

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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PRESSURE TESTING

SUBSCRIBER CABLE LAYOUT

GENERAL

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1. GENERAL

1.01 This section describes in general terms information concerning the placing of a subscriber cable system under continuous feed pressure. Included is, (1) information appearing on the initial work order or layout; (2) subsequent work operations to be completed by the plant operating forces; and (3) the locations of permanent valves and contactors.

1.02 An analysis of the cable records associated with each cable system is recommended in advance of installing valves, plugs, contactors, and other items. Such an analysis will provide a clearer picture of the gas flow paths involved.

2. CABLE SYSTEM LAYOUT INFORMATION

2.01 Information contained on the original layout work order or print will generally include the following:

- (1) Meter panel arrangement; gas meters and air rate indicators that will serve the various cables.
- (2) Entrance cable plugs; for blocking the flow of gas to the tip cables.
- (3) Flanges on entrance cables; for connecting tubing fittings for gas supply to cables.
- (4) Insulating joints in the cable vault.

(5) Plugs in cross-connecting terminal stubs and building laterals to be built before gas pressure is applied to the cables. These plugs generally are those within about a mile of the C.O.

(6) Permanent valves.

(7) Contactors; usually are only indicated at riser pole locations on the original layout.

(8) Plugs in stubs extending between cables which will separate the cables into networks; local practices may not require the placing of such plugs initially or may leave the decision for placing plugs to the plant operating forces.

2.02 Subsequent work on the pressure system will usually be left to the discretion of the plant operating forces. Such work includes:

(1) Placing of additional valves to facilitate pressure gradient and leak location analysis.

(2) Constructing gas by-passes to clear a gas flow restriction, such as a paraffin filled sleeve or an existing plug.

(3) Installing additional contactors to provide more complete monitoring of the system.

(4) Plugging of other cross-connecting terminal stubs, building laterals, and non-gastight distribution terminals, as may be necessary to obtain satisfactory gas pressure.

(5) Plugging junctions of PIC and paper or pulp insulated cable where ready access type terminals are, or will be installed, on the PIC section.

2.03 It may be helpful to record such additions to the system as are indicated in Paragraph 2.02.

3. VALVE LOCATIONS

3.01 Permanent valves are generally located as follows:

(1) On underground cable at 3000 ft. intervals; this distance may be varied as much as 500 ft. to take advantage of existing valve manholes, drier or more accessible manholes, and taper points.

(2) On buried cable at 3000 ft. intervals; this distance may be varied as much as 500 ft. to take advantage of accessible and dry locations or taper points.

(3) On aerial feeder cable at about 1200 ft. intervals; this spacing is not critical and may be varied with preference given to stepped poles, junction or taper points, splice cases, and accessibility.

(4) At each aerial riser pole.

- (5) At the end of each branch cable unless the end is within 500 ft. of a junction with a main feeder cable.
 - (6) At each contactor location.
- 3.02 Temporary valves are placed on an, "as-required basis," to obtain pressure readings for leak location work.

4. CONTACTOR LOCATIONS

4.01 B End Point Contactors are generally located as follows:

- (1) At aerial cable riser poles.
- (2) At other locations in the aerial cable system as covered in Section G73.135.1.