

**Definitions:**

**Electric Vehicle (EV):** Any vehicle for on-road use that is powered by an electric motor which may utilize building electrical service as a fuel source.

**Electric Vehicle Supply Equipment (EVSE):** Electrical circuitry and equipment dedicated to EV charging including conductors, connectors, attachment accoutrements, personnel protection, power outlets, apparatus and equipment installed specifically for the purpose of transferring electricity from building to electric vehicle.

**Electric Vehicle Supply Equipment (EVSE) Installed Space:** A parking space provided with EVSE equipment for vehicle charging.

**EV Ready Space:** A parking space provided with an electrical circuit dedicated to EV charging. The circuit shall include a 240-volt outlet with 50 amps of maximum amperage located within 3 feet of the EV Ready parking space.

**EV Capable Space:** A parking space provided with electrical conduit or raceway to a junction box within 3 feet of the parking space. The raceway or conduit shall lead to an electrical panel with circuits dedicated and identified specifically for electric vehicle charging and sized for Level 2 charging.

**Section 8.9 Electric Vehicle Charging Facilities**

**8.9.1 Scoping.** In each location where parking is provided, the number of parking spaces equipped as EVSE-Installed, EV-Ready, and EV-Capable shall be provided in accordance with this section. Where more than one parking facility is provided on a site, EVSE-Installed, EV-Ready, and EV-Capable Spaces shall be calculated separately for each parking facility. Fractions shall be rounded up to the next higher whole number.

**8.9.1.1 Mixed occupancies and shared occupancies.** Where a parking facility is shared by multiple occupancies, the required number of electric vehicle charging facilities shall be provided in proportion to the gross building area of each occupancy classification.

**8.9.1.2 Installed Spaces Exceeding Minimums.** EVSE Installed spaces that exceed the minimum number of required EVSE Installed spaces may be used to satisfy requirements of EV-Ready and EV-Capable Spaces. Installed EV-Ready spaces that exceed the minimum number of required EV-Ready spaces may be used to satisfy requirements of EV-Capable Spaces.

**8.9.1.3 Identification.** EVSE Installed spaces shall be identified by permanent signage reading “Electric Vehicle Parking for Charging Only.” EVSE Ready spaces shall be identified by permanent signage reading “Electric Vehicle Parking Only.” Signs shall be installed at the head end of the designated parking stall and mounted such that the sign is between 60 inches and 66 inches above the parking surface. A permanent and visible label shall be posted in a conspicuous place at the service panel to identify each panel space reserved for future EVSE equipment as required for EV-Capable and EV-Ready spaces. Raceway termination points for EV-Capable and EV-Ready spaces shall be labeled as reserved for EVSE Equipment.

**8.9.2 Number of Dedicated parking stalls.** EVSE-Installed, EV-Ready Spaces and EV-Capable Spaces shall be provided in quantities in accordance with Table 8.9.2. Where the calculation of percent served results in a fractional parking space, it shall round up to the next whole number.

| Table 8.9.2<br>EVSE-Installed, EV-Ready and EV Capable Space Requirements <sup>1, 2</sup> |  |  |  |
|---|--|--|--|
| Use   | Minimum number or % of EVSE-Installed spaces | Minimum number or % of EV-Ready spaces | Minimum number or % of EV-Capable spaces |
| Commercial (Groups A, B, E, F, I-2, I-3, I-4, M, S)                                       | 3% EVSE Installed (50+ spaces)               | 15% EV-Ready                           | 7% EV- Capable                           |
| Multi-family (R-1, R-2, R-4, I-1)   | 5% EVSE Installed (20+ spaces)               | 15% EV-Ready                           | 15% EV-Capable                           |

Footnotes:

1. Parking spaces dedicated to commercial, or emergency vehicles are exempt. Parking for non-commercial vehicles at the facility are not exempt.
2. Parking serving mixed occupancies on the same property shall be provided with electric vehicle charging facilities as required and in proportion to the building area of each occupancy classification.

**8.9.3 EV Capable Spaces.** Each EV capable space used to meet the requirements of Section 8.9.2 shall comply with the following:

1. A continuous raceway or cable assembly shall be installed between a junction box or outlet located within 3 feet (914mm) of the EV capable space and electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with Section 8.9.6
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have dedicated space for an overcurrent protection device and electrical capacity to supply a calculated load in accordance with Section 8.9.6.
4. The junction box or outlet and the electrical distribution equipment directory shall be marked “For electric vehicle supply equipment (EVSE).”

**8.9.4 EV Ready Spaces.** Each branch circuit serving EV ready spaces used to meet the requirements of Section 8.9.2 shall comply with the following:

1. Terminate at an outlet located within 3 feet (914 mm) of each EV ready space it serves.
2. Have a minimum system and circuit capacity in accordance with 8.9.6.
3. The electrical distribution equipment directory shall designate the branch circuit as “For electric vehicle supply equipment (EVSE)” and the outlet or enclosure shall be marked “For electric vehicle supply equipment (EVSE).”

**8.9.5 EVSE Installed Spaces.** An installed EVSE with multiple output connections shall be permitted to serve multiple EVSE spaces. Each EVSE installed to meet the requirements of Section 8.9.2, serving either a single EVSE space or multiple EVSE spaces, shall comply with the following:

1. Have minimum system and circuit capacity in accordance with Section 8.9.6.
2. Have a nameplate rating not less than 6.2 kW.
3. Be located within 3 feet (914 mm) of each EVSE space it serves.
4. Be installed in accordance with the equipment manufacturers recommended instructions.

**8.9.6 System and circuit capacity.** The system and circuit capacity shall comply with this section.

**8.9.6.1 Circuits for electric vehicle charging.** The service panel shall provide sufficient capacity and space to accommodate the circuit and over-current protective device for each EVSE, EV-Ready and EV-Capable space. Circuits for EVSE, EV-Ready and EV-Capable spaces shall have no other outlets. Termination points for EV-Ready and EV-Capable spaces shall be located where proposed future equipment for such purposes is intended to be installed.

**8.9.6.2 System Capacity.** The electrical distribution equipment supplying the branch circuit(s) serving each EV capable space, EV ready space, and EVSE space shall have a calculated load of 7.2 kVA or the nameplate rating of the equipment whichever is larger, for each EV capable space, EV ready space, and EVSE Installed space.

**8.9.6.3 Circuit Capacity.** The branch circuit serving each EV capable space, EV ready space, and EVSE Installed space shall have a rated capacity not less than 40 amperes at 208/240-volt capacity or the nameplate rating of the equipment, whichever is larger.

**8.9.7 Accessibility.** Not fewer than 5% of the EVSE Installed spaces but not less than one shall be accessible. Not fewer than 5% of EVSE Ready Spaces but not less than one shall be accessible. Accessible vehicle spaces shall comply with the requirements for an accessible parking space where the EVSE is located at the head end of the access aisle.

Additional information and suggested model code language is available at:

[https://www.energycodes.gov/sites/default/files/2021-07/TechBrief\\_EV\\_Charging\\_July2021.pdf](https://www.energycodes.gov/sites/default/files/2021-07/TechBrief_EV_Charging_July2021.pdf)

[https://www.iccsafe.org/wp-content/uploads/21-20604\\_COMM\\_EV\\_Strategy\\_RPT\\_v5.pdf](https://www.iccsafe.org/wp-content/uploads/21-20604_COMM_EV_Strategy_RPT_v5.pdf)

EVSE Requirements from Other Midwest Jurisdictions

| EVSE-Installed, EV-Ready and EV Capable Space Requirements |   |   |  |
|--|---|---|--|
| Occupancy Classification                                   | Minimum number or % of EVSE-Installed spaces    | Minimum number or % of EVSE-Ready spaces        | Minimum number or % of EVSE-Capable spaces |
| Madison, WI- Commercial                                    | 1% EV- Installed (increase by 1% every 5 years) | 10% EV Ready (increase 10% every 5 years, 2021) | -  |
| Madison, WI- Multi-Family                                  | 2% EV- Installed                                | 5% EV Ready (increase 10% every 5 years, 2021)  | -  |
| Iowa- 2015 IECC, Holding                                   | -   | -   | -  |
| North Dakota   | -   | -   | -  |
| South Dakota   | -   | -   | -  |
| Michigan   | <b>10% EV- Installed</b>                        | <b>5% EV Ready</b>                              | <b>10% EV Capable</b>                      |
| Illinois (Chicago)- Commercial                             |   | 20% EV Ready @ 30+ spaces (2020)                |  |
| Illinois (Chicago)- Multifamily                            |   | 20% EV Ready @ 5+ spaces (2020)                 |  |
| Nebraska   | -   | -   | -  |
| Missouri (St Louis) Commercial                             | 2% EV- Installed                                | 5% EV Ready                                     |  |
| Missouri (St Louis) Multi-Family                           | 2% EV- Installed                                | 5% EV Ready (increases to 10% in 2025)          |  |
| Colorado (Denver) Commercial                               | 5% EV- Installed                                | 10% EV Ready                                    | 10% EV Capable                             |

**EVSE-Installed, EV-Ready and EV Capable Space Requirements**

|                                    |                  |              |  |
|------------------------------------|------------------|--------------|--|
| Colorado (Denver) Multi-family     | 5% EV- Installed | 15% EV Ready | 80% EV Capable   |
| Colorado (Lakewood) Commercial     | 2% EV- Installed | 13% EV Ready | 18% EV Capable (10+ spaces)  |
| Colorado (Lakewood) Multi-family   | 2% EV- Installed | -            | 18% EV Capable (10+ spaces)  |
|                                    |                  |              |  |
| IEGC- Commercial                   |                  |              | 4% of total spaces or 8% of employee spaces (where 20+ on-site parking spaces) |
| IEGC- Multi-Family (R-1, R-2, R-4) |                  |              | 20%  |