

## **Nonresidential Appendix NA7 – 2008**

# **Appendix NA7-2008 – Acceptance Requirements for Nonresidential Buildings**

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### **NA7.1 Purpose and Scope**

This appendix defines acceptance procedures that must be completed on certain controls and equipment before the installation is deemed to be in compliance with the Standards. These requirements apply to all newly installed equipment for which there are acceptance requirements in new and existing buildings. The procedures apply to nonresidential, high-rise residential and hotel/motel buildings as defined by the California Energy Commission's Energy Efficiency Standards for Nonresidential Buildings.

The purpose of the acceptance tests is to assure:

1. The presence of equipment or building components according to the specifications in the compliance documents.
2. Installation quality and proper functioning of the controls and equipment to meet the intent of the design and the Standards.

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### **NA7.2 Introduction**

Acceptance requirements are defined as implementation of targeted inspection checks and functional and performance testing to determine whether specific building components, equipment, systems, and interfaces between systems conform to the criteria set forth in the Standards and to related construction documents (plans or specifications). Acceptance requirements improve code compliance effectiveness and help meet the expected level of performance.

Prior to signing a Certificate of Acceptance the installing contractor, engineer of record or owners agent shall be responsible for reviewing the plans and specifications to assure they conform to the acceptance requirements. Persons eligible to sign the Certificate of Acceptance are those responsible for its preparation; and licensed in the State of California as a civil engineer, mechanical engineer, licensed architect or a licensed contractor performing the applicable work or a person managing work on a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

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### **NA7.3 Responsible Party**

The installing responsible party shall certify compliance with the acceptance requirements. They shall be responsible for performing data analysis, calculation of performance indices, and crosschecking results with the requirements of the Standard. They shall be responsible for issuing a Certificate of Acceptance as well as copies of all measurement and monitoring results for individual test procedures to the enforcement agency. The enforcement agency shall not release a final Certificate of Occupancy until a Certificate of Acceptance, and all applicable acceptance requirements for code compliance forms, are approved and submitted by the responsible party. A responsible party who is licensed shall record their State of California contractor's license number or their State of California professional registration license number on each Certificate of Acceptance that they issue.

- Lights controlled by occupancy sensors turn on immediately upon an occupied condition, *OR* sensor indicates space is "occupied" and lights are turned on manually (automatic OFF and manual ON control strategy).

### **NA7.6.3 Manual Daylighting Controls Acceptance**

#### **NA7.6.3.1 Construction Inspection**

Prior to Functional testing, verify and document the following:

- If dimming ballasts are specified for light fixtures within the primary sidelit zone or skylit zone, make sure they meet all the Standards requirements, including "reduced flicker operation" for manual dimming control systems.

#### **NA7.6.3.2 Functional testing**

Step 1: Perform manual switching control. Verify and document the following:

- Only lights in the primary sidelit zone or the skylit zone as defined in §131(c) are controlled. Compare daylighting controlled luminaires against description of the primary sidelit and skylit zones on the building plans.
- Manual switching or dimming achieves a lighting power reduction of at least 50 percent.
- The amount of light delivered to the space is uniformly reduced.

### **NA7.6.4 Automatic Time Switch Control Acceptance**

#### **NA7.6.4.1 Construction Inspection**

Prior to Functional testing, verify and document the following:

- Automatic time switch control is programmed with acceptable weekday, weekend, and holiday (if applicable) schedules.
- Document for the owner automatic time switch programming including weekday, weekend, holiday schedules as well as all set-up and preference program settings.
- Verify the correct time and date is properly set in the time switch.
- Verify the battery back-up (if applicable) is installed and energized.
- Override time limit is set to no more than 2 hours.
- Override switches remote from area with controlled luminaires have annunciator lights.

#### **NA7.6.4.2 Functional testing**

Step 1: Simulate occupied condition. Verify and document the following:

- All lights can be turned on and off by their respective area control switch.
- Verify the switch only operates lighting in the enclosed space (ceiling-height partitioned area) in which the switch is located.

Step 2: Simulate unoccupied condition. Verify and document the following:

- All non-exempt lighting turn off per §131(d)1.
- Manual override switch allows only the lights in the enclosed space (ceiling height partitioned) where the override switch is located to turn on or remain on until the next scheduled shut off occurs.