



SUBJECT

Lighting System Retrofits

PIN: 13

Effective: 7/11/1995

Revised: 12/5/2013



BACKGROUND

Lighting system retrofits are performed in health care facilities for a variety of reasons; normally to reduce operation and maintenance costs. The system retrofits typically consist of one or more of the following modifications:

- Ballast and/or lamp replacement
- Lamp and/or ballast removal
- Reflector installation
- Fixture replacement

When properly performed, system retrofits can lead to improved illumination and reduced energy consumption; however, some retrofit techniques adversely affect the illumination quality. To ensure that the quality of lighting is maintained, Article 517.22(B) of the California Electrical Code (CEC) requires that illumination intensity values for OSHPD 1, 3, and 4 facilities be as recommended in the latest edition of the *Illuminating Engineering Society of North America (IESNA) Lighting Handbook*, and for OSHPD 2 facilities, as recommended in the latest edition of ANSI/ESNA RP-28, *Recommended Practice for Lighting and the Visual Environment for Senior Living*.

POLICY

Lighting system retrofits shall be submitted to the Office for plan review. Such submittals shall include:

1. Lighting calculations in accordance with the latest edition of the IESNA Handbook. A suggested format is a schedule of rooms to be retrofitted, showing the use of the area, dimensions of the room, height of the work plane, the illuminance recommended by IESNA, and the predicted illuminance.
2. Plans and specifications signed and stamped by a California registered electrical engineer pursuant to Section 7-115(a) of the California Administrative Code.
3. A list of the assumptions used in the calculations, including reflectances, depreciation factors, etc.
4. Certified photometrics for each new or modified luminaire, including spacing criteria.
5. Reflected ceiling plan for each area that shows the location of fixtures in each area to be retrofitted.

6. Confirmation that the components to be used in the retrofit are listed, labeled, or certified by a Nationally Recognized Testing Laboratory, in accordance with Article 110.2 of the CEC; and where fixtures are installed in fire-rated ceiling assemblies, each fixture shall be protected to meet the fire rating criteria for horizontal assemblies as required by the California Building Code.
7. Plans and specifications for any circuiting and switching changes.

The above requirements are waived for one-for-one replacement, lamp and ballast retrofits. In these instances only a key plan, written description and specification are required to be submitted to the Office for review.

Note: Please refer to [OSHPD Code Application Notice 1-0](#) to determine the applicable edition of the code.

<u>Original signed</u>	<u>12/5/13</u>
Paul Coleman	Date