



PROSPER FIRE RESCUE

FIRE MARSHAL'S OFFICE

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Electric Vehicle (EV) Charging Stations

The following is consistent with local Ordinances, the International Fire Code, and Regional Amendments, supporting the long-term development in the Town of Prosper regarding fire & life safety for Electric Vehicles and their associated charging stations under the Town Fire Code 102.9.

This document is to better serve our community and assist contractors with this task. It is incumbent upon each contractor to comply and businesses to maintain.

DEFINITIONS

Electric Vehicle Charging System (EVCS): A complete assembly consisting of one or more electric vehicle connectors, with or without cable, attachments, power outlets, or power outlets and attachments, and associated equipment, installed specifically for the purpose of transferring energy between premises wiring and the electric vehicle.

Electric Vehicle (EV): A motor vehicle that is propelled by an electric motor drawing current from rechargeable storage batteries, fuel cells, or other portable sources of electrical current.

Electric Vehicle Supply Equipment (EVSE): The conductors, including the ungrounded, grounded, and equipment grounding conductors, the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle.

SECTION 322 ELECTRIC VEHICLE (EV)

322.1 Electric Vehicle Charging Stations. Electric vehicle (EV) charging stations shall not be located inside buildings and/or structures, except where approved for parking garage locations as per the National Electrical Code.

322.1.1 Charging Stations Inside Parking Garage. EV charging stations located in parking garages shall be located at grade level along the exterior perimeter walls and shall be within 150 feet of a fire apparatus access roadway, or on the top level of the garage with no roof or structure above, when provided with an approved Class 1 standpipe system.

322.1.2 Charging Stations inside R-3 and R-4 occupancies. Approved charging stations in the private garage shall have a listed heat alarm installed in the garage and interconnected to the smoke alarms inside the dwelling.

322.1.3 Charging Stations under Carports. EV charging stations located under carports shall be located within a maximum 150 ft. hose lay of a fire lane, when permitted by the *Fire Code Official*.

323.1.4. Locations Not Addressed. EV charging stations located inside buildings and/or structures shall be permitted only after a review by the *Building Code Official* and *Fire Code Official* and shall demonstrate sufficient safeguards and fire protection to allow the installation.

322.2 Disconnect. Locations containing electric vehicle charging stations shall be provided with a clearly identified and readily accessible dedicated emergency disconnect installed on the exterior of any building to which power is provided to the EV charging stations. Type, arrangement, and location of the emergency disconnect shall be approved by the fire code official.

The emergency disconnects for exterior electric vehicle charging stations shall be located within 50 feet of, but not less than 20 feet from the charging stations, unless otherwise approved by the fire code official.

Pole mounted signs, on a separate pole from the charging station, shall be provided at each charging station to indicate the location of the disconnect, or as otherwise permitted by the fire code official.

Disconnects shall not be located inside a building or electrical rooms and shall be readily identifiable for the EV charging station. When an EV charging station is a standalone system, the emergency disconnect shall be located as noted above.

Exception: R3 and R-4 occupancies

322.2.1 Height. The height of the emergency disconnect switch shall be not less than 42 inches and not more than 48 inches measured vertically, from the floor level to the activating button.

322.2.2 Emergency Disconnect Sign. Emergency disconnect devices shall be distinctly labeled as: "EMERGENCY ELECTRIC VEHICLE CHARGER DISCONNECT." Signs shall be placed in an approved location and shall consist of all of the following:

1. Red reflective background with white letters.
2. Weather-resistant durable material.
3. Lettering not less than 1 inches high.
4. Permanently affixed to the building or structure in an approved manner.
5. Comply with the PFR FMO Sign Guide.

322.3 Damaged Electric Vehicle Batteries. Damaged electric vehicle batteries shall not be stored inside any building or structure, unless otherwise approved by the *Fire Code Official*.

322.4 Vehicle Impact Protection. Vehicle Impact Protection shall be provided as required in Section 312 of the Town Fire Code for all EV charging stations.

Exception: R3 and R-4 occupancies

323.4 Signage. Signage shall be provided at the EV charging stations and electrical disconnects as required by the PFR FMO Sign Guide.

BELOW IS A WORKING EXAMPLE OF THE REQUIRED SIGNAGE

EV CHARGING POWER DISCONNECT SIGNAGE



**EV CHARGING POWER
DISCONNECT LOCATED
IN ELECTRICAL ROOM**

Sign required on a signpost or on the wall directly behind EV charging station.

Actual verbiage to be added indicating where the disconnect is located. Sign shall be a minimum of 6"x8" with 1" letters.

Sign shall be built per sign construction specifications.



**EV CHARGING
POWER
DISCONNECT**

Sign required on the wall directly behind EV charging disconnect. Sign shall be a minimum of 6"x8" with 1 ¼" letters.

Sign shall be built per sign construction specifications.