

LED Retrofit Made Simple



Location: Las Vegas, NV
Details: Clark High School
Engineer: TJK Consulting Engineers, Inc.

"The removal of the previously installed fixtures and the new luminaires required a unique solution. Kenall's engineers designed a custom trim ring that is a perfect solution and also complements the finished product."

– Tom Anderson
President, TJK Consulting Engineers, Inc.



Project Summary

Challenge: Provide an aesthetically-pleasing LED retrofit solution from an opening left by removal of HID luminaires.

Solution: Custom trim rings cover gap to make a challenging LED retrofit simple.

Benefit: Reduction of energy consumption by 75 percent, plus, looks great!

Millenium Edge™ with Custom Trim Ring Enables School's First LED Luminaire Retrofit

Ed W. Clark High School, Las Vegas, NV



“Clark High School is an inner city school with specific illumination requirements. The new fixtures needed to deter crime, resist vandalism, conserve energy...and fit into the same physical space of the previous HID lights.”

— Steve Johnston, CCSD, design manager, Clark High School modernization project

Clark County School District (CCSD) is the fifth largest and fastest growing school district in the U.S. and is designing and building over 100 new schools. All will be LEED™ Gold Certified.

In addition to new construction, the district is implementing an ongoing \$30 million modernization renovation at existing facilities including the Ed W. Clark High School. The high school serves grades 9-12 and approximately 2,070 students.

Built in 1964, Clark High School needed updating. The exterior lighting was inadequate and outdated.

Johnston and Jeff Iverson from TJK Consulting Engineers compared Kenall's Millenium Edge™ LED luminaires with other lighting technology and determined the LED luminaires outperformed traditional lighting sources. Millenium Edge was selected for the project.

A crucial component to the project's success was Kenall's design and manufacture of a custom trim ring to span a hole left by the old 12-inch HID luminaire. This custom trim ring provided a smooth retrofit from HID to LED. Other options under consideration would not have met the school district's objectives.

Millenium Edge Features:

- Color temperature of 4000K
- Flat lens for Dark Sky compliance in soffit mounted applications
- IP65 listing ensures dust and water protection

Benefits for High School:

- Brighter, safer campus at night
- Reduced energy consumption by 75 percent over incumbent fixtures
- Reduced maintenance time and expense
- Uniform lighting around the school

“We are very pleased with the brighter and whiter light quality and uniform lighting performance from this luminaire. We're expecting to save a lot of time and expense in maintenance.”

— Steve Johnston

The new luminaires are constructed of environmental-and-impact-resistant materials such as marine-grade aluminum housings, UV-resistant polycarbonate lenses and lens bases, stainless steel fasteners, and extruded closed-cell gasketing.



A custom trim ring covers a gap around the luminaire that was left when the larger HID was removed.

LED luminaires are designed to provide a virtually maintenance-free operation for more than 15 years in the harshest outdoor environments, while HID last only two to three years.

Reduced luminaire maintenance is a benefit welcomed by Jack Viscosi, Clark County School District electrical/mechanical repair coordinator, who's responsible for the electrical maintenance at Clark High School.

Kenall LEDs Get High Marks

This is the school district's first LED luminaire installation but it won't be the last. A commitment to reducing energy consumption and environmental stewardship will help facilitate additional sustainable projects as funds become available.

This renovation was funded largely through a 1998 voter approved bond fund, and federal grants specifically for the lighting upgrade as well as other renovations.

For more information, please visit us on the web at www.kenall.com



www.kenall.com

P: 800-4-Kenall

F: 262-891-9701

10200 55th Street Kenosha, Wisconsin 53144

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