



Checklist for Non-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. Site plan (show structures, service, EVSE, and (N) meter if applicable).
 4. 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)	Typical NON-RES Charging Locations
<input type="checkbox"/>	Level 1	110/120 volt alternating current (VAC) at 15 or 20 Amps	Commercial office building
<input type="checkbox"/>	Level 2 - 3.3kW (low)	208/240 VAC at 20 or 30 Amps	Commercial office building Public access
<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"/>	DC Fast Charging	440 or 480 VAC	Public access Large commercial office buildings or parks Hospitality & recreation
<input type="checkbox"/>	Other (provide detail)		

PERMIT APPLICATION

- 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 of 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
- 4) If charging equipment proposed is a DC Fast Charging station or a Level 2 - 10kW station with a circuit rating of 50 amps or higher, is a completed circuit card with electrical calculations included with the single-line diagram? Yes No Not Applicable

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
 - 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" – 24" min. coverage per CEC 300) Yes No
- 6) Has physical protection or bollards been installed to prevent vehicle impact to equipment? (CEC 110.27 (B)) Yes No Not Applicable
- 7) Has the equipment been mounted with the appropriate vertical clearance at a height of 18-48 inches above the finished floor? (CEC 625.50) Yes No Not Applicable
- 8) Has a disconnect been installed in a readily accessible location for EVCS system that is rated more than 60 amps or more than 150 Volts to ground? (CEC 625.23) Yes No
 - a. Is the location of the disconnect in a readily accessible location in line of site and within 50' of the EVCS? Yes No
 - b. Are main service disconnects installed per CEC 230.71, 72? Yes No
 - i. Are they grouped? Yes No
 - ii. Are there more than 6 disconnect sets in any group? Yes No

COMPLIANCE WITH 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

- 1) Do CAL Green EV Readiness installation requirements apply to this project? Yes No
- 2) Do the plans demonstrate conformance with CAL Green Table 5.105.5.3.3 (below) for the minimum required number of charging stations?

Table 5.105.5.3.3

Total Number of Actual Parking Spaces	Number of Required EV Charging Spaces
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 and over	6% of total (rounded up to the nearest whole number)

- 3) Do the construction plans comply with the design requirements set forth in CAL Green Table 5.106.5.3.1 for single charging spaces or 5.106.5.3.2 for multiple charging stations?

COMPLIANCE WITH 2016 CALIFORNIA BUILDING CODE, CHAPTER 11B ACCESSIBILITY REQUIREMENTS

- 1) Is there at least 1 EVCS parking stall that meets Chapter 11B accessibility dimension requirements for a van accessible parking space? Yes No
- 2) For parking stalls with 5 or more EVCS, does the number of EVCS stalls provided meet the requirements of Table 11B-228.3.2.1? Yes No
- 3) Do the construction plans comply with the design requirements set forth in 11B-812.1 through 11B-812.10 for accessible EVCS with regard to:
 - Operable Parts? Yes No
 - Vertical Clearance? Yes No
 - Accessible Routes? Yes No
 - Vehicle Spaces? Yes No
 - Access Aisle? Yes No
 - Identification Signs? Yes No
 - Surface Marking? Yes No
 - Electric Vehicle Charger? Yes No

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

