OLDNER LIGHTING
DALLAS
AUSTIN
SAN ANTONIO

Lighting Narrative: McKinney Temple - Fairview, TX

The proposed McKinney LDS Temple's designed Site, Architectural Building, and Landscape Lighting Schemes comply with the Town of Fairview's Lighting Ordinances & Restrictions supporting Dark Sky Guidelines. Proper initiatives have been carefully and meticulously followed to meet all Dark Sky requirements notated within the Town of Fairview's specific Ordinances through Professional obligations as Lighting Designers, and as a dedicated member of the McKinney Temple Project Design Team. Our Lighting Design strategies and processes for achieving compliancy is a combination of us implementing our professional design principles and applying tenured experience lighting design strategies for meeting obligatory Town & Municipal Code Ordinances, such as Dark Sky Compliance Guidelines. The Lighting Design Principles and Strategies implemented on the McKinney Temple project consist of, but are not limited to:

- incorporating relevant Lighting Design Concepts & properly specified Light Fixtures
- physically adjusting luminaires towards the vertical surfaces being lit
- physically adjusting or changing luminaire optics for maintaining light within the surface boundaries being lit
- utilizing a Lighting Control System for making the proper lighting intensity adjustments for achieving the Code & Ordinances required foot-candle average maximums and not-to-exceed foot-candle maximums.
- incorporating scheduled time frames for light fixtures to turn on & off meeting Code requirements.

The following pages of this Lighting Narrative define and describe the above mentioned Design Principles & Strategies in further detail of how we are achieving and complying with the Town of Fairview's Lighting Ordinances and Dark Sky Guidelines.

Lighting Narrative: McKinney Temple - Fairview, TX

The McKinney LDS Temple Lighting Schemes comply with the Town of Fairview's Lighting Ordinances & Restrictions supporting Dark Sky Compliance Guidelines through incorporating the lighting narrative described in this memo. Additionally, for achieving/meeting these typically 'more strict' adopted local Town Ordinances, Oldner Lighting will be incorporating Lighting Design Industry Standard "aiming & tuning" on site practices consisting of, but not limited to: physically adjusting luminaires, optically fine tuning & adjusting luminaires, and dimming & adjusting lumen output/intensity of luminaires through a Lighting Control System.

Lighting Design Concepts & Instruments:

• the project proposes overall soft and pleasing lighting design visuals on the Temple Building Composition for accenting, around the interior landscaping areas for promoting pedestrian circulation, and throughout Parking Areas for establishing uniform lighting and addressing safety concerns.

• the project proposes a layering of light levels for Architectural Building Lighting ranging from 1.0 foot candle to a maximum of 5.0 foot candles on vertical surfaces and maintaining light within the surface boundaries of that which is being lit, complying with the Town of Fairview's Lighting Ordinances of a maximum of 5.0 foot candles on vertical surfaces and avoiding light trespass beyond vertical surface boundaries.

• all Area/Parking light fixtures are "full cut-off" luminaires, complying with Dark Sky Regulations and the Town of Fairview's Lighting Ordinances, avoiding light trespass above horizontal.

• Area/Parking light fixtures utilize the Town of Fairview's Lighting Ordinances recommended maximum 4000 Kelvin temperature to aid in creating a better feeling of security. The Area/Parking lighting layout conforms to the maximum 2.0 average foot candle level at the parking surface required by Code and the Town of Fairview's Lighting Ordinances, as well as, avoiding light trespass to neighboring properties. These requirements are achieved by the overall luminaire design specifications, the placement & designed layout of the Area/Parking lighting, and utilizing "full cut-off" luninaires.

Lighting Narrative: McKinney Temple - Fairview, TX

Lighting Design Concepts & Instruments (continued):

- all Architectural Building light fixtures are "fully shielded" luminaires positioned, aimed, and optically equipped for lighting within the vertical surface boundaries of which they are specifically illuminating…, complying with Dark Sky Regulations and the Town of Fairview's Lighting Ordinances related to fixtures aimed above horizontal and appropriately equipped to being "fully shielded" luminaires.

- Architectural Building & Landscape light fixtures utilize 3,000 Kelvin as opposed to the maximum of 4,000 Kelvin allowed by the Town of Fairview, for creating a warmer overall light appearance, as well as, addressing USFWS (The United States Fish and Wildlife Service) Nighttime Lighting Recommendations regarding avoiding the disruption to migratory bird flight patterns.

Light Fixture Aim & Tune Procedure and Procurement Process for Meeting Regulations:

- Architectural Building Lighting consists of "focused flood" lighting for lighting the Temple Building form, and "adjustable optic focused accent" lighting for lighting the Steeple Base & Steeple/Spire…, not "general floodlighting". All Architectural Building Light Fixtures are "fully shielded" and optically equipped for lighting the specific vertical surface by which they are designed to light. Architectural Building Light Fixtures include those fixtures aimed above horizontal, which are intentionally aimed and optically specified to light the vertical surface specific to each fixture; and, within the outer boundary limits of each associated vertical surface. Each Architectural Building Light Fixture will be 'aimed, optically tuned, and dimmed' after installation by Oldner Lighting (the project Lighting Design Firm) for fine-tuning the overall lighting design, intentionally tailoring/adjusting each light fixture for achieving our overall comprehensive compliant Architectural Building lighting design…, meeting all Code and Dark Sky Ordinances performance requirements of the Town of Fairview. Landscape Lighting will be addressed in similar fashion - utilizing "fully shielded" and optically equipped fixtures, that will be 'aimed and dimmed' after installation by Oldner Lighting for fine-tuning the overall lighting design.

Lighting Narrative: McKinney Temple - Fairview, TX

Light Fixture Aim & Tune Procedure and Procurement Process … (continued):

- This Lighting Design Process of "aiming & tuning" (physically adjusting luminaires, optically aiming luminaires through "build-in zoom optic technology" and/or by physically exchanging optics on site, and dimming & adjusting the lumen output/ intensity of luminaires using the specified Lighting Control System) is the current & industry standard process for achieving/meeting all Federal, State, County, and City adopted Lighting Code Standards, in addition to associated stricter City Municipality & Town Lighting Codes & Lighting Ordinances regulations (ie. Dark Sky Compliancy Ordinance).

Lighting Schedule of Operation:

- Area/Parking lighting will turn on at dusk, maintaining the required maximum 2.0 average foot candle level, and will turn off at dawn via photocell.
- Architectural Building Accent lighting will turn on at dusk and within the required maximum of 5.0 foot candle level at the building surface(s), and will turned off (along with Landscape Lighting) at dawn via photocell.

These narrated procedures & measures satisfy all required Code and the Town of Fairview's Lighting Ordinances. To aid in this effort, Oldner Lighting has implemented design solutions (ie. kelvin temp adjustments & optical zoom technology) and voluntary incorporated recognized recommendations (ie. USFWS Nighttime Lighting Recommendations) for meeting & exceeding code requirements and the overall experience expectations of the project for the Town of Fairview's questions & concerns.

Respectfully,

Ross Murphy
PM & Senior Lighting Designer, Oldner Lighting