

### General Requirements for Residential Electrical Installations

2024

### **DREMC General Requirements for Residential Electrical Installations**

### **Installation**

In addition to the National Electrical Code, National Electrical Safety Code, and state and local building codes, DREMC has installation requirements which must be followed.

<u>Please check with an DREMC engineer or representative before locating the meter base</u> or if you have questions about requirements or specifications.

### **General Specifications**

- A. Overhead Residential Services
  - 1. Where a DREMC engineering representative specifies an eyebolt for service attachment, install the eyebolt at a point lower than the weatherhead and no more than 18" horizontally from the weatherhead.
  - 2. Where a DREMC engineering representative specifies a service mast for service attachments, install 2 1/2 inch rigid metal conduit (RMC) fastened with a minimum of 2 mast clamps bolted through the wall on all residential services.
  - 3. In no case shall a residential point of attachment be less than 12 ft.
  - 4. All services must comply with Codes requirements for clearance. Codes can require more than 12' of clearance at midspan in many situations. DREMC's engineering representative will assist in determining the required clearance.
  - 5.See DR-91 for additional specification details.
- B. Overhead Non-Residential Services
  - 1. Where a DREMC engineering representative specifies an eyebolt for service attachment, install the eyebolt at a point lower than the weatherhead and no more than 18" horizontally from the weatherhead.
  - 2. Where a DREMC engineering representative specifies a service mast for service attachments, install 2 1/2 inch rigid metal conduit (RMC) fastened with a minimum of 2 mast clamps bolted through the wall on all residential services.
  - 3. All services must comply with Codes requirements for clearance.
  - 4. The DREMC Service conductor must maintain a minimum 16 ft. ground clearance at midspan on all non-residential service lines. See an DREMC engineering representative to confirm that the proposed point of attachment height will achieve sufficient ground clearance. If the point of attachment does not comply with the clearance requirements, DREMC will not energize the service.
  - 5.See DR-91 for additional specification details.

### C. Underground Services

### Responsibility of the Member:

### Trench:

- 1. The Member will be responsible for the trenching and backfilling necessary for the installation of underground facilities.
- 2. The trench is to be 30" in depth and must be inspected by DREMC prior to backfilling.
- 3. The trench must be backfilled with clean, rock free dirt or bedded 6" above and below the conduit with fine (1/4" down) gravel.
- 4. No large rock, brick, trash, or debris will be permitted as backfill.
- 5. A joint-use trench with gas, water, and sewer will not be allowed. Where gas, water and sewer run parallel to a secondary conduit, a minimum of 48" horizontal separation is required. Where gas, water, and sewer cross a secondary conduit, a minimum of 12" vertical separation is required.
- 6. A joint-use trench with communications (telephone and cable television) must have a minimum 12" vertical separation from the secondary conduit.
- 7. Communications (telephone and cable television), gas, water, and sewer conduits, equipment and meters must be located a minimum of 48" horizontally from DREMC's secondary boxes.

### Conduit System

- 1. All conduits shall be supplied by the Member.
- 2. The conduit used below grade shall be 3" schedule 40 PVC, grey electrical conduit for 400 amps and less service entrances.
- 3. The conduit located on the pole shall be 3" rigid metal conduit, the length of which will be specified on a per job basis. The elbow at the pole shall be rigid metal conduit with a minimum bend radius of 24". The conduit attached to the house, below the meterbase, shall be 3" rigid metal conduit securely fastened with two straps, two feet apart. The elbow at the meterbase shall be rigid metal conduit with a minimum bend radius of 24".
- 4. A weatherhead and grounding clamp supplied by the member, will be required at the top of the riser pole conduit.
- 5. The conduit located inside a padmount transformer or underground secondary box for secondaries shall be 4" schedule 40 PVC, grey electrical conduit. The elbows at a padmount transformer or underground secondary box for secondaries shall be schedule 40 PVC, grey electrical conduit with a minimum bend radius of 36".

- 6. The elbows at a padmount transformer or underground secondary box for services shall be schedule 80 PVC, grey electrical conduit with a minimum bend radius of 24". Size of service conduit to be specified by DREMC.
- The conduit below grade and the elbows shall be installed by the member. The location and installation of the pole conduit <u>must</u> be coordinated with DREMC. The pole conduit will be installed by DREMC.
- 8. During construction, the conduit system is to be capped with threaded caps to prevent debris from entering the system.
- 9. A pull rope (1/4" polypropylene rope) or mule tape must be installed in the conduit system by the member.
- 10. Ditch to be inspected by DREMC prior to covering.
- 11. Heating conduit to make bends is NOT accepted.

See DR-150 for specification details.

- D. Manufactured and Modular Home Services
  - 1. A **red** HUD label identifies **manufactured** or **mobile** homes. Meters may not be installed on manufactured or mobile homes. DR-19 for specification details.
  - 2. **Modular** homes are identified by a **green** State of Tennessee label. Services for modular homes may be identical to overhead or underground residential services. See DR-91 and DR-150 for specification details.
- E. Temporary Services
  - 1. Overhead Temporary service pole must be within 100 ft. of DREMC pole. See DR-90 for specification details.
  - Underground Temporary service pole must be located behind the right corner of pad mount transformer or underground secondary box. See DR-151 for specification details.

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DR-90
Aug. 2019
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### **Duck River Electric Membership Corporation**

### Typical Overhead Temporary Service



### **Duck River Electric Membership Corporation**

Typical Meter Pole Installation for Manufactured Home



### DR-91 Duck River Electric Membership Corporation

Updated 2024 Guidelines for Overhead Residential and Non-Residential Service 400 amps or less

### NOTE: MUST MEET WITH A DREMC REPRESENTATIVE PRIOR TO ANY INSTALLATION OF EQUIPMENT.

- 1-1. Weatherhead must be above point of service drop attachment.
- 1-2. An eyebolt and related hardware will be furnished by DREMC for installation by the member. The eyebolt must pass through a plate spanning two or more wall studs. The eyebolt must be below and within 18" of weatherhead. Point of service drop attachment will be sufficient height to provide minimum clearances as specified by the National Electrical Safety Code as determined by DREMC field engineer.
- 1-3. Service entrance conductors will extend 18" out of weatherhead.
- 1-4. Rigid conduit,IMC, or EMT, with rain tight couplings and connectors may be used as service entrance conductor raceway. Service entrance raceways will be fastened through the exterior wall with a minimum of 2 conduit straps; the lower being within 3' of top of meter base. For 200-225 amp service, 2" conduit is required. For 400 amp service, 3" conduit is required.
- 1-5. Center of meter will be located between 5' to 6' above final grade, on end of house closest to service pole, at a point marked by DREMC engineer. Meter base will not be located on or under porches, decks, or carports. If service entrance panel is not located in immediate vicinity of meter, a weatherproof disconnect may be required, refer to National Electrical Code.
- 1-6. A ground wire of no. 4 copper or larger shall be run unspliced from a lug in the meter base to a grounding electrode (per NEC/State of Tennessee requirements).
- 1-7. Where a mast riser is used, weatherhead will be a minimum of 36" above roof. If weatherhead is more than 42" above roof, a guy wire with eyebolt through rafter is required.
- 1-8. Service clevis assembly will be furnished and installed by DREMC.
- 1-9. Service mast will be a minimum of 2-1/2" metallic rigid conduit secured with a minimum of 2 mast clamps fastened through the wall with 1/2" clampbolts: the lower being within 3' of meter base. For 200/225 amp service, 2-1/2" conduit is required. For 400 amp service, 3" conduit is required.

NOTE: All customer owned facilities must be in compliance with the provisions of this sketch or the National Electrical Code, whichever is more stringent. All wiring must be approved by the state wiring inspector.



### DR-150 Updated 2022

### **Duck River Electric Membership Corporation**

### **Requirements for Underground Residential Service**



### **DR-400**

# DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION

400 or Less Amp Single Phase Meter Center

# Note: Must meet with DREMC prior to digging and installation of equipment

# DREMC RESPONSIBILITIES

a.) Conduit brackets at the pole and will install them per specifications

### N MEMBER RESPONSIBILITIES:

- a.) Member shall furnish and install first stick of conduit at the pole and provide weatherhead conduit grounding clamps, and additional conduit as determined by DREMC Field Representative. (Conduit length at pole =
- b.) Conduit size shall be 3" rigid metal conduit with a EL sweep with minimum 24" radius
- c.) Continuous raceway from transformer shall be scheduled 40 electrical PVC conduit and shall have a minimum depth of 30" at final grade. Maximum length of 250'.
- d.) Support members shall be constructed of 6x6 treated posts or 2" metal rigid conduit and set 3 feet below final grade. If rigid metal conduit, caps shall require on pole.
- <u>Ф</u> ) Cross member supports shall be constructed of treated wood or metal unistrut.
- ) Center of the meter shall be 5' to 6' from final grade.
- g.) Install pull rope in conduit (1/4" Polypropylene or Polyester Pull Tape (Mule Tape)).
- ) Locknuts & grounding bushings required in/at meter base.
- Heating of PVC conduit to make bends is NOT accepted.
- The member must provide a UL listed meter base appropriate for the intended use and must be approved by the State Electrical Inspector. Location approved by DREMC Engineer.

## **3. ADDITIONAL NOTES:**

- a.) All wiring must meet NEC and local requirements and approved by state electrical inspector.
- b.) Grounding electrode as required per NEC/State of Tennessee requirements. Ground rods
- c.) Ditch to be Inspected by DREMC Prior to Covering must be a minimum of 12" from underground service conduit.

