



City of Scottsdale 2021 International Energy Construction Code (IECC)

Interior Lighting Controls Checklist

08-23-23

- C405.2.1 Occupant Sensor Controls.** Occupant sensor controls shall be installed to control lights in the following space types:

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| 1. Classrooms/lecture/training rooms. | 8. Storage rooms. |
| 2. Conference/meeting/multipurpose rooms. | 9. Locker rooms. |
| 3. Copy/print rooms. | 10. Corridors. |
| 4. Lounges/breakrooms. | 11. Warehouse storage areas. |
| 5. Enclosed offices. | 12. Other spaces 300 square feet or less that are enclosed by floor-to-ceiling height partitions. |
| 6. Open plan office areas. | |
| 7. Restrooms. | |

Exception: Luminaires that are required to have specific application controls in accordance with Section C405.2.5 (see IECC).

- C405.2.2 Time-switch controls.** Each area of the building that is not provided with occupant sensor controls complying with Section C405.2.1.1 (see IECC) shall be provided with time-switch controls complying with Section C405.2.2.1 (below).

Exceptions:

1. Luminaires that are required to have specific application controls in accordance with Section C405.2.5 (see IECC).
2. Spaces where patient care is directly provided.
3. Spaces where an automatic shutoff would endanger occupant safety or security.
4. Lighting intended for continuous operation.
5. Shop and laboratory classrooms.

C405.2.2.1 Time-switch control function. Time-switch controls shall comply with all the following:

1. Automatically turn off lights when the space is scheduled to be unoccupied.
2. Have a minimum 7-day clock.
3. Be capable of being set for seven different day types per week.
4. Incorporate an automatic holiday “shutoff” feature, which turns off all controlled lighting loads for not fewer than 24 hours and then resumes normally scheduled operations.
5. Have program backup capabilities, which prevent the loss of program and time settings for not fewer than 10 hours if power is interrupted.
6. Include an override switch that complies with the following:
 - a. The override switch shall be a manual control.
 - b. The override switch, when initiated, shall permit the controlled lighting to remain on for not more than 2 hours.
 - c. Any individual override switch shall control the lighting for an area not larger than 5,000 square feet.

- **C405.2.3 Light-reduction controls.** Where not provided with occupant sensor controls complying with Section C405.2.1.1 (see IECC), general lighting shall be provided with light reduction controls complying with Section C405.2.3.1 (below).

Exceptions:

1. Luminaires controlled by daylight responsive controls complying with Section C405.2.4.
2. Luminaires controlled by special application controls complying with Section C405.2.5.
3. Where provided with manual control, the following areas are not required to have light reduction control:
 - a. Spaces that have only one luminaire with a rated power of less than 60 watts.
 - b. Spaces that use less than 0.45 watts per square foot.
 - c. Corridors, lobbies, electrical rooms and/or mechanical rooms.

C405.2.3.1 Light-reduction control function. Spaces required to have light-reduction controls shall have a manual control that allows the occupant to reduce the connected lighting load by not less than 50% in a reasonably uniform illumination pattern with an intermediate step in addition to full on or off, or with continuous dimming control, using one of the following or another *approved* method:

1. Continuous dimming of all luminaires from full output to less than 20% of full power.
2. Switching all luminaires to a reduced output of not less than 30% and not more than 70% of full power.
3. Switching alternate luminaires or alternate rows of luminaires to achieve a reduced output of not less than 30% and not more than 70% of full power.

- **C405.2.4 Daylight-Responsive controls** Daylight responsive controls complying with Section C405.2.4.1 shall be provided to control the general lighting within daylight zones in the following spaces:

1. Spaces with a total of more than 150 watts of general lighting within primary sidelit daylight zones complying with Section C405.2.4.2 (see IECC).
2. Spaces with a total of more than 300 watts of general lighting within sidelit daylight zones complying with Section C405.2.4.2 (see IECC).
3. Spaces with a total of more than 150 watts of general lighting within toplit daylight zones

Exceptions: Daylight responsive controls are not required for the following:

1. Spaces in health care facilities where patient care is directly provided.
2. Sidelit daylight zones on the first floor above grade in Group A-2 and Group M occupancies.
3. New buildings where the total connected lighting power calculated in accordance with Section C405.3.1 is not greater than the adjusted interior lighting power allowance (*LPA_{adj}*) calculated in accordance with Equation 4-9.

- **C405.2.6 Manual controls.** Manual controls for lights shall comply with the following:

1. They shall be in a location with *ready access* to occupants.
2. They shall be located where the controlled lights are visible or shall identify the area served by the lights and indicate their status.