BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G42.410
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AT&T Co. Prov. Std.

SUBSIDIARY CONDUIT
REPAIRING

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1. CONDUIT REPAIRS

1.01 Repairs to subsidiaries constructed of VC conduit, CW conduit or sewer pipe will, in general, be accomplished through the removal of the damaged conduit and replacement with split conduit of the required type following the procedure outlined for the repair and replacement of main conduit.

1.02 After removal of the section under repair, the ducts should be examined to determine whether accumulations of mud and silt which may have entered through the break are present in amounts which may affect cable placing operations. If practicable, an effort should be made to remove any obstructions disclosed in this manner. Such work should be done in accordance with the instructions for cleaning ducts as covered in the Underground Cable Placing Practices.

2. REPAIR OF TERMINATING BENDS

Steel or Wrought Iron Bends

2.01 Deterioration of steel and wrought iron subsidiary bends is generally confined to a section extending slightly above and below the ground line. When the duct is occupied and the bend cannot be replaced with one of cast iron, the method outlined below may be employed to effect repairs.

Pipe Extending up Pole

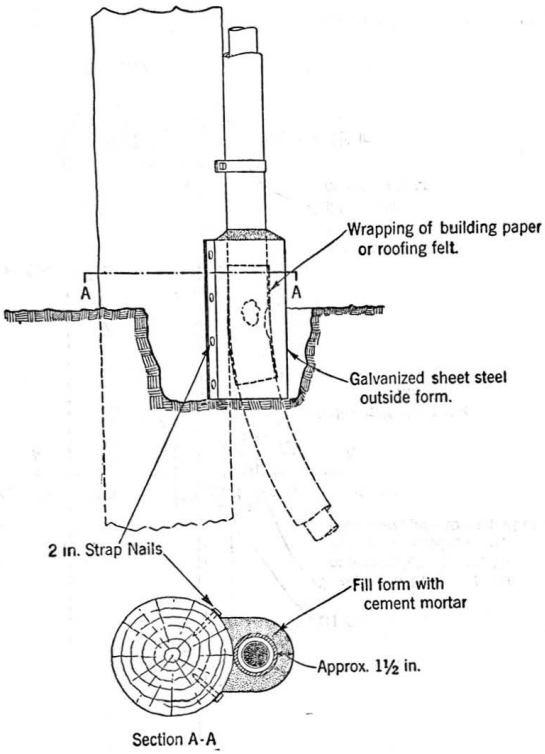
2.02 Remove paving, if present, and excavate around the bend to a depth of about 12 inches below the ground line. With a wire brush, clean the pipe for some distance above and below the ground line, removing rust, scale and all loose portions of the pipe.

2.03 The portion to be repaired should include a section extending approximately 2 inches above and below the area showing evidences of severe corrosion.

2.04 Wrap the pipe completely with a sheet of heavy building paper or roofing felt large enough to cover all punctured areas and secure this wrapping in place with twine or lashing wire.

2.05 Enclose the bend in a metal form of a diameter approximately 3 inches larger than the pipe and constructed of galvanized sheet steel of not less than No. 20 gauge. The form should be long enough to extend approximately 2 inches above and below the corroded portion. Attach the form to the pole by means of 2-inch strap nails as shown below.

2.06 Fill the form with cement mortar of the grade recommended for trowelled joints and puddle the mortar thoroughly around the pipe on all sides. Finish the top with a smooth surface sloping from the pipe down to the form.



Section A-A

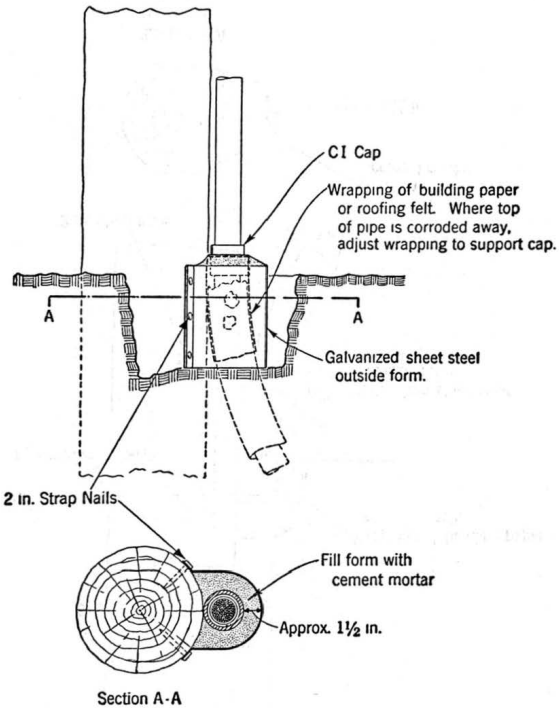
2.07 **Backfill and, if necessary, replace paving. If concrete paving is required, use the grade of concrete specified for concrete paving following the recommended practices for placing and curing. The form is to be left in place permanently.**

Where U Cable Guard is Used

2.08 Remove paving, if present, and excavate to a depth necessary to uncover the entire corroded area. Remove the U cable guard and cast iron cap. Clean the pipe as described above and cover the punctured areas with heavy building paper or roofing felt.

2.09 If the top of the bend is corroded away it may be built up to hold the cap at the proper level by wrapping the end of the pipe with several layers of building paper and allowing it to extend beyond the end of the pipe as indicated below.

2.10 Replace the cap and adjust the metal form so that its top is slightly below the shoulder of the cap and attach it to the pole. Fill the form with concrete to encase the cast iron cap to the level of the shoulder. Finish the top to a smooth surface and slope it to the edge of the form.



Section A-A

2.11 Proceed with backfill, etc., as outlined in Paragraph 2.07.

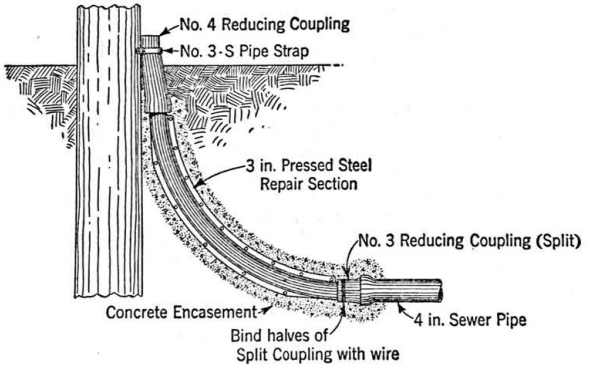
Sewer Pipe Bends

2.12 The repair of broken sewer pipe bends containing cable can be accomplished by the use of a split pressed-steel repair section as illustrated below. Break off the remaining portions of the sewer pipe bend down to the first straight section of conduit. Fit the halves of the bend over the cable and place a bolt and nut at each end of the bend and one at the center to hold it in place. The remaining bolts should then be placed and tightened securely.

2.13 The repair bend should be joined to the bell end of 4-inch Sewer Pipe with a split No. 3 Reducing Coupling or to 3-inch CW Conduit by inserting the bend in the mortise of the conduit.

2.14 The No. 4 Reducing Coupling originally used with the sewer pipe bend should then be slid down over the end of the repair section. Replace the pipe strap previously used to secure the reducing coupling to the pole or building.

2.15 Encase the repair section in 3 inches of mortar or concrete, extending the encasement about 6 inches beyond the joint at each end of the section.



3. REPLACEMENT OF TERMINATING BENDS

3.01 If operations in connection with other work disclose the existence of wrought iron or steel bends which are unoccupied or are scheduled to be vacated temporarily during the replacement of the cable, the advisability of the replacement of the bend with one of cast iron should be discussed with the supervisor.