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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. Specify manufacturer and provide manufacturer's equipment specifications for charging equipment on site.

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. For example, accessibility provisions in CBC 11B-228.3 where applicable to sites and facilities subject to Chapter 11B. A site plan is required for Multi-Family and Non-Residential sites. A site plan or a clear written description is adequate for other sites.

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.

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

Applicant Name:	
Applicant Phone & email:	
Contractor Name:	License Number & Type:
Contractor Phone & email:	
Owner Name:	
Owner Phone & email:	

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 _____	

System Voltage: ☐ 120/240V, 1ϕ, 3W ☐ 120/208V, 3ϕ, 4W ☐ 120/240V, 3ϕ, 4W ☐ 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. *(or verify with Inspector in field)*

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 *(Provide Demand Load Reading from Electric Utility)*
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 *See* ***Residential Electric Vehicle Load Calculator for Level 2 Charging*** *below.*

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

I hereby acknowledge that the information presented is a true and 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:_____

Residential Electric Vehicle Load Calculator for Level 2 Charging

INSTRUCTIONS: Review the list of electrical loads in the table below and check all that exist in your home (don't forget to include the proposed Level 2 charger). For each item checked, fill in the corresponding "Watts Used" (refer to the "Typical Usage" column for wattage information). Add up all the numbers that are written in the "Watts Used" column and write that number in the "TOTAL WATTS USED" box at the bottom of the table, then go to the next page to determine if your existing electric service will accommodate the new loads.

(Loads shown are rough estimates; actual loads may vary. For a more precise analysis, use the nameplate ratings for appliances and other loads and consult with a trained electrical professional.)

Check all Applicable Loads (☑)	Description of Load	Typical Usage	Watts Used
GENERAL LIGHTING AND RECEPTABLE OUTLET CIRCUITS			
	Multiply the square footage of house x 3	3 watts/sq. ft.	
KITCHEN CIRCUITS			
	Kitchen circuits	3,000 watts	
	Electric oven	2,000 watts	
	Electric stove top	5,000 watts	
	Microwave	1,500 watts	
	Garbage disposal under kitchen sink	1,000 watts	
	Automatic dish washer	3,500 watts	
	Garbage compactor	1,000 watts	
	Instantaneous hot water at sink	1,500 watts	
LAUNDRY CIRCUIT			
	Laundry circuit	1,500 watts	
	Electric clothes dryer	4,500 watts	
HEATING AND AIR CONDITIONING CIRCUITS			
	Central heating and air conditioning	6,000 watts	
	Window mounted air conditioning	1,000 watts	
	Whole-house or attic fan	500 watts	
	Central electric furnace	8,000 watts	
	Evaporative cooler	500 watts	
OTHER ELECTRICAL LOADS			
	Electric water heater (storage type)	4,000 watts	
	Electric tankless water heater	15,000 watts	
	Swimming pool or spa	3,500 watts	
ELECTRIC VEHICLE CHARGER CIRCUIT			
	Level 2 electric vehicle charger wattage rating		
		TOTAL WATTS USED	0

INSTRUCTIONS: Using the "TOTAL WATTS USED" number from the previous page, check the appropriate line in column 1 and follow that line across to determine the minimum required size of the electrical service panel shown in column 3. In column 4, write in the size of your existing service panel (main breaker size). If your existing service

panel (column 4) is smaller than the minimum required size of the existing service (column 3), then you will need to install a new upgraded electrical service panel to handle the added electrical load from the proposed Level 2 charger.

The table below is based on CEC 220.83(A), 230.42 and Annex D.

1	2	3	4
Check the appropriate line (☑)	**Total Watts Used (from previous page)**	**Minimum Required Size of Existing 240-Volt Electrical Service Panel (Main Service Breaker Size)**	**Identify the Size of Your Existing Main Service Breaker (Amps)****
☐	up to 48,000	100 amps	
☐	48,001 to 63,000	125 amps	
☐	63,001 to 78,000	150 amps	
☐	78,001 to 108,000	200 amps	
☐	108,001 to 123,000	225 amps	

********Note that the size of your existing service (column 4) MUST be equal to or larger than the Minimum Required Size (column 3) or a new larger electrical service panel will need to be installed in order to satisfy the electrical load demand of the EV charger.*

STATEMENT OF COMPLIANCE

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

Job Address: _____

(Print job address)

Signature: _____ _____

(Signature of applicant) (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.