SLEMCO
Specifications for Residential Underground Secondary Requirements

Applicable to residential and small noncommercial services receiving single-phase power at 120/240 volts through a 200 Amp meter base attached to building requiring service. The meter base service conductors enter through an underground conduit from either an underground or overhead source.

The *Point of Connection* is the point of demarcation between SLEMCO and the customer. It will be the customer's responsibility for compliance with the National Electrical Code (*NEC*) and any governing authority for all equipment beyond the *Point of Connection*. The customer is advised to use the services of a qualified electrician to assure compliance with all codes and regulations.

It should be noted that electrical pipe is the gray pipe and white water pipe is not acceptable. Therefore, schedule 40 or 80 electrical pipe discussed in this section is approved electrical conduit.

Items marked with ❷❸❹ are indicated on the following drawings:
❷Drawing No.2 – *Single-Phase Underground Service Requirements from an Existing Padmount Transformer*
❸Drawing No.3 – *Single-Phase Underground Service Requirements from a new Padmount Transformer*
❹Drawing No.4 – *Single-Phase Underground Service Requirements from an Overhead Source*

A. Secondary conductors from transformer to meter base are furnished and installed by SLEMCO. ❷❸❹ Secondary conductors will be terminated by SLEMCO to source side of the meter base (*Point of Connection*).

B. Secondary conduit furnished and installed by customer. After trenching, the trench may be backfilled and covered. Conduit must be 2" electrical conduit. Electrical schedule 40 pipe is acceptable for below ground use. ❷❸❹

C. Above ground riser conduit must be 2" electrical schedule 80 pipe. If elbows are required, then PVC elbows shall be used. LB elbows and flex conduit cannot be used. ❷❸❹

D. Any underground service that requires three 90º (*degree*) turns or is further than 150', the customer must use standard steel 90º elbows with an 18" turn. A maximum of three 90º turns are allowed. Any underground service which is less than 150' with two or less 90º turns, the customer is allowed to use PVC long radius 90º elbows with a 36" turn. ❷❸❹

E. Customer must maintain a depth of 36" when installing electrical conduit for secondary conductors. ❷❸❹

F. **F1** If the customer is getting power from an overhead source, then the customer will stub up at the SLEMCO pole 36" above finished grade with 2" electrical schedule 80 pipe. ❹ The customer will also be required to leave three (*3*) joints of 2" electrical schedule 40 pipe near the pole to be used by SLEMCO to install the riser up the pole even with neutral or bottom of transformer. The customer will also provide a 2" weather head along with the electrical schedule 40 pipe. According to National Electric Safety Code (*NESC*) Table 232-1, Item 5., Note 8(d), the lowest point of the service conductor (*drip loop*) must be at least 10' above final grade.

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❷Drawing No.2 – *Single-Phase Underground Service Requirements from an Existing Padmount Transformer*
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❹Drawing No.4 – *Single-Phase Underground Service Requirements from an Overhead Source*

F2 If the customer is getting power from an existing padmount transformer, then the customer must stop the electrical conduit 1' short of the transformer pad. The customer conduit must be installed perpendicular (*in direction of arrows*) to the area (*shown in gray*) marked as 1' from edge of transformer pad surrounding the bushing enclosure of the padmount transformer. ❷ Unacceptable installations include installing conduit from the rear of the transformer or installing conduit that in not perpendicular to the bushing enclosure of the padmount transformer. SLEMCO will install and provide the PVC long radius 90º elbow and electrical conduit into the transformer.

F3 If the customer is getting power from an existing pedestal, then the customer must stop the electrical conduit 1' short of the pedestal's edge.

F4 If the customer is getting power from a new padmount transformer, then the customer must stub up the secondary and primary electrical conduit next to each other at the location of new padmount transformer. ❸ See the next section entitled, *Specifications for Residential Underground Primary Requirements*, for details on primary installation.

G. Standoff brackets furnished and installed by SLEMCO. ❹

H. Customer will complete installation of electrical conduit into bottom left side of meter base using 2" electrical schedule 80 pipe for section above finished grade into meter base. If elbows are required, then PVC elbows shall be used. LB elbows and flex conduit cannot be used. ❷❸❹

I. Customer will install a polypropylene pull string (*minimum strength of 210 lbs.*) in all electrical conduit that will require SLEMCO to install secondary conductors.

J. Meter base furnished and installed by customer. When purchasing a meter base for underground service please specify hubless or underground meter base. The meter base shall be mounted on the outside of the building such that the center of the meter socket window is between 5' and 6' above finished grade. ❷❸❹ The meter base shall conform to SLEMCO's standards and shall be compatible with SLEMCO metering. The meter base shall be rated for 200 Amps.

K. The main disconnect (*service panel*) and customer conductors (*from load side of the meter base to the main disconnect*) are furnished and installed by customer. The main disconnect shall be sized for 200 amps and located within 3' of the meter base. The customer conductors shall be sized for 200 Amps of load, as required by the NEC or Governing Authority. The main disconnect and or other electrical equipment may be mounted on the outside of the building. However, it must be of weather proof and watertight design to be mounted on the outside. ❷❸❹

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L. The customer will be responsible to furnish the meter base ground wire (*minimum #6 soft drawn copper*) and install this wire in electrical conduit from the meter base to the ground rod. The meter base ground wire shall be connected in the ground wire lug, where provided, and not in the service neutral lug. ❷❸❹

M. Ground rod, minimum 5/8" x 8' copperweld or 1/2" x 8' copper, furnished and installed by customer. Ground rod is to be set 1" below finished grade. ❷❸❹ This is the minimum required by SLEMCO. Additional grounding may be required by the NEC or Governing Authority.

N. Variations of this design may be considered equal as long as NEC requirements are met. To assure acceptability where variations arise, contact SLEMCO prior to installation.

O. If a Governing Authority requires inspection, inspection tag must be in place and marked approved before SLEMCO will connect service. ❷❸❹