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## SECTION IX

### JOINT POLES OR POLES JOINTLY USED

#### 90. GENERAL

The following rules cover certain details of construction on jointly used poles (see Rule 21.4 for definition of joint use of poles). These rules are additional to those contained in other sections, and the requirements of such other sections shall be followed in all respects except as modified herein.

No attempt is made in these rules to deal with the prevention or mitigation of inductive interference in communication lines resulting from supply lines.

#### 91. POLES, TOWERS AND STRUCTURES

##### 91.1 Joint Use

Joint use of poles shall be given consideration by all interested parties where construction or reconstruction is involved and where used it shall be subject to the appropriate grade of construction as specified in Section IV.

Nothing herein shall be construed as requiring utilities to use poles jointly, or as granting authority for the use of any poles without the owner's consent.

Each utility should definitely designate its space requirements on joint poles, which space shall not be occupied without consent, by equipment of any other utility.

Non-climbable metal poles in partial underground construction (see Rules 22.0-D and 21.10) shall not be jointly used.

##### 91.2 Strength

Poles used to support circuits of different classification shall have a strength determined by using the total loading due to all circuits supported by the pole computed according to Section IV. The grade of construction for such poles shall be the highest required for any circuit present or condition existing.

### 91.3 Stepping

#### A. Location of Steps

The lowest step shall be not less than 7 feet 6 inches from the ground line and above this point steps shall be placed, with spacing between steps on the same side of the pole not exceeding 36 inches, at least to that conductor level above which only circuits operated and maintained by one party remain. Steps shall be so placed that runs or risers do not interfere with their free use.

### 91.4 Hardware

On jointly used wood poles or structures, hardware which is less than 3 feet above or 6 feet below unprotected supply conductors of 0-7500 volts shall be ungrounded. Excepted from the requirements of this rule are the following:

Hardware of risers treated as specified in Rules 54.6-E or 84.6-E;

Hardware of riser terminals treated as specified in Rule 54.6-F;

Hardware associated with grounded cables and messengers supported on crossarms provided such hardware has vertical clearances and pole clearances as specified in Tables 1 and 2 for such cables and messengers;

Hardware associated with guarded cables and messengers which are treated as specified in Rules 57.4-F or 87.4-C3; and

Hardware associated with guys or extended messengers when installed as specified in Rule 86.6-B2.

Hardware which is required to be ungrounded by any provision of this Rule 91.4 shall be not less than 1½ inches from any grounded cable, messenger or hardware.

## 92. CONDUCTORS, CABLES AND MESSENGERS

The following provisions shall apply to conductors and cables on jointly used poles which support supply conductors.

### 92.1 Vertical Clearances

On jointly used poles the vertical clearances specified in Table 2, Case 8, Columns D and E; Case 9, Columns C, D, E, and F; Case 10, Columns C and D; and Case 11, Column D, are modified by the following requirements. These requirements

are applicable to the clearances between communication and supply conductors and to clearances between supply conductors of different ownerships.

A. Between Low-Voltage Rack Conductors and Other Conductors

On jointly used poles, the following minimum vertical clearances shall apply between 0-750 volt supply conductors in rack construction and other conductors (see App. G, Fig. 9):

Racks Above

Conductors or cables 15" or more from center line of pole ----- 4 feet  
Unguarded cables, messengers or racks attached to poles ----- 6 feet  
Guarded cables, messengers, or racks attached to poles ----- 4 feet

Unguarded Racks Below

All circuits ----- 6 feet

Guarded Racks Below

Circuits of 0-20,000 volts or communication circuits ----- 4 feet

Exception: In situation where 0-750 volt supply conductors are in rack construction above communication conductors, cables, or messengers, a basic minimum clearance of 40 inches may be maintained between the bottom of the rack and the highest communication attachment provided that such is agreed upon by the supply and communication utilities concerned. Guard arms will not be required in such situations.

B. Between Cables and Messengers and Other Conductors

Where any cable or messenger (supply or communication) is less than 15 inches from center line of pole or is attached directly to the surface of jointly used poles, the following minimum vertical clearances shall apply between such cable and other conductors or cables (see App. G, Fig. 9):

Cables or Messengers Above

Conductors, cables or messengers 15 inches or more from center line of pole ----- 4 feet  
Unguarded racks attached to pole ----- 6 feet  
Unguarded cables or messengers attached to pole ----- 4 feet  
Guarded cables, messengers or racks attached to poles ----- 4 feet

Unguarded Cables or Messengers Below

- All unprotected supply conductors (a) ----- 6 feet
- All grounded cables (c) ----- 4 feet

Guarded Cables or Messengers Below

- Unprotected supply conductors of more than 750 volts (b) ----- 6 feet
- Unprotected supply conductors of 0-750 volts or communication circuits (c) ----- 4 feet
- (a) See Rule 84.6-C for exception applicable to suitably insulated lateral runs.
- (b) This is not intended to prohibit the attachment of an unguarded cable or messenger 6 feet or more below supply circuits of more than 750 volts.
- (c) This is not intended to apply between communication cables or messengers and other communication conductors.

In situations where communication cables or messengers are installed below supply conductors or cables, a basic minimum clearance of 40 inches may be maintained between supply and communications cables or conductors provided that such is agreed upon by the supply and communications utilities concerned. Guard arms will not be required in such situations.

C. Communication Open Wire Conductors

Open wire Class C communication conductors may be attached by means of hooks, knobs or brackets to one side of poles jointly used with supply conductors provided all of the clearances in Rule 92.1-B are applied, and any guard arm required is installed above the top communication conductor in accordance with the provisions of Rule 87.7-B. Excepted from the provisions of this Rule 92.1-C is the single communication circuit treated in Rule 92.1-D.

D. Circuits Serving Same Party

Supply conductors of 0-750 volts and the conductors of one paired (parallel, duplex or twisted) or open-wire communication circuit may be supported on jointly used poles on private property with a clearance of not less than 5 feet between the conductors of the two classifications and without guard arm, provided such circuits are used for service to one (the same) party only and where openwire communication conductors are used they shall be placed on one side of pole only.

With the agreement of the communication and electric utilities concerned, a basic minimum clearance of 40 inches may be maintained between any supply conductor of 0-750 volts and any communication paired or open wire conductor.

E. Communication Service Drop Attachments

Guard arms are not required above communication service drops from cabled lines where such drops are installed in accordance with the provisions of Rule 84.8-B2b.

F. Between Conductors, Cables, Messengers and Miscellaneous Equipment

- (1) Unenergized and Ungrounded Equipment: Communication conductors or 0-750 volt supply conductors, which are on crossarms with not less than 15-inch clearance from center line of pole or which are attached to pole surface and provided with guard arm, shall be not less than 40 inches below unenergized and ungrounded cases or enclosures of apparatus of the other classification.

This rule will not prohibit the placing of communication conductors on crossarms within 9 inches of the center of the pole on one side provided that the clearance is increased to not less than 21 inches on the other side of the pole. The 40-inch clearance shall also apply in situations where with the agreement of the supply and communication utilities concerned the use of guard arms is not required.

- (2) Cable Terminals or Metal Boxes: On jointly used poles metal communication cable terminals, metal boxes or similar equipment which are less than 8 inches from center line of pole or are attached to surface of pole shall be placed not less than 6 feet vertically below or 3 feet above the level of the nearest unprotected supply conductor.

All parts of such metal terminals, boxes or similar equipment which are 8 inches or more from center line of pole shall have vertical clearances from conductors not less than the clearance specified in Table 2, Col. C, Cases 8 to 13 inclusive.

For clearance between street light drop wires and cables, other conductors, and metal boxes see Rules 58.2-B3 and 92.1-F5.

- (3) Drip Loops: The lowest point of the drip loop of the terminal or end of a vertical run or riser of supply conductors of more than 750 volts shall be not less than 48 inches above the nearest communication conductor level below the drip loop. Where the supply conductors are of more than 7500 volts, this clearance shall be not less than 60 inches.

The lowest point of the drip loop of supply conductors of 750 volts or less shall be not less than 36 inches above the nearest communication conductor level below the drip loop except that the drip loop of such supply conductors may be less than 36 inches but not less than 12 inches above the level of police or fire alarm conductors carried as specified in Rule 92.2.

- (4) Transformers or Regulators: Transformers or regulators of supply systems shall normally be located above communication equipment. Where it is necessary to locate transformers or regulators below communication equipment they shall be placed at least 6 feet vertically below and all energized parts shall be protected and guarded so as to afford the least possibility of contact.

Where transformers or regulators are installed on platforms having continuous flooring which extends not less than 1 foot horizontally outside of the vertical plane of all transformer or regulator lead and bus wires on the same pole or structure, cables or other conductors may be installed at a minimum vertical distance of 12 inches below the transformer or regulator cases provided such cables or conductors do not extend laterally beyond the platform.

- (5) Street Lighting Equipment: All parts of street light drop wires, street lamps, and their supporting fixtures (including rods, braces and guys) shall be not less than 1 foot above or 2 feet below the level of messengers or conductors supported by messengers. These vertical clearance requirements

shall not apply to those parts of such street lighting equipment which are 2 feet or more horizontally from the vertical plane of messengers, conductors supported by messengers, and metal boxes.

All parts of street light drop wires, street lamps, and their supporting fixtures (including rods, braces and guys) shall be not less than 1 foot radially from all communication conductors not supported on messengers.

## 92.2 Police and Fire Alarm Circuits

Police and fire alarm circuits which are carried on cross-arms are permitted to occupy a position between supply circuits of 0-750 volts and other Class C communication circuits provided the police or fire alarm circuits have a vertical clearance of not less than 2 feet from each of such circuits and the conductors of such police or fire alarm circuits have a clearance of not less than 25 inches from center line of pole and have a weather-resistant covering at least equal to double-braid weatherproofing. In lieu of conductors with weather-resistant covering, non-metallic sheathed cable may be used. Where such cable is supported on a messenger, the messenger shall be ungrounded throughout its length and shall be sectionalized by means of insulators placed 6 feet to 9 feet from each attachment to crossarms. Where a 4-foot neutral space is reserved between supply and communication circuit levels on joint poles, it is recommended that police and fire alarm circuits which are installed in accordance with the foregoing provisions be at a level at the center of such a neutral space.

Police and fire alarm circuits which are less than 25 inches from center line of pole, or are attached to the surface of pole, shall have vertical clearances from supply conductors not less than those specified throughout this Order for Class C communication conductors.

## 92.3 Vertical Runs, Risers, Ground Wires and Hardware

Vertical runs, risers, ground wires and hardware of supply lines shall have a clearance of not less than 1½ inches from similar equipment of communication lines and from similar equipment of supply lines of different ownership.



Vertical runs, risers, ground wires and hardware shall be so located that they do not interfere with the free use of pole steps.

93. CLIMBING SPACE

Climbing space shall be provided on all jointly used poles which support conductors and the provisions of Rules 54.7 and 84.7 are directly applicable to such poles. Climbing space on jointly used poles shall be so correlated between conductor levels that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet.