

SESD SERVICE CONNECTIONS

Table of Contents

General Information & Requirements 10

Electrical Services for New Construction 11

Electrical Service Upgrades, Remodeling, Additions, Relocations. 13

SESD Net Metering System Conduit (SMC) & Other Communication Utilities 14

Inspections 14

Electrical Installation Pictures..... 16

SESD RESIDENTIAL SERVICE CONNECTIONS

General Information & Requirements

South Utah Valley Electric Service District hereafter known as SESD or District shall determine locations of meters and associated service equipment that may or may not meet the requirements of this manual.

Care and consideration should be given by the customer in choosing a location of an electrical service. The service will serve your house for a long time and you should try to think of future needs for your particular circumstances.

SESD requires access to the meter and service for meter reading and maintenance. The meter and service should also be readily accessible to the customer in case of fire, natural disasters, electrical repair and maintenance, or other electrical issues or hazards that may arise. Proper planning is important when choosing the electrical meter & service location.

The electric meter & service shall be kept accessible and unobstructed. The service shall not be enclosed by carports, garages, additions, fences, etc.. The service shall be kept 3 feet from doors, windows, window wells, gas meters, etc..

The location of the service shall be on the side of the house closest to the power source and shall be within 10 feet from the front wall of the house. Contact SESD if you are unsure of the location of the power source.

The service conduit shall be anchored to the concrete foundation of the house by (2) two unistrut assemblies. Each unistrut assembly includes; unistrut (typically cut 36" in length), unistrut conduit clamps, 3/8"x3" concrete anchors & bolts. If the unistrut is cut at least 36 inches in length you will be able to attach the other communications conduits (such as Qwest, Comcast) to it. Or you can choose to use separate unistrut for the power & communications conduits.

Contact SESD if you are unsure if your service location meets these requirements. Please refer to the SESD Standards drawings for more information.

In general, all new services shall be installed underground. Existing Overhead services that are being upgraded or relocated may be required to be rerouted underground. Contact SESD with questions.

Services 100 amps to 200 amps shall be installed in a minimum size 2 ½" conduit. The length of the service shall not be greater than 150 feet from the power source unless otherwise approved in writing by SESD. The service conduit shall have no more than 360 degrees of total bend. All approved bends shall be factory made elbows or sweeps.

For services greater than 150 feet in distance from the power source contact SESD.

For services larger than 200 amps contact SESD.

Electrical Services for New Construction

1. In new construction installations you should first determine the future/proposed location of the electrical meterbase or service on the building/house foundation. You should take into consideration the future locations of windows, doors, gas meters, stairs, window wells and other possible conflicts with the electrical service.
 - a. The electrical service should be placed within the front 10 feet of the side of the house. The service shall be kept a minimum of 3 feet from doors, windows, window wells, gas meters and any other items or obstructions that will limit the access to the electrical service.
 - b. The electrical meterbase shall not be recessed into the brick or stucco exterior of a building or home, it should only be surface mounted.
 - c. If you have any questions on the locations or clearances of the electrical service please contact SESD for assistance.
2. The next step is to locate the power source. The power source will be a transformer, junction box or, in some cases, it may be a pole that will be in one of the corners of the lot or in a corner of an adjacent property. You should always install your electrical service on the same side as the electrical power source. If you cannot install your service on the same side as the power source or have questions about the location of the power source, contact SESD for assistance.
3. Once you have determined the location of your electrical service on the building or house & you have determined the power source location & you have called **Blue Stakes Utility Notification Center at 811 or 1-800-662-4111**, you can begin to dig your trench from the building to the power source. **① Read #4 before digging into or around electrical boxes!**
 - a. The trench shall be a minimum of 42" in depth measured from grade.
 - b. The trench shall be excavated in as straight of a line from the building/house service location to the power source as possible.
 - c. The trench shall be free from large rocks and debris.
 - d. The trench shall be backfilled with-in 48 hours after passing inspection.
 - e. Sand may be required below and on the conduit if soils are rocky.
4. **Transformers contain ⚡ 12,470 volts! The risk of electrical shock & death are possible if you dig into energized electrical transformers, boxes or cabinets! Please contact SESD for assistance digging the trench around electrical boxes.** You may excavate the trench to within 5 feet of transformers but you need to call SESD for assistance before digging any closer. **Always call Blue Stakes Utility Notification Center at 811 or 1-800-662-4111 at least two working days prior to digging any trench!**

SOUTH UTAH VALLEY ELECTRIC SERVICE DISTRICT

5. Service Installation

- a. Once the trench has been excavated, the electrical contractor should then install the electrical meterbase/service on the foundation of the building/home.
- b. The electrical contractor is required to install the meterbase, 2 ½" rigid metal riser conduit, a 2 ½" 36" long sweep rigid metal elbow, (2) pieces of unistrut with clamps, and all other associated appurtenances.
- c. For services larger than 200 amps contact SESD for special requirements.
- d. Refer to the rules in #1 for locations, clearances, etc for electrical services.
- e. Contact the County or respective City with jurisdiction to inspect the meterbase.

6. Customer Options

- a. Once the trench is excavated & the electrical meterbase is installed, the customer has the choice to finish the electrical conduit installation or to pay SESD to install the conduit and pull the wire.
- b. If the customer chooses to install the conduit, they must pay SESD for any associated inspection fees to inspect the customer installed conduit.
- c. If the customer chooses to have SESD install the conduits, then the customer must pay SESD all associated costs for SESD installation.

7. Conduit Stubs

- a. In some cases, conduits stubs may already be extended out from the junction box or transformer. This is true in subdivisions or areas that have been recorded later than 2010. Subdivisions or areas recorded or developed prior to 2010 usually do not have conduits stubs extending from the electrical boxes. If you have questions if your subdivision or lot may have the conduit stubs please contact SESD.
- b. If your subdivision has conduits stubbed out from the electrical boxes, you will need to excavate the conduit stubs. The conduits should be stubbed out approximately 12' to 15' from the electrical box. The conduit stubs should be 3' in depth and should be marked. There should be a 2 ½" conduit stub for the electrical, a 2" conduit stub for the SESD Metering System, and possibly (2) two 1" conduit stubs for Qwest & Comcast respectively.
- c. Once the conduit stubs are excavated you can attach to the conduits and finish installing them to the house or building.

8. Conduit Installation

- a. Electrical Service Conduits shall be installed so they are 36" in depth measured from the top of the conduit to finished grade. This means the trench should be excavated to a greater depth (typically 42"). The conduit shall be electrical grade schedule 40 PVC.

SOUTH UTAH VALLEY ELECTRIC SERVICE DISTRICT

- b. The electrical service shall have a long sweep (36") rigid metal elbow & rigid metal riser conduit installed at the house/building service point. All rigid metal conduits below grade shall be taped with a 10 mil. corrosion tape that is listed for the purpose applied to the conduit.
- c. The electrical service shall have a long sweep (36") PVC elbow installed on the electrical power source side which is a transformer or junction box.
- d. The electrical service conduit & the communications utility conduits may be installed in a joint trench; however, the electrical conduits shall have a horizontal separation of at least 6" from the communications conduits.

Electrical Service Upgrades, Remodeling, Additions, Relocations.

1. Existing buildings or homes that are upgrading services or installing new services must contact SESD to determine if the existing service may need to be relocated or otherwise upgraded to comply with the current National Electric Code & current SESD Standards.
2. Existing buildings, structures, or homes that may be remodeling or adding additions, or otherwise altering the structure, that may affect the electrical service, must contact SESD to determine if the existing service may need to be relocated or otherwise upgraded to comply with the current National Electric Code & current SESD Standards.
3. Before starting any service upgrade, service replacement, addition or remodel that may affect the electrical service, you should first contact SESD. SESD will send a representative out on site to meet with you and determine if the service would need to be relocated or if there are any other possible requirements that need to be addressed.
4. The following is a list of general requirements for services that includes but is not limited to;
 - a. The service or meter shall not be located under carports or porches.
 - b. The service or meter shall not be enclosed by any means. This includes, but is not limited to; garages, sheds, doors, walls.
 - c. SESD requires access to all services or meters. The service and meter shall have (8) eight feet of clearance in front of service or meter.
 - d. The meter shall be placed at a height of no less than 4'6" to center of meter, and no more than 6' to center of meter, from finished grade.
 - e. The service disconnect shall be placed at a height of no more than 6'7" with the handle in the "up" position, from finished grade.
 - f. The area around a service or meter shall be level and clear for a minimum of 6' in all directions.

SOUTH UTAH VALLEY ELECTRIC SERVICE DISTRICT

5. Grounding & bonding shall meet current National Electric Codes, State, County & SESD Codes & requirements. Older homes & buildings often do not meet the current NEC Codes for grounding or bonding. If you cannot ground to a concrete encased 'ufer' or metal water line, or other approved means, you should drive at least (2) 5/8"x8' copper-clad ground rods for the service.

SESD Net Metering System Conduit (SMC) & Other Communication Utilities

1. Effective January 2010, SESD will be requiring a 2" conduit to each home for the possible future use of a net metering system. The conduit system is referred to as "SESD Metering System Conduit" or "SMC". The conduit may also be used to install cables that would allow the remote reading of meters through the cable system or the use of a net metering system associated with alternative means of customer generated electricity.
2. The customer is responsible to provide a 2" Schedule 40 PVC service riser conduit & 2"x 24" PVC elbow on the house service side for the SESD Metering System. The customer can then choose to finish the conduit to the source (adjacent to power source) or pay SESD to install the conduit. If the customer chooses to install the conduit follow the next steps.
3. Attach to the existing 2" SMC conduit stub if present and run the conduit to the home. Stub the conduit out of the ground using a 2" PVC elbow and 2" schedule 40 pvc gray conduit riser at the house along with the Qwest & Comcast conduits if applicable. Place a pvc cap on the end of the conduit. If there isn't a conduit stubbed out for the SESD Metering System you need to dig a trench and run the conduit to the box. If there aren't any conduits stubbed out for Qwest or Comcast you need to call Qwest and Comcast to come out and run direct burial cable to house if so desired. **Trench shall not be covered until power & SMC conduits are installed.**

Inspections

1. There will be a 48 hour notice required for inspections.
2. Inspection requests shall include owner, and address and inspection type.
3. Timed inspections will only be accepted for special circumstances.
4. SESD shall inspect electrical conduits and SESD Metering System Conduits prior to being backfilled.
5. SESD will leave a green "passed inspection" sticker on the service conduit if conduit & trench pass inspection. If the conduit & trench fail inspection SESD will leave a correction notice on the meterbase. Once the corrections have been made contact SESD for a re-inspection.
6. If a customer chooses to install his/her own conduit & wire then SESD will require and charge for an inspection. (2) Two Inspections are included in the initial service application if customer is installing his/her own conduit & wire. If you fail your inspections and require more than (2) two inspections, each subsequent inspection shall

SOUTH UTAH VALLEY ELECTRIC SERVICE DISTRICT

incur a \$100.00 re-inspection fee. The re-inspection fee will have to be paid before the re-inspections will take place.

7. The County or respective City having jurisdiction will inspect the meterbase at the house. SESD will inspect the service trench, service conduit, service urd wiring & connections up to the meter or line side of the meterbase.
8. The meterbase must be inspected by the County or City having jurisdiction before permanent power will be installed to the house.

Electrical Installation Pictures

Meterbase on Foundation



Conduits on Foundation



Finished Meterbase on house



Finished Meterbase on house 2



Finished Meterbase on House 3



Finished Meterbase on House 4

