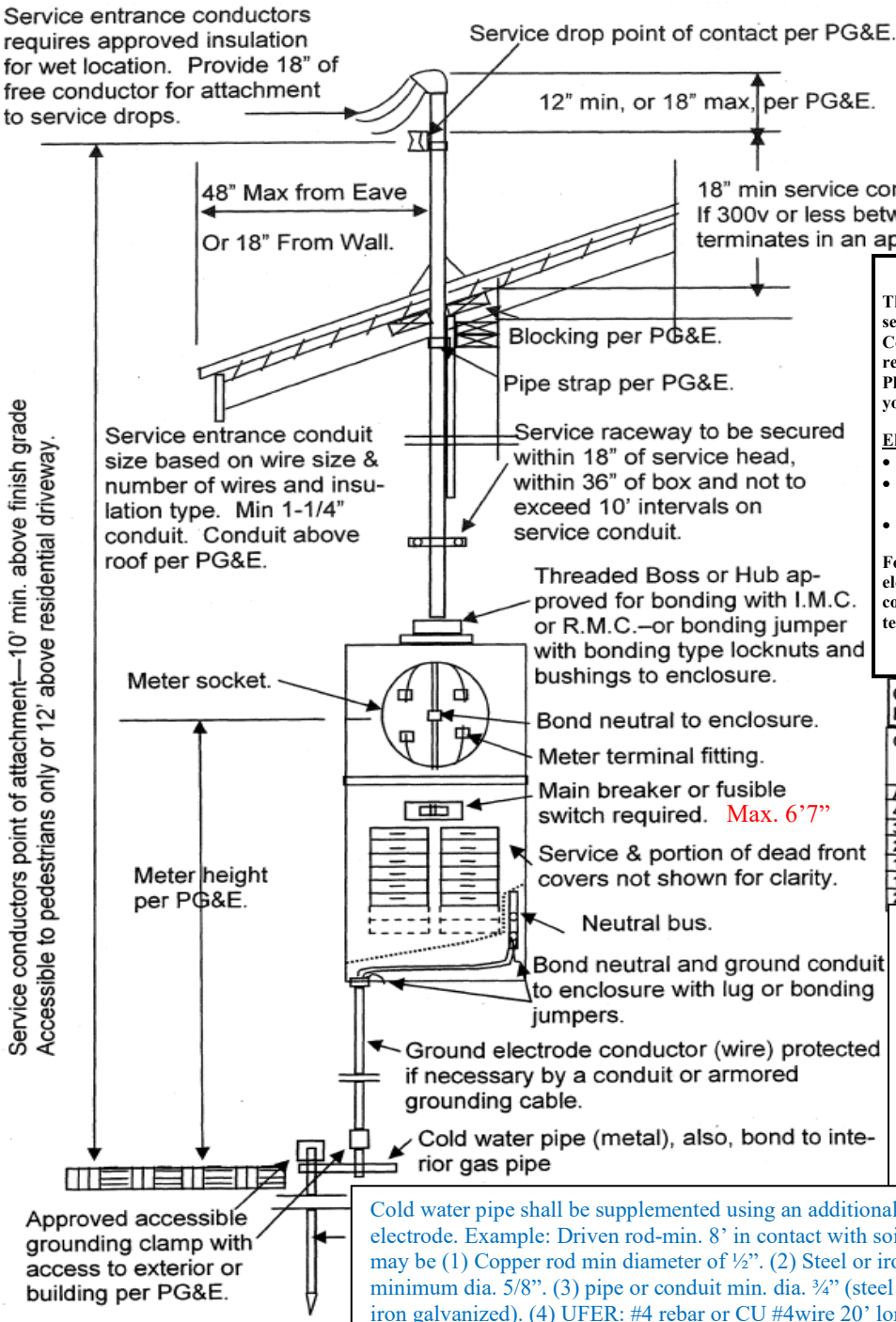
NEVADA COUNTY CALIFORNIA

COMMUNITY DEVELOPMENT AGENCY
BUILDING DEPARTMENT
PO Box 599002, 950 Maidu Ave Ste 170, Nevada City, CA 95959
Phone: (530) 265-1222 Email:buildingdept@nevadacountyca.gov
Web: nevadacountyca.gov/1114

Residential Service Entrance / Main / Sub-Panel Directive
Less Than 5,000 Foot Elevation



General Notes

This illustration is intended to show basic residential electrical service installation requirements per the California Electrical Code. This illustration is not all inclusive and additional requirements may apply to your service installation project. Please consult with the Building Department prior to starting your electrical installation.

Electrical Service Working Clearance:

- **30" minimum wide in front**
- **36" minimum clear depth in front (42" to conductive material and 48" to live parts)**
- **78" minimum clear height**

For underground service requirements consult with your electrical service provider. Services, switches, panel boards, conduits, etc shall be of a type approved by an authorized testing/listing agency (Underwriter Laboratory, etc).

CONDUCTOR TYPES, SIZES & CONDUIT
RH-RHH-RHW-THW-THWN-THHN-XHHW

COPPER	ALUMINUM COPPER-CLAD AL	SERVICES RATING IN AMP	CONDUIT SIZE. 3 COND.
AWG	AWG		THW
4	2	100	1 1/4" MIN
3	1	110	1 1/4"
2	1/0	125	1 1/4"
1	2/0	150	1 1/4"
1/0	3/0	175	1 1/2"
2/0	4/0	200	2"

Grounding Electrode Conductor / Water Bonding Jumper Table 250.66

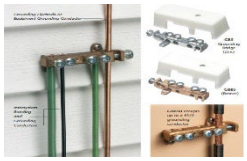
Largest Service Entrance Wire		Grounding and Bonding Conductor	
Copper	Alum.	Copper	Aluminum
2 or smaller	1/0 or smaller	8	6
1 or 1/0	2/0 or 3/0	6	4
2/0 or 3/0	4/0 or 250	4	1/0

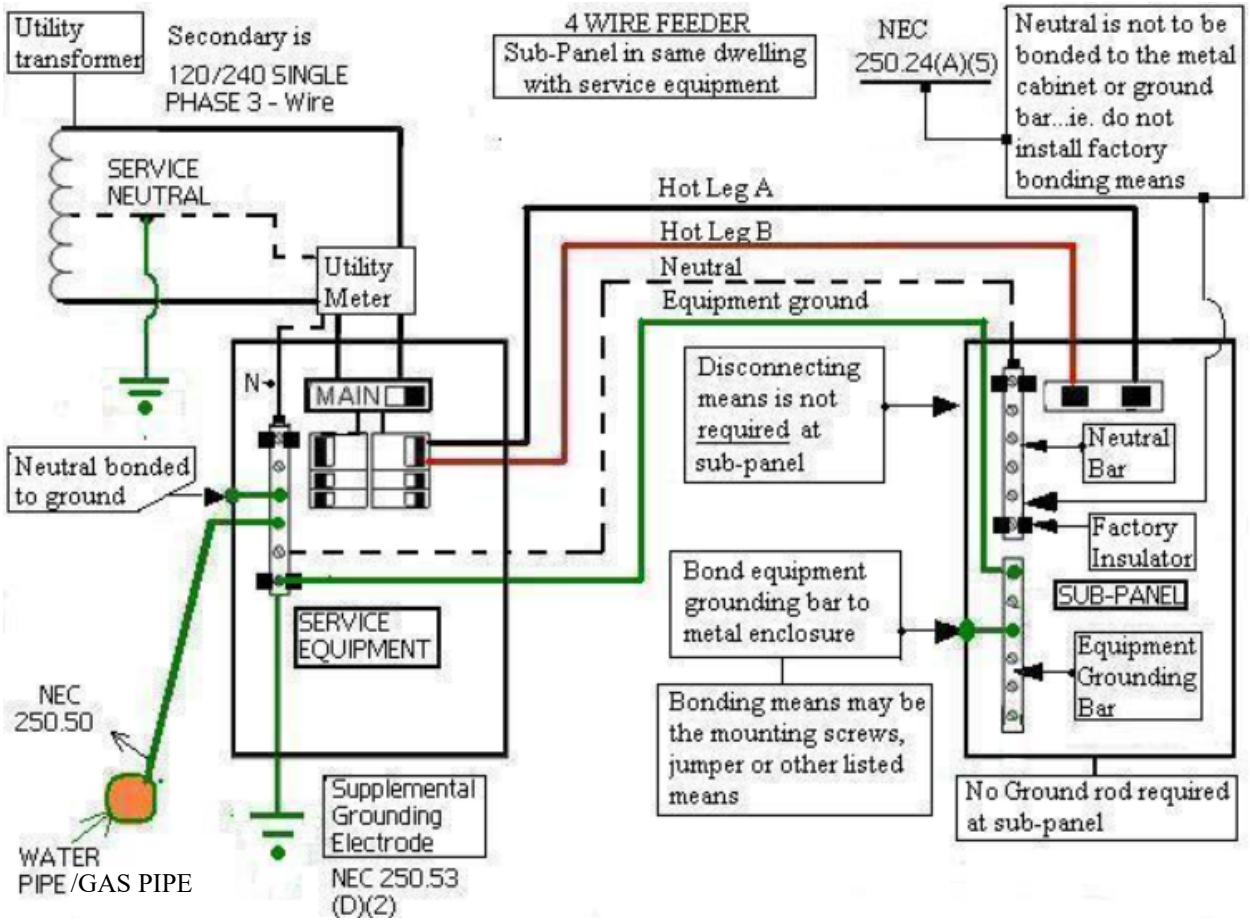
Cold water pipe shall be supplemented using an additional electrode. Example: Driven rod-min. 8' in contact with soil, may be (1) Copper rod min diameter of ½". (2) Steel or iron-minimum dia. 5/8". (3) pipe or conduit min. dia. ¾" (steel or iron galvanized). (4) UFER: #4 rebar or CU #4wire 20' long 2" minimum from bottom of foundation.

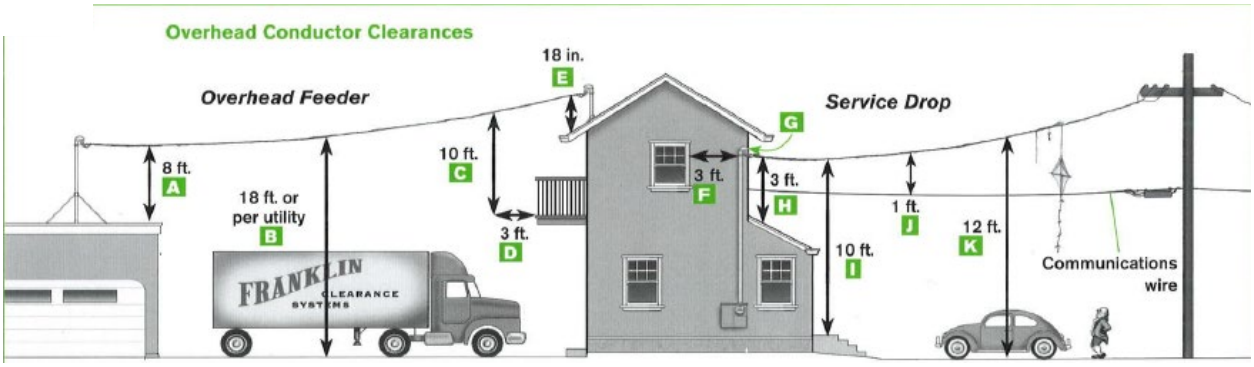
Minimum Size Equipment Grounding Conductor Table 250.122

Breaker	Copper	Aluminum
15	14	12
20	12	10
30/60	10	8
100	8	6
200	6	4
300/400	4/2	3/1

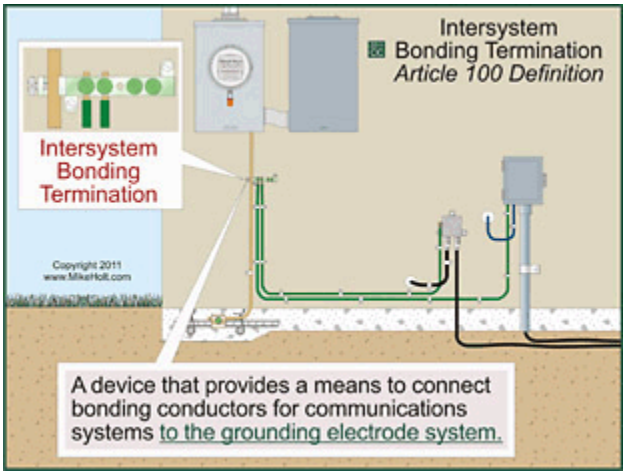
Intersystem bonding termination required with minimum 3 available bonding connections per CEC 250.94







ELECTRICAL SERVICE INSPECTION



1. *408.54 ---------- Maximum number of overcurrent devices*
2. *300---------- Conduits adequately supported*
3. *314.40(D)------ Ground fittings/bushings completed*
4. *Manuf. --------- Lug torque per manufacturer installation instructions*
5. *110.14 ---------- Assure all connections are tight*
6. *110.26 ————- Proper location & clearance of panel*
7. *230.70(A)(1)— Readily accessible location*
8. *200.6 ---------- Identify neutrals (white) and grounds (green)*
9. *250.28(B) ----- Panel bonding screw or jumper*
10. *310.15(B)(7)-- Service entrance conductor size (residential only)*
11. *250.8 ---------- Only approved lugs or screws for grounding or bonding*
12. *250.24 --------- Grounding electrode conductor connected to neutral buss*
13. ***250.53 --------- Two ground rods minimum 6' apart unless 25ohms or less of resistance is observed by inspector***
14. *250.104 ———- Bonding of gas / waterline*
15. *250.52---------- Required grounding electrode installed for main grounding of service*
16. *250.94 --------- Intersystem bonding busbar completed*
17. ***230.67--------- All services supplying dwelling units shall be provided with a surge protection device***
18. ***** One GFCI receptacle, one breaker, panel cover, grounding, bonding and one circuit min. completed for temp power service.*