

IECC RE Elec Subcommittee EV Ready Consensus Proposal (593)

IECC®: SECTION 202 (New), R404.4 (New), R404.4.1 (New), R404.4.2 (New), R404.4.3 (New), R404.4.4 (New), R404.4.5 (New)

Proponents:

2021 International Energy Conservation Code

Add new definition as follows:

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office and work areas, for the parking of an automobile.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, *EVSE*, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space). An *automobile parking space* that is provided with a dedicated *EVSE* connection.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated *automobile parking space* that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). An *automobile parking space* that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

Add new text as follows:

R404.4 Electric Vehicle Power Transfer Infrastructure. New parking facilities shall be provided with *electric vehicle power* transfer infrastructure in accordance with Sections R404.4.1 through R404.4.5.

R404.4.1 Quantity. New one- and two-family dwellings and townhouses with a designated attached or detached garage or carport or other onsite parking provided adjacent to the dwelling unit shall be provided with one *EV-capable, EV-ready or EVSE installed space* per dwelling unit. All other new residential parking facilities shall be provided with *electric vehicle power transfer infrastructure* in accordance with Section C405.13 of the International Energy Conservation Code-Commercial Provisions.

R404.4.2 EV Capable Spaces. Each *EV capable space* used to meet the requirements of Section R404.4.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable space* and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with R404.4.4
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future *electric vehicle supply equipment (EVSE)*."

R404.4.3 EV Ready Spaces. Each branch circuit serving *EV ready spaces* shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready space* it serves.
2. Have a minimum circuit capacity in accordance with R404.4.4
3. The panelboard or other 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)."

R404.4.4 Circuit Capacity. The capacity of electrical infrastructure serving each *EV capable space, EV ready space and EVSE space* shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each *EV capable space, EV ready space or EVSE space* it serves. When a circuit is shared or managed it shall be in accordance with NFPA 70.

R404.4.5 EVSE Installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594. *EVSE* shall be accessible in accordance with International Building Code Section 1107.

Reason: Built off the Commercial Electrical Power, Lighting, and Renewables subcommittee consensus proposal this proposal provides clarity for application for R-3 occupancies and one- and two-family dwelling and townhomes.

Cost Impact: The code change proposal will increase the cost of construction.
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