

Designers Lighting Forum

Utility Companies & LED

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03-15-22



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material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

Learning Objectives

At the end of this course, participants will be able to:

1. (The Utility companies are reluctant to transition to LED for Roadway lighting. Learn the key points of resistance and best practice for LED)
2. (Learn the importance and benefits of LED lighting and examine ways to move forward with utility companies)
3. (Discuss examples of proactive LED lighting projects from Tennessee and selected neighboring states)
4. (Learn how LED and technology can benefit utilities when performing maintenance or should natural/manmade disaster occur)



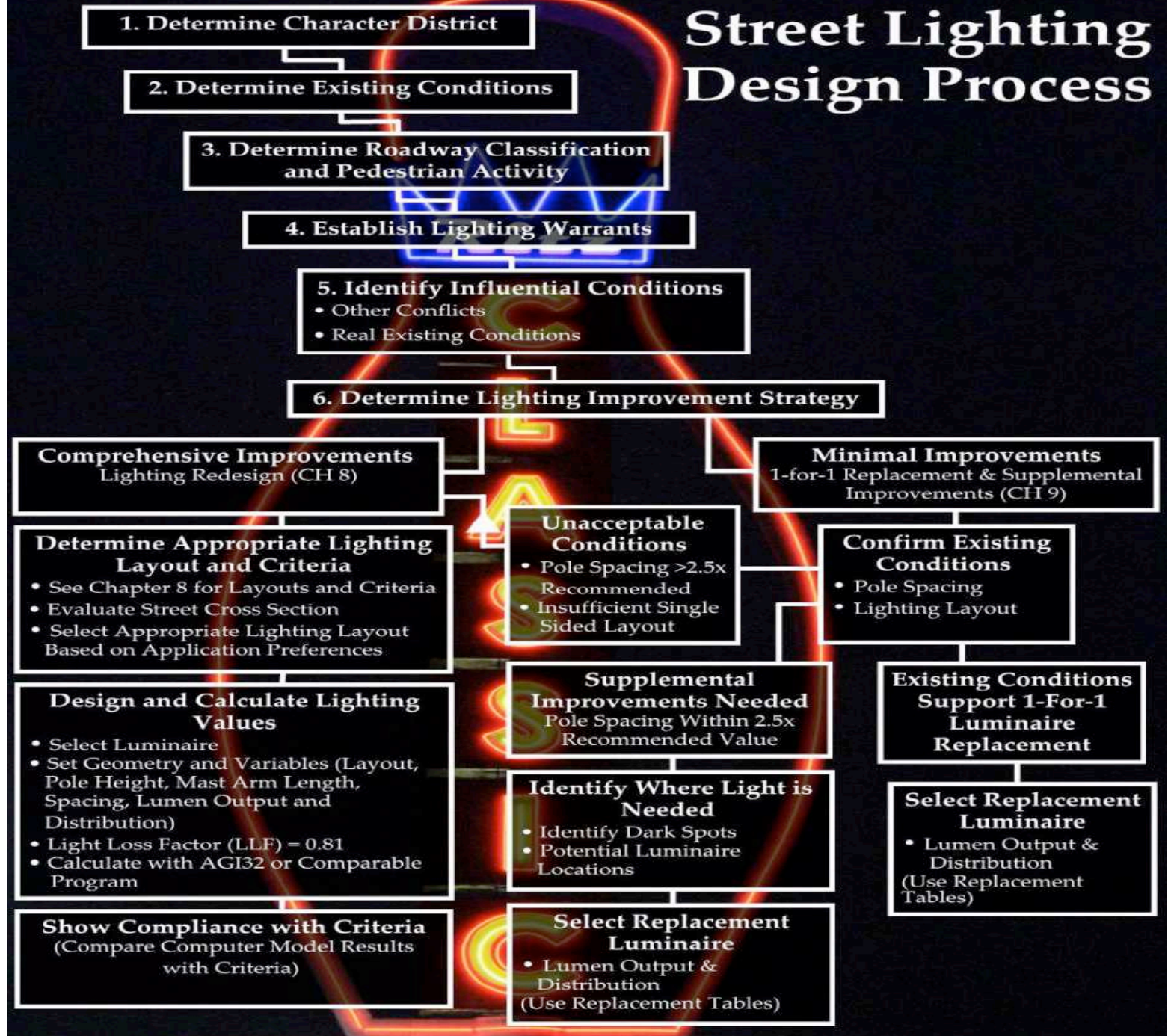
LED

- STREET LIGHTING IN SOUTH SALT LAKE



STREET LIGHTING DESIGN PROCESS

Street Lighting Design Process



WHY WE CARE ABOUT LIGHTING?

- LIGHTING STATISTICS:
- 38% of industrial and commercial electricity use is for lighting.
- 10% to 20% of home electricity use is for lighting.

- In September 1878, Thomas Edison announced he would introduce new form of incandescent lighting.
- USA: Energy Independence and Security Act of 2007: Phase 1: All general purpose bulbs must be 30% more efficient by 2014.
- Phase 2: By 2020, all general-purpose bulbs must produce 45 lumens/watt.
(Edison's 1879 light bulb 1.4 lumens/watt).

Comparison between LED & HID in Washington D.C.

The top is LED light.

The bottom picture is HID light



NON LED – 4D GA Avenue & New Hampshire Ave NW (PTZ & FIXED Cam)



What is outdoor lighting now

- Street lighting
- Roadway lighting
- Parks
- Stadiums
- Parking lots
- Landscaping
- Residential
- Building
- Pedestrian & Bicycling Pathways



Purpose of outdoor lighting

- Provide a safe and secure environment at night.
- Extend the use of parks and walkways into the night.
- To enhance historic/notable features.
- To enhance travel on the roads and at intersections.



**Why LED
Roadway
Lighting**

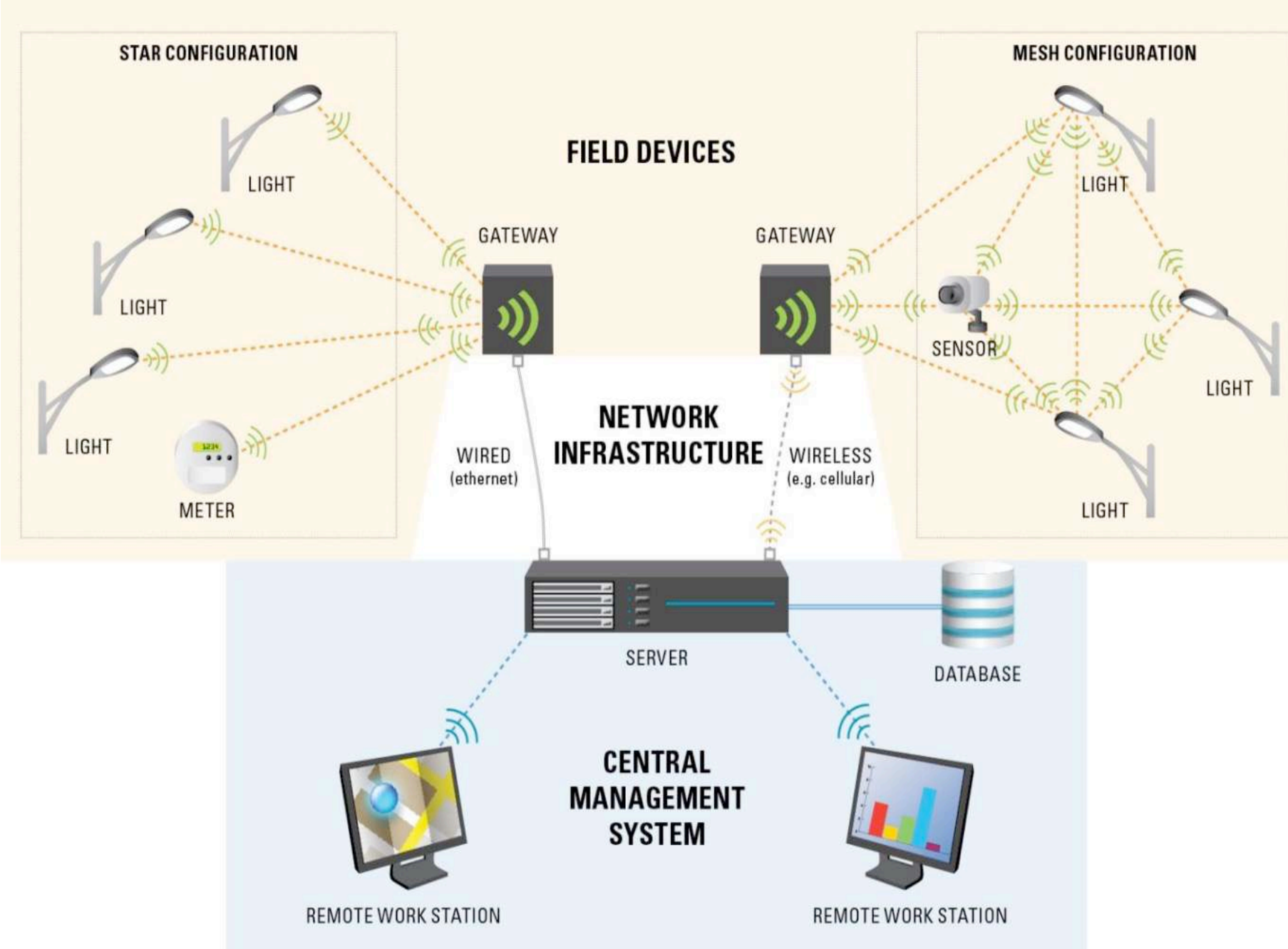


LED Benefits

- Compact size.
- Long life & ease of maintenance.
- Resistant to breaking & vibration.
- Good performance in cold temps.
- Lack of Infrared/UV emissions.
- Instant-On Performance.
- Directional light.

- The conversion of all street lighting in the city, estimated at 29,500 units, to equivalent LED street luminaires.
- Minimizing the City's administration costs and staff time for streetlight maintenance.
- Optimizing the environmental benefits of the program (e.g., reductions in greenhouse gases emitted and toxic materials disposal).

A networked outdoor lighting control system



This concludes The American Institute of Architects Continuing
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