

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G51.120.1
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AT&TCo Standard

SUSPENSION STRAND
DEAD ENDING—GENERAL

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1. GENERAL

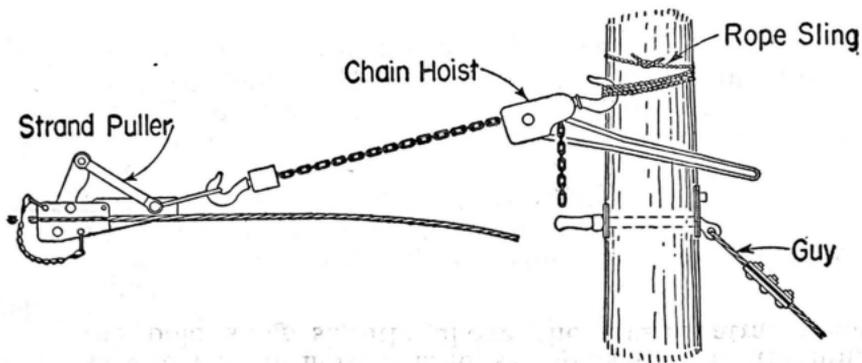
1.01 This section covers the methods for pulling up and terminating suspension strand at dead ends. This section and Sections G51.120.2 and G51.120.3 replace Section G51.120.

1.02 The tools used in pulling up and terminating strand, such as strand pullers, chain hoists, rope slings, blocks and tackle, etc., shall be in good working condition and shall be used as outlined in the various sections covering their use and maintenance.

2. PULLING UP STRAND

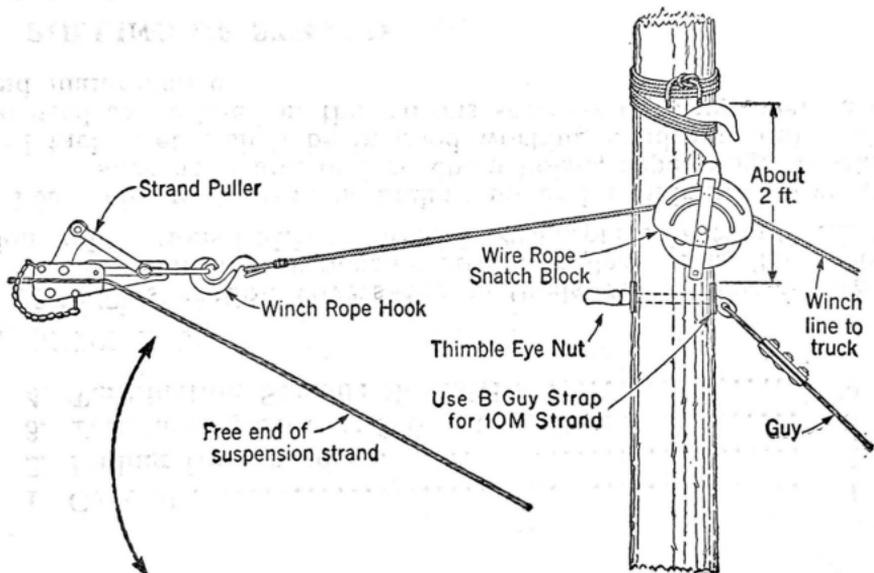
2.01 Pull up suspension strand by means of a chain hoist, winch line or blocks and tackle, as appropriate for the tension to be used.

2.02 Where a chain hoist is used, set up as shown, attaching the pole sling slightly above the strand attachment level.

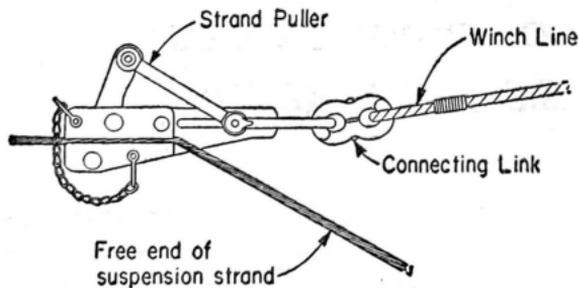


2.03 Where the winch line is used, the rigging should be as shown.

(a) For 6,000 or 10,000 pound suspension strand



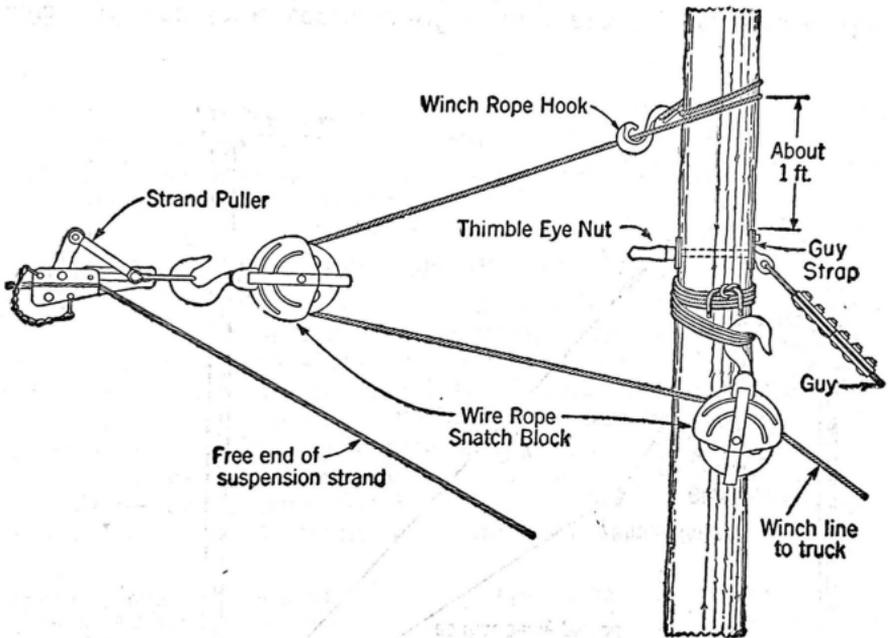
ALTERNATIVE METHOD



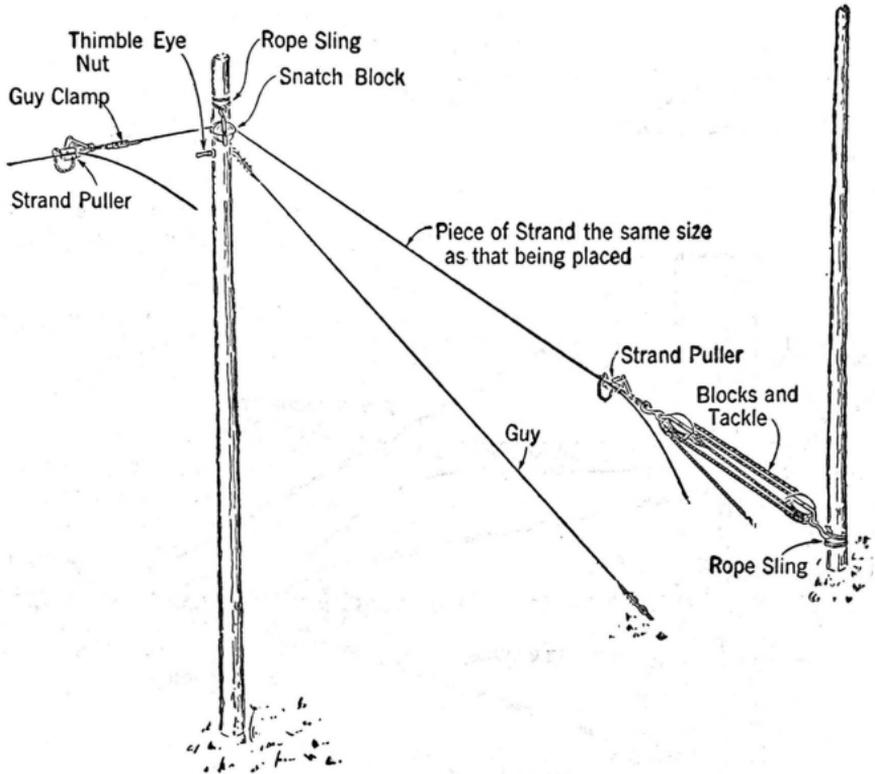
Use a Connecting Link of proper size:

<u>Size of Connecting Link</u>	<u>Maximum Load (Pounds)</u>
1/4 Inch	2,000
3/8 "	3,000
1/2 "	5,000
3/4 "	10,000
1 "	17,500

(b) For 16,000 or 25,000 pound suspension strand



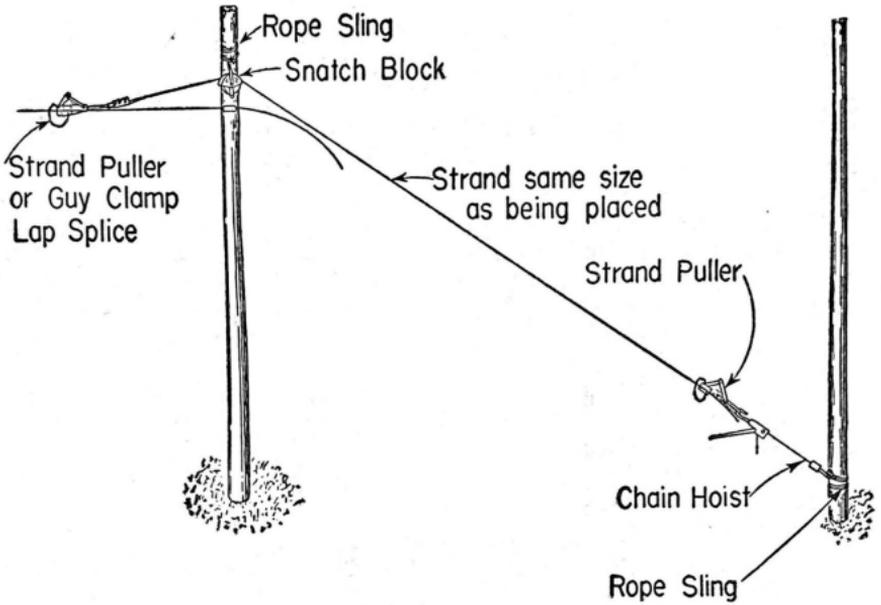
2.04 Where blocks and tackle are used the rigging may be as shown.



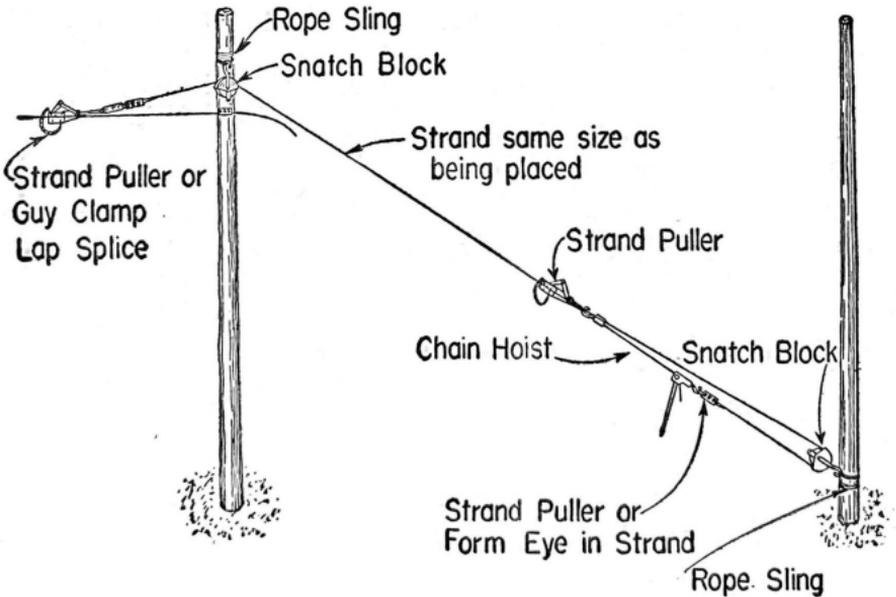
2.05 Where long sections of strand are to be placed the following methods may be used:

- (1) Pay out the first reel of strand and dead end it permanently at the first pole.
- (2) Pay out the second reel of strand.
- (3) Pull up the strand from the first reel to the required tension and hold the tension as shown in the following illustrations until the lengths of strand are spliced and the second section is tensioned.

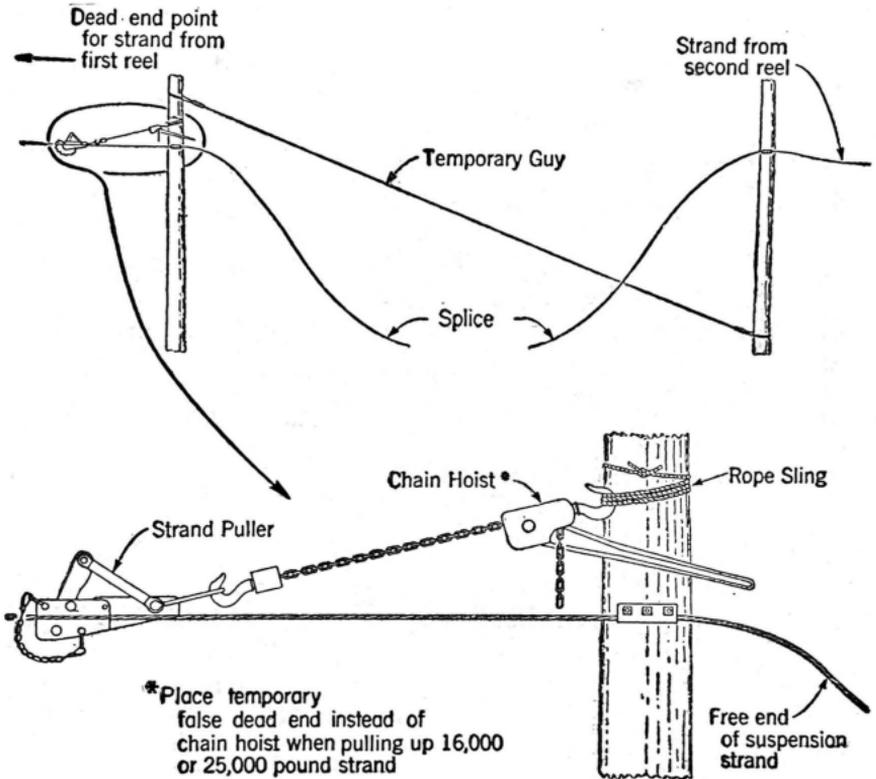
(a) For 6,000 or 10,000 pound strand



(b) For 16,000 pound strand

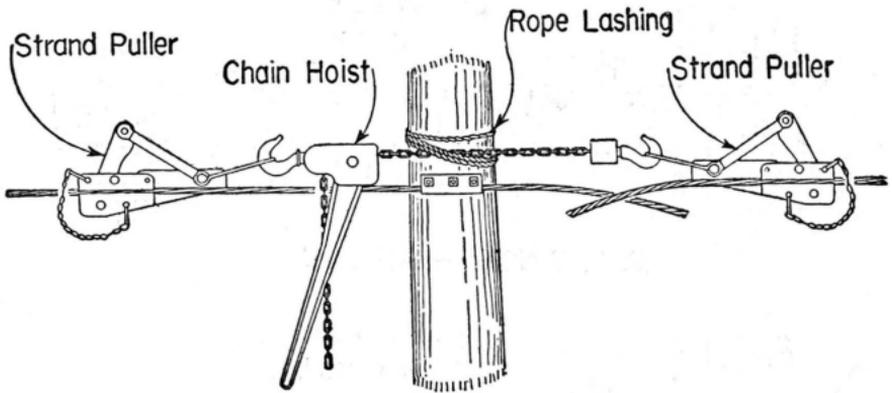


As an alternative, a temporary guy may be placed, the strand pulled up to the required tension, and the tension maintained with a chain hoist and strand puller or a temporary false dead end as shown.



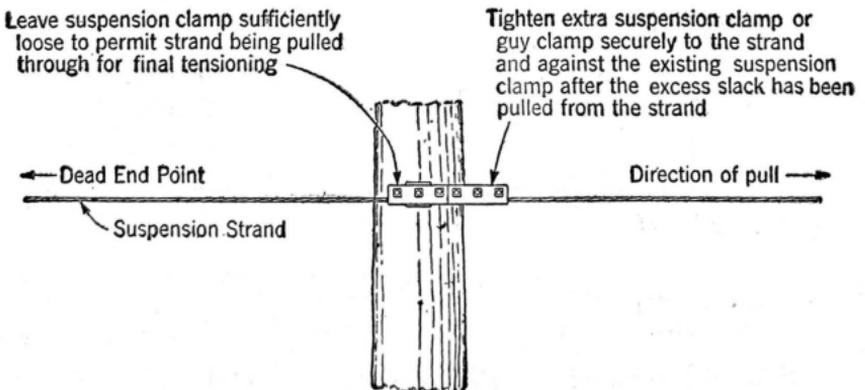
2.06 Where two reels of 6,000 or 10,000 pound suspension strand are to be placed and they can be permanently dead ended at the first and last poles of the section, they may then be tensioned and spliced at an intermediate pole as follows:

- (1) Tension both strands at the same time as shown. Leave rope lashing loose enough to allow movement of chain through loop to equalize tension of the two strands.



- (2) Splice the strand with a strandlink. Leave at least 12 inches between the near ends of the suspension clamp and the strandlink.
- (3) Place the strand in the suspension clamp and tighten the bolts just enough to support the strand.
- (4) Release tension on the chain hoist slowly until the strandlink is securely engaged.
- (5) Remove the chain hoist and strand pullers and securely tighten the bolts on the suspension clamp.

2.07 Occasionally, because of corners in the line or heavy tree conditions, or where using large reels of strand, it is advisable to pull slack out of the strand at intermediate points preparatory to the final tensioning of the strand. At these points, the following method may be found convenient for temporarily holding the strand. This method shall only be used as a means for holding light unbalanced loads in the strand and shall never be used for holding unbalanced loads as high as the recommended strand stringing tensions.



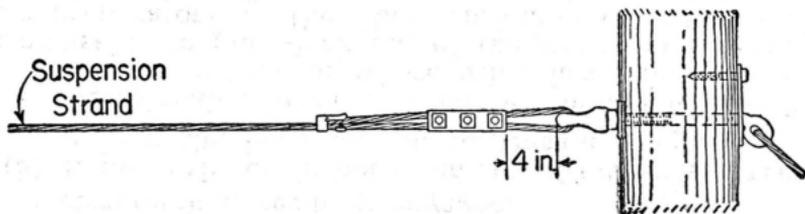
3. TERMINATING STRAND: 3-BOLT GUY CLAMPS

3.01 In terminating suspension strand the number of guy clamps required is determined by the size of the strand as shown in the following table:

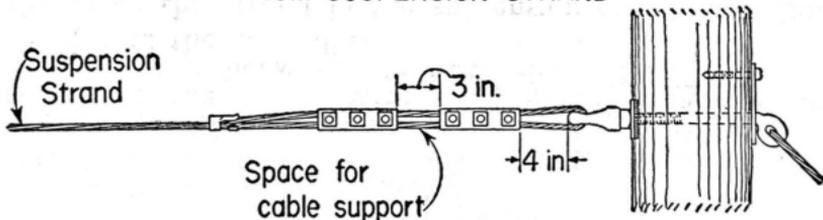
<u>Size of Strand (Pounds)</u>	<u>No. of Guy Clamps</u>
6,000	1
10,000	1
16,000	2
25,000	3

3.02 The following illustrations indicate the arrangement of the guy clamps when terminating strand.

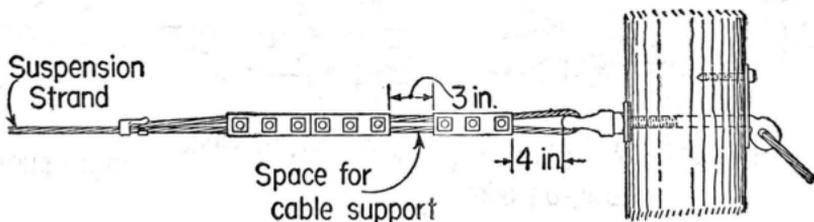
6M AND 10M SUSPENSION STRAND



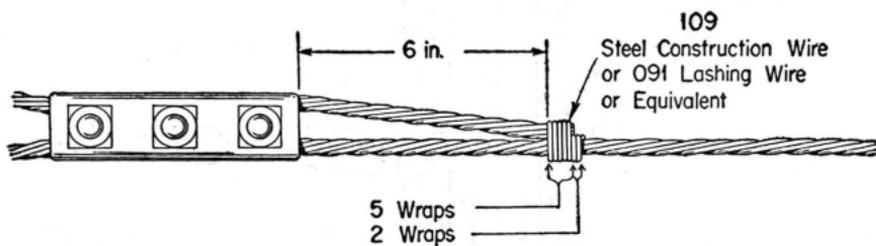
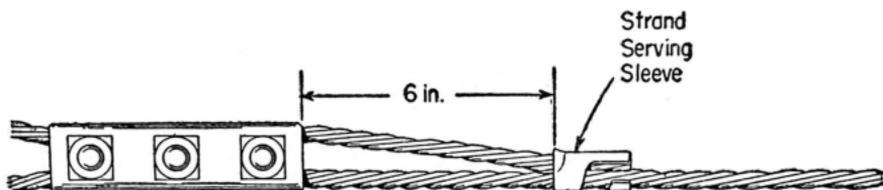
16M SUSPENSION STRAND



25M SUSPENSION STRAND

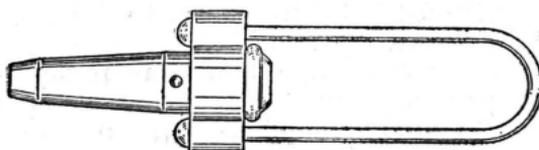


3.03 Provide a 6-inch tail at suspension strand dead ends. Secure the tail with a strand serving sleeve or a wire serving as shown.



4. TERMINATING STRAND: STRANDVISE

4.01 The strandvise consists of a cartridge, a yoke and a bail. The cartridge encloses a spring-loaded three-jaw chuck which grips the strand.



4.02 Strandvises are available in three sizes, 5/16 inch for 6,000 pound galvanized or corrosion-resistant strand, 3/8 inch for 10,000 pound galvanized strand and 7/16 inch for 16,000 pound galvanized strand. Do not use the 3/8 and 7/16 inch sizes on corrosion-resistant strand.

4.03 The strandvise should not be used in seacoast locations where extreme conditions of salt spray and salt fog may be encountered.

4.04 The strandvise is installed as follows :

- (1) Place the bail of the strandvise through the thimble eye nut. Then force the ends of the bail together, pass them through the yoke and insert the cartridge through the yoke.
- (2) Straighten the strand to remove the coil curvature and tape and cut it to proper length. The strand should extend approximately 2 inches beyond the rear end of the cartridge.
- (3) Insert the end of the strand in the pilot cup in the small end of the strandvise and force it into the strandvise in a continuous, steady forward motion. Avoid unwinding the strand and fouling the chuck.
- (4) Apply tension to the strandvise by slowly releasing the chain hoist if the strand has been tensioned or by pulling the strand firmly by hand.

