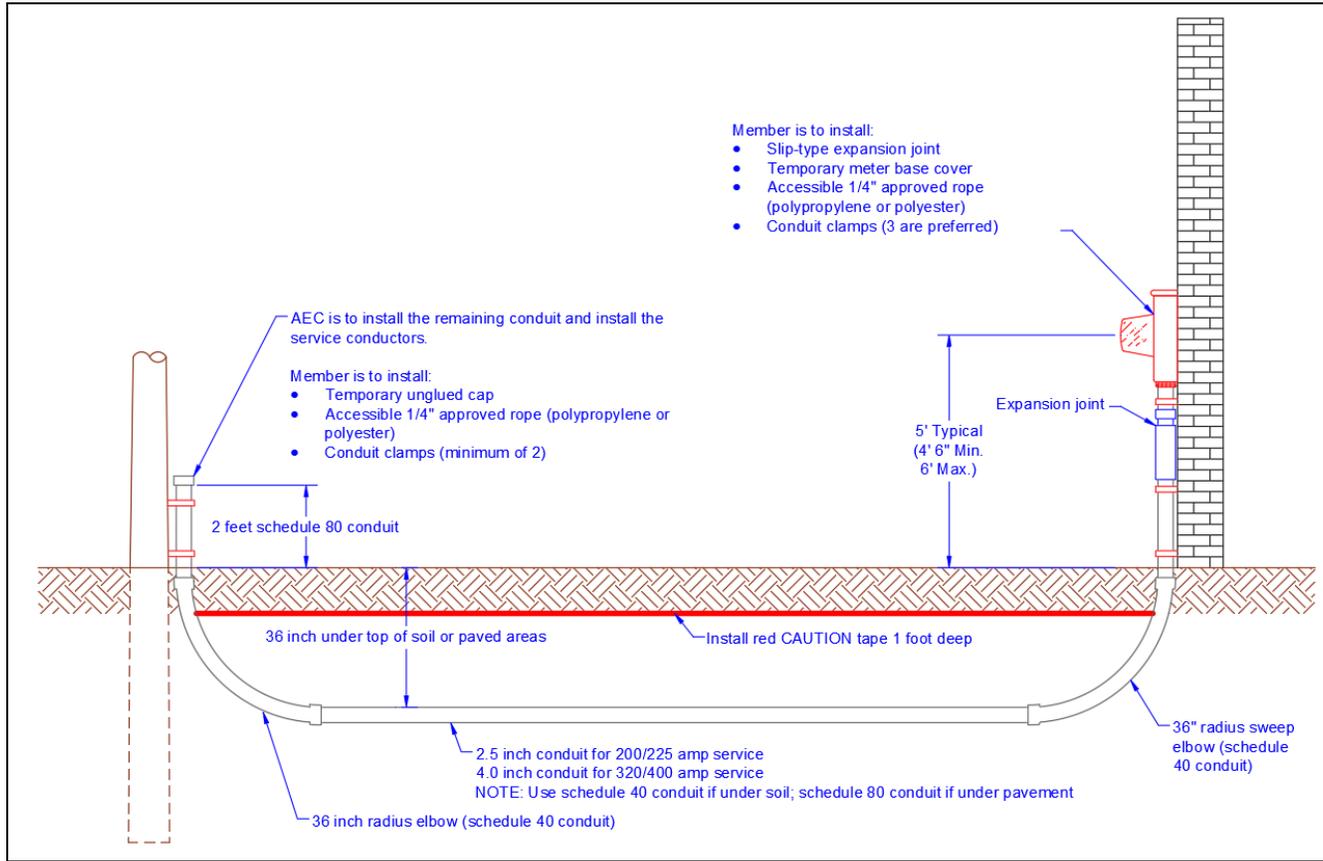


# APPALACHIAN ELECTRIC COOPERATIVE

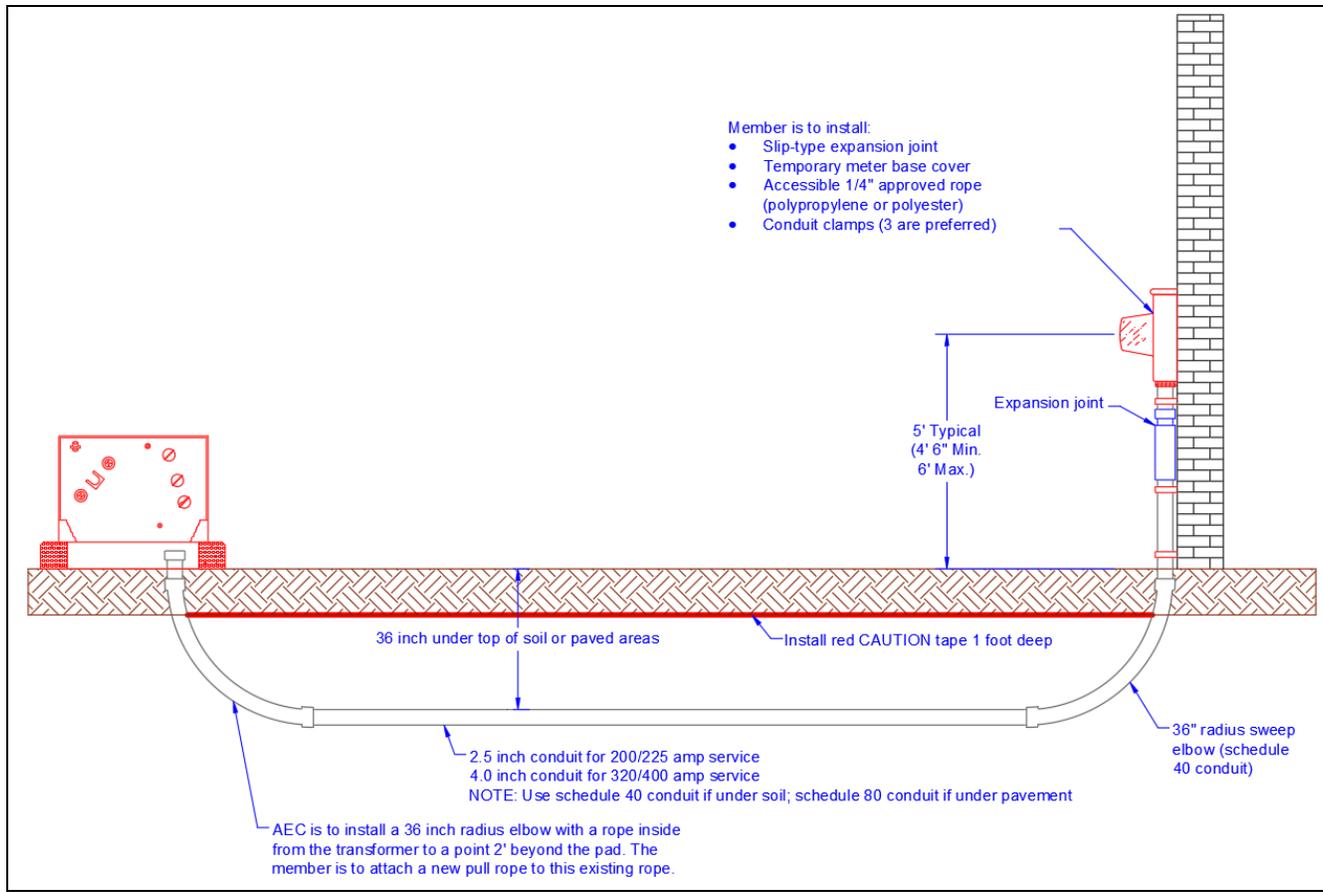
## Underground Service

Pole Mounted Transformer to Meter Base and Pad Mounted Transformer to Meter Base  
200 / 225/ 320 (400) amp Service Entrance

1. The member is to furnish and maintain one continuous conduit raceway from the meter base to:
  - A. Two (2) feet above the ground and adjacent to the pole for pole to meter base installations (Figure 1).
  - B. The interception of the AEC conduit adjacent to the padmounted transformer for padmounted transfer to meter base installations (Figure 2).
2. The conduit raceway is to utilize **two and one-half (2.50) inch** electrical conduit for 200 amp service entrances and **four (4) inch** electrical conduit for 320 (400) amp service entrances. **No water or sewer pipe is to be used.**
3. The conduit from the meter base to the meter base elbow is to be schedule 80 PVC and must include an expansion joint. A preferred minimum of three (3) two-hole rigid conduit straps are to be used to support this riser. The conduit from the pole elbow to two (2) feet above the ground is to be schedule 80 PVC for pole meter base installations (Figure 1).
4. The elbows are to have a 36 inch minimum radius. It is to be noted that this is not the standard non-sweep elbow. No elbows are allowed except the two (2) mentioned in Item 3.
5. The electric PVC conduit joints are to be joined using PVC cement with the cement applied over an external area of the conduit such that the application overlaps the coupling by one (1) inch and is obvious to an AEC inspector after the coupling is applied.
6. An approved 1/4 inch pull rope is to be installed, is to be free moving and not stuck to cement joints. The rope will be left at the job site after use.
  - A. **APPROVED: polypropylene, polyester (similar to Muletape)**
  - B. **NOT APPROVED: baling twine, nylon, anything that stretches**
7. The supply end of the conduit is to be installed as follows:
  - A. For a pole to meter base installation, a temporary conduit cap is to be installed at the pole to prevent water from entering the conduit. The temporary cap is to be taped and not cemented (Figure 1).
  - B. For a padmounted transformer installation; the member's rope is to be tied to AEC's 1/4 inch polypropylene pull rope, which will be found in the conduit elbow near the padmounted transformer (Figure 2).
8. A temporary protective cover is to be installed at the meter base to prevent water from entering the meter base and the conduit raceway. All conduit below ground level and not below paved areas shall be schedule 40. All conduit above ground level or below paved areas shall be schedule 80.
9. The steps for installing the conduit raceway are as follows:
  - A. Contact AEC's Service Department (865-475-2032 ext. 1800) to start a Service Order.
  - B. A Staking Technician will meet with you onsite to identify your meter base and ditch line locations. The meter base and ditch line locations **MUST BE REVIEWED AND APPROVED** by the Staking Technician **BEFORE** the member opens the ditch.
  - C. The ditch is to be opened, and the ditch bottom is to be leveled with material of one (1) inch across or less. The ditch must be straight without bends.
  - D. **Other utilities must be separated from the AEC conduit system by one (1) foot horizontally and vertically.**
  - E. The conduit system is to be laid and cement joined.
  - F. The pull line is to be installed.
  - G. The temporary conduit cap is to be installed for pole to meter base installations and a temporary meter base cover is to be installed in all installations.
  - H. **A conduit raceway inspection is to be requested from the AEC inspector (865-475-2032 ext. 1075).**
  - I. **After the conduit raceway has been approved by an AEC inspector, the member is to fill the remaining ditch to within one (1) foot from the top of the ditch. Lay the warning tape in the remaining one (1) foot of ditch and cover.** Building supplies such as lumber, nails, buckets, bands, bricks, blocks, equipment parts, insulation, roofing, wallboards, and etc., are to be excluded from the backfill material.
  - J. An inspection of the service entrance is to be requested from the State Deputy Wiring Inspector. The State Deputy Wiring Inspector will approve the service entrance and affix the approval sticker to the meter base.
  - K. AEC will schedule and install the remaining conduit system up the pole including a service head, install the service conductors connecting them at the meter base and at the pole, and install the meter.



**Figure 1: Pole Mounted Transformer to Meter Base Installation**



**Figure 2: Padmounted Transformer to Meter Base Installation**