

STEFFEN THOMAS MUSEUM OF ART

4200 Bethany Road, Buckhead, GA 30625

GRANTS TO GREEN PROGRAM OVERVIEW

Project Case Study June 2017



Project Overview

The Steffen Thomas Museum of Art (STMA) is sited in bucolic Buckhead, Georgia. Although STMA was originally operating in an efficient manner, their original lighting, HVAC, and appliances were inefficient based on current technologies. With funding from Grants to Green, STMA replaced all incandescent and fluorescent lighting with LED. Motion-based controls ensure that lighting turns off in unoccupied areas.

All HVAC systems were replaced with high-performance heat pumps equipped with Web-based thermostats that allow for online monitoring of temperatures and relative humidity conditions that are critical in a museum environment. This project also allowed for removal of an unsightly aboveground propane storage tank.

Kitchen appliances were replaced with ENERGY STAR units that use from 10-50 percent less energy than conventional appliances.

STMA sealed several openings in the building envelope that reduced infiltration of unconditioned outside air. This project saved energy and also reduced swings in relative humidity associated with infiltration.

STMA was recognized for far exceeding the 20 percent energy savings target of the Atlanta Better Buildings Challenge (ABBC) in 2016 and 2017. STMA's Facilities Director, Lisa Conner, has been an active advocate for Grants to Green.



About [Grants to Green](http://www.cfgreateratlanta.org/nonprofits/available-grants/grants-to-green): Nonprofits in a 23-county Atlanta region can apply for Assessment Awards and/or Implementation Match Grants. An Assessment Award is not a cash grant, but a service performed for the nonprofit by Southface. Southface conducts assessments for existing buildings and recommends opportunities to optimize operations, particularly related to energy and water use. Once the assessment process is complete, nonprofits are eligible to apply for Implementation Match Grants to offset the cost associated with implementation project cost. <http://www.cfgreateratlanta.org/nonprofits/available-grants/grants-to-green>

Site Details

- 13,000 square feet
- Constructed in 1995

Baseline Utilities Benchmarks

- \$9,482 in baseline utilities cost
- 27.2 kBtu of energy per sq. ft. per year

Improvements & Results

- Invested \$78,513, or \$6.04 per sq. ft.; of which STMA contribution was 33%, or \$26,171
- Actual annual cost savings to date of \$5,721
- Actual ROI on STMA investment of 22%
- 11.4 kBtu of energy per sq. ft. per year
- Actual annual savings to date: 60.3% energy cost savings, 50.4% energy savings (weather-normalized source) and 51.7% avoided GHG emissions

Project Contacts

- Lisa Conner, Facilities Manager – Steffen Thomas Museum of Art
- Frank Nesbitt: LED lighting & lighting controls
- Lewis and Malone Heating and Air Conditioning, Inc.: High-performance HVAC
- Jean Pullen, PE; Chandra Farley, Program Manager – Southface

Project Highlights



Figure 1: STMA Recognized by the ABBC & Atlanta Mayor Reed in 2016



Figure 2: HVAC Replaced with High-Performance

The original HVAC systems (above) were replaced with high-performance heat pumps. The new heat pumps allowed for removal of the propane storage tank (below).



Figure 3: Unsightly Propane Tank Removed



Figure 4: LED Track Lighting

All interior incandescent and fluorescent lighting was replaced with LED under motion sensor control. Outdoor fixtures were also converted to LED. STMA recruited volunteers to assist with installation of LED bulbs in track lighting systems (below).



Figure 5: Volunteer Support for LED Bulb Installation



Figure 6: STMA School Programs

Cost savings from Grants to Green enable STMA to direct more funds to its mission.