

# LED Outdoor Lighting Project Profile

## QLS Haven and Gardens

Atlanta, GA

### Situation

Quality Living Services, Inc. (QLS) is a 501(c) 3 non-profit organization established in 1985 that provides services for citizens of Atlanta over the age of 50. QLS owns and manages several senior housing communities and one multifamily community.

The QLS Haven and Gardens facility in southwest Atlanta encompasses 120 one-bedroom cottages and 202 one- and two-bedroom apartments and three-bedroom townhomes. QLS management, as part of its ongoing efforts to provide quality senior and family housing, identified outdoor lighting as an area for possible improvement that would benefit its residents. QLS asked Georgia Power's outdoor lighting experts to conduct a lighting analysis at the site and make recommendations for improvements. The existing lighting system consisted of a total of 47 lights in a mixture of 150-watt, 250-watt and 400-watt high pressure sodium (HPS) fixtures in post top, shoebox, cobrahead and floodlight styles.

### Action Plan

In the fall of 2012, Georgia Power conducted a lighting analysis and noted that the system, approximately 20 years old, was nearing the end of its useful life and not producing illumination levels needed to provide a safe and secure environment for residents. A proposal was made to upgrade the lighting from the current HPS lighting to either metal halide (MH) or Light-Emitting Diode (LED) lighting, both of which would provide a clean, white light.

QLS management decided to upgrade to the LED lighting, as it would provide improved illumination, white light, and energy efficiency. New LED fixtures were ordered. The removal of the old lighting and installation of the new LED lighting was completed in early January 2013.

Almost all of the existing lighting locations and poles were utilized with the new LED lighting. In most locations,

*continued >*



HPS



LED

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fixtures were replaced “one for one.” That is, one LED fixture was installed where one HPS fixture was originally. There were, however, several locations where one LED fixture replaced two HPS fixtures. During the lighting analysis, it was determined that there were two locations that needed to be illuminated where there previously was no pole or fixture. In these locations a new pole and fixture were added.

The new lighting installed utilized a total of 40 Cooper Lighting Navion LED lights in one, two, three and four LED Light Square configurations. All fixtures have a Correlated Color Temperature (CCT) of 4000K and a Color Rendering Index (CRI) of 70.



## Results/Benefits

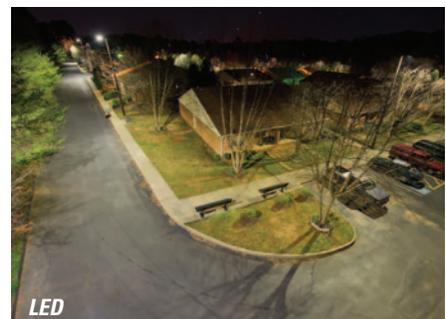
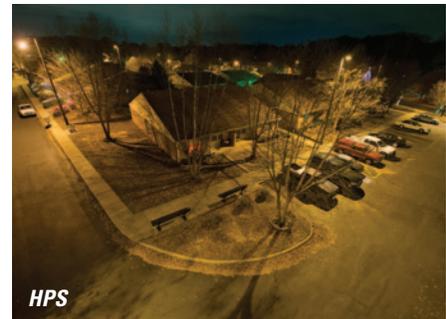
- **Old HPS System:**

- 7 150-watt (185 system watt) HPS fixtures = 1,295 watts
- 4 250-watt (285 system watt) HPS fixtures = 1,140 watts
- 36 400-watt (465 system watt) HPS fixtures = 16,740 watts
- Total = 19,175 watts

- **New LED system:**

- 1 50-watt LED fixture = 50 watts
- 10 105-watt LED fixtures = 1,050 watts
- 6 155-watt LED fixtures = 930 watts
- 23 205-watt LED fixtures = 4,715 watts
- Total = 6,745 watts

- 65 percent reduction in energy usage related to outdoor lighting
- Enhanced the safety and security of residents, staff, 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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