BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G50.105.1
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CABLE PLACING — GENERAL
CLAMPS AND STRAPS FOR CABLE

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1. GENERAL

1.01 This section replaces Issue 2. It contains information regarding clamps and straps and the anchoring devices used in fastening cables to various kinds of surfaces. This section is reissued to include a new paragraph regarding the use of clamps and straps in attaching cables on buildings and poles.

2. CLAMPS, STRAPS AND ANCHORING DEVICES

2.01 The standard cable clamps and straps and the minimum and maximum cable diameters with which each can be used are shown in the following tables. The diameters of the various types and sizes of cable are given in other sections of the practices.

CABLE CLAMPS		
Cable Diameter		Cable Clamp Number
Minimum	Maximum	
.25	.33	4
.34	.43	6
.44	.52	7
.53	.60	8
.40	.59	9
.61	.72	10
.60	.72	11
.73	.93	13
.94	1.20	17
1.21	1.45	21
1.46	1.70	25
1.71	2.00	30
2.01	2.40	35
2.41	2.70	42

CABLE STRAPS		
Cable Diameter		Cable Strap Number
Minimum	Maximum	
.51	.56	9
.57	.69	11
.70	.81	13
.82	1.00	16
1.01	1.25	20
1.26	1.50	24
1.51	1.88	30
1.89	2.25	36
2.26	2.63	42
2.64	3.50	56
3.51	4.00	64

2.02 The anchoring devices used for fastening clamps and straps to various types of surfaces are shown in the following table.

Anchoring Devices					
Cable Clamp Number	Cable Strap Number	Masonry	Wood Drill 1/16 in. lead hole for No. 8 Screw Drill 1/8 in. hole for No. 14 Screw and Strap Nail to avoid Splitting		Plaster on Wood Lath or Plaster Board
		Hammer Drive Anchor	* R.H. Wood Screw	or Strap Nail	R.H. Blued Wood Screw
4		3/16 in. × 7/8 in.	1 in. No. 8	1-1/2 in.	1-1/2 in. No. 8
6		3/16 in. × 7/8 in.	1 in. No. 8	1-1/2 in.	1-1/2 in. No. 8
7		3/16 in. × 7/8 in.	1 in. No. 8	1-1/2 in.	1-1/2 in. No. 8
8		3/16 in. × 7/8 in.	1 in. No. 8	1-1/2 in.	1-1/2 in. No. 8
9	9	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
10		3/16 in. × 7/8 in.	1 in. No. 8	1-1/2 in.	1-1/2 in. No. 8
11	11	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
13	13	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	16	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
17		1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	20	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
21		1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	24	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
25		1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
30	30	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
35		1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	36	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
42	42	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	56	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14
	64	1/4 in. × 1 in.	1-1/2 in. No. 14	2 in.	2 in. No. 14

* Use Galv. Wood Screws on the outside and Blued Wood Screws on the inside of buildings.

** Galv. Plaster Board Nail may be used if a thinner nail is required.

2.03 On hollow tile, screws or nails with wire ties are used as toggles or if the tile permits drilling holes of such size that the base of the cable clamp or strap will have adequate bearing, use 3/16" x 4" Toggle Bolts.

3. SPACING OF CABLE CLAMPS AND CABLE STRAPS

3.01 On vertical runs space clamps and straps approximately 24 inches apart for all sizes of cable.

3.02 On horizontal runs with cables one inch and smaller in diameter, space the clamps and straps approximately 17 inches apart. For cables larger than one inch in diameter space the clamps and straps approximately 26 inches apart.

3.03 No clamps and straps are required on the portion of the cable under a U guard or equivalent type of protection except where a lead sleeve is involved. In the latter case, the lead sleeve should be supported in the usual manner.

4. USE OF CABLE CLAMPS AND CABLE STRAPS

4.01 When attaching cables on building walls, it is advisable to use cable clamps in order to minimize drilling operations for the anchoring devices. This is particularly important if rings for wire runs may be required in conjunction with cable runs. Information regarding the installation of the several standard anchoring devices and the placing of drive rings in connection with cable runs is included in Bell System Practices covering Block and House Cable—Anchoring Devices for Attaching Cables to Walls.

4.02 When placing vertical cable runs on poles, cable straps may be used.