

# RESIDENTIAL SERVICE

## STANDARD SERVICE SIZES

60 ampere	125 ampere
100 ampere	150 ampere
	200 ampere

## Typical Branch Circuit Design.

Maximum Load Ampere (A <sub>max</sub> )	Wire Size	Voltage	Max. Distance (D <sub>max</sub> )
12	14 AWG Copper	120	47'
12	14 AWG Copper	240	95'
16	12 AWG Copper	120	56'
16	12 AWG Copper	240	113'
24	10 AWG Copper	120	60'
24	10 AWG Copper	240	120'
40	8 AWG Copper	240	115'
52	6 AWG Copper	240	140'

(Interpolation between values permitted)

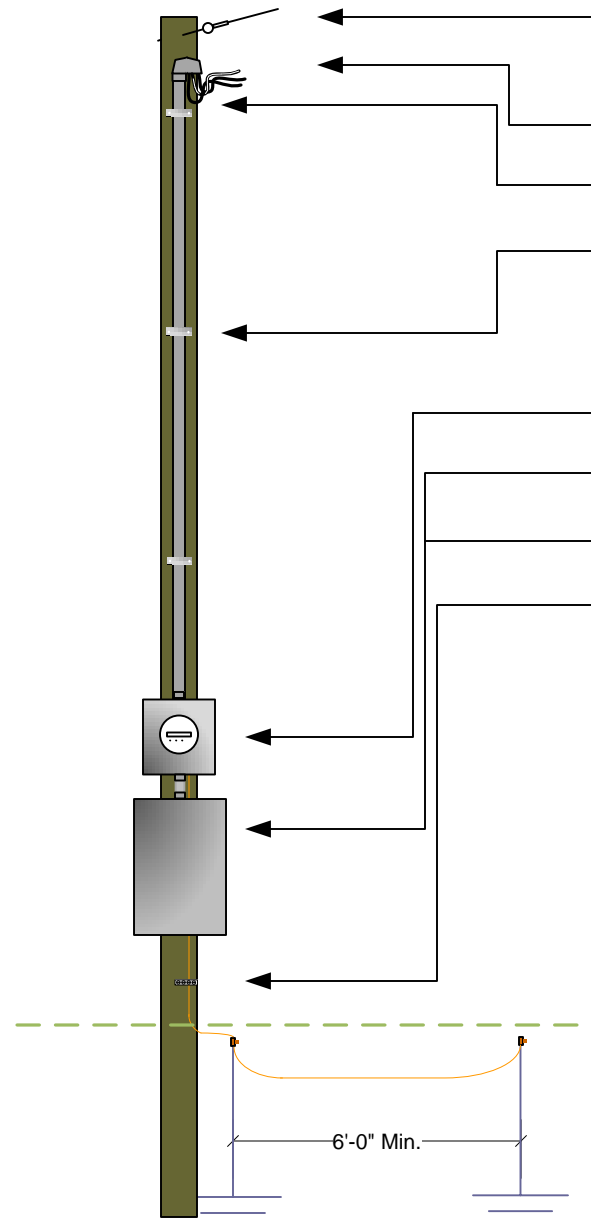
Example: 12 ampere on 14 AWG copper wire @ 120 volts max. distance 47'  
6 ampere on 14 AWG copper wire @ 120 volts max. distance ?'

$$\left( \frac{A_{max}}{A_{min}} \right) \times D_{max} = \left( \frac{12}{6} \right) \times 47' = 94'$$

## CONDUCTOR PROPERTIES (Based On NEC Table 310-16)

Copper	Ampacity	Aluminum	Ampacity
14	15	10	30
12	20	8	40
10	30	6	50
8	50	4	65
6	65	2	90
4	85	1/0	120
1	130	2/0	135
2/0	175	4/0	180

Ampacity size based on thhn, thwn, thhw, xhbw, thw-2 and use-2 insulation rated for 75 degrees Celsius.



Service drop must meet power company requirements.

Clay Electric: 1-800-224-4917

F.P.L: 1-800-226-6543

Weather Head (6 inches Min. from top of pole)

Drip Loop minimum 10 ft. from grade.

Service Riser must be secured in place. Straps must be placed within 3 ft. max. of the meter can and weather head. Straps must be evenly spaced not exceeding 4 ft.

Electrical Service must be constructed in compliance with National Electrical Code.

Meter Cabinet placed 5 1/2 ft. – 6 ft. above adjacent grade.

Main Panel

Main Disconnect

Intersystem Bond

Minimum Grounding electrode conductors:

#4 C.U. for 200 ampere service

#8 C.U. for 100 ampere service

Protective conduit required for grounding electrode conductors small than #6 AWG. Copper.

Service support (Pole) must be constructed to power company specifications.

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Circuits buried on property must be installed 24" below grade or located in electrical rated conduit installed 18" below grade. In all cases where conductors pass under a driving surface, conductors must be installed a minimum of 24" deep from grade.

Grounding grid must comply with National Electrical Code and must contain 2 grounding electrodes spaced a minimum of 6 ft. apart where additional grounding electrode systems are not present.

Underground service lateral to be constructed to power company specifications.

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All electric services developed in special flood hazard must be installed above Base Flood Elevation.

Service arrangement depicted is diagrammatic only.

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SCALE

1/4" = 1'