



"We're dramatically upgrading both the technology and the overall look of our community. Most importantly, we're estimating a savings of about 23,000\$ annually with the LED system. We felt the investment to be a wise one for now and the future."

Damon Lambert,
Transportation Planner,
Cherokee Department of Transportation

Modern Lighting Inspired by Tradition Eastern Band of Cherokee Indians goes LED

Located on the south end of the Great Smoky Mountains National Park, known as *the people's park*, Cherokee is home to the Eastern Band of Cherokee Indians. A sovereign nation of 14,500 residents, Cherokee covers an area of 100 square miles in the western part of North Carolina. For centuries, the Cherokee Indians have thrived there, in harmony with nature, respecting and preserving the land and its resources.

The community was lit by High Pressure Sodium (HPS) fixtures, but their inefficient light, high energy consumption and need for constant maintenance was a drain on resources, both financial and natural. Moreover, they did not blend into their spectacular surroundings, created light pollution and contained mercury. Faithful to their ways of being stewards to their land, the Cherokees decided to invest in energy-efficient outdoor lighting to upgrade the aging 40 year-old downtown system.

Working in concert with architectural firm, Proctor Hodge, engineering and architectural consultants, Hodge & Associates, as well lighting

and design experts at the O'Hanlon Group, the Cherokees quickly realized that LED solutions were with the best choice for their sustainability goals. They chose Philips Lumec's Transit Series luminaires, equipped with the eco-friendly LifeLED™ technology, thus placing themselves in the vanguard of communities choosing more environmentally responsible systems.

LifeLED™ is a high-performance, energy-efficient LED light engine designed to last over 70,000 hours before replacement is required, which is 3 to 7 times longer than HID lamps. It is also made to be easily taken apart for recycling at the end of the luminaire's life.

"We considered 250 watt Metal Halide lamps initially, but when we saw the performance of the Philips Lumec LED system, it quickly became the preferred option" says Damon Lambert, Transportation Planner, Cherokee Department of Transportation.

Among the many reasons why the innovative Philips Lumec solution was chosen, the Transit

series offered energy savings of up to 50%, as compared to the HPS fixtures they replaced. The Transit also offered an elegant design and better light distribution and uniformity than HPS, allowing for greater pole spacing. This enables it to blend, rather than compete, with the majestic scenery of the region.

Another important consideration was the maintenance of the fixtures, which can require significant time and effort, increasing operating costs. The Transit series from Philips Lumec features the Smartseal™ system, which protects the optics from Luminaire Dirt Depreciation, minimizing the need for maintenance. Engineered to function in even the most demanding environments, the rugged Transit series is an ideal choice for virtually any outdoor application.

Adds Lambert: "We're dramatically upgrading both the technology and the overall look of our community, but most importantly, we're estimating a savings of about \$23,000 in energy

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sense and simplicity



and maintenance costs annually with the new LED system. So in spite of some additional front-end cost, the estimated payback is well within the expected life of the system. We felt the investment to be a wise one for now and the future.”

Apart from the environmental and financial benefits of the luminaires, the Transit series enhances the spaces they illuminate with better quality light. The 6000K light generated by the LifeLED™ is brighter and more vivid than HPS light, providing more safety and comfort for residents, while minimizing light spill to protect the nocturnal majesty of the area.

“We are committed to improving quality of life and creating more comfortable night-time environments, while minimizing energy waste and pollution,” says Jean-Francois Simard, Philips Lumec CEO. “The Band of Cherokee Indians’ decision to utilize LifeLED™ technology

reinforces their ages old commitment to preserving the environment, making us very proud to be a part of this project.”

Phase I of the project was initiated in summer 2009 and involved replacing 54 HPS units with the Transit series, quickly followed by a second phase with the replacement of an additional 30 units. In April 2010, an additional 31 luminaires entered production, with other phases being considered to further enhance this southern region of the people’s Park.

The Eastern Band of Cherokee Indians took responsible steps, enhancing their surroundings and reducing their ecological footprint, while saving money. They have proven that ancient traditions and new technologies can co-exist, becoming a beacon for their contemporaries and paving the way for generations to come.



Project Statistics

End User	City of Cherokee, NC
Project Site	Downtown streets of Cherokee, NC
Project Scope	Upgrade 40+ year-old HPS fixtures by highly efficient, reliable and eco-friendly LED fixtures. In the end, 7 miles of road along with adjacent parking lots could be included in the project, representing 250 to 275 fixtures.
Project Timetable	Project initiated in summer 2009. First and second phases completed in 2009, with additional phases projected through 2010.
Products and Suppliers Used	85 Transit luminaires, fitted with 82w 54-LED and 90w 49-LED (new generation) LifeLED™ light engines designed and manufactured by Philips Lumec have been installed. 31 additional new-gen luminaires entered production in April 2010.
Cost Savings with New System	The upgrade should reduce Cherokee’s energy and maintenance bills by \$23,000 annually.
Other Benefits	<ul style="list-style-type: none"> • Highly efficient LED white light elevates visibility, ambiance and comfort • Reliability and long life of the LifeLED™ system minimize maintenance costs • Better light distribution and uniformity allow for greater pole spacing • LED technology consumes considerably less electricity while providing a better lighting, lowering energy bills



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