

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G21.125.1
Issue 1, February, 1956
AT&T Co Standard

PLACING POLES
FRAMING POLES AND STUBS

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1. GENERAL

1.01 This section covers the framing of poles and replaces Section G21.125, Issue 1. The principal change from the previous section deals with the procedure recommended where it becomes necessary to cut off a full length treated pole or to otherwise expose untreated wood in such a pole. (See Paragraphs 1.03 to 1.08.)

1.02 The framing of full length treated poles after treatment should be avoided in so far as practicable. The standard specifications for poles provide for certain standard types of framing, depending on whether the pole is to be used in an open wire line or in a cable line. Framing different from the standard types can be obtained, provided that the details of the desired framing are specified on the order. To the extent that it is reasonably possible, it is desirable that only poles having standard framing be ordered. The framing of standard poles is done by the pole suppliers before the poles are treated.

1.03 While framing after treatment is not desirable, it may sometimes be necessary, and any resulting exposed untreated wood should be protected from decay or insect attack by the application of a coat of preservative, as described in Paragraph 1.05.

1.04 Cutting off the top or butt of a full length treated pole is undesirable since it removes the deeply penetrated wood at the ends of the pole which normally provides an effective barrier against decay and insect attack.

1.05 Whenever it becomes necessary, however, to cut off a full length treated pole, always apply a generous coating of B Wood Preservative to the full cross-section of the new roof or butt, letting it flow into the checks and soak into the newly exposed wood. As a supplementary safeguard, the new roof surface may be given a coating of a commercial preservative, such as Pole-Nu or Pole-Topper, immediately after the B Wood Preservative has been applied.

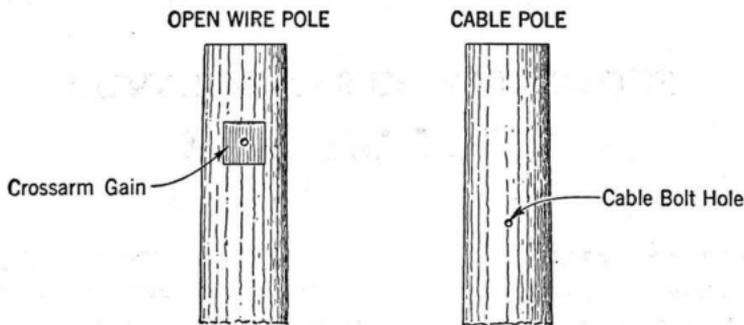
1.06 The cutting of additional gains in a pole subsequent to treatment is less objectionable than cutting off the top of a full length treated pole, inasmuch as the depth of a gain is usually less than the depth of preservative penetration and the bearing of the treated crossarm against the pole surface helps in preventing decay. It is desirable, however, on full length treated poles to apply a coating of B Wood Preservative to the new surface immediately after cutting the gain.

1.07 In some cases the need for cutting a gain can be eliminated through the use of a standard metal pole gain.

1.08 Holes may be bored in full length treated poles without requiring any supplementary preservative treatment of the holes; provided that the holes will be filled shortly after boring with pole steps, cable suspension bolts, drive screws, or other hardware. If, however, the holes for some reason, will be left unoccupied they should be swabbed with B Wood Preservative.

2. ROOFING POLES AND STUBS

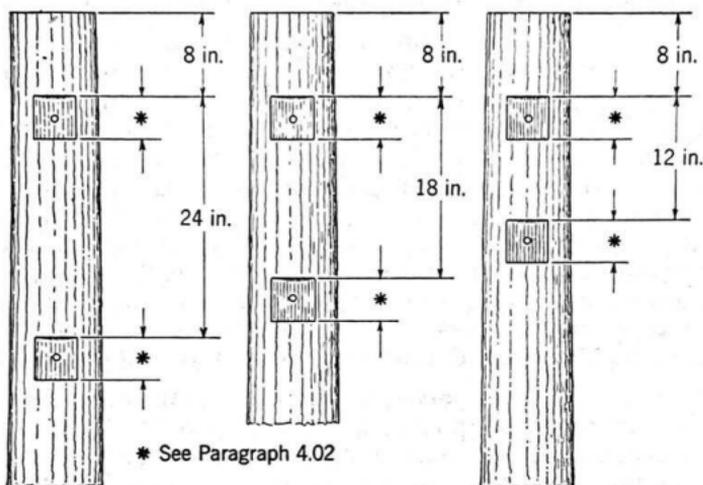
2.01 When necessary to roof poles and stubs, use a single cut, as shown below. unless otherwise specified. Cut the roof of the pole with a saw, taking care not to splinter the wood at the finish of the cut. Apply B Wood Preservative to the new roof, in accordance with Paragraph 1.05.



3. LOCATING AND SPACING GAINS

3.01 Where necessary to cut gains for crossarms locate them on the inside of the sweep on curved poles. If poles were erected by another company and gains were not provided for the Telephone Company, this requirement can be disregarded and the gains cut on the same side of the pole on which the other company's crossarms were placed.

3.02 In general, space the gains 24 inches apart, measured from top to top of gain. With the approval of the supervisor, the spacing may be reduced to 18 or 12 inches, in order to obtain increased road or crossing clearances without replacing the pole with a longer pole. Measure spacing distances accurately. The location of the gains and their spacing should be as shown below.



3.03 Where P or CP transposition brackets are to be placed, do not reduce the crossarm spacing to less than 24 inches.

3.04 Where S, CS or T transposition brackets are to be placed, do not reduce the crossarm spacing to less than 18 inches.

3.05 Where the crossarms carry circuits on which carrier systems will be operated, do not reduce the spacing to less than 24 inches without the approval of the Plant Engineer.

3.06 On jointly-used poles, cut the gains for telephone crossarms so that the clearances between telephone crossarms and the nearest crossarm or attachment of the electric company will be as covered in the Practices covering Clearances and Separations for Aerial Plant.

4. CUTTING GAINS

4.01 Cut gains for crossarms as follows:

- (a) For the ultimate number of crossarms as specified in the detail plans. Where the line is to carry only cable or wires attached to wooden pole brackets, no gains are necessary, unless the municipality requires one. In such cases, cut and bore the required gain. No gains are required for two-pin crossarms.
- (b) Not more than 1/2-inch deep, and flat or slightly concave so that the arm will not rock.
- (c) So that crossarms will be parallel to each other and at right angles to the axis of the pole.
- (d) On only one side of pole where pole is to be double armed.
- (e) On only one pole of an "H" fixture. Any projections on either pole at the points where the crossarms will bear against the poles should be removed, so as to afford a good bearing between the arms and the poles.

4.02 The width of the gain should preferably be such as to provide a snug fit for the crossarm. The dimensions of crossarms and the location of the bolt holes are likely to vary slightly. The height of all crossarms is approximately 4-1/4 inches except the D. E. which is 3-3/4 inches. If the framing is done on the ground and the crossarms are to be placed immediately, the crossarm may be used as a templet for determining the exact width of the gain and the location of the bolt hole. If the framing is done after the pole is erected, or if it is not convenient to use the crossarm as a templet, make the gain at least 4-1/2 inches in width, in order to insure a fit between a crossarm and the gain at a later time.

4.03 Apply B Wood Preservative to the new gains, in accordance with Paragraph 1.06.

5. BORING HOLES

5.01 Bore an 11/16-inch hole in the center of each gain for a crossarm bolt. Bore the hole so that when the crossarm is drawn up tight, the bolt will be at right angles to the face of the crossarm.

5.02 Where practicable, it is desirable to bore holes for crossarm bolts, cable suspension bolts, and pole steps before the pole is erected.

5.03 If any holes are to be left unoccupied, swab them with B Wood Preservative in accordance with Paragraph 1.08.