

Bruce Barker, ASHI Certified Inspector

Once again, The Word invites you to travel into the dark realm of terms that are often misused or misunderstood in home inspection reports. The Word hopes you will find this trip informative and maybe a little entertaining.

The Word's term today is service entrance conductors. The Word finds this term interesting because: (1) our Standards of Practice (Section 7.1.A.2) require that we inspect them, and (2) it is not always clear which, if any, conductors are the service entrance conductors.

Service entrance conductors are those that run between the service point and the service equipment. In order to locate the service entrance conductors, we must first locate these other two components.

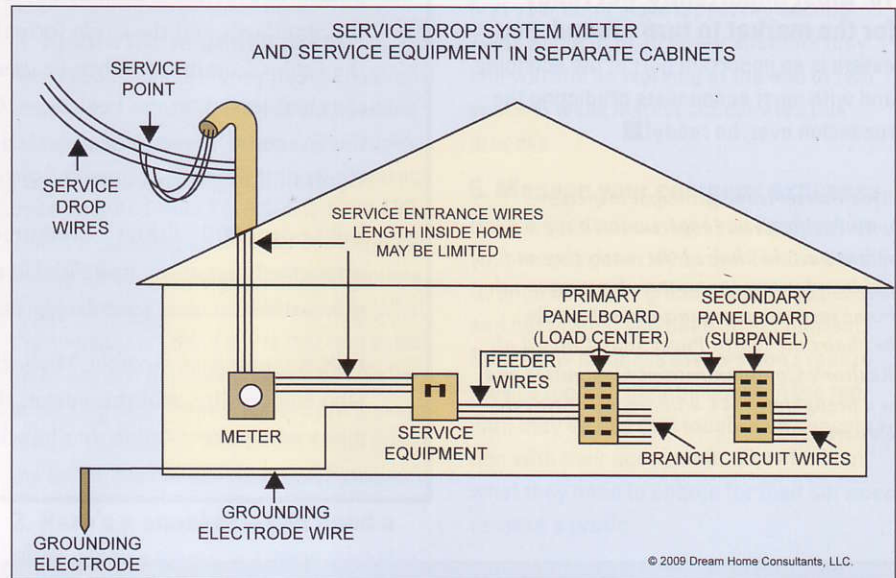
Service equipment

The service equipment consists of not more than six means of disconnecting electrical power to a building. In most homes, these will be circuit breakers or fuses. The service equipment should be readily accessible, listed and labeled for use as service equipment and located not more than 79 inches above the floor or the ground. The service equipment may be inside or outside; but if it's inside, it should be as close as possible to the point where the service entrance conductors enter the home. This avoids a long run of wires unprotected by fuses or circuit breakers. The service equipment is usually easy to locate.

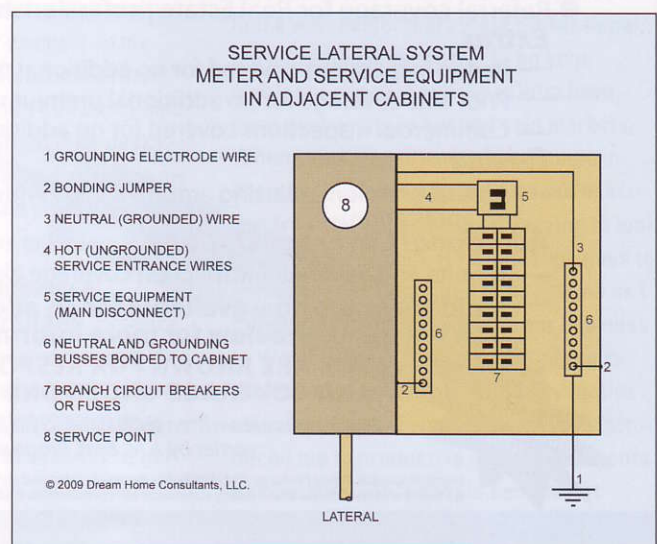
Service point

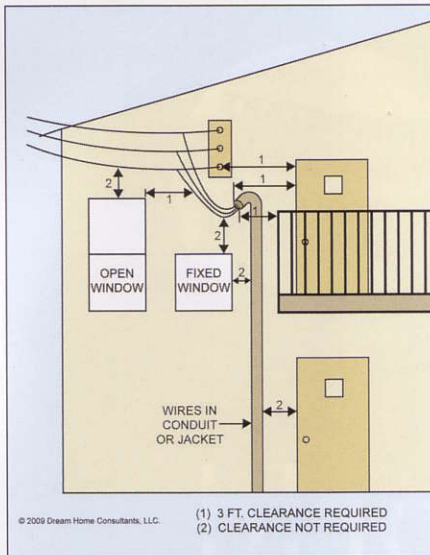
Locating service point can be a challenge. The service point is where the electric utility's maintenance responsibility ends and the homeowner's responsibility begins. It is anywhere that the electric utility designates. In overhead service drop configurations, the service point is usually at the familiar connectors near the drip loops at the service mast.

But where is the service point in an underground service lateral system? In most residential systems, the logical service point location is at the meter cabinet. The meter cabinet is sealed and often belongs to the electric utility.



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Common configurations in a service lateral system

There are two common configurations of meter and service equipment cabinets in a service lateral system. One is where the meter and the service equipment are in one cabinet. In this configuration there are no service entrance conductors for you to inspect. The other configuration is where the meter and the service equipment are in two (or more) cabinets.

The cabinets can be in different locations, in which case the service entrance conductors are those that run between the meter cabinet and the service equipment cabinet(s). The cabinets can also be adjacent to each other, as they often are in The Word's territory. In this configuration, the service entrance conductors are either metal bus bars or short lengths of wire between the meter cabinet and the service equipment.

Properly installed service entrance conductors

Attributes of properly installed service entrance conductors include conductors that:

1. are undamaged,
2. are listed for use as service entrance conductors,
3. are the proper size for the conductor material,

4. are enclosed in conduit where subject to damage (as determined by the building official),
5. have the required distance between individual conductors and potential contact points such as roofs, doors, operable windows and driving and walking surfaces. Required distances to individual conductors include 10 feet above walkways, 18 inches above roof eaves, and 3 feet horizontally to the side of operable windows and 3 feet horizontally to doors, decks, balconies and any other surface from which someone could touch the conductors.

Where to look

In many cases, service entrance conductors are easy to locate and inspect. The Standards make no exception for cases where they are not so easy to locate, so The Word hopes you now have a better

sense of where to look for service entrance conductors.

Memo to the electrical Gods and other authorities: The Word does not reside on Mt. Olympus (just at its base) and welcomes other viewpoints. The electrical Gods are more vocal than some of the others, so The Word will not be surprised to hear from them. Send your lightning bolts or e-mails to inspectorbruce@cox.net. ■

Attend Bruce Barker's presentation, "Not Your Daddy's Building Code," in the Specialty Track at InspectionWorld Las Vegas in January 2010.



Bruce Barker, Dream Home Consultants, Peoria, Ariz., has been building and inspecting homes since 1987. He is the author of "Everybody's Building Code" and currently serves as chair of the ASHI Standards Committee.

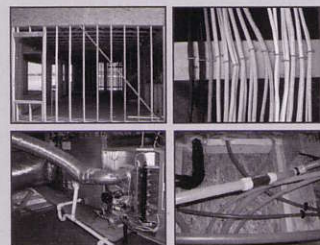
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