

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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CABLE SPLICING—UNDERGROUND
STUB CABLE ARRANGEMENT IN MANHOLES

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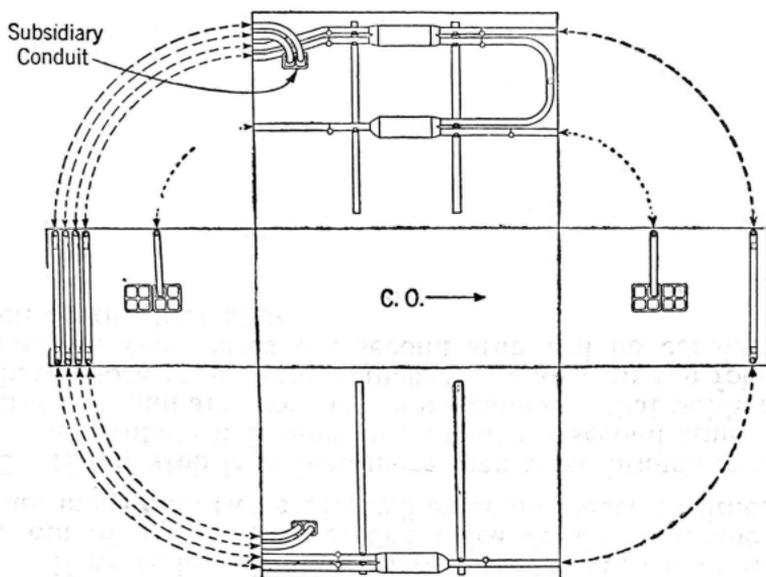
1. GENERAL

1.01 This section covers the general arrangement, location, and the method of racking stub cables in manholes.

2. ARRANGEMENT OF STUB CABLES

2.01 The arrangement of stub cables should be such that, if possible, not more than three branch cables will be taken out of one stub cable. The splice should be arranged so that not more than two cables will enter the sleeve at either end.

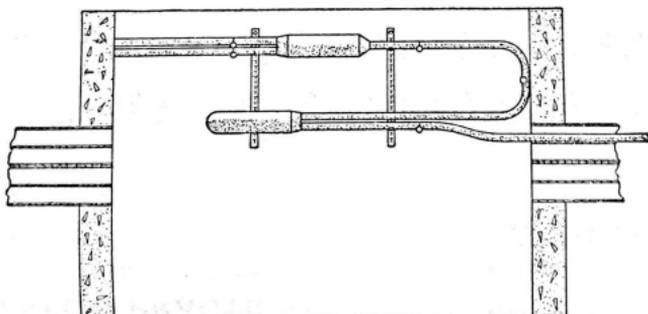
2.02 If one stub is to feed more than three branch cables in a manhole it is advisable to take a second stub out of the first stub and arrange the branch cables so that neither stub will have more than three branches as shown in the following diagram. In such cases the second stub will be considered a branch of the first stub.



2.03 As a general rule it is desirable to loop subsidiary cables around the manhole to the wall opposite that on which they enter the manhole before splicing them to a stub, so as to provide sufficient slack for any future changes or work which may be done on the subsidiary cable.

3. STUBBING WHERE MAIN CABLE IS TO BE EXTENDED

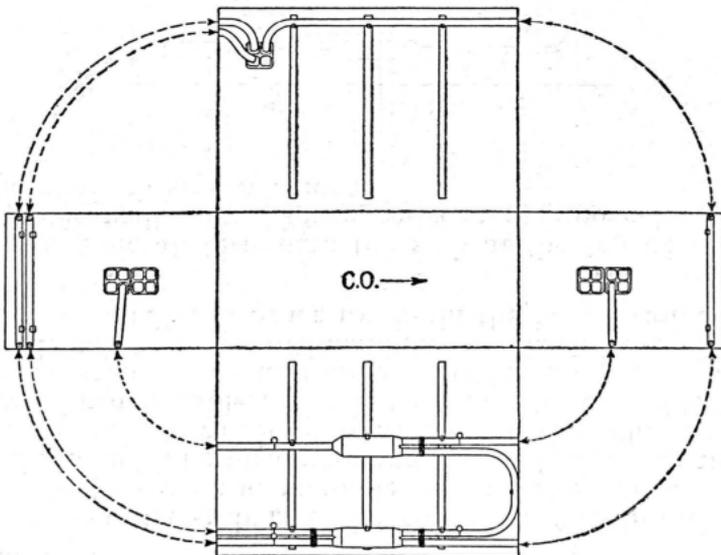
3.01 When a stub is taken out at the end of a main cable which may later be extended, a butt splice should always be made so as to facilitate the future extension of the main cable. In such cases the butt splice should be made in such a location that there will be sufficient wire for making the splice to the future extension from the main cable, as illustrated below.



3.02 A stub cable at the end of a main cable can sometimes be provided by leaving a long end on the main cable. The sheath is then removed at the point where a splice will later be made to extend the main cable and the end of the cable is bent back and set up on the usual position for a stub cable. The exposed core at the point where the sheath has been removed to permit the end of the cable to be bent back is then capped with a lead sleeve. This method avoids splicing the stub to the main cable and leaves the cable in position to be extended later. The use of this method should, however, be confined to manholes which are not congested and are free of obstruction, such as pipes, etc. The setup is similar to that shown in Paragraph 3.01.

4. TERMINATION OF STUB CABLE

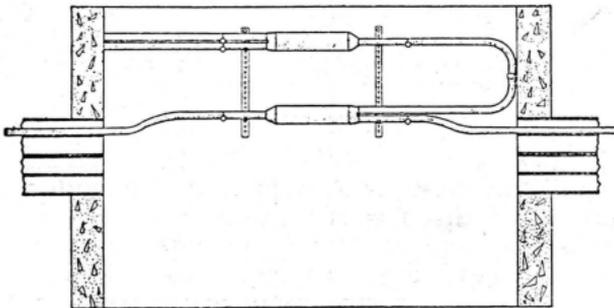
4.01 The wall on which a stub cable should be terminated will, in general, be determined by the arrangement of the subsidiary cables to which the stub cable is to be spliced. If the stub is to be spliced to one or more subsidiary cables which occupy the same subway, it is desirable to terminate it on the wall opposite the subsidiary subway entrance, as shown below.



4.02 When the main cable to be stubbed out is racked on the same side wall through which the subsidiary cables to be spliced to the stub enter the manhole, it is sometimes desirable to carry the stub cable to the opposite side wall of the manhole.

4.03 When the stub is to be spliced to two branch cables which leave the manhole on opposite walls, the stub should, in general, be terminated on the wall on which the main cable is racked. However, if the stub is to be spliced to more than two branch cables, it will generally be desirable to terminate the stub on the wall opposite which the greater number of branch cables enter the manhole, but each case should be studied individually, in order to obtain the best arrangement in the manhole.

4.04 In general, terminate the stub at the top of the manhole wall in the space between the top cable position and the roof, as shown below.



4.05 In arranging the stub, be careful to avoid blocking positions on the manhole walls reserved for future cables.

5. RACKING STUB CABLE

5.01 Rack the stub cable immediately above the main cable to which it will be spliced. In small manholes lead the stub from the splice in the main cable to the corner of the manhole, then vertically to the level of the splice between the stub and branch cable. In large manholes, equipped with L rack supports, stubs for distribution purposes and loading stubs may be taken up behind the offset racks in any position.

5.02 If the stub is to cross from one side of the manhole to the other, lead it across the end wall of the manhole, near the roof; then carry the stub along the side wall near the top, to the point where it is to be spliced to the branch cable.

5.03 If a stub is installed for splicing to a branch cable at some future time, rack it as shown below.

