

Engineering Service Specifications

Commercial Three-Phase Metering Schemes (*Self-contained meter base no CTs required*)

SLEMCO

Specifications for Commercial Underground Secondary Requirements for Three-Phase Customers

Applicable to commercial services receiving three-phase power at 120/240 or 120/208 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 ⑳㉑㉒ are indicated on the following drawings:

㉑ Drawing No.20 – Three-Phase Underground Service Requirements from a New Padmount Transformer

㉑ Drawing No.21 – Three -Phase Underground Service Requirements from an Existing Padmount Transformer

㉒ Drawing No.22 – Three-Phase Underground Service Requirements from an Overhead Source

- A. **A1** If the customer is getting power from a padmount transformer (*Point of Connection*), then secondary conductors from transformer (*Point of Connection*) to meter base furnished and installed by customer. ⑳㉑ The secondary conductors shall be sized according to the load, as required by the NEC or Governing Authority. Diesel Locomotive (*DLO*) conductors are prohibited. The neutral of the secondary conductors shall be sized no smaller than two sizes less than the other conductors. Termination of conductors must be made in meter base by customer. An extension of at least 48" of secondary conductor is required to be left out of conduit at padmount transformer location. Termination of conductors in padmount transformer (*Point of Connection*) performed by customer.
- A2** If the customer is getting power from an overhead source, then secondary conductors from transformer to meter base furnished and installed by SLEMCO. ㉒ Customer will install a polypropylene pull string (*minimum strength of 210 lbs.*) in all electrical conduit that will require SLEMCO to install secondary conductors. Termination of conductors will be made to source side of meter base (*Point of Connection*) by SLEMCO.
- B. Secondary conduit furnished and installed by customer. The customer is required to trench and install one (1) electrical conduit (3" *minimum*) per conductor run. Electrical schedule 40 pipe is acceptable for below ground use. ⑳㉑㉒ After trenching, all trenches may be backfilled and covered by customer.
- C. Above ground riser conduit must be 3" electrical schedule 80 pipe. If elbows are required, then PVC elbows shall be used. LB elbows and flex conduit cannot be used. ⑳㉑㉒

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Items marked with ⑳㉑㉒ are indicated on the following drawings:

⑳ Drawing No.20 – *Three-Phase Underground Service Requirements from a New Padmount Transformer*

㉑ Drawing No.21 – *Three -Phase Underground Service Requirements from an Existing Padmount Transformer*

㉒ Drawing No.22 – *Three-Phase Underground Service Requirements from an Overhead Source*

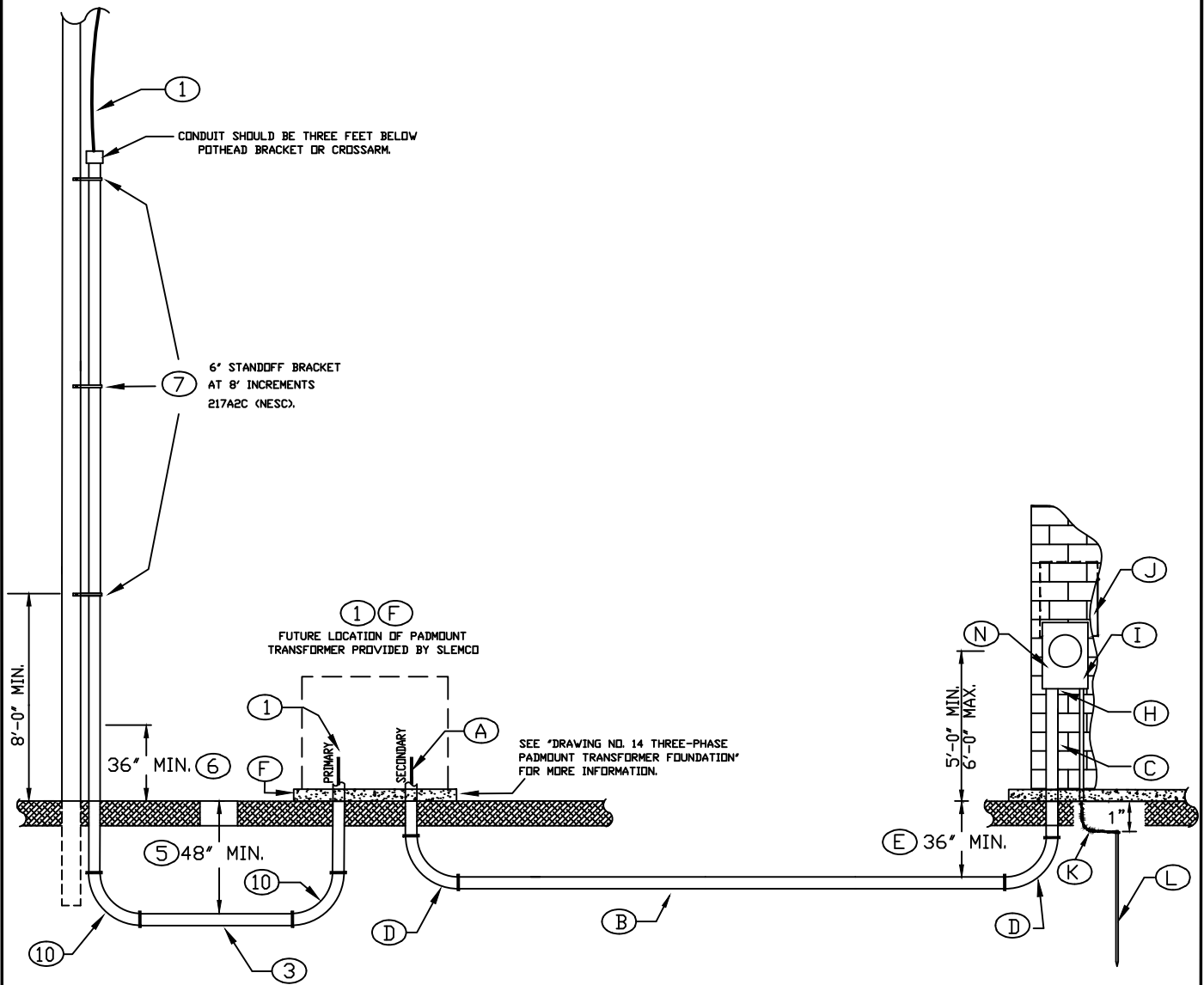
- D. Any underground service that requires three 90° (*degree*) turns or is further than 150', the customer must use standard steel 90° elbows with an 18" turn. A maximum of three 90° turns are allowed. Any underground service which is less than 150' with two or less 90° turns, the customer is allowed to use PVC long radius 90° elbows with a 36" turn. ⑳㉑㉒
- E. Customer must maintain a depth of 36" when installing electrical conduit for secondary conductors. ⑳㉑㉒
- F. **F1** If the customer is getting power from an overhead source, then the customer will furnish and install the riser (*conduit*) up the SLEMCO pole. ㉒ The first 36" of riser above ground must be electrical schedule 80 pipe (3" *minimum*) and the remaining riser can be electrical schedule 40 pipe (3" *minimum*). The customer will also furnish and install a weather head (3" *minimum*) at the top of the riser. The installation height of the riser will be such that connection of the weather head on the riser is even with neutral or bottom of transformer bank. 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.
- F2** If the customer is getting power from an existing padmount transformer, then the customer shall stub up the secondary electrical conduit adjacent to existing secondary electrical conduit within the existing padmount transformer. Prior to this, a SLEMCO serviceman must be present to de-energize the padmount transformer. The customer must notify the Lafayette Service Department by calling (337) 896-5551 and schedule a serviceman.
- F3** If the customer is getting power from a new padmount transformer, then the padmount transformer foundation constructed and grounded by customer according to *Drawing No. 14 - Three-Phase Padmount Transformer Foundation*. SLEMCO must inspect foundation before concrete is poured. Padmount transformer furnished and installed by SLEMCO. The customer shall stub up the secondary electrical conduit as indicated on *Drawing No. 14 - Three-Phase Padmount Transformer Foundation* at the location of new padmount transformer. ⑳
- G. Standoff brackets furnished and installed by SLEMCO. ㉒
- H. Customer will complete installation of electrical conduit into bottom left side of meter base using 3" 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. ⑳㉑㉒

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Items marked with ⑳㉑㉒ are indicated on the following drawings:

- ㉑ Drawing No.20 – *Three-Phase Underground Service Requirements from a New Padmount Transformer*
- ㉑ Drawing No.21 – *Three -Phase Underground Service Requirements from an Existing Padmount Transformer*
- ㉑ Drawing No.22 – *Three-Phase Underground Service Requirements from an Overhead Source*

- I. Meter base furnished by SLEMCO and installed by customer. 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. ⑳㉑㉒
- J. The main disconnect (*service panel*) and customer conductors (*from 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. ⑳㉑㉒
- K. 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. ⑳㉑㉒
- L. 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. ⑳㉑㉒ This is the minimum required by SLEMCO. Additional grounding may be required by the NEC or Governing Authority.
- M. 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.
- N. If a Governing Authority requires inspection, inspection tag must be in place and marked approved before SLEMCO will connect service. ⑳㉑㉒
- O. Prior to secondary service connection and meter installation, a SLEMCO serviceman must inspect the total job for readiness. When ready for this inspection, notify the Lafayette Service Department by calling (337) 896-5551.

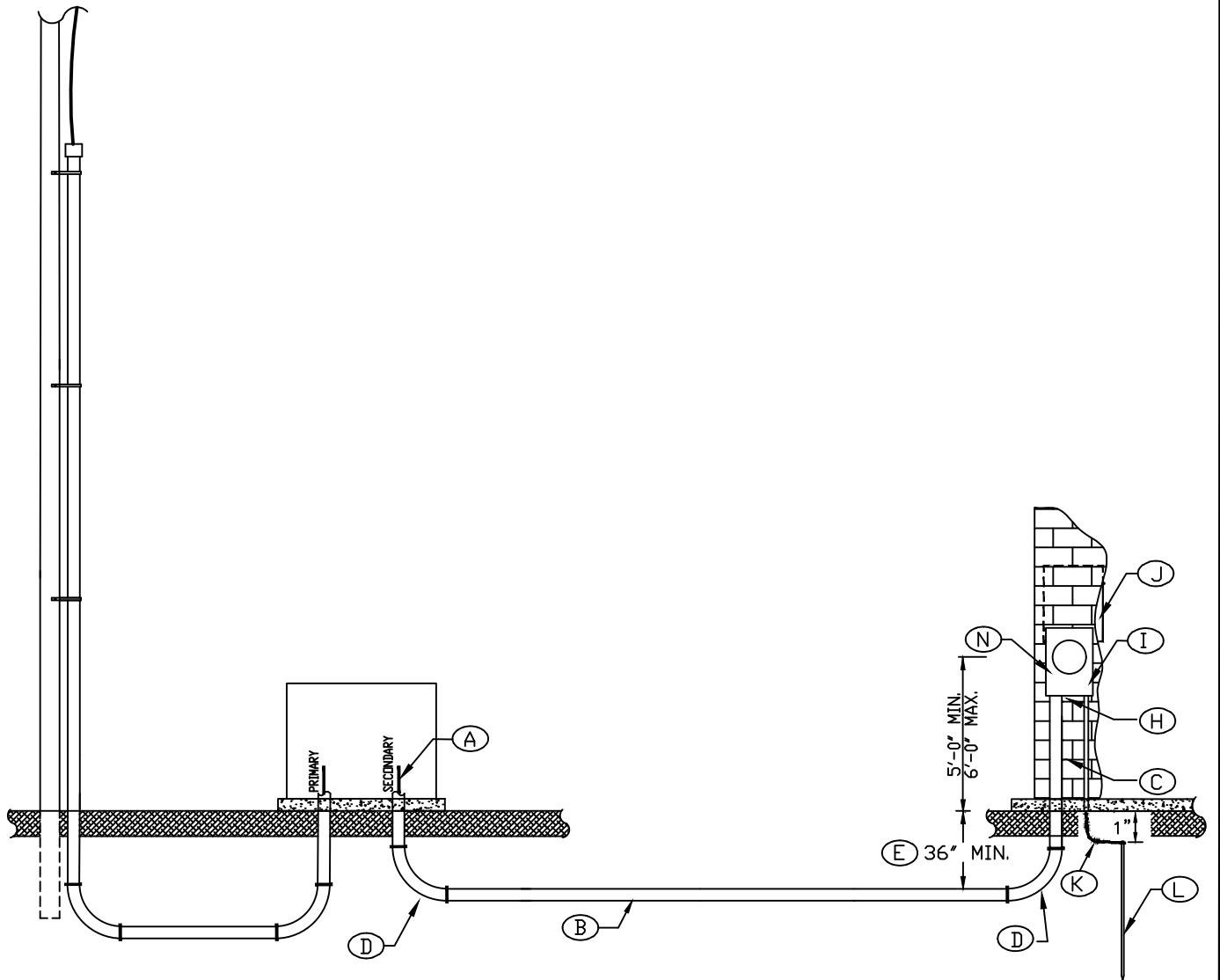


1. SEE "SLEMCO - SPECIFICATIONS FOR COMMERCIAL UNDERGROUND SECONDARY REQUIREMENTS FOR THREE-PHASE CUSTOMERS" FOR MORE INFORMATION ON ALPHA IDENTIFIERS.
2. SEE "SLEMCO - SPECIFICATIONS FOR COMMERCIAL UNDERGROUND PRIMARY REQUIREMENTS FOR A THREE-PHASE CUSTOMER" FOR MORE INFORMATION ON NUMERICAL IDENTIFIERS.


	SOUTHWEST LOUISIANA ELECTRIC MEMBERSHIP CORPORATION <small>LOUISIANA 9 LAFAYETTE</small>				
	THREE-PHASE UNDERGROUND SERVICE REQUIREMENTS FROM A NEW PADMOUNT TRANSFORMER				
DRAWN BY: D. CHRISTOPHE JR.		CREATED ON: 03/26/19	SCALE: N.T.S.		
REVISIONS	REVISED BY	DATE	REV.	DRAWING NO.	REV.
				20	0

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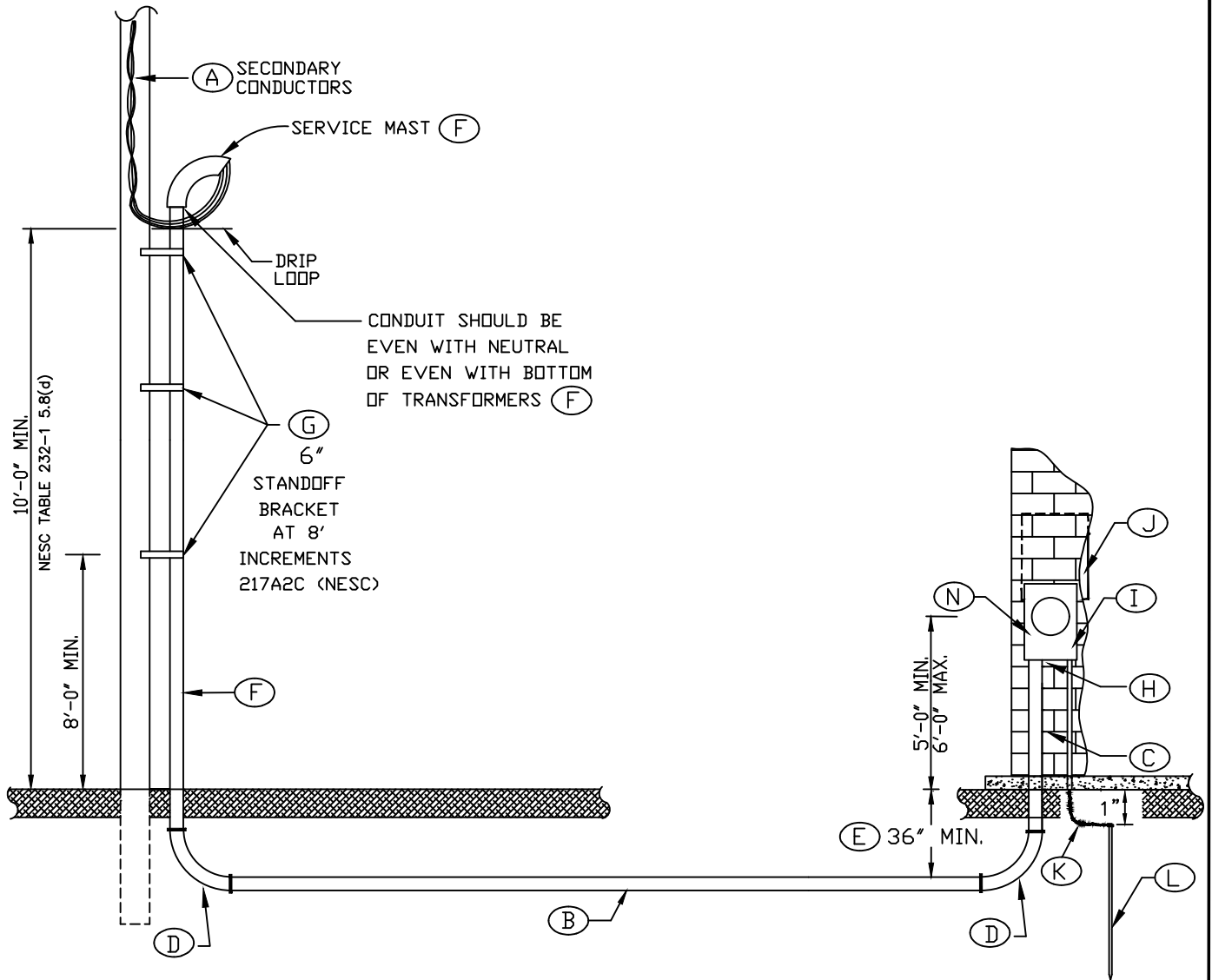


SEE 'SLEMCO - SPECIFICATIONS FOR COMMERCIAL UNDERGROUND SECONDARY REQUIREMENTS FOR THREE-PHASE CUSTOMERS' FOR MORE INFORMATION.


	SOUTHWEST LOUISIANA ELECTRIC MEMBERSHIP CORPORATION LOUISIANA 9 LAFAYETTE				
	THREE-PHASE UNDERGROUND SERVICE REQUIREMENTS FROM AN EXISTING PADMOUNT				
DRAWN BY: D. CHRISTOPHE JR.		CREATED ON: 03/26/19			SCALE: N.T.S.
REVISIONS	REVISED BY	DATE	REV.	DRAWING NO.	REV.
				21	0

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SEE "SLEMCO - SPECIFICATIONS FOR COMMERCIAL UNDERGROUND SECONDARY REQUIREMENTS FOR THREE-PHASE CUSTOMERS" FOR MORE INFORMATION.

	SOUTHWEST LOUISIANA ELECTRIC MEMBERSHIP CORPORATION LOUISIANA 9 LAFAYETTE				
	THREE-PHASE UNDERGROUND SERVICE REQUIREMENTS FROM AN OVERHEAD SOURCE				
DRAWN BY: D. CHRISTOPHE JR.		CREATED ON: 03/26/19	SCALE: N.T.S.		
REVISIONS	REVISED BY	DATE	REV.	DRAWING NO.	REV.
				22	0

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Specifications for Commercial Overhead Service Requirements

Applicable to commercial services receiving three-phase power at 120/208 or 120/240 volts through a 200 Amp (*or less*) meter base attached to building requiring service. Also applicable to commercial 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 a weather head from an overhead source. These requirements can also be used attached to a standalone structure or rack accompanying an overhead meter pole installation.

The *Point of Connection* is the point of demarcation between SLEMCO and the customer. It shall 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. 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. A sufficient drip loop shall be present to prevent water ingress.

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 ⑬ are indicated on Drawing No.23 – Three-Phase Overhead Service Requirements.

- A. Service cable from transformers to weather head (*Point of Connection*) are furnished and installed by SLEMCO. The Point of Attachment (*eye bolt, clevis bolt, etc.*) is furnished and installed by customer and shall be mounted at a minimum height of 12' (*NESC Table 232-1, Item 5*) above finished grade. ⑬
- B. Service entrance conductors from the weather head (*Point of Connection*) to the meter base are furnished and installed by customer. ⑬ The service entrance conductors shall be sized according to the service load size (*ampacity*) and **Commercial-Overhead Service Entrance Conductor Table**. Termination of conductors at the weather head (*Point of Connection*) performed by SLEMCO.

All service entrance conductors into and out of a self-contained meter base shall be single conductors. Parallel conductors are not allowed. An extension of at least 18" of service entrance conductors is required at the weather head. ⑬

The neutral of the service entrance conductors shall be identified with gray or white tape at the weather head and in the meter base.

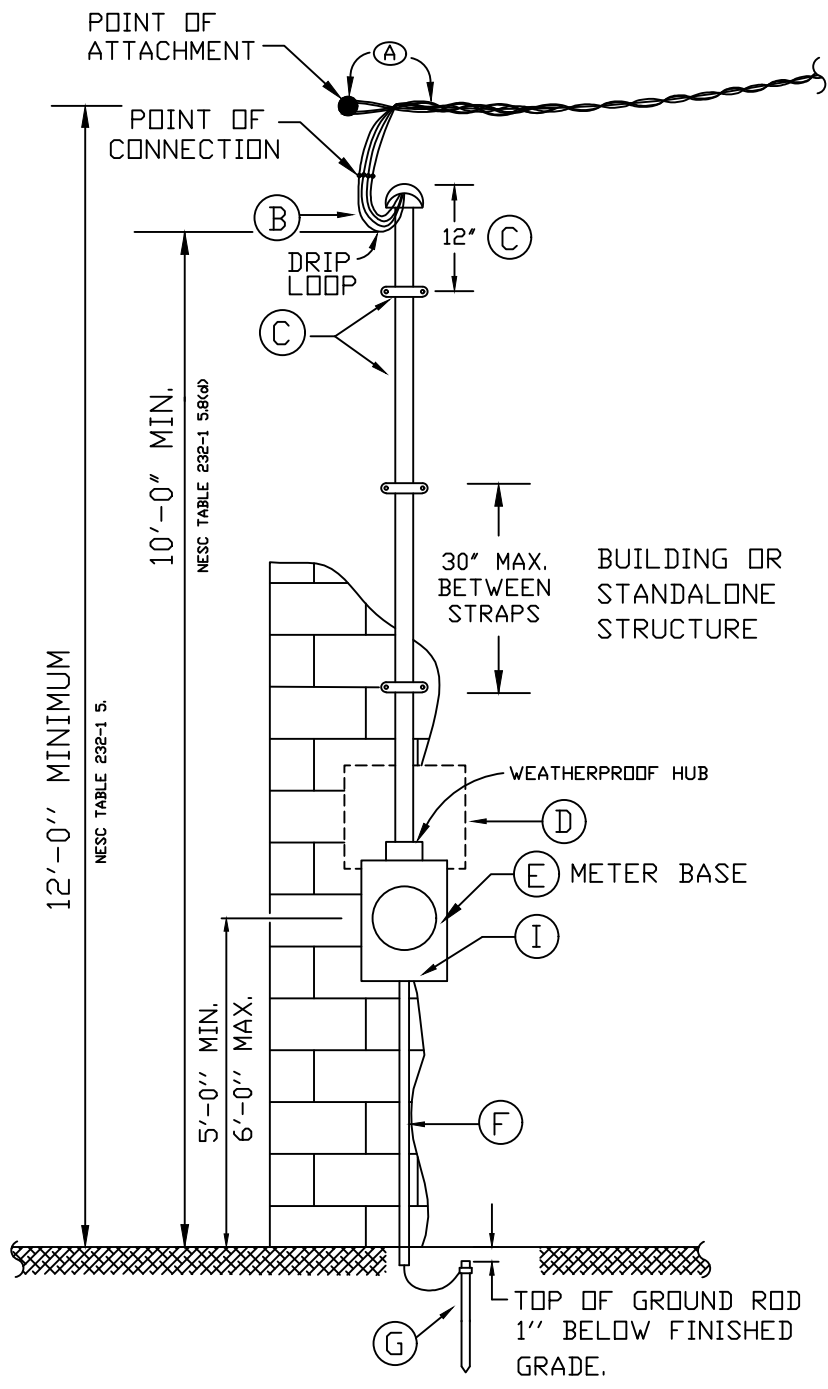
- C. The service mast and associated weather head are furnished and installed by customer. The service mast conduit shall be securely mounted with a minimum of three (3) conduit straps with a maximum of 30" (*NEC 230.51A*) apart. One (1) strap will be required installed no more than 12" (*NEC 230.51A*) from the weather head. The Service Mast conduit shall be galvanized metal rigid conduit or electrical schedule 80 pipe. If elbows are required, then PVC elbows shall be used. LB elbows and flex conduit cannot be used. ⑬

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Specifications for Commercial Overhead Service Requirements

Items marked with ⑬ are indicated on Drawing No.23 – *Three-Phase Overhead Service Requirements*.

- D. The main disconnect (*service panel*) and customer conductors (*from 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. ⑬
- E. Meter base furnished by SLEMCO and installed by customer. 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. ⑬
- F. 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. ⑬
- G. 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. ⑬ This is the minimum required by SLEMCO. Additional grounding may be required by the NEC or Governing Authority.
- H. 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.
- I. If a Governing Authority requires inspection, inspection tag must be in place and marked approved before SLEMCO will connect service. ⑬
- J. Prior to secondary service connection and meter installation, a SLEMCO serviceman must inspect the total job for readiness. When ready for this inspection, notify the Lafayette Service Department by calling (337) 896-5551.



SEE "SLEMCO - SPECIFICATIONS FOR COMMERCIAL OVERHEAD SERVICE REQUIREMENTS" FOR MORE INFORMATION.

	SOUTHWEST LOUISIANA ELECTRIC MEMBERSHIP CORPORATION <small>LOUISIANA 9 LAFAYETTE</small>				
	THREE-PHASE OVERHEAD SERVICE REQUIREMENTS				
DRAWN BY:		CREATED ON: 09/08/89	SCALE: N.T.S.		
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