

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Controlled Receptacles

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What the Seattle Energy Code Requires

“Controlled receptacles” are electrical outlets that are automatically turned on and off by occupancy sensors or time switch systems. Seattle Energy Code Section C405.13 requires at least 50 percent of all outlets to be controlled receptacles in the following space types:

- Private offices
- Open offices
- Conference rooms
- Classrooms
- Print/copy rooms
- Break rooms
- Individual workstations (including office cubicles)

Individual workstations include those formed by modular partitions and “office cubicles.” Controlled receptacles are not required in lobbies, circulation areas, or other associated areas.

There are some exceptions to the requirement for controlled receptacles. As stated in the Seattle Energy Code, “Receptacles designated for specific equipment requiring 24-hour operation, for building maintenance functions, or for specific safety or security equipment” are exempt. Thus, an outlet intended for a wall clock, a security camera, or a vacuum cleaner does not have to be on a controlled circuit or located near a controlled outlet.

Operation of Controlled Receptacles

Occupancy sensors must be set to turn off power after 20 minutes without detecting people in the space. Several types of occupancy sensors are available, including passive infrared, ultrasonic, microwave

and various combinations. Be sure to select a type that will work correctly for each particular space, especially where office partitions or other objects in the room might interrupt the line of sight from the detector to the occupants.

Automatic time switch systems must be able to program an independent schedule for each area of the building, with no area larger than 5,000 square feet. Provide each of those areas with an override switch that turns on power to the controlled receptacles in that area for up to two hours. The override function allows occupants to work late or to have an event off-hours. (An automatic time switch is a lighting control system that turns lights on and off on a predetermined schedule.)

Configuration of Controlled Receptacles

One way to comply with this requirement is to split each duplex receptacle so that the top half is a controlled receptacle and the bottom half is not controlled. This is the most convenient and intuitive for users. Another option is to locate a controlled duplex receptacle within 12 inches of each non-controlled duplex. Within a single modular office cubicle, the duplex receptacles are allowed to be up to 72 inches apart.

How Controlled Receptacles Can Interact with Lighting Controls

Lighting must be controlled by occupancy sensors in classrooms, private offices, print/copy rooms and break rooms. In an open office, lighting can also be controlled by a time switch system with a two-hour override switch. These lighting controls and override switches can potentially also be used to operate the controlled outlets in those spaces, so that the lights and the controlled plug loads would turn off and on together. Individual override switches are not allowed to control more than 2,500 square feet for lighting, so that limit also applies to the receptacles when the two controls are combined.



Are Controlled Receptacles Required for Alterations?

In general, controlled receptacles are required in alterations where electrical outlets are being added or replaced in the room types listed. The following clarifying exceptions can be found in Seattle Energy Code Section C503.6.6 for alteration projects:

1. Controlled receptacles are not required in alterations smaller than 5,000 square feet.
2. Controlled receptacles are not required for existing “office cubicles” or modular partitions that are moved or reconfigured within the same space.
3. Outlets that are specifically intended for 24-hour operations, building maintenance, or safety and security functions don’t have to be controlled receptacles, and don’t have to be located close to non-controlled receptacles. Just like with new construction, this exempts electrical outlets intended for clocks, security cameras, vacuum cleaners, computer servers and the like.

Existing electrical outlets that remain in place do not have to be converted to controlled receptacles.

Code Excerpts

C405.14 Controlled receptacles. At least 50 percent of all 125 volt 15- and 20-ampere receptacles installed in private offices, open offices, conference rooms, rooms used primarily for printing and/or copying functions, break rooms, individual workstations and classrooms, including those installed in modular partitions and modular office workstation systems, shall be controlled as required by this section. Either split receptacles shall be provided, with the top receptacle(s) controlled, or a controlled receptacle shall be located within 12 inches (0.3 m) of each uncontrolled receptacle. Controlled receptacles shall be visibly differentiated from standard receptacles using the standard symbol required by the Seattle Electrical Code and shall be controlled by one of the following automatic control devices:

1. An occupant sensor that turns receptacle power off when no occupants have been detected for a maximum of 20 minutes.
2. A time-of-day operated control device that turns receptacle power off at specific programmed times and can be programmed separately for each day of the week. The control device shall be

configured to provide an independent schedule for each portion of the building not to exceed 5,000 square feet (465 m²) and not to exceed one full floor. The device shall be capable of being overridden for periods of up to two hours by a timer accessible to occupants. Any individual override switch shall control the controlled receptacles for a maximum area of 5,000 square feet (465 m²). Section C202.

Exceptions:

1. Receptacles designated for specific equipment requiring 24-hour operation, for building maintenance functions, or for specific safety or security equipment are not required to be controlled by an automatic control device and are not required to be located within 12 inches of a controlled receptacle.
2. Within a single modular office workstation, non-controlled receptacles are permitted to be located more than 12 inches, but not more than 72 inches, from the controlled receptacles serving that workstation.

Section C202 - Definitions

- Automatic Control Device: A device capable of automatically turning loads off and on without manual intervention
- Controlled Receptacle: An electrical receptacle that is controlled by an automatic control device

Access to Information

Links to electronic versions of SDCI **Tips**, **Director's Rules**, and the **Seattle Municipal Code** are available on the "Tools and Resources" page of our website at www.seattle.gov/scdi. Paper copies of these documents, as well as additional regulations mentioned in this Tip, are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.