



Generator Installation Requirements

ELECTRICAL INFORMATION Based on the 2017 NEC

In accordance with Municipal Code Section 4-416 an electrical permit is required before any electrical work is performed. Inspections are required for electrical wiring before insulating or covering.

1. A selective coordination study must be performed for all overcurrent devices on the supply side of the emergency system. 700.32 If the generator has a main breaker and feeds both emergency and optional loads, then the optional breaker must be selectively coordinated with the generator main breaker. 700.10 (B)(5)(ii)
2. All emergency branch circuit wiring must be installed in a separate raceway system from all other general wiring. 700.10 (B)
3. All boxes and enclosure for emergency circuits must be readily identified as part of the emergency system. Painting or marking the box cover plate is not enough. 700.10 (A)
4. A sign must be placed at the service entrance equipment stating the type and location of the emergency power source. 700.7 (A)
5. In the event of power failure, the emergency source shall supply power to the lighting within 10 seconds. 700.12
6. An outdoor located generator must be installed at least 10 feet from a type 3, 4 or 5 building and at least 20 feet from any normal power distribution equipment including a utility transformer. A closer distance may be done if a non-combustible wall is built per SPS 316.700 (2)
7. Emergency circuit wiring must be in a listed raceway, AC or MC cable. SPS 316.700 (1)(a)

2013 NFPA 110 requirements:

1. A load bank acceptance test needs to be performed and documented. The document must be submitted to the inspection department prior to a final inspection being scheduled. Section 7.13
2. Advance notice must be provided to the inspection department for when the generator will be load bank tested so that it can be witnessed by one of the electrical inspectors. Section 7.13.3
3. A complete list of high mortality parts, determined by the generator manufacture, must be submitted to the inspection department. The parts on this list must be stored on site with the generator. Section 8.2.4
4. Two sets of instruction manuals must be kept on site. One set must be stored near the generator location and the other needs to be kept in a secure location on the premise. Section 8.2.1
5. A remote located manual generator shut off must be installed outside the room housing the generator for an interior installations. For generators located outside, this shut off must be installed somewhere on the premises. The manual shut off must be labeled. Section 5.6.5.6 & 5.6.5.6.1
6. Generators installed outdoors must have their generator enclosure ambient air heated to 40 degrees Fahrenheit. Section 7.7.6
7. Natural gas generators that are connected to a buildings gas supply system must have separate shut off valves installed. Each gas valve must be labeled. The buildings gas shut off valve must be labeled to indicate the existence of a separate generator shut off valve. Section 7.9.7 & 7.9.8

8. Generators installed inside a building must be installed in a room that is dedicated for only the generator and any emergency transfer switch. The room must have a minimum two hour fire rating. The room can only be used to store spare parts, tools and manuals for the maintenance of the generator. Sections 7.2.1.1, 7.2.1.2, 7.2.1.3 & 7.11.1
 9. Generators installed inside a building must be provided with battery powered emergency lighting. The battery powered emergency lighting and the normal room lighting must be fed from the load side of the emergency transfer switch. The minimum lighting in the room is 3 footcandles. Section 7.3.1, 7.3.2 & 7.3.3
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