

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G21.075.1
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DIMENSIONS OF NEW POLES, STUBS AND ANCHOR LOGS

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1. GENERAL

1.01 This section covers the minimum dimensions of the various lengths and classes of poles, stubs and anchor logs used in the Bell System.

1.02 This section is being reissued to omit Northern White Cedar as a standard species of pole timber. There are no changes in the dimensions of the items covered.

2. WESTERN RED CEDAR POLES AND STUBS

Poles and Guy Stubs

| Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 |
|-------------------------------------|---|------|------|------|------|------|------|---------------|----|
| Minimum Circumference at Top | | | | | | | | | |
| (Inches) | | | | | | | | | |
| | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 15 | 12 |
| Length | Minimum Circumference at 6 Feet from Butt | | | | | | | | |
| (Feet) | (Inches) | | | | | | | | |
| 16 | | | | | 23.0 | 21.5 | 19.5 | No Butt | |
| 18 | | | 28.5 | 26.5 | 24.5 | 22.5 | 21.0 | Requirement | |
| 20 | 34.5 | 32.0 | 30.0 | 28.0 | 25.5 | 23.5 | 22.0 | | |
| 22 | 36.0 | 33.5 | 31.5 | 29.0 | 27.0 | 25.0 | 23.0 | | |
| 25 | 38.0 | 35.5 | 33.0 | 30.5 | 28.5 | 26.0 | 24.5 | | |
| 30 | 41.0 | 38.5 | 35.5 | 33.0 | 30.5 | 28.5 | 26.5 | .... |  |
| 35 | 43.5 | 41.0 | 38.0 | 35.5 | 32.5 | 30.5 | 28.0 | .... |  |
| 40 | 46.0 | 43.5 | 40.5 | 37.5 | 34.5 | 32.0 | | Dotted lines | |
| 45 | 48.5 | 45.5 | 42.5 | 39.5 | 36.5 | | | indicate | |
| 50 | 50.5 | 47.5 | 44.5 | 41.0 | 38.0 | | | length limits | |
| 55 | 52.5 | 49.5 | 46.0 | 42.5 | 39.5 | | | | |
| 60 | 54.5 | 51.0 | 47.5 | 44.0 | | | | | |
| 65 | 56.0 | 52.5 | 49.0 | 45.5 | | | | | |
| 70 | 57.5 | 54.0 | 50.5 | 47.0 | | | | | |
| 75 | 59.5 | 55.5 | 52.0 | 48.5 | | | | | |
| 80 | 61.0 | 57.0 | 53.5 | 49.5 | | | | | |
| 85 | 62.5 | 58.5 | 54.5 | | | | | | |
| 90 | 63.5 | 60.0 | 56.0 | | | | | | |

Reinforcing Stubs

| Length | Class | | | |
|--------|-------------------------------------|----|----|----|
| | Z | Y | X | W |
| | Minimum Circumference at Top | | | |
| (Feet) | (Inches) | | | |
| 10 | 37 | 29 | 22 | 16 |
| 11 | 41 | 33 | 26 | 20 |
| 13 | 45 | 37 | 30 | 24 |
| 15.5 | 48 | | 35 | |
| 19.5 | 50 | | 37 | |

3. PONDEROSA PINE POLES AND STUBS

Poles and Guy Stubs

| Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 |
|-------------------------------------|--|------|------|------|------|------|------|---------------|------|
| Minimum Circumference at Top | | | | | | | | | |
| (Inches) | | | | | | | | | |
| | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 15 | 12 |
| Length | Minimum Circumference at 6 Feet from Butt | | | | | | | | |
| (Feet) | (Inches) | | | | | | | | |
| 16 | | | | | 22.5 | 21.0 | 19.5 | | |
| 18 | | | 28.0 | 26.0 | 24.0 | 22.0 | 20.5 | No Butt | |
| 20 | 33.5 | 31.5 | 29.5 | 27.0 | 25.0 | 23.0 | 21.5 | Requirement | |
| 22 | 35.0 | 33.0 | 30.5 | 28.5 | 26.5 | 24.5 | 22.5 | | |
| 25 | 37.0 | 34.5 | 32.5 | 30.0 | 28.0 | 25.5 | 24.0 |  | .... |
| 30 | 40.0 | 37.5 | 35.0 | 32.5 | 30.0 | 28.0 | 26.0 |  | .... |
| 35 | 42.5 | 40.0 | 37.5 | 34.5 | 32.0 | 30.0 | 27.5 | | |
| 40 | 45.0 | 42.5 | 39.5 | 36.5 | 34.0 | 31.5 | 29.5 | Dotted lines | |
| 45 | 47.5 | 44.5 | 41.5 | 38.5 | 36.0 | 33.0 | 31.0 | indicate | |
| 50 | 49.5 | 46.5 | 43.5 | 40.0 | 37.5 | 34.5 | 32.0 | length limits | |
| 55 | 51.5 | 48.5 | 45.0 | 42.0 | 39.0 | 36.0 | | | |
| 60 | 53.5 | 50.0 | 46.5 | 43.5 | | | | | |
| 65 | 55.0 | 51.5 | 48.0 | 45.0 | | | | | |
| 70 | 56.5 | 53.0 | | | | | | | |

Reinforcing Stubs

| Length | Class | | | |
|--------|-------------------------------------|----|----|----|
| | Z | Y | X | W |
| | Minimum Circumference at Top | | | |
| (Feet) | (Inches) | | | |
| 10 | 37 | 29 | 22 | 16 |
| 11 | 41 | 33 | 26 | 20 |
| 13 | 45 | 37 | 30 | 24 |
| 15.5 | 48 | | 35 | |
| 19.5 | 50 | | 37 | |

4. LODGEPOLE PINE, JACK PINE AND RED PINE POLES AND STUBS

Poles and Guy Stubs

| Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 |
|-------------------------------------|--|------|------|------|------|------|------|---------------|------|
| Minimum Circumference at Top | | | | | | | | | |
| (Inches) | | | | | | | | | |
| | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 15 | 12 |
| Length | Minimum Circumference at 6 Feet from Butt | | | | | | | | |
| (Feet) | (Inches) | | | | | | | | |
| 16 | | | | | 22.0 | 20.5 | 19.0 | | |
| 18 | | | 27.5 | 25.5 | 23.5 | 21.5 | 20.0 | No Butt | |
| 20 | 32.5 | 30.5 | 28.5 | 26.5 | 24.5 | 22.5 | 21.0 | Requirement | |
| 22 | 34.0 | 32.0 | 30.0 | 27.5 | 25.5 | 23.5 | 22.0 | | |
| 25 | 36.0 | 33.5 | 31.0 | 29.0 | 27.0 | 25.0 | 23.0 |  | .... |
| 30 | 39.0 | 36.5 | 34.0 | 31.5 | 29.0 | 27.0 | 25.0 |  | .... |
| 35 | 41.5 | 38.5 | 36.0 | 33.5 | 31.0 | 28.5 | 26.5 | | |
| 40 | 44.0 | 41.0 | 38.0 | 35.5 | 33.0 | 30.5 | 28.0 | | |
| 45 | 46.0 | 43.0 | 40.0 | 37.0 | 34.5 | 32.0 | 29.5 | Dotted lines | |
| 50 | 48.0 | 45.0 | 42.0 | 39.0 | 36.0 | 33.5 | 31.0 | indicate | |
| 55 | 49.5 | 46.5 | 43.5 | 40.5 | 37.5 | 34.5 | | length limits | |
| 60 | 51.5 | 48.0 | 45.0 | 42.0 | 38.5 | | | | |

Reinforcing Stubs

| Length | Class | | | |
|--------|----------|----|----|----|
| | Z | Y | X | W |
| (Feet) | (Inches) | | | |
| 10 | 35 | 28 | 21 | 16 |
| 11 | 39 | 32 | 25 | 20 |
| 13 | 43 | 36 | 29 | 24 |
| 15.5 | 45 | | 33 | |
| 19.5 | 48 | | 36 | |

5. SOUTHERN PINE AND DOUGLAS FIR POLES AND STUBS

Poles and Guy Stubs

| Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 |
|-------------------------------------|--|------|------|------|------|------|------|-------------------------------------|----|
| Minimum Circumference at Top | | | | | | | | | |
| (Inches) | | | | | | | | | |
| | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 15 | 12 |
| Length | Minimum Circumference at 6 Feet from Butt | | | | | | | | |
| (Feet) | (Inches) | | | | | | | | |
| 16 | | | | | 21.5 | 19.5 | 18.0 | | |
| 18 | | | 26.5 | 24.5 | 22.5 | 21.0 | 19.0 | No Butt Requirement | |
| 20 | 31.5 | 29.5 | 27.5 | 25.5 | 23.5 | 22.0 | 20.0 | | |
| 22 | 33.0 | 31.0 | 29.0 | 26.5 | 24.5 | 23.0 | 21.0 | | |
| 25 | 34.5 | 32.5 | 30.0 | 28.0 | 26.0 | 24.0 | 22.0 | | |
| 30 | 37.5 | 35.0 | 32.5 | 30.0 | 28.0 | 26.0 | 24.0 | .... |  |
| 35 | 40.0 | 37.5 | 35.0 | 32.0 | 30.0 | 27.5 | 25.5 | .... |  |
| 40 | 42.0 | 39.5 | 37.0 | 34.0 | 31.5 | 29.0 | 27.0 | Dotted lines indicate length limits | |
| 45 | 44.0 | 41.5 | 38.5 | 36.0 | 33.0 | 30.5 | 28.5 | | |
| 50 | 46.0 | 43.0 | 40.0 | 37.5 | 34.5 | 32.0 | 29.5 | | |
| 55 | 47.5 | 44.5 | 41.5 | 39.0 | 36.0 | 33.5 | | | |
| 60 | 49.5 | 46.0 | 43.0 | 40.0 | 37.0 | 34.5 | | | |
| 65 | 51.0 | 47.5 | 44.5 | 41.5 | 38.5 | | | | |
| 70 | 52.5 | 49.0 | 46.0 | 42.5 | 39.5 | | | | |
| 75 | 54.0 | 50.5 | 47.0 | 44.0 | | | | | |
| 80 | 55.0 | 51.5 | 48.5 | 45.0 | | | | | |
| 85 | 56.5 | 53.0 | 49.5 | | | | | | |
| 90 | 57.5 | 54.0 | 50.5 | | | | | | |
| 95 | 58.5 | 55.0 | 51.5 | | | | | | |
| 100 | 60.0 | 56.0 | 52.5 | | | | | | |
| 105 | 61.0 | 57.0 | 53.5 | | | | | | |
| 110 | 62.0 | 58.0 | 54.5 | | | | | | |

Reinforcing Stubs

| Length | Class | | | |
|--------|------------------------------|----|----|----|
| | Z | Y | X | W |
| (Feet) | Minimum Circumference at Top | | | |
| | (Inches) | | | |
| 10 | 33 | 26 | 20 | 15 |
| 11 | 37 | 30 | 24 | 19 |
| 13 | 41 | 34 | 28 | 23 |
| 15.5 | 42 | | 30 | |
| 19.5 | 46 | | 34 | |

6. WESTERN LARCH POLES AND STUBS

Poles and Guy Stubs

| Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 |
|-------------------------------------|---|------|------|------|------|------|------|-------------|---|
| Minimum Circumference at Top | | | | | | | | | |
| (Inches) | | | | | | | | | |
| | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 15 | 12 |
| Length (Feet) | Minimum Circumference at 6 Feet from Butt (Inches) | | | | | | | | |
| 16 | | | | | 20.5 | 18.5 | 17.5 | | |
| 18 | | | 25.0 | 23.5 | 21.5 | 20.0 | 18.5 | No Butt | |
| 20 | 30.0 | 28.5 | 26.5 | 24.5 | 22.5 | 21.0 | 19.0 | Requirement | |
| 22 | 31.5 | 29.5 | 27.5 | 25.5 | 23.5 | 21.5 | 20.0 | | |
| 25 | 33.0 | 31.0 | 29.0 | 26.5 | 24.5 | 23.0 | 21.0 | | |
| 30 | 35.5 | 33.5 | 31.0 | 29.0 | 26.5 | 24.5 | 23.0 | ..... |  |
| 35 | 38.0 | 35.5 | 33.0 | 31.0 | 28.5 | 26.5 | 24.5 | ..... |  |
| 40 | 40.0 | 37.5 | 35.0 | 32.5 | 30.0 | 28.0 | 26.0 | | |
| 45 | 42.0 | 39.5 | 37.0 | 34.0 | 31.5 | 29.0 | 27.0 | | |
| 50 | 44.0 | 41.0 | 38.5 | 35.5 | 33.0 | 30.5 | 28.5 | | Dotted lines indicate length limits |
| 55 | 45.5 | 42.5 | 40.0 | 37.0 | 34.5 | 31.5 | | | |
| 60 | 47.0 | 44.0 | 41.0 | 38.5 | 35.5 | 33.0 | | | |
| 65 | 48.5 | 46.0 | 42.5 | 39.5 | 36.5 | | | | |
| 70 | 50.0 | 47.0 | 44.0 | 41.0 | 38.0 | | | | |
| 75 | 51.5 | 48.0 | 45.0 | 42.0 | | | | | |
| 80 | 52.5 | 49.5 | 46.0 | 43.0 | | | | | |
| 85 | 54.0 | 50.5 | 47.0 | | | | | | |
| 90 | 55.0 | 51.5 | 48.5 | | | | | | |
| 95 | 56.5 | 53.0 | 49.5 | | | | | | |
| 100 | 57.5 | 54.0 | 50.5 | | | | | | |
| 105 | 58.5 | 55.0 | 51.5 | | | | | | |
| 110 | 59.5 | 56.0 | 52.5 | | | | | | |

Reinforcing Stubs

| Length (Feet) | Class | | | |
|------------------|-------------------------------------|----|----|----|
| | Z | Y | X | W |
| | Minimum Circumference at Top | | | |
| | (Inches) | | | |
| 10 | 33 | 26 | 20 | 15 |
| 11 | 37 | 30 | 24 | 19 |
| 13 | 41 | 34 | 28 | 23 |
| 15.5 | 42 | | 30 | |
| 19.5 | 46 | | 34 | |

7. ANCHOR LOGS (All species of timber)

| <u>Length</u> (Feet) | <u>*Type</u> | | | | |
|-------------------------|---|-----------|-----------|-----------|-----------|
| | <u>31</u> | <u>51</u> | <u>71</u> | <u>53</u> | <u>83</u> |
| | <u>Minimum Circumference at Small End</u> (Inches) | | | | |
| 3 | 22 | | | | |
| 5 | | 25 | | | |
| 7 | | | 37.5 | | |
| 5 | | | | 31.5 | |
| 8 | | | | | 37.5 |

*In the type numbers, the first digit indicates the length (in feet) of the log and the second digit indicates the number of holes for guy rods provided in the log. For example, a Type 51 log is 5 feet long and is provided with one hole.