances on the pole shall be those shown on Specification 41;
(D) underground services shall be in accordance with the requirements of Rule 6-300; and
(e) pole top transfer switches used in conjunction with Central Metering Systems shall be installed in accordance with Specification 41;

Return to Proposed Changes

OESC Code Rule 75-1000

Description of the change: Delete Rule

Background
General cleanup of Section 75.

Rationale
Relocated entire Rule to Section 30 Installation of lighting equipment since the scope of Section 75 pertains to the installation of primary and secondary lines.
Code Proposal

75-1000 Pole-mounted luminaires

(1) Where pole-mounted luminaires are installed on poles carrying the conductors of a primary line, the luminaire shall be at least 3 m below the primary conductors.

(2) Where luminaires are installed on a pole, there shall be signs cautioning that high voltage is present and advising that lamp changing shall be done only by qualified persons.

(3) Notwithstanding Subrule (1) where the supply authority owns the pole-mounted luminaires, the clearance requirement does not apply.

(4) Where pole-mounted luminaires are controlled from more than one point by switches, each switch shall be wired and connected so that the identified (neutral) conductor runs directly to the luminaire(s) controlled by it.

(5) The identified conductor of the circuit supplying the pole-mounted luminaire shall be permitted to be connected to the neutral conductor of a feeder or subfeeder.

(6) Each lighting circuit shall have adequate overcurrent protection, for example, a weatherproof in-line fuseholder assembly is acceptable for this purpose.

(7) All non-current-carrying metal parts of a luminaire shall be bonded to ground in accordance with Section 10.

Return to Proposed Changes

OESC Code Rule 75-1002

Description of the change: Delete Rule

Background
General cleanup of Section 75.

Rationale
Relocated entire Rule to Section 30 Installation of lighting equipment since the scope of Section 75 pertains to the installation of primary and secondary lines.

Code Proposal

75-1002 Roadway lighting systems

(1) Roadway lighting systems shall be installed in accordance with Rule 2-024(3) and Rules 30-1000 to 30-1036, except that Rule 30-1006(1) need not apply.

(2) In-line fuseholders shall be acceptable to satisfy the requirements of Rules 30-1002 and 30-1008, for single luminaires fed from overhead distribution systems where a dedicated roadway lighting bus is not available.

Return to Proposed Changes
Table 33
Description of the change: Amend Table

**Background**
Horizontal clearances of overhead powerlines and structures are referenced in Table 33.

**Rationale**
For consistency of Tables referencing code rules, Rule 75-708 has been added.

**Code Proposal:**

<table>
<thead>
<tr>
<th>Maximum system voltage†, kV</th>
<th>Clearance, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 46.0</td>
<td>3</td>
</tr>
<tr>
<td>69</td>
<td>3.7</td>
</tr>
</tbody>
</table>

*See Appendix B.
†For ungrounded systems, the maximum system voltage is the phase-to-phase voltage, and for grounded systems it is the phase-to-ground voltage.

Table 34
Description of the change: Amend Table

**Background**
Vertical clearances of overhead powerlines to finished grade are referenced in Table 34.

**Rationale**
For consistency of Tables referencing code rules, Rule 75-706 has been amended.

**Code Proposal:**

<table>
<thead>
<tr>
<th>Maximum system voltage†, kV</th>
<th>Minimum vertical clearances above ground, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 25.0</td>
<td>6.1</td>
</tr>
<tr>
<td>34.5</td>
<td>6.7</td>
</tr>
<tr>
<td>46</td>
<td>7</td>
</tr>
<tr>
<td>69</td>
<td>7.6</td>
</tr>
</tbody>
</table>

*See Appendix B.
†For ungrounded systems, the maximum system voltage is the phase-to-phase voltage, and for grounded systems it is the phase-to-ground voltage.

Reference to Proposed Changes
Table 101

Description of the change: Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Amended Table 101 as the current concrete to wood pole class equivalency was out of date.

**Code Proposal**

<table>
<thead>
<tr>
<th>Class</th>
<th>Equivalent class of wood poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>5</td>
</tr>
<tr>
<td>F</td>
<td>4</td>
</tr>
<tr>
<td>G</td>
<td>3</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
</tr>
<tr>
<td>J</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 102

Description of the change: Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Amended Table 102 to include the definition of CCA.
### Table 102

**Wood pole species and treatment combinations**  
*(See Rule 75-120)*

<table>
<thead>
<tr>
<th>Treatment preservative</th>
<th>Acceptable wood pole species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>Coast Douglas fir</td>
</tr>
<tr>
<td>CCA-PEG</td>
<td>Interior Douglas fir</td>
</tr>
<tr>
<td>CCA-ET (oil)</td>
<td>White spruce</td>
</tr>
<tr>
<td>CCA</td>
<td>Red spruce</td>
</tr>
<tr>
<td>ACQ</td>
<td>Western larch</td>
</tr>
<tr>
<td></td>
<td>Jack pine</td>
</tr>
<tr>
<td></td>
<td>White pine</td>
</tr>
<tr>
<td></td>
<td>Red pine</td>
</tr>
<tr>
<td></td>
<td>Lodgepole pine</td>
</tr>
<tr>
<td></td>
<td>South yellow pine*</td>
</tr>
<tr>
<td></td>
<td>Ponderosa pine</td>
</tr>
<tr>
<td></td>
<td>Western hemlock</td>
</tr>
<tr>
<td></td>
<td>Alaska yellow cedar</td>
</tr>
<tr>
<td></td>
<td>Western red cedar</td>
</tr>
<tr>
<td>CCA — WR</td>
<td>Red pine</td>
</tr>
<tr>
<td>Copper naphthenate</td>
<td>Coast Douglas fir</td>
</tr>
<tr>
<td></td>
<td>Jack pine</td>
</tr>
<tr>
<td></td>
<td>Red pine</td>
</tr>
<tr>
<td></td>
<td>Lodgepole pine</td>
</tr>
<tr>
<td></td>
<td>South yellow pine*</td>
</tr>
<tr>
<td></td>
<td>Western red cedar</td>
</tr>
</tbody>
</table>

*Southern Yellow Pine — Penta, which shall have a minimum of .38 pcf (pounds per cubic foot) of treatment preservative level, be kiln dried, and be marked “SPP.38” and “KD”.*

CCA — Chromated Copper Arsenate

---

**Return to Proposed Changes**

### Table 104

**Description of the change: Amend Table**

**Background**

General cleanup of Section 75.

**Rationale**

Delete note at bottom of table  
This table is a representative of all pole types not just wood

Delete note as per Can/CSA-015-1990  
This standard for wood poles only and is not indicative of the other applicable standards

Amend Rule number  
Revised to include revised rule number which now references Table 104
### Table 104

**Depth of setting of poles in soil**

(See Rules 75-104, 75-122, 75-144, 75-146, 75-164, 75-166, and 75-1802)

<table>
<thead>
<tr>
<th>Pole length, m (ft)</th>
<th>Minimum depth of pole (m)</th>
<th>Max. height of marking (m) above grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 (30)</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>10.7 (35)</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>12.2 (40)</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>13.7 (45)</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>15.2 (50)</td>
<td>2.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Wood poles only.*

Note: As per CAN/CSA-O15-1990.

---

**Table 105**

Description of the change: Amend Table

**Background**

General cleanup of Section 75.

**Rationale**

Delete Rule number reference

Rule 75-606 deleted as a reference to Table 105.
Table 105
Sag of neutral-supported cable
( ruling span — 30.0 m)
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Temp. °C</th>
<th>Triplex: 2-No. 4 Polyethylene AL. 1-No. 4 Bare ACSR</th>
<th>Triplex: 2-No. 2 Polyethylene AL. 1-No. 2 Bare ACSR</th>
<th>Triplex: 2-No. 1/0 Polyethylene AL. 1-No. 1/0 Bare ACSR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Span, m</td>
<td>Span, m</td>
<td>Span, m</td>
</tr>
<tr>
<td>-29</td>
<td>127</td>
<td>279</td>
<td>508</td>
</tr>
<tr>
<td>-18</td>
<td>152</td>
<td>330</td>
<td>559</td>
</tr>
<tr>
<td>0</td>
<td>152</td>
<td>356</td>
<td>635</td>
</tr>
<tr>
<td>16</td>
<td>178</td>
<td>406</td>
<td>711</td>
</tr>
<tr>
<td>32</td>
<td>203</td>
<td>432</td>
<td>762</td>
</tr>
</tbody>
</table>

(Continued)

Table 105 (Concluded)

<table>
<thead>
<tr>
<th>Triplex: 2-No. 3/0 Polyethylene AL. 1-No. 1/0 Bare ACSR</th>
<th>Triplex: 2-No. 4/0 Polyethylene AL. 1-No. 3/0 Bare ACSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span, m</td>
<td>Sag, mm</td>
</tr>
<tr>
<td>15</td>
<td>305</td>
</tr>
<tr>
<td>15</td>
<td>305</td>
</tr>
<tr>
<td>305</td>
<td>711</td>
</tr>
<tr>
<td>330</td>
<td>711</td>
</tr>
<tr>
<td>330</td>
<td>737</td>
</tr>
</tbody>
</table>

*Ruling span formula:*
*Ruling span = average span + 2/3 (maximum span — average span)*
**Description of the change: Amend Table**

**Background**
General cleanup of Section 75.

**Rationale**
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 107.

**Code Proposal**

### Table 107

Sags and tensions for #2 ACSR (6/1) with 60 m (200 ft) ruling span
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>Tension</th>
<th>Tension</th>
<th>Tension</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>−20 °C</td>
<td>40 m</td>
<td>21</td>
<td>27</td>
<td>33</td>
<td>40</td>
<td>48</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>45 m</td>
<td>27</td>
<td>34</td>
<td>42</td>
<td>51</td>
<td>61</td>
<td>72</td>
</tr>
<tr>
<td>−10 °C</td>
<td>50 m</td>
<td>33</td>
<td>42</td>
<td>51</td>
<td>62</td>
<td>74</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>55 m</td>
<td>37</td>
<td>47</td>
<td>58</td>
<td>71</td>
<td>84</td>
<td>99</td>
</tr>
<tr>
<td>0 °C</td>
<td>60 m</td>
<td>43</td>
<td>55</td>
<td>67</td>
<td>82</td>
<td>97</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>65 m</td>
<td>48</td>
<td>60</td>
<td>74</td>
<td>90</td>
<td>107</td>
<td>126</td>
</tr>
<tr>
<td>10 °C</td>
<td>70 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>75 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Final sags and tensions for design |

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>Tension</th>
<th>Tension</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td>Wind, N/m²</td>
<td>Ice, mm</td>
<td>40 m</td>
<td>45 m</td>
<td>50 m</td>
<td>55 m</td>
</tr>
<tr>
<td>−20 °C</td>
<td>400</td>
<td>12.5</td>
<td>64</td>
<td>82</td>
<td>101</td>
<td>122</td>
</tr>
<tr>
<td>30 °C</td>
<td>0</td>
<td>0</td>
<td>55</td>
<td>70</td>
<td>86</td>
<td>104</td>
</tr>
<tr>
<td>50 °C</td>
<td>0</td>
<td>0</td>
<td>63</td>
<td>80</td>
<td>99</td>
<td>119</td>
</tr>
<tr>
<td>100 °C</td>
<td>0</td>
<td>0</td>
<td>80</td>
<td>101</td>
<td>125</td>
<td>151</td>
</tr>
</tbody>
</table>

[Return to Proposed Changes]
Description of the change: Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 108.

**Code Proposal**

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Initial sags and tensions for stringing</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>34</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>–10 ºC</td>
<td>42</td>
<td>50</td>
<td>59</td>
</tr>
<tr>
<td>0 ºC</td>
<td>49</td>
<td>58</td>
<td>68</td>
</tr>
<tr>
<td>10 ºC</td>
<td>58</td>
<td>68</td>
<td>80</td>
</tr>
<tr>
<td>20 ºC</td>
<td>64</td>
<td>76</td>
<td>89</td>
</tr>
<tr>
<td>30 ºC</td>
<td>71</td>
<td>84</td>
<td>99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Final sags and tensions for design</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td>Wind, Ice, N/m²</td>
<td>Sag, cm</td>
<td>55 m</td>
</tr>
<tr>
<td>–20 ºC</td>
<td>400</td>
<td>12.5</td>
<td>105</td>
</tr>
<tr>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
<td>84</td>
</tr>
<tr>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
<td>97</td>
</tr>
<tr>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
<td>122</td>
</tr>
</tbody>
</table>

Return to Proposed Changes
Table 109

Description of the change: Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 109.

**Code Proposal**

---

### Table 109

Sags and tensions for #1/0 ACSR (6/1) with 60 m (200 ft) ruling span
(See Rule 75-604 and 75-606.)

| Ambient temperature | Span  | Tension | | | | | |
|---------------------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                     |       | Sag, cm | lb    | kN   | % RTS |
| –20 ºC              | 40 m  | 23      | 426   | 1.9  | 10    |
|                     | 45 m  | 29      | 477   | 1.9  | 11    |
|                     | 50 m  | 35      | 513   | 2.2  | 12    |
|                     | 55 m  | 43      | 581   | 2.6  | 13    |
|                     | 60 m  | 51      | 640   | 3.1  | 14    |
|                     | 65 m  | 60      | 702   | 3.7  | 15    |
|                     | 70 m  | 69      | 766   | 4.3  | 16    |
|                     | 75 m  | 80      | 833   | 5.0  | 17    |
| –10 ºC              | 40 m  | 27      | 345   | 1.5  | 8.1   |
|                     | 45 m  | 34      | 405   | 1.8  | 9.0   |
|                     | 50 m  | 42      | 466   | 2.1  | 10    |
|                     | 55 m  | 51      | 529   | 2.5  | 11    |
|                     | 60 m  | 61      | 592   | 3.0  | 12    |
|                     | 65 m  | 72      | 658   | 3.5  | 13    |
|                     | 70 m  | 83      | 724   | 4.0  | 14    |
|                     | 75 m  | 95      | 792   | 4.6  | 15    |
| 0 ºC                | 40 m  | 33      | 288   | 1.3  | 6.7   |
|                     | 45 m  | 42      | 345   | 1.5  | 8.1   |
|                     | 50 m  | 51      | 405   | 1.8  | 9.0   |
|                     | 55 m  | 62      | 466   | 2.1  | 10    |
|                     | 60 m  | 74      | 529   | 2.5  | 11    |
|                     | 65 m  | 87      | 592   | 3.0  | 12    |
|                     | 70 m  | 101     | 658   | 3.5  | 13    |
|                     | 75 m  | 114     | 724   | 4.0  | 14    |
| 10 ºC               | 40 m  | 38      | 249   | 1.1  | 5.8   |
|                     | 45 m  | 48      | 308   | 1.5  | 7.6   |
|                     | 50 m  | 60      | 370   | 1.9  | 9.4   |
|                     | 55 m  | 72      | 434   | 2.4  | 11    |
|                     | 60 m  | 86      | 500   | 2.9  | 12    |
|                     | 65 m  | 101     | 568   | 3.4  | 13    |
|                     | 70 m  | 117     | 636   | 4.0  | 14    |
|                     | 75 m  | 134     | 704   | 4.6  | 15    |
| 20 ºC               | 40 m  | 43      | 220   | 1.1  | 5.8   |
|                     | 45 m  | 55      | 290   | 1.5  | 7.6   |
|                     | 50 m  | 67      | 353   | 1.9  | 9.4   |
|                     | 55 m  | 82      | 419   | 2.4  | 11    |
|                     | 60 m  | 97      | 487   | 2.9  | 12    |
|                     | 65 m  | 114     | 557   | 3.4  | 13    |
|                     | 70 m  | 132     | 628   | 4.0  | 14    |
|                     | 75 m  | 152     | 699   | 4.6  | 15    |
| 30 ºC               | 40 m  | 48      | 198   | 0.9  | 4.6   |
|                     | 45 m  | 61      | 270   | 1.4  | 6.6   |
|                     | 50 m  | 76      | 335   | 1.9  | 9.4   |
|                     | 55 m  | 92      | 404   | 2.4  | 11    |
|                     | 60 m  | 109     | 475   | 2.9  | 12    |
|                     | 65 m  | 128     | 546   | 3.4  | 13    |
|                     | 70 m  | 147     | 618   | 4.0  | 14    |
|                     | 75 m  | 170     | 690   | 4.6  | 15    |

---

### Table 109

Sags and tensions for design

| Loading condition | Span | Tension | | | | | |
|-------------------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cond. temp.       | Wind, N/m² | Ice, mm | Sag, cm | lb | kN | % RTS |
| –20 ºC            | 400  | 12.5    | 56    | 107 | 127 | 149 | 173 | 198 | 1366 | 6   | 31.9 |
| 30 ºC             | 0    | 0       | 54    | 103 | 122 | 143 | 166 | 191 | 176 | 0.8 | 6.3  |
| 50 ºC             | 0    | 0       | 63    | 119 | 142 | 167 | 193 | 222 | 142 | 0.6 | 5.8  |
| 100 ºC            | 0    | 0       | 80    | 151 | 180 | 211 | 245 | 281 | 120 | 0.5 | 4.3  |

---

[Return to Proposed Changes]
Description of the change: Amend Table

Background
General cleanup of Section 75.

Rationale
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 110.

Code Proposal

Table 110
Sags and tensions for #1/0 ACSR (6/1) with 75 m (250 ft) ruling span
(See Rule 75-604 and 75-606.)

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55 m</td>
<td>60 m</td>
</tr>
<tr>
<td>Sag, cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>–20 ºC</td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–10 ºC</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ºC</td>
<td>51</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 ºC</td>
<td>58</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 ºC</td>
<td>64</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 ºC</td>
<td>73</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. temp.</td>
<td>Wind, N/m²</td>
<td>Ice, mm</td>
</tr>
<tr>
<td>Sag, cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>–20 ºC</td>
<td>400</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Return to Proposed Changes
### Table 111

**Description of the change:** Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 111.

**Code Proposal**

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20 ºC</td>
<td>21</td>
<td></td>
<td>686</td>
<td>1.2</td>
<td>10.3</td>
</tr>
<tr>
<td>-10 ºC</td>
<td>27</td>
<td></td>
<td>554</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>0 ºC</td>
<td>33</td>
<td></td>
<td>462</td>
<td>0.8</td>
<td>6.9</td>
</tr>
<tr>
<td>10 ºC</td>
<td>37</td>
<td></td>
<td>398</td>
<td>0.7</td>
<td>5.9</td>
</tr>
<tr>
<td>20 ºC</td>
<td>43</td>
<td></td>
<td>351</td>
<td>0.6</td>
<td>5.3</td>
</tr>
<tr>
<td>30 ºC</td>
<td>48</td>
<td></td>
<td>317</td>
<td>0.6</td>
<td>4.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Cond. temp.</th>
<th>Wind, N/m²</th>
<th>Ice, mm</th>
<th>Sag, cm</th>
<th>Tension</th>
<th>lb</th>
<th>kN</th>
<th>% RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-20 ºC</td>
<td>400</td>
<td>12.5</td>
<td>50</td>
<td>1756</td>
<td>7.7</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 ºC</td>
<td>0</td>
<td>0</td>
<td>54</td>
<td>282</td>
<td>1.3</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
<td>61</td>
<td>247</td>
<td>1.1</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
<td>79</td>
<td>192</td>
<td>0.8</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 112

Description of the change: Amend Table

**Background**
General cleanup of Section 75.

**Rationale**
Delete Rule number reference
Rule 75-606 deleted as a reference to Table 112.

**Code Proposal**

Table 112

Sags and tensions for #3/0 ACSR (6/1) with 75 m (250 ft) ruling span
(See Rule 75-604 and 75-606.)

### Initial sags and tensions for stringing

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
</tr>
<tr>
<td>-20 ºC</td>
<td>35</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>-10 ºC</td>
<td>42</td>
<td>51</td>
<td>59</td>
</tr>
<tr>
<td>0 ºC</td>
<td>51</td>
<td>60</td>
<td>71</td>
</tr>
<tr>
<td>10 ºC</td>
<td>58</td>
<td>68</td>
<td>80</td>
</tr>
<tr>
<td>20 ºC</td>
<td>67</td>
<td>79</td>
<td>93</td>
</tr>
<tr>
<td>30 ºC</td>
<td>73</td>
<td>86</td>
<td>101</td>
</tr>
</tbody>
</table>

### Final sags and tensions for design

<table>
<thead>
<tr>
<th>Loading condition</th>
<th>Span</th>
<th>Sag, cm</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55 m</td>
<td>60 m</td>
<td>65 m</td>
</tr>
<tr>
<td>Cond. temp.</td>
<td>Wind, N/m²</td>
<td>Ice, mm</td>
<td>60 m</td>
</tr>
<tr>
<td>-20 ºC</td>
<td>400</td>
<td>12.5</td>
<td>81</td>
</tr>
<tr>
<td>30 ºC</td>
<td>0</td>
<td>0</td>
<td>82</td>
</tr>
<tr>
<td>50 ºC</td>
<td>0</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>100 ºC</td>
<td>0</td>
<td>0</td>
<td>119</td>
</tr>
</tbody>
</table>

[Return to Proposed Changes]
Specifications

Specification 3

Description of the change: Amend Specification

Background
The installation of down guys is illustrated in Specification 3. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Added reference to Subrule in title

Code Proposal

![Diagram of down-guy(s) and offset]

Return to Proposed Changes
**Specification 4**

**Description of the change: Amend Specification**

**Background**
The installation of span and anchor guys is illustrated in Specification 4. As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Added reference to Spec 25.1 for detailed information in regards to the location of the span guy insulator.

**Code Proposal**

![Diagram of Specification 4: Span and anchor guy](image)

**Typical line pole**

<table>
<thead>
<tr>
<th>Stub lengths</th>
<th>Rake (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1m (30ft)</td>
<td>60cm (2 ft, 6in)</td>
</tr>
<tr>
<td>10.7m (35ft)</td>
<td>70cm (2 ft, 3 1/2 in)</td>
</tr>
<tr>
<td>12.2m (40ft)</td>
<td>80cm (2 ft, 7 1/2 in)</td>
</tr>
</tbody>
</table>

*Note: If stub pole carries power circuit, refer to Specification 3, excluding pole offset requirements*
Specification 5

Description of the change: Delete Specification

Background
The installation of a pole mount for wood poles in rock is illustrated in Specification 4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Deleted specification since the pole mount for rock illustrates one manufacture’s procedure. There are other manufactures with different installation methods. Rule 75-104(5) still permits the use of a pole mount.

Code Proposal

Return to Proposed Changes
Specification 9.1 and 9.2

Description of the change: Amend Specifications

Background
The installation of a single phase pin top insulator for voltages ranging from 2.4 to 8.0kV is illustrated in Specifications 9.1 and 9.2. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.
Note added as a reference to Spec 35 for alternate methods to support the neutral conductor. Spec 9.1 added anti split bolt to top of pole for consistency with other specifications.

Code Proposal

Return to Proposed Changes
Return to Proposed Changes

Specification 10.1 to 10.5

Description of the change: Amend Specifications

Background
The installation of a single phase circuit, line post insulator for voltages ranging from 2.4 to 16.0kV is illustrated in Specifications 10.1 to 10.5. As part of the general cleanup of Section 75, amendments have been made.
**Rationale**

Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Spec 10.4 added guying distance locations to align with current Spec 27 Fig 5.

Spec 10.5 added guying attachment and neutral support distance to be consistent with other specifications.

Specs 10.3 to 10.5 added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress to the neutral position of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**

![Diagram of specification 10.1](image-url)
Specification 10.3
Primary 1-phase line angle 16° to 60°, 1-phase - 2.4 to 16 kV, maximum span 90 m (300 ft)
(See Rule 73 200)

Legend:
1 = Insulator, dead end
2 = Clamp, conductor, angle
3 = Washer, square 5/8 in x 2 in x 2 in
4 = Bolt, 5/8 in
5 = Stud, Oval eye for 5/8 in bolt
6 = Guy location

Note: See Specification 35; Figure 1.

Notes:
(1) Guy under neutral not required if conductors utilized are 1/0 AWG or smaller.
(2) See alternate Specification 35

Return to Proposed Changes
Specification 10.4
Primary 1-phase line angle 61° to 90° 4-phase,
2.4 to 16 kV, maximum span 90 m (300 ft)

(See Rule 75-200)

Legend:
1 = Insulator, dead-end
2 = Clevis bolt, dead-end
3 = Washer, square 3/8 in x 3/8 in
4 = Bolt, 5/8 in
5 = Clamp, conductor, bolted, dead-end
6 = Clip, conductor, pinformed, dead-end
7 = Connector, wedge type or compression
8 = Bolt—Oval eye for 5/8 in bolt
9 = Guy location
10 = See Specification 27, Figure 5

Notes:
(1) Guys under neutral not required if conductors utilized are 1/0 AWG or smaller.
(2) See alternate Specification 35

Return to Proposed Changes
Return to Proposed Changes

Specification 11.1 to 11.4

Description of the change: Amend Specifications

Background
The installation of a three phase circuit, pin insulators for voltages ranging from 2.4/4.16kV to 8.0/13.8kV is illustrated in Specifications 11.1 to 11.4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Spec 11.1 added dimensions of guying attachment distance to crossarm support bolt to be consistent with other specs. Also added dimensions for the distance between the steel crossarm support bolts to align with Spec 30.
Spec 11.4 added dimensions between top insulator through bolt and anti split bolt to be consistent with other specifications.

**Code Proposal**

![Specification 11.1](image)

**Legend:**
- 1 = Tie wire No. 4
- 2 = Insulator, pin 15 kV
- 3 = Angle insulator pin
- 4 = Bolt, 5/8 in
- 5 = Washer, square 5/8 in x 2 in x 2 in
- 6 = Lockwasher for 5/8 in bolt
- 7 = Clamp, neutral conductor
- 8 = Crossarm, 9 ft, 6 in steel
- 9 = Guy location

**Note:** See Specification 35, Figure 1.

**NOTE:** See alternate Specification 35

[Return to Proposed Changes]
Specification 11.3
Primary 3-phase, underbuilt, tangent crossarm (pin insulator)
3-phase, 2.4/4.16 to 8.0/13.8 kV, maximum span 60 m (200 ft)

(See Rule 75 200)

Legend:
1 = Tie wire No. 4
2 = Insulator, pin 15 kV
3 = Brace
4 = Steel insulator pin
5 = Bolt, 5/8 in
6 = Bolt, 3/8 in
7 = Washer, square 5/8 in x 2 in x 2 in
8 = Lockwasher for 5/8 in bolt
9 = Clamp, neutral conductor
10 = Washer, rd. 3/6 in
11 = Crossarm, wood - see span = 200 cm (9 ft, 10 in)
12 = Screw, lag 1/2 in x 4 1/2 in

Note: See Specification 35 Figure 2
Note: See alternate Specification 35
Specification 12.1 to 12.3

Description of the change: Amend Specifications

Background
The installation of a tangent and vertical dead end framing, three phase circuit for voltages ranging from 2.4/4.16kV to 16.0/27.6kV is illustrated in Specifications 12.1 to 12.3. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.
Spec 12.1 added dimensions between top insulator through bolt and anti split bolt to be consistent with other specifications. Also removed the word “wood” from the table since the column is referring to a standoff bracket dimension.

Spec 12.2 added dimensions of guyling attachment distance to standoff bracket support to be consistent with other specs.

Spec 12.3 added note referring the use of a #1/0 AWG or smaller will not require guyling at the identified positions. The weight and pull of the conductor will add minimal stress to the neutral position of the pole that the upper most guyling will be sufficient to support the pole.

**Code Proposal**

![Diagram of Specifications](image)

---

For maximum span

| 75 m (250 ft) | 23 cm (9 in) wood |
| 90 m (300 ft) | 45 cm (18 in) wood |

**Note:** See Specification 35, Figure 2.

**Note:** See alternate Specification 35.

---

**Return to Proposed Changes**
Specification 12.2
Primary 3-phase dead-end vertical 3-phase
2.4/4.16 to 16/27.6 kV
(See Rule 75-200)

Legend:
1 = Insulator, dead end
2 = Clevis ball, dead end
3 = Washer, square 5/8 in x 2 in x 2 in
4 = Sheet metal ovo 5/8 in
5 = Clamp, conductor, bolted, dead end
6 = Grip, conductor, preformed, dead end
7 = Bolt 5/8 in
8 = Guy location
9 = Note

See Note (1)

Notes:
(1) Guys under centre and bottom phases not required if conductors utilized are 1/0 AWG or smaller.
(2) See alternate Specification 55.

Return to Proposed Changes
Specification 13.1 to 13.4

Description of the change: Amend Specifications

Background
The installation of angled framing, three phase circuit for voltages ranging from 2.4/4.16kV to 16.0/27.6kV is illustrated in Specifications 13.1 to 13.4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.
Spec 13.1 to 13.4 added dimensions of guying attachment distance to neutral support to be consistent with other specs.

Spec 13.4 added guying distance locations to align with current Spec 27 Fig 5.

Specs 13.3 and 13.4 added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress to the neutral position of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**

![Diagram of Specification 13.1](image-url)

**Specification 13.1**
Primary 3-phase line angle 4° to 15° 3-phase-2.4/4.16 to 16/27.6 kV

*(See Rule 75.200)*

**Legend:**
1. Bracket, pole top, tangent
2. Insulator, vertical
3. Clamp, conductor insulator
4. Insulator horizontal
5. Bracket, stand off (see span)
6. Clamp, neutral conductor
7. Stud, insulator
8. Bolt, 5/8 in
9. Washer, square 5/8 in x 2 in x 2 in
10. Lockwasher for 5/8 in bolt
11. Guy location

**For maximum span** | **Stand-off bracket**
--- | ---
75 m (250 ft) | 23 cm (9 in)
90 m (300 ft) | 45 cm (18 in)

**Note:** See alternate Specification 35

**Return to Proposed Changes**
Specification 13.2
Primary 3-phase line angle 16° to 45° 3-phase
2.4/4.16 to 16/27.6 kV
(See Rule 75.200)

Legend:
1 = Insulator, dead end
2 = Clamp, conductor, angle
3 = Washer, square 5/8 in x 2 in x 2 in
4 = Bolt, Oval eye for 5/8 in bolt
5 = Bracket, stand-off
6 = Bolt, 5/8 in
7 = Stud, Insulator
8 = Clamp, conductor, insulator
9 = Insulator, vertical
10 = Guy location

Note: See Specification 35, Figure 1

Note: See alternate Specification 35

<table>
<thead>
<tr>
<th>For maximum span</th>
<th>Stand-off bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 m (250 ft)</td>
<td>23 cm (9 in)</td>
</tr>
<tr>
<td>90 m (300 ft)</td>
<td>45 cm (18 in)</td>
</tr>
</tbody>
</table>
Specification 13.3
Primary 3-phase line angle 16° to 60° 3-phase
2.4/4.16 to 16/27.6 kV
((See Rule 75.200))

Legend:
1 = Insulator, dead end
2 = Clamp, conductor, angle
3 = Washer, square 5/8 in x 2 in x 2 in
4 = Bolt 5/8 in
5 = See Oval eye for 5/8 in hot
6 = Guy location

Notes:
See Specification 35, Figure 1.
(1) Guy under bottom phase not required if conductors utilized are 1/0 AWG or smaller.
(2) See alternate Specification 35

Return to Proposed Changes
Return to Proposed Changes

Specification 14.1 to 14.4

Description of the change: Amend Specifications

Background
The installation of crossarm framing, three phase circuit for voltages ranging from 2.4/4.16kV to 16.0/27.6kV is illustrated in Specifications 14.1 to 14.4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Specs 14.1, 14.2 and 14.3 amended crossarm dimensions in table.
Spec 14.3 added dimensions of guying attachment distance to neutral support to be consistent with other specs. Also added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress to the neutral position of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**
Spec 14.3
Primary 3-phase dead-end, crossarm (triangular)
3-phase, 2.4/4.16 to 16/27.6 kV
(See Rule 75-200)

Legend:
1 = Insulator, dead end
2 = Clevis, dead end
3 = Grip, conductor, preformed, dead end
4 = Washer, square 5/8 in x 2 in x 2 in
5 = Lockwasher for 5/8 in bolt
6 = Bolt, Oval eye for 5/8 in bolt
7 = Bolt 5/8 in
8 = Clamp, conductor, bolted, dead end
9 = Crossarm steel (see span)
10 = Bolt, 5/8 in x 6 in
11 = Guy location

Notes:
(1) Guy under neutral not required if conductors utilized are 1/0 AWG or smaller.
(2) See alternate Specification 35

<table>
<thead>
<tr>
<th>For maximum span</th>
<th>Crossarm, see Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 m (250 ft)</td>
<td>173 cm (68 in)</td>
</tr>
<tr>
<td>90 m (300 ft)</td>
<td>230 cm (7 ft 6 in)</td>
</tr>
</tbody>
</table>

See Note (1)  
See Note (2)
Specification 15.1 to 15.3

Description of the change: Amend Specifications

Background
The installation of three phase circuit underbuild lines for voltages ranging from 2.4/4.16kV to 16.0/27.6kV is illustrated in Specifications 15.1 to 15.3. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Spec 15.3 added dimensions of guying attachment distance to crossarm support bolt.
Specification 15.1
Primary 3-phase, underbuilt, tangent or line angle 0° to 15°
3-phase, 2.4/4.16 to 16/27.6 kV

(See Rule 75-200)

Legend:
1 = Clamp, conductor, insulator
2 = Insulator, horizontal
3 = Bracket, stand-off (see span)
4 = Clamp, neutral conductor
5 = Stud, insulator, 5/8 in x 3 in
6 = Bolt, 5/8 in
7 = Lockwasher, for 5/8 in bolt
8 = Washer, square 5/8 in x 2 in x 2 in
9 = Guy location

Note: See alternate Specification 25

For maximum span | Stand-off bracket
75 m (250 ft)      | 23 cm (9 in)
90 m (300 ft)      | 45 cm (18 in)
Specification 15.2
Primary 3-phase, underbuilt tangent crossarm (LP insulator)
3-phase; 2.4/4.16 to 10/27.6 kV, maximum span 80 m (200 ft)

(See Rule 70:200)

Legend:
1 = Clamp, conductor, insulator
2 = Insulator, vertical
3 = Braces
4 = Stud, Insulator, 5/8 in x 7 in
5 = Bolt, 5/8 in
6 = Bolt, 3/8 in
7 = Washer, square 5/8 in x 2 in x 2 in
8 = Lockwasher for 5/8 in bolt
9 = Clamp, neutral conductor
10 = Washer, rd. 3/8 in
11 = Crossarm, wood 200 cm (6 ft, 10 in)
12 = Screw, lag 1/2 in x 4 1/2 in

Note: See alternate Specification 25

Return to Proposed Changes
Return to Proposed Changes

Specification 16.1 and 16.2

Description of the change: Amend Specifications

Background
The installation of a tangent and vertical dead end framing, three phase subtransmission voltage 44kV is illustrated in Specifications 16.1 to 16.2. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.
Spec 16.2 added dimensions of guying attachment distance to the insulator support bolt to be consistent with other specs. Also added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress to the centre phase position of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**

![Specification 16.1](image)

**Legend:**

1. Bracket pole top, tangent
2. Insulator, vertical
3. Clamp, conductor insulator
4. Insulator, horizontal
5. Bracket, stand-off (see span)
6. Washer, square 5/8 in x 2 in x 2 in
7. Stud, insulator
8. Bolt, 3/8 in

<table>
<thead>
<tr>
<th>For maximum span</th>
<th>Stand-off bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 m (250 ft)</td>
<td>23 cm (9 in)</td>
</tr>
<tr>
<td>90 m (300 ft)</td>
<td>45 cm (18 in)</td>
</tr>
</tbody>
</table>

**Return to Proposed Changes**
Specification 17.1 to 17.4

Description of the change: Amend Specifications

Background
The installation of angled framing, three phase subtransmission voltage 44kV is illustrated in Specifications 17.1 to 17.4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.
Spec 17.2 and 17.3, added dimensions of guying attachment distance to the insulator support bolt to be consistent with other specs.

Spec 17.4 added guying distance locations to align with current Spec 27 Fig 5. Also added dimensions of guying attachment distance to the insulator support bolt to be consistent with other specs. Also added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress to the centre phase position of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**
Specification 17.2
Subtransmission 3-phase line angle 16° to 45°
3-phase, 44 kV
(See Rule 75-200)

Legend:
1 = Insulator, dead-end
2 = Clamp, conductor, angle
3 = Washer, square 5/8 in x 2 in x 2 in
4 = Bolt, 5/8 in
5 = Clevis, bolt head for 5/8 in bolt
6 = Bracket, suspension
7 = Stud, insulator
8 = Clamp, conductor, insulator
9 = Insulator, vertical
10 = Bracket, stand-off (see span)
11 = Guy location

For maximum span Stand-off bracket
75 m (250 ft) 23 cm (9 in)
90 m (300 ft) 45 cm (18 in)
Specification 18.1 to 18.4

Description of the change: Amend Specifications

Background
The installation of crossarm framing, three phase subtransmission voltage 44kV is illustrated in Specifications 18.1 to 18.4. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial changes.
Spec 18.1 added dimensions of the insulator support bolt spacing to be consistent with other specs.

Spec 18.3 added guying distance locations to align with current Spec 27 Fig 5. Also added dimensions of guying attachment distance to the insulator support bolt to be consistent with other specs. Also added note referring the use of a #1/0 AWG or smaller will not require guying at the identified positions. The weight and pull of the conductor will add minimal stress below the crossarm of the pole that the upper most guying will be sufficient to support the pole.

**Code Proposal**

![Diagrams of Spec 18.1](image)

**Specification 18.1**
**Primary 3-phase tangent, crossarm 3-phase, 44 kV maximum span 90 m (300 ft)**

(See Rule 75-200)

Legend:
1 = Clamp, conductor, insulator
2 = Insulator, vertical
3 = Bracket, pole top, tangent
4 = Stud, insulator
5 = Bolt, 5/8 in
6 = Bolt, 3/8 in
7 = Washer, square 5/8 in x 2 in x 2 in
8 = Screw, lag 1/2 in x 4-1/2 in
9 = Brace
10 = Washer, rd. 3/8 in
11 = Crossarm, wood 300 cm (9 ft, 10 in)
Specification 18.2
Primary 3-phase, line angle 4° to 15°, crossarm, 3-phase—
44 kV maximum span 90 m (300 ft)
(See Rule 75-200)

Legend:
1 = Clamp, conductor, insulator
2 = Insulator, vertical
3 = Bracket, pole top, angle
4 = Stud, insulator, 5/8 in x 7 in
5 = Bolt, 5/8 in
6 = Washer, square 5/8 in x 2 in x 2 in
7 = Bracket, insulator angle mount
8 = Crossarm, steel 290 cm (9 ft, 6 in)
9 = Stud, post insulator 5/8 in x 3 in
10 = Guy location

Return to Proposed Changes
Specification 18.3
Primary 3-phase dead-end, crossarm (triangular) 3-phase, 44 kV
(See Rule 75-200)

Legend:
1 = Insulator, dead-end
2 = Clevis bail, dead-end
3 = Grip, conductor, preformed, dead-end
4 = Washer, square 5/8 in x 2 in x 2 in
5 = Lockwasher, 5/8 in
6 = Bolt - Oval eye for 5/8 in bolt
7 = Bolt, 5/8 in
8 = Clamp, conductor, bolted, dead-end
9 = Crossarm, steel (see span)
10 = Guy location

Note:
(1) Guy under crossarm not required if conductors utilized are 1/0 AWG or smaller.

For maximum span Crossarm
75 m (250 ft) 170 cm (5 ft, 6 in) steel or wood
90 m (300 ft) 230 cm (7 ft, 6 in) steel or wood
Description of the change: Amend Specifications

**Background**
The installation of guy strain insulators for down guys is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.
**Rationale**

Editorial changes.

Amended rule numbers in the title. The proposed rules are no longer referenced to Spec 25.

Removed note 1 and renumbered noted 2 and 3. The note has created confusion in the interpretation when to apply the second insulator. Therefore a new Spec 25.1 was created to illustrate the meaning of the note.

**Code Proposal**

---

**Specification 25**

**Location of guy strain insulator joint use and non-joint use, armless or crossarm for down guys**

[See Rule 75.300 (a), 75.412, and 75-310 (1)(q)]

2.4/4.16 to 44 KV

Under 750 V

Communication

100 cm (3 ft, 2 in) radius

Range for insulator location. See Note (2)(1)

Standard location for insulator. See Note (2)(2)

250 cm (8 ft, 2 in) min

---

**Down guy**

Guy passing within 100 cm (3 ft, 2 in) of communication circuit

---

**Notes:**

1. A second insulator is required if the power circuit is separate from the insulator on the pole.

2. If communication (telephone or TV cable) connectors are on the pole, the guy insulator shall be in the standard location as shown.
Specification 25.1

Description of the change: Added new Specification

Background
The installation of guy strain insulators for span guys is illustrated in this spec. As part of the general cleanup of Section 75, a new specification has been added.

Rationale
New Specification has been created to illustrate existing wording in note 1 in Spec 25. The specification illustrates the second insulator requirement.

Code Proposal
Specification 26

Description of the change: Amend Specification

Background
Guying arrangement is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Amended rule numbers in the title. References to Spec 26 have been revised.

Amended guying arrangement No. 7 requiring electrical equipment installed on a free standing pole with no overhead distribution lines installed will require 3 guys to be installed 120 deg apart. There have been locations in which a ground gang operated switch installed on a pole (terminal pole) was missing the 3 point guying. Currently the rule and spec only requires a transformer pole to be guyed.

Code Proposal

Return to Proposed Changes
Specification 27

Description of the change: Amend Specification

Background
Attachment of guys on poles is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Amended title since Rule 75-308 will now include the attachment of guys on poles and anchors.

Code Proposal

Return to Proposed Changes
**Specification 28**

**Description of the change: Amend Specification**

**Background**
Service mast installation is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Amended rule numbers in the title. The proposed rules are no longer referenced to Spec 28. New rule number has been added.

Deleted the height to grade dimension. The height of the meter is a requirement of the supply authority.

**Code Proposal**

---

**Note:**
(1) All hardware shall be hot-dipped, galvanized steel or corrosion resistant.
(2) Where the maximum attachment height exceeds 1600 mm, guyings shall be employed and connected to an eye bolt fastened to a building structural member.
(3) Compression connectors shall be used where required.
(4) Height from meter base to finished grade to compliance with the requirements of the supply authority.

**Return to Proposed Changes**
Specification 34

Description of the change: Amend Specification

Background
Grounding for overhead electrical equipment is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Amended rule numbers in the title. The proposed rule is no longer referenced to Spec 34.

Spec 34 will now include grounding of electrical equipment for all types of poles. Amendments in specification have been done to accommodate the different types of poles recognized in Section 75.

Amended requirements for the use of the metal guard. Wood or plastic covers which are required provide sufficient protection against damage from livestock, however not sufficient to protect mechanical damage from vehicular traffic; therefore the additional metal guard is required to provide adequate protection.

Code Proposal

![Diagram of Specification 34: Grounding for overhead installations on wood-pole](image)

Legend:
1. Stake 1, 1/4 in. (every 30 cm)
2. No. 4 bare copper conductor for 27.6 kV systems
3. 1/0 bare copper conductor for 44 kV systems
4. Ground wire
5. Staple 3 in. (every 50 cm)
6. Steel guard - Guard, inward 230 cm length
7. Strap for metal guard (secure metal guard every 100 cm)
8. M-10, m-10 lag screw (for wood pole only)
9. Special tip
10. Ground rod
11. Clamp, ground rod
12. Compression type connector
13. Wedge type connector

Notes:
(1) For installation without a neutral, continue the ground wire and mounding up near the level of the first grounding connection of the equipment or hardware.
(2) Where a service box is installed on pole, a ground electrode meeting the requirements of rule 10-700 is required.
(3) The method of securing ground guard is determined by the pole type. Spec. 34 simplifies for a wood pole, securing for other poles is as per manufacturer’s requirements.

Return to Proposed Changes
Specification 35

Description of the change: Amend Specification

Background
Means of attaching the service conductor or neutral support is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Amended rule numbers in the title. The proposed rule is referenced to Spec 35.

Added figures 3 and 4 to the specification as recognizing other means of attaching the service wire to a building or a service mast as referenced in OESC Bulletin 75-3-* and Section 6.

Code Proposal
Specification 36

Description of the change: Amend Specification

Background
Detail of attaching a service tap to an intermediate pole is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial change.

Amended reference to the subrule number in the title.

Code Proposal

Return to Proposed Changes
Specification 37

Description of the change: Amend Specification

Background
Detail of attaching a service tap to an intermediate pole is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial change.

Amended reference to the subrule number in the title.

Code Proposal

Return to Proposed Changes
Specification 38

Description of the change: Amend Specification

**Background**
Connection of a single phase secondary service conductor is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Amended rule numbers in the title. The proposed rule is referenced to Spec 38.

Editorial change.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Amended reference to the rule and subrule number in the title.

Added distance from the neutral to the underside to the transformer for consistency with other specs.

Added alternate detail to spec as other means of attachment for the service conductor.

**Code Proposal**

Return to Proposed Changes
Specification 39

Description of the change: Amend Specification

Background
Termination of the service conductor is illustrated in this spec. As part of the general cleanup of Section 75, amendments have been made.

Rationale
Amended rule numbers in the title. The rule is no longer referenced to Spec 39.

Editorial change.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Amended reference to the rule and subrule number in the title.

Added distance from the neutral to the attachment point to the service head to align with Rule 6-116(b) requirements.

Code Proposal

Return to Proposed Changes
**Specification 40**

Description of the change: Amend Specification

**Background**
As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Amended rule numbers in the title. The rule is no longer referenced to Spec 40. New rule number has been added.

Editorial change.

Amended reference to the rule and subrule number in the title.

Added distance from the neutral to the underside to the transformer for consistency with other specs.

**Code Proposal**

Return to Proposed Changes
Specification 41

Description of the change: Amend Specification

Background
As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial change.

Amended rule numbers in the title. The rules are no longer referenced to Spec 41 or a new rule number has been added.

Distance from the neutral to the underside to the transformer and between attachment points has been added for consistency with other specs.

Code Proposal
**Specification 42**

**Description of the change: Amend Specification**

**Background**

As part of the general cleanup of Section 75, amendments have been made.

**Rationale**

Editorial change.

Amended rule numbers in the title. The rules are no longer referenced to Spec 42 or a new rule number has been added.

Amended Figure 1 dimensions to be consistent with other spec in relation to the current transformer and the service head. The dimension was not sufficient to accommodate the installation and caused interference between the system neutral and the service head.

Amended Figure 2 dimension between the service head and neutral attachment to be consistent with other specs.

**Code Proposal**
Specification 43

Description of the change: Amend Specification

Background
As part of the general cleanup of Section 75, amendments have been made.

Rationale
Editorial change.

Amended rule numbers in the title. The rules are no longer referenced to Spec 43 or a new rule number has been added.

The centre phase was previously missing the customer service wires to the bolted tap connection.

Amended dimension between the service head and neutral attachment to be consistent with other specs.

Code Proposal
**Specification 44**

Description of the change: Amend Specification

**Background**
As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Editorial change.

Amended rule numbers in the title. New rule references Spec 44.

Note added as a reference to Spec 35 for alternate methods to support the neutral conductor.

Added distance from the neutral to the underside to the transformer for consistency with other specs.

**Code Proposal**

Return to Proposed Changes
**Specification 45**

Description of the change: Amend Specification

**Background**
As part of the general cleanup of Section 75, amendments have been made.

**Rationale**
Editorial change.

Amended rule numbers in the title. New rule references Spec 45.

Amended lightening arrester grounding conductor as per Rule 26-508 and 36-308(c)(ii) which requires the grounding conductor to be as short, straight and direct as practicable.

**Code Proposal**

---

Return to Proposed Changes