



## 2.5 Green Building Practices

SAS strives to be a leader in environmental sustainability and is committed to making a difference around the world. To achieve this goal, SAS embraces Leadership in Energy and Environmental Design (LEED®) guidelines for new construction, and remodeling and retrofitting existing buildings. Since 2005, all new office buildings and data centers at world headquarters have achieved LEED certification.

SAS' 10 LEED-certified buildings include Platinum-level certification for the Executive Briefing Center at world headquarters. Platinum is the highest level awarded by the US Green Building Council (USGBC). SAS holds a Silver level national membership with the USGBC. For offices located in countries that do not use LEED, SAS is incorporating country-specific best practices and pursuing equivalent certifications for new construction and maintenance.

Examples of SAS' commitment to green building practices that are LEED-certified include:

### **World Headquarters: Building C – LEED Platinum Certified Office Building**

Building C includes the Executive Briefing Center, café and an office tower for employees. The Executive Briefing Center uses cutting-edge technologies to help customers learn

about SAS® software. Building C achieved LEED Platinum certification for water and energy conservation, the first for any building in Wake County and only the fifth in North Carolina in 2011. The building consumes 40 percent less energy and 50 percent less water by integrating highly efficient technologies and sustainable features:

- Photovoltaic panels generate 100,000 kWh annually to support lighting and building systems.
- Solar thermal panels provide hot water for the café.
- Thermal slab floor cooling uses water cooled in off-peak hours by building chillers to help maximize air conditioning efficiency.
- Radiant floor heating is used in the atrium for greater occupant comfort and minimizes heat loss through the roof.
- Highly efficient HVAC systems integrate economizers, enthalpy wheels, variable speed drives, and various heat recovery systems to increase energy savings.
- T5 fluorescent and LED lighting fixtures – along with individual lighting controls, motion sensors and automatic timers – save energy.

- A 1-acre sedum green roof minimizes stormwater runoff and insulation, significantly reducing the heat-island effect for this microclimate.
- Low-flow and electronically activated plumbing fixtures greatly reduce employee water consumption, saving 63 percent more compared to standard fixtures.
- A rainwater collection system with two 20,000-gallon cisterns captures water for use in bathrooms.
- A 655,000-gallon retention pond collects stormwater runoff for landscape irrigation.

#### **World Headquarters: Building D – LEED Gold Certified Data Center**

The 38,660-square-foot facility includes two server farms, providing additional data handling for expanded SAS OnDemand offerings, hosted solutions and continued R&D growth. Environmental technology designed into the building, which earned LEED Gold certification by the USGBC, includes a reclaimed water system and mechanical and electrical systems emphasizing efficiency of operation.

#### **World Headquarters: Building Q – LEED Gold Certified Office Building**

The 220,660-square-foot office building features rooftop solar photovoltaic panels, highly insulated exterior wall and roofing systems, highly efficient heating and air conditioning, mechanical systems, energy recovery units and a water-side heat exchanger, extensive use of LED lighting, and reclaimed water use for cooling towers, irrigation and toilets. The parking lot has 12 spaces designated for plug-in electric vehicles with access to electric vehicle charging stations.

#### **World Headquarters: Buildings R, S, T & U – LEED Certified Existing Office Buildings**

In 2013, Building T was the first SAS building to be awarded LEED certification for an existing building. Since then, SAS has achieved LEED existing building certifications for buildings R, S and U. These buildings are Energy Star certified and feature the use of solar panels, energy-efficient lighting and automation controls, and low-flow bathroom fixtures. They have also completed advanced retro-commissioning to ensure optimal performance for all building systems.

#### **Solna, Sweden:**

##### **LEED Gold Certified Office Building**

Sweden's newest office building was awarded LEED Gold certification. The facility features geothermal energy wells for efficient heating and cooling, rooftop solar photovoltaic panels, a sedum-covered green roof, and even on-site beehives, which provide natural honey for the cafeteria.

#### **Toronto:**

##### **LEED Silver Certified Office Building**

Toronto was the first LEED-certified new office building in Canada. With rainwater harvesting and energy conservation measures saving more than 6 million kWh of energy per year, the SAS building has served as an inspiration for many other new buildings in Toronto.

#### **São Paulo, Brazil:**

##### **LEED Certified Office Building Renovation**

SAS' leased office in São Paulo received LEED certification for an office renovation project in 2013.

### **2017 Data**

Green building highlights from 2017 include:

- Achieved LEED certification for SAS' largest office building and data center at its world headquarters - 78 percent of all office space at Cary headquarters is LEED certified.
- Continued to incorporate environmental best practices in the construction of a new office building planned for completion in early 2019. "Building A" will be the largest SAS facility and is expected to earn a high-level LEED certification. It will be partially powered by one of our solar farms, utilize a "smart building" analytics platform to optimize building performance, make extensive use of LED lighting and have 17 free electric vehicle charging stations.
- Completed pilot project to test the use of sphagnum moss as a water treatment option in building cooling towers. The data indicated this solution improved overall water quality, increased equipment efficiency, removed corrosive organic material, reduced potable water consumption, and minimized the need for chemical treatments.