



Checklist for 1 & 2 Family Residential Electric Vehicle Charging Station Article 625 – 2016 California Electrical code (CEC)

General Requirements:

Level 1 Charger:

- 110V dedicated 20 amp circuit
- No electrical plans required

Level 2 Charger:

- 220V dedicated circuit
- Cut sheets for equipment are required
- Load calculations are required
 - If installing an EVSE (electric vehicle supply equipment) that is listed with a cord/plug connection, then only the cut sheets and the load calculations need to be provided.
 - If installing an EVSE that is hardwired with or without a time of use meter then all of the following are required:
 1. Equipment cut sheets.
 2. Load calculations (complete load calculations worksheet).
 3. Single line diagram (show the service size, EV breaker size, EV conductor size, number of conductors, EVSE, time of use meter (if applicable)).

If the scope of work only includes installing a time of use meter for an existing EVSE then no plans are required. Verify that the original EVSE installation was permitted.

Specific Requirements:

Check One	Type of Charging Station(s) Proposed	Power Levels (proposed circuit rating)
<input type="checkbox"/>	Level 1	110/120 volt alternating current (VAC) at 15 or 20 Amps
<input type="checkbox"/>	Level 2 - 3.3 kilowatt (kW) (low)	208/240 VAC at 20 or 30 Amps
<input type="checkbox"/>	Level 2 – 7.2kW (medium)	208/240 VAC at 40 Amps
<input type="checkbox"/>	Level 2 – 10kW (high)	208/240 VAC at 50 Amps
<input type="checkbox"/>	Level 2 - 19.2kW (highest)	208/240 VAC at 100 Amps
<input type="checkbox"/>	Other (provide detail)	

PERMIT APPLICATION REQUIREMENTS

- 1) Is the permit application complete with the following information: Project address, parcel #, builder/owner name, contractor name, valid contractor license #, phone numbers and any other requirement? Yes No
- 2) Does the application include electric vehicle charging station model number, manufacturer's specs and installation guidelines? Yes No

ELECTRICAL LOAD CALCULATION WORKSHEET

- 1) Is an electrical load calculation worksheet included? (Article 220 2016 CEC) Yes No
- 2) Based on the load calculation worksheet, is a new electrical service panel upgrade required? Yes No
 - a. If yes to Q2, do plans include the electrical service panel upgrade? Yes No
 - b. If yes to Q2, has the Healdsburg Electric Department reviewed and approved the installation and confirmed the necessary utility work? Yes No
- 3) Is the charging circuit appropriately sized for a continuous load? Overcurrent protection for circuits supplying electric vehicle supply equipment shall be sized for continuous duty and shall have a rating of not less than 125% of the maximum load of the EVSE (i.e. if the maximum load of the charger is 40A then a 50A breaker is required). Yes No

SITE PLAN & SINGLE LINE DRAWING

- 1) Is a site plan and electrical plan with a single-line diagram included with the permit application? Yes No Not Applicable

- a. If mechanical ventilation requirements are triggered for indoor venting requirements (CEC 625.29 (D)), is a mechanical plan included with the permit application? Yes No
- 2) Is the site plan fully dimensioned and drawn to scale? Yes No Not Applicable
 - a. Showing location, size, and use of all structures? Yes No
 - b. Showing location of electrical panel to charging system? Yes No
 - c. Showing type of charging system and mounting? Yes No
 - d. Is the type of mounting for charging system included if the charging system is not wall-mounted? Yes No Not Applicable

COMPLIANCE WITH 2016 CALIFORNIA ELECTRICAL CODE

- 1) Does the plan include EVCS manufacturer's specs and installation guidelines? Yes No
- 2) Does the electrical plan identify the amperage and location of existing electrical service panel?
Yes No
 - a. If yes to Q2, does the existing panel schedule show room for additional breakers?
Yes No
 - b. Are sizes for the conduit and conductor included? Yes No
- 3) Is the charging unit rated more than 60 amps or more than 150V to ground? Yes No
 - a. If yes to Q3, are disconnecting means provided in a readily accessible location in line of site and within 50' of EVCS? (CEC 625.23) Yes No
- 4) Does the charging equipment have a Nationally Recognized Testing Laboratory (NRTL) approved listing mark? (UL 2202/UL 2200) Yes No
- 5) If trenching is required, is the trenching detail called out? Yes No
 - a. Is the trenching in compliance with electrical feeder requirements from structure to structure? (CEC 225) Yes No
 - b. Is the trenching in compliance of minimum cover requirements for wiring methods or circuits? (18" min. cover over conduit per CEC 300) Yes No

COMPLIANCE WITH 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

- 1) Do CAL Green EV Readiness installation requirements apply to this project? (Is this a new construction of a one-family or two family dwelling?) Yes No
 - a. If yes to Q1, each dwelling must install a listed raceway to accommodate a dedicated 208/240-volt branch circuit in accordance with section 4.106.4.

NOTES:

STATEMENT OF COMPLIANCE

By my signature, I attest that the information provided is true and accurate.

Job Address: _____

Signature: _____ Date: _____

In addition to this document, you will also need to provide a copy of the manufacturer’s installation literature and specifications for the Level 2 charger you are installing.

Note: This is a voluntary compliance alternative and you may wish to hire a qualified individual or company to perform a thorough evaluation of your electrical service capacity in lieu of this alternative methodology. Use of this electrical load calculation estimate methodology is at the user’s risk and carries no implied guarantee of accuracy. Users of this methodology and these forms are advised to seek professional assistance in determining the electrical capacity of a service panel.

