

**PROPERTY AND BUILDING INSPECTION MODULE II  
TREC Course 39926**

**Chapter 1  
Electrical Systems**

**Section 1  
Electrical – Miscellaneous**



**Objectives: At the completion of this section, the Inspector candidate will:**

- 1. Understand the rules for electrical service wires.**

*The inspector shall report as Deficient:*

*a drop, weatherhead or mast that is not securely fastened to the building deficiencies in:*

*the insulation of the service entrance conductors, drip loop, separation of conductors at weatherheads, and clearances*

**Overhead Service and Service Entrance  
Conductor installation**

**Clearances on buildings.** Open conductors and multiconductor cables without an overall outer jacket should have a clearance of not less than 3 feet from the sides of doors, porches, decks, stairs, ladders, fire escapes and balconies, and from the sides and bottom of windows that open.

**Above roofs.** Conductors should have a vertical clearance of not less than 8 feet above the roof surface. The vertical clearance above the roof level should be maintained for a distance of not less than 3 feet in all directions from the edge of the roof.

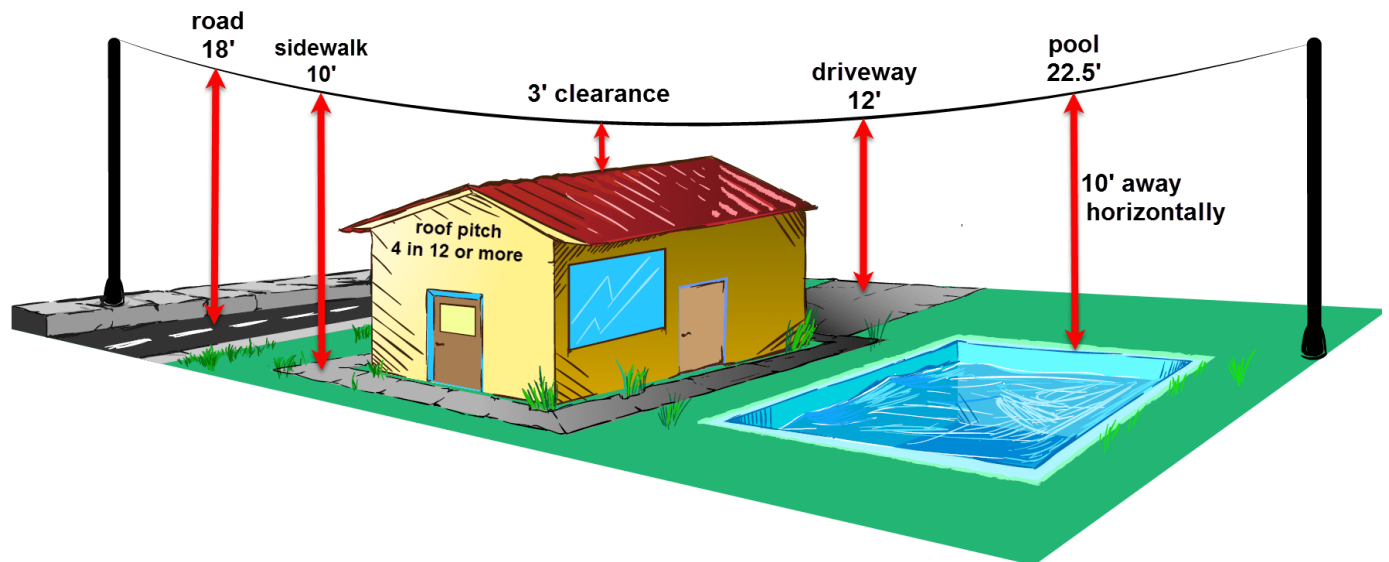
Exceptions:

1. Conductors above a roof surface subject to pedestrian traffic should have a vertical clearance from the roof surface.
2. Where the roof has a slope of 4 inches in 12 inches, or greater, the minimum clearance shall be 3 feet.

3. The minimum clearance above only the overhanging portion of the roof should not be less than 18 inches where not more than 6 feet of overhead service conductor length passes over 4 feet or less of roof surface measured horizontally and such conductors are terminated at a through-the-roof raceway or approved support.
4. The requirement for maintaining the vertical clearance for a distance of 3 feet from the edge of the roof shall not apply to the final conductor span where the service drop is attached to the side of a building.
5. Where the voltage between conductors does not exceed 300 and the roof area is guarded or isolated, a reduction in clearance to 3 feet should be permitted.

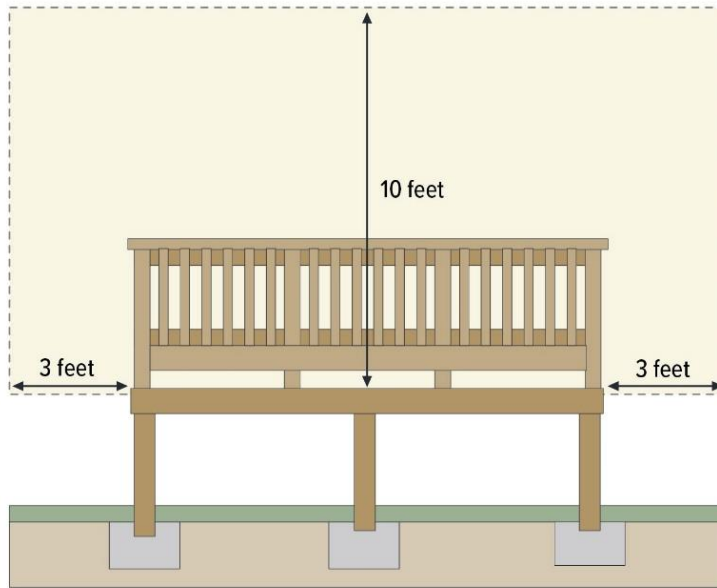
**Vertical clearance from grade.** Overhead service conductors should have the following minimum clearances from final grade:

1. For conductors supported on and cabled together with a grounded bare messenger wire, the minimum vertical clearance should be 10 feet at the electric service entrance to buildings, at the lowest point of the drip loop of the building electric entrance, and above areas or sidewalks accessed by pedestrians only. Such clearance shall be measured from final grade or other accessible surfaces.
2. Twelve feet—over residential property and driveways.
3. Eighteen feet—over public streets, alleys, roads or parking areas subject to truck traffic.



### Clearance from Deck

There should be no electrical cables within reach of the deck, either 3 feet horizontally or 10 feet vertically (2021 IRC E3604.1, E3604.2.2).



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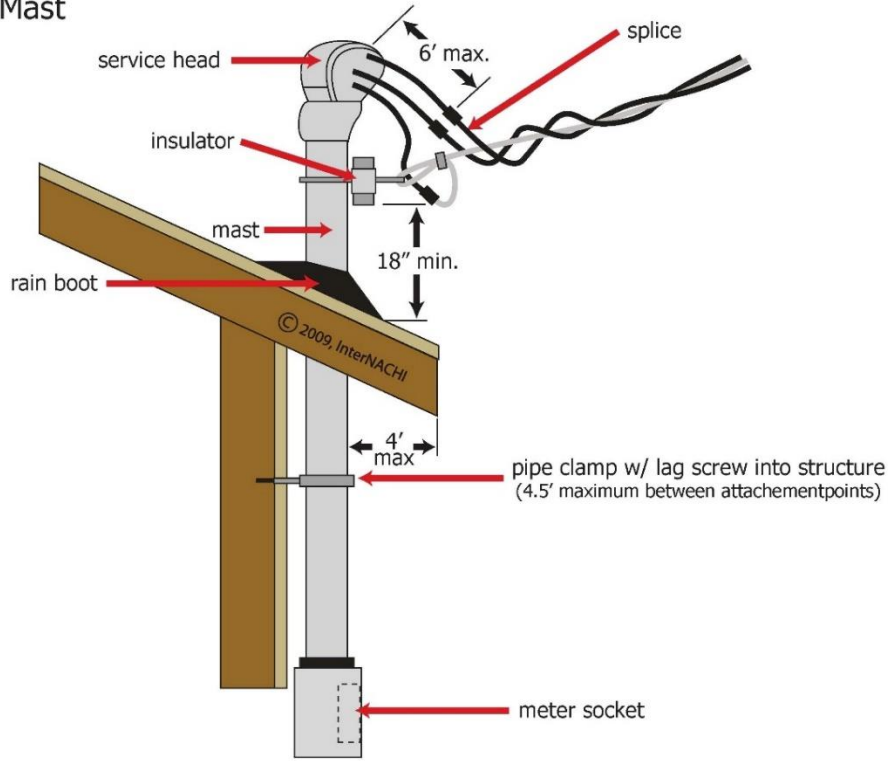
**Rain-tight service head.** Service raceways should be equipped with a service head at the point of connection to service-drop or overhead conductors. The service head should be listed for use in wet locations.

**Drip loops.** Drip loops should be formed on individual conductors. To prevent the entrance of moisture, service-entrance conductors should be connected to the service-drop or overhead conductors either below the level of the service head or below the level of the termination of the service-entrance cable sheath.

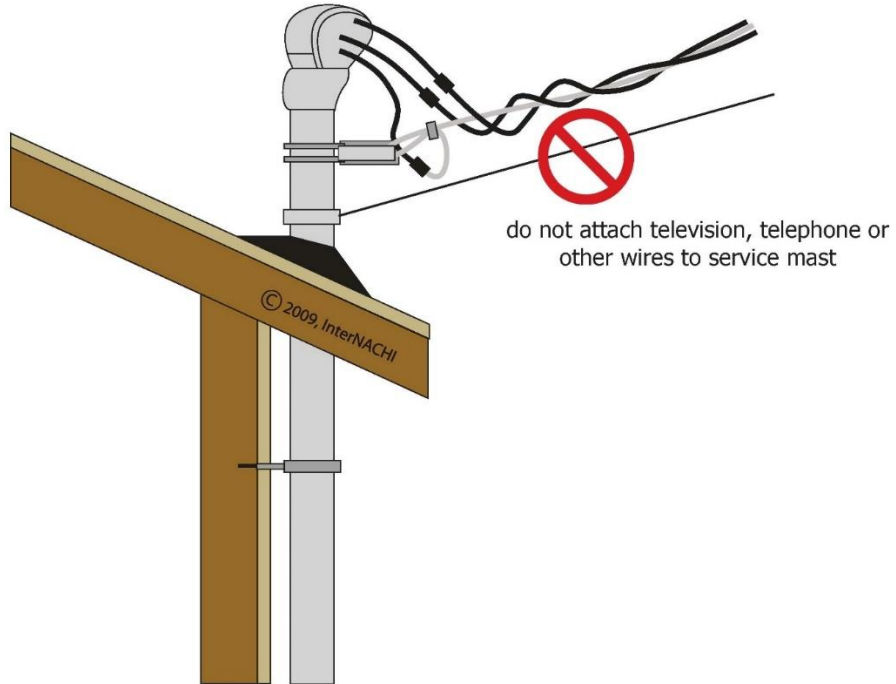
### **Drip Loop**



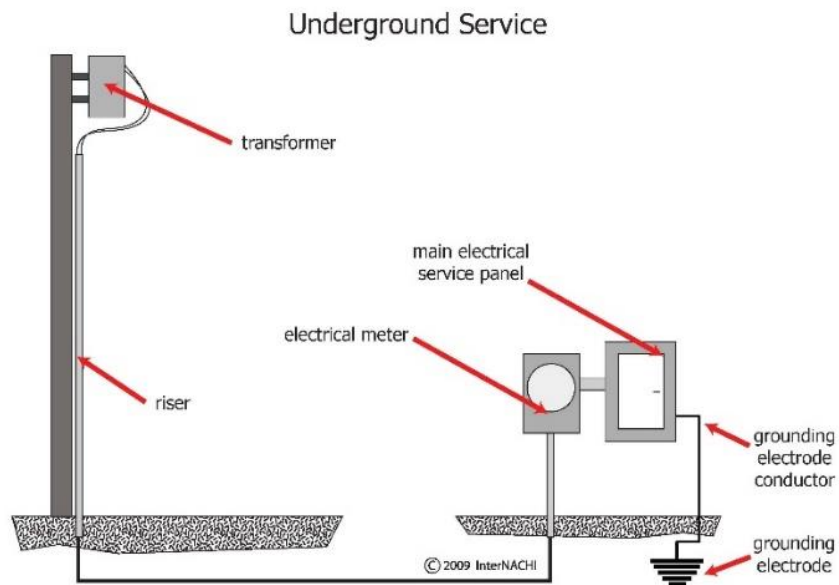
### Service Entrance Mast



### Service Mast Support



Newer homes and newer sub-divisions have underground service that feeds a “box” that feeds the house.



## Miscellaneous electrical issues

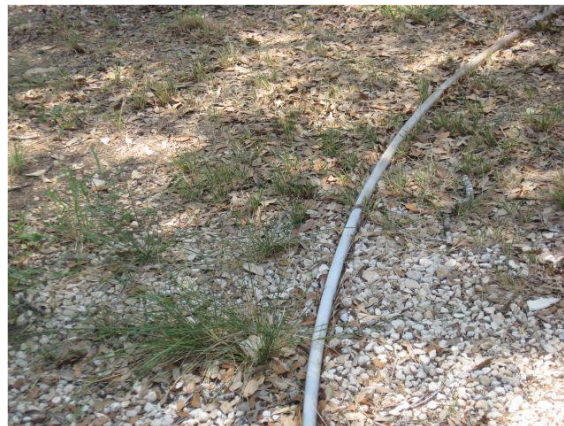
### Extension Cord through an Exterior Wall



**Exterior Receptacle not Protected**



**Conduit on top of Ground – Safety Issue as Wire Could be Pulled and Trip Hazard**



**Another Extension Cord and Receptacle not Protected**

