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# **COUNTY OF RIVERSIDE BUILDING AND SAFETY DEPARTMENT**

## **SUBMITTAL REQUIREMENTS AND GUIDELINES FOR EV CHARGE STATION**

The information provided in this document is general and intended as a guide only to offer basic information and guidance and is not intended to represent a complete determination of all codes requirements, laws, and ordinances governing this subject.

EV Charging Systems must be installed in accordance with manufacturer's installation instructions and in accordance with current codes, California Electrical Code (CEC) & current California Building Code (CBC). Wiring methods in Chapter 3 of the CEC must be applied to each installation.

### **GENERAL REQUIREMENTS:**

- 1-Complete the building permit application form.  
<https://rctlma.org/Portals/5/Applications/284-500 Master Online Application>
- 2-Attach copy of the manufacturer's installation instructions to each submittal.
- 3-The EVSE must be listed by a nationally recognized testing laboratory (NRTL). (i.e., UL) in compliance with UL 2202 "Standard for Electric Vehicle (EV) Charging System Equipment." (CEC 90.7).
- 4-Property information including the address of property and name, address, contact Phone Number of property owner; applicable codes; occupancy and type of Construction description and scope of work.
- 5-Provide a job specific site plan showing the location of the building, street, all charging stations, electric service and disconnects.
- 6-Include load calculations per CEC Article 220. Include the EV Unit in the Calculations.
- 7-The method of securing the charging station should be specified.
- 8-If a service replacement or upgrade is to be part of the application this should be specified and a separate permit will be required.

## **ELECTRICAL REQUIREMENTS:**

A single line diagram must be included in the submittal with the following information:

- Conductor types and sizes.
- Size of the over current device (circuit breaker) supplying the EVCS.
- Conduit size, type and location.
- The manufacturer and model of the charging stations.
- The size of the main electric panel, distribution panels (sub panels) and disconnects.
- Type charging station (Level 1,2, or 3).
- Number of chargers being installed and number of electric vehicles.
- Electrical Load Calculation Sheet: Provide size of the existing electrical panel, existing load on the panel, and proposed load/circuits from the electric vehicle charging system in order to determine if there is adequate capacity in the existing panel. (CEC 220).
- A lockable disconnect is required in a readily accessible location (CEC 625.23) for EV.
- Attachment detail for post/bollard installations where protection of electrical equipment is required.

## **DISABLED ACCESS GUIDELINE:**

EVCS are not considered parking spaces by the code. The accessibility provisions for parking spaces do not apply to EVCS. In addition, the required accessible parking spaces shall not double as required EVCS. 11B-208.1.

### **Required Number of Accessible EVCS**

Where EVCS are provided for public use or common use, accessible EVCS shall be provided in accordance with the table below. (11B-228.3.1) (11B-228.3.2) (11B-228.3.2.1)

## Electric Vehicle Charging Stations for Public Use and Common Use

Total Number of EVCS at a Facility <sup>1</sup>	Minimum Number (by type) of Accessible EVCS Required		
	Van Accessible	Standard Accessible	Ambulatory
1 to 4	1	0	0
5 to 25	1	1	0
26 to 50	1	1	1
51 to 75	1	2	2
76 to 100	1	3	3
101 and over	1, plus 1 for each 300, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100	3, plus 1 for each 50, or fraction thereof, over 100

1. Where an EV charger can simultaneously charge more than one vehicle, the number of EVCS provided shall be considered equivalent to the number of electric vehicles that can be simultaneously charged.

### **Existing Facilities**

Where new EVCS are added to a facility with existing EVCS, accessibility requirements shall apply only to the new EVCS installed. Alterations to existing EVCS shall comply with this section. (11B-228.3.1.1)

Where new EVCS are installed in facilities with existing EVCS, the "Total Number of EVCS at a Facility" in the table below shall include both existing and new EVCS. (11B-228.3.2.1)

### **Multiple EVCS Facilities on a Site**

Where EVCS are provided in more than one facility on a site, the number of accessible EVCS provided on the site shall be calculated according to the number required for each facility. (11B-228.3.2).

### **Public Housing Facilities**

In public housing facilities, EVCS intended for use by an EV owner or operator at their residence shall not be required to comply with accessibility requirements. (11B-228.3.2, Exception 2)

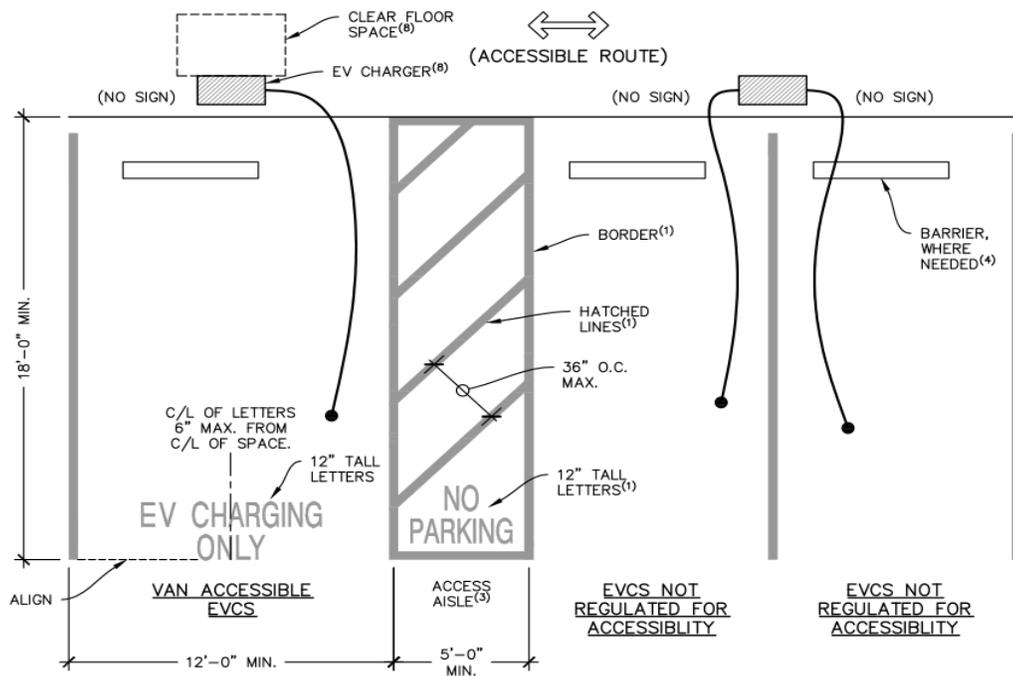
## EVCS Locations

Accessible EVCS that serve a particular building or facility shall be located on an accessible route to an accessible entrance. (11B-812.5.1) (11B-812.5.1)

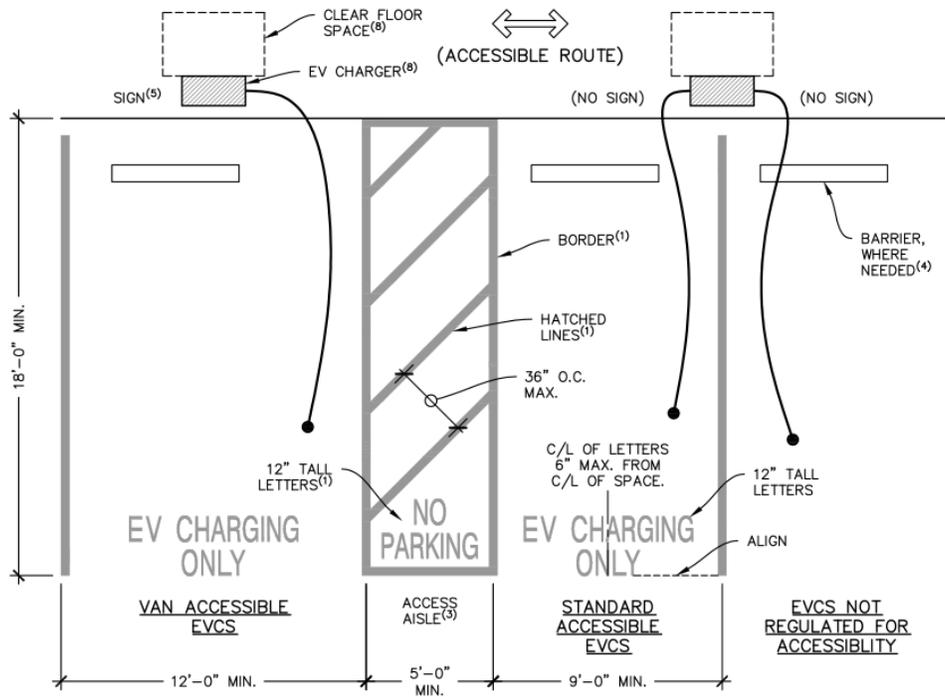
Where EVCS do not serve a particular building or facility, accessible EVCS shall be located on an accessible route to an accessible pedestrian entrance of the EV charging facility. (11B-812.5.1) (11B-812.5.1)

Vehicle spaces and access aisles shall be designed so that persons using them are not required to travel behind vehicle spaces or parking spaces other than the vehicle space in which their vehicle has been left to charge. (11B-812.5.4)

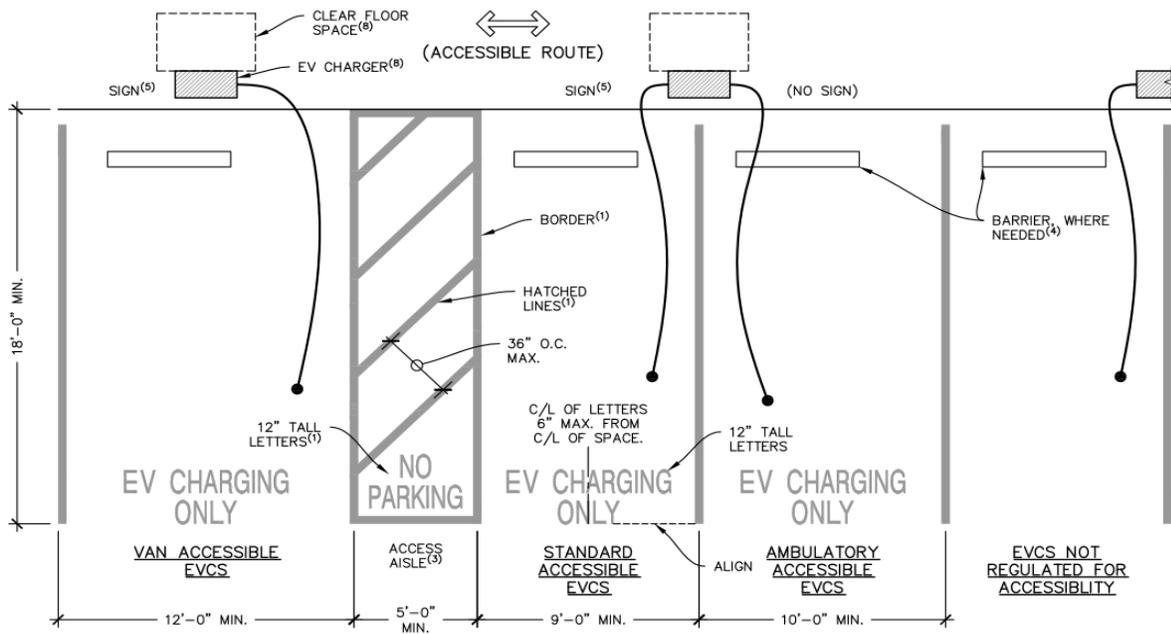
## EVCS Plan Examples



**ELECTRIC VEHICLE CHARGING STATION  
(1 - 4 SPACES)**



**ELECTRIC VEHICLE CHARGING STATION  
(5 - 25 SPACES)**



**ELECTRIC VEHICLE CHARGING STATION  
(26 - 50 SPACES)**

1. THE COLOR OF BORDER LINES, HATCHED LINES, AND LETTERS SHALL CONTRAST THE SURFACE OF THE ACCESS AISLE. THE BLUE COLOR REQUIRED FOR ACCESSIBLE PARKING SHALL NOT BE USED.
2. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE SPACE THEY SERVE. THE SLOPE OF VEHICLE SPACES AND ACCESS AISLES SHALL NOT EXCEED 1:48 (2%). CHANGES IN LEVEL AND DETECTABLE WARNINGS SHALL NOT BE PERMITTED IN VEHICLE SPACES AND ACCESS AISLES. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY.
3. ACCESS AISLES SHALL BE ON THE PASSENGER SIDE OF VAN ACCESSIBLE SPACES. ACCESS AISLES ARE PERMITTED ON EITHER SIDE OF STANDARD SPACES. ACCESS AISLES SHALL EXTEND THE FULL REQUIRED LENGTH OF THE SPACES THEY SERVE.
4. A CURB, WHEEL STOP, BOLLARDS, OR OTHER BARRIER SHALL BE PROVIDED IF REQUIRED TO PREVENT ENCROACHMENT OF VEHICLES OVER THE REQUIRED CLEAR WIDTH OF ACCESSIBLE ROUTES.
5. SIGNS SHALL BE PERMANENTLY POSTED EITHER IMMEDIATELY ADJACENT TO THE VEHICLE SPACE OR WITHIN THE PROJECTED VEHICLE SPACE WIDTH AT THE HEAD END OF THE VEHICLE SPACE. SIGNS MAY ALSO BE PERMANENTLY POSTED ON A WALL AT THE INTERIOR END OF THE VEHICLE SPACE.
6. WHERE VEHICLE SPACES AND ACCESS AISLES ARE MARKED WITH LINES, MEASUREMENTS SHALL BE MADE TO THE CENTERLINE OF THE MARKINGS. WHEN NOT ADJACENT TO ANOTHER VEHICLE SPACE, PARKING SPACE, OR ACCESS AISLE, MEASUREMENTS MAY INCLUDE THE FULL WIDTH OF THE MARKING.
7. VEHICLE SPACES, ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98" MINIMUM.
8. EV CHARGERS SHALL HAVE ACCESSIBLE OPERABLE PARTS.