LIVERMORE
CALIFORNIA

# RESIDENTIAL AND NON-RESIDENTIAL
# CHECKLIST FOR PERMITTING ELECTRIC VEHICLES
# AND ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE)

Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for a building permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for electric vehicle charging.

Upon this checklist being deemed complete, a permit shall be issued to the applicant. ***However, if it is determined that the installation might have a specific adverse impact on public health or safety, additional verification will be required before a permit can be issued.***

This checklist substantially follows the *"Plug-In Electric Vehicle Infrastructure Permitting Checklist"* contained in the *Governor's Office of Planning and Research "Zero Emission Vehicles in California: Community Readiness Guidebook"* and is purposed to augment the guidebook's checklist.

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|---|---|
| Job Address: | Permit No. |
| ☐ Single-Family ☐ Multi-Family (Apartment) ☐ Multi-Family (Condominium)<br>☐ Commercial (Single Business) ☐ Commercial (Multi-Businesses)<br>☐ Mixed-Use ☐ Public Right-of-Way | |
| Location and Number of EVSE to be Installed:<br>Garage _____ Parking Level(s) _____ Parking Lot _____ Street Curb _____ | |
| Description of Work: | |
| | |

| | |
|---|---|
| Applicant Name: | |
| Applicant Phone & email: | |
| Contractor Name: | License Number & Type: |

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| Contractor Phone & email: |
| Owner Name: |
| Owner Phone & Email: |

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|---|---|
| EVSE Charging Level: ☐ Level 1 (120V) ☐ Level 2 (240V) ☐ Level 3 (480V) | |
| Maximum Rating (Nameplate) of EV Service Equipment = _____ kW | |
| Voltage EVSE = _____ V | Manufacturer of EVSE: _____ |
| Mounting of EVSE: ☐ Wall Mount ☐ Pole Pedestal Mount ☐ Other _____ | |

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| System Voltage:<br>☐ 120/240V, 1ϕ, 3W ☐ 120/208V, 3ϕ, 4W ☐ 120/240V, 3ϕ, 4W<br>☐ 277/480V, 3ϕ, 4W ☐ Other _____ |
| Rating of Existing Main Electrical Service Equipment = _____ Amperes |
| Rating of Panel Supplying EVSE (if not directly from Main Service) = _____ Amps |
| Rating of Circuit for EVSE: _____ Amps / _____ Poles |
| AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ A.I.C.<br>*(or verify with Inspector in field)* |

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| Specify Either Connected, Calculated or Documented Demand Load of Existing Panel: |
| • Connected Load of Existing Panel Supplying EVSE = _____ Amps |
| • Calculated Load of Existing Panel Supplying EVSE = _____ Amps |
| • Demand Load of Existing Panel or Service Supplying EVSE = _____ Amps<br>*(Provide Demand Load Reading from Electric Utility)* |

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|---|
| Total Load (Existing plus EVSE Load) = _____ Amps |
| *For Single Family Dwellings, if Existing Load is not known by any of the above methods, then the Calculated Load may be estimated using the "Single-Family Residential Permitting Application Example" in the Governor's Office of Planning and Research "Zero Emission Vehicles in California: Community Readiness Guidebook" https://www.opr.ca.gov* |

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| EVSE Rating _____ Amps x 1.25 = _____ Amps = Minimum Ampacity of EVSE Conductor = # _____ AWG |
| For Single-Family: Size of Existing Service Conductors = # _____ AWG or kcmil<br>- or - : Size of Existing Feeder Conductor<br>Supplying EVSE Panel = # _____ AWG or kcmil<br>*(or Verify with Inspector in field)* |

I hereby acknowledge that the information presented is a true, correct representation of existing conditions at the job site, and that any causes for concern as to life-safety verifications may require further substantiation of information.

Signature of Permit Applicant: _____ Date: _____

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# Electric Vehicle Charging Stations

## Purpose

This handout summarizes the requirements for both residential and nonresidential Electric Vehicle Charging Stations (EVCS).

## Permits Required

### Residential/Duplex

- A Building Permit is required

### MultiFamily/Commercial/Industrial

- A Site Plan Design Review is required
- A Building Permit is required

## Plan Submittal Requirements

### Residential/Duplex

- An electrical plan is required (8.5''x 11''), include the following: See sample Plan (A) below
- Specify panel rating and location of the existing electrical service (example: 200 amp service panel)
- Indicate EV charging system load and circuit size‡
    - Provide disconnect within sight if EVCS is rated more than 60 Amps
- Specify level of EV charging (Level 1* or Level 2**)
- Provide Load calculations when the service panel rating is less than 200 Amps
- Provide manufacturers cut sheets/ installation instructions
- Indicate installation height is min 18'' indoors and min 24'' outdoors above floor/grade level
- Indicate if a second electric meter for EV charging will be installed

### MultiFamily/Commercial/Industrial

Site Plan Design Review

- Provide existing and proposed site plan including:
    - Location of proposed EVCS
    - Show parking and landscaping
- Provide manufacturers cut sheets
- Provide elevation plan or photo with dimensions

Building Permit

- Provide building and electrical plans
- Building footprints and landscaped areas
- Locations of existing and proposed EVCS, panelboard, and service equipment
- Provide accessibility features associated with proposed EVCS/2022 CBC 11B-812
- Provide single line diagram showing existing and added electrical loads with calculations‡
- Indicate levels of EV charging; three levels are allowed in commercial/industrial/ multi-family properties (*, **, †)

## Review Time

Included review time for the entitlement portion and the permit portion

City Hall
Permit Center

Community Development Department
1052 South Livermore Avenue
Livermore, CA 94550

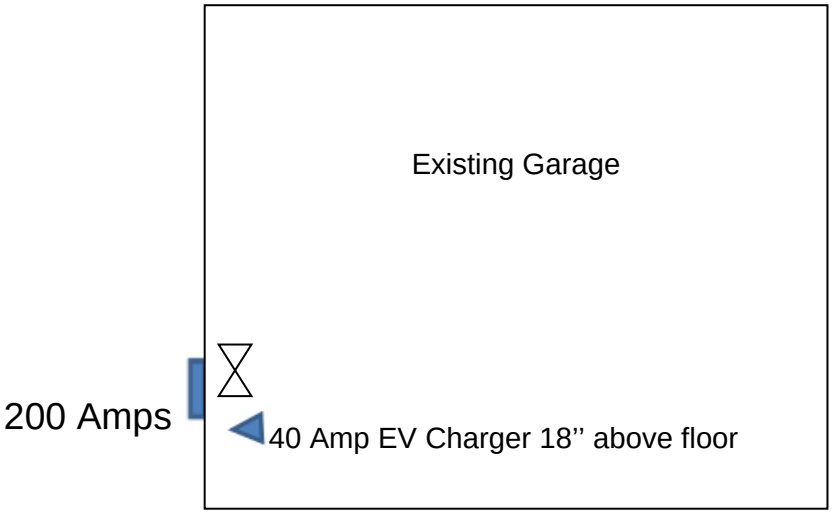
phone: (925) 960-4410 www.livermoreca.gov
fax: (925) 960-4419
CA Relay: Dial 711

## Additional Resources

*Level 1 - 120 VAC - This is regular household voltage. It can fully charge a depleted battery in six to 10 hours, depending on the vehicle model.
**Level 2 - 240 VAC - This voltage is the type that supports clothes dryers. It can fully charge a depleted battery in three to eight hours, depending on the vehicle model.

†Level 3 - 480 VAC or 208V three-phase - This is high voltage DC charging equipment that requires three-phase electric service. It can charge a depleted battery to roughly 80 percent of capacity in 30 minutes, depending on the vehicle model.
‡Calculated load of chargers are considered continuous loads. Overcurrent protection device shall have a rating of not less than 125% of the maximum load.

Residential Plan Sample




Sample plan (A)

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