CONDUIT INSTALLATION
Customer and Developer Installed

Published: 12-31-24
Reaffirmed: N/A

USE : Requirements for customer and developers to install conduit for a new install of either primary or secondary wire as required by LOA engineering. Guidance includes open trench method and directional boring.

STANDARD ORIGINATED	PREVIOUS STANDARD REVISION	PREVIOUS STANDARD NUMBERS
12-31-24	N/A	ER 18-500-A (02-01-21)

REVISION SUMMARY: New standard replacing ER 18-500. Added additional requirements for developer/customer installed conduit and developer/customer installed directional bore process. Additional conduit required for developer installed road crossings.

REFERENCE(S): (All references are latest revision; unless noted)

National Standard(s)

a. NEMA TC-2: Electrical Polyvinyl Chloride (PVC) Conduit
b. NEMA TC-8: Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installations
c. NEMA TC-9: Fittings for Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installation
d. NEMA TC-7: Solid-Wall Coilable and Straight Electrical Polyethylene Conduit
e. ASTM D1785: Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
f. ASTM F512: Smooth-Wall Poly(Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation
g. ASTM D3035: Standard Specification for Polyethelene Plastics Pipe Based on Controlled Outside Diameter
h. ASTM D1248: Standard Specification for Polyethelene Plastics Extrusion Materials for Wire and Cable
i. ASTM D3350: Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
j. NESC Section 32: Underground Conduit Systems

NIPSCO Standard(s)

k. U0055: Cross Bore Avoidance
l. U0101: Electric Trench
m. U0105: Electric Joint Trench
n. ER 19-285: Service-General, Residential, Commercial, Industrial
o. EU 2-120: Cable Installation, General
p. M 18-450: Conduit - High Density Polyethylene
q. M 18-525: Conduit, Fittings, & Accessories

SPECIFICATIONS:

1. GENERAL:

1.1. All electric conduits shall be gray schedule 40 electrical PVC or black-pipe-red-stripe SDR13.5 HDPE. All conduits agreed to be installed by customer/developer shall be supplied and installed by customer/developer.

1.2. Prior to backfill, all conduit installations and crossing locations are subject to approval by the local field supervisor or company personnel as appropriate to ensure there have been no damages to any underground facilities. Approval may be through visual inspection or contractor supplied photographs. Conduit that cannot be visually verified shall follow the process outlined in NIPSCO U0055 "Cross Bore Avoidance".

1.3. All conduit sizes shall be provided by NIPSCO LOA Engineering Department and indicated on customer/developer Exhibit A as part of New Business Contract. New Business Specialists shall provide a construction drawing to customer/developers for design acceptance of conduit installation or agreed upon locations of conduit. Conduit length shall not to exceed standard electric service length as indicated in the NIPSCO Electric Tariff without evaluation of service length and path with LOA Engineering or New Business Specialists.

1.4. Customer shall own conduit until NIPSCO inserts cable, upon that time NIPSCO will own and maintain conduit.

1.5. Service entrance size of 200 A shall be installed in 2.5" conduit. Service entrance size of 320 A shall be installed in 3" conduit.

1.6. Customer-owned service conduit, shall be customer owned and installed conduit. If the customer chooses to own their service, then installation method is responsibility of the customer.

1.7. All conduits shall be temporarily sealed, at both ends, as to prevent infiltration and blockage of conduits. Customer/developer installed conduit found to be blocked or otherwise unusable, shall be the responsibility of the customer/developer for remediation.

1.8. Customer installed conduit shall be flagged by customer after installation before construction can begin.

1.9. Project shall not be released to construction without verification of conduit installation.

1.10. Wood marking stakes, 2" x 4" dimensional lumber, shall be provided to mark conduits ends at each side of crossing (see 2.1 Road Crossing). 2" x 4" marking stakes shall be within 1 foot of conduit ends shall be wrapped at the top with red barrier tape, labeled with NIPSCO, and conduit dimension. 2" x 4" marking stakes shall extend a minimum, of 36 in above final grade and be clearly identified to communicate use of installed conduit.

2. TYPICAL INSTALLATION

2.1. Road Crossing

2.1.1. All conduits shall extend a minimum of 5 feet into easement or right of way, which ever is farthest from the paved road. On either side of the road crossing, normal trenching methods shall be followed. (Refer to: NIPSCO U0101 for electric only or NIPSCO U0105 for joint trenching.)

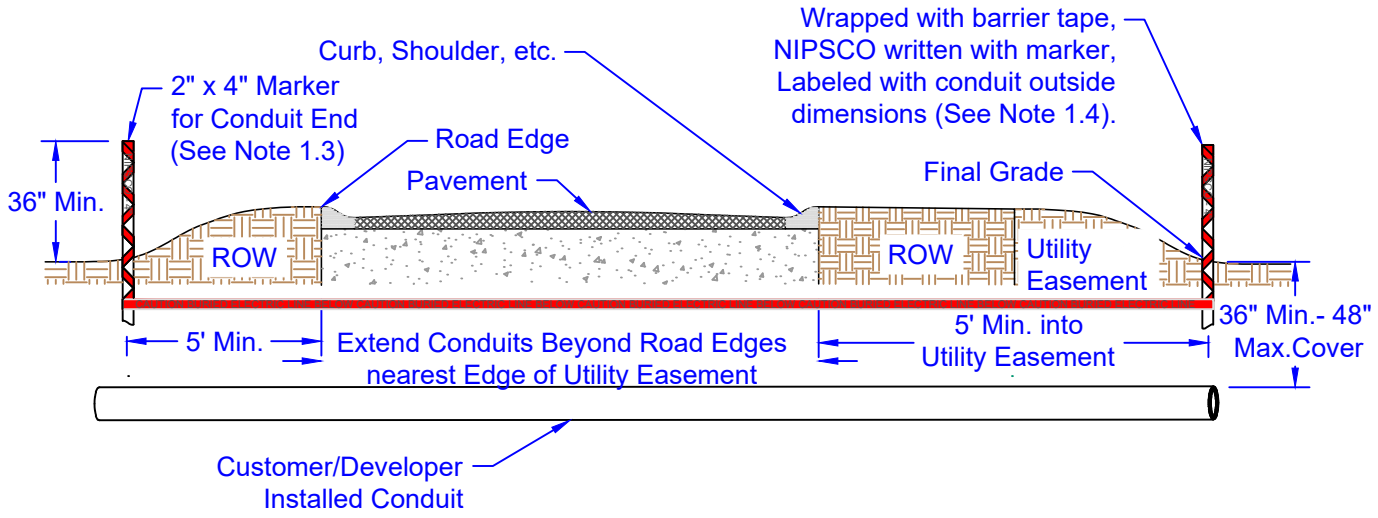


Figure 2-1

2.2 Trench Profile (Joint Side-by-Side Installation)

2.2.1 Minimum of 36 inches and a maximum of 48 inches of cover shall be maintained above all conduits. In joint gas and electric combination installations, all conduits shall be installed as displayed, in a joint trench, with a minimum 12 inches separation between electric and gas. (See Figures 2.2 & 2.3).

2.2.2 All open trench conduits shall be installed with electric barrier tape as displayed. (See Figures 2.2, 2.3, & 2.4)

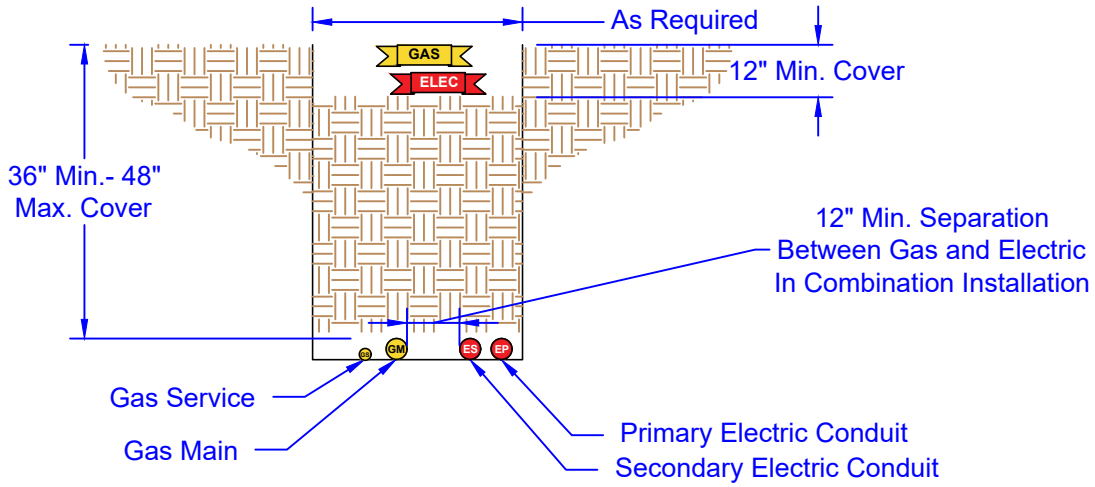


Figure 2-2

2.3 Trench Profile (Joint Stacked Installation)

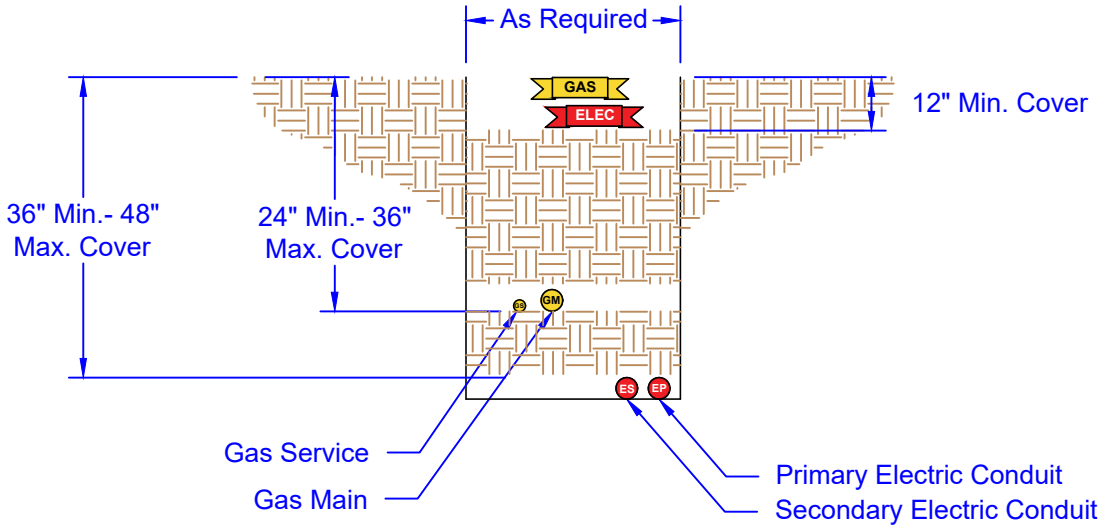


Figure 2-3

2.4 Trench Profile (Electric Only Installation)

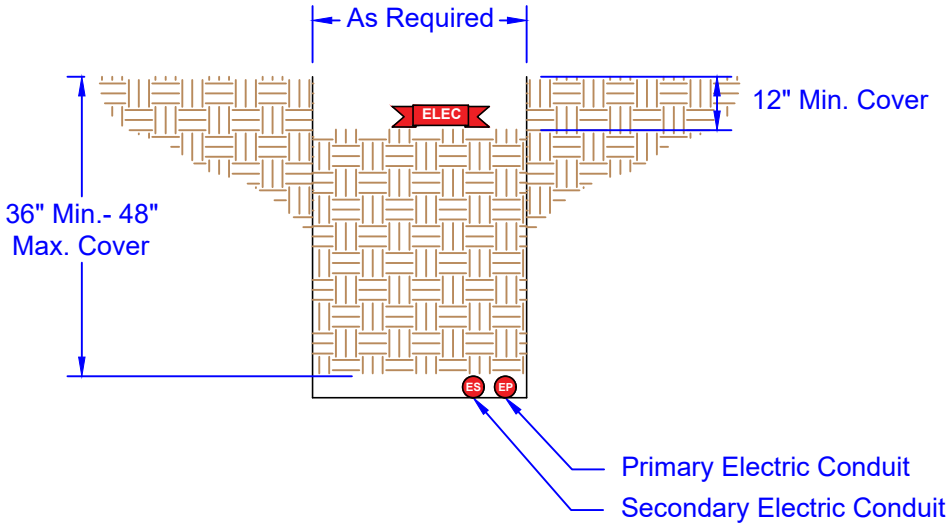


Figure 2-4

2.5 Existing Pedestal Conduit Installation

2.5.1 Customer shall install conduit to within 4 feet of energized primary and secondary pedestals.

2.5.2 NIPSCO will facilitate installing long sweep elbows under primary and secondary pedestals.

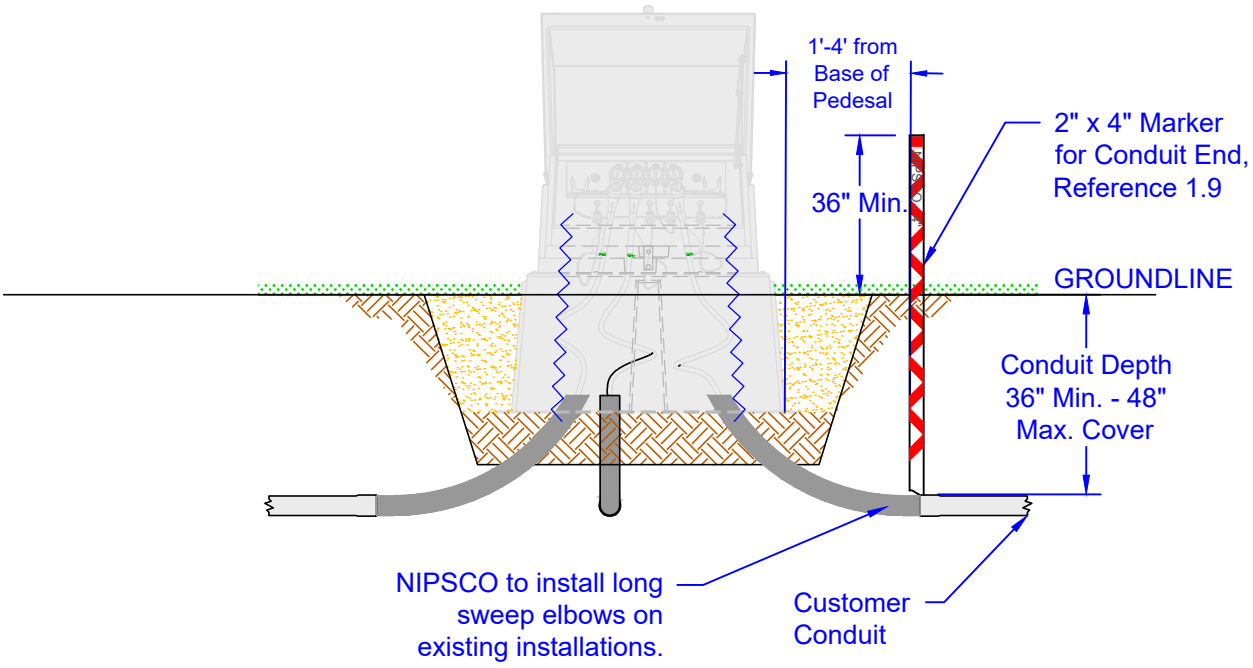
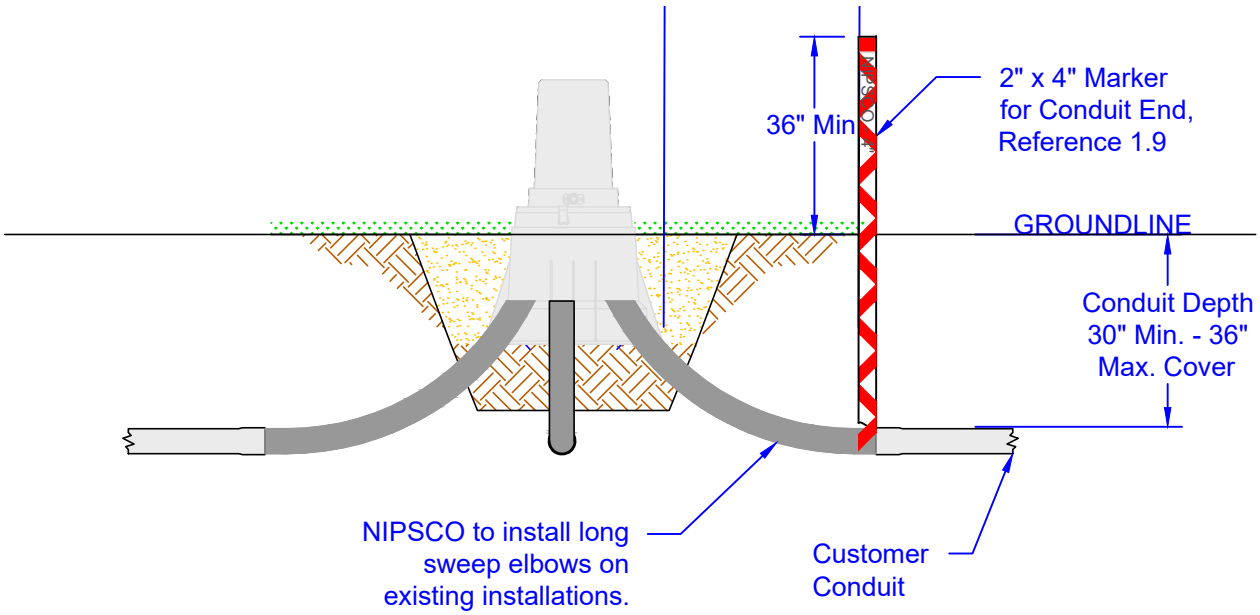


Figure 2-5



2.6 Existing Pole Conduit Installation

2.6.1 Customer to install conduit to within 4 feet of existing pole.

2.6.2 NIPSCO will facilitate installing the long sweep elbows next to poles, unless indicated by Field Engineering or New Business Specialists.

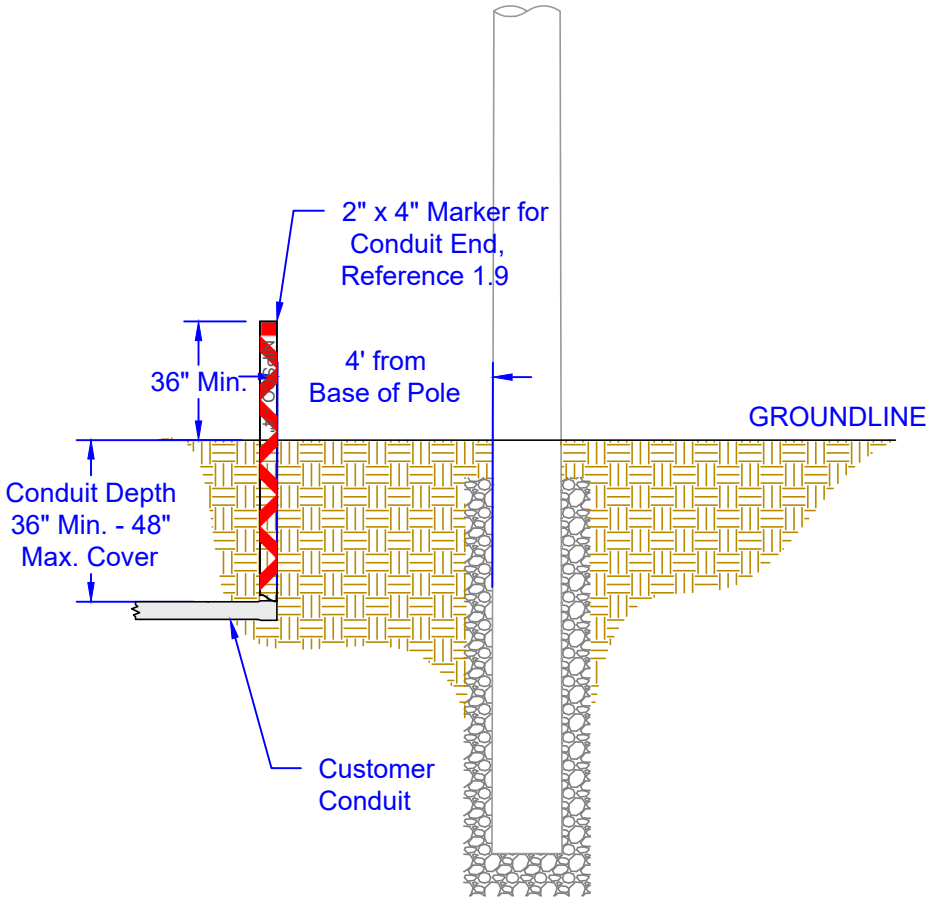


Figure 2-6