
CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP

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Electric Vehicle Charging Station Installation Information

The City of Mercer Island supports and encourages the use of Electric Vehicles (EV) and has developed an easy process for obtaining permits to install most charging equipment required or desired to charge your personal electric vehicle. In most cases the installation will require only a simple electrical permit.

EV charging stations for **single family homes** can be issued as over the counter electrical permits at the permit center or on-line at www.mybuildingpermit.com (by adding a receptacle).

This handout provides information about electric vehicle charging stations, permitting and inspections. It may help you plan and install your equipment. It is important to remember that if you do not own the property where the new equipment is to be installed, you should first discuss your plans with the owner, condo association or building management before making application because permit applications will need to be signed by the property owner or authorized agent.

Before purchasing an electric vehicle, you may wish to retain a State licensed electrical contractor that is qualified and experienced with EV installations to evaluate the building's electrical system to determine whether the system has the capacity to safely operate the electric vehicle charger and to provide a cost estimate for the charger installation. Depending on your electrical service capacity, it may be a simple matter of installing a vehicle charger in an existing garage near your electrical service panel. If your electrical service panel has little capacity or is in a location away from where you intend to charge your vehicle, the proposed installation may be more complex.

Location

1. Charging of electric vehicles is permitted in single family zones and multi-family zones, when incidental to the primary use, and not for commercial purposes.
2. Electric vehicle charging stations are allowed in all other zones if associated with the primary use. Additional parking is not required when parking stalls are converted and reserved for charging electric vehicles whose parking is associated with the primary use, such as a restaurant.
3. If the primary business is the retail electric charging of a vehicle (providing electric vehicle charging for a fee), then the use is considered a "service station", and is only permitted in areas zoned for service stations. Please contact us for a list of those zones.

Types of Charging Level

1. **Level 1** is considered slow charging and is typical in homes and businesses, operating on a 15- or 20-amp breaker with a 120-volt Alternating Current (AC) circuit and standard outlet. This level of charging can fully recharge a Battery Electric Vehicle (BEV) between 8 and 32 hours and a Plug-in Hybrid Electric Vehicle (PHEV) between 3 and 15 hours. If your vehicle allows charging from an existing electrical outlet (e.g. from an existing outlet in a garage), no permit is required. You are good to go green.
2. **Level 2** is considered medium charging and is expected to become the standard for home and public charging. It typically operates on a 40-amp to 100-amp breaker with a 208 or 240-volt AC circuit. This level of charging can fully recharge a BEV between 4 and 6 hours and a PHEV between 1 and 2 hours. If you want to upgrade your service to a Level 2, an electrical permit is required.
3. **Level 3** is considered fast charging and is primarily for commercial and public applications (e.g., taxi fleets and charging along freeways). It typically operates on a 60-amp or higher dedicated breaker with a 480-volt or higher three-phase circuit with special grounding equipment. Level 3 charging uses an off-board charger to

provide the AC to DC conversion, delivering DC directly to the car battery. Charging time ranges from 25-40 minutes for BEVs and less than 20 minutes for PHEVs.

Permit Requirements for Charging Stations

1. A new or modified Level 1 or Level 2 battery charging station will require an electrical permit and an inspection.
2. Level 3 battery charging stations are more complex. In addition to an electrical permit a formal Design Review process by the Design Commission may be required if making exterior modifications in the multi-family or town center zoning districts. Please contact us for more information regarding this process.

Permit Submittal Requirements and Fees

1. For Level 1 and Level 2 charging stations you can simply fill out an electrical permit application (front and back), and the permit can be issued over the counter at the Permit Center or on-line at www.mybuildingpermit.com. While your permit fee will be based upon your specific proposal, the typical fee is \$157.59, which includes the cost of inspection.
2. For Level 3 charging station permit requirements and fees, please contact us.

Need more information or help?

Please contact the Development Services Group Planning Team at 206-275-7729.