INTERIOR LIGHTING

DESIGN GUIDELINES

1. Summary:
   a. This section provides guidelines and standards for Interior Lighting.

2. General
   a. Use 277 volt where available in building.
   b. MC cable is acceptable for "whips" from junction boxes.
   c. Fixtures shall be hard wired (no "plug-in" type, i.e. Reloc, Holoflex, or other modular wiring system).
   d. Fixtures shall not be wired using “pinch connectors” or “butt splices”.
   e. Lay-in fixtures shall have 4-point support independent of grid. Other fixtures shall be supported per applicable codes and seismic requirements.
   f. Fixtures shall be static troffers and shall not be utilized for air-handling purposes.
   g. Refer to Lighting Controls Design Standards for typical control methods.
   h. All fixtures shall use the Ideal PowerPlug or equal luminaire disconnect for connection between the A.C. power and the LED driver(s)/ballast for ease of removing power to the luminaire.

3. LED Fixtures
   a. The use of LED fixtures shall be approved by the owner. A mockup or sample of individual fixtures shall be demonstrated to the owner during design and approved prior to specifying for all applications.
   b. Color temperature for LED fixtures shall be 3500K unless otherwise approved by owner.
   c. Attic Stock of LED drivers and light bars shall be provided for each type of fixture as follows:
      • 5% for projects with > 30 fixtures
      • 10% for projects with ≤ 30 fixtures.

4. General Fluorescent:
   a. All lamps shall have a 4100K color temperature and minimum 82 CRI.
   b. Typical fluorescent fixtures shall be lamped as follows:
      • 2’x4’ prismatic troffer fixtures with (3) F28T8SPX41 lamps (1 ballast).
      • 2’x2’ prismatic troffer fixtures with (3) F17T8/SPX41 lamps (1 ballast).
      • 1’x4’ direct or combination direct/indirect recessed with (2) F28T8SPX41 lamps (1 ballast).
c. Electronic ballasts:
   - Use electronic NEMA premium high efficiency ballasts with less than 10% total harmonic distortion
   - 90% minimum power factor

5. All areas except Labs: (See use of LED fixtures above)
   a. Use 2’x4’ prismatic troffer.
   b. Use 2’x2’ fluorescent prismatic troffer.
   c. Use indirect or combination direct/indirect recessed fixtures when directed by WUSM OFMD (If plenum space is a problem, this item to be reviewed with WUSM OFMD).
   d. Avoid deep "high-hat" ballasted fixtures.
   e. Provide LED down lights in conference rooms.

6. Labs: (See use of LED fixtures above)
   a. Use 1’x4’ lay-in direct or combination direct/indirect recessed pendant mounted fixtures or as directed by WUSM OFMD.
   b. Switch alternating lights in each row with respect to 1’x4’ row mounted recessed or pendant mounted direct/indirect fixtures.
   c. Verify project specific foot-candle requirements with owner at work surface.

7. Exit Fixtures:
   a. Exit Fixtures shall be LED.
   b. Exit fixtures are to be fed from emergency panel circuit where available.

8. Auxiliary Lights: (See use of LED fixtures above)
   a. Night light fixtures are to be fed from the emergency panel circuit where available.
   b. No battery ballasts and no unit equipment allowed unless existing building is not equipped with an Emergency Generator and approved by WUSM.

9. Related Sections
   a. Building Wire and Cable
   b. Conduits, Fitting and Boxes
   c. Lighting Controls
EQUIPMENT and PRODUCT REQUIREMENTS

1. Lighting Fixtures
   a. Approved Manufacturers:
      • Exit lights: Lithonia Model # LQMSW3R120/277 or universal LED equal.

2. Fluorescent Lamps
   a. Approved Manufacturers:
      • GE:
         - F28T8/SP41/UMX/ECO UltraMax Watt Miser 4’ lamps in Non-Dimming applications.
         - F32T8/XL/SPX4100/HL/ECO 4’ lamps in dimming applications, cold rooms and exterior fixtures.
         - F17T8/SPX41/ECO lamps on Non-Dimming applications.
      • Equals by Sylvania

3. Fluorescent Ballasts
   a. Approved Manufacturers
      • G.E. UltraMax Ballasts on 4’ and 8’ applications
      • Equals by Sylvania.

END OF SECTION