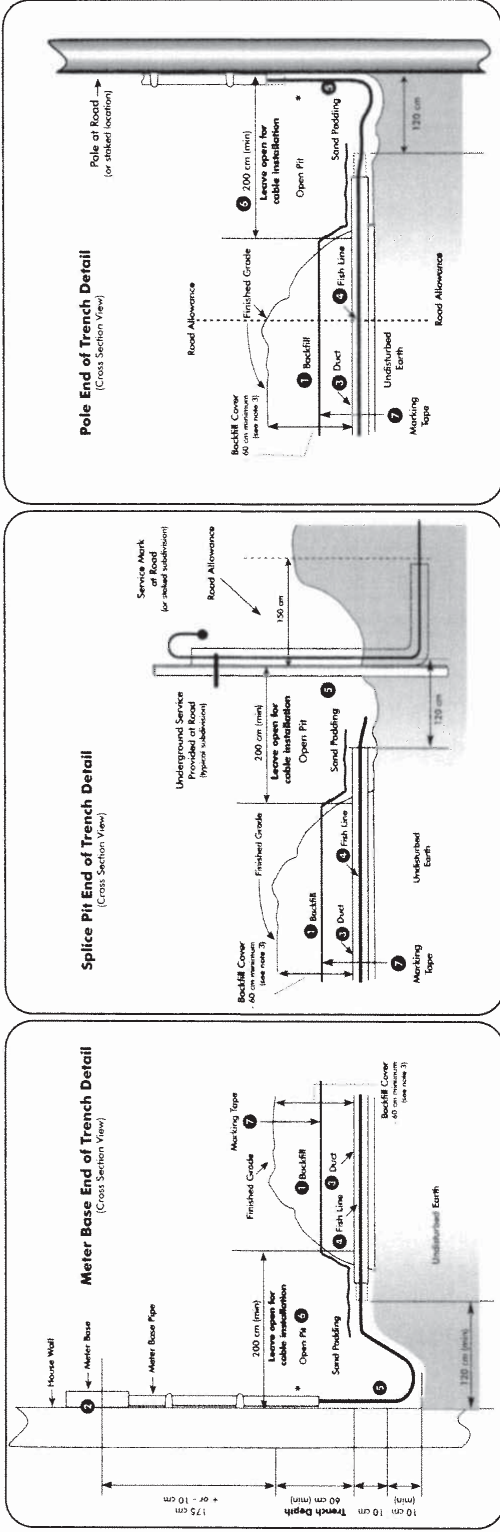


Hydro One Trenching Guidelines

The reference notes below explain Hydro One Networks' Standards for the installation of all Hydro One owned secondary underground cable, regardless of who installs the cable. The diagrams further illustrate these requirements. This will allow Hydro One crews to install the cable without requiring a coordinated site visit with the trench installer, if Hydro One is the chosen installer of the cable. Trench, excluding open pit area, can be backfilled as shown prior to cable install. **Option B** - If, at the sole discretion and approval of Hydro One, a continuous length of 4" Red Line Big "O" is used in rock locations in lieu of Type DB2 as specified, the entire trench must remain open for cable installation.



- 1 Backfill:** It must be clean and free of debris to properly protect the duct and to prevent crushing. See item 3 below.
- 2 Meter Base Assembly:** Install the meter base assembly according to the Electrical Supply Authority guidelines (1-877-421-2228). Meter Base shall be an assembly type, centre mount with tunnel mount connectors having a minimum outside dimension of 17" x 12" x 4 3/4" (43.2 x 30.5 x 12.1 cm) 200A jumbo; 400A etc. as per Hydro One.
- 3 Trench and Duct:** The trench should be as straight as possible. However, if a curve is necessary, the bend should be no more than 45 degrees over a 300 cm radius. **The trench depth must provide for a minimum of 60 cm of cover (90 cm under driveways).** "Cover" refers to the distance between grade and the top of the duct. The duct shall be 4" diameter PVC "Type DB2". (Type DB2 duct specifications are governed by the Ontario Electrical Safety Code.) If 60 cm of cover depth is not achievable, the cable installation must comply with ESA standards (Section 12 Rule 12-012 and cable 53. It also refers to CSA Standard C22.3 No.7) for shallow cable. The ends of the duct must be capped or bagged to prevent debris and moisture from entering the duct prior to cable installation. Blocked or frozen ducts, preventing Hydro One from completing its portion of the work, will result in an "extra trip charge" being applied.
- 4 Fish Line:** A 1/4" polypropylene (or equivalent) fish line must be installed through the entire length of the duct. This line is used to install the cable-pulling rope through the duct. Your cable installer must provide the pulling rope and any other accessories (pulling compounds, etc.) needed to install the cable.
- 5 Ends of Trench:** The cable installer must ensure that the service cable is formed into a semicircular loop below the pipe (bending radius not less than ten times cable diameter) at the meter base and pole end. This loop will prevent damages due to frost movement. The ends of the cable are required to be protected by sand padding above and below the cabling. **Clean mason sand, heated or free of clumps, is to be provided by the civil contractor.**
- 6 Open Pit Detail:** The duct must extend to the road allowance ideally 120 cm from the cable stake. Your local Hydro One office must approve any changes from this standard.
- 7 Marking Tape:** A power cable marking tape shall be buried approximately halfway between the installation and grade level.

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