

## 2.0 RESIDENTIAL SERVICE REQUIREMENTS

For the purposes of this book, residential service is defined as an individual residence, apartment, mobile home or living unit used for domestic purposes.

Non-diversified continuous load cannot exceed 800 amps of true load for single phase service. For loads larger than 800 amps, a 120/208V or 277/480V 3 phase service is required. All service meters must be located on outside of building.

### 2.1 RESIDENTIAL SERVICE CUSTOMER CHECKLIST

Avista has provided this checklist for the residential customer to assure that all customer work has been completed before Avista comes to connect the service.

#### OVERHEAD SERVICE

- Avista has agreed with the proposed location of service entrance and meter location. (i.e. meter location with meter 4' to 6' up from the ground (See **Service Location**).
- A service agreement with Avista has been signed by customer and returned with payment.
- An insulated strike knob on the mast or two-bolt strike plate on the house has been installed 8" below the weather head and 24" of extra wire has been left hanging out of the weather head for utility connection. Strike plate shall be installed on the source side of the service entrance mast. Neutral wire extending from weather head has been taped with white tape for identification.
- Service entrance has been inspected and passed by the State or City Electrical Inspector.
- Avista has approved the mast height. If the mast is 24" above the roof, or the distance from the building to the Avista pole exceeds 100', or the distance from the meter pole to the Avista pole exceeds 125', then a back guy on the mast or meter pole is required.
- Treated 8"x8" wood permanent meter pole was approved by Avista for this application before it was installed and meets all requirements and must be truck accessible. Metal poles/structures are not allowed.
- AIC rating of service equipment has been verified to be adequate to handle the available fault current from the supply transformer with the reduction due to the conductor size and length added in to the total.

#### UNDERGROUND SERVICE

- Avista has approved the proposed location of service entrance and meter location (See Service Location).
- A service agreement with Avista has been signed by customer and returned with payment.
- A locate request has been called into the National One Call center (#811) at least 2 business days before digging is scheduled to begin.
- Location of transformer and ditch route has been approved by Avista prior to digging.
- Poly pulling string has been installed into conduit by customer and all conduit joints have been glued and proper sized sweeps have been installed on conduit ends (**Section 1.21.4** of handbook) and all conduit that exits the ground is schedule 80.
- Ditch and conduit have been inspected by Avista for proper depth and placement of conduit including sand bedding (if needed) BEFORE backfilling ditch.

- Service entrance has been inspected and passed by State or City Electrical Inspector.
- AIC rating of service equipment has been verified to be adequate to handle the available fault current from the supply transformer with the reduction due to the conductor size and length added in to the total.

## **2.2 OVERHEAD SERVICE**

### **2.2.1 Point of Delivery**

The point of delivery for self contained metering is at the ends of the service entrance conductor extending from the mast head. An extra 24" of wire must extend beyond weather head for utility connection and neutral wire must be taped in white tape or marked by factory stripe.

### **2.2.2 Service Mast**

Service on the gable end of the house must have the meter and attachment point on the gable end. Meters on metal structures or on buildings with metal roofs, are to be placed on the gable end of the structure to protect them from ice and snow from the roof.

Avista will no longer attach to a customer provided steel "Dead Mast" or "Roof Horse". Other options will need to be considered when trying to lift an overhead service wire over a shop or garage. Contact your local Avista representative before construction.

Services on buildings without metal roofs not on the gable end of the house or building must be mast-type extending through the roof. Roof masts must be within 30" of the roof's edge. Services under the eaves of sloping roofs are only allowed by special permission and must meet all requirements for service and meter protection as well as meet all clearance requirements (services terminating under the eaves of metal roofs are not allowed anytime).

Masts extending through metal roofs must be protected from sliding snow & ice by back guying, mast with guy kit, strut or by building a "Roof Cricket (similar to a chimney cricket) above the mast with the minimum dimensions of 16" high by 24" wide by 28" deep.

There shall be no conduit bodies or junction boxes (condulets, LBs, etc) between the customer-owned weatherhead and the Avista-owned meter. Field sweeps are permissible.

For flush-mount meter enclosures, rigid or intermediate metal conduit must be used between the Avista-owned meter and the customer-owned weatherhead. Service conductors are not allowed to traverse through any interior space apart from flush-mount meter applications.

### **2.2.2B Service Mast Cont.**

Electric meters that are under the eaves of buildings with metal roofs must have protection from sliding snow & ice. Extended soffit must provide at least 18" of overhang to protect the meter. Metal roof snow brakes or mini roofs attached to the wall above the electric meter and cantilevered over the electric meter are not adequate protection.

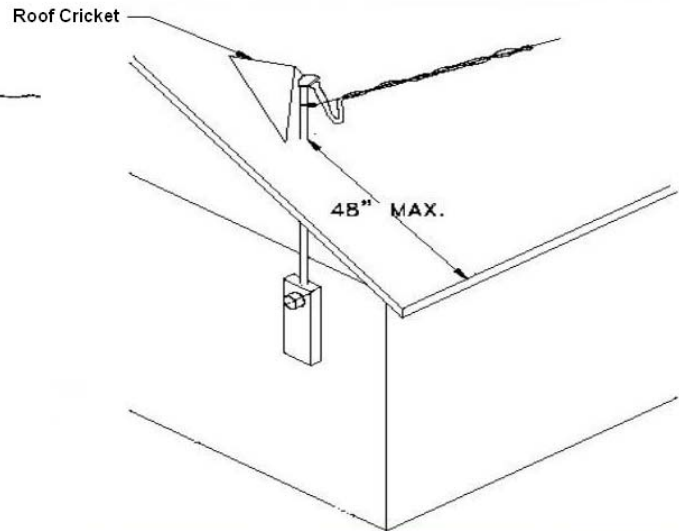
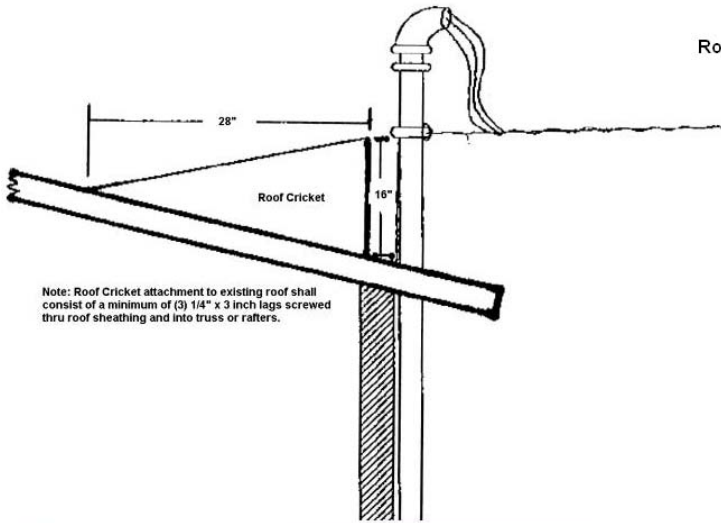
Adequate protection consists of either:

1. A "Roof Cricket" (similar to a chimney cricket with a minimum dimension of 16" high by 24" wide by 28" deep) built just above the mast.
2. Extension of existing roof overhang to 36" by 48" wide over the electric meter.
3. Small gable roof (not shed roof) 24" by 24", 8 inches above the electric meter attached to the wall and being supported at all 4 corners by 4"X4" commercially treated posts sunk into the ground 18" embedded in concrete.

Note: "Roof Cricket" is to be 24" wide to protect the meter below the roof and needs to be lagged through the roof sheathing and into a roof framing member. Service mast extending through roof shall not extend more than 6' above roof without preapproval by Avista representative.

Service mast must be a horizontal distance of 15' (minimum) from the source. This applies to both temporary and permanent overhead services.

### Roof Cricket:



Snow Splitter constructed out of sheet metal are an alternative to Roof Crickets when only the mast needs to be protected.

**Figure- 10- Roof Cricket**

### 2.2.3 Multiple Masts

Avista will connect the service entrance conductors from up to three masts and supply them with a single set of service drop conductors. Group multiple masts together within no more than 24" of one another. Extend service entrance conductor from each mast to a common point near the service drop attachment. Avista will normally make the connections between customer and utility conductors unless size and/or number of conductor prevent this. Check with Avista for approval.

### 2.2.4 Anchor Point

All service entrances must be located so that the utility service drop can be anchored to the building at only one point. These anchoring points must meet Avista strength and height requirements. The strength needed will depend on the service drop conductor size and number. Guying may be required on a roof mast used as the anchor point. Contact Avista for information.

Overhead service drops will be run and attached to the anchor point by Avista. The anchor point is furnished and installed by the customer or their electrician.