

Appendix RD

ELECTRIC VEHICLE READY PROVISIONS-ONE- AND TWO-FAMILY DWELLINGS, TOWNHOUSES AND GROUP R OCCUPANCIES

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION RD101

SCOPE

RD101.1 General. These provisions shall be applicable for new construction where electric vehicle (EV) provisions are required.

RD101.1 Intent. This code shall regulate the design, and construction of buildings for the reduction of greenhouse gas emissions and for the efficient production, use and storage of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

User Note: Intent includes consideration of greenhouse gas emissions as well as both production and storage of energy.

SECTION RD102

GENERAL DEFINITIONS

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Plug-in hybrid electric vehicles are electric vehicles having a second source of motive power. Off-road, self-propelled electric mobile equipment, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not considered electric vehicles.

User Note: Definition for EV is mirrored from NEC-2020 to be useful in defining requirements for electric vehicle infrastructure.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, 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.

EV READY SPACE. A *vehicular parking space* that is provided with an electrical circuit capable of supporting an installed *EVSE*.

User Note: The definition for EV Ready does not include requirements for minimum capacity for the branch circuit. Different levels of capacity are appropriate for different EV charging scenarios (charging at different building types, parking types, residential types, business types, times of day, etc.) as well as different levels of penetration of EV charging spaces in a parking lot. Therefore, capacity requirements are set in the code text itself to allow for consistent use of the definitions while the capacity requirements change to match the specific EVCI requirements of the jurisdiction.

SECTION RD103

ELECTRICAL POWER AND LIGHTING SYSTEMS

RD103.1 Electric vehicle charging infrastructure. Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section. *EV ready spaces* are permitted to be counted toward meeting minimum parking requirements.

RD103.2 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces and new detached garages shall be provided with one *EV-ready space* per *dwelling unit*. The branch circuit shall meet the following requirements:

1. A minimum 40-amp, 208/240-Volt dedicated branch circuit that terminates at a receptacle, junction box or EVSE located within 3 feet (914 mm) of the parking space,
2. The electrical panel directory shall designate the branch circuit as “For electric vehicle charging” and the junction box or receptacle shall be labelled “For electric vehicle charging”.

RD103.3 Group R occupancies. Parking facilities serving Group R-2, R-3 and R-4 occupancies shall comply with Section C405.15.

User Note: Tailored requirements for single-family and multifamily housing have been included. Single-family homes, where the occupants will choose the specific EVSE that meets their EV charging needs, are required to have one parking space with an EV Ready space that is sized to accommodate the most common EVSE on the market. The requirements for EV charging infrastructure for multifamily buildings are referenced to the commercial requirements as those are more appropriate for EV charging in parking lots. The required capacity for the branch circuit for the EV Ready space is the equivalent of a 240V, 40A circuit and is expressed in kVA as that is the standard metric for capacity or “apparent power” in electrical infrastructure.