

C U S T O M E R I N F O R M A T I O N B O O K

FOR INSTALLING OVERHEAD ELECTRIC FACILITIES



TURLOCK IRRIGATION DISTRICT



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CUSTOMER INFORMATION BOOK FOR INSTALLING OVERHEAD ELECTRIC FACILITIES

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Electric Service: Overhead

1.1. Scope

This Booklet provides instructions regarding customer responsibilities, attachment locations, and minimum clearance requirements for permanent services to residential and non-residential property from T.I.D. Overhead lines.

1.2. General Information

- 1.2.1. Overhead electric service consists of electric wires running overhead from a T.I.D. pole to a customer weather head and riser on a building or service pole.
- 1.2.2. Riser material shall be galvanized rigid steel (GRS) or intermediate metal conduit (IMC) rigid steel, minimum 1 1/4 inch, or 2 inch rigid aluminum conduit measured in iron pipe size (IPS) dimensions. T.I.D. will **NOT** attach to riser structures made of plastic (except for wood service poles, which should use PVC plastic, not metal).
- 1.2.3. New overhead service will be allowed provided your electric service panel is close to existing T.I.D. overhead electric facilities, or an overhead line extension can be built close to your panel, and overhead service is not prohibited by local jurisdictions. T.I.D. will NOT provide overhead service in areas designated as underground districts by local jurisdictions.
- 1.2.4. Normally, overhead electric service will be limited to panels rated no greater than 400 amps.
- 1.2.5. Service Rating
 - 1.2.5.1 For utility purposes, the electrical service rating shall be determined by T.I.D. based on the rating of the service equipment to be supplied and/or in which T.I.D. will connect and terminate its supply facilities and conductors.
 - 1.2.5.2 For installations supplying a single main disconnecting device (i.e., a single main disconnect), the rating of the service to be supplied may be the rating of the switchboard or termination section, pull can, or other service termination enclosure, whichever is greater. If a rating is not provided for the termination section, enclosure, or facility, the rating of the service will be the maximum rating of the service-disconnecting means.
 - 1.2.5.3 For installations without a single disconnecting device for the premises being served (usually a service with multiple disconnects), the service rating shall be the rating of the electrical enclosure or service-termination section, pull can, or

other service termination enclosure, in which T.I.D. terminates and connects its supply facilities and conductors. If the termination section, enclosure, or facility is not rated, the rating of the service will be the aggregated maximum rating of all service disconnects.

- 1.2.6. See T.I.D. "Customer Booklet for Installing Underground Electric Facilities" for other options.

1.3. What Must I Do To Obtain Overhead Service?

- 1.3.1. Contact TID to apply for service. Provide panel location, voltage and load, date needed, and other applicable information.
- 1.3.2. Pay TID the overhead connection fee and sign up for the meter. (A service deposit may also be required where credit has not been established with the District.)
- 1.3.3. Line Extensions - When your service location is more than 150 feet from acceptable TID line facilities, a line extension will be required. The line extension charge will be based on the total length of extension as determined by TID, less any free footage allowance, multiplied by the overhead extension charge. Free footage of 150 feet per service, and 100 feet for each horsepower of connected load (when installed in public road right-of-way) will be granted up to a maximum of 5,150 feet.
- 1.3.4. The District will assist you if easements or rights-of-way must be obtained for the line extension. However, it is ultimately your responsibility to provide, at no cost to the District, easements or rights-of-way the District needs to build the line.

1.4. What is the Process After I Apply?

- 1.4.1. TID will field check the job, prepare a design/job package, and forward the job to construction.
- 1.4.2. You will proceed to install your service panel. Please notify us if you plan to be ready earlier or later than the date you previously told TID, so we may update our schedule to best serve you.
- 1.4.3. You will need your panel inspected and tagged by the local governing inspection authority (city, county, etc.). TID may perform some work in advance, but cannot make final service connections until the panel is tagged. (SEE SECTION 6 - [INSPECTIONS.](#))
- 1.4.4. When tagged and ready for electricity, you will need to notify TID at (209) 883-8415 so we can schedule completion of the work.

1.5. *Where Do I Put My Panel?*

TID has the final say on meter location, and some locations are prohibited. There are requirements for meter height and access also (see SECTION 2 – [SERVICE LOCATION](#) for more information).

1.6. *What About Service Poles?*

To ensure a safe and proper operation, any service pole you use must be in accordance with TID standards (See SECTION 4 – [WOOD POLES](#)). Poles meeting TID's standard are available at many local lumberyards.

1.7. *What If I Need Three-phase Service?*

Single-phase is what nearly all residential and other small services utilize. Medium to large pump and other heavier loads typically utilize three-phase power. You should consult with TID regarding the cost and availability of three-phase service.

New three-phase, 3-wire services will not be provided. (Should an existing three-phase, 3-wire service fail, please contact TID as soon as possible about the options that may exist for you.)

1.8. *What If I Need a Backup Generator?*

Back up generators are a significant safety issue. Even a small generator that is improperly connected can result in serious injury or death to TID line workers and customers and can cause significant damage to facilities. For this reason, TID requires that any backup generators our customers may use to supply load that is also supplied by TID must be interconnected via a TID-approved transfer switch, such that the generator is prevented from ever connecting to TID's system in a fail-safe manner. To avoid expensive redesign and panel/equipment replacement, please provide a single line diagram showing the proposed interconnection of any generators, and detailed model and specifications for the proposed transfer switch to TID for approval prior to purchase of equipment. In general, TID will approve transfer switches that are mechanically interlocked throw-over type knife blade switches without bypass provisions, though alternative transfer switch types will be considered if adequate details are provided.

1.9. *What Else Do I Need to Know?*

Any service equipment exceeding 30 amps nameplate rating must have manual circuit closing devices (usually a commercial-style panel) so the meter can be removed and tested without shutting off your power. EXCEPTIONS: Residential, signboards, and temporary applications do not require manual circuit closing devices.

Should you change your mind about your electric service, please contact TID as soon as possible so we can stop work or make changes at a minimum cost to you.

If TID construction has not been completed within 2 years of receipt of a completed application, the customer may be required to re-apply under the then current Electric Service Rules, Electric Service Schedule of Charges, and other construction requirements.

Location of Overhead Services

2.1. *Point of Attachment*

- 2.1.1. In areas served from overhead lines, an overhead service drop will be installed from T.I.D.'s distribution line to a riser with weather head on the customer's residence, building, structure or service pole. The point of attachment shall be located so it can be reached with a single span from T.I.D. facilities. The span shall not cross adjacent property. The span shall maintain the required vertical clearance to ground.
- 2.1.2. Consult with T.I.D. before selecting the meter/service panel location or installing the panel. T.I.D. has the final approval on meter/service panel locations. See Drawing [24815](#) for general requirements. See [Section 3](#) for riser height requirements and restrictions.
- 2.1.3. Generally, the weatherhead should be located within five feet of the corner of the structure closest to the nearest T.I.D. pole.
- 2.1.4. The service-drop conductors should not exceed 75 feet in length, nor cross over the building served, nor over adjacent property, nor any other buildings.
- 2.1.5. T.I.D. must be able to safely access the service panel riser weatherhead to make connections. In some instances, this may limit the height that a weatherhead can be installed in locations where TID workmen would need to use a ladder to make connections. In general, if the weatherhead must be extended higher than 48 inches above the roof, TID will need to assess if an alternate location or other arrangement is needed to ensure our ability to safely hook-up and maintain the connections.
- 2.1.6. Panels placed in difficult to serve locations without consulting T.I.D. may result in customer relocating panel or making modifications to the service at the customer's expense.

2.2. *Two or More Buildings on One Lot*

If more than two dwellings or buildings are located on the same lot, consult with TID to determine acceptable meter locations before proceeding with the wiring of the buildings.

For a single-family dwelling located behind another dwelling or commercial establishment on an inside (non-corner) lot not subject to further subdivision, the meters shall be located adjacent to each other at the building closest to the distribution line from which service will be supplied. All wiring beyond the meters will be the customer's responsibility.

For multi-dwelling buildings constructed on the rear of non-commercial lots, if practical, and at the customer's request, TID will install separate service facilities to the rear building. The meters for the rear building shall be grouped together at a suitable location at the rear building.

2.3 *Planning and Grouping of Additional Meters*

Occasionally there is need to locate and install additional service and metering equipment after the originally planned electric service for a building is installed and energized. Where possible, additional meters should be grouped with those electric meters already in service.

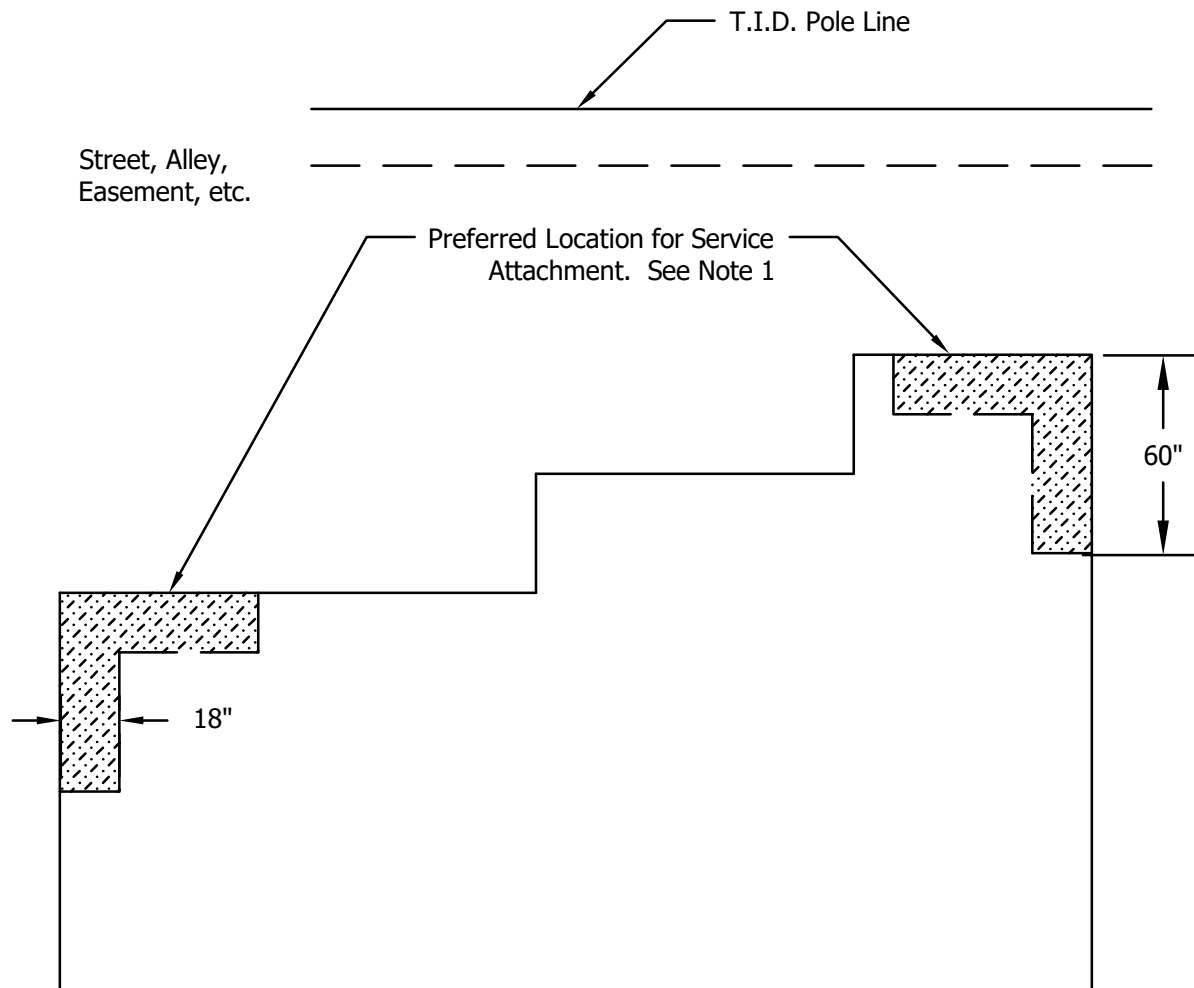


FIGURE 2-1
Location of Overhead Service-Drop Attachment (see Note 2)

Notes in reference to Figure 2-1

1. Consult T.I.D. before installing panel. TID has final approval as to location.
2. Service drops will be attached to riser with weatherhead. Generally, the weatherhead should be located within five feet of the corner of the building closest to the nearest T.I.D. pole. The service-drop conductors should not exceed 75 feet in length, nor cross over the building served, nor over adjacent property, nor any other buildings. Maintain the required conductor clearances and access to the electric meter. Service riser should be within 18 inches of wall facing the direction of the service drop.
3. For more information on meter location requirements and restrictions, see section 5, Meters.



TURLOCK IRRIGATION DISTRICT

CONSTRUCTION STANDARDS

REV	DESCRIPTION	INIT	CHK	RV'D	RV'D	RV'D	APP	DATE
B	UPDATE TITLEBLOCK	SSG	DMH				EDJ	05-2019
A	MAJOR REVISION FOR CUSTOMER BOOK	SDC	GKT	MSG	BS	DBM	BLL	06-2008
--	INITIAL ISSUE	SDC		PBR			BLL	04-2003

**OVERHEAD RESIDENTIAL
SERVICE PANEL LOCATION**

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Clearances

3.1. Service Drop Clearances

On request, a T.I.D. representative will specify a location for the service-drop attachment that will ensure service conductors maintain the required clearance above thoroughfares and structures and from windows, doors, and building exits.

The minimum clearances from the ground, structures, and other objects for overhead service drops are specified in the California Public Utilities Commission's (CPUC) General Order 95. These minimum clearances are listed and illustrated in Figure 2-4, Drawing [24810](#).

3.1.1. Minimum Vertical Clearance for Residential Overhead Service

3.1.1.1. Clearance of Overhead Conductors Above Thoroughfares in Public Areas

- Above the center portion, 12 feet horizontal from curbs: 18 feet.
- At the curb line (from the level of the street, not the sidewalk): 16 feet.
- Where there are no curbs, the curb line shall be taken as the outer limit of possible vehicular traffic.

3.1.1.2. Clearance Over Residential Property

- Private roads and other areas accessible to agricultural equipment: 16 feet.
- Private driveways or other areas accessible to vehicles: 12 feet.
- Areas accessible to pedestrians only: 12 feet.

3.1.1.3. Clearance From Swimming Pools

- T.I.D. will NOT install service drops over swimming pools.
- If a customer installs a swimming pool beneath a service drop, customer will be responsible for the full cost to relocate such service.

3.1.1.4. Clearance From Communication Service Drops

- Normal radial clearance shall not be less than 24 inches.
- Within 15 feet from the point of attachment on a building or structure, the normal radial clearance may be reduced to not less than 12 inches.

3.1.2. Clearances from Buildings

3.1.2.1. Clearance from the building being served (see Figure 2-3, Drawing [24810](#))

- Generally, a minimum of 18 inches, crossing no more than 4 feet of the roof. Maximum of six feet above roof to allow access by T.I.D. personnel.
- Riser shall be minimum of 18 inches above roof to allow room for T.I.D. to connect service supply drop. When within 30 inches of roof, riser must be rigid conduit without couplers.
- If the riser height above roof is over 30 inches, customer **MUST** brace the riser with a brace kit. Brace kit shall consist of two galvanized steel braces, securely bolted or lagged to the structure with approximately a 90 degree spread. Use ¾ inch galvanized rigid steel pipe or 1 ¼" x 1 ¼" x 1/8" galvanized steel angle (minimum size).
- If riser must go under eave, **CONTACT STANDARDS AND LINE ENGINEERING**. Customer must provide a suitable landing for the service supply wire. T.I.D. will **NOT** install screw knobs.
- Additionally, if access to the customer's electrical panel is limited, a maximum overall height of 16 feet may be required.

3.1.2.2. Other buildings on the same premises: As much as possible, with minimum of two feet.

3.1.2.3. Buildings on other premises

- Avoid on new services. Minimum 8 feet on existing services.

3.1.2.4. Be aware that City and/or County Building Departments may have different requirements. Consult with them when applying for your Permit.

3.1.2.5. Horizontal and Radial Clearances

- From fire escapes, windows and doors, minimum of three feet.

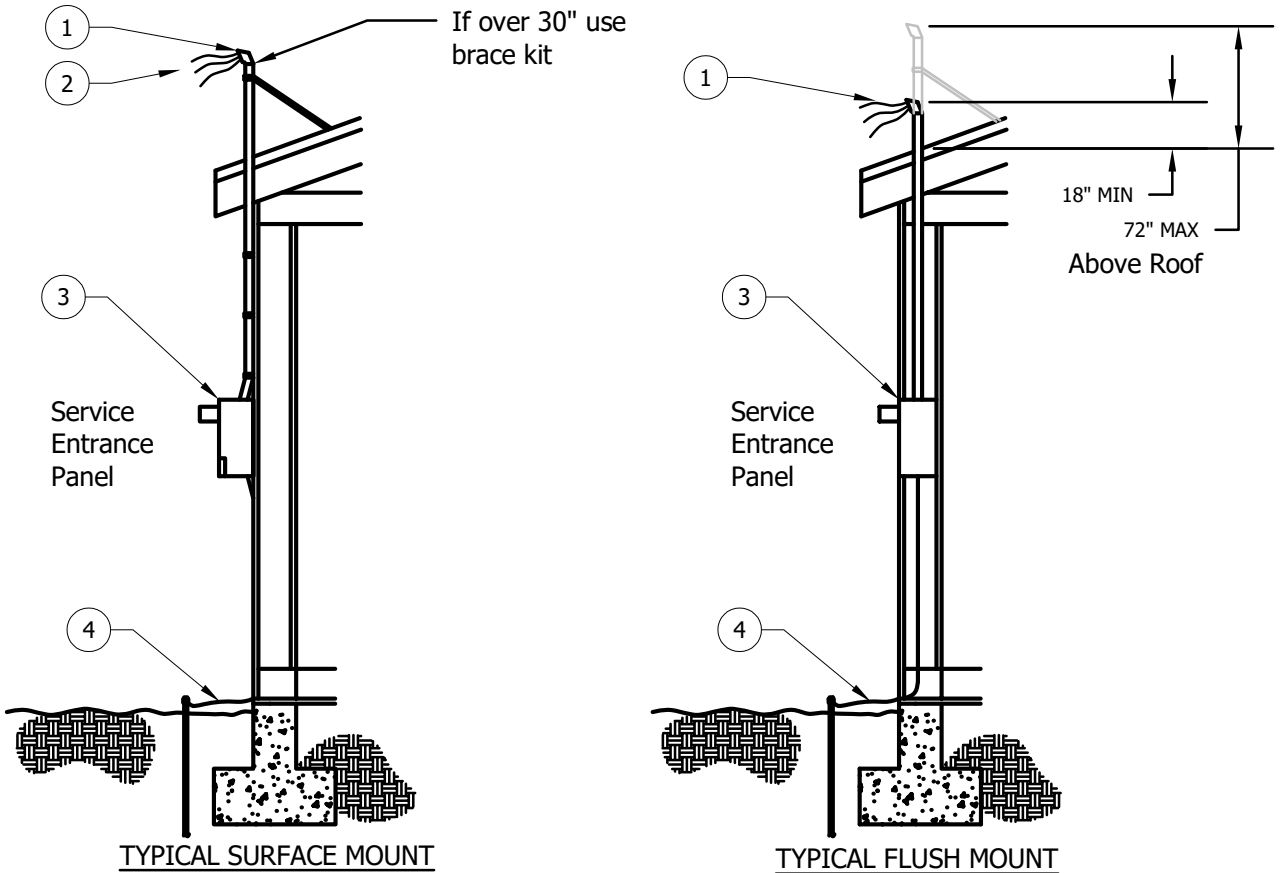


FIGURE 2-3

NOTES:

1. Required height of riser service head is at least 18 inches above roof, but not more than 72 inches. When within 30 inches of roof, riser must be rigid conduit without couplers. When height of the riser is over 30 inches, customer MUST brace the riser with a brace kit. In limited access situations, overall riser height may be limited to no more than 16 feet above the ground. If riser service head MUST go under eave, contact STANDARDS & LINE ENGINEERING. Customer must provide a landing for the service wire. T.I.D. will NOT install screw knobs.
2. Leave at least 24 inches of wire outside the service head.
Wire and conduit size to be determined by the approving agency.
The neutral wire is to be marked with white per National Electric Code (NEC).
3. Maximum meter height - 75 inches to center of meter. Minimum height 48 inches. Service entrance equipment will conform to applicable sections of the Electric Utility Service Equipment Requirements Committee (EUSERC) Standards.
4. Grounding shall be in accordance with the NEC and local codes. T.I.D. may require that the grounding conductor be installed in EMT or cable armor to protect the conductor from mechanical damage. Use approved cast ground clamp.



TURLOCK IRRIGATION DISTRICT

CONSTRUCTION STANDARDS

REV	DESCRIPTION	INIT	CHK	R/V'D	R/V'D	R/V'D	APP	DATE
G	UPDATED TITLE BLOCK	SSG	DMH	AJB			EDJ	05-2019
F	REVISE FOR CUSTOMER BOOK	SDC	GKT	DBM	MSG	BS	BLL	06-2008
E	ADD BRACE KIT DETAILS	SDC	DBM	KJO	GKT	BS	BLL	01-2008
D	CHG GROUNDING REQUIREMENTS	SDC	JSA				BLL	09-2006
C	CHG CLEARANCES, COMBINED NOTES	SDC	PBR				BLL	11-2002

**MINIMUM REQUIREMENTS
FOR RESIDENTIAL SERVICES
USING OVERHEAD CONSTRUCTION**

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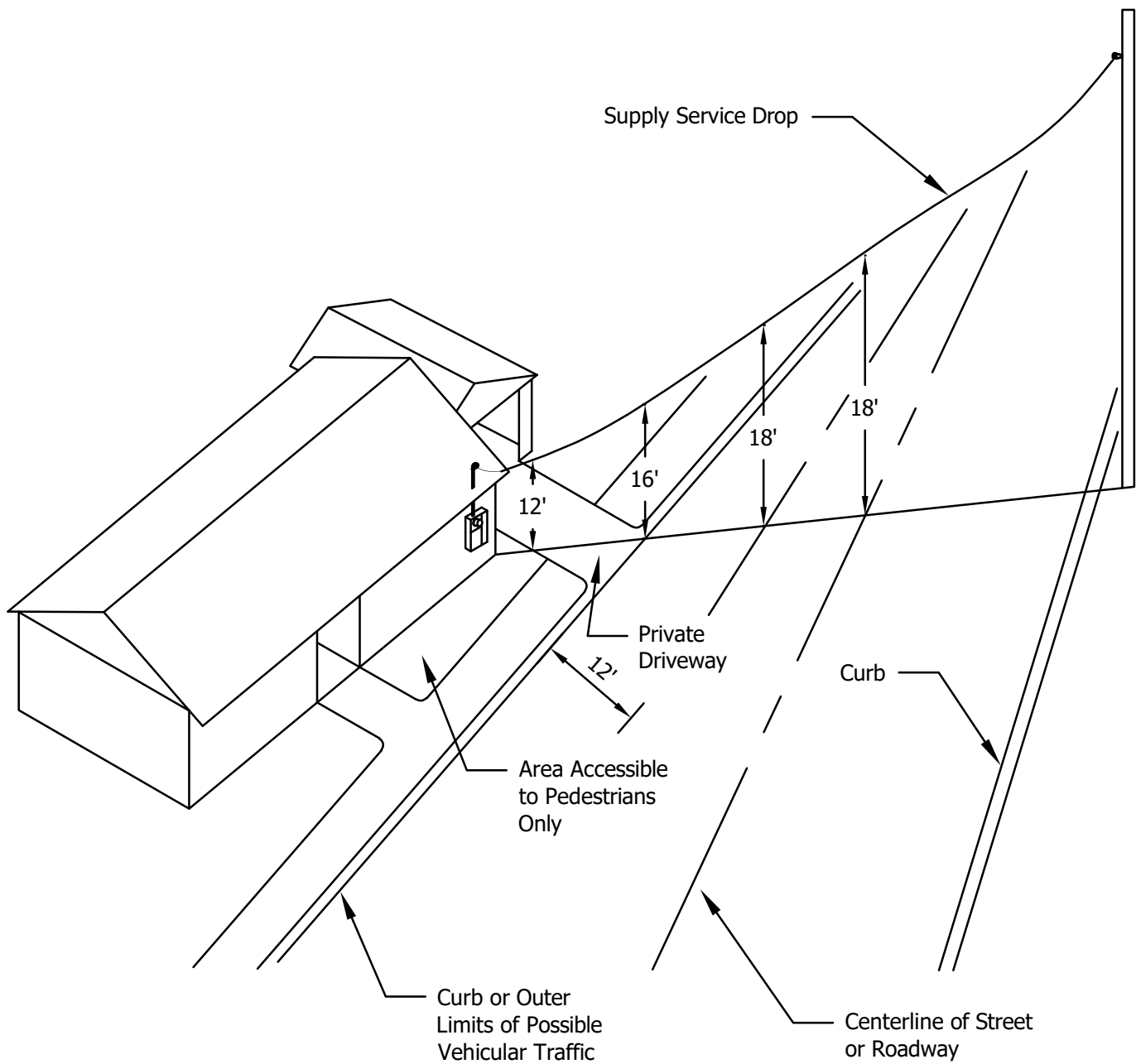


FIGURE 2-4
GROUND CLEARANCES FOR SUPPLY SERVICE DROPS
(Required by CPUC)

MINIMUM REQUIREMENTS
 FOR RESIDENTIAL SERVICES
 USING OVERHEAD CONSTRUCTION

CONSTRUCTION STANDARDS

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Customer Owned Wood Poles

4.1. Customer Owned or Installed Wood Service Poles

4.1.1 General Requirements

- 4.1.1.1. Certain types of services, such as pumps, may not have a structure available to place the electric service panel on. In these cases, the customer may need to furnish and install a wood pole to mount the electric service panel, riser, and Weatherhead. Minimum clearances for overhead service drops will apply to services placed on wood poles. See [Drawing 24800](#) for more detail.
- 4.1.1.2 If, in the opinion of T.I.D. personnel, a service pole is deemed unsafe for any reason, electric service will not be established. The customer will be advised of why the pole is unsafe and will be required to take corrective action.
- 4.1.1.3. Poles meeting the following specifications are generally referred to as “Class 4 Utility approved” poles and are available from local lumber companies.
- 4.1.1.4. Used poles will not be allowed for new services. Used poles must always be inspected by T.I.D. personnel before being re-used.

4.1.2. Minimum Requirements for Customer Owned Wood Poles

- 4.1.2.1. Species of wood shall be Douglas Fir, Western Red Cedar, or Ponderosa Pine.
- 4.1.2.2. Poles shall be circular in cross-section.
- 4.1.2.3. Preferred pole shall be no less than 30 feet long. 25 feet, class 5, wood pole may be an option for shorter services if clearances are met. Consult TID Line Engineering before using 25 feet, Class 5 wood pole. Clearance concerns may require a taller pole.
- 4.1.2.4. Poles shall be no less than Class 4 as defined by the latest revision of ANSI 05.1, “Specifications and Dimensions for Wood Poles.”
- 4.1.2.5. Poles shall be set to a depth of 10% of the pole length plus two feet.
- 4.1.2.6. Poles shall be treated full length to prevent decay. Green “pressure treated” poles will NOT be accepted.
- 4.1.2.7. Poles shall be branded in accordance with the latest revision of ANSI 05.1, “Specifications and Dimensions for Wood Poles”.

4.1.2.8. The soil around the pole shall be tamped to no less than 0.95 relative compaction.

4.1.3 Pole Location

Service poles shall be located so that the vertical clearance requirements can be met. They shall not be placed less than 10 feet from a T.I.D. pole nor installed under other electric wires without approval from T.I.D.

4.1.4 Vertical Clearance

Conductors to the service pole shall have a minimum clearance of 18 feet over roadways. The minimum clearance at the curb or other areas under which vehicles can drive is 16 feet. If the minimum clearances cannot be attained with a 30-foot service pole or when crossing overhead communication lines, the District may require a longer pole. **Consult TID Line Engineering for pole height exceptions.**

4.1.5. Grounding

Grounding shall be in accordance with the National Electric Code (NEC) and local codes. T.I.D. may require that the grounding conductor be installed in EMT or cable armor to protect the conductor from mechanical damage. The ground rod shall be placed within 24 inches of the pole and shall be set in undisturbed soil if possible.

4.1.6. Service Entrance Conductors

4.1.6.1. The customer shall provide the service entrance conductors in compliance with all applicable codes. A minimum of 24 inches of service conductor shall be provided outside of the weatherhead.

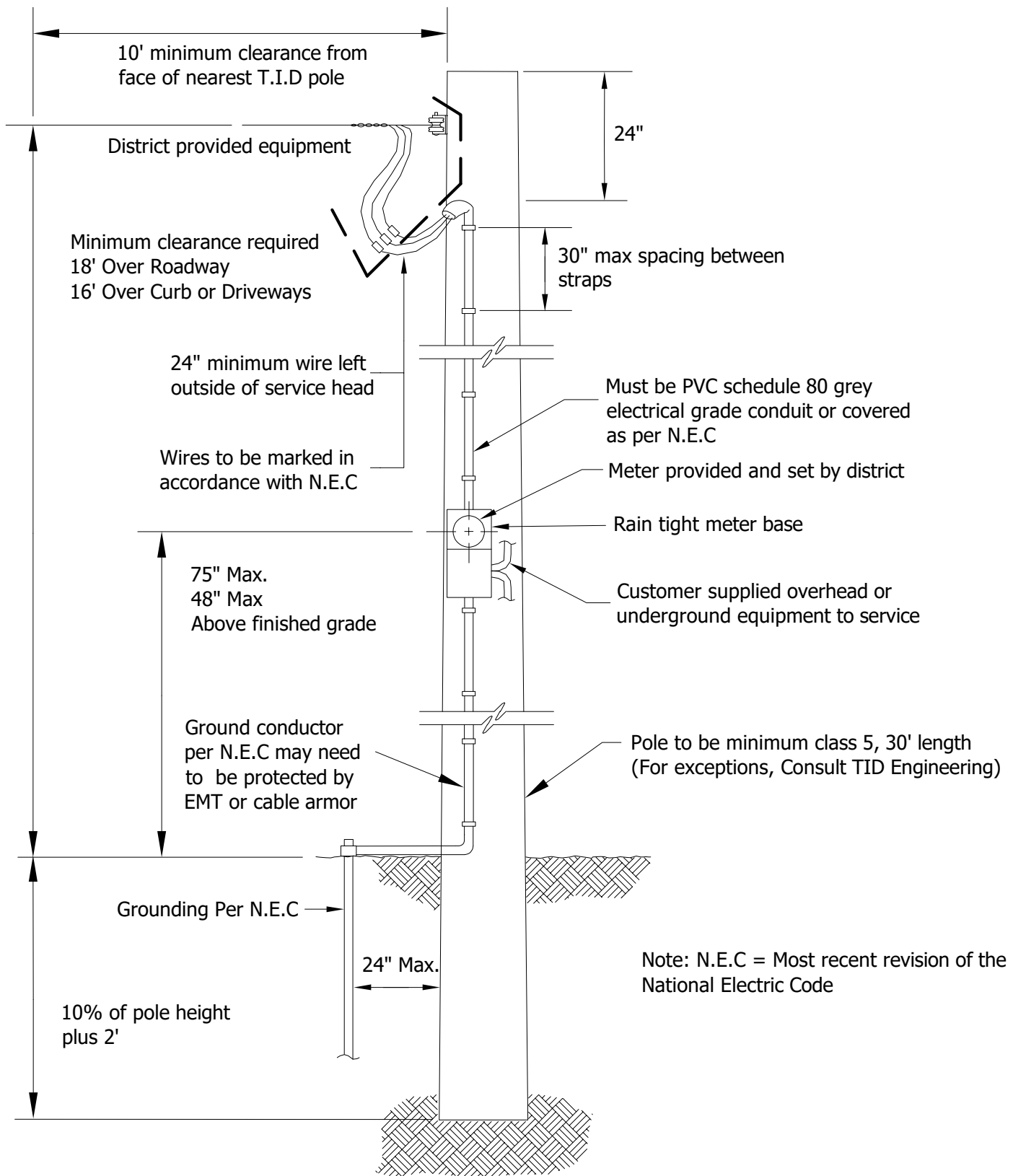
4.1.6.2. The neutral conductor shall be WHITE in color or marked with white tape.

4.1.6.3. The Power leg (stinger) on 120/240 volt, 4-wire, 3-phase services shall be ORANGE in color or marked with orange tape.

4.1.7. Temporary Service Poles

4.1.7.1. Temporary Service Poles may vary from the above description of permanent service poles on a case-by-case basis. Consult the District's Standards and Line Engineering Department prior to installing a temporary service pole if it varies from the above description.

4.1.7.2. The maximum span length of a service drop to a temporary pole shall be 100 feet.



TURLOCK IRRIGATION DISTRICT

REV	DESCRIPTION	INIT	CHK	RV'D	RV'D	RV'D	APP	DATE
I	REMOVED "MULTIPLE RISER" LANGUAGE ON PG3	ADL					SSG	02-2025
H	CHANGED MIN. CLASS FROM 4 TO 5	ADL	DNP				SSG	01-2023
G	UPDATE NOTE 7, TREATMENT TYPES	PEM		LRM	RB	DNP	SSG	09-2022
F	ADDED SCHEDULE 80	SSG					MSG	03-2021
E	UPDATE TITLEBLOCK	SSG	DMH				EDJ	05-2019

CONSTRUCTION STANDARDS

MINIMUM REQUIREMENTS FOR CUSTOMER OWNED SERVICE POLES

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PURPOSE

The purpose of this Construction Standard is to establish a standard for the installation of customer owned service poles.

SCOPE

This standard shall apply to both permanent and temporary customer owned service poles. These poles shall be furnished and installed by the customer. If, in the opinion of District personnel, a service pole is deemed unsafe for any reason, electric service will not be established. The customer will be advised of why the pole is unsafe, and will be required to take corrective action.

PERMANENT SERVICE POLES

Permanent service poles shall be as follows:

1. Poles shall be wood.
2. Species of wood shall be Douglas Fir, Western Red Cedar, or Ponderosa Pine.
3. Poles shall be circular in cross section.
4. Poles shall be a minimum of class 5 as defined by the latest revision of ANSI O5.1, "Specifications and Dimensions for Wood Poles."
5. Poles shall be a minimum of 30 feet in length.
6. Poles shall be set to a depth of 10% of the pole length plus 2 feet.
7. Poles shall be full length treated with CCA, Copper Naphthenate, DCOI, Cresote, or ACZA to prevent decay.
8. Poles shall be branded in accordance with the latest revision of ANSI O5.1, "Specifications and Dimensions for Wood Poles."
9. The soil around the pole shall be tamped to no less than 0.95 relative compaction.

Poles meeting these specifications are generally referred to as "Class 5 PG&E approved" poles by local lumber companies. Length of pole must be specified.

TEMPORARY SERVICE POLES

Temporary service poles may vary from the above description of permanent service poles on a case-by-case basis. Consult the District's **Standards and Line Engineering Department** prior to installing a temporary service pole if it varies from the above description.

MINIMUM REQUIREMENTS
FOR CUSTOMER OWNED
SERVICE POLES

CONSTRUCTION STANDARDS

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ALL SERVICE POLES

GROUNDING

Grounding shall be in accordance with the NEC and local codes. TID may require that the grounding conductor be installed in EMT or cable armor to protect the conductor from mechanical damage. The ground rod shall be placed within 24 inches of the pole and shall be set in undisturbed soil if possible.

VERTICAL CLEARANCE

Conductors to the service pole shall have a minimum clearance of 18 feet over roadways. The minimum clearance at the curb or outer limits of possible vehicle traffic, and over driveways, shall be 16 feet. If the minimum clearances cannot be attained with a 30-foot service pole, or when crossing overhead communication lines the District may require a longer pole. **Consult TID Line Engineering for pole height exceptions.**

SERVICE ENTRANCE CONDUCTORS

The customer shall provide the service entrance conductors in compliance with all applicable codes. A minimum of 24 inches of service conductor shall be provided outside of the service head. The conductors shall be marked as follows:

- a. Neutral conductor (when required) shall be WHITE in color or marked with WHITE tape.
- b. Power leg (stinger) on 120/240 volt, 4-wire services shall be ORANGE in color or marked with ORANGE tape.

POLE LOCATION

Service poles shall be located so that the vertical clearance requirements can be met. They shall not be placed less than 10 feet from a TID pole and shall not be installed under other electric wires without approval from TID. The maximum span length of a service drop to a temporary pole shall be 100 feet.

MINIMUM REQUIREMENTS
FOR CUSTOMER OWNED
SERVICE POLES

CONSTRUCTION STANDARDS

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Meters

5.1. Meter Height

- 5.1.1. The requirements for meter height, which is the vertical distance between the centerline of the meter and the ground or standing surface, shall be as follows:

48" minimum - 75" maximum for single meter residential services & meter pedestals

36" minimum - 75" maximum allowed for commercial meter clusters in self-supporting, rain-tight cabinets

5.2. Meter Working Space

- 5.2.1. The width of the clear working space shall be 36 inches minimum for a one meter installation and shall extend the additional width necessary for access to the total number of metering panels. The centerline of any meter shall not be less than 18 inches from any adjacent side wall or other protruding obstruction.

- 5.2.2. The depth of the clear working space shall be 36 inches minimum for services rated 150 volts or less to ground. When the service is rated in excess of 150 volts to ground, the depth shall be as required by applicable electrical codes or as dictated by the physical design and arrangement of the metering cubicles.

5.3. Meter Locations – General Conditions

- 5.3.1. To ensure that a satisfactory meter location is selected and that adequate space is provided, TID should be consulted while the building or residence is in the preliminary planning stage. Installation of additional facilities and/or future relocation of existing facilities can be prevented by early consultation with TID.

- 5.3.2. The following basic location requirements shall apply in all cases:

5.3.2.1. All locations for meters and metering equipment are subject to TID approval.

5.3.2.2. Meters shall be accessible during and after landscaping or other building construction. No meter shall be enclosed by any fencing without permission from an authorized TID representative.

3.3.2.3. Meters and metering equipment installed on or recessed in the external surface of any building shall have a clear working and standing space entirely on the property of the customer served. Any exception from this requirement must be approved by TID.

- 3.3.2.4. For the meter distance from the transformer, refer to construction standard 50510.

5.4. *Unacceptable Locations for Electric Meters*

- 5.4.1. In any location that is hazardous to equipment or persons or unsuitable for entry, such as:
- a. any elevator shaft.
 - b. any doorway or hatchway.
 - c. directly over any stairway, ramp or steps.
 - d. any area accessible only through a trap-door, hatchway, or by means of a ladder.
 - e. any area where personnel may contact exposed high voltage conductors or equipment in motion.
- 5.4.2. In any place where vibration, moisture, excessive temperature, fumes, or dust may damage the meter or interfere with its operation.
- 5.4.3. Within or requiring access through any bath, shower, powder or toilet room.
- 5.4.4. On any portion of a building where later landscaping, fencing or other building construction will make the meter inaccessible.
- 5.4.5. Within any enclosed area that contains or will contain gas meters.
- 5.4.6. Meters and metering equipment shall not be installed within any locked facility in which TID would be denied access at any time of the day.
- 5.4.7. Indoors.
- 5.4.8. Outdoor meters shall not be installed where they will interfere with traffic, sidewalks, driveways, or where they will obstruct the opening of doors or windows, or in any location which may be considered hazardous or cause damage to the metering equipment.

5.5. Remote Metering

Remote metering is acceptable in instances where an outside panel or switchboard is not utilized.

5.5.1 The following special arrangements are required:

- 5.5.1.1. Applicant shall provide an approved CT (current transformer) mounting cabinet that complies with the previous paragraph "Meter Locations - General Conditions."
- 5.5.1.2. 1 1/4" steel conduit between the CT (current transformer) cabinet and meter socket.
- 5.5.1.3. Meter will be located within 50 conductor feet of CT (current transformer) cabinet.
- 5.5.1.4. Junction boxes are permitted only if they can be sealed.
- 5.5.1.5. Couplings must have seal screws.
- 5.5.1.6 For the special distance requirement, refer to construction standard 50510.

5.8. Meter Occupancy Identification

Where meters are grouped at a common location, such as for two or more houses on a lot or for a multiple occupancy building, either residential or non-residential, each meter position and its directly identifiable service disconnect shall be clearly and permanently marked by the building owner or his representative to indicate the occupancy served. (N.E.C. 230-72A) Examples of permanent marking shall be engraved plate attached by screws, rivets, or two-part epoxy. Clear identification means a legible apartment or street number. The store name may be included but does not constitute a clear designation in itself. Apartment or suite numbers must be on or adjacent to the door of each unit. See Construction Standard 50520 for placard details.

5.9. Sealing of Meters and Meter Equipment

All meters and enclosures for meters, metering equipment and service entrance equipment on the line side of the meter will be sealed by TID. The TID seal shall not be broken except by an authorized representative of TID. No person is permitted to tamper, remove, replace, or in any way interfere with a meter or its connections as placed by TID.

5.10. Meter Socket Bypass Devices

- 5.10.1. Manual circuit closing devices are required on all service entrance equipment exceeding 30 amps nameplate rating except domestic, signboards and temporary service. Except for domestic service, service entrance equipment must be continuously rated per U/L 414.
- 5.10.2. Automatic bypass or circuit closing devices that close when the meter is removed from the socket shall not be used.

5.11. Self-Contained Metering Defined

A self-contained meter is capable of carrying the total current at the voltage of the electric service supplied to the customer. Sockets for self-contained meters are directly connected to the customer's service entrance conductors, and the meter is inserted into the socket. Meter sockets are available with nominal ratings of 100 or 200 amperes. . Contact TID for details on single-phase, 400 ampere service, and three-phase service.

5.12. Transformer-rated Metering Defined

When the electric service needs of the applicant exceed the ampacity or voltage limitations of a self-contained meter, metering transformers, which connect directly to the customer's service entrance conductors, must be used. A transformer-rated meter is then connected to the metering transformers to measure the energy delivered to the customer. The metering transformers and the transformer-rated meter(s) are furnished and installed by TID.

5.13. EUSERC

Electric Utility Service Equipment Requirements Committee (EUSERC) is an organization whose purpose is to promote uniform electric service requirements among the utilities. TID is a member of and supports EUSERC. As such, when an applicant wishes service within the District service area and the equipment chosen meets EUSERC, it is understood, with some specific exceptions, that TID will provide power to the equipment. Check with the District for details.

5.14. Switchboards

- 5.14.1. Switchboards are considered a specialty item for metering equipment. TID requires two sets of approval drawings of such equipment to be delivered to Electrical Engineering. If TID does not approve the equipment, the applicant will be notified of the changes required. Should the applicant request service and the equipment is not acceptable, service will not be connected. If the equipment is checked and approved prior to requesting service, it will save time and headaches for everyone involved.
- 5.14.2. The switchboard must meet, at a minimum, EUSERC requirements. A switchboard service section has a hinged meter panel located in front of the instrument transformer compartment. Hinged meter panels must have EUSERC handles and open a minimum of 90° with meters and test switches mounted. Hinged meter panels must be sealable.
- 5.14.3 For the meter distance from the transformer, refer to construction standard 50510.

Table 1 Single Phase Service From Single Phase or Delta Secondary Transformers

Type of Service	Main Size Amps	Meter Socket	Drawing Number
2 Wire 1 Phase 120 Volt	30 A	100A 4 Jaw MCC CDR	51010
3 Wire 1 Phase 120/240 Volt	100 A	100A 4 Jaw MCC CDR	51015
3 Wire 1 Phase 120/240 Volt	200 A	200A 4 Jaw MCC CDR	51015
3 Wire 1 Phase 120/240 Volt	400 A	320A 4 Jaw MCC CDR	51025
3 Wire 1 Phase 120/240 Volt	400 A	Self Contained Meter Receptacle	51030 Maintenance Only
3 Wire 1 Phase 120/240 Volt	400 A 600 A 800 A	CMCTC 6 Jaw TP	51040

Table 2 Three Phase Service From Delta Secondary Transformers

Type of Service	Main Size Amps	Meter Socket	Drawing Number
4 Wire 3 Phase 120/240 Volt	100 A Limit to 30 HP for Pumping Loads	100 A 7 Jaw MCC CDR	51050
4 Wire 3 Phase 120/240 Volt	200 A Limit to 60 HP for Pumping Loads	200 A 7 Jaw MCC CDR	51050
4 Wire 3 Phase 120/240 Volt	400 A 600 A 800 A	CMCTC 13 Jaw TP	51070
3 Wire 3 Phase 480 Volt	100 A Limit to 60 HP for Pumping Loads	100 A 5 Jaw MCC CDR	51020 Maintenance Only
3 Wire 3 Phase 480 Volt	200 A Limit to 125 HP for Pumping Loads	200 A 5 Jaw MCC CDR	51020 Maintenance Only
3 Wire 3 Phase 480 Volt	400 A 600 A 800 A	CMCTC 8 Jaw TP	51060 Maintenance Only

TURLOCK IRRIGATION DISTRICT

REV	DESCRIPTION	INIT	CHK	RVD	RVD	RVD	APP	DATE
H	CORRECT NO OF METER JAWS IN TABLE 3	SSG		RB	AS	AB	MSG	04-2021
G	CORRECT DWG NUMBERS, CHG NOTE 8	ELJ					MSG	09-2016
F	REPLACE TITLEBLOCK	JRS	MSG	JSA	MLH	SDP	EDJ	06-2013
E	ALLOW 320 AND 40 AMP ON COMMERCIAL	BB	RC				BLL	09-1998
D	REDRAWN FOR BOUND BOOK	BB	ETE	RWB	LBG		RA	06-1993

CONSTRUCTION STANDARDS

**LOW & HIGH VOLTAGE ELECTRIC
SERVICE METER SOCKET
REQUIREMENTS**

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Table 3 Single Phase Service From Wye Secondary Transformers

Type of Service	Main Size Amps	Meter Socket	Drawing Number
2 Wire 1 Phase 120 Volt	30 A	100 A 4 Jaw MCC CDR	51020
3 Wire 1 Phase $120\sqrt{3}/208$ Volt	200 A	200 A 5 Jaw MCC CDR	51020

Abbreviations:

CMVTCTC - Combination Meter and Voltage Transformer and Current Transformer Cabinet.

TP - Test Perch (Provisions for mounting meter test blocks in cabinet).

CDR - Continuous Duty Rated per UL 414 (CDR not required for domestic service).

MCC - Manual Circuit Closing Device.

CMCTC - Combination Meter and Current Transformer Cabinet.

Table 4 Three Phase Service From Wye Secondary Transformers

Type of Service	Main Size Amps	Meter Socket	Drawing Number
4 Wire 3 Phase $120\sqrt{3}/208$ Volt	100 A Limit to 30 HP for Pumping Loads	100 A 7 Jaw MCC CDR	51055
4 Wire 3 Phase $120\sqrt{3}/208$ Volt	200 A Limit to 60 HP for Pumping Loads	200 A 7 Jaw MCC CDR	51055
4 Wire 3 Phase $120\sqrt{3}/208$ Volt	400 A to 2000 A	CMCTC 13 Jaw TP	51074
4 Wire 3 Phase $277\sqrt{3}/480$ Volt	100 A Limit to 60 HP for Pumping Loads	100 A 7 Jaw MCC CDR	51055
4 Wire 3 Phase $277\sqrt{3}/480$ Volt	200 A Limit to 125 HP for Pumping Loads	200 A 7 Jaw MCC CDR	51055
4 Wire 3 Phase $277\sqrt{3}/480$ Volt	400 A to 3000 A	CMCTC 13 Jaw TP	51074
3 Wire 3 Phase 12 kV	Varies	CMVTCTC 8 Jaw TP	51081 Maintenance Only
4 Wire 3 Phase 12 kV	Varies	CMCTC 13 Jaw TP	51081

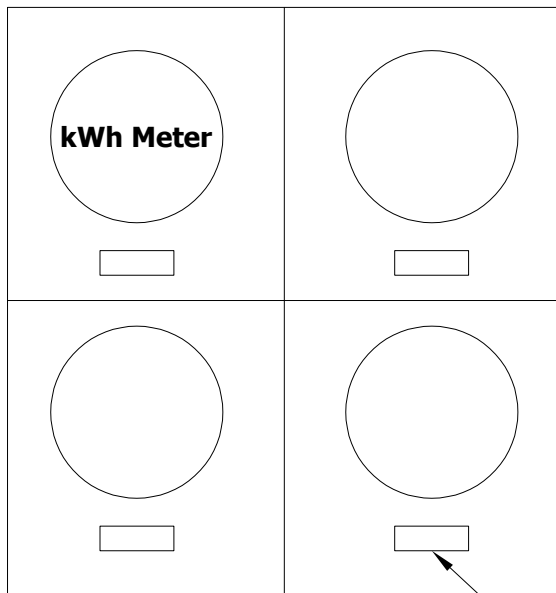


Figure 1

Placard

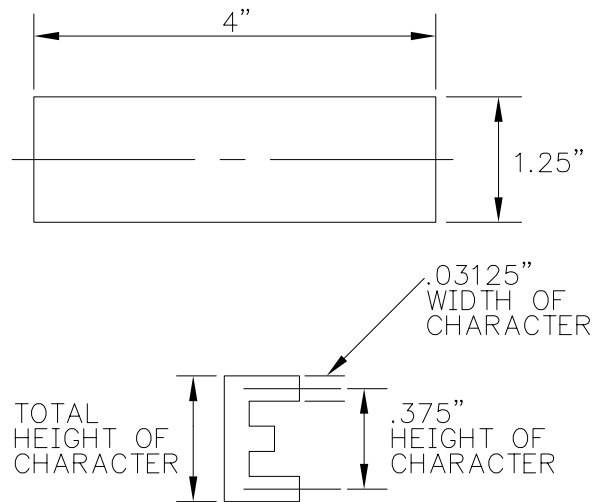


Figure 2

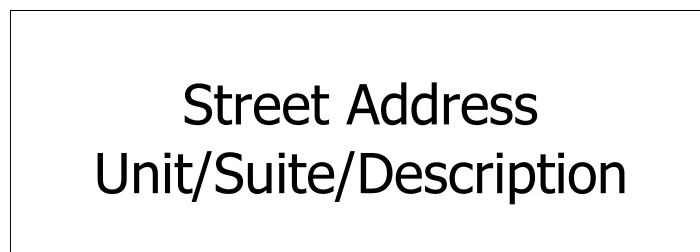


Figure 3

Notes:

1. Each meter position shall be clearly and permanently marked to indicate the occupancy served as per 2023 NEC 230-72a or latest revision.
2. Lettering shall be engraved white letters on a black placard.
3. Red placards with white letters shall only be used for PV systems.
4. Placard shall be attached by screws, rivets, or weatherproof adhesive.
5. Multiple services on one premise shall be labeled with description.
6. Outdoor meter placard shall have Ultra Violet (UV) protection rating.
7. Label maker, adhesive, or hand written labels will not be accepted.



TURLOCK IRRIGATION DISTRICT

CONSTRUCTION STANDARDS

REV	DESCRIPTION	INIT	CHK	RV'D	RV'D	RV'D	APP	DATE
---	INITIAL ISSUE	ADL					SSG	9-2023

**MULTI METER
IDENTIFICATION**

SHEET

50520

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Notes:

1. Manual Circuit closing devices will be required on all service entrance equipment exceeding 30 amps nameplate rating except:

Domestic
Signboards
Temporary services
2. Meter socket and CT cabinets and mounting shall conform to applicable sections of the Electric Utility Service Equipment Requirements Committee (EUSERC) Standards. Consult TID Meter Shop if you have any questions.
3. Meter Sockets shall be located on the outside of buildings, where meters will be readily accessible for reading, unless prior arrangements are made with Standards and Line Engineering Dept.
4. For remote meter installations, the customer shall provide an approved CT mounting cabinet, a 1 ¼ inch rigid steel conduit without junction boxes between the CT cabinet and meter socket and shall locate the meter socket not more than 50 circuit feet from the CT cabinet. T.I.D. will install the Current Transformers and wiring.
5. Service entrance equipment for commercial operation must be continuously rated for the load specified.
6. All electrical work on a customer's premise must be passed by the proper inspecting authorities before any hookup can be made by T.I.D.
7. Building plans and definite load information for commercial and industrial installations must be furnished to T.I.D.'s Standards and Line Engineering Department, P.O. Box 949, Turlock, CA 95381, as soon as possible.
8. "K-Base" meter panels and ringless meter sockets are not allowed or accepted.

LOW & HIGH VOLTAGE ELECTRIC
SERVICE METER SOCKET
REQUIREMENTS

CONSTRUCTION STANDARDS

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Inspections

Facilities constructed by either the owner or his or her builder must be constructed according to TID standards and applicable local building codes.

If the TID inspector determines that any of the customer/builder-installed facilities do not meet TID standards, the owner/builder will be responsible for making the necessary changes at his or her cost.

TID cannot complete the service work until **ALL** customer work has passed TID and applicable governing agencies' inspections.

The following is a list of governing agencies within the TID:

Stanislaus County Building Inspection Office

ATT: Deputy Building Inspector
1010 10th St. Suite 350, Modesto 95354

(Serving: Ceres, Denair, Hickman, Keyes, La Grange & Stanislaus CO.)
Phone – (209) 525-6557

Merced County Inspection Office

ATT: Chief Building Official
2222 M St., Merced 95340

(Serving: Ballico, Delhi, Hilmar, & Merced Co.)
Phone (209) 385-7477

City of Hughson Building Department

ATT: Chief Building Official
7001 Whitmore Ave #8
Hughson, CA. 95326

(Serving: City of Hughson)
Phone: (209) 883-0811

City of Modesto Building Inspection Department

1010 10th St., Suite 3100, Modesto 95354
(Serving: City of Modesto)

Phone: (209) 577-5232

City of Patterson Community Development Department
Building Division
1 Plaza, Patterson 95363

(Serving: City of Patterson)
Phone: (209) 895-8030

City of Turlock Inspection department
156 S. Broadway, Ste 130, Turlock 95380

(Serving: City of Turlock)
Phone: (209) 668-5560

NOTE: Under some conditions, state or other authorities will be responsible for inspecting the electric facilities. The agencies listed above will assist you in determining the proper authority.

TID Contact List

TID Service Division

(209)-883-8301

TIDservicedivision@tid.org

TID Line Engineering Department

(209)-883-8415

LineEngineering@tid.org

TID Customer Service

(209)-883-8222

CSworkorders@tid.org

TID Underground Inspector

(209)-606-0136

TIDunderground@tid.org

TID Line Scheduler

(209)-883-8660

jobscheduling@tid.org