



EFFECTIVE LIGHTING CONTROLS FOR TODAY AND TOMORROW

-

DESIGN & INSTALLATION

Presented by:

**Daniel G. Salinas, LC, IES
President, Lighting Systems Designer
Salinas Lighting Consult, Inc.
May 25, 2017**



REMEMBER THIS....

“In the classroom you receive tools to help you find the answers. But, true education begins when you leave the classroom. Only by putting what you have received into practice will you begin to be able to truly understand what needs to be done.”

Basis of Design

- Owners Intent
 - *What is important to the person paying for this installation*
- User Abilities and Knowledge
 - *What do you know about the person or persons maintaining this system.*
 - *Too difficult and it never gets used, too simple and you miss opportunities in efficiency and client benefits*
- Maintenance Requirements
 - *Life Cycle Cost evaluation, NOT just ROI*

Programming and Design

- User Requirements for the Space
 - *Occupancy v/s Vacancy*
 - *Scheduling and Emergency Operation*
 - *Light Level Monitoring*
- Opportunities
 - *Daylight Control, Load Shed, Dimming*
 - *After Hours Sensor Programming*
 - *Integration with Other Systems*
- Product Evaluation
 - *What are the weakest links in a proposed system*
 - *Compatibility with driver types and equipment*
 - *System concept and control protocol history*

User Interface

■ Control Locations

- *Where are they and what do they do*
- *Do they reflect the expected use patterns of the client per the Basis of Design*

■ System Programmability and Modification

- *How intuitive is the system*
- *Local, onsite programming and modification or remote by a monitoring company*

■ User Input or Automated

- *Take the user out of the equation by automating all or..*
- *Require interaction by the user with the system*

System Feedback

■ Trending and Analytics

- *It is in line with the known user abilities and knowledge base*
- *Is it intuitive or does it require a programmer*

■ System Maintenance

- *Keeping it to the users knowledge and abilities*
- *Does it require a lot of monitoring other than changes initiated by tenant request.*
- *Is it component heavy*
- *Are the potential savings from efficiency tied to the maintenance budget*

Expandability

- Can the system be part of future control expansion or does it need to be replaced
 - *10 to 15 years from now is it still available for interface with new requirements and concepts*
- Does it allow for new technology to interface with it down the road or is it locked in logic.
 - *IOW: Does it play well with others*
- Open Protocol or Proprietary
 - *How long has this type of control been in existence and what is its history*
- Document, Document, Document for Future
 - *During As-Build phase make sure the information is correct and not just construction docs reprinted.*