

Huntsville Utilities

Underground Residential Service Requirements

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Scope

This document is meant to describe Huntsville Utilities' requirements for a typical residential underground service to a home on a fixed foundation, with a service size 400 amps or less. These specifications are not meant to over-ride any local code requirements, including the National Electric Code or National Electric Safety Code.

General

1. No service will be connected without an inspection from the appropriate local inspection agency. Either Huntsville Utilities or the inspection agency can deny connection of service if their requirements are not met. Approval from one does not guarantee approval of the other.
2. Huntsville Utilities will provide only one delivery point per building.
3. The customer is encouraged to contact the appropriate inspection agency for local requirements (we can provide a list of agencies with their contact information).
4. Permanent house numbers must be installed on the house or on the mail box and must be visible from the street. In addition, street signs must be installed if the house is located on a new street.
5. The necessary electrical distribution infrastructure must be completed before services can be installed. Electrical distribution infrastructure is not scheduled to be worked until the developer had paid any Aide-To-Construction costs and the conduit system has been installed by the developer and approved by Huntsville Utilities.
6. Customer must call 256-535-1255 to set up an account before a service will be installed. This may require a visit to one of our offices at 112 Spragins Street, Huntsville, AL. 35801.

7. Huntsville Utilities will provide and install the service cable from the power source to the customer supplied and installed meter base and will make the connections in the meter base (for residential services size 400 amp or less).
8. The customer is responsible for installing the conduit from the meter base to the power source, the meter base, and the cable from the meter base to the main disconnect. Check with the local inspection agency for cable size.
9. Certain materials purchased and installed by the customer must be approved by Huntsville Utilities as detailed in this specification.

Conduit Installation

1. Call Alabama One Call (811) to request underground facilities to be located before beginning any excavation (this is a toll-free call and a free service to the customer). Some utilities are not members of Alabama One Call and need to be notified individually. Alabama One Call will provide you with a list of utilities that will be notified by them on your behalf. Water lines from the meter into the customer's home are part of the customer's equipment and will not be located by the utility.
2. Conduit can only be installed on the land deeded to the building it is serving, or in a public right of way or within an easement for that purpose, and may not be installed under any building or structure.
3. Customers must furnish and install 3" schedule 40 PVC gray electrical conduit from the meter base to the riser pole, transformer pad, or secondary pedestal. Note that some local inspection agencies require that any exposed conduit be schedule 80 PVC.
4. Conduit shall have 18" to 24" of cover. In rocky areas, when approved by Huntsville Utilities, conduit depth may be reduced 6" for each 2" of concrete cover. In no case shall cover be less than 12".
5. Maximum service length is 125'. Longer services may be accepted with fewer bends; contact Engineering Services at 256-535-1315 for approval before installation.
6. The total amount of hard fittings in the conduit cannot exceed 270 degrees. Only large radius elbows shall be used.
7. A minimum 1/8" nylon string must be blown into the conduit after all glue has dried. String must have 24" of slack and must be taped to the inside of the conduit or accessibility. Tape or cap exposed ends of the conduit.
8. Service cable will not be pulled by Huntsville Utilities until conduit is installed per these requirements, with string, and covered. Conduit is normally inspected for proper depth by the local inspection agency before covering.

Conduit Termination at Riser Pole Reference Drawing UG-1

1. A large radius 90 degree bend shall be turned up at a distance of 5" away from a wood pole or 1" away from a concrete or steel pole.

2. If the riser pole is not an existing pole, the customer must pay a portion of the Aide-To-Construction cost before the pole will be set.

Conduit Termination at Padmount Transformer or Secondary Pedestal Reference Drawing UG-1

1. In underground subdivisions there should be a conduit already stubbed out to each lot from a transformer or pedestal with a string already inside.
2. Customer's conduit shall tie to the existing stub-out; tie the nylon strings firmly together before sealing the conduit, taking care not to glue the string to the inside of the conduit.
3. It should not be necessary for the customer to access the inside of the transformer or pedestal. However, if it is necessary or if the stub-out cannot be located, contact Huntsville Utilities Engineering Services at 256-535-1315.

Meter Bases and Meter Base Locations

1. Customer must provide and install the meter base. Meter base must be from Huntsville Utilities' current list of approved meter bases (see publication of approved meter bases).
2. A ground rod and ground wire must be installed by the customer according to local code. The main switch box must be bonded to the ground rod without passing through the meter base (which should not be grounded).
3. The ground rod must also be accessible to any communication companies for bonding. Failure of all services to the home to bond to this ground rod could result in equipment damage.
4. Meter base must be located at the point of the house closest to the point of attachment to Huntsville Utilities' power source (call 256-535-1315 if you need a representative to determine this point). Meter base must be installed within line of sight to this source.
5. Meter base must be installed on a front wall of the house, or side wall within 5' of the front, at a vertical distance of 4'6" to 5'6" from finished grade to the center of the meter glass.
6. Meter base location must be accessible for reading and maintenance.

Inspections When No Local Agency Has Jurisdiction

1. The customer is required to obtain all health, electrical, and building inspections according to local jurisdiction.
2. Where there is no local agency performing inspections, Huntsville Utilities will ensure basic requirements (as described in this section of this document) are met before connecting service.

3. Service Entrance Cable Sizes based on Main Disconnect Size

<u>Main Size</u>	<u>Conductor Size</u>	<u>Neutral Size</u>
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100 amps	#4 copper	#8 copper
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<u>#2 aluminum</u>	<u>#6 aluminum</u>	
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200 amps	2/0 copper	#4 copper
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<u>4/0 aluminum</u>	<u>#2 aluminum</u>	
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225 amps	3/0 copper	#4 aluminum
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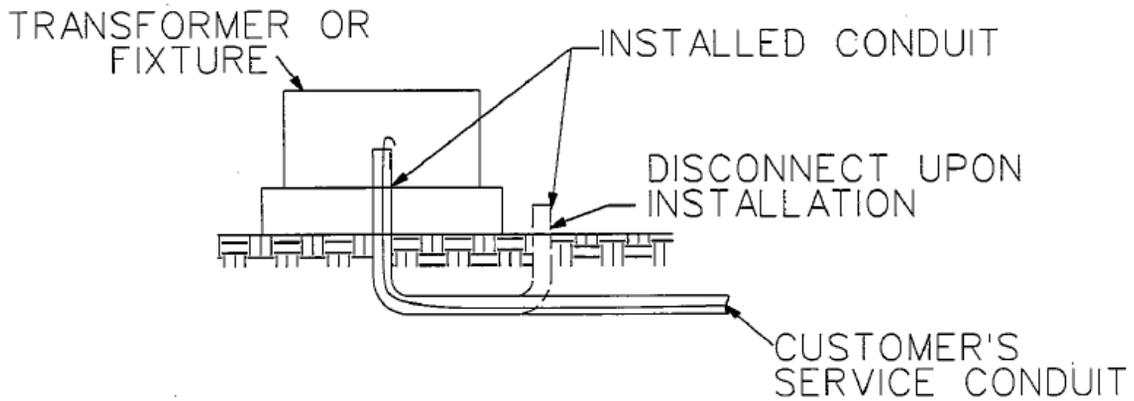
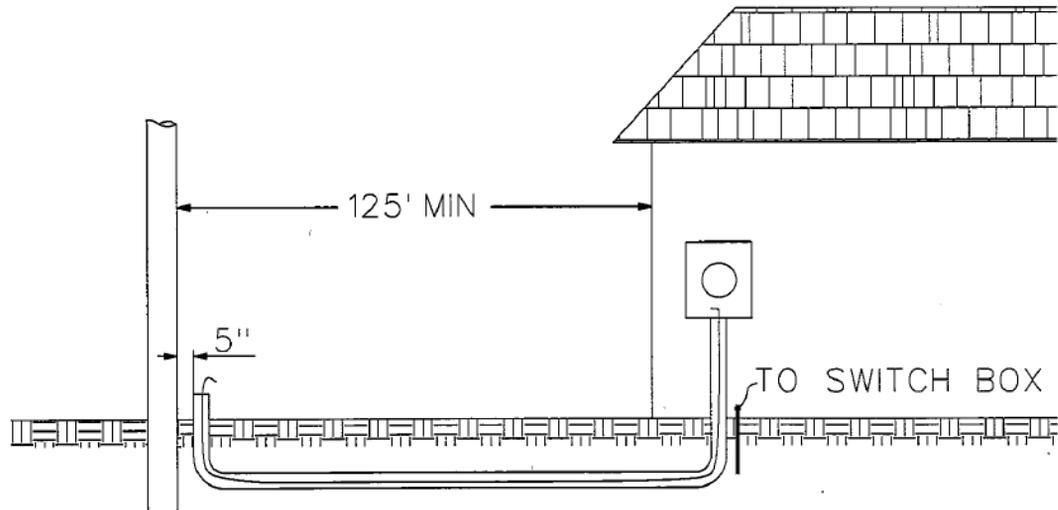
250 mcm aluminum	#2 aluminum	
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400 amps - normally a 400 amp residential service will use two 200 amp mains contact Engineering Services 535-1315 if using 400 amp main

4. The customer must supply and install a copper ground rod a minimum of 8' in length (minimum of 7'6" in ground) and shall have a minimum diameter of $1/2$ ". If galvanized pipe is used, a minimum diameter of $3/4$ " is required.
5. Where the service entrance cable is longer than 36" a 4-wire entrance cable is required

Exceptions

1. Any exceptions must be presented to Huntsville Utilities Engineering Services Department. Call 256-535-1315 to determine which representative should help you (based on geographic location).
2. In some cases a second delivery point may be provided (to a garage or barn), but the account will be set up with a commercial rate.
3. For service size larger than 400 amps, contact Engineering Services at 256-535-1315. Customer will be required to install service cable from the source to the meter base and make the connections in the meter base in addition to installing the conduit. Additional cost may be required to ensure capacity is available for this size of service.



NOTE: THIS DRAWING IS PART OF HUNTSVILLE UTILITIES SPECIFICATIONS FOR MOBILE HOME SERVICE REQUIREMENTS, WHICH MUST BE FOLLOWED IN ENTIRETY.

DWN J. BAILEY DAT 11/21/08	NO.	DATE	REVISION	HUNTSVILLE UTILITIES ELECTRIC DEPARTMENT	
CKD DAT				SUBJECT DETAIL UNDERGROUND SERVICES TYPICAL URD CONDUIT AND METERBASE INSTALLATION	UG-1
APP DAT					
APP DAT					
APP DAT	GENERAL SPECIFICATIONS FOR INSTALLATION OF ELECTRIC SERVICES				