



210.8(F) GFCI Protection for Outdoor Outlets: Overview of a Life-Saving Technology

What is the change?

The 2020 edition of the NEC® now requires GFCI protection on residential outdoor outlets such as air conditioners. This change would most likely require the standard circuit breaker supplying that outlet to be a circuit breaker featuring GFCI protection.

Why is the code changing?

"On August 3, 2007, 12-year-old Vontrell Pargo jumped over a fence... and landed on the AC condenser unit. However, the condenser had an electrical ground fault which caused the unit's outer metal housing to become electrified, so Vontrell was fatally electrocuted when he simultaneously came into contact with both the condenser and the fence."

The child was survived by his parents and one sibling..."

[2016 Annual JVR Magazine \(juryverdictreporters.com\)](http://juryverdictreporters.com)

Often, the NEC® language is updated when an electrocution resulting in death is brought forward highlighting a necessary change of a particular installation. This installation of this air conditioner, at the time, was not required to be GFCI protected. With this change, the 2020 NEC® would now require this air conditioner to be GFCI protected. If GFCI protection was afforded to this outdoor outlet, Vontrell Pargo would not have been electrocuted.



What is the impact of this change?

| FISCAL IMPACT GFCI PROTECTION OF OUTDOOR OUTLETS | | | | | |
|--|----------------|-------------|-------|----------------|----------------|
| EQUIPMENT | PRICE | QUANTITY | LABOR | TOTAL | FISCAL IMPACT |
| STANDARD 30A CIRCUIT BREAKER | \$12 PER HOUSE | 1 PER HOUSE | N/A | \$12 PER HOUSE | \$55 PER HOUSE |
| GFCI 30A CIRCUIT BREAKER | \$67 PER HOUSE | 1 PER HOUSE | N/A | \$67 PER HOUSE | |

Understanding GFCI and NEC

Ground-Fault Circuit-Interrupter (GFCI) technology is a life-saving technology that has been an essential part of the National Electrical Code® (NEC®) since the 1970s. The 2020 edition of the NEC® has expanded the dwelling unit requirement for GFCI technology to protect outdoor outlets via Article 210.8(F).

What is a GFCI?

- GFCI devices operate by recognizing and de-energizing the circuit when a hazardous or potentially deadly event when electricity flows outside the normal path which can be through the human body.
- You may be familiar with GFCIs in your bathrooms, garages, or outdoors shown by the receptacle (on the left) or in your home electrical panel with the circuit breaker (on the right.)
- Since the inception of GFCI technology in the 1970s, there has been a significant decrease in the number of electrocutions resulting in saved lives.



National Electrical Code Process

- The National Electrical Code® is a document that conveys the minimum safety requirements of electrical installations to protect people and property from hazards of electricity.
- The three-year NEC® update process is open to the public for proposals and comments that are considered by panels made up of all stakeholders of the electrical industry including homebuilders.
- All panels are balanced where no interest group can hold larger than a 33% voting membership. Every public proposal requires a two-thirds majority to be accepted into the NEC®.

