

# Development Services

## Building Safety and Inspection

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### Checklist for Residential Electric Vehicle Charging Stations

#### All forms are available at:

[http://www.elkgrovecity.org/city\\_hall/departments\\_divisions/building\\_safety\\_inspection\\_permits/forms\\_handouts\\_featured\\_articles](http://www.elkgrovecity.org/city_hall/departments_divisions/building_safety_inspection_permits/forms_handouts_featured_articles)

- Completed building permit application
- A site plan
- An electrical plan
- Equipment Manufacturer's Installation Instructions

#### Electronic Submittal Requirements

- Each required document listed above shall be submitted in separate PDF attachments
- Submit the PDF attachments to the Building Department Filedrop:

<http://share.elkgrovecity.org/filedrop/BuildingFileDrop>

#### **GENERAL REQUIREMENTS:**

Level of EV charging:

- Level 1 (120V)
- Level 2

(240V) Type of equipment being installed:

- NEMA 14-50
- NEMA 5-15
- NEMA 5-20
- Other \_\_\_\_\_

Equipment Overcurrent Protection Rating:

- 50A
- 15A
- 20A
- Other \_\_\_\_\_

Existing Electrical Service (If less than 150A, provide Electric Load Worksheet)

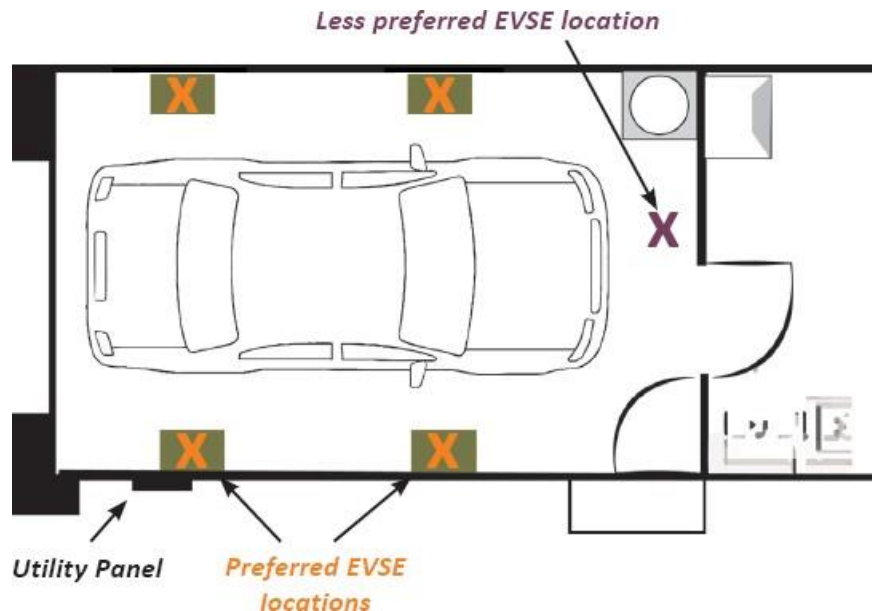
- 100A
- 125A
- 150A
- 200A

Branch Circuit Distance:

- 100 Feet or less
- More Than 100

Feet Conductor Size:

- #14 Cu
- #12 Cu
- #6 Cu
- Other \_\_\_\_\_



# Electric Load Worksheet

Address: \_\_\_\_\_ Date: \_\_\_\_\_

Main Electric Panel Service Size: Existing \_\_\_\_\_ (Amps) / New (if applicable) \_\_\_\_\_ (Amps)

Quantity of Existing Subpanels: \_\_\_\_\_ Quantity of New Subpanels: \_\_\_\_\_ Gas Furnace (Y/N) \_\_\_\_\_

Breaker Size(s) feeding subpanel(s)? \_\_\_\_\_ Wires Size(s) feeding subpanel(s)? \_\_\_\_\_

## A. Calculate Habitable<sup>1</sup> Square Footage

\_\_\_\_\_ (Existing S.F.) + \_\_\_\_\_ (New S.F., if any) = \_\_\_\_\_ Total Habitable<sup>1</sup> Square Footage

## B. Identify General Loads

General Lighting and Use Receptacles:	_____ Total Habitable <sup>1</sup> SF	x 3	= _____ total watts
Kitchen Small Appliance Branch Circuits:	_____ (Quantity, Min. 2)	x 1500	= _____ total watts
Bathroom Small Appliance Branch Circuits:	_____ (Quantity, Min. 1)	x 1500	= _____ total watts
Range:	_____ (Nameplate Rating)	x 1	= _____ total watts
Oven:	_____ (Nameplate Rating)	x 1	= _____ total watts
Water Heater:	_____ (Nameplate Rating)	x 1	= _____ total watts
Dishwasher:	_____ (Nameplate Rating)	x 1	= _____ total watts
Garbage Disposal:	_____ (Nameplate Rating)	x 1	= _____ total watts
Washer:	_____ (Nameplate Rating)	x 1	= _____ total watts
Dryer:	_____ (Nameplate Rating)	x 1	= _____ total watts
Total Subpanel Load <sup>2</sup> :	_____ (Combined Watts <sup>2</sup> )	x 1	= _____ total watts
Motor Loads:	_____ (Nameplate Rating)	x 1	= _____ total watts
Other Loads:	_____ (Nameplate Rating)	x 1	= _____ total watts

Add total watts together (from above) = \_\_\_\_\_ Total B

## C. Identify Largest of the Following Six Heating and Air Conditioning (HAC) Loads

Electric Thermal Storage:	_____ (Nameplate Rating)	x 1	= _____ total watts
Air Conditioning and Cooling:	_____ (Nameplate Rating)	x 1	= _____ total watts
Heat Pump (without any supplemental electric heating):	_____ (Nameplate Rating)	x 1	= _____ total watts
3 or Less (Separately Controlled) Electric Space Heating Units:	_____ (Nameplate Rating)	x 0.65	= _____ total watts
4 or more (Separately Controlled) Electric Space Heating Units:	_____ (Nameplate Rating)	x 0.40	= _____ total watts
Central Electric Space Heating System <sup>3</sup> :	_____ (Combined Nameplate Rating <sup>3</sup> )		= _____ total watts

Enter single largest Heating and Air Conditioning Load (from above) = \_\_\_\_\_ Total C

## D. Calculate Total Service Load

$\frac{\text{Total B (from above)}}{\text{Total B (from above)}} - 10,000 \text{ watts} \times 0.40 + 10,000 \text{ watts} + \frac{\text{Total C (from above)}}{\text{Total C (from above)}} \div 240 = \text{_____ Total Amps}$

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
State License Number<sup>(if applicable)</sup>

<sup>1</sup>Habitable square footage includes the floor area for each floor, calculated from the outside dimensions of the dwelling unit. It does not include open porches, garages, or unused or unfinished spaces not adaptable for future use.

<sup>2</sup>Add all subpanel loads here that are not already included elsewhere on this form.

<sup>3</sup>For Central Electric Space Heating Systems, add 100% of the heat pump compressor's nameplate rating plus 65% of the supplemental electric heating's nameplate rating. If the heat pump compressor is prevented from operating at the same time as the supplementary heat, it does not need to be added to the supplementary heat for the total central space heating load.