

GENERAL

SEPARATIONS FOR BLOCK AND HOUSE

CABLES IN OR ON BUILDINGS

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1. GENERAL

1.01 This section covers minimum separations in or on buildings between (a) power wires and telephone cables, and (b) clearances between foreign signal wires, conduits, drain spouts, etc., and telephone cables.

2. SEPARATIONS

2.01 Telephone cables shall not cross open supply conductors carrying more than 300 volts.

2.02 Block or house cables shall not be placed in pipe, conduit or wire enclosures containing electric light wires or cables, power wires or cables, nor in the same outlet box, junction box, or similar fitting unless they are separated from the electric light or power wires by a suitable partition, except where the power wires are terminated in an outlet box, junction box, or compartment solely as power supply to signaling equipment or for connecting to remote control equipment. Block or house cable may be placed

in a common cabinet or compartment with electric equipment where the power and telephone space is not separated by a partition, provided all the electric wiring, switches, etc. within the cabinet or compartment are fully enclosed in metal conduit or boxes.

Note: Where common cabinets or compartments are provided for electric light and telephone plant, the plant engineer shall endeavor to secure a partition between the power and telephone space and thus provide added mechanical protection as well as to insure adequate space for the proposed telephone equipment.

2.03 Exposed telephone cables shall maintain a separation from unexposed cables of at least 2 inches wherever practicable, except within a building, where the exposed and unexposed cable sheaths are electrically connected through a splice or bond or through a terminal. If the 2 inch clearance cannot be obtained and the exposed cable sheath is not grounded to a water pipe within the building, the cable shall be protected by a Porcelain Tube or B Cable Guard extending 2 inches either side of the impaired clearance. The tube or guard shall be held in place with several wraps of 3/4 inch friction tape at each end.

2.04 The sheath of an entrance cable on the street side of an insulating joint located inside of a building shall be clear of contacts with metallic objects, such as structural steel, grounded metal pipes, conduits, etc. Where contacts may subsequently develop due to building changes or additions, the cable sheath between the cable entrance and the insulating joint shall be encased in wood moulding or protected with two layers of DR or friction tape. The section of cable through the building wall shall also be protected with two layers of tape. All taping shall be half lapped and reversed.

2.05 The minimum separations required in or on buildings for block and house cables are shown in the following table. The table also specifies the type of protection to be placed at crossings where the minimum separation cannot be obtained. See Part 3 for the various methods of passing obstacles.

MINIMUM SEPARATIONS FOR CABLES ON THE OUTSIDE AND INSIDE OF BUILDINGS
Applies to Crossings and Parallel Runs
(Unless Otherwise Noted)

Type of Plant Involved (Including Associated Fixed Equipment and Wiring)	Cables on Outside Walls of Buildings		Cables on Inside Walls of Buildings	
	Minimum Separation	*Protection Required if Separation Cannot Be Obtained	Minimum Separation	*Protection Required if Separation Cannot Be Obtained
1. Open Power Wiring (Not Over 300 Volts)	4 In.	Porc. Tube or B Cable Guard	2 In.	Porc. Tube or B Cable Guard
2. Conduit for Power and Other Wiring, Armored, Lead or Nonmetallic Sheath Cable or Foreign Cables and Power Ground Wires (Excluding Radio and Lightning Ground Wires).	2 In.	2 Rub. , 2 Fr. or Porc. Tube or B Cable Guard	1/2 In.	1 Rub. , 1 Fr. or B Cable Guard
3. Other Open Signal Wires	2 In.	2 Rub. , 2 Fr. or Porc. Tube or B Cable Guard	** 1/2 In.	1 Rub. , 1 Fr. or B Cable Guard

GENERAL
 SEPARATIONS FOR BLOCK AND HOUSE
 CABLES IN OR ON BUILDINGS

Type of Plant Involved (Including Associated Fixed Equipment and Wiring) (Contd)	Cables on Outside Walls of Buildings (Contd)		Cables on Inside Walls of Buildings (Contd)	
	Minimum Separation	*Protection Required if Separation Cannot Be Obtained	Minimum Separation	*Protection Required if Separation Cannot Be Obtained
4. Rain Spouts and Metal Gutters	2 In.	2 Rub. , 2 Fr. or Porc. Tube or B Cable Guard	--	--
5. Metal Gratings, Sharp Corners, Fire Shutters, Etc.	Taped	2 Fr. or B Cable Guard	Taped	2 Fr. or B Cable Guard
6. Water, Gas, Oil, and Sewer Pipes	2 In.	2 Rub. , 2 Fr. or B Cable Guard	1/2 In.	1 Rub. , 1 Fr. or B Cable Guard
7. Steam Pipes (Bare) and Heating Ducts	2 In.	Porc. Tube or B Cable Guard	1/2 In.	Porc. Tube or B Cable Guard
8. Radio Antenna, Lead-In and Ground Wire	4 In.	Porc. Tube or B Cable Guard	4 In.	Porc. Tube or B Cable Guard

Type of Plant Involved (Including Associated Fixed Equipment and Wiring) (Contd)	Cables on Outside Walls of Buildings (Contd)		Cables on Inside Walls of Buildings (Contd)	
	Minimum Separation	*Protection Required if Separation Cannot Be Obtained	Minimum Separation	*Protection Required if Separation Cannot Be Obtained
9. Neon Signs	6 In.	Cable With Sheath Grounded	6 In	Cable With Sheath Grounded
10. Lightning Wires, Rods, and Associated Buried Connections	TELEPHONE CABLE SHALL NOT BE PLACED NEARER THAN 6 FT			

Abbreviations

- Porc. Tube = Porcelain Tube
- Par. = Paralleling or in Proximity
- Xing = Crossing
- 2 Fr. = 2 Layers of Friction Tape
- 2 Rub. = 2 Layers of Rubber Tape

* Applies only to crossings. For parallel runs the indicated separations must be obtained.

** Permissible to run in common raceways if the signal wires are confined to the building or are equipped with approved protection at the building entrance, but the use of common raceways should be avoided, if possible.

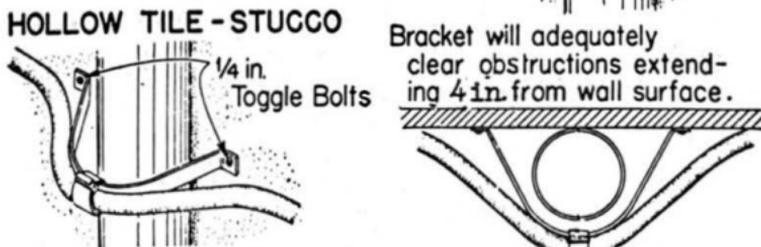
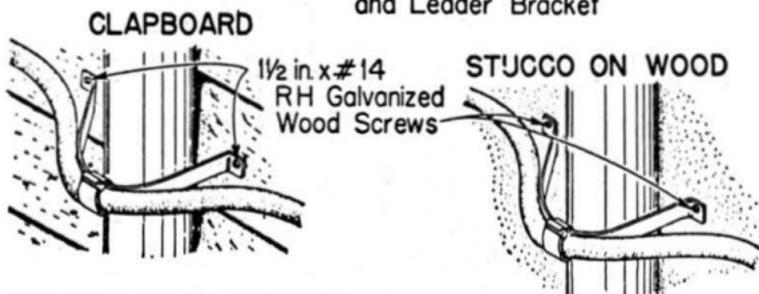
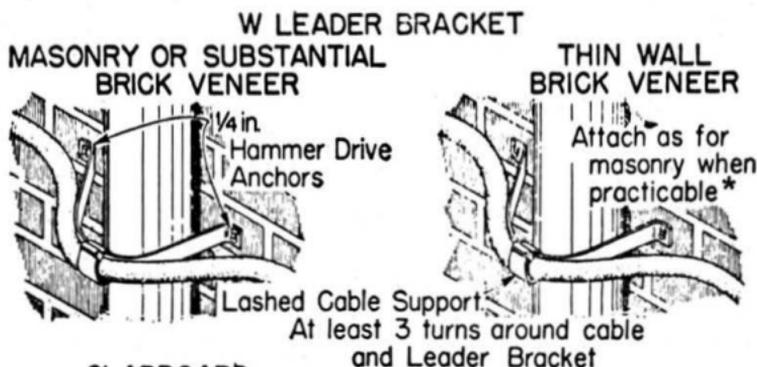
Note: Where the separation at crossings is less than specified in the above table and it is permissible, place the indicated protective covering and extend it for two inches each side of the crossing.

Porcelain tubes are available in 3/4 and 1 inch inside diameters. Where they are used, they shall be held in position by means of friction tape at each end.

B Cable Guards are split plastic tubes 8 inches long, available in 1/2 inch and 1 inch diameters. They may be used on cables under 1 inch in diameter in lieu of porcelain tubes. The above instructions for placing porcelain tubes shall also apply to the B Cable Guard.

3. CROSSING PIPES, RAIN SPOUTS, ETC.

3.01 Where practicable, cross pipes, rain spouts, etc., by carrying the cable in front of the obstruction and supporting it by means of a leader bracket as shown in the following illustration:



*If necessary #14 RH Galv. Wood Screws of length sufficient to penetrate wood sheathing approx. 1 in. may be used.
When rigid composition shingles are encountered drill clearance hole.

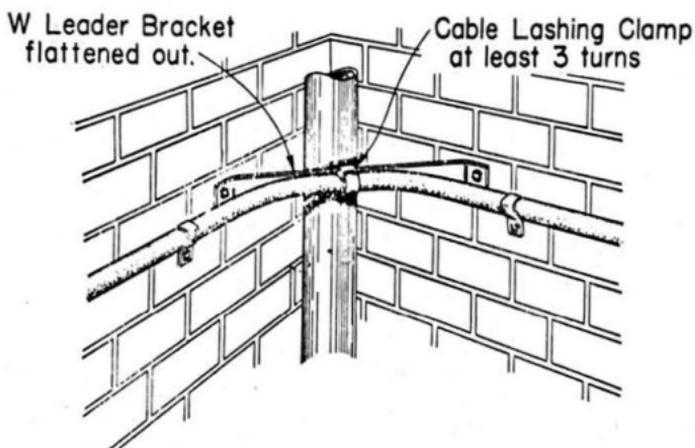
For smaller obstructions bracket may be flexed and extended.



3.02 Where the cable can not be placed in front of an obstruction, it may be placed between the obstruction and the wall. In such cases, it may be necessary to insert the cable in the wall.

3.02 Where the cable can not be placed in front of an obstruction, it may be placed between the obstruction and the wall. In such cases, it may be necessary to insert the cable in the wall.

3.03 Where a conduit, rain spout or similar obstruction is located in an inside corner place the cable in front of the obstruction and support it with a leader bracket as shown in the following illustration.



4. CROSSING METAL SHEATH POWER CABLES OR POWER WIRES IN CONDUIT

4.01 Metal sheath power cables or power wires in conduit shall be bypassed by carrying the telephone cable in front of the power wires or power conduit as shown in the following illustration. If necessary, the telephone cable may be placed between the power wires or conduit and the wall. In some cases it may be necessary to insert the cable in the wall.

