



Electric Vehicles and the Florida Building Code

Course Information

Electric Vehicles and the Florida Building Code

1 Hour General Credit

Training Provider:

Florida Home Builders Association

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FHBA.com

CILB & BCAIB Provider # 0000916

FBPE Provider # 0008653

DATE July 19 & 20, 2022 Location Orlando, FL

CILB Approval # 0614515

BCAIB Approval # Reciprocity

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Outline

- Local amendments to the Florida Building Code
- Florida Building Code, Energy Conservation Code Appendix CC
- Florida Building Code, Energy Conservation Code Appendix RF
- National Electrical Code Article 625

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - More stringent than minimum standards of Florida Building Code

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - Locally adopted by governing body
 - Advertised
 - Public hearing(s)

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - Transmitted to Florida Building Commission within 30 Days

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - Only one amendment adopted in six-month period

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - Technical criteria that local government must meet
 - Establish need
 - Based on local conditions
 - Only stringent enough to meet need
 - Can you discriminate against materials, products, or techniques
 - Can not introduce a new subject

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - 30 day waiting period prior to implementation
 - Fiscal impact statement

Florida Statutes 553.73(4)(a)

- Local Technical Amendments
 - May be appealed by stakeholders
 - Countywide review board

FBC, Energy Conservation Code

- Florida Building Code, Energy Conservation Appendix RF
 - One- and two-family dwellings
 - Townhomes
 - Applicable only to new construction where electric vehicle charging provisions are required.

FBC, Energy Conservation Code

- Florida Building Code, Energy Conservation Appendix RF
 - ELECTRIC VEHICLE (EV) An automotive-type vehicle for on-road use . . . Primarily powered by an electric motor . . . From a rechargeable storage battery . . . Or other source of electric current.

FBC, Energy Conservation Code

- Florida Building Code, Energy Conservation Appendix RF
 - ELECTRIC VEHICLE SUPPLY EQUIPMENT.
The conductors, . . . Attachment plugs, and all fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the EV.

FBC, Energy Conservation Code

- Florida Building Code, Energy Conservation Appendix RF
 - ELECTRIC VEHICLE CAPABLE SPACE.
Electrical panel capacity and space to support a minimum 40-ampere, 240-volt branch circuit for each EV parking space, and the installation of raceways . . . To support the EVSE.

FBC, Energy Conservation Code

- RF 103 Requirements for Electric Vehicle Charging
 - RF103.1 Each dwelling unit with an attached or detached garage shall be designed with provision for the future installation of electric vehicle supply equipment in accordance with this section.

FBC, Energy Conservation Code

- RF 103 Requirements for Electric Vehicle Charging
 - RF103.2 Raceway from the panel to the EVSE
 - Enclosure labeled EV Capable
 - RF 103.3 Open space and rated for 40-ampere circuit.
 - Space marked in the panel board.

FBC, Energy Conservation Code

- Appendix CC Electric Vehicle Charging Provisions for New Commercial Construction
 - CC101 These provisions shall be applicable for new commercial construction where vehicle charging provisions are required.

FBC, Energy Conservation Code

- Appendix CC
- EV Ready Space
 - A dedicated space that is provided with a 40-amp branch circuit for EVSE supplying electric vehicles. The circuit shall terminate in a suitable termination point, such as a receptacle, outlet box, enclosure, or EVSE, and be located in close proximity to the proposed EV parking spaces.

FBC, Energy Conservation Code

- CC 103.2 New Commercial Buildings
 - Details required on construction documents
 - Use Table CC103.2
 - Round up
 - Identify spaces in electrical equipment
 - EV Ready
 - EV Capable
 - Enclosure also marked.

FBC, Energy Conservation Code

- CC 103 Requirements for Electric Vehicle Charging
 - NFPA 70 (National Electrical Code)

FBC, Energy Conservation Code

TABLE CC103.2
EV READY SPACE AND EV CAPABLE SPACE REQUIREMENTS

TOTAL NUMBER OF PARKING SPACES	MINIMUM NUMBER OF EV READY SPACES	MINIMUM NUMBER OF EV CAPABLE SPACES
1	1	0
2-10	2	0
11-15	2	3
16-20	2	4
21-25	2	5
26+	2	20% of total parking spaces

NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - 625.1 Covers the electrical conductors and equipment connecting an electric vehicle to the premises wiring.

NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - Part II
 - 625.17 Cords and Cables
 - 685.22 Listed Equipment



NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - Part III Installation
 - 625.40 Branch Circuit
 - Individual Branch Circuit
 - Overcurrent protection sized for continuous duty and 125% of the equipment.
 - 625.42 Rating
 - Sized according to the equipment
 - 625.43 Disconnecting Means
 - Required for larger systems.

NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - 625.46-625.48 Interactive systems
 - 625.52 Ventilation
 - Some systems require ventilation

NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - 625.54 GFCI protection required for charging receptacles.
 - 625.56 In-Use covers required in wet locations.

NFPA 70: National Electrical Code

- Article 625 Electric Vehicle Transfer System
 - Part IV. Wireless Power Transfer Equipment



