

Attachment D

Milpitas 2019 Green Building Reach Codes

SUMMARY

EV Charging Proposed Reach Code for the 2019 California Green Building Standards Code

Unlike amendments to the California Energy Code, a cost-effectiveness study is not required for amendments to the California Green Building Standards Code (CALGreen), which covers items such as electric vehicle charging infrastructure. Staff worked closely with SVCE and the Statewide Program's team to establish new construction EV requirements which are more in line with local EV adoption trends, while providing flexibility for the developer and keeping construction costs as low as possible.

Electric Vehicle Charging Infrastructure Categories and 2019 CALGreen EV Requirements

Electric Vehicle charging requirements in California can generally be broken into three categories:

- **EV Charging Installed:** all supply equipment is installed at a parking space, such that an EV can charge without additional equipment.
- **EV Ready:** Parking space is provided with all power supply and associated outlet, such that a charging station can be plugged in and a vehicle can charge.
- **EV Capable:** Conduit is installed to parking space, and building electrical system has ample capacity to serve future load. An electrician would be required to complete the circuit before charging is possible.

EV charging capacity and speed can be summarized as three categories:

- **Level 1:** Capable of charging at 120V, 20A. This is the equivalent to a standard home outlet.
- **Level 2:** Capable of charging at 240V, 30-40A. This is the service capacity typically used for larger appliance loads in homes.
- **Level 3 (DC Fast Charging):** Capable of charging at 20-400kW. This is the type of charger used for Tesla Superchargers and DC Fast Chargers at some supermarkets.

The 2019 California Green Building Standards Code increases requirements for electric vehicle charging infrastructure in new construction, including the following:

- New one- and two-family dwellings and townhouses with attached private garages: must be Level 2 EV-capable.
- Multi-family dwellings: 10% of parking spaces must be Level 2 EV-capable.
- Non-residential: 6% of parking spaces must be Level 2 EV-capable.

Milpitas Proposed Reach Code for EV infrastructure for New Buildings in 2019 CALGreen

While the code amendment language can be found in the proposed ordinance, proposed reach code for EV infrastructure for new buildings is summarized below:

Residential Buildings

- Single Family Dwelling: One Level 1 EV Ready circuit, and one Level 2 EV Ready circuit.
- Multi-Family Dwelling: ≤20 units: 15% of dwelling unit parking spaces provided with access to at least one Level 2 EV Ready circuit and an additional 35% provided with access to at least one Level 1 Capable circuit
 - Exception: Not required for units without parking.
- Multi-Family Dwelling: >20 units: 20% of dwelling unit parking spaces provided with access to at least one Level 2 Ready circuit and an additional 35% of dwelling unit parking spaces provided with access to at least one Level 1 Capable circuit
 - Exception: Not required for units without parking.

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- Exception: For multi-family affordable housing projects:
≤ 20 units, 5% of parking spaces to be provided access to at least one Level 2 Ready circuit and an additional 35% of spaces shall have access to one Level 1 Capable circuit
< 20 units, 10% of parking spaces to be provided access to at least one Level 2 Ready circuit and an additional 15% of parking spaces shall have access to at least one Level 1 Capable circuit

Office Buildings

- 5% of the parking spaces, Level 2 Electric Vehicle Supply Equipment (EVSE) (complete charging infrastructure installed).
- 10% of the parking spaces, Level 1 EV Ready circuits.
- 20% of the parking spaces EV Capable at the “pinch points” utilizing at least Level 2-sized conduit with panel capacity for 2kW per EV capable parking space.

Other Nonresidential Buildings

- When 10 or more parking spaces are provided, 4% of the spaces shall be equipped with Level 2 Electric Vehicle Charging Stations (EVCS).
- An additional 3% shall be at least Level 1 Capable.
- Over 100 spaces: option for one 80kW Fast Charger per 100 spaces
 - NOTE: Installation of each DC Fast Charger with the capacity to provide at least 80 kW output may substitute for 6 Level 2 EVCS and 5 EV Ready spaces after a minimum of 6 Level 2 EVCS and 5 Level 1 EV Ready spaces are installed.

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