

GUYING DEFINITIONS

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1. GENERAL

1.01 This section defines and illustrates lead, height, and corner pull as applied to the guying of poles and stub poles.

1.02 This section is reissued to include information on the C pull finder which has been modified to add a slot on the guy rod and strand gauge for measuring or determining 6.6M strand size.

1.03 Pull finders in the field can be updated by replacing the existing gauge with the new gauge (order separately—Gauge for C Pull Finder).

2. LEAD AND HEIGHT

2.01 The lead and height of a guy are defined as distances in feet measured as shown in

Fig. 1.

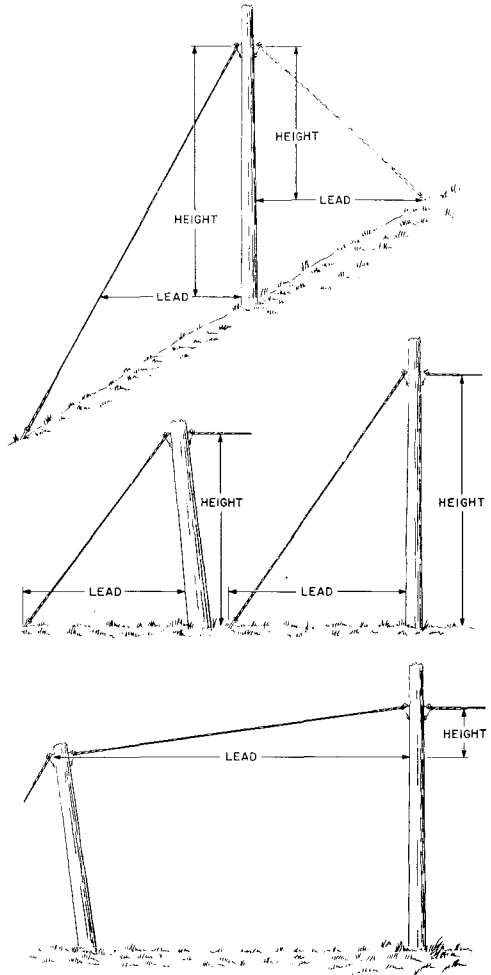


Fig. 1—Lead and Height Measurements

3. PULL

3.01 Pull at a corner pole is defined as the distance in feet measured as shown in Fig. 2. The two lower illustrations show two alternative methods for determining the pull on a corner pole where trees, shrubbery, or other obstructions make the first method impractical.

4. DESCRIPTION OF C PULL FINDER

4.01 Although Fig. 2 defines pull at a corner pole, it is more convenient to measure pull with a C pull finder.

4.02 The C pull finder, as shown in Fig. 3, consists of a short arm (A) with a threaded point which screws into the pole and supports two pivoted sighting arms (B and C) and a gauge for determining existing guy rod and galvanized strand sizes in the field.

4.03 The pointer on arm B indicates the pull in feet on the scale inscribed on arm C. Another scale, inscribed on arm B in conjunction with the index mark on arm C, enables arm C to swing around and point along the correct bisecting line of the corner angle. Pins are located at the end of each sighting arm to be used for alignment with a pin on top of the pivot bolt assembly or back sight.

4.04 The strand and guy rod gauge is an integral part of the C pull finder. The triangular

shape of the gauge coincides with the triangular base sections of the sighting arms. Two small projections on the gauge edges lock the gauge into place under the sighting arm base when not in use. (Fig. 3.) To use, swing the gauge free of the sighting arm base by depressing the locking projections.

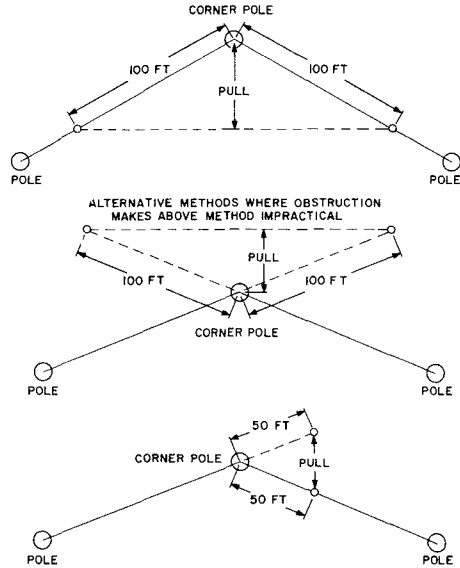


Fig. 2—Measuring Corner Pull (Taping)

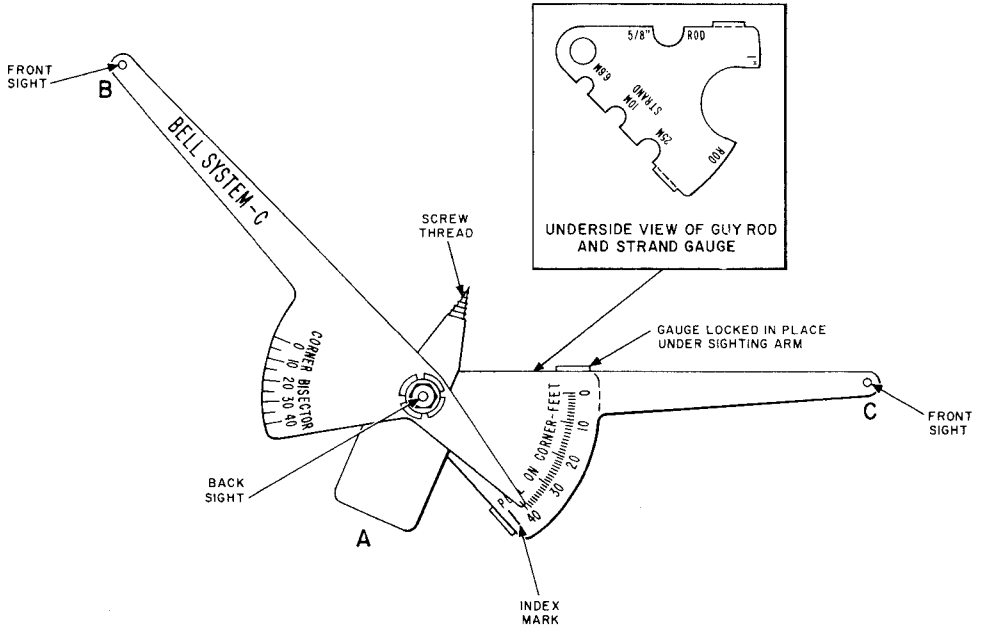


Fig. 3—C Pull Finder

5. USING C PULL FINDER

To Measure Pull

5.01 To determine the pull at a corner pole by use of the C pull finder, screw the short arm A into the corner pole, as illustrated in Fig. 4. Adjust arm C so that the line of sight, when sighting over the back sight and the front sight on arm C, is tangent to the surface of the pole adjacent to the corner. In a similar manner, line up arm B, sighting on the other pole adjacent to the corner. Check arm C to make certain it has not moved. The pointer on arm B now indicates, on the scale on arm C, the pull in feet at the corner.

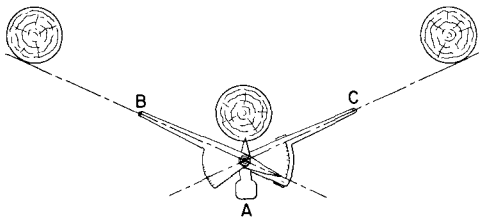


Fig. 4—Determining Corner Pull With C Pull Finder

5.02 The load on a corner pole at which there is a 50-foot pull equals that at a deadend.

To Bisect Angle

5.03 The C pull finder, in addition to determining the pull on a corner pole can also be used to provide a quick, convenient method for bisecting the angle of the corner pull for the purpose of locating the anchor or stub pole. To bisect the angle, proceed as follows:

- (a) Mount the pull finder on the corner pole and measure the pull in feet, as described in 5.01.
- (b) Without disturbing arm B, swing arm C away from the pole until the bisector index (located just beyond the 40-foot mark on the pull scale) points to the pull reading [obtained in (a) above as read on the corner bisector scale on arm B (Fig. 5).

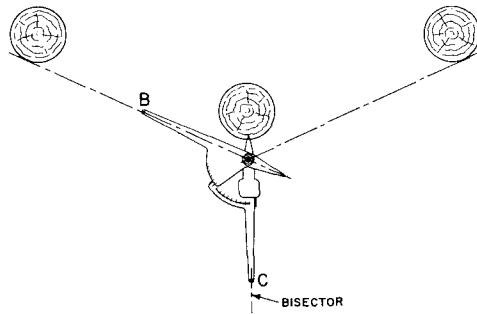


Fig. 5—Bisecting Corner Pull With C Pull Finder

(c) Arm C is now in line with the bisector of the corner angle and the anchor or guy stub should be located in line with the back sight and the front sight on arm C. If the anchor or guy stub location is so far away that the sights on the pull finder cannot be observed accurately, place a digging bar or a ranging rod on the bisector line, a few feet away from the pole where the pull finder sights may be easily observed. The anchor or stub may then be located in line with this marker and the corner pole.

5.04 When a C pull finder is not available or the conditions described in 3.01 make the use of the C pull finder impractical, bisecting the angle of pull can be accomplished by taping the measurements as shown in Fig. 6.

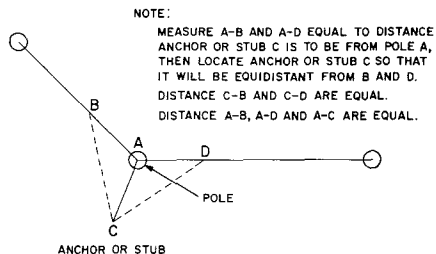


Fig. 6—Bisecting Angle By Taping Measurement

To Measure Size of Strand or Guy Rod

5.05 The strand and guy rod gauge has five semicircular slots for measuring galvanized strand and guy rod sizes in the field.

Note: Not for use on C R Strand.

Three of the slots are marked 6.6M, 10M, and 25M for measuring or determining the size of galvanized strand and the remaining two slots are marked 5/8 inch and 1 inch for guy rod identification. The size of strand or of a guy rod can be determined by using the slots appropriate to the item. For example, 6.6M, 10M, and 25M strand will show as a "good fit" in their appropriate slots, while giving either a "loose fit" or a "no fit" in larger or smaller slots. The 6M strand size will result in "no fit" in the 6.6M slot and a "loose fit" in the 10M slot, while 16M strand would be "no fit" in the 10M slot and a "loose fit" in the 25M slot. In a similar manner the various guy rod sizes can be determined by using the 5/8 or 1-inch guy rod slot.

6. TYPES OF GUYS

6.01 The following are definitions and illustrations of various types of guys.

- (a) A side guy is defined as a guy placed in a direction transverse to the line of the lead which it supports. Fig. 7.

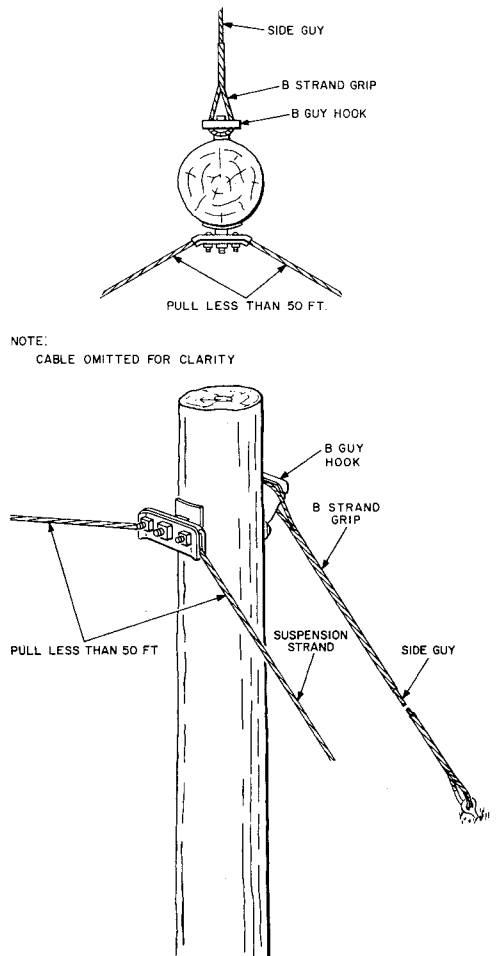
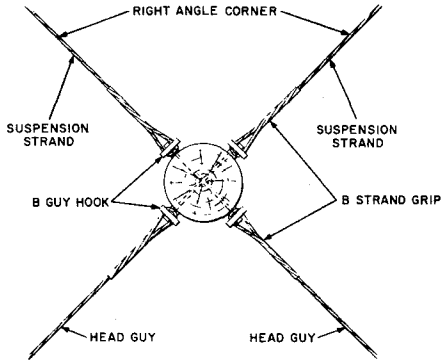


Fig. 7—Side Guy

(b) A head guy is defined as a guy which is placed in a line with the lead which it supports. Fig. 8.



NOTE:
CABLE OMITTED FOR CLARITY.

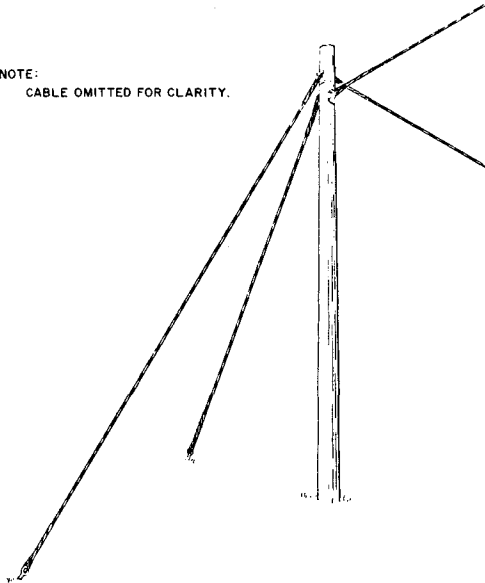


Fig. 8—Head Guys

(c) An anchor guy is a guy extending directly from a pole or guy stub to an anchorage in the ground. Fig. 9.

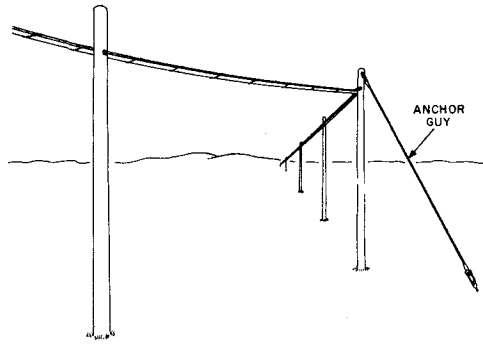


Fig. 9—Anchor Guy

(d) A pole to stub guy (Fig. 10) is used for transferring the load supported by a pole to a guy stub.

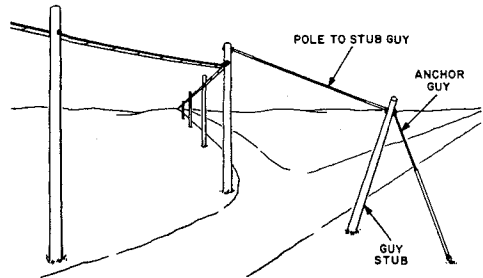


Fig. 10—Pole to Stub Guy

(e) A pole to pole guy is a guy used for transferring the load supported by a pole to another pole. Fig. 11.

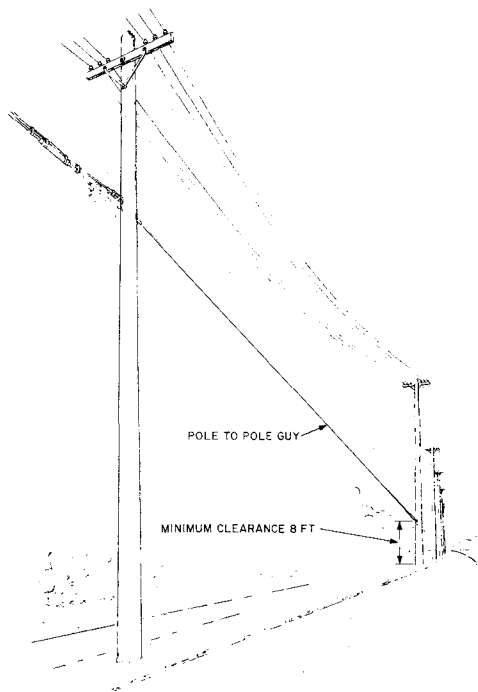
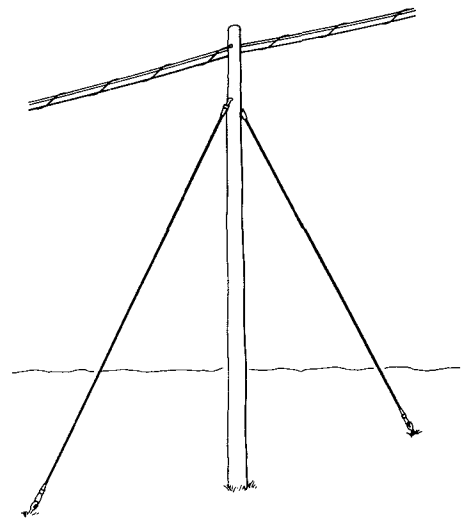
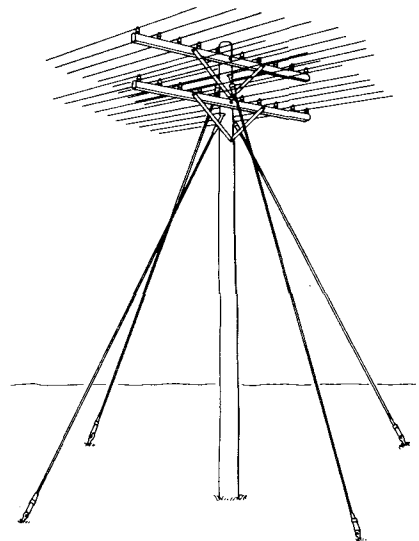


Fig. 11—Pole To Pole Guy

(f) Storm guys (Fig. 12) are guys placed for the purpose of stabilizing the line, particularly during the period of storm loading. Under normal conditions, these guys do not contribute materially to the support of the lead. Generally, storm guys consist of two opposing side guys or a similar arrangement of guys supplemented by two opposing head guys. These are known as "two way" and "four way" storm guys, respectively. Anchor guys, pole to stub guys, or pole to pole guys may serve as storm guys. Push braces, push and pull braces, or H fixtures can also be employed.



TWO WAY STORM GUY



FOUR WAY STORM GUY

Fig. 12—Storm Guys