



**City of San Ramon
Building and Safety Services**

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Electric Vehicle Charging Devices For Single-Family Homes

Permits are required for electric vehicle charging systems installed in a home. All work shall be in conformance with **Article 625 of the 2019 California Electric Code**. The City of San Ramon recommends that the homeowner hire a licensed electrical contractor* to provide a preliminary consultation and perform the installation. Before the permit is applied for, it is necessary to evaluate the home's electrical service to verify if it will be adequate for the new demands of the charging device. This is confirmed by completing the "load calculation" form attached. In some situations, the electric service panel will need to be upgraded to accommodate the new charger. An upgraded electric service panel will require an additional permit.

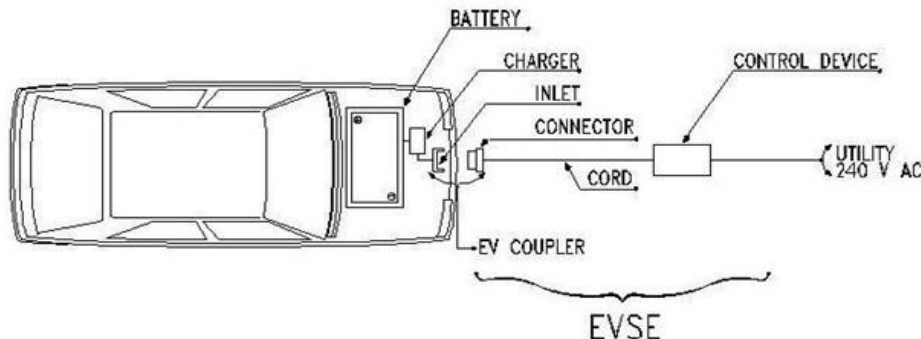
**Electrical contractors have a State of California contractor's license with the designation "C-10", as opposed to general contractors that have a "B" license. General contractors cannot pull permits for work that is primarily electrical unless there are unrelated trades in the project with carpentry as the primary trade.*

STEP 1: Determine the type of charging system to install. Either a **Level 1** charger that is 120 volts alternating current or a **Level 2** charger that is 240 volts alternating current.

STEP 2: Visit the Permit Center to obtain your permit. An electrical permit is required for an EV charging system to be installed. The following information is required for a permit:

- A site or floor plan identifying the location of the installation of the Electric Vehicle Supply Equipment (EVSE) and installation instructions from the manufacture.
- EV charging system information: Level 1 or 2 EVSE system with UL listed number or other approved nationally recognized testing laboratory, in compliance with UL2202.
- Completed load calculations worksheet per California Electrical Code Article 220, if the electric service panel is not adequate for the installation of the EVSE, additional permits will be required for an electrical service panel upgrade.
- Panel upgrade and electrical wiring shall be in conformance with 2019 California Electrical Code.
- Identify if a second electrical meter is required to be installed because of electric utility rate for EV charging.

EV Sample Charging System:



- STEP 3: Schedule an inspection and have the following on site for review:**
 - Inspectors Copy of Permit, Approved Plans, Installation Instructions and Electrical Load Calculations Worksheet** completed.
 - No work shall be concealed before it is inspected.**
 - All electrical conduit or wiring shall be installed and inspected** prior to concealing.
 - Electric disconnect for the EVSE shall be within sight** of charger or lockout tag installed on the breaker.
 - Contractor shall be present** at time of inspection with appropriate **torque wrench** to verify proper torque of all electrical connections and breakers.
 - Label EVSE Breaker** on Electrical Service Panel.

