DEPARTMENT OF ECONOMIC
AND COMMUNITY DEVELOPMENT
BUILDING DIVISION

AFCI vs. GFCI RECEPTACLES

The AFCI **should not** be confused with the GFCI.

The **AFCI** (Arc Fault Circuit Interrupter) protects against fires caused by arcing faults.

Arcing faults often occur in damaged or deteriorated wires and cords. Some causes of damaged and deteriorated wiring include puncturing of wire insulation from picture hanging or cable staples, poorly installed outlets or switches, cords caught in doors or under furniture, furniture pushed against plugs in an outlet, natural aging, and cord exposure to heat vents and sunlight.

Required Locations: Dwelling unit: Kitchens, Family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways or similar rooms and areas.

The **GFCI** (Ground Fault Circuit Interrupter) is designed to protect people from severe or fatal electric shocks.

A ground fault is an unintentional electric path diverting current to ground. Ground faults occur when current leaks from a circuit. If a person's body provides a path to ground for this leakage, the person could be injured, burned, severely shocked, or electrocuted.

Required Locations: "See below"

Note:
The GFCI also can protect against some electrical fires by detecting arcing and other faults to ground but cannot detect hazardous across-the-line arcing faults that can cause fires.

Dwelling Units – All 125-volt though 250-volt installed in the following locations and supplied by single-phase branch circuits rated 150volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

(1) Bathrooms
(2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
(3) Outdoors
(4) Crawl spaces – at or below grade level
(5) Basements
(6) Kitchens

(7) Areas with Sinks and permanent provisions for food preparation, beverage preparation, or cooking
(8) Sinks – where the receptacles are installed within 1.8 m (6ft) from the top inside edge of the bowl of the sink
(9) Boathouses
(10) Bathtubs or Shower stalls where receptacles are installed within 1.8 m (6ft) of the outside edge of the bathtub or shower stall
(11) Laundry areas
(12) Indoor Damp and Wet locations

Other Than Dwelling Units – All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150-volts or less to ground, 50 amperes or less, all receptacles supplied by three-phase branch circuits rated 150volts or less to ground, 100 amperes or less, installed in the following locations shall be provided with GFCI protection.

(1) Bathrooms
(2) Kitchens
(3) Areas with sinks, and permanent provisions for food preparation, beverage preparation, or cooking
(4) Buffet serving areas with permanent provisions for food serving, beverage serving, or cooking
(5) Rooftops
(6) Outdoors
(7) Sinks where receptacles or cord and plug connected fixed or stationary appliances are installed within1.8m (6ft) from the top inside edge of the bowl of the sink
(8) Indoor Damp or Wet Locations
(9) Locker rooms with associated showering facilities
(10) Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms
(11) Crawl spaces at or below grade level
(12) Unfinished areas of Basements
(13) Aquariums, Bait wells, and similar open aquatic vessels or containers, such as tanks or bowls, where receptacles are installed within 1.8m (6ft) from the top inside edge or rim or from the conductive support framing of the vessel or container.
(14) Laundry areas
(15) Bath tubs and shower stalls where receptacles are installed within 1.8m (6ft) of the outside edge of the bathtub or shower stall