

LED Outdoor Lighting Project Profile

Bartow County College and Career Academy

Cartersville, GA

Situation

The new Bartow County College and Career Academy (BCCCA), located 45 miles northwest of Atlanta in Cartersville, opened its doors to students in August 2013 in the old Cass High School facility. BCCCA is a joint venture between the community, K-12 education, post-secondary education, business, and industry. The goal of the Career Academy is to provide educational opportunities for high school students and ensure a viable 21st century workforce for Bartow County and the surrounding area.

As renovation work was progressing on the facility in the spring of 2013, the Bartow County Board of Education’s director of maintenance contacted Georgia Power for assistance with repairs and upgrades to the existing outdoor lighting to improve nighttime visibility on the campus.

Georgia Power’s outdoor lighting experts visited the BCCCA campus and conducted a lighting analysis. This included an evaluation of the current outdoor lighting system to determine if energy-saving light-emitting diode (LED) lighting could help reduce the monthly energy bill at this facility.

Action Plan

Based on the analysis, a proposal was made to replace the 28 existing 1,000-watt metal halide (MH) Galleria fixtures in the campus parking lots and driveways with 28 new 280-watt LED fixtures. The proposed LED fixtures would provide the improved site lighting that the Board of Education was seeking, plus energy savings and a bright, white light to match that provided by the current metal halide fixtures.

The Bartow County Board of Education accepted the LED lighting proposal and signed a contract for the new LED *continued >*

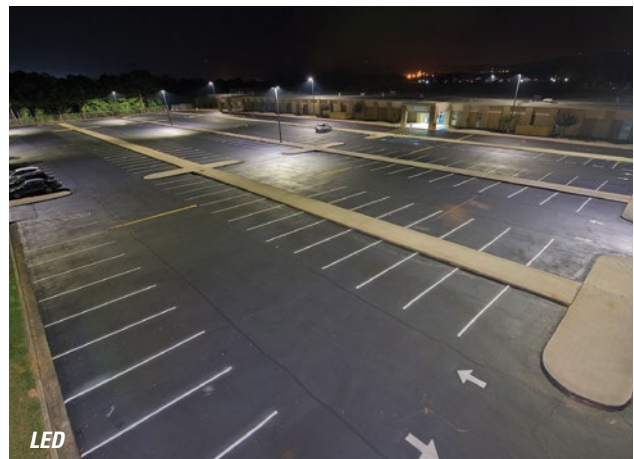
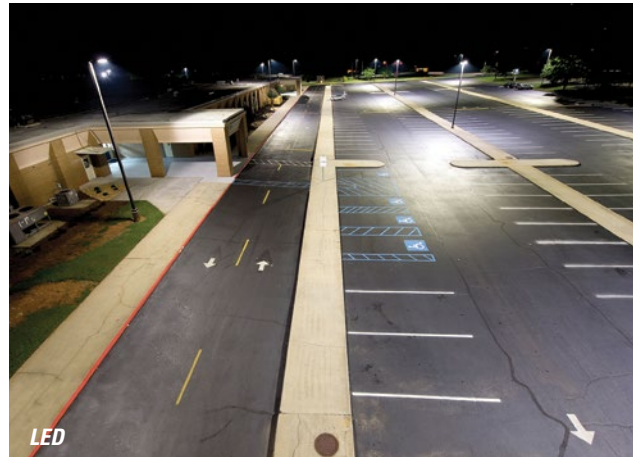


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lighting in June 2013. Removal of the old MH lighting and installation of the new LED lighting was completed in August 2013.

The new lighting installed utilized 28 American Electric Lighting 280-watt Autobahn series LED lights from Acuity Brands. All fixtures have a Correlated Color Temperature (CCT) of 4000K and a Color Rendering Index (CRI) of 70. All existing poles and pole locations were used. Pole heights are 30 feet.



Results/Benefits

- **Old Metal Halide System:**

- 28 - 1,000-watt (1,080 system watt) MH Galleria fixtures = 30,240 watts

- **New LED system:**

- 28 - 280-watt LED area fixtures = 7,840 watts

- 74% reduction in energy usage related to outdoor lighting
- Enhanced the safety and security of students, faculty, and property
- LED lighting is directional – all light is directed toward the area to be illuminated
- Minimized/eliminated light trespass
- Greatly improved lighting uniformity (eliminated dark spots and hot spots)
- Long fixture life and reduced maintenance requirements
- Environmentally friendly (no hazardous materials to recycle; reduced energy usage lowers greenhouse gas emissions)
- Instant on/no warm-up time



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