WELCOME TO
INTERMOUNTAIN RURAL ELECTRIC
ASSOCIATION

We understand that obtaining electrical facilities is only one of many tasks our consumers must achieve during the construction of a new residence or commercial facility. Therefore, it is our goal to provide the best customer service possible!

Please do not hesitate to contact our Engineering Services Department with any questions or concerns at:

- Sedalia office 303-688-3100
- Woodland Park office 719-687-9277
- Conifer office 303-674-6879
- Strasburg office 303-622-9231

Providing us with the work order number or legal description of the property will help us answer your questions promptly.

We look forward to serving you!
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PROCESSING NEW SERVICE APPLICATIONS

There are two separate phases in the processing of each new service application. Each of the two phases requires that the applicant complete certain steps. This may involve supplying information about the requirements for electric service to the Association or completing certain actions at the construction site. In all cases, a delay in providing information needed for engineering or construction will delay the availability of electric service. Therefore, it is important that information is provided as needed, and all steps are completed as quickly as possible. This guideline is provided to assist the applicant with this process. Some requests may have unusual aspects not specifically described here.

PHASE 1 – Engineering

Initial contact with the Association will open a work order, which identifies the owner as an applicant for new service. The information required in STEP 1 may be provided by phone, email, fax, or in person at our office. A Contract Authorization form will be submitted to the applicant requesting the items listed within STEP 1. Upon receipt of this signed document with proof of ownership and payment of the design fee, the work order will be released to the engineer.

STEP 1

- Owner name to appear on all accounts
- Owner’s current mailing address
- Street address of property, if available
- Legal description of property to which service is required
- Owner/builder telephone numbers, fax numbers, email, etc.
- Overhead or underground service requirement
- Pay applicable design fee
- Proof of ownership (Warranty Deed)
- Any distributive generation (Solar, Wind, etc.) interconnection requirements.*

For commercial, industrial, and large residential services:

- Copy of engineered electric one-line diagram with loads
- Copy of site plan
- Total electric demand
- Largest motor(s) and type of motor starting to be used
- Size and quantity of service entrance conductors

*For information regarding the small generation interconnection procedure requirements, please contact our Engineering Services Department.
The Engineer will contact the applicant at the phone numbers provided and arrange an on-site meeting to discuss the service requirements and explain the Association’s policy and procedures. During the on-site meeting, the applicable items in STEP 2 will be discussed. Be prepared to show plans, drawings, and building/well or septic permits to the engineer. A plat of the property may be required. It may be necessary for the applicant to obtain right-of-way, if the routing of the power line crosses a property on which the Association does not have an easement. The Field Engineer will instruct the applicant in this regard, when necessary. The Engineer will design, route, and stake the line extension at that time or later in certain situations.

**STEP 2**

- Location of property pins, including corner and point of line, if needed
- Location of well, septic system, and leach field
- Location of driveway or other access
- Location of the house corners (REQUIRED)
- Location of the meter
- Electric service requirements: voltage, amp size, phase
- Right-of-way acquisition
- Plat or property survey

**PHASE 2 – Construction**

When the design is complete, the Field Engineer will contact the applicant with a quote of the cost-of-construction. Cost quotes are valid for sixty (60) days. After that time, or if redesigns are required, payment of an additional design fee may be required. The items shown within STEP 3 are required before a job can be released for construction. Once released, the job will be constructed as quickly as job backlog and working conditions allow.

**STEP 3**

- Pay the costs of construction
- Sign Construction Contract
- Submit signed rights-of-way, if required
- Pay balances on other accounts, if any
- Post the physical street address at the property
Following construction of power line facilities, the Association will set a meter in accordance with the stipulations shown in STEP 4. Typically, the meter can be set within five (5) working days following the receipt of a meter release from the State, County, or City/Town Electrical Inspector. Other permitting requirements may apply to some jobs.

**STEP 4**

- Sign a Membership Application
- Meter loop constructed to current Association specifications
- Meter loop constructed in location approved by the Association
- Meter loop inspected by the Electrical Inspector
- Electrical Inspector notifies the Association of meter release
- Service order issued to set meter and energize service.
ELECTRIC SAFETY AND CODE CLEARANCES

It is the policy of the Association to operate the transmission and distribution electric system with the highest degree of care and safety for the public and Association employees. To ensure the care and safety needed for an electrical distribution system, the National Electrical Safety Code (NESC) is used for design, construction, maintenance, and operation of the electrical transmission and distribution system by the Association. The current National Electrical Safety Code in effect at the time of distribution installation will apply. The Association reserves the right to terminate service without prior notice when a hazardous condition exists.

OVERHEAD/UNDERGROUND FACILITIES

Contact with electric lines can result in SEVERE INJURY OR DEATH! Federal OSHA standards and Colorado State Statues require that all equipment be maintained at a minimum distance of ten feet (10’) from overhead lines.

If work near an overhead electric line is anticipated, contact the Association Operations Department at (303) 688-3100 at least 24 hours in advance for assistance in avoiding contact with any energized facilities.

Any attachments to existing facilities that may violate the minimum clearances as determined by the National Electrical Safety Code must be reported ninety (90) days prior to the Association by contacting the Association Engineering Department at (303) 688-3100.

Any person who proposes to change the grade of land that would result in conflict with minimum clearances must give ninety (90) days prior notice of such action to the Association.

If a violation has already occurred and the Association determines that relocating the existing facilities is necessary, the Association will perform this relocation at the expense of the party creating the violation.

If the Association determines that relocation is not feasible, other alternatives will be considered; however, the Association will take the steps necessary to protect the safety of the public and the electric facilities at the expense of the party creating the clearance violation.

Maps of Association facilities are not generally provided to the public. If necessary for engineering the landowner may request a copy of Association map(s) upon proof of ownership.
LOCATES FOR UNDERGROUND UTILITIES

CALL BEFORE YOU DIG! 1-800-922-1987 or 811

• Contact the Utility Notification Center by dialing 811 or visit www.uncc.org, before you dig.

• Trained service personnel will locate the Association's underground electric facilities at no cost.

• Do not start grading or excavation work until an underground facilities' location has been completed.

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND ASSOCIATION UTILITIES.
Types of Easements

The Association generally uses two types of easements:

- A platted/dedicated easement is provided to the Association by virtue of a dedication statement for every platted subdivision. A five foot (5’) side lot and ten foot (10’) rear lot easement are typical platted easements. In some cases a front lot design will require a dedication of ten foot (10’) easement on the front lot. However, if the subdivision is served by overhead facilities or if larger easements are necessary, the Association will require additional easements.

- The Association requires the customer to grant, at no cost to the Association, easements for power lines and any associated equipment before any part of an electrical installation is energized. In the event the Association has to cross property other than that of the customer requesting service, the new customer will be required to obtain all easements. Please note that these easements may require a legal survey to be provided for documentation.

Access to Utility Easements

Periodically the Association may need to access facilities within the utility easement, the Association requests reasonable access to facilities. To access facilities, the Association may use existing roads, driveways and entrance thru fenced yards.

General Restrictions on Easements/Right-of-Way

- To comply with NESC requirements, easement and right-of-way grades cannot be changed more than six inches (6”) by excavation or filling without prior written approval of all utility companies involved. Full cost of any necessary alteration or relocation of utility lines will be borne by the customer requesting the change.

- Fences and landscaping may be installed on utility easements, except where such materials would prevent access to utility lines or conflict with utility equipment.

- Other permanent structures or buildings are not allowed within the utility easement.

Landscaping on Utility Easements (Working Space)

- Call the Utility Notification Center, toll-free, 1-800-922-1987 or 811, prior to digging.
• Permanent structures cannot be constructed on utility easements. However, landscaping within an easement is permissible. A minimum clearance is required around all vaults and pad mounted equipment. A distance of ten feet (10') must be kept clear in front of all service doors. Equipment side clearances vary from 1'-0" to 3'-0". See Working Space Clearance.

• Trees should be planted far enough away from pad mounted equipment so that, at maturity, overhanging branches will not obstruct a crane setting or removing equipment. It is best to select trees with supple branches that can be tied back without risk of breaking.

• Responsibility for upkeep and any landscaping maintenance in a utility easement is borne by the property owner/customer.

• In the event a fence must be removed by the Association to repair or maintain electrical facilities, reasonable effort will be made to replace existing fencing when repairs are completed.

**Working Space Clearance**

• Landscaping, fences, and other obstructions shall not encroach upon the working space clearances.

• A clear and level working space shall be equal to the full width of the equipment and shall extend a minimum of 10 feet (10') from the compartment opening for pad mount equipment.
- Single phase pad mount equipment shall have a minimum of one foot (1'-0") of clear working space on the sides and rear of the equipment, and 10 feet (10'-0") in front of the equipment.
• Three-phase pad mount equipment with cooling fins shall have a clear working space minimum of one foot-6 inches (1'-6") on the sides and 2 feet-6 inches (2'-6") on the rear of the equipment, and 10 feet (10'-0") in front of the equipment.
- Pad mounted air switchgear shall have a minimum clear working space of one foot-six inches (1'-6") on the sides of the equipment, and 10 feet (10'-0") in front and rear of the equipment.
• Commercial EUSERC Cabinets shall have a minimum of 1 foot (1'-0") on the sides of the equipment and 4 feet (4'-0") on the front of the equipment. This equipment is typically placed parallel to the building wall.

* - A LESSER DIMENSION SHALL BE APPROVED BY THE ASSOCIATION.
Guard Posts for Pad Mounted Equipment

Guard posts shall be installed around pad mounted equipment that is exposed to vehicular traffic. The customer is required to supply and install these guard posts to protect the Association’s equipment.
POST BARRIER

CONCRETE 2500 PSI (MIN)

6" DIA X 7'0" SCH 40 STEEL PIPE (WALL THICKNESS OF 0.280 INCHES)

GROUND LEVEL

CONCRETE

NOTES:

1. CLEAN AND PRIME ALL EXPOSED METAL. PAINT UNIT WITH GLOSS OR SEMI-GLOSS CANARY YELLOW EXTERIOR ACRYLIC.

2. UNIT SHALL NOT OBSTRUCT OR INTERFERE WITH EQUIPMENT OPERATION OR ACCESS TO EQUIPMENT.

3. FILL PIPE COMPLETELY WITH CONCRETE. TOP OF PIPE SHALL HAVE CONCRETE ROUNDED TO SHED WATER.

4. SURFACE RESTORATION OTHER THAN TAMING IS NOT PART OF THIS UNIT.

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TEMPORARY POWER SERVICES

A temporary service connection may be installed to supply electricity for a limited time (up to 18 months). Services used for construction purposes, fairs, carnivals, holiday lighting, street decorations, or other uses are considered temporary.

- A billing account must be established for each specific location by signing a Membership Application/Electrical Service Agreement with the Association.

- A temporary electric meter will be installed upon completion of an electrical inspection and release by an electrical inspector of the State, County, or City/Town where the service is located.

- It is the responsibility of the applicant to obtain such an inspection and release.

- The meter will not be installed unless it meets the Association’s specifications. See pages 20, 21, 22, 23, and 24.

- Contact the Association Engineering Services (303) 688-3100 with any questions.

Temporary Overhead Power Source

- A temporary service is installed on an Association pole, preferably one equipped with a transformer.

- A temporary service may not be installed on a pole with risers or other special equipment on it.

- If a pole is available that is not equipped with a transformer, a fee will be charged to cover the cost to install and remove the transformer.

- Should a temporary service require poles or facilities other than a transformer, the applicant will be charged both installation and retirement costs up-front that are nonrefundable.

- If a meter pole is available when temporary service is required, the applicant may avoid installing two services by constructing a permanent service loop on the meter pole and using it for temporary purposes (check for county regulations).
TEMPORARY CONSTRUCTION – OVERHEAD
SINGLE AND THREE PHASE (200 AMP)

NOTES:
1. MAGNETIC CIRCUIT BREAKERS
   REQUIRED FOR ALL
   SINGLE-PHASE SERVICES UP TO
   200A. FUSED DISCONNECTS NOT
   ALLOWED.
2. ALL METER LOOP CONDUITS ARE
   REQUIRED TO BE METALLIC.
3. METER LOOP MUST BE INSTALLED
   ON AN ASSOCIATION POLE,
   PREFERABLY WITH A
   TRANSFORMER, OR THERE WILL
   BE A CHARGE TO INSTALL A
   TRANSFORMER.
4. IF A METER POLE IS INSTALLED
   PRIOR TO TEMPORARY SERVICE,
   THE ASSOCIATION RECOMMENDS
   CUSTOMER INSTALL PERMANENT
   METER LOOP FOR TEMPORARY
   POWER.
5. TEMPORARY SERVICE WILL BE
   ALLOWED A MAXIMUM OF 18
   MONTHS.
6. THE ASSOCIATION RESERVES THE
   RIGHT TO REFUSE TO CONNECT
   ANY UNSAFE SERVICE
   INSTALLATION.
7. PLEASE CHECK WITH YOUR LOCAL
   INSPECTOR FOR NATIONAL, STATE,
   OR LOCAL CODE REQUIREMENTS.
   THIS INFORMATION WILL NOT BE
   SUPPLIED BY THE ASSOCIATION.
8. ANYONE MAKING UNAUTHORIZED
   METER BYPASSES WILL BE
   PROSECUTED.
9. ALL CONNECTIONS TO
   ASSOCIATION SERVICE MUST BE
   MADE BY ASSOCIATION
   PERSONNEL ONLY.

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Temporary Underground Power Source

- Areas with underground facilities may have either metering pedestals or power pedestals available.

- A metering pedestal will contain the permanent meter even while the temporary loop is in use.

- For this reason, a main breaker large enough to protect the permanent service must be installed in the metering pedestal before a temporary service may be connected.

- If a double-breaker kit is required (service amperage exceeds 200 amps), the second breaker must be installed prior to the installation of the temporary meter.

- The Association supplies and installs jumpers from meter socket to breakers.

**Diagram:**

- **Double-Breaker Kit in Meter Pedestal**
  - 200–400 Amp Service

- **Diagram Details:**
  - Meter
  - Double Dead Front Plate (Installed by Association)
  - Kit to be Installed by Association
  - Breakers to be Installed and Centered by Customer
  - Double-Breaker Assembly
  - Pedestal Exterior
  - Pedestal Interior

**Note:**

1. Both Breaker Assemblies Must Be Installed and Centered Prior to Temporary Service.
• If the source is a power pedestal or power transformer, the temporary stand must be located within ten feet (10') of its source.

• The temporary stand also must be set at the permanent source as designated by the Association's maps.

**TEMPORARY UNDERGROUND SERVICE AT METER PEDESTAL, SINGLE PHASE (400 AMPS OR LESS)**

**NOTES:**
1. THE MAIN BREAKER IS REQUIRED IN THE METER PEDESTAL.
2. TEMPORARY METER WILL BE INSTALLED IN METER PEDESTAL.
3. SERVICE ADDRESS MUST BE PROMINENTLY DISPLAYED ON TEMPORARY SERVICE INSTALLATION.
4. ALL CONNECTIONS TO THE ASSOCIATION'S EQUIPMENT MUST BE MADE BY ASSOCIATION PERSONNEL.
5. MIN. OF 3' AND MAX. 5' BETWEEN METER PEDESTAL AND TEMPORARY STRUCTURE.
6. TEMPORARY SERVICE WILL BE ALLOWED FOR A MAXIMUM OF 18 MONTHS.
7. THE ASSOCIATION RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE INSTALLATIONS.

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<td>3</td>
<td>CONDUIT AND SERVICE CONDUCTOR</td>
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<td>6</td>
<td>CONNECTION, METER HOUSING</td>
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TEMPORARY UNDERGROUND SERVICE
AT TRANSFORMER OR SECONDARY TAP ENCLOSURE
SINGLE PHASE (400 AMPS OR LESS)

NOTES:
1. ALL CONNECTIONS TO ASSOCIATION DISTRIBUTION EQUIPMENT MUST BE MADE BY ASSOCIATION PERSONNEL
   ONLY.
2. THE ASSOCIATION RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE INSTALLATION.
3. INSTALLATION MUST BE LESS THAN 10 FEET FROM SERVICE PEDESTAL OR RIGHT SIDE OF PAD MOUNT
   TRANSFORMER (FACING FRONT). SERVICE GROUND PROVIDED BY CONNECTION TO DRIVEN GROUND ROD
   WITHIN COMPANY PEDESTAL OR TRANSFORMER WHERE PERMITTED BY LOCAL NEC CODE. (NO GROUND ROD
   SHALL BE DRIVEN WITHIN THE UTILITY EASEMENT).
4. WHERE FLEX CONDUIT ATTACHES TO PEDESTAL OR TRANSFORMER, A SUITABLE CONNECTOR FOR 1-1/2"
   FLEXIBLE CONDUIT TO 1" KNOCK-OUT MUST BE SUPPLIED BY CUSTOMER.
5. MINIMUM WIRE SIZE 3 #6 AL. OR CU.
6. SERVICE ADDRESS MUST BE PROMINENTLY DISPLAYED ON TEMPORARY SERVICE INSTALLATION.
7. TEMPORARY SERVICE LOCATION IS SUBJECT TO ASSOCIATION APPROVAL.
8. TEMPORARY SERVICE WILL BE ALLOWED FOR 18 MONTHS.

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### TEMPORARY THREE PHASE C.T. METER INSTALLATION

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<td>CT 480</td>
<td>13 TERM.</td>
<td>3 CTS/3 PTS</td>
<td>THREE PHASE OR THREE PHASE DEMAND</td>
<td>YES</td>
</tr>
</tbody>
</table>

**NOTES:**

1. LOCATION OF SERVICE MUST BE ACCESSIBLE TO THE ASSOCIATION AT ALL TIMES.
2. CT METER TO BE INSTALLED BY ASSOCIATION PERSONNEL ONLY.
3. CTS MAY BE MOUNTED IN CUSTOMER SUPPLIED CT CAN OR SWITCHGEAR.
4. ANY VARIANCE CONTACT THE ASSOCIATION METER DEPARTMENT.
5. TEMPORARY SERVICE SHOULD BE LESS THAN 18 MONTHS.
RESIDENTIAL POWER SERVICES
(Single Lot, Multi-Family and Developments)

Street Lighting

- The Association offers street light facilities upon request by the developer or other qualified applicant (i.e., a community homeowners’ association, etc.) Two styles of LED ornamental street light facilities are used in subdivisions with underground facilities; whereas in areas with overhead facilities; LED security lights are placed on wooden poles.

- The cost of installation for a street light and electrical feed is typically incorporated into the distribution design. The cost for street light facilities will vary depending upon the size of the lots, the desired location of the street lights, and the electric sources available to serve the new street lights.

- It will be the responsibility of the developer to contact the proper city or county authorities for street light specifications, as design requirements may vary.

- Should the builder/developer wish to install ornamental lights that are not within the Association’s specifications, they may do so at their own expense.

- The Association will provide metering points (at the builder/developer’s cost) and will bill for the actual kilowatt-hours used. The builder/developer will be responsible for the acquisition, installation, and maintenance of all such facilities beyond the metering point.

Joint-Trench

- Subdivisions with underground electrical service frequently have telephone and cable television facilities in the same trench with electrical distribution. The builder/developer may contact the Association Engineering Department for information required to coordinate joint trenching of facilities.

- If construction is assigned to the Association’s contractor, any contracts or agreements regarding joint-trench will be made with that contractor, not the Association. Joint-trench facilities are normally used for distribution lines but can include secondary (house) laterals as well.

- Gas and water lines cannot be included in the electrical trench. All utilities requesting joint-trench use must be designed and ready to install at the time the Association’s facilities are scheduled for construction.
Meter Sets

- The builder/customer must apply for new service. A New Location Request Form will be mailed, faxed or emailed to the builder/customer. This form needs to be completed and returned to Engineering Services via fax (720-733-5764) or email (engineeringservices@irea.coop).

- If the meter is to be used strictly for temporary construction purposes only and then to be removed from the site, the builder/customer should indicate “temp only” on this form.

- Upon receipt of this completed document, an account will be created and a Membership Application/Electrical Service Agreement per each location requested will be mailed accordingly.

- The Association will issue a service order to set the meter upon receipt of the inspection from the State, County, City/Town inspector, or other documentation authorized by the Association.

- Please allow three to five business days for the meter set to be completed.

Choosing the Right Service Voltage

The Association offers their customers the voltages shown in the table below.

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-phase</td>
<td>120/240V, 3-wire*</td>
</tr>
<tr>
<td>Three-phase</td>
<td>120/208V, 4-wire</td>
</tr>
<tr>
<td></td>
<td>277/480V, 4-wire</td>
</tr>
</tbody>
</table>

*Available for loads to a maximum demand of 100kW. Larger loads may be served, if determined feasible by an Association engineer. All motors must be rated 10 HP or less.
Meter Locations

- An electric meter will not be located in any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.

- A distance of four feet (4’) clearance must be maintained in front of the meter.

- The meter shall be located five feet (5’) at center of glass, above ground level.

- The meter will be located on the front 25% of the house, ahead of any fences, and in a direct line with the Association’s electrical facility designated to serve that location.
• If the service is underground to a power pedestal, the Association will install a secondary lateral to the house and the meter will be located on the house.

METER ON BUILDING
UNDERGROUND RESIDENTIAL SINGLE-PHASE SERVICE (400 AMPS OR LESS)

TABLE OF RESPONSIBILITY

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DISTRIBUTION FACILITIES (TRANS. OR PED.)</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>2</td>
<td>CONDUIT, SERVICE ENTRANCE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>3</td>
<td>METER HOUSING</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>4</td>
<td>CONDUCTOR, SERVICE LATERAL</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>5</td>
<td>CONNECTION, METER HOUSING</td>
<td>---</td>
<td>ASSOC./CUST.</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>DISCONNECT</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>
- If the service is underground to a meter pedestal, the meter is located within the meter pedestal, and the applicant will be required to install the secondary lateral to the house.

**METER PEDESTAL UNDERGROUND RESIDENTIAL SINGLE-PHASE SERVICE (400 AMPS OR LESS)**

<table>
<thead>
<tr>
<th>TYPE OF METER PEDESTAL</th>
<th>BREAKER TYPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILBANK</td>
<td>BRYANT TYPE: BR/BJ LINE GE: TOD 21, GE: TOD 22 ITE: OP OR OT LINE WESTINGHOUSE: CAZ LINE</td>
<td>200 AMP SERVICE 400 AMP SERVICE REQUIRES DOUBLE-BREAKER KIT TO BE INSTALLED BY ASSOCIATION PERSONNEL</td>
</tr>
<tr>
<td>SMALL DURHAM</td>
<td>WESTINGHOUSE TYPE: QUICKLAC P, BRYANT TYPE: BR, SQUARE D, HOME LINE ITE: OP</td>
<td>60 TO 125 AMP</td>
</tr>
<tr>
<td>STANDARD DURHAM</td>
<td>SAME AS MILBANK</td>
<td>200 AMP</td>
</tr>
<tr>
<td>LARGE DURHAM</td>
<td>SAME AS MILBANK</td>
<td>200 TO 400 AMP (400 AMP SERVICE REQUIRE TWO, 200 AMP BREAKERS)</td>
</tr>
</tbody>
</table>

**NOTE:**

IF METER PEDESTAL IS A DIFFERENT MANUFACTURE THAN NOTED ABOVE, PLEASE CALL THE ASSOCIATION'S METER DEPARTMENT FOR ADDITIONAL BREAKER INFORMATION.

**NOTES:**

1. DOUBLE-BREAKER KIT FOR 400 AMP SERVICE ON MILBANK PEDESTALS ARE SUPPLIED AND INSTALLED BY ASSOCIATION.

2. IF DOUBLE-BREAKER KIT IS REQUIRED, BOTH BREAKER ASSEMBLIES MUST BE INSTALLED AND CENTERED PRIOR TO TEMP SERVICE.

**TABLE OF RESPONSIBILITY**

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DISTRIBUTION FACILITIES</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>2</td>
<td>CONDUIT SERVICE ENTRANCE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>3</td>
<td>BREAKER(S) IN PEDESTAL</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>4</td>
<td>CONDUCTOR, SERVICE LATERAL</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>5</td>
<td>PANEL CONNECTION</td>
<td>Customer</td>
<td>Customer</td>
<td>Customer</td>
</tr>
<tr>
<td>6</td>
<td>METER PEDESTAL AND CONNECTIONS</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>---</td>
</tr>
</tbody>
</table>
SINGLE-PHASE  
OVERHEAD/UNDERGROUND  
RESIDENTIAL  
(METER PEDESTAL – 400 AMPS OR LESS) 

TABLE OF RESPONSIBILITY 

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SECONDARY</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>2</td>
<td>POLE</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>3</td>
<td>SERVICE CONNECTION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>4</td>
<td>CONDUIT AND CONDUCTOR</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>5</td>
<td>BREAKER(S)</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>6</td>
<td>METER PEDESTAL AND CONNECTIONS</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>7</td>
<td>SERVICE CONDUCTOR</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>
• If the service is overhead to the house, the meter will be located on the house.
• If the service is overhead to the meter pole and then underground to the house, the meter will remain on the meter pole, and the applicant will be required to install the secondary to the house.
CT/PT metering is required for single-phase 400+ amp and three-phase 200+ amp. See Current Transformer – CT and Potential Transformer – PT Metering Section.

NOTES:
1. **ENCLOSED BY LOCKABLE DOORS.**
2. **HINGED DOORS CT'S & PT'S ARE LOCATED BEHIND METER AND TEST SWITCH.**
3. **LOCATED OUTDOORS ONLY.**

UNIT DESIGNATION
CT-4 240V – 1Ø 240 VOLT OVER 400 AMP
CT-4 208V – 3Ø 208 VOLT OVER 200 AMP
CT-4 480V – 3Ø 480 VOLT OVER 200 AMP

STANDARD ADOPTED – 02/01/1997
• Meter housings are not provided by the Association. See Specifications for Meter Housings, Locations, and Installations.

• Only one meter will be issued per structure. Contact the Association Metering Department for detailed information.

Laterals

The Association will install the service lateral at such time that the foundation is in and backfilled to final grade (± 6”), and the location of the meter service has been marked on the foundation. To facilitate the timely installation of the service lateral and eliminate additional costs, please refer to the following procedure.

1. A New Location Request Form for the new permanent service must be requested to initiate an account prior to ordering the lateral, if an account has not yet been established.

2. Notify the Association to schedule the lateral service installation by submitting a Builder/Developer Service Lateral Form to Engineering Services for processing.

3. Mark "E" (with paint) on the foundation wall. Remember the following guidelines when marking the location of the meter socket.

   a. Meters will not be located in any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.

   b. Meters will be located on the front 25% of the house, ahead of any fence, and in a direct line with the Association’s electrical facility designated to serve the house. The meter will be located five feet (5’) above final grade.
4. Post the address and legal description of the property at the curb or in a visible location for locators and construction crews.

5. The Association will install a lateral from the electric power source to the foundation. The wire will be coiled next to the foundation wall.
The electrical service will not be energized. Once the house has been framed and sided, an electrician can then mount the meter socket, install the riser, and terminate the wire (line side and load side) in the meter socket. Note that the wire will be color coded. It is imperative that the electrician leave the color code markings on the wire.

6. Remove all trash and building material from the area where the service lateral will be located.

Upon receipt of written notification, the requested lots will be inspected to verify readiness (site condition and foundation being marked for electric service entrance, etc.). The Association will schedule the installation of the lateral within a period not to exceed two (2) weeks from the release of each lot per the inspection. If the Association’s lateral crew arrives at a site that is not ready, rescheduling the lateral could mean an additional two (2) weeks from that date.

The builder/customer will be responsible for any costs incurred from:

- Cable cuts and any damages caused by the builder or their subcontractor.

- Reinstallation of lateral due to grade changes, meter housing changes, etc.

- Additional materials, i.e., conduit under retaining walls, extended laterals due to location of house, etc.

- Relocation of lateral from original design (other side of house from its source).

**Multiple Meter Installations**

**Multi-family**

On residential multimeter panels, the centerline of the bottom row of meters shall be a minimum of 3 feet (3’) and the top row of meters shall be a maximum of 6 feet (6’) above finished grade or floor. The minimum spacing between socket centers shall be 7-1/2” horizontally and 8-1/2” vertically.

Meter base/socket jumpers shall not be used to serve house meters. House meters shall be served in the following manor:

- A dedicated set of service entrance conductors.
- A tap at the bussing of residential multimeter panels.
- All-in-one factory assembled multimeter panels.
Specifications for Single-Phase 120/240V 3-Wire Meter Housings

- Housings shall be constructed from metal in accordance with the latest revision of Underwriters’ Laboratories (UL) Standard No. 414 for meter sockets.

- Each socket on line-side compartment shall be equipped so proper sealing of the socket can be maintained by padlock.

- After installation and sealing are completed, the socket shall not have any openings except as permitted by NEMA Type 3R construction.

- All meter housings shall be UL listed and labeled, and they shall be installed and used in accordance with their labeling.

- Meter housing installations shall be installed per National Electric Code (NEC) procedures and shall be enforced by the local inspection authority.

- Meter housing shall be located five feet (5’) above finished grade.

- Maximum amp size to be metered by a self-contained 1Ø meter will not exceed 400 amps. All single-phase services in excess of 200 amps, which require a class 320 meter, must have a lever bypass meter housing unless preapproved by the Association.

Additional approval will be given to meter/load center combinations as well as multiple combinations, which meet all other provisions for residential/1Ø meter housings.

It is understood that Association approval does not mean approval in any area where there may be a conflict with any national or local code, and the local inspecting body will need to approve and will have the final authority.

It is also understood that in case of a disaster, the Association will not have spare parts and will not be responsible for the repair.

Questions can be answered by the Association Meter Department.
Additional Requirements for 1Ø Underground Feed Residential Meter Housings

- Minimum size permitted must be 200 amp capable of terminating 4/0 aluminum wire.

- Meter will be located on the front 25% of the house, ahead of fence, and in a direct line with the Association's electric facility designated to serve that location.

Additional Requirements for 120/208V 1Ø Hookups

- Fifth (5th) terminal is required and will be allowed in the 9 o'clock position only and must be bonded within the housing. Typically used for 1Ø service fed by 3Ø transformer, 120/208 voltage.
Fault Current Levels and Standard KVA Size Transformers

The most commonly used transformers installed by the Association are shown in the tables below. Tables also show the maximum available short-circuit current at the transformer’s secondary connection point.

### Maximum short circuit current in amps for single-phase pole mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>240 V Windings Min. % Z</th>
<th>240 V Windings Fault Current</th>
<th>120 V Winding Min. % Z</th>
<th>120 V Winding Fault Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/240</td>
<td>10</td>
<td>1.5</td>
<td>2778</td>
<td>1.5</td>
<td>5556</td>
</tr>
<tr>
<td>120/240</td>
<td>15</td>
<td>1.5</td>
<td>4167</td>
<td>1.5</td>
<td>8333</td>
</tr>
<tr>
<td>120/240</td>
<td>25</td>
<td>1.5</td>
<td>6944</td>
<td>1.5</td>
<td>13889</td>
</tr>
<tr>
<td>120/240</td>
<td>37.5</td>
<td>1.5</td>
<td>10417</td>
<td>1.5</td>
<td>20833</td>
</tr>
<tr>
<td>120/240</td>
<td>50</td>
<td>1.5</td>
<td>13889</td>
<td>1.5</td>
<td>27778</td>
</tr>
<tr>
<td>120/240</td>
<td>75</td>
<td>1.5</td>
<td>20833</td>
<td>1.5</td>
<td>41667</td>
</tr>
</tbody>
</table>

### Maximum short circuit current in amps for single-phase pad mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>240 V Windings Min. % Z</th>
<th>240 V Windings Fault Current</th>
<th>120 V Winding Min. % Z</th>
<th>120 V Winding Fault Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/240</td>
<td>25</td>
<td>1.5</td>
<td>6944</td>
<td>1.5</td>
<td>13889</td>
</tr>
<tr>
<td>120/240</td>
<td>37.5</td>
<td>1.5</td>
<td>10417</td>
<td>1.5</td>
<td>20833</td>
</tr>
<tr>
<td>120/240</td>
<td>50</td>
<td>1.5</td>
<td>13889</td>
<td>1.5</td>
<td>27778</td>
</tr>
<tr>
<td>120/240</td>
<td>75</td>
<td>1.5</td>
<td>20833</td>
<td>1.5</td>
<td>41667</td>
</tr>
<tr>
<td>120/240</td>
<td>100</td>
<td>1.5</td>
<td>27778</td>
<td>1.5</td>
<td>55556</td>
</tr>
<tr>
<td>120/240</td>
<td>167.5</td>
<td>1.5</td>
<td>46528</td>
<td>1.5</td>
<td>93056</td>
</tr>
</tbody>
</table>
COMMERCIAL/INDUSTRIAL POWER SERVICES

Street Lighting

- The Association offers to provide street lighting on public streets. It shall be the responsibility of the developer to provide lighting in private parking lots.

Joint-Trench

- Subdivisions with underground electrical service frequently have telephone and cable television facilities in the same trench with electrical distribution. The builder/developer may contact the Association Engineering Department for information required to coordinate joint trenching of facilities.

- If construction is assigned to the Association’s contractor, any contracts or agreements regarding joint-trench will be made with that contractor, not the Association. Joint-trench facilities are normally used for distribution lines but can include secondary (house) laterals as well.

- Gas and water lines cannot be included in the electrical trench. All utilities requesting joint-trench use must be designed and ready to install at the time the Association’s facilities are scheduled for construction.

Meter Sets

- The builder/customer must apply for new service. A New Location Request Form will be mailed, faxed or emailed to the builder/customer. This form needs to be completed and returned to Engineering Services via fax (720-733-5764) or email (engineeringservices@irea.coop).

- If the meter is to be used strictly for temporary construction purposes only and then to be removed from the site, the builder/customer should indicate “temp only” on this form.

- Upon receipt of this completed document, an account will be created and a Membership Application/Electrical Service Agreement per each location requested will be mailed accordingly.

- The Association will issue a service order to set the meter upon receipt of the inspection from the State, County, City/Town inspector, or other documentation authorized by the Association.

- Please allow three to five business days for the meter set to be completed.
• A deposit in the amount of an estimated 90-day bill may be required. Such deposit may be in addition to any advance, contribution, or guarantee provided for in the extension regulations.

**Meter Locations**

• An electric meter will not be located in any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.

• A distance of four feet (4’) clearance must be maintained in front of the meter.

• The meter shall be located five feet (5’) at center of glass, above ground level.
SINGLE-PHASE / THREE-PHASE
UNDERGROUND COMMERCIAL
(200 AMPS OR LESS)

![Diagram of underground electrical system]

### TABLE OF RESPONSIBILITY

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DISTRIBUTION FACILITIES (TRANS. OR PED.)</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>2</td>
<td>CONNECTION, SOURCE</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>CONDUCTOR, SERVICE LATERAL</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>4</td>
<td>CONDUIT, HORIZONTAL, AND RELATED MATERIAL</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>5</td>
<td>CONDUIT SERVICE ENTRANCE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>6</td>
<td>METER HOUSING LEVER BYPASS ON SAFETY - SEALED</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>7</td>
<td>CONNECTION, METERING HOUSING</td>
<td>---</td>
<td>CUSTOMER</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>DISCONNECT - MAGNETIC OR FUSED</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>

SPECIAL NOTE: KEY NO. 2 - CONNECTORS ARE FURNISHED AND INSTALLED BY ASSOCIATION.

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SP-3P-C

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• If the service is underground to a meter pedestal, the meter is located within the meter pedestal, and the applicant will be required to install the secondary lateral to the building load.

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**meter pedestal**

**Underground Commercial Single-Phase Service (400 Amps or Less)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Breaker Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milbank</td>
<td>General Electric – TDO200</td>
<td>200 Amp Service</td>
</tr>
<tr>
<td></td>
<td>Cutler Hammer/Westinghouse – CA200</td>
<td>400 Amp Service requires double-breaker kit to be installed by association personnel</td>
</tr>
<tr>
<td>Small Durham</td>
<td>General Electric – Q Line, ITE, OP, of Westinghouse/Bryant – P, 30, 80, or Crouse-Hinds – MP, WH</td>
<td>60 to 125 Amp</td>
</tr>
<tr>
<td>Standard Durham</td>
<td>Same as Milbank</td>
<td>200 Amp</td>
</tr>
<tr>
<td>Large Durham</td>
<td>Same as Milbank</td>
<td>200 to 400 Amp (400 Amp services require two, 200 Amp breakers)</td>
</tr>
</tbody>
</table>

**Note:**
If meter pedestal is a different manufacture than noted above, please call the association's meter department for additional breaker information.

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1. Double-breaker kit for 400 Amp service on Milbank pedestals are supplied and installed by association.

2. If double-breaker kit is required, both breaker assemblies must be installed and centered prior to temp service.

**Table of Responsibility**

<table>
<thead>
<tr>
<th>Key No.</th>
<th>Material or Work Description</th>
<th>Material</th>
<th>Installation</th>
<th>Ownership and Maintenance</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Distribution Facilities</td>
<td>Association</td>
<td>Association</td>
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<tr>
<td>2</td>
<td>Breaker(s) in Pedestal</td>
<td>Customer</td>
<td>Customer</td>
<td>Customer</td>
</tr>
<tr>
<td>3</td>
<td>Conductor, service lateral</td>
<td>Customer</td>
<td>Customer</td>
<td>Customer</td>
</tr>
<tr>
<td>4</td>
<td>Meter Pedestal, and connections</td>
<td>Association</td>
<td>Association</td>
<td>Association</td>
</tr>
<tr>
<td>5</td>
<td>Secondary Wire</td>
<td>Association</td>
<td>Association</td>
<td>Association</td>
</tr>
</tbody>
</table>
SINGLE-PHASE
OVERHEAD/UNDERGROUND
COMMERCIAL
(METER PEDESTAL – 400 AMPS OR LESS)

TABLE OF RESPONSIBILITY

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SECONDARY</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
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<td>2</td>
<td>POLE</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>3</td>
<td>SERVICE CONNECTION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>4</td>
<td>CONDUIT AND CONDUCTOR</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>5</td>
<td>BREAKER(S)</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>6</td>
<td>METER PEDESTAL AND CONNECTIONS</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>7</td>
<td>SERVICE CONDUCTOR</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>
• If the service is overhead to the building, the meter will be located on the building.
• If the service is overhead to the meter pole and then underground to the building, the meter will remain on the meter pole, and the applicant will be required to install the secondary to the building.

**SINGLE-PHASE OVERHEAD – METER POLE**

**COMMERCIAL OR INDUSTRIAL**

(400 AMPS OR LESS)

**NOTES:**
1. THIS LOOP CANNOT BE INSTALLED ON A PRIMARY POLE.
2. MAGNETIC CIRCUIT BRIDGE TAPS OR PLASTIC DISCONNECTS REQUIRED FOR ALL SINGLE-PHASE SERVICES. FUSED DISCONNECTS ARE ALLOWED.
3. ALL METER LOOP CONDUITS ARE REQUIRED TO BE METAL.
4. THE ASSOCIATION RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE SERVICE INSTALLATION.
5. PLEASE CHECK WITH YOUR LOCAL INSPECTOR FOR NATIONAL, STATE, OR LOCAL CODE REQUIREMENTS. THIS INFORMATION WILL NOT BE PROVIDED BY ASSOCIATION.
6. ANYONE MAKING UNAUTHORIZED METER BYPASSES WILL BE PROSECUTED.
7. ALL CONNECTIONS TO ASSOCIATION SERVICE MUST BE MADE BY ASSOCIATION PERSONNEL ONLY.

**TABLE OF RESPONSIBILITY**

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>MATERIAL OR WORK DESCRIPTION</th>
<th>MATERIAL</th>
<th>INSTALLATION</th>
<th>OWNERSHIP AND MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POLE &amp; GROUND ROO</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
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</tr>
<tr>
<td>2</td>
<td>PIPING &amp; CONNECTION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>3</td>
<td>CONDUIT &amp; TERMINAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CONDUIT &amp; TERMINAL TO SERVICE ENTRANCE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>5</td>
<td>METER HOUSING WITH LEVER BYPASS</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>6</td>
<td>CONNECTION, METER HOUSING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>CONDUIT &amp; TERMINAL TO SERVICE ENTRANCE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
<tr>
<td>8</td>
<td>WEATHERPROOF MAIN DISCONNECT DEVICE</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>

8024-0
• CT/PT metering is required for single-phase 400+ amp and three-phase 200+ amp. See Current Transformer – CT and Potential Transformer – PT Metering.

**EUSERC SINGLE METER**
**(ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENT COMMITTEE)**

**NOTES:**

1. ENCLOSED BY LOCKABLE DOORS.

2. HINGED DOORS CTS & PTS ARE LOCATED BEHIND METER AND TEST SWITCH.

3. LOCATED OUTDOORS ONLY.

4. ENCLOSURE: NEMA TYPE 3R.

   3Ø 13 TERMINALS/8 TERMINALS 1Ø

   * HOT SEQUENCE

   TO ASSOCIATION TRANSFORMER

**UNIT DESIGNATION**

CT-4 240V – 1Ø 240 VOLT OVER 400 AMP
CT-4 208V – 3Ø 208 VOLT OVER 200 AMP
CT-4 480V – 3Ø 480 VOLT OVER 200 AMP

STANDARD ADOPTED – 02/01/1997
• Meter housings are not provided by the Association. See Specifications for Meter Housings, Locations, and Installations.

• Only one meter will be issued per business. Strip malls and warehouses with multiple suites, units, or businesses will be allowed to have a commercial multi-metering configuration with one meter per business. Contact the Association Metering Department for detailed information.

**Multiple Meter Installations**

**Nonresidential**

On nonresidential multiple meter panels, the centerline of meters shall be a minimum of 3 feet (3’) and a maximum of 6 feet (6’) above finished grade or floor. The minimum spacing between socket centers shall be 12” horizontally and 12” vertically.

Meters shall be protected from mechanical damage. Factory-built multiple meter equipment shall be approved by the Association Meter Department.
COMMERCIAL MULTI-METERING
FOR EUSERC APPLICATIONS

UL LISTED SERVICE ENTRANCE

SERVICE:
120/240V 103W AC
240/120V 30KW AC Δ
208Y/120 30KW AC
480Y/277V 30KW AC

AMPERAGE 400–4000A

SCCR 100,000A RMS SYMMETRICAL

BUSING:
ALUMINUM (STANDARD)
COPPER (OPTIONAL)

ENCLOSURE:
NEMA TYPE 3R

HOT SEQUENCE METERING: EXCEPTION
6 HANDLE RULE

MAINS:
UNDERGROUND PULL SECTION 400–4000A
CIRCUIT BREAKER 400–4000A
FUSEABLE SWITCH 400–4000A

LARGE TENANT MAINS:
400–1200A CT COMPARTMENT
CIRCUIT BREAKER, FUSEABLE, OR MULTIPLE MAIN

METER SECTIONS:
3-SOCKET OR 6-SOCKET
CIRCUIT BREAKER OR FUSEABLE

METER SOCKETS:
200A CONTINUOUS (5-JAW OR 7-JAW)
PLUG-ON CONSTRUCTION

BRASS TAGS ATTACHED TO NON-MOVABLE
BODY OF HOUSINGS.

4 panels–C
Cable Limits for Three-Phase Pad-Mounted Transformers

Twelve (12) runs is the maximum number of secondary conductors allowed for transformer sizes 45KVA to 3000KVA.

Voltages

The Association offers their customers the voltages shown in the table below.

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-phase</td>
<td>120/240V, 3-wire*</td>
</tr>
<tr>
<td>Three-phase</td>
<td>120/208V, 4-wire</td>
</tr>
<tr>
<td></td>
<td>277/480V, 4-wire</td>
</tr>
</tbody>
</table>

*Available for loads to a maximum demand of 100kW. Larger loads may be served, if determined feasible by an Association engineer. All motors must be rated 10 HP or less.
## Fault Current Levels and Standard KVA Size Transformers

The most commonly used transformers installed by the Association are shown in the tables below. Tables also show the maximum available short-circuit current at the transformer’s secondary connection point.

### Maximum short circuit current in amps for single-phase pole mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>240 V Windings</th>
<th>120 V Winding</th>
<th>240 V Windings</th>
<th>120 V Winding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min. % Z</td>
<td>Fault Current</td>
<td>Min. % Z</td>
<td>Fault Current</td>
</tr>
<tr>
<td>120/240</td>
<td>10</td>
<td>1.5</td>
<td>2778</td>
<td>1.5</td>
<td>5556</td>
</tr>
<tr>
<td>120/240</td>
<td>15</td>
<td>1.5</td>
<td>4167</td>
<td>1.5</td>
<td>8333</td>
</tr>
<tr>
<td>120/240</td>
<td>25</td>
<td>1.5</td>
<td>6944</td>
<td>1.5</td>
<td>13889</td>
</tr>
<tr>
<td>120/240</td>
<td>37.5</td>
<td>1.5</td>
<td>10417</td>
<td>1.5</td>
<td>20833</td>
</tr>
<tr>
<td>120/240</td>
<td>50</td>
<td>1.5</td>
<td>13889</td>
<td>1.5</td>
<td>27778</td>
</tr>
<tr>
<td>120/240</td>
<td>75</td>
<td>1.5</td>
<td>20833</td>
<td>1.5</td>
<td>41667</td>
</tr>
</tbody>
</table>

### Maximum short circuit current in amps for single-phase pad mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>240 V Windings</th>
<th>120 V Winding</th>
<th>240 V Windings</th>
<th>120 V Winding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min. % Z</td>
<td>Fault Current</td>
<td>Min. % Z</td>
<td>Fault Current</td>
</tr>
<tr>
<td>120/240</td>
<td>25</td>
<td>1.5</td>
<td>6944</td>
<td>1.5</td>
<td>13889</td>
</tr>
<tr>
<td>120/240</td>
<td>50</td>
<td>1.5</td>
<td>10417</td>
<td>1.5</td>
<td>20833</td>
</tr>
<tr>
<td>120/240</td>
<td>75</td>
<td>1.5</td>
<td>13889</td>
<td>1.5</td>
<td>27778</td>
</tr>
<tr>
<td>120/240</td>
<td>100</td>
<td>1.5</td>
<td>27778</td>
<td>1.5</td>
<td>55556</td>
</tr>
<tr>
<td>120/240</td>
<td>167.5</td>
<td>1.5</td>
<td>46528</td>
<td>1.5</td>
<td>93056</td>
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</table>

### Maximum short circuit current in amps for Three-single phase pole mounted transformer bank

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>208 V Winding</th>
<th>120 V Winding</th>
<th>208 V Winding</th>
<th>120 V Winding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min. % Z</td>
<td>Fault Current</td>
<td>Min. % Z</td>
<td>Fault Current</td>
</tr>
<tr>
<td>120/208</td>
<td>10</td>
<td>1.5</td>
<td>1850</td>
<td>1.5</td>
<td>3208</td>
</tr>
<tr>
<td>120/208</td>
<td>15</td>
<td>1.5</td>
<td>2776</td>
<td>1.5</td>
<td>4811</td>
</tr>
<tr>
<td>120/208</td>
<td>25</td>
<td>1.5</td>
<td>4626</td>
<td>1.5</td>
<td>8019</td>
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<tr>
<td>120/208</td>
<td>37.5</td>
<td>1.5</td>
<td>6939</td>
<td>1.5</td>
<td>12028</td>
</tr>
<tr>
<td>120/208</td>
<td>50</td>
<td>1.5</td>
<td>9252</td>
<td>1.5</td>
<td>16038</td>
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</table>

### Maximum short circuit current in amps for Three-phase pad mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>3 Phase L-G</th>
<th>Min. % Z</th>
<th>Fault Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/208</td>
<td>75</td>
<td>1.5</td>
<td>13879</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>112.5</td>
<td>1.5</td>
<td>20725</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>150</td>
<td>1.5</td>
<td>27757</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>225</td>
<td>1.5</td>
<td>41636</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>300</td>
<td>1.5</td>
<td>55514</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>500</td>
<td>1.5</td>
<td>92524</td>
<td></td>
</tr>
<tr>
<td>120/208</td>
<td>750</td>
<td>2.5</td>
<td>83272</td>
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</tr>
<tr>
<td>120/208</td>
<td>1000</td>
<td>5.0</td>
<td>55514</td>
<td></td>
</tr>
</tbody>
</table>

### Maximum short circuit current in amps for Four-phase pad mounted transformers

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>480 V Winding</th>
<th>277 V Winding</th>
<th>480 V Winding</th>
<th>277 V Winding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min. % Z</td>
<td>Fault Current</td>
<td>Min. % Z</td>
<td>Fault Current</td>
</tr>
<tr>
<td>277/480</td>
<td>10</td>
<td>1.5</td>
<td>802</td>
<td>1.5</td>
<td>1390</td>
</tr>
<tr>
<td>277/480</td>
<td>15</td>
<td>1.5</td>
<td>1203</td>
<td>1.5</td>
<td>2084</td>
</tr>
<tr>
<td>277/480</td>
<td>25</td>
<td>1.5</td>
<td>2005</td>
<td>1.5</td>
<td>3474</td>
</tr>
<tr>
<td>277/480</td>
<td>37.5</td>
<td>1.5</td>
<td>3007</td>
<td>1.5</td>
<td>5211</td>
</tr>
<tr>
<td>277/480</td>
<td>50</td>
<td>1.5</td>
<td>4009</td>
<td>1.5</td>
<td>6948</td>
</tr>
</tbody>
</table>

### Maximum short circuit current in amps for Three-phase L-G

<table>
<thead>
<tr>
<th>Secondary Voltage</th>
<th>KVA</th>
<th>3 Phase L-G</th>
<th>Min. % Z</th>
<th>Fault Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>277/480</td>
<td>75</td>
<td>1.5</td>
<td>6014</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>112.5</td>
<td>1.5</td>
<td>8981</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>150</td>
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<td>12028</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>225</td>
<td>1.5</td>
<td>18042</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>300</td>
<td>1.5</td>
<td>24056</td>
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</tr>
<tr>
<td>277/480</td>
<td>500</td>
<td>1.5</td>
<td>40094</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>750</td>
<td>2.5</td>
<td>36084</td>
<td></td>
</tr>
<tr>
<td>277/480</td>
<td>1000</td>
<td>4.0</td>
<td>30070</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>277/480</td>
<td>3000</td>
<td>5.0</td>
<td>72169</td>
<td></td>
</tr>
</tbody>
</table>
Specifications for Single & Three-Phase 120/240V 1Ø, 3-Wire; 120/208V, 3Ø, and 277/480V 3Ø 4-Wire Self-Contained Meter Housings

- Housings shall be constructed from metal in accordance with the latest revision of Underwriters’ Laboratories (UL) Standard No. 414 for meter sockets.

- Each socket on line-side compartment shall be equipped so proper sealing of the socket can be maintained by padlock.

- After installation and sealing are completed, the socket shall not have any openings except as permitted by NEMA Type 3R construction.

- All meter housings shall be UL listed and labeled, and they shall be installed and used in accordance with their labeling.

- Meter housing installations shall be installed per National Electric Code (NEC) procedures and shall be enforced by the local inspection authority.

- Center of glass on meter housing shall be located five feet (5') above finished grade.

- All commercial applications will have a meter socket with a heavy-duty locking jaw with lever-type bypass or meet the EUSERC Standards for commercial metering with safety sockets.

- All sockets will be permanently labeled with an etched metal tag or permanent tag approved by the Association Meter Department personnel noting the service location that it feeds, on the body of housing; not on removal panel.

- Maximum amp size to be metered by a self-contained 3Ø meter will not exceed 200 amps.

- All 3Ø polyphase sockets will have a seven-terminal mounting block with a heavy duty 200-amp locking jaw with lever-type bypass or meet the EUSERC Standards for commercial metering with safety sockets.

- All 3Ø consumers will provide their own single-phase protection.

- All 1Ø meter housing will require lever-type-bypass.
• Maximum amp size to be metered by a self-contained 1Ø meter will not exceed 400 amps. All single-phase services in excess of 200 amps will require a class 320 meter housing with a lever-bypass, unless preapproved by the Association.

Additional approval will be given to meter/load center combinations as well as multiple combinations, which meet all other provisions for commercial/3Ø meter housings.

It is understood that the Association's approval does not mean approval in any area where there may be a conflict with any national or local code, and the local inspecting body will need to approve and will have the final authority.

It is also understood that in case of a disaster, the Association will not have spare parts and will not be responsible for the repair.

Questions can be answered by the Association Meter Department.
Specifications for Meter Location and Installation

Subject to Association Meter Department personnel approval, the customer shall provide and maintain, without cost to the Association, an easily accessible meter location on or within the premises to be supplied service. All locations must comply with Association rules and regulations.

Where meters, originally installed in accessible locations satisfactory to the Association, are rendered inaccessible by virtue of alterations or new construction by the owner of the premises or his agents, such meters shall be reinstalled at a point designated by the Association at the expense of the property owner.

The location of meters and metering equipment shall be designated by the Association Meter Department personnel. No wiring dependent upon the meter location should be started until such location has been definitely established.

Meters

- Meters shall be installed outdoors in accordance with rules governing outdoor meter installations. Meters and EUSERC cabinets are to be installed outside the building either free standing (EUSERC cabinet) or against an exterior wall (EUSERC cabinet or meter) allowing unobstructed access by the Association’s personnel.

- A minimum of four feet (4’) unobstructed working space in front of the cabinet is also required.

- The cabinet or meter may NOT be installed in an interior room, courtyard, or any other structure that could possibly have a lockable entry way.

- If the EUSERC cabinet, metering, and main disconnect are not installed in a proper location and manner, the Association will refuse service. Major changes may be required at the customer’s cost and delay the service connection.

- Meter mounting and associated equipment shall be mounted securely and plumb. Where attachment is made to masonry, concrete, or plaster walls, expansion bolts, plugs, or anchors shall be used.

- Meter mountings shall not be placed in a location where meter reading or servicing may become impracticable or may cause damage to any part of the customer’s premises.
• Meter housing must be located within 30” of load side disconnect.

**Line-side Conductors**

• The line-side conductors in meter mounting devices shall be required to be separated from the load-side conductors by means of permanent barrier.

• Access to the line-side conductors shall be sealable.

• No conductors other than line-side conductors shall be permitted in line-side conduits, troughs, or lug landings.

• All line-side (unmetered) conductors must be in a continuous length of conduit from the point of delivery to the meter mounting device.

• The use of line-side (ahead of the meter) disconnects or other open devices are not permitted with exception to 277/480V self-contained commercial accounts and/or multiple-meter stacks.

• Association Meter Department personnel must approve the location of any ahead-of-the-meter devices.

• An approved location will be limited to installation in secured switch gear or on the same surface wall directly ahead and within 24” of the meter.

Meter location, point of delivery, and service disconnect will be determined by the Association in accordance with standard practices, including the National Electrical Code, and will be accessible to the Association’s service personnel at all times.

**Three-Phase Services: 120/240V, Four-Wire Delta**

*(Restricted – available only for existing services)*

In addition to the requirements for all three-phase services, the high-leg (power leg) shall be connected through the right-hand terminals of the socket.
Three-Phase Self-Contained Services: 277/480V

An accessible meter disconnect (fused disconnect preferred) after each meter base/socket and a safety socket with a manual bypass are required.

SINGLE-PHASE (NONRESIDENTIAL ONLY) AND ALL THREE-PHASE METER BASE-SOCKET TYPES

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Wires</th>
<th>Service Capacity Amp</th>
<th>No. of Terminals</th>
<th>Meter Socket Config.*</th>
<th>Manual Block Bypass Required?</th>
<th>Accessible Disconnect Ahead &amp; Safety Socket Required?</th>
<th>Socket</th>
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<td>Up to 200</td>
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<td>A</td>
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ALL THREE-PHASE

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<th>Service Capacity Amp</th>
<th>No. of Terminals</th>
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<tr>
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<td>7</td>
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<tr>
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<td>13</td>
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<tr>
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* METER BASE/SOCKET CONFIGURATIONS

![METER SOCKET CONFIGURATIONS]

A  2S
B  8 TERMINAL
C  2S NETWORK
D  1S
E  13 TERMINAL
Three-Phase Services, Above 200 Amps

All three-phase services above 200 amps will require EUSERC specification switchgear, which will include a pull section, metering section and disconnect section. NEMA 3R rated enclosures will be on all sections with double hasp provided for joint access to applicable sections. (See Drawings 325, 354 of EUSERC information). Any 277/480 volt service will have an additional width to accommodate the placement of Potential Transformers attached to a removable PT pan. (See Drawing 326 of EUSERC information & Instrument-Transformer Compartment Drawings) All EUSERC systems will be hot sequenced per drawing on page 48.

Manufacturer Drawings Required for Services Over 200 Amps

Manufacturer drawings shall be submitted to the Association for approval for all switchboard metering prior to shipment from manufacturer.

120/208 VOLTS
ALL DIMENSIONS SHOWN ARE IN INCHES

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<td>ADDED MAXIMUM DIMENSIONS FOR FLANGES</td>
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<td>STANDARD SWITCHBOARD SERVICE SECTION WITH INSTRUMENT–TRANSFORMER COMPARTMENT</td>
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<td></td>
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ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE
NOTES:

1. Socket meter panel with blank meter panel shown. Consult serving utility regarding alternate meter panel arrangements. Blank meter panel shall be constructed of 12 gauge (minimum) steel. See Drawings 332, 333 and 336 for socket meter panel details.

2. Meter panels shall be equipped with stops to prevent inward swinging beyond the front surface of the service section.

3. Hinges shall be readily interchangeable, left or right, on the job site.

4. Removable or hinged panels enclosing unmetered bus or cable shall be sealable. See drawing 300, note II(f).

5. For requirements regarding instrument—transformer compartments, see:
   - 0 to 1000 Amperes See Drawings 319, 320
   - 1001 to 3000 Amperes See Drawings 321, 322
   - 3001 Amperes and above See Drawings 323, 324

6. Dimension may be reduced if the service section is supplied from horizontal cross-bussing or bus duct.

7. When used as a utility terminating section in a bottom-fed service section. See Drawing 327.

8. For outdoor applications, See Drawing 354 for weatherproof enclosure requirements.
1. Hinged meter panel shall be capable of being opened 90-degrees with meter and test facilities in place, and provide the following clearances to any obstruction – 11 inches at the meter socket and 4 inches at the test-switch slotted opening. See Drawing 332 and 333 for hinged meter panels construction details.

2. Meter panels, either socket or blank, shall not be hinged to a hinged filler panel. Non-hinged filler panels shall not extend into the required instrument—transformer compartment access opening.

3. Enclosure doors providing access to utility compartments (i.e., metering sections and pull sections) shall be:
   a. Equipped with a device to secure the doors in the open position at 90-degrees or more.
   b. Secured in the closed position with a single, handle-operated, latching system. When provided with a locking means, each door, or set of doors, shall be equipped with an approved double-locking device, accepting padlocks with a 5/16 inch lock shaft, to allow access by both the serving utility and the customer.

4. Dimension may be reduced if the service section is supplied from horizontal cross-bussing or bus duct.

ALL DIMENSIONS SHOWN ARE IN INCHES

<table>
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OUTDOOR OR RAIN TIGHT ENCLOSURES FOR SWITCHBOARDS

0–600 VOLTS

SHT 1 OF 1

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DWG NO. 354 REV. 1
277/480 VOLTS

ALL DIMENSIONS SHOWN ARE IN INCHES

REV. | DATE | DESCRIPTION
---|---|---
6  | 11/09 | ADDED MAXIMUM DIMENSIONS FOR FLANGES

SCALE
N.T.S.

DATE
05/00

STANDARD SWITCHBOARD SERVICE SECTION WITH INSTRUMENT-TRANSFORMER COMPARTMENT AND FILLER PANEL, 0-600 VOLTS

ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE

SHT 1 OF 2

DWG NO. 326

REV. 6
NOTES:

1. Socket meter panel with blank meter panel shown. Consult serving utility regarding alternate meter panel arrangements. Blank meter panel shall be constructed of 12 gauge (minimum) steel. See Drawings 332, 333 and 336 for socket meter panel details.

2. Filler panels shall be used where the service section width exceeds the meter panel width. Meter panels, either socket or blank, shall not be hinged to hinged filler panels. Non-hinged filler panels shall not extend into the required instrument—transformer compartment access opening.

3. Meter panels and filler panels shall be equipped with stops to prevent inward swinging beyond the front surface of the service section.

4. Hinges shall be readily interchangeable, left or right, on the job site.

5. Removable or hinged panels enclosing unmetered bus or cable shall be sealable. See drawing 300, note (k).

6. For requirements regarding instrument—transformer compartments, see:

- 0 to 1000 Amperes See Drawings 319, 320
- 1001 to 3000 Amperes See Drawings 321, 322
- 3001 Amperes and above See Drawings 323, 324

7. Dimension may be reduced if the service section is supplied from horizontal cross—bussing or bus duct.

8. When used as a utility terminating section in a bottom—fed service section, See Drawing 327.

9. For outdoor applications, See Drawing 354 for weatherproof enclosure requirements.

REV. DATE DESCRIPTION
6 11/09 ADDED MAXIMUM DIMENSIONS FOR FLANGES

SCALE N.T.S. STANDAR DSWITCHBOARD SERVICE SECTION WITH INSTRUMENT—TRANSFORMER COMPARTMENT AND FILLER PANEL, 0—600 VOLS SHT 2 OF 2
DATE 05/00 ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE DWG NO. REV. 326 6
Current Transformer (CT) and Potential Transformer (PT) Metering

Current and potential transformers provide the intelligence for measuring or metering power flows, such as large amperes flowing in a high-voltage circuit. More specifically, the Association will use CT's and PT's on services as listed below:

**CT –**
- 120/208V, three-phase larger than 200-Amp service entrance
- 120/240V, single-phase larger than 400-Amp service entrance

**CT/PT –**
- 277/480V, three-phase larger than 200-Amp service entrance

If you are requiring this type of service, please contact the Association Metering Department for installation procedures, guidelines, and equipment specifications.

**CT/PT Requirements:**

- CT/PT cabinets must be furnished and installed by the customer. Located outside in accordance with the Association’s policies, and meet EUSERC Standards.

- Metering connections are performed by the Association’s personnel.

- Association will install a lock on CT/PT cabinet. Customer shall supply a double lock hasp for joint access.

- CTs/PTs are supplied by the Association (prepaid by customer) and installed by the customer’s electrician.

- Construction must follow national, state or local code requirements.

- Polarity of CTs/PTs toward source.

- All existing services that are changed or upgraded because of increased loads, transformer size, wire size, or reconstruction will adhere to the EUSERC Standards.
TYPICAL TRANSFORMER PAD AND WIRE OPENINGS

NOTES
1. 1φ PAD IS A FIBERGLASS BOX PAD FOR COMMERCIAL APPLICATION.
Notes:
Zone 1 (Shaded Area) = Minimum distance for pad-mounted transformer from a non-combustible building.
Zone 2 = Minimum distance for pad-mounted transformers from a combustible building.
Air intake clearance must be a minimum of 25 feet diagonal from transformer (not shown) additional clearances on page 67.
MINIMUM DISTANCES FOR PAD-MOUNT TRANSFORMERS

NOTE: THE MINIMUM SEPARATION DISTANCES SHOWN MAY NOT MEET INSURANCE PROPERTY LOSS PREVENTION REQUIREMENTS. BUILDER/DEVELOPER IS RESPONSIBLE FOR CONFIRMING THESE MINIMUM SEPARATION DISTANCES AND INFORMING IREA ENGINEERING PRIOR TO CONSTRUCTION IF ADDITIONAL CLEARANCES ARE NEEDED.
**GLOSSARY**

*Approved* - Acceptable to the authority having jurisdiction.

*Association* – Intermountain Rural Electric Association

*Backfill* - Native soil or soil brought in from another area, free from sharp objects, rocks, scrap building material, and corrosive material.

*City/Town, County or State Inspector* - The qualified representative of a city/town, county or the State of Colorado, who has been authorized by governmental agencies to inspect electrical service installations on their behalf.

*Clearance* - A set distance between two objects.

*Cold Sequence Metering* – The customer’s circuit breakers are located upstream from the meter. (Turning off the circuit breakers does de-energize the meter.)

*Conduit* - A listed or approved wireway with a smooth interior surface to permit easy drawing-in of the electrical conductors. A conduit may be metallic or nonmetallic, depending on its usage, in accordance with codes and the Association’s Standards.

*Customer* – Any person or company applying for, receiving, using, or agreeing to take electric service or other services supplied by IREA.

*Demand* - The maximum average kilowatt load used by the customer for a specific period of time during the billing period.

*Direct Burial* - The installation of electrical conductors in a trench, without the use of conduit.

*Enclosure* - A sealable cabinet designed for surface or flush mounting, and provided with a frame or trim in which doors or removable covers are hung.

*EUSERC* – Electric Utility Service Equipment Requirements Committee

*Fault Current* – Is the current that flows during a fault condition.

*Hot Sequence Metering* – The customer’s circuit breakers are located downstream from the meter. (Turning off the circuit breakers does not de-energize the meter.)

*Lever Bypass* - A provision for paralleling the meter circuit, allowing the meter to be removed without interrupting service to the customer.

*Meter Loop* - Any provision in which an electrical meter may be installed. Does not include the service disconnect device.

*Meter Pole* - A pole which supports the metering equipment owned and maintained by the customer.
**Meter Base/Socket** - The mounting device consisting of meter jaws, connectors, and enclosure for accommodating socket-type meters. The mounting device may be either a single socket or a trough to accommodate more than one mounting unit.

**Metering Equipment** - Any equipment associated with measuring electric energy.

**NEC** - National Electrical Code

**NESC** - National Electrical Safety Code

**Neutral** - The grounded conductor in a single-phase, three-wire or three-phase, four-wire system. The service conductor that is at zero potential to ground.

**Point of Attachment (Point of Service)** - The point at which the Association’s service conductors are attached to the customer’s premises by an approved insulated clevis.

**Point of Delivery** - The connection point of the meter base, on the customer’s premises, where the Association’s circuit and the customer’s system are interconnected.

**Seal** - The locking device used to secure meter and/or service entrance equipment to assure safety and security for the unit.

**Secondary Voltage** - The lower voltage, after transformation, used to supply the customer with electrical energy. Normally less than 600 V.

**Self-Contained** - In reference to meter sockets: a device designed and rated to continuously carry the entire capacity of the service entrance equipment through the meter.

**Service Entrance Conductors** - Those conductors which extend between the customer’s load center and point of delivery.

**Service Entrance Equipment** - Service conduit, conductors, weatherhead, meter base, enclosures, service disconnect, and load center.

**Service Mast** - The conduit above the meter used to provide mechanical protection for the service conductors and to support the service drop from the Association’s system.

**Short Current** – Current flow when there is short circuit in the system and will represent the highest possible fault current that the system can experience.

**Temporary Service** - An electrical service connection installed by the Association to provide power to a customer for a limited time (up to 18 months).

**UL** - (Underwriters Laboratories) A nationally-recognized test laboratory which lists materials it has tested and accepted.
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