Prepared by
The Pacific Telephone and Telegraph Company
Southern California Area
BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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T. P. T. & T. Co.

RAILROAD CROSSINGS

OVERHEAD CROSSINGS

CONDUCTORS

Contents

1. GENERAL

1.01 Conductors shall be of material or combinations of materials which will not corrode excessively under the prevailing conditions. Galvanized steel or copper steel wire shall not be used in the crossing span in coastal or other localities where excessive corrosion of galvanized steel wire or hardware has been experienced.

1.02 Conductors of materials other than those specified in Table 1 shall be of such size and so erected as to have mechanical strength not less than that of the sizes of copper conductors given.

2. MINIMUM SIZES

2.01 The minimum allowable size of conductors in a span crossing over a railroad shall be as indicated in the following table:

TABLE 1

Conductors	Spans 125 feet or less	Spans Exceeding 125 feet
Copper	104	128
Galvanized	134	165
Copper Steel	104	104

Note: Where practicable, crossing spans should not exceed 100, 125 and 150 feet in heavy, medium and light loading areas respectively. If spans in excess of 150 feet are necessary, refer the matter to the engineering department for recommendations. In no case shall a crossing span exceed 180 feet in heavy loading areas.

3. DROP WIRES

3.01 Drop wires without a suspension strand shall in no case be used for spans longer than 100 feet in the heavy loading districts, 125 feet in the medium loading districts, and 150 feet in the light loading districts.

4. SPLICES

4.01 Splices in conductors in the crossing or adjacent spans over a railroad preferably should be avoided but may be placed when required subject to the following limitations.

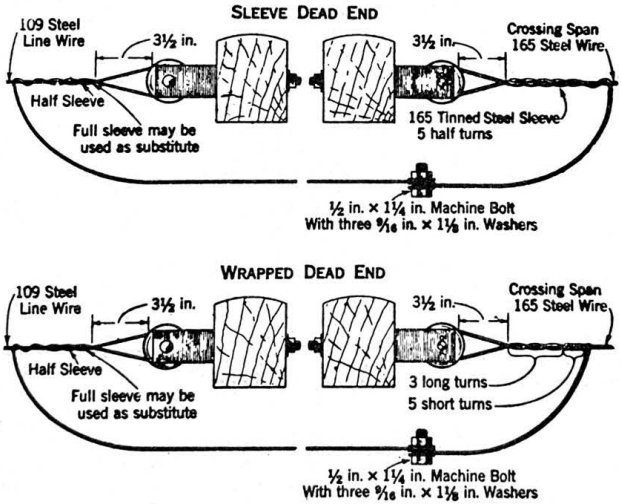
(a) All joints shall be of the rolled sleeve type placed in accordance with the standard practices.

(b) Two joints but not more than two are permitted in each conductor in the crossing span provided that they are of the rolled sleeve type and the wire and sleeves are gauged in each case with a B sleeve wire gauge to insure a specification splice.

5. CHANGE IN SIZE

5.01 Where the size of wire carried on the line is smaller than that permitted in the crossing span, the two sizes of wire may be joined by means of combination rolled sleeve joints, thereby avoiding the necessity of dead-ending to change wire size. Such joints should be located near the crossing poles in the spans adjacent to the crossing span.

5.02 Where 165 steel wire is required in the crossing span, it will usually be necessary to dead-end the wire in the crossing span and also in the adjacent spans, as shown in the following illustration. The dead-end of the 165 wire may be made either by using a full length double tube tinned steel sleeve, or by wrapping the tail of the 165 wire around the span wire.



6. TAPS

6.01 Taps should be avoided in the crossing span where practicable. Taps should be avoided in spans adjacent to a crossing span over major tracks if the crossing span is not dead-ended.

7. SAGS

7.01 Conductors shall be strung with sags in accordance with those used in the rest of the line unless otherwise specified on the detail plans.