

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G31.116.1
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STRINGING SAGS
GENERAL

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1. GENERAL

1.01 This section provides a general index of all sag tables covering the placing of different kinds of line wire and B Rural Distribution Wire and discusses the various conditions that should be considered when selecting a particular sag table.

1.02 This section is reissued to modify Part 2 and to include in the index of sag tables information concerning sag tables for B Rural Distribution Wire.

1.03 For convenience of notation, high strength steel line wire and extra high strength steel line wire are designated as H Wire and E Wire, respectively.

2. SELECTION OF SAG TABLES

2.01 The selection of a particular sag table for determining recommended wire sag is based on the following factors.

- (a) Kind of wire placed or other kind of wire existing in the line.
- (b) Storm loading area.
- (c) Average span length.

2.02 When only one kind of line wire is placed in a line it should be placed with sag as recommended in the sag table pertaining to that kind of wire. If different kinds of line wire are placed in any one line, all wire should be placed with sag as recommended in the sag table covering the kind of wire for which the greatest sag is required, i.e., when H Wire is

placed in a line carrying copper line wire, sag should be provided as recommended in the sag table for copper wire.

2.03 B Rural Distribution Wire should be placed with minimum sags as recommended in the sag tables for such wire except that greater sags should be provided where field conditions permit. The placing of B Rural Distribution Wire on a pole line should not change the sag requirements for other kinds of line wire carried on the same line.

2.04 The average span length is the span length on which a section of line is laid out for construction, such as 130 feet, 150 feet, 300 feet, etc. Corners and obstructions may require spans to be longer or shorter than the average span length. If the average span length or storm loading area in which a line is located is not known or is not specified in the detail plans or other instructions, obtain this information from your supervisor.

2.05 Select the sag table which covers the kind of wire to be sagged, the average span length and storm loading area. Determine the recommended sag by referring to the span length and temperature value which are the closest to the conditions in the particular case, i.e., if Sag Table No. 1 is being used and the temperature is 72° F. and the span length in which the sag is being measured is 127 feet, use the sag shown for a temperature of 70° and a span length of 125 feet which is 10-1/2 inches.

2.06 Each sag table is developed from a basic span length in a specific storm loading area for a particular kind of wire. It is, therefore, possible that for the same kind of wire, the recommended sag shown in one table for a given span length and temperature value may be different from the sag shown in another table for the same span length and temperature value.

3. INDEX OF SAG TABLES

3.01 The following general index of sag tables lists the sections of the practices to be used for determining the recommended sag for copper, copper-steel, steel line wire and B Rural Distribution Wire. Each section referred to includes a detailed index of the sag tables according to the kind of wire, the storm loading areas and the average span lengths.

| Kind of Wire | Bell System Practices | Sag Table No. | |
|--|-----------------------|----------------------------|----------------------------------|
| Copper or Steel Wire | G31.116.2 | 1 2 3 4 5 6 | |
| Copper-Steel, H or E Wire on the same line with Copper or Steel Wire | | 7 8 9 10 | |
| Copper-Steel Wire (080 and 128) | | G31.116.3 | 11 12 |
| 104 Copper-Steel, H or E Wire on the same line with 080 or 128 Copper-Steel Wire | | | 13 14 15 |
| H Wire or 104 Copper-Steel Wire | | G31.116.4 | 16 |
| E Wire on the same line with H or 104 Copper-Steel Wire | | | 17 18 19 20 21 22 |
| E Wire | G31.116.5 | | |
| B Rural Distribution Wire | G31.116.6 | | |

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