

Dialight's StreetSense™ Series LED Street Light Historic Missouri City Takes Progressive Approach to Lighting with Dialight's StreetSense™ Series LED Street Lights

Home to the world's only inland cape, Cape Girardeau, Missouri has played a significant role in the discovery and settlement of the American west. Founded more than 200 years ago along the Mississippi River, the city has evolved from a tiny trading post to a thriving culturally-rich community of 37,000 residents.

Recently, city officials in "the Cape" embarked on an upgrade to its municipal lighting, replacing 104 high-pressure sodium street lights with Dialight's new StreetSense™ LED street lights. The result is not only improved visibility for motorists in the high-traffic area but also significant reduction in the maintenance needs and energy costs, all funded by the Department of Energy's Energy Efficiency & Conservation Block Grant (EECBG).



Dialight's StreetSense™ LED Street Light's reflector based optics direct the light to where it needs to be on the street

The Missouri Highway 74 corridor through downtown Cape Girardeau is one of the busiest thoroughfares in the city, leading up to the Emerson Memorial Bridge across the mighty Mississippi and connecting the Cape with Illinois. Along this stretch of road, as well as North Kingshighway, more than a hundred 250W high-pressure sodium street lights kept maintenance crews perpetually busy with frequent bulb changes.

"Each is equipped with a photocell, which means we'd have to send a crew out to scout for burn-outs each night, an overtime expense that we'd prefer to avoid," said Geoff Dial, Special Projects Coordinator in the Public Works Department in Cape Girardeau. "The ballasts were getting to be around five to seven years old, and lately it seemed as though the lights were going out more frequently than ever before. Almost every day we had one burn out, despite our efforts to keep up with the changes."

As part of an overall plan to achieve more sustainable operations, officials in Cape secured a \$190,000 grant to make energy-efficiency improvements to city-owned facilities. Part of the funding received through the EECBG was designated to replace 104 streetlights with new high-efficiency, low-maintenance LED street lights that would save the city money and free up precious resources to attend to other, more pressing issues besides changing light bulbs.

Having already replaced traffic signals in 21 intersections and rail signals in one railroad crossing with Dialight's LED signals, the city looked to the leading innovator in LED technology to once again meet its needs. The EECBG grant mandated that all equipment purchased must comply with the Buy American requirement of the American Recovery & Reinvestment Act. Not only did the Dialight StreetSense fixtures meet Cape Girardeau's technological and performance needs, but they are also made entirely at its Roxboro, NC manufacturing facility, satisfying the Buy American requirement.



LED Street lights greatly improve color rendering for Cape Girardeau

Working with Brown Traffic, a Dialight authorized distributor in Davenport, IA, the city has now replaced 104 of its 250W HPS lights with the much more efficient 120W Dialight LED units along Highway 74 and North Kingshighway. With an output of 9,000 lumens (73 lm/w) and a CRI of 72 with 6000k cool white light, the new StreetSense LED lights provide outstanding illumination with a light that is easier on the eyes for motorists.

"The changeout to the Dialight units was extremely fast and easy for our crews," Dial said. "I personally witnessed them replace one in less than 10 minutes from the time they stepped into the bucket truck to getting back onto the ground. Because I know these new lights will last for at least 15 years, I'm looking forward to not having to touch these LED fixtures for a long time."

In addition to the maintenance savings, Dial estimates that the new LED units will slash the city's energy consumption by nearly 70,000 KWH, from about 160,000 KWH to just 89,000 KWH, which will help offset future increases in energy costs, a factor that the city council in Cape Girardeau has found very enticing. The first 104 units installed represent about one-fourth of the street lighting under the city's charge, and Dial says he frequently fields calls from residents who complain about burned out lights in other areas.

With a new casino planned for the north end of town, Dial says the new lighting also offers a much more welcoming environment for the anticipated influx of tourists expected in Cape.

"We are continually reviewing ways to conserve energy and resources throughout the city," Dial said. "The Dialight LED street lights offered us the energy savings and long life we require to ensure a safer and more hospitable environment for residents and visitors."

For more information about Dialight's StreetSense™ Series LED Street Light including IES files and technical datasheets, visit www.dialight.com.



Installation Snapshot

- ▷ Number of fixtures – 104
- ▷ Replaced – 250W HPS with 120W LED Street Lights
- ▷ Annual energy reduction – 70,000kwh
- ▷ Rebate incentive – EECBG (part of \$190,000 energy efficiency rebate)

Dialight LED benefits

- ▷ 70% lumen maintenance after 80,000 hours
- ▷ 5 year warranty
- ▷ LEDs driven at low current (350mA) for extended life
- ▷ Exceptionally precise optics (B1, U1, G1)
- ▷ Field replaceable power supply
- ▷ Up to 76 lm/W
- ▷ Instant on/off
- ▷ Maintenance free
- ▷ Mercury free
- ▷ Superior light quality
- ▷ Hinged cover provides easy tool-less entry to terminal block
- ▷ Universal input: (100 - 277VAC), 50/60Hz
- ▷ Ruggedized LED drivers
- ▷ Resistant to shock and vibration

Dialight reserves the right to make changes at any time in order to supply the best product possible.

The most current version of this document will always be available at:

www.dialight.com/news/details/Cape_Girardeau_Case_Study