



ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE) CHECKLIST FOR ONE- AND TWO- FAMILY DWELLING PROJECTS

CITY OF MANHATTAN BEACH COMMUNITY DEVELOPMENT

1400 Highland Avenue, Manhattan Beach, CA 90266

www.manhattanbeach.gov • plancheck@manhattanbeach.gov • (310) 802-5544

Code Cycle: 2022 California Code of Regulations Title 24

Scope of Work: Installation of Electric Vehicle Service Equipment (EVSE) serving single-family dwellings, duplexes, or two-unit condominiums.

1. Does the proposed EVSE serve a multi-residential (3 or more dwelling units), or non-residential use? * is required.
2. Does the proposed EVSE include removal or alteration to structural elements? * is required.

If both questions are answered “No,” an Electrical permit may be issued through our online [Citizen Self Service Portal \(CSS\)](#). Please complete and upload the *Electric Vehicle Service Equipment Checklist for One- and Two- Family Dwellings* in PDF format. The Checklist begins on page 3 of this handout. If either question is answered “Yes,” complete construction documents must be submitted for plan review.

EVSE Codes

- EVSE may not project into required parking space dimensions (width x length x height). ([MBMC 10.64.090](#))
- Exterior EVSE installations must be located in compliance with Zoning Code regulations. EVSE projection into setbacks must comply with [MBMC 10.60.040 K](#).
- EVSE installation must comply with the requirements contained in California Electrical Code (CEC) Article 625, *Electric Vehicle Charging System*
- Provide working space clearance for electrical equipment per CEC 110.26: 30” wide x 36” deep x 6’-6” high.
- Protect equipment operating above 50 volts against physical damage per CEC 110.27. Equipment must be located outside of the line of vehicle travel or provide bollards, wheel stops or other protective measures.
- NEMA-rated enclosure type for exterior installations (CEC 110.28)
- Separate electrical permits are required for service upgrades, new service, or new meters.
- EVSE listed by UL or other nationally-recognized testing laboratory
- Garage lighting to meet CEC 210-70
- For EVSE greater than 60 amperes or more than 150 volts to ground, a separate disconnect is required and should be installed concurrently with conduit and visible from the EVSE. (CEC 625.43)

- Pull wiring: charging stations require a neutral line and a ground line and equipment is considered to be a continuous load.
- Conductors should be sized to support 125% of the rated equipment load (CEC 625.41)

Construction documents required if plan check submittal is required:

- Site plan
- Fully dimensioned floor plan showing parking layout and proposed EVSE location
- Manufacturer's specification or cut sheet for EVSE.
- Plans shall show compliance with all EVSE Code items listed above.



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Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for an Electrical permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for EV charging.

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.

Electrical permits will be issued for one- and two-family residential EVSE projects with completed checklists that meet the criteria specified in the Residential EVSE handout. 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. Please refer to the Multi-Residential and Non-Residential EVSE handout for permit and plan check requirements for those project types. EVSE Applications are available online through the [Citizen Self-Service Portal \(CSS\)](#).

| | |
|---|---|
| Job Address: | Associated Building Permit No. (if any): |
| Location and Number of EVSE to be Installed: | |
| Interior of Garage _____ Exterior Parking Area (describe below) _____ Common Use Area _____ | |
| Description of Work: | |

CONTACTS

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

PROPERTY TYPE

| RESIDENTIAL | COMMERCIAL | OTHER |
|--|---|--------------------------------------|
| <input type="checkbox"/> Single-Family <input type="checkbox"/> Duplex/2 Unit Condominium <input type="checkbox"/> Multi-Family (Apartment) <input type="checkbox"/> Multi-Family (Condominium) | <input type="checkbox"/> Commercial (Single Business) <input type="checkbox"/> Commercial (Multi-Businesses) <input type="checkbox"/> Mixed-Use | <input type="checkbox"/> Other _____ |

EVSE SPECIFICATIONS

| <u>CHARGING LEVEL</u> | <u>MOUNTING TYPE</u> | |
|---|---|---|
| <input type="checkbox"/> Level 1 (120V) <input type="checkbox"/> Level 2 (240V) <input type="checkbox"/> Level 3 (480V) | <input type="checkbox"/> Wall Mount <input type="checkbox"/> Pole Pedestal Mount <input type="checkbox"/> Other _____ | Maximum Rating (Nameplate) EVSE = _____ Kw Voltage EVSE = _____ V Manufacturer: _____ |

SERVICE PANEL SPECIFICATIONS

| <u>SYSTEM VOLTAGE</u> | |
|--|--|
| <input type="checkbox"/> 120/240V, 1 ϕ , 3W <input type="checkbox"/> 120/208V, 3 ϕ , 4W <input type="checkbox"/> 120/240V, 3 ϕ , 4W <input type="checkbox"/> 277/480V, 3 ϕ , 4W <input type="checkbox"/> Other _____ | Existing Main Electrical Service Equipment Rating: _____ Amperes Panel Rating Supplying EVSE (if not direct from Main Service) = _____ Amps Circuit Rating for EVSE: _____ Amps / _____ Poles AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ AIC (or verify with Inspector on site) |

PANEL LOADS

Specify below the connected, calculated or documented demand load of existing panel (please select one)::

- 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>

CONNECTIONS

EVSE Rating _____ Amps x 1.25 = _____ Amps =

Minimum Ampacity of EVSE Conductor = # _____ AWG

For Single Family Dwellings:

Size of Existing Service Conductors = # _____ AWG or kcmil; **OR**

Size of Existing Feeder Conductor Supplying EVSE Panel = # _____ AWG or kcmil
(or verify with Inspector on site)

I hereby acknowledge that the information I have provided is correct and agree to comply with all City Ordinances, State Regulations, and the provisions and conditions of any permit issued pursuant to this application. I understand that inspection and approval by the City Building Inspector is required, and that any causes for concern as to life-safety verifications may require further substantiation of information. I also understand that the permit will expire if the building or work authorized is not commenced within 365 days from the date of permit issuance or if work is suspended or abandoned, any time after work is for a period of 180 days.

Signature of Permit Applicant: _____ Date: _____