

Parking-Charging Configurations

Parking is integral to charging electric vehicles (EVs). Parking configurations, property design, and electrical infrastructure on site determine what charging configuration is best suited for multifamily housing (MFH) properties. This document will provide an overview of shared and dedicated configurations and considerations for new and existing MFH properties.

Types of Parking

First-come, First-Served, Unassigned, Communal, or Shared Parking spaces are unreserved spaces. Drivers can park wherever spaces are available. Adherence to ADA, vehicle dimensions, and other restrictions are still required.

Assigned Parking spaces are controlled by a property manager and allocated to a specific resident or to a resident in a specific unit. Property management can change assignments of parking spaces at any time, as determined by lease agreements. Sometimes parking costs are bundled with rent and other times they are separate.

Deeded Parking spaces are owned and controlled by a condominium unit owner. To buy or sell parking spaces, HOA guidance or approval may be required.



Fig. 1 Parking Signage ¹

1. California Plug-In Electric Vehicle Collaborative et al., "Plug-in Electric Vehicle Charging Infrastructure Guidelines for Multi-Unit Dwellings."

Types of Charging

Shared chargers: Electric Vehicle Supply Equipment (EVSE), available to EV drivers with access to the parking lot. Most EVSE have two charging ports with cables that can typically reach all sides of the car (see below). These are standard in both assigned parking with excess parking spaces and first-come, first-served parking configurations. For parking lots with no extra parking spaces, this charging configuration may require a reservation system.

Considerations for shared chargers:

- Shared chargers take up extra parking spaces, but overall will require slightly less panel capacity per parking spot, reducing the electrical install costs.
- Ensure residents have a place to park after completing their charging session to avoid fully charged EVs blocking charger access.
- Initiating idle fees, or reducing the number of parking passes to residents may be necessary if access to charging becomes an issue.
- In an unsecured parking lot property management can institute access controls to manage who has access to the chargers during certain times of day and night.



Dedicated chargers: EVSE that are meant to be utilized by an assigned resident. This charging configuration is used when there are no excess parking spaces.

Considerations for Dedicated Chargers:

- Load Management features should only be used for dedicated chargers or if panel capacity is insufficient. A property wide energy management solution can have a similar impact as load management.
- When there are more parking spaces than cars installing shared chargers is recommended. As EV adoption increases, adopting a dedicated configuration may be necessary and reusing that panel capacity for dedicated chargers may be appropriate. [For more information check out our FAQ on the subject here.]
- Having both shared and dedicated charging onsite can be valuable for residents.
- Dedicated charging is more valuable than shared charging to residents and many are willing to pay for that increase in value.

Fig. 2 Dedicated Chargers ²

2. File:EV Charging Stations Arlington 08 2017 5214.jpg - Wikimedia Commons. 6 Aug. 2017, commons.wikimedia.org/wiki/File:EV_charging_stations_Arlington_08_2017_5214.jpg.