



CI-0703

TAB 7: TECHNICAL DISCIPLINES

Electrical

The Consultant shall examine the different alternatives of parking lot illumination design: high mast, flood lighting and area lighting. Generally, stations near residential areas shall have area lighting. (Flood lighting should be avoided where ever possible) Where floodlighting is used, upward glare shall be addressed and minimized. High mast lighting shall be considered for parking lots in industrial areas.

For ease of lighting maintenance, large areas (tunnel, bride, waiting area, boardrooms, lunch rooms, maintenance facilities, etc) lighting shall have at least two sources of light control.

LED LIGHTING MINIMUM REQUIREMENTS

- > LED light fixtures shall be warranted for a minimum of 5 years.
- > LED light fixtures shall work with the available power supply on site. Every fixture shall have surge suppression.
- > Fixtures' lighting efficiency shall equal the most current industry accepted standard. The lighting efficiency shall not be achieved by overdriving the LEDs.
- > The LEDs in the fixture must be of the same colour temperature. LEDs with CRI below 75 are not acceptable for indoor lighting.
- > Colour temperature of LED light fixtures shall be uniform throughout the area (3500K for indoors, 4000K for outdoors).
- > Fixtures shall be provided with a lighting facts label. Outdoor fixtures must have an IP65 general use rating. For locations subject to high pressure washing (tunnels, platforms or parking structures) the fixtures shall have an IP 66 rating.
- > The lighting design shall be such that the specified minimum lighting levels shall be maintained for a minimum of 15 years
- > The fixture shall meet LM 79 rating and the chips shall meet LM 80 rating. LED B50 and L70 lifetime graph shall be provided.
- > The fixture must be vandal resistant and shall be modular in design for easy upgrade of the LED light engine, simple maintenance (straightforward part replacement) and installation.
- > The component connections shall be of plug-in type, tool-less removal and replacement.