



Electric Service Requirements

.....

Agricultural Pumps

.....

Engineering Specification T006

June 2017




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|  SMUD [®] | ENGINEERING SPECIFICATION | No. T006 Page 1 of 22 | |
| | | REV. 2 | DATE: 6-12-17 |
| CATEGORY | ELECTRIC SERVICE REQUIREMENTS | | |
| SUBJECT | AGRICULTURAL PUMPS | | |

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1 PURPOSE

This specification is intended to inform customers and their contractors of the minimum requirements of the Sacramento Municipal Utility District (SMUD) for establishing or changing electric service to agricultural pumps and certain other loads. Compliance with this specification is a requirement for service.

2 SCOPE

This specification identifies the necessary actions, design, and construction requirements for a customer to receive service from SMUD. It also outlines SMUD communications requirements and the “Service Request” process. This specification applies to services provided to agricultural pumps, and certain other load types as determined by SMUD, where a permanent structure or building does NOT exist. Where such a structure or building does exist, the customer should refer to *Electric Service Requirement IV, Commercial Industrial Service Specification T004*.

3 REFERENCES – Latest Editions, Errata, Corrections, and Amendments

- 3.1 California General Order 95 (G.O. 95)
- 3.2 California Electric Code

4 DEFINITIONS

4.1 ABBREVIATIONS

The following abbreviations may be used throughout this Service Requirement:

| | | | | | |
|-----------|---|---|--------|---|-------------------------|
| A | = | A Type Meter | Int. | = | Interval |
| Amp. or A | = | Amperes | KW. | = | Kilowatts |
| Ag. Can. | = | Agricultural Meter Can | L.P. | = | Lightning Protector |
| C.C. | = | Circuit closing | Man. | = | Manual |
| Cl. | = | Class of Meter | M.B. | = | Meter Mounting Base |
| Comb. Can | = | Combination Can | M.D. | = | Maximum Demand |
| CT | = | Current Transformer | O.H. | = | Overhead |
| D.B. | = | Direct Buried | R.M.T. | = | Rigid Metallic Conduit |
| E.B. | = | Encased Burial | S. | = | S Type Meter |
| E.L. | = | Element | S.P. | = | Separate Potential |
| EUSERC | = | Electric Utility Service Equipment Requirements Committee | S.S. | = | Safety Socket |
| | | | U.G. | = | Underground |
| G.O. | = | General Order | U.L. | = | Underwriters Laboratory |
| H.P. | = | Horsepower | V. | = | Volts |
| I.M.T. | = | Intermediate Metallic Conduit | W. | = | Watts |

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4.2 TERMINOLOGY

Service Entrance: Facilities installed by the customer between the termination of SMUD's service drop conductors and the main disconnect. Some of these facilities must be designed to accommodate SMUD equipment (e.g., meters, test switches, etc.) from the service panel, through conduit, and exiting the service weatherhead or terminating at the underground service point.

5 GENERAL REQUIREMENTS AND INFORMATION

- 5.1** This service requirement is consistent with General Order 95, "Rules for Overhead Electric Line Construction", of the California Public Utilities Commission, and all applicable orders, rules, and regulations of the state of California, which have been established in the interest of safety to the public and to utility workers. SMUD **cannot** establish service to customer facilities that do not meet these minimum requirements.
- 5.2** In addition to SMUD's requirements, the customer is responsible for complying with applicable provisions of City and County ordinances, the "California Electric Code", and all applicable orders, rules, and regulations of the State of California. All meter panel and customer service switchboard equipment shall meet SMUD and EUSERC requirements and be U.L. approved. All materials used and all work performed on a customer's premise, with the exception of the meter and service work performed by SMUD, must conform with local inspection authority requirements. SMUD **cannot** connect service until the proper inspection authority approves the customer's facilities.
- 5.3** Only authorized SMUD employees are permitted to make connections between SMUD equipment and customer service entrance facilities (e.g., service entrance conductor connection, SMUD CT's, meter, etc.).
- 5.4** The customer shall carefully review all materials supplied herein: text, drawings, and drawing notes. Any questions should be directed to the responsible New Services Designer, Distribution Services.
- 5.5** Failure to comply with these requirements could be costly and cause unnecessary delays for the customer.
- 5.6** "Where the operation of the customer's equipment will require unusually stable voltage regulation, free from momentary and transient voltage excursions or other stringent voltage control beyond that supplied by SMUD in the normal operation of its system, the customer, at his/her own expense, shall be responsible for installing, owning, operating, and maintaining any special or auxiliary equipment on the load side of the meter that will be required, as deemed necessary by the customer, for the operation of the customer's equipment."

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5.7 Customers are responsible to install motor protective devices and to restrict motor inrush currents as per SMUD's Rule and Regulation #2.

5.8 If the working space in front of the meter is not on an earth surface, or requires to cross a canal or be above a body of water, the following materials need to be used when constructing the walkway or platform:

5.8.1 Pressure treated wood,

5.8.2 Steel, or

5.8.3 Aluminum.

Note: Plywood is NOT an acceptable construction material.

5.9 A catwalk or walkway should be flat and level with a minimum width of 36". There should be at least one handrail on one side of the catwalk or walkway.

5.10 A suitable standing space, at least 30" x 36" (Width x Depth), shall be maintained in front of the meter socket in order to allow for installation, testing, and maintenance of SMUD facilities. The 36" minimum clearance must be increased to 42" on all 277/480 Volt WYE installations where a grounded object will be behind a worker when they are standing in front of the meter.

5.11 These requirements are also applicable to certain nonagricultural power service pole installations. Consult SMUD for details.

USE CAUTION WHEN DIGGING TO AVOID BURIED ELECTRICAL CABLES.

BEFORE DIGGING CALL

U.S.A. (Underground Service Alert),

811 or www.Call811.com

6 SERVICE REQUEST AND DESIGN

6.1 Satisfactory arrangements must be made for the installation of electric service lines and the location and setting of meters. The customer must contact SMUD's Customer Services Department, 4401 Bradshaw Road, (888) 742-7683, to request a new service or change of service. This communication should occur during the initial planning for the service. A delay in making this contact, or in supplying required information to SMUD, could cause unnecessary inconvenience and cost or service delays for the customer.

6.2 A New Services Designer will be assigned to work with the customer. SMUD's New Services contact number is (916) 732-5700. Electric Service **will not be connected** until all SMUD requirements have been met, including any special requirements determined by the Designer, payment of any service charges, and the approval of service entrance facilities by the proper inspection authority.

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7 DESIGN REQUIREMENTS

7.1 SERVICE DESIGN

7.1.1 SMUD's New Services Designer will determine the specific location and type of service to the customer, and the service voltage. Where a suitable building or structure exists, the service will normally be installed in accordance with *Commercial Industrial Electric Service Requirement IV*. Where there are no such structures, the Designer will designate the location for a service pole.

7.1.2 Service pole(s) shall be located within 100 feet of a SMUD power pole as determined by the Designer, shall be a minimum of 3 feet from all property lines, and a minimum of 10 feet from any overhead line. Pole locations, other than as described above, will not be allowed without advance written permission from New Services. Deviations will be made only under special circumstances and are subject to additional charges, payable prior to meter installation.

7.1.3 The service installation shall be designed and constructed in accordance with these written requirements and the following attachments:

T006.1 SERVICE DROP AND SERVICE POLE CONFIGURATION

T006.2 SELF-CONTAINED SOCKET METER INSTALLATION

This installation shall apply to:

- a) 120/240 volt polyphase agricultural loads from a minimum of 5 H.P. to a maximum of 60 H.P.
- b) 277/480 volt polyphase agricultural loads up to a maximum of 125 H.P.

T006.3 SOCKET METER INSTALLATION WITH CT's

This installation shall apply to:

- a) 120/240 volt polyphase agricultural loads from a minimum of 61 H.P. to a maximum of 100 H.P.
- b) 277/480 volt polyphase agricultural loads from a minimum of 126 H.P. to a maximum of 200 H.P.

T006.4 SERVICE POLE CONSTRUCTION DETAILS

7.1.4 Consult SMUD for installations that will serve electrical loads that exceed the ratings defined in attachments T006.2 or T006.3.

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7.2 METERING AND ASSOCIATED EQUIPMENT

7.2.1 All new services and rewires shall be designed with service entrances to accommodate neutral and ground connections. SMUD will provide three-phase service in 4-wire wye or 4-wire delta configurations only, as specified by the Designer. (SMUD will not provide ungrounded 3-wire delta service to new installations.)

7.2.2 Self-contained meter sockets for agricultural installations shall be U.L. rated for continuous duty as follows:

a) 100 ampere continuous duty rating required on:

- 1) 120/240 volt polyphase loads from 5 H.P. to 30 H.P.
- 2) 277/480 volt polyphase loads up to a maximum of 60 H.P.

b) 200 ampere continuous duty rating required on:

- 1) 120/240 volt polyphase loads from 31 H.P. to 60 H.P.
- 2) 277/480 volt polyphase loads from 61 H.P. to 125 H.P.

7.2.3 Approved test bypass devices, illustrated in attachments T006.9 through T006.11, are required for all agricultural, self-contained meter installations.

7.2.4 Panels rated greater than 200 amps shall be designed utilizing standard switchboard sections (see attachments T006.5 through T006.7). The customer must contact SMUD's Meter Division for approval of any non-standard service panel section or any service section labeled "special."

7.2.5 SMUD shall supply, install, and maintain current transformers and associated test switches where required for panels rated greater than 200 amperes.

7.2.6 Meter sockets with extruded or cast aluminum jaws are **not** acceptable and will **not** be connected.

7.3 METER ENCLOSURES

7.3.1 Meter enclosures shall be constructed of galvanized steel or equivalent corrosion-resistant material. The sheet metal used shall be #16 gauge or heavier.

7.3.2 The meter enclosure shall be "rain tight" with all unused outlets sealed. Provisions shall also be made for sealing it with a standard meter seal.

7.3.3 Enclosures shall be mounted in a true vertical plane.

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7.4 SERVICE POLE

- 7.4.1 A Douglas Fir pole shall be used to support conductors and metering equipment. The pole shall be round and shall be at least 25 feet in length with a minimum top circumference of 16 inches. The pole shall be machine shaved and full length treated pressure treated with Copper Naphthenate, (0.095 pounds per cubic foot retention) or Pentachlorophenol (0.45 pounds per cubic foot retention). Brush application of wood preservative is ineffective and, therefore, **not** acceptable.
- 7.4.2 The service pole shall be located at least 10 feet away from any well, and in such a position that overhead conductors or guys will **not** cross through or over the area within a radius of 10 feet from the well and will **not** interfere with work to be performed at any well.
- 7.4.3 The service pole shall be located at least 10 feet from any pole owned by SMUD. A minimum distance of 10 feet, measured at right angles to the centerline of SMUD's power line, must be maintained.
- 7.4.4 The service pole shall be set in the ground **not** less than 5 feet and shall be securely guyed against the pull of service drop conductors so as to maintain a vertical position.

7.5 SERVICE POLE GUY AND ANCHOR

- 7.5.1 The guy wire shall be galvanized steel wire and shall be 1/4 inch or larger. The guy wire shall be attached to the service pole as shown by attachment T006.1. A strain insulator (10,000 lb. minimum) shall be installed in the guy **not** less than 8 feet above the ground.
- 7.5.2 A suitable anchor shall be provided for properly securing the guy wire. An anchor can be made by installing an 8 inch diameter log 2 feet in length at a minimum depth of 4 feet below ground level. The guy wire should be fastened to the log by means of a galvanized eye bolt. This arrangement is shown in attachment T006.4. A properly installed screw anchor or a cone anchor may be substituted for the log. Do **not** use an iron stake as an anchor.

7.6 OVERHEAD SERVICE DROP CONDUCTORS

- 7.6.1 SMUD will furnish and install the overhead service drop conductors from its distribution power pole to the customer's service pole and will furnish and install the electrical connections to the customer's service entrance conductors.
- 7.6.2 The maximum length of an overhead service drop shall **not** exceed 100 feet.

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7.7 CUSTOMER SUPPLIED CONDUCTORS

- 7.7.1 The local inspection authorities should be consulted for size and type of conductor (wire or cable) to be installed by the customer.
- 7.7.2 The Customer's service entrance conductors must be continuous and without splices. A minimum of 24 inches of conductor must be left outside the service head for connection to SMUD's service drop conductors.
- 7.7.3 When a self-contained socket meter is used, the meter socket shall be wired by the manufacturer or contractor.
- 7.7.4 The customer may install load circuit conductors in underground conduit as shown in attachment T006.3, or the customer may use an overhead, open-wire circuit from the service pole to the load as shown in attachments T006.1 and T006.2.
- 7.7.5 Where the customer's load conductors are attached to the service pole, they must be in conduit per local inspection authorities. The installation shall be made in accordance with attachments T006.2 and T006.3.

7.8 SERVICE ENTRANCE CONDUIT

- 7.8.1 The service conduit shall be sized and installed by the customer in accordance with the requirements of local inspection authorities.
- 7.8.2 Water pipe or water pipe fittings are **not** permitted.
- 7.8.3 Metallic service conduit shall be covered for a minimum of 8 feet below the lowest overhead conductor in accordance with one of the methods shown by attachment T006.4. A cover is **not** required when using approved Schedule 80 PVC.

7.9 CUSTOMER'S SERVICE MAIN DISCONNECT AND CONTROL EQUIPMENT

- 7.9.1 SMUD recommends that the customer's motor control equipment include overcurrent devices in all underground load conductors for the best possible protection of the motor.
- 7.9.2 The customer's service main disconnect and motor control equipment may be mounted on the service pole in the space indicated on the appropriate sketch, provided that the enclosure for such equipment is rain tight.
- 7.9.3 If the customer's service main disconnect (or other fused disconnect) is located elsewhere, it shall be installed at a point **not** more than 50 circuit feet from the service head. The wiring between the meter enclosure and service main disconnect switch must be in conduit.
- 7.9.4 Any main disconnect switch used shall be approved by local inspection authorities.

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7.10 GROUNDING

- 7.10.1 The grounding of all non-current carrying metallic parts shall be in accordance with the requirements of the "California Electric Code", local inspection authorities, and the rules and regulations issued by the State of California. The ground connection shall be made to a suitable ground and installed as shown in Attachments 2 and 3.
- 7.10.2 The ground conductor shall be protected against mechanical damage by rigid steel conduit. It should be connected to the ground electrode by means of an approved conduit grounding hub and clamp.
- 7.10.3 Connections to the ground electrode must be visible and accessible.
- 7.10.4 The local inspection authorities should be consulted for required ground electrode and ground conductor size and type.
- 7.10.5 When using a metallic weatherhead in conjunction with a PVC riser, the weatherhead must be grounded to the customer's panel.

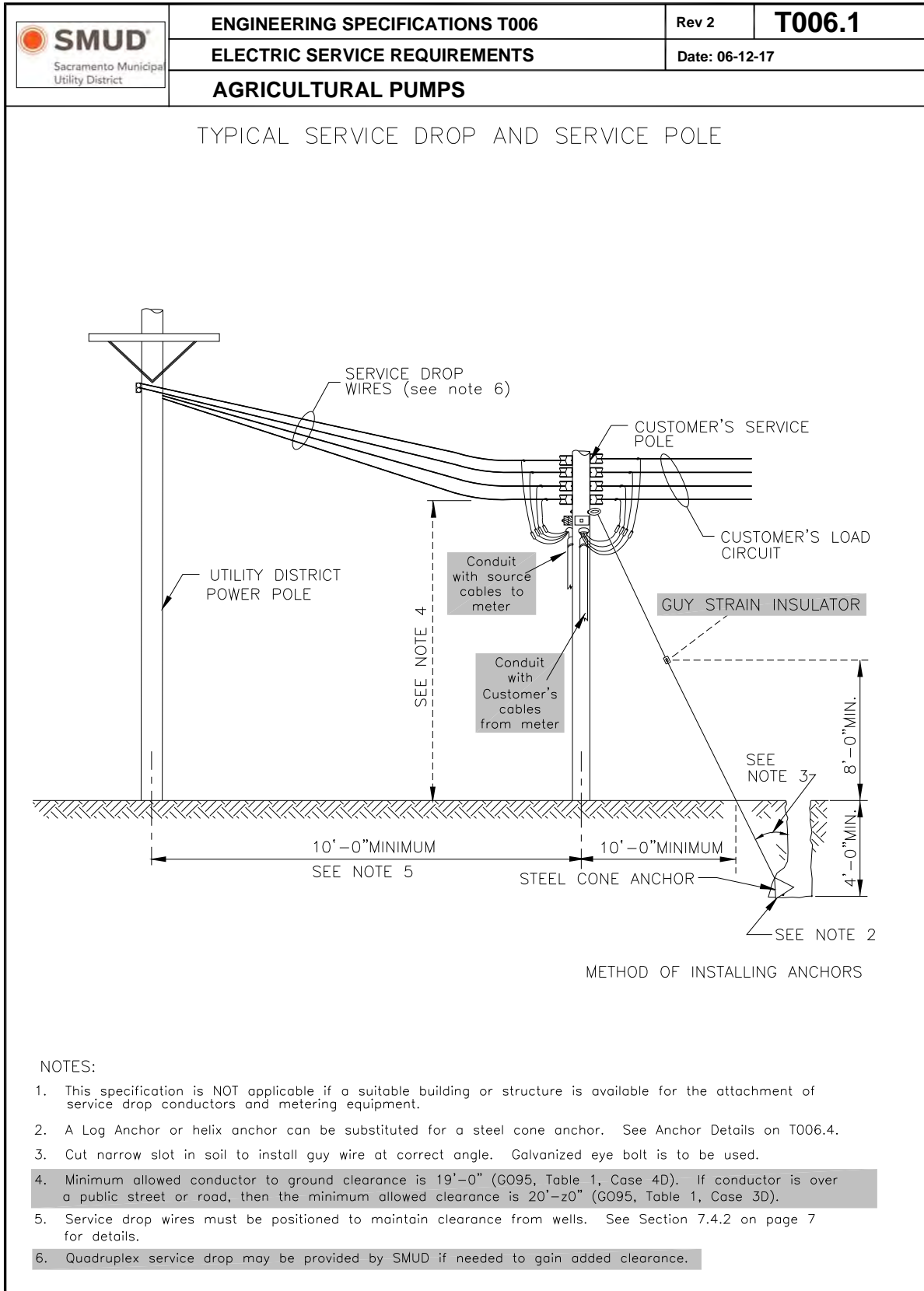
8 METER INSTALLATION

SMUD will only install the meter when:

- 8.1 The customer has complied with all of the requirements noted above; and,
- 8.2 The work has been passed by the proper inspecting authorities.

9 ATTACHMENTS

| | |
|----------------|---|
| T006.1 | Service Drop and Service Pole |
| T006.2 | Self-Contained Socket Meter Installation |
| T006.3 | Socket Meter Installation with Current Transformers |
| T006.4 | Service Pole Construction Details |
| T006.5 | Combination Meter and Current Transformer Cabinet, Main Switch or Breaker Rated 201-400 Amperes – Overhead Service |
| T006.6 | Combination Meter and Current Transformer Cabinet, Main Switch or Breaker Rated 201-400 Amperes – Underground Service |
| T006.7 | Current Transformer Cabinets, Main Switch or Breaker Rated 201-400 Amperes – Please refer to <i>Electric Service Requirement T004</i> |
| T006.8 | Diagram of Connections, Meter Sockets for Self-Contained Meters |
| T006.9 | Safety Socket Box with factory Installed Test Bypass Devices, 100 Amperes Maximum |
| T006.10 | Safety Socket Box with Factory Installed Test Bypass Devices, 200 Amperes Maximum |
| T006.11 | Test Bypass Blocks for Safety Socket, 200 Amperes Maximum |
| T006.12 | Agricultural Meter Requirements |



ENGINEERING SPECIFICATIONS T006

Rev 2

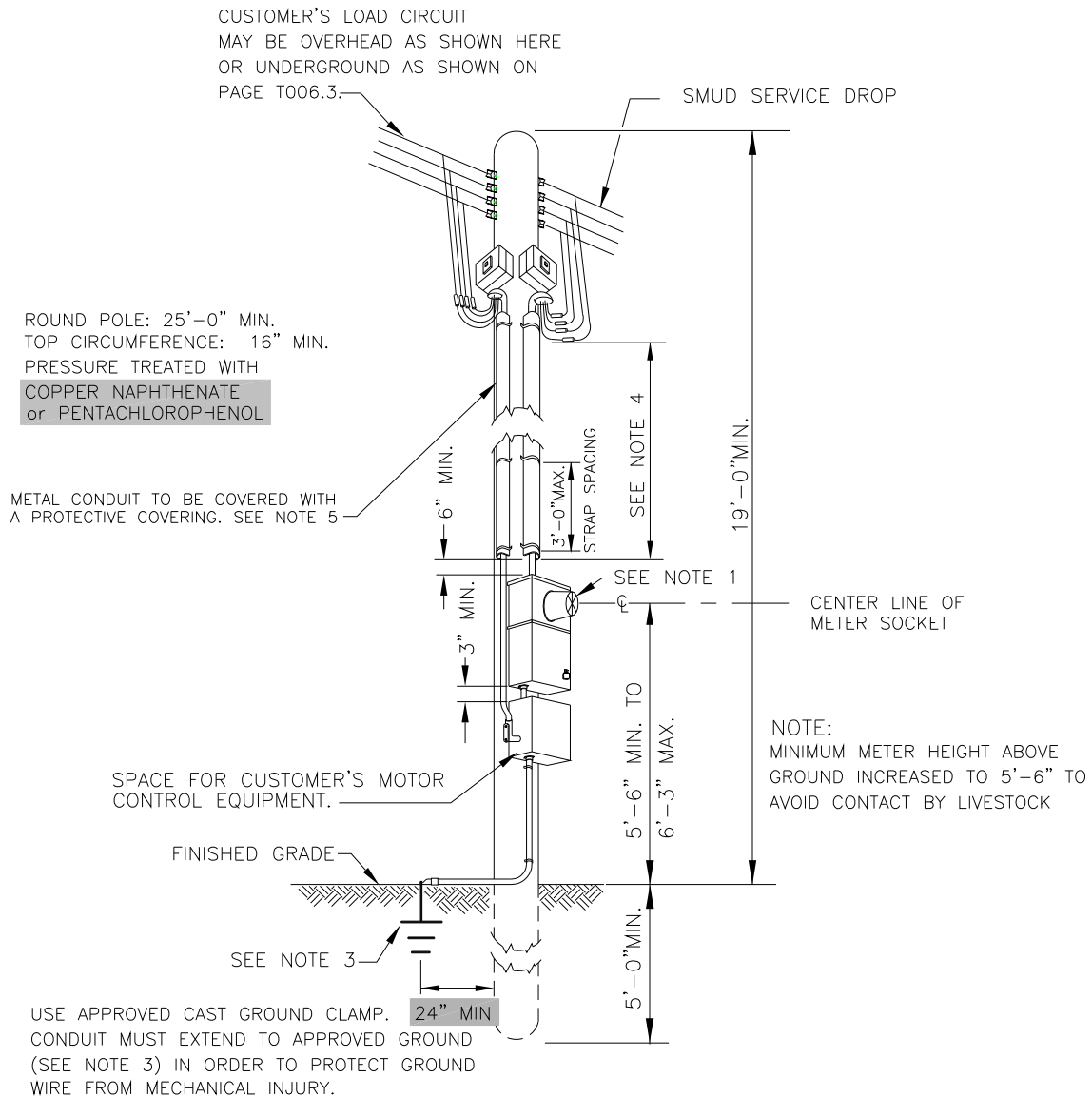
T006.2

ELECTRIC SERVICE REQUIREMENTS

Date: 06-12-17

AGRICULTURAL PUMPS

Self-Contained
Socket Meter Installation



NOTES:

1. For self-contained socket meter enclosures, see attachments T006.9 and T006.10.
2. This specification is NOT applicable if a suitable building or structure is available for the attachment of service drop conductors and metering equipment.
3. For grounding requirements, contact the applicable City or County inspection authority.
4. Moulding must extend a minimum of 8'-0" below the lowest conductor.
5. PVC SCH 80 conduit riser and service head do not require covering.

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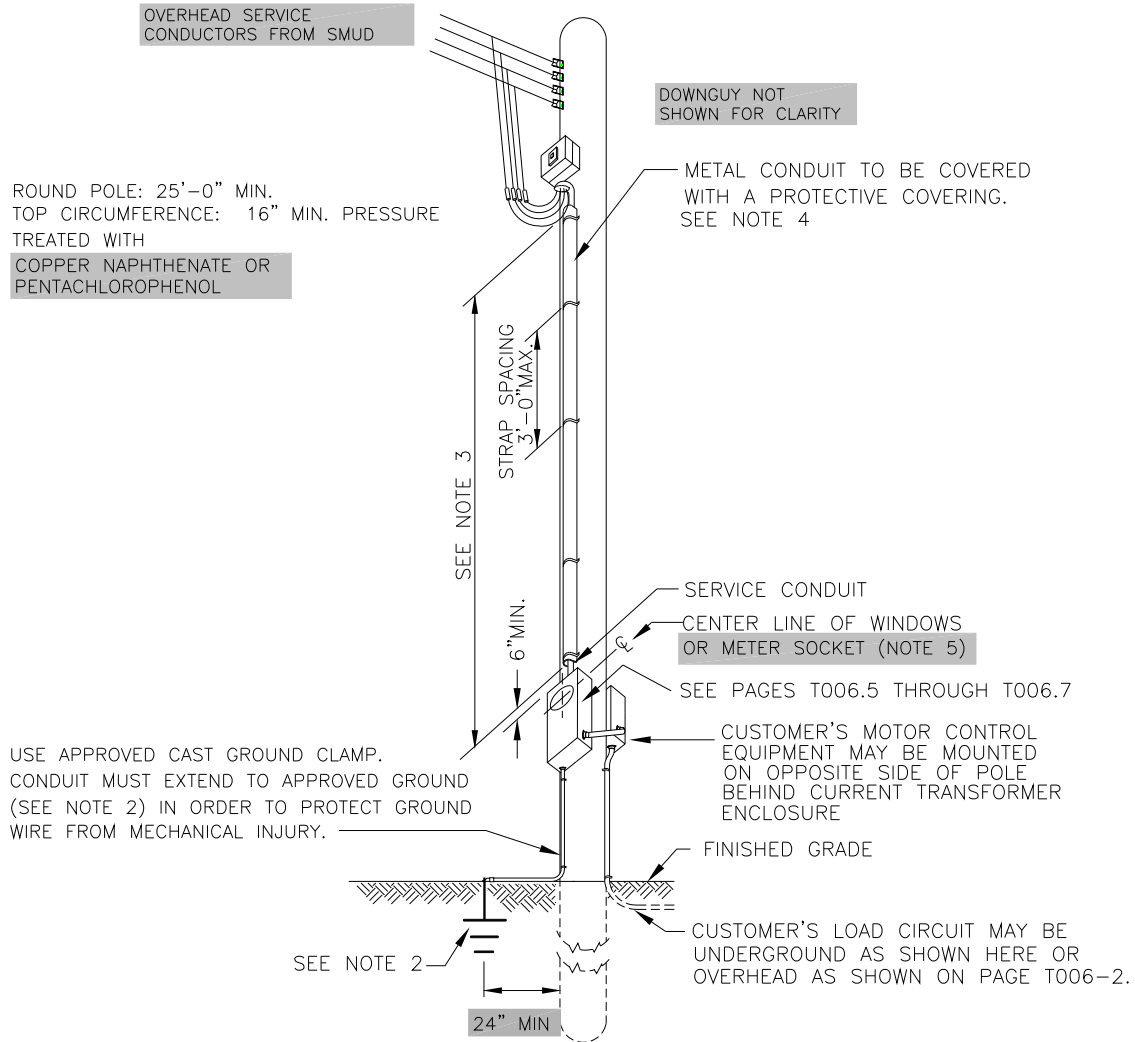
T006.3

ELECTRIC SERVICE REQUIREMENTS

Date: 06-12-17

AGRICULTURAL PUMPS

Socket Meter Installation
With Current Transformers



NOTES:

1. For self-contained socket meter enclosures, see pages T006.9 and T006.10.
2. For grounding requirements, contact the applicable City or County inspection authority.
3. Molding must extend a minimum of 8'-0" below lowest conductor.
4. PVC SCH 80 conduit riser and service head do not require covering.
5. Centerline of meter socket shall be 5'-6" minimum to 6'-3" maximum above ground line.

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T006.4

ELECTRIC SERVICE REQUIREMENTS

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AGRICULTURAL PUMPS

SERVICE POLE CONSTRUCTION DETAILS

Covering Conduits On Poles



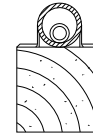
WOOD BOXING

Boxing of wood 1 1/2" min. thickness. The cover shall be nailed to the side pieces. Boxing strapped to pole with galvanized perforated plumber's tape spaced not over 3'-0" apart.



REDWOOD MOLDING

Redwood molding 1 1/2" thick strapped to pole with galvanized perforated plumber's tape spaced not over 3'-0" apart.



FIBER CONDUIT OR EXTRA HEAVY WALL PVC

Extra heavy wall PVC (schedule 80) or fiber conduit of 1/4" wall thickness over rigid conduit strapped to pole with galvanized perforated plumber's tape spaced not over 3'-0" apart.

NOTES:

- PVC Schedule 80 riser and service head do not require covering.

Details Of Anchors And Bracing

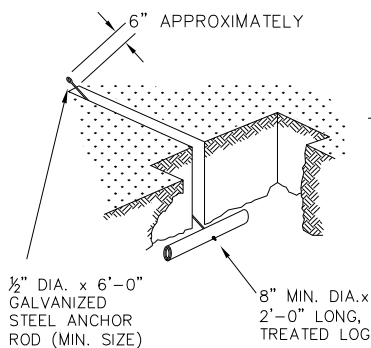


FIG 1

LOG ANCHOR

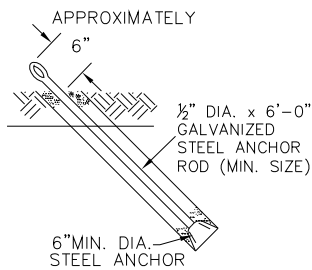


FIG 2

STEEL ANCHOR

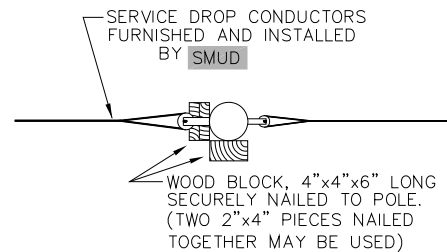
NOTE:

- The minimum anchor depth in the soil is 4 feet.

TABLE OF POLE SETTING DEPTHS

| POLE LENGTH (FT.) | DEPTH (FT.) IN FIRM SOIL |
|-------------------|--------------------------|
| 25 | 5 |
| 30 | 5 |
| 35 | 5 |
| 40 | 5 1/2 |

Pole Top Construction (A)

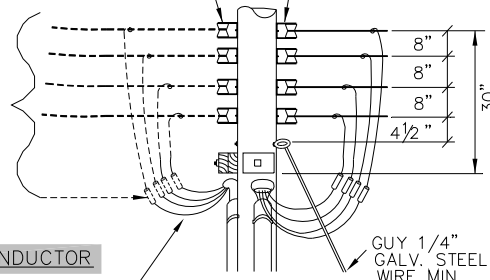


TOP VIEW

LINE SIDE
INSULATORS, BRACKETS, AND BOLTS FURNISHED AND INSTALLED BY CUSTOMER.

LOAD SIDE - TYPICAL
INSULATORS & BRACKETS FURNISHED AND INSTALLED BY CUSTOMER, WHEN NECESSARY.

SERVICE DROP AND ELECTRICAL CONNECTIONS FURNISHED AND INSTALLED BY SMUD



SIDE VIEW

CUSTOMER SERVICE CONDUCTOR

A MINIMUM OF 24" OF SERVICE ENTRANCE CONDUCTOR SHALL BE LEFT OUTSIDE SERVICEHEAD BY CUSTOMER.

Combination Meter And Current Transformer Cabinet,
Main Switch Or Breaker Rated 201–400 Amperes
(Overhead Service)

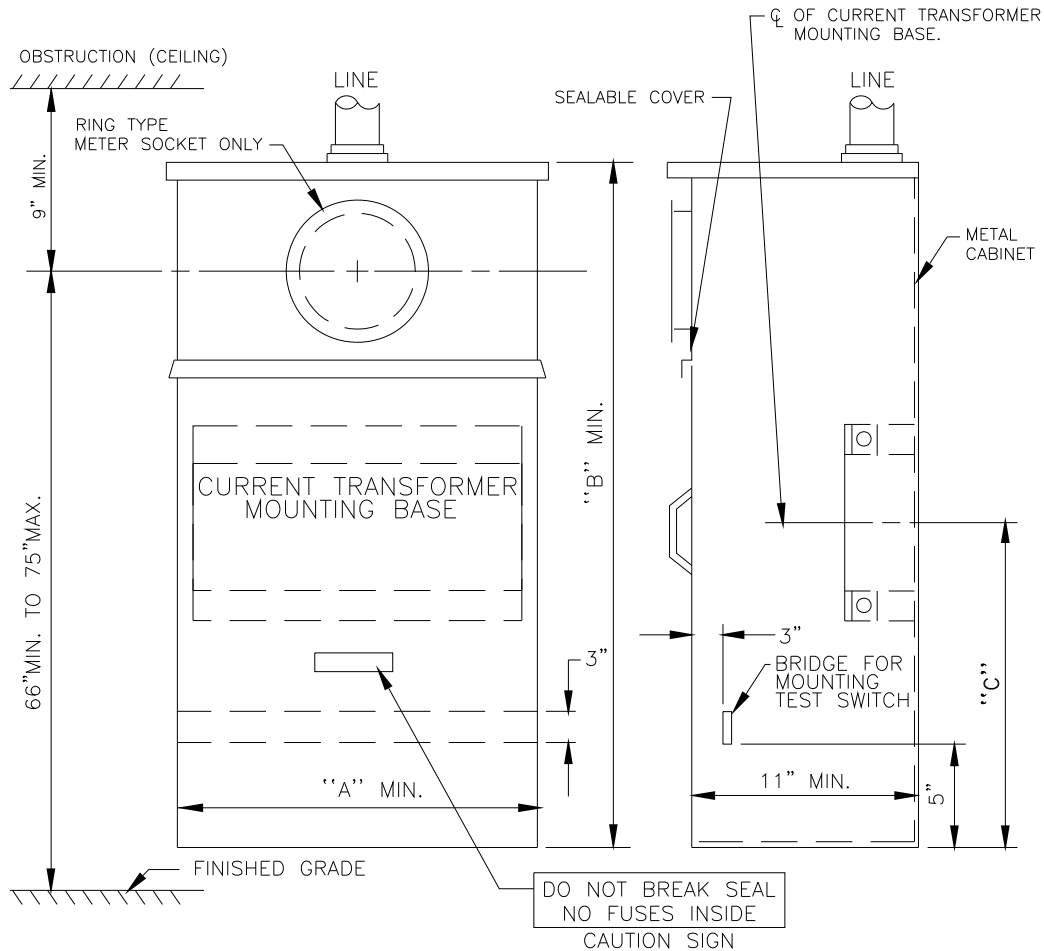



TABLE 1

| CABINET | MINIMUM DIMENSIONS | | | TRANSFORMER MOUNTING BASE | MAXIMUM WIRE SIZE | USE |
|-----------------|--------------------|-----|-----|---------------------------|-------------------|--------------|
| | "A" | "B" | "C" | | | |
| 24" x 42" x 11" | 24" | 52" | 19" | FIG. B ATT. T006.7 | 500 kcmil (1) | 1 ϕ (2) |
| 36" x 42" x 11" | 36" | 42" | 19" | FIG. D ATT. T006.7 | 500 kcmil (1) | 3 ϕ (3) |

1. Conductors larger than 500 kcmil shall not be installed except when required by code or ordinance for 400 ampere capacity.
2. Any service over 200A, single phase, requires authorization by SMUD's New Services.
3. Check with SMUD's New Services for availability of 120/240 Volt, 3 ϕ , delta service.

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| | AGRICULTURAL PUMPS | | |

Combination Meter And Current Transformer Cabinet,
Main Switch Or Breaker Rated 201–400 Amperes
(Underground Service)

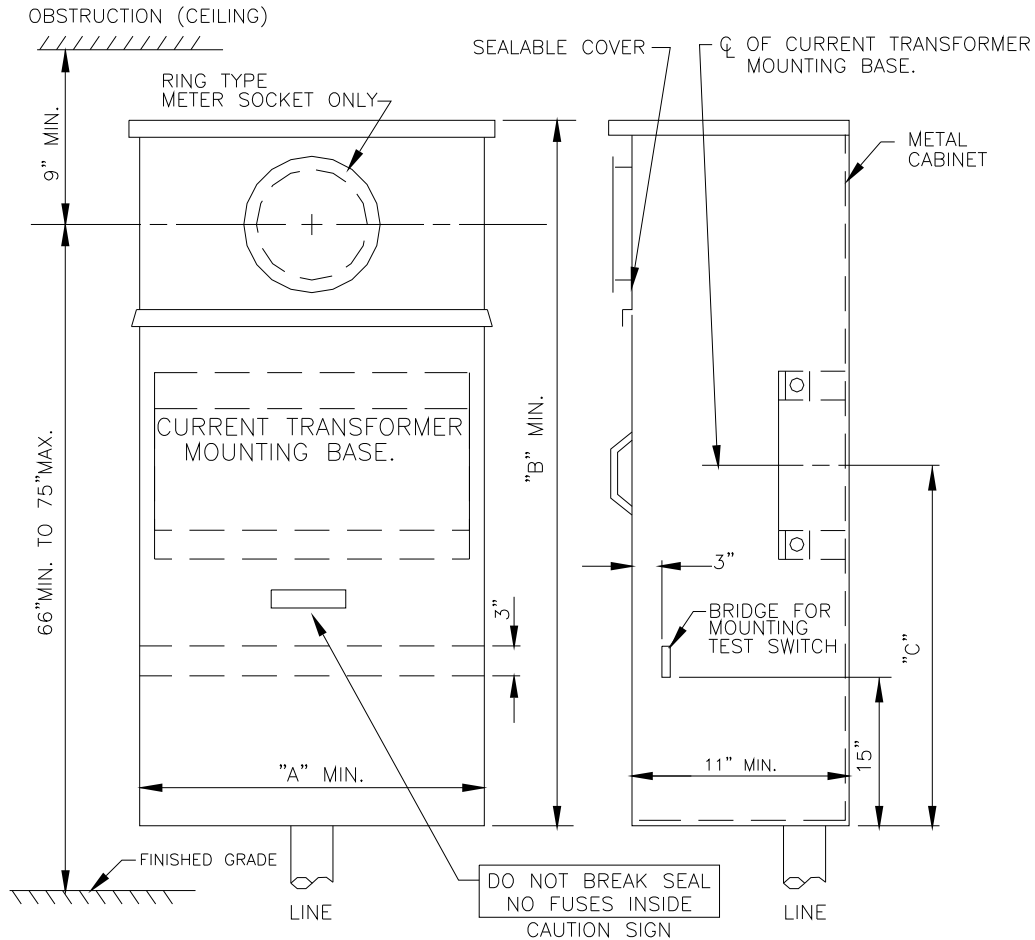



TABLE 1

| CABINET | MINIMUM DIMENSIONS | | | TRANSFORMER MOUNTING BASE | MAXIMUM WIRE SIZE | USE |
|-----------------|--------------------|-----|-----|---------------------------|-------------------|--------------|
| | "A" | "B" | "C" | | | |
| 24" x 52" x 11" | 24" | 52" | 29" | FIG. B PG. T006.7 | 500 kcmil (1) | 1 ϕ (2) |
| 36" x 52" x 11" | 36" | 52" | 29" | FIG. D PG. T006.7 | 500 kcmil (1) | 3 ϕ (3) |

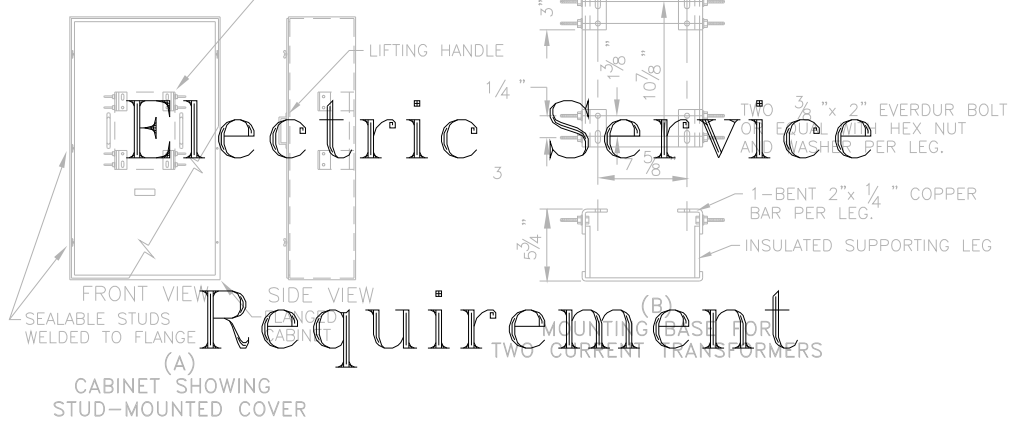
1. Conductors larger than 500 kcmil shall not be installed except when required by code or ordinance for 400 ampere capacity.
2. Any service over 200A, single phase, requires authorization by SMUD's New Services
3. Check with SMUD's New Services for availability of 120/240 Volt, 3 ϕ , delta service.

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Current Transformer Cabinets,
Main Switch Or Breaker Rated 201-400 Amperes

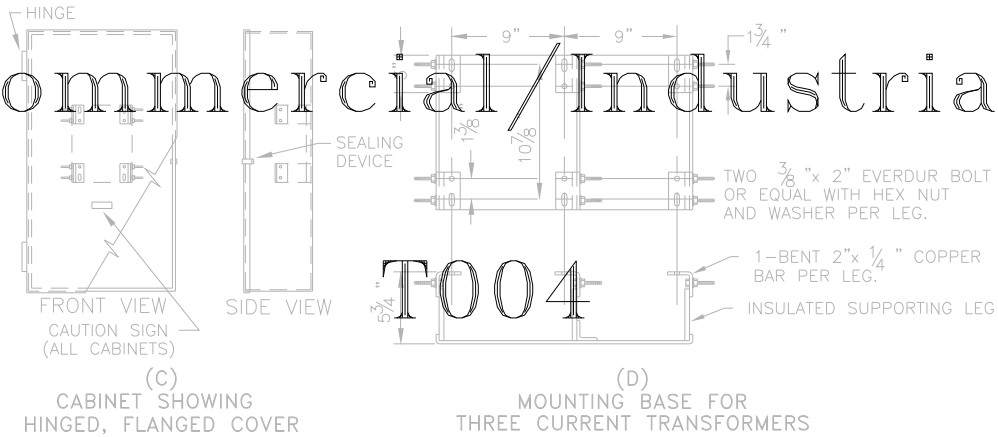
Please refer to

MOUNTING BASE FURNISHED AND
INSTALLED BY CUSTOMER
(BASE FOR 2 CT'S SHOWN)



Requirement

Commercial/Industrial



T004

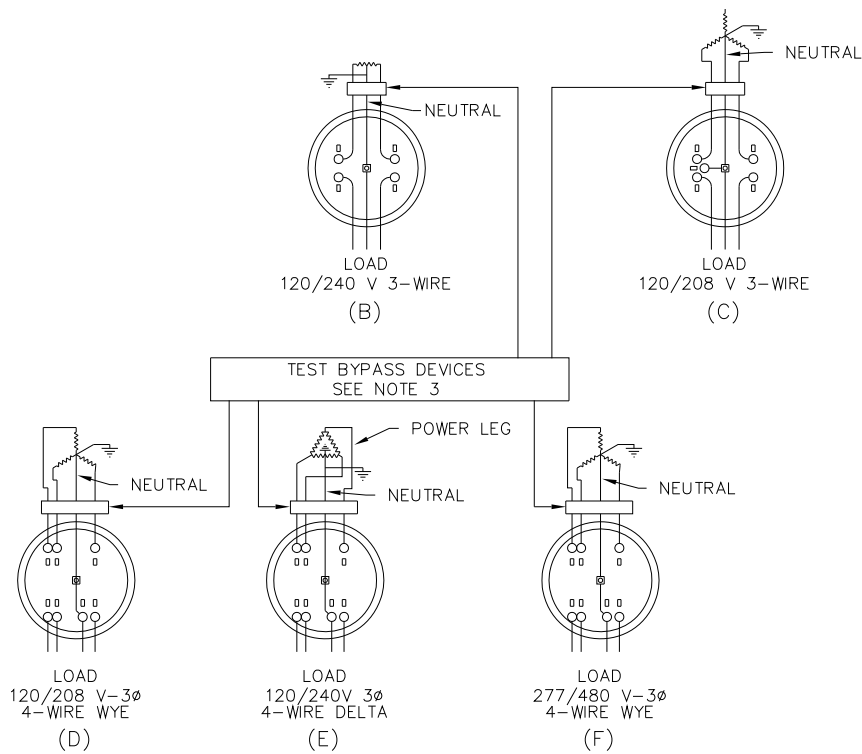
| TYPE OF SERVICE | MINIMUM CABINET SIZE | MOUNTING BASE |
|-----------------|----------------------|--------------------------------|
| SINGLE PHASE | 24" x 42" x 11" | TWO CURRENT TRANSFORMER BASE |
| THREE PHASE | 36" x 42" x 11" | THREE CURRENT TRANSFORMER BASE |

NOTES:

- The cover shall be sealable.
- The cover shall not be attached by means of screws.
- A hinged cover may be used, provided there is proper clearance to open the cover when the cabinet is installed.
- When exposed to weather, the cabinet shall be raintight.
- The customer shall furnish lugs and connect cable to the current transformer mounting base.
- When service is 4-wire delta, connect the power leg to the current transformer mounting base.
- The grounding lug shall be provided by SMUD.
- No connection shall be made in any instrument transformer cabinet to supply any other meter, and not more than one load circuit shall leave any such cabinet, except when required by SMUD.
- Any service over 200 amperes, single phase, required authorization by SMUD's New Services

Diagram of Connections,
Meter Sockets For Self-Contained Meters


SINGLE PHASE SOCKETS



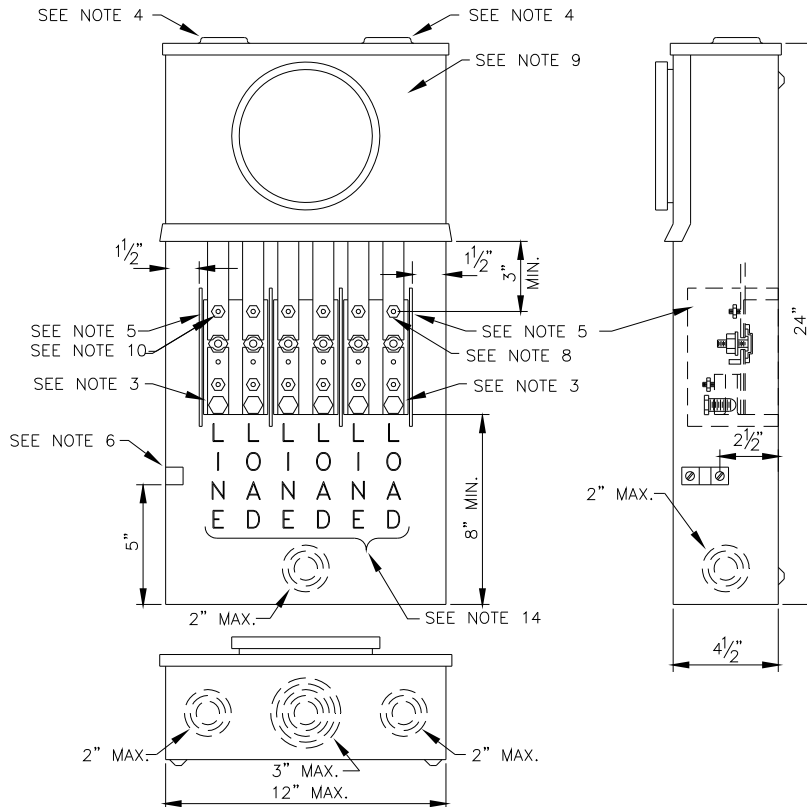
POLYPHASE SOCKETS

NOTES:

1. Commercial, self-contained meter sockets shall be U/L approved and shall have a continuous duty current rating load equal to or greater than the current rating of the associated load service equipment.
2. Neutral taps shall be connected to the service neutral conductor and located behind sealed panels. Wire nuts are not permitted.
3. For test bypass devices, see Pages T006.9 through T006.11.

| | | | |
|---|--|----------------|---------------|
|  | ENGINEERING SPECIFICATIONS T006 | Rev 2 | T006.9 |
| | ELECTRIC SERVICE REQUIREMENTS | Date: 05-02-17 | |
| | AGRICULTURAL PUMPS | | |

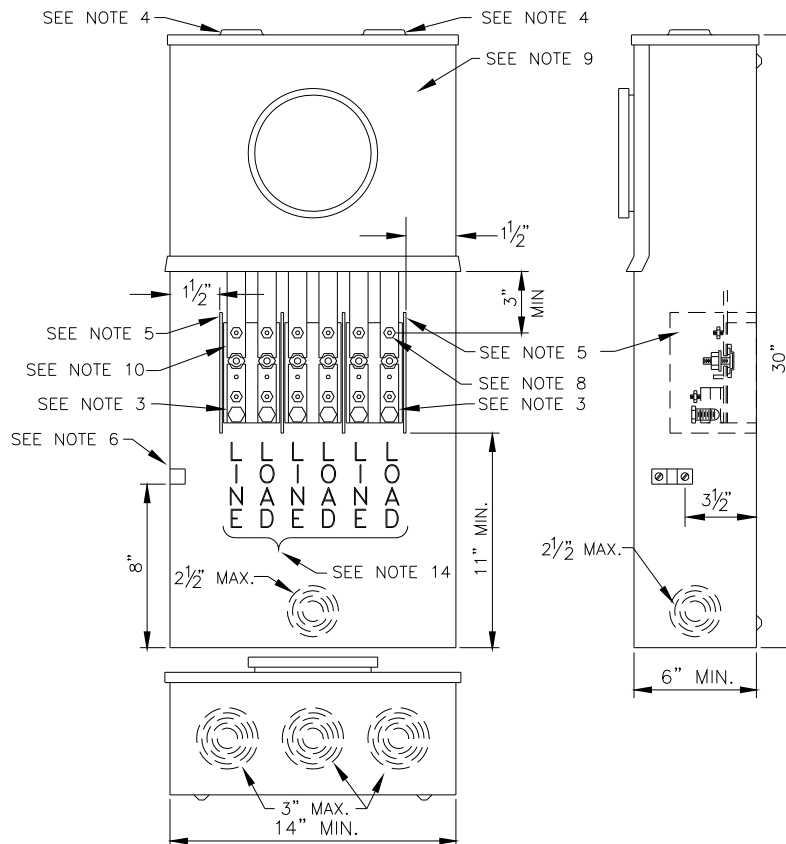
Safety Socket Box With Factory Installed
Test Bypass Devices, 100 Amperes Maximum



NOTES:

1. Self-contained meter sockets shall be U.L. current rated for continuous duty.
2. This device may be used as a combination terminating pull and meter socket box for an underground service.
3. Aluminum bodied terminals shall be used for #6 through #1/0 wire.
4. Hubs must be capped off if used for an underground feed.
5. Rigid insulating barriers must be used.
6. Insulated, bondable vertical lay-in, double neutral lug with #1/0 wire capacity.
7. Test blocks shall be bussed or wired to socket jaws or terminals.
8. Upper test connector studs.
9. All section covers shall be independently removable. The upper cover shall be nonremovable when the meter is in place. The lower cover shall be sealable and permanently labeled: "DO NOT BREAK SEALS, NO FUSES INSIDE."
10. For 3/0, 4 wire, connect the 7th jaw to the body of the neutral lug with #8 copper wire.
11. For 3/0, 4 wire delta, identify the right-hand test bypass block (2 poles) as the power leg.
12. For 1/0, 3 wire, omit the center block and associated barriers.
13. For 1/0, 3 wire, 120/208 volt, omit the center block and associated barriers and connect the 5th jaw to the body of the neutral lug with #8 copper wire.
14. Decals on the inside back of the enclosure must be in 3/4 inch minimum high block letters.
15. On 480 volt installations, lightning protectors shall be mounted on the bottom or side of the enclosure by SMUD.
16. Test block details are on Page T006.11.

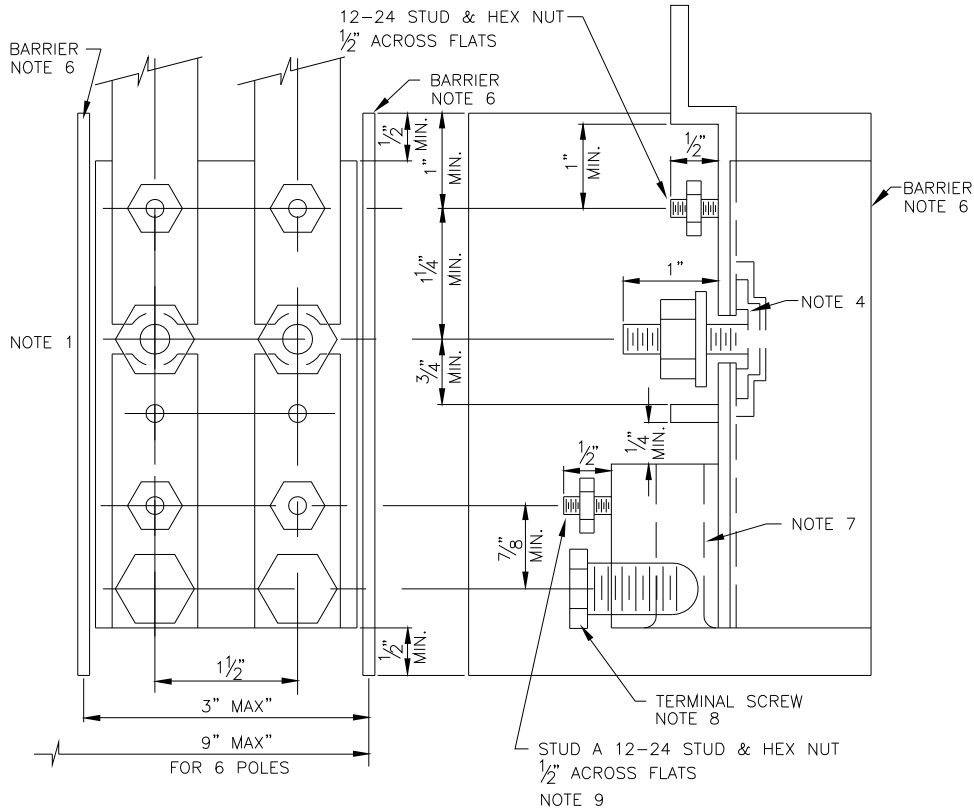
Safety Socket Box With Factory Installed
Test Bypass Devices, 200 Amperes Maximum



NOTES:


1. Self-contained meter sockets shall be U.L. current rated for continuous duty.
2. This device may be used as a combination terminating pull and meter socket box for an underground service.
3. Aluminum bodied terminals shall be used for #1/0 through 250 kcmil wire.
4. Hubs must be capped off if used for underground feed.
5. Rigid insulating barriers must be used.
6. Insulated, bondable vertical lay-in, double neutral lug with 250 kcmil wire capacity.
7. Test blocks shall be bussed or wired to socket jaws or terminals.
8. Upper test connector studs.
9. All section covers shall be independently removable. The upper cover shall be nonremovable when the meter is in place. The lower cover shall be sealable and permanently labeled: "DO NOT BREAK SEALS, NO FUSES INSIDE."
10. For 3/0, 4 wire, connect the 7th jaw to the body of the neutral lug with #8 copper wire.
11. For 3/0, 4 wire delta, identify the right hand test bypass block (2 poles) as the power leg.
12. For 1/0, 3 wire, omit the center block and associated barriers.
13. For 1/0, 3 wire, 120/208 volt, omit the center block and associated barriers and connect the 5th jaw to the body of the neutral lug with #8 copper wire.
14. Decals on the inside back of the enclosure must be in 3/4 inch minimum high block letters.
15. On 480 volt installations, lightning protectors shall be mounted on the bottom or side of the enclosure by SMUD.
16. Test block details are on Page T006.11.

Test Bypass Blocks for Safety Socket,
200 Amperes Maximum



NOTES:

1. The strike distance between the upper and lower bus sections shall not be less than 1/4 inch when the shorting nut is backed off.
2. The circuit-closing nut shall be a hex nut 5/8 inch across flats with plated copper washer attached and have threads counter-bored at the bottom to facilitate reinstallation. The bolt head shall be secured in place to prevent turning and backout.
3. The circuit-closing nut and bolt assembly shall maintain the applied contact pressure between the plated copper washer and the bus members of the test bypass block.
4. The insulating washer shall be made from dimensionally stable, nontracking material and shall provide a minimum of 1/8 inch creep distance between the bolt and the bus sections. Bus sections shall be plated.
5. Wire stops shall extend to the center of the terminal opening or beyond.
6. Rigid insulating barriers shall project at least 1/4 inch beyond any energized parts when the maximum wire size is installed.
7. Terminals shall be aluminum bodied. The opening shall extend through the terminal body and, if the wire hole is round, shall be chamfered as necessary to facilitate installation of the largest size wire.
8. The terminal screw may be of the Allen type (3/16 inch across flats for 100 amp or 5/16 inch across flats for 200 amp). If stud "A" is a part of the terminal screw, the terminal screw shall be 5/8 inch hex across flats.
9. Stud "A" shall be located in the clear area between the terminating lug and the circuit-closing nut and may be positioned on the terminal body, on the terminal screw, on the bus member, or incorporated as part of the wire stop.

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|  | ENGINEERING SPECIFICATIONS T006 | Rev 2 | T006.12 |
| | ELECTRIC SERVICE REQUIREMENTS | Date: 06-12-17 | |
| | AGRICULTURAL PUMPS | | |

AGRICULTURAL METER REQUIREMENTS

Delta Meter Requirements*

| TYPE OF SERVICE | REF. PAGE NO. | PUMP SIZE H.P. | METER | METER SOCKET | CURRENT COILS | TEST BYPASS | CURRENT COIL CAN SIZE |
|------------------------|--------------------|--------------------------------|---|--|---------------|-----------------------------------|-----------------------|
| 4W-3 Phase 120/240V | T006.9 | 30 H.P. max. | C1.200 240V 4W Delta 3 Phase S | 100A 7 Point Continuous Duty Rated | | See Pages T006.9 & T006.11 | |
| * | T006.10 | 31 H.P. to 39 H.P. max. | C1.200 240V 4W Delta 3 Phase S | 200A 7 Point Continuous Duty Rated | | See Pages T006.10 & T006.11 | |
| * | T006.10 | 40 H.P. to 60 H.P. max. | C1.200 240V 4W Delta 3 Phase 15' int. M.D.S. | 200A 7 Point Continuous Duty Rated | | See Pages T006.10 & T006.11 | |
| * | T006.4 & T006.5 | 61 H.P. to 100 H.P. max. | 5A-240V, 4W 3 Phase S.P. 15'int. M.D.S. | Comb. Can. 13 Points | 3-2W 300A | 10 Pole Test Switch | See T006.6 |

WYE Meter Requirements*

| TYPE OF SERVICE | REF. PAGE NO. | PUMP SIZE H.P. | METER | METER SOCKET | CURRENT COILS | TEST BYPASS | CURRENT COIL CAN SIZE |
|------------------------|--------------------|---------------------------------|---|--|---------------|-----------------------------------|-----------------------|
| 4W-3 Phase 277/480V | T006.9 | 0 H.P. to 39 H.P. | C1.200 277V 4W 3 Phase S | 100A 7 Point Continuous Duty Rated | | See Pages T006.9 & T006.11 | |
| 4W-3 Phase 277/480V | T006.9 | 40 H.P. to 60 H.P. max. | C1.200 277V 4W 3 Phase 15' int. M.D.S. | 100A 7 Point Continuous Duty Rated | | See Pages T006.9 & T006.11 | |
| * | T006.10 | 61 H.P. to 125 H.P. max. | C1.200 277V 4W 3 Phase 15' int. M.D.S. | 200A 7 Point Continuous Duty Rated | | See Pages T006.10 & T006.11 | |
| * | T006.4 & T006.5 | 126 H.P. to 200 H.P. max. | 5A-277V, 4W 3 Phase 15' int. M.D.S. | Comb. Can. 13 Points | 3-2W 300A | 10 Pole Test Switch | See T006.6 |

* For 1 Phase Delta & WYE Requirements, see Section IV - "Commercial / Industrial Electric Service Requirements", Pages A-25 and A-26.