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SECTION X

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SECTION X

SUPPLY AND COMMUNICATION LINES IN LINE CROSSINGS OR CONFLICTS

100. GENERAL

The following rules cover certain details for the construction of supply and communication lines in line crossings or conflicts and apply to the line which is at the higher elevation. These rules are supplemental to the rules for lines of these classifications in general and to the construction details for such lines where alone, which general rules shall be followed in all respects except as modified herein.

101. POLES, TOWERS AND STRUCTURES

101.1 Height Adjacent to Crossing

The vertical difference of the conductor level between the crossing and adjacent poles, towers or structures, shall, at all times, be less than that which would produce an uplift strain on the pin, insulator or tie, on the poles, towers or structures, adjacent to the crossing spans, unless due precaution is taken to prevent the conductor from becoming detached from the crossarm.

101.2 Spliced or Stub-reinforced Poles

Spliced poles, stub-reinforced poles and pole top extensions shall not be used in crossings or conflicts where Grade "A" construction is required.

102. PINS AND CONDUCTOR FASTENINGS

102.1 Duplex Pin Construction

Duplex pin construction is not permitted in crossings or colinear lines.

103. CONDUCTORS

103.1-A. Prevention of Conductor Breakage and Burning of Supports

A. Splices and Taps

- (1) Splices shall not be made or permitted in crossing spans where Grade "A" construction is required unless the mutual consent of all parties involved in such spans is obtained. Nothing contained in this Rule 103.1-A(1) shall be construed as requiring that splices be made, or as granting authority for or permitting the making of splices in such crossing spans without the consent of all parties owning or operating overhead lines involved in such crossing spans.
- (2) Splices and taps shall, as far as practicable, be avoided in crossing spans where Grade "A" construction is required. If it is impracticable to avoid such splices, they shall be of such type and be so made as to have a strength practically equal to the conductor in which the splice is made. Splices and taps should not be made in spans adjacent to such crossing spans if the crossing span is not dead-ended. Splices or taps in spans adjacent to a Grade "A" crossing span shall, if practicable, be placed nearer to the crossing support than the nearest conductor crossed over. This rule is not intended to prohibit splices or taps on the free ends of conductors which are dead-ended in the crossing span.

B. Supply Conductor Supports

In installing insulators and conductors precautions shall be taken to guard against the possibility of arcs or leakage current injuring conductors or burning any wood parts of the supporting structure which would render the conductors liable to fall. In cases where two or more circuits are carried on the same poles and steel pins with wood crossarms are used, the insulator pins of different circuits, if bonded, shall be bonded independently of each other in conformity with Rule 53.4-A3. The conductor used for bonding shall have a conductivity not less than No. 10 AWG copper wire.

103.2 Overhead Lightning Protection Wires

Overhead lightning protection wires or cables, if used, shall conform to the requirements of this Order as to grades of construction, material, size and strength, for conductors

of the voltage of the circuit protected. See Rule 63.2 for the requirements for lightning protection wires where supported by towers.

103.3 Limitation of Span Lengths

The crossing span shall be made as short as is practicable. In no case shall the length of the crossing span be greater than the normal span of the line, and the length of the next adjoining span shall be no greater than one and one-half times the normal span.

Spans of extraordinary length, made necessary by unusual conditions of topography, shall be considered as exceptions to the above rule.

103.4 Communication Wires

No paired wire line conductors or single conductor smaller than that specified in Table 8 for the grade of construction involved shall be used without supporting messengers, except where the circuits crossed over are of less than 750 volts. For communication service drops crossing over supply conductors see Rule 32.2-F and 32.2-G.

103.5 Crossing or Colinear Clearances

Where supply conductors of 750-7500 volts cross over, or are above and in conflict, or above and colinear with communication conductors within 6 feet radially of a pole or structure which supports the communication conductors, the vertical clearance specified in Table 2, Case 3, Column E and Case 5, Column C (48 inches) shall be increased to not less than 60 inches.

104. INSULATORS FOR SUPPLY CONDUCTORS

Where grounded pins are used at crossings with ungrounded construction being used at other parts of the line, the insulators used on such grounded supports shall have a rating of 25% greater than the flashover voltage values of the line insulators used on ungrounded pins, except where these values exceed those specified in Table 12, Rule 55.3, by 50%. As an alternative, the conductors at their points of attachment, where suspension insulators are used, may be protected by arcing shields.

105. SCREENS AND CRADLES

The use of screens or cradles for crossing protection is not approved under these rules.