Electric Vehicle Supply Equipment/Charger Inspection Checklist for the City of South Bend/St. Joseph County Building Department

Level Definitions

EV Charging Station Levels	VAC	Application
Level 1	120	Refers to using a standard EV charger household receptacle (NEMA 5-15 or NEMA 5-20). Level 1 could be considered in commercial applications such as for long-term parking/charging. Charger output is typically rated at 12-16 A.
Level 2	208/240	This voltage is the type that supports ovens and other large appliances. Can either be used with a receptacle (typically NEMA 14-50) or hardwired directly to the breaker (typically the safest option and enables the usage of 48-80 A chargers, assuming the available breakers are large enough). Charger output is typically rated at 12-80 A.
Level 3	480	Commercial properties only. Also called DC Fast Chargers, these chargers provide direct current (DC) electricity to the battery. Charger output is typically rated at 150-600 A.

MINIMUM ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) REQUIREMENTS

- Specifications of EVSE match the approved plans:
  - Maximum kW rating
  - Voltage
  - Ampacity
  - Manufacturer
  - NEMA enclosure type (indoor/outdoor)
- EVSE installed according to manufacturer's installation instructions
- EVSE is suitable for the environment in which it is installed (indoor and outdoor)
- EVSE has a Nationally Recognized Testing Laboratory (NRTL) approved listing mark (UL 2202/UL 2594)
- If EVSE with adjustable amperage setting is installed, equipment is fixed in place and adjusting means is accessible by qualified personnel with the use of a tool or password protected commissioning software
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LOCATION AND EVSE INSTALLATION REQUIREMENTS

- EVSE installation location matches approved floor plan
- Permanently installed EVSE are located at a height of:
  - Indoor location: 1.5 feet or more above floor level
  - Outdoor location: 2 feet or more above grade level
- Charging cord meets one of the following:
  - Does not exceed 25 feet in length
  - Is equipped with a cable management system that is part of the EVSE
- Charging cord length reaches the vehicle's charging inlet without excessive slack
- The EVSE is protected from vehicular impact through one of the following:
  - Installation in a location not subject to vehicular impact such as a side wall or 4 feet or more above floor level;
  - Wheel barriers;
  - Bollards; or
  - Other approved barrier

ELECTRICAL REQUIREMENTS

- For EVSE and 240V outlets installations, electrical service rating is greater than or equal to the electrical service load
- Overcurrent protection are the type and rating according to the approved plan
- For EVSE rated greater than 60 amperes or 150 volts, a disconnecting means is able to be locked in the open position and is located in an easily accessible location not protected by locked doors or other obstructions
- Circuits serving EVSE do not serve any other end uses
- Circuit conductors are the type and size according to the approved plan
- All electrical materials, devices, fittings, and associated equipment are listed and labeled
- Underground conduit meet minimum depth requirements according to the approved plan. Insulated conductors and cables are suitable for use in wet locations and protected from physical damage
- Portable and fastened-in-place EVSE are connected to the wiring system according to the approved plans
- Fixed EVSE are permanently wired and fixed in place to the supporting surface
- Receptacles have GFCI protection
- All receptacles installed in a wet location for EV charging have a weatherproof enclosure with the attachment plug cap inserted or removed. If an outlet box hood is installed, it is extra duty
- ADA Accessibility – When installing an EV charging station, consider the accessibility of the space. Refer to U.S. Access Board for best practices for design recommendations.
- Signage – consider signage to inform EV drivers of publicly accessible stations and deter non-EV drivers from blocking access to stations. Station signage can include post or wall-mounted signs, or pavement markings that are painted on the surface of a parking space. More guidance can be found here.
- Making a station searchable – once a charging station is installed, consider adding it to a charging station locator such as PlugShare or the Joint Office of Energy and Transportation.
- Additional EV resources and guidance can be found here.