

Maplewood Mall Simon Property Group

City Engineers Association of Minnesota

Annual Meeting

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Simon Property Group

Simon Property Group, Inc. is an S&P 500 company and the largest public U.S. real estate company.

Simon is a fully integrated real estate company which operates from five real estate platforms:

Regional Mall

Premium Outlet Centers

The Mills

Community/Lifestyle Centers

International Properties



Simon Property Group

Simon currently owns/has interest in 338 properties, comprising 246 million square feet of gross leasable area in North America, Europe and Asia.

Simon is headquartered in Indianapolis Indiana, and employs more than 5000 people worldwide.

Simon Property Group is publicly traded on the NYSE under symbol SPG.



Maplewood Mall

Maplewood Mall is a 930,000 square foot super-regional mall, built in 1974.

The mall was renovated once in 1988 ,and again in 2011.

Maplewood Mall is anchored by Macy's, Kohl's, JCPenney and Sears, and has over 130 specialty stores including a two level 40,000 square foot Barnes and Noble.

Maplewood Mall is also home to a 10-restaurant food court, and a double-decker Venetian Carousel.

The mall is open to the public 7 days per week, an average of 90+ hours.



ENERGY STAR

ENERGY STAR was introduced by the U.S. Environmental Protection Agency in 1992 as a voluntary market-based partnership to reduce greenhouse gas emissions through increased energy efficiency.

ENERGY STAR offers businesses and consumers energy-efficient solutions to save energy, money and help protect the environment for future generations.

More than 9,000 organizations are ENERGY STAR partners, committed to improving the energy efficiencies of products, homes, buildings and businesses.



Simon Property Group – 2008 ENERGY STAR Partner of the Year

Simon Property Group was honored for smart energy management practices and investments throughout its operations that resulted in significant energy and financial savings.

Due to energy management efforts, Simon showed a consistent trend in the reduction of both electricity and natural gas use since 2003.

Absolute corporate energy use decreased by 9.7% from 2003 to 2006.

This represents a reduction of 102 million kilowatt-hours in energy use and reduction of carbon emissions by more than 67,932 tonnes.

Simon Property Group was one of only three commercial real estate companies to be so recognized by the EPA in 2008.



“Effective energy management is a key sustainability strategy and a core part of our operations and corporate culture” – David Simon, chairman and CEO of Simon Property Group.

“Energy efficiency will only become more important in the future. The proven fiscal and environmental savings that result from superior energy management reinforces the benefits of our partnership with ENERGY STAR” – George Caraghiaur, Vice-President of Energy Services, Simon Property Group.

“Simon Property Group’s leadership in managing its energy use is a model for other businesses that are looking for ways to protect the environment. Energy management is a critical element in our efforts on climate change because commercial and industrial facilities account for half of all energy consumption in the U.S. and are responsible for nearly half of U.S greenhouse gas emissions” – Robert J. Meyers, principal deputy assistant administrator for EPA’s Office of Air and Radiation.



EPA – National Building Competition – “Work Off the Waste”

According to the EPA, energy use in commercial buildings account for 17% of total U.S. greenhouse gas emissions at a cost of more than \$100 billion per year.

On average, 30% of the energy used in commercial buildings is wasted.

The EPA launched the National Building Competition as a coast-to-coast contest between commercial buildings to save energy and fight climate change.

14 different commercial buildings from across the country were chosen to “work off the waste” through improvement in energy efficiency, during the timer period of September 1, 2009 – August 31, 2010.

The building that shed the most energy waste on a percentage basis was declared the winner by the EPA in October 2010.



EPA – National Building Competition Contestants

522 Fifth Avenue Building in New York, New York

1525 Wilson Boulevard Building in Arlington, Virginia

Crystal River Elementary School in Carbondale, Colorado

Courtyard by Marriott San Diego Downtown in San Diego, California

JCPenney Store 1778 in Orange, California

Maplewood Mall in St. Paul, Minnesota

Memorial Arts Building at the Woodruff Arts Center in Atlanta, Georgia

Morrison Residence Hall at UNC Chapel Hill in Chapel Hill, North Carolina

Sears in Glen Burnie, Maryland

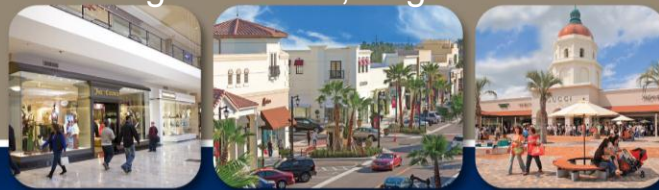
Sheraton Austin Hotel in Austin, Texas

Solon Family Heath Center at the Cleveland Clinic in Cleveland, Ohio

Tucker Residence Hall at North Carolina State University in Raleigh, North Carolina

Van Holten Primary School in Bridgewater, New Jersey

Virginia Beach Convention Center in Virginia Beach, Virginia



EPA National Building Competition – Maplewood Mall

Since 2005, Maplewood Mall has reduced its annual energy consumption by over 2,600,000 kWh. This is a 20% reduction over 5 years. At current energy rates of \$0.08/kWh, this is a savings of \$208,000 annually.



EPA National Building Competition – Maplewood Mall

Since 2005 Maplewood Mall has implemented the following energy efficiency measures:

Retrofitted all 1000 parking lot pole lights with energy efficient 750w pulse start metal halide lamps and electronic ballasts.

Installed two new 600 ton chillers at .430 kW/ton efficiency.

Converted all fluorescent T12 lamps to T8s and electronic ballasts.

Converted interior and exterior halogen/incandescent lamps to compact fluorescents.

Installed occupancy sensors in all offices and storage rooms.

Installed timers on all vending machines to eliminate run hours when mall is unoccupied.



EPA National Building Competition – Maplewood Mall

Implemented O&M best practices regarding interior and exterior lighting run hours.

Optimized boiler and chiller run times to coincide with need and mall operating hours.

Optimized economizer function for 1st and 2nd stage cooling when outdoor conditions allow.

Conversion of halogen MR16s to LEDs on all Retail Merchandising Units.

Install VFD's on 6 water pumps (chilled, condensed, hot).

Replace part of the roof with a more energy efficient roof.

Replace several roof top units.



EPA National Building Competition – Maplewood Mall

Participate in Xcel Energy's new Commercial Efficiency program that will identify more measures to implement and provide a roadmap to greater sustainability.

Roll out tenant education on energy efficiency best practices.



EPA National Building Competition – Maplewood Mall

The 2010 Winner of the National Building Competition was Morrison Hall, UNC at Chapel Hill.

Reduced Energy Use by 35.7%

Saved 11.7 million kBTU

Prevented 733 metric tons in greenhouse gas emissions.

Second Place: Sears store in Glen Burnie, Maryland – 31.7% energy reduction.

Third Place: JCPenney Store in Orange, California – 28.4% energy reduction.

Maplewood Mall had a 6.7% energy reduction.



Top Ten Energy Efficiency Tips from Competitors

1. Check/replace weather stripping.
2. Plant trees along west-facing windows to provide shade.
3. Install occupancy sensors in any area not continuously occupied.
4. Check night lighting.
5. Upgrade lighting, to energy efficient compact fluorescent and LED.
6. Control heating, ventilation and air conditioning.
7. Monitor and report energy performances.
8. Recruit lighting and HVAC to one central circuit to provide better control.
9. Install variable frequency drives (VFD's) to match demand.
10. Involve building occupants in efforts to save energy.



Maplewood Mall – 2011 Renovation Lighting Efficiency Study

Maplewood Mall was surveyed to determine what energy-saving measures were available. Areas of study included exterior mall entrances, mall throats, center court concourse, center court, anchor courts and food court.

The existing systems were surveyed, and a new system proposed. Not only would the new system save energy, but also INCREASE light levels in all above mentioned areas of study.

With the implementation of the proposed system, the estimated savings are:

1,022,465 kWh/year

\$49,384 energy cost savings per year

Including potential rebates, the simple payback is 12.10 years



Maplewood Mall – 2011 Renovation Lighting Efficiency Study

The amount of consumed energy saved (1,022,465 kWh, is equivalent to approximately 705 metric tons of Carbon Dioxide or Carbon Dioxide equivalent. A savings of that quantity is comparable to:

Annual greenhouse gas emissions from 138 passenger vehicles.

C02 emissions from the electricity use of 87.9 homes over the course of one year.

Carbon sequestered every year by 150 acres of pine or fir forest.



“Buildings of all shapes and sizes are saving money and energy with help from EPA and ENERGY STAR. We applaud the contestants of EPA’s National Building Competition to taking action to protect the environment and fight climate change”

– Jean Lupinacci, Director of EPA’s ENERGY STAR Commercial Buildings Program.

