



GREEN BUILDING RESEARCH

The built environment has a profound impact on our natural environment, economy, health, and productivity.

In the United States alone, buildings account for:

- 70% of electricity consumption,
- 39% of energy use,
- 39% of all carbon dioxide (CO₂) emissions,
- 40% of raw materials use,
- 30% of waste output (136 million tons annually)
- 12% of potable water consumption.

Benefits of Green Buildings

Environmental Benefits:

Enhance and protect ecosystems and biodiversity

Improve air and water quality

Reduce solid waste/conserves natural resources

Economic Benefits:

Reduce Operating Cost

Enhance asset value and profits

Improve employee productivity and Satisfaction

Optimize life-cycle economic performance

Health & Community Benefits:

Improve air, thermal, and acoustic environments

Enhance occupant comfort and health

Minimize strain on local infrastructure

Contribute to overall quality of life

Information taken from the U.S Green Building Council website at www.usgbc.org



GREENWAY PLAZA

Putting the Green in Greenway.

Green Gossip

Up to Date News on Environmentally Friendly Projects, Awards and Practices at Greenway Plaza



26 1/2 TONS OF ELECTRONIC EQUIPMENT COLLECTED AT GREENWAY PLAZA

The E-Recycling event sponsored by the Houston Building Owner's and Managers Association's Green Task Force and hosted by Greenway Plaza on May 21 was a smashing success. Equipment came rolling in before the scheduled start time of 7:00 AM and continued to do so at a steady pace throughout the day to well past the scheduled close time of 2:00 pm. The response was so great that the company collecting the equipment pulled a team of people from a downtown location for the same event to help load equipment at Greenway. In the end seven moving vans were loaded from top to bottom and back to front - the last one leaving the property at 7:00 PM. A huge thank you goes out to all of the Crescent/Greenway personnel, as well as our service partners from Standard Parking, ABM Security and Taylor Waterproofing who assisted with this project, as well as all of the Greenway customers who participated by dropping off electronic equipment.



WE NOW RECYCLE ALUMINUM & PLASTIC

See More Information on Greenway's Recycling Program - Page 6

Greenway Service Partner Receives Green Award

Recently, Standard Parking, Greenway Plaza's parking management provider, received the "Empower the Green Enterprise" Award from the Oracle which is the world's largest business software company. The award highlights corporate initiatives that support green business practices.

Standard was specifically recognized for its streamlined implementation of financial management, service contracts and advanced procurement of software that will have substantial green implications. The Company projects that its new electronic billing and payment methods for monthly parkers will reduce its annual paper consumption by 312 tons which translates into saving 624 trees, 5.1 million gallons of water, over 600,000 pounds of solid waste and close to 19,000 pounds of air emissions.

Greenway's Central Plant Completes Energy/Cost Savings Projects

In 2008 Greenway Plaza's Central Plant engaged in several boiler burner retrofits in order to reduce greenhouse gases from the products of combustion, primarily NOX emissions. The new burner installation also increased the boilers' overall efficiency, thus reducing fuel consumption by 15 to 20 percent.

Additionally, early in 2009 the Plant completed a roof replacement project which included the installation of reflective materials. Reflective, or cool roofs, do not absorb the sun like regular roofs so they remain cooler. The cooler roof reduces the energy demand providing both energy and cost savings to Greenway Plaza. The new roof is LEED compliant and has a 95 percent reflectivity factor.

Dennis Cruse, LEED AP

Appointed Chairman of Existing Buildings Committee for Houston Area USGBC



Dennis Cruse, energy services manager for the Crescent portfolio and 20 year veteran staff member at Greenway Plaza, has recently accepted the position of Chairman of the Houston Area Chapter of the USGBC (U.S. Green Building Council) Existing Buildings Committee.

Dennis received the coveted LEED Professional Accreditation (LEED AP) last year. The LEED AP designation distinguishes building professionals with the knowledge and skills to successfully steward the LEED certification process. LEED Accredited Professionals demonstrate a thorough understanding of green building practices and principles, as well as, the LEED Rating System and its application in practice. They are trained to facilitate the integrated design process and streamline LEED certification.

Dennis is also co-chair of the BOMA (Houston Building Owners and Managers Association) Green Task Force and is the USGBC liaison for Greenway Plaza/Crescent. Mr. Cruse has been coordinating Greenway's "green" efforts for the past three years.

Greenway Plaza's Land Services Department Practices Conservation Through Green Horticultural Practices

The primary goal of Greenway's Land Services Department is to utilize sustainable horticultural practices that promote conservation and environmentally-friendly results. As a whole, results are not always easily measured in dollar amounts; however, efforts are reflected in the overall health and presentation of the landscape investment. This makes landscaping a "silent" part of the overall conservation or Green Initiative program at Greenway Plaza.

The Land Services Department focuses on three major areas of conservation when dealing with Landscaping: the reduction in the use of synthetic chemicals; water conservation; and plant waste recycling.

(Continued on page 3)



Greenway Plaza's Landscape Conservation Program (Continued)

The reduced use of synthetic chemicals and fertilizers and the increased use of organic supplements (IPM programs) is tantamount to Greenway's landscaping goal which is to be 100% organic. Traditionally, insecticides, fungicides, and fertilizers contain large amounts of salts and other man-made chemical by-products. These chemicals leach into the soil, storm drains, and eventually end up in or coastal waterways. In an effort to proactively take part in the removal of these environmental hazards we have developed an eco-friendly Integrated Pest Management Program for the site. The plan is to carefully insert organic supplements/treatments into our landscape management routine so that we become more earth-friendly and efficient. The transition from synthetic to organic products is a process that will be completed over a period of time. Significant progress has already been made and more organic products will be incorporated into the program until the goal of 100% organic is reached.

Water conservation is essential to our environment. Potential water loss related to landscape is mainly due to inefficient irrigation systems. As a result, Greenway's Land Services Department constantly works to upgrade irrigation systems throughout the property to enhance performance and conserve water.

From January 1, 2006 to mid-May of 2008, Greenway expended its efforts by upgrading its irrigation systems with improvements that include the replacement of vacuum breakers, old valves, sprinkler heads, and controllers. The installation of electronic controllers allows for a more efficient watering schedule, as well as, the ability to monitor usage more closely. Drip lines were installed in all seasonal color beds to reduce water runoff into the streets and storm sewers. In addition, irrigation watering programs have been set up that alternate watering patterns at shorter interval time lines to insure that the water that is applied soaks into the ground and does not run off into drain systems

Adaptive plant vegetation utilized for soil erosion control, to prevent run-off is part of the water conservation effort. The introduction of native/water conserving plant species into the landscape selection is a significant factor in determining how much water and nutrient applications will be used within the landscape. Native or adaptive species generally require less water and perform better. Recognizing the benefits of installing these species in the landscape perennials, grasses, and adaptive trees are part of the landscape elements at Greenway Plaza. Strategically locating the correct plant material into environments where they best thrive is another element of landscape management that is important to the bottom line when it comes to sustaining plant longevity.

When it comes to plant waste recycling Greenway Plaza's Landscape Maintenance and Management site specifications require that all plant waste (grass stems, plant leaves, branches) be placed back into the site or gathered up and transported to mulching facilities. Plant waste is not permitted to be placed in dumpsters, swept down drains, or blown into the middle of a street to be carried away by wind or vehicles.

Greenway Plaza Donates \$10,000 to Plant Trees in Honor of Greenway Customers

"Greenway's Green initiative Reaches Out to The Community"

In keeping with Greenway Plaza's "Green Initiative Program", \$10,000 was donated to Trees For Houston as a holiday gift to its customer base this past December. Greenway Plaza chose Longfellow Elementary School as the recipient of 19 trees. Longfellow is Greenway's FACES of CHANGE partner school.



The trees planted count towards the Mayor Bill White's Million Trees + Houston Initiative, the multi-organizational effort to plant over 1 million trees throughout the City of Houston within the next three years. In the wake of Hurricane Ike, it is more important than ever to continue to green our Houston community. With help from companies like Crescent/Greenway Plaza, Trees For Houston will continue to fulfill its mission to plant, promote and protect trees all over Houston. Trees For Houston is a nonprofit organization dedicated to planting, protecting and promoting trees.

Know Your Carbon Footprint

Inevitably, in going about our daily lives — commuting, sheltering our families, eating — each of us contributes to the greenhouse gas emissions that are causing climate change. Yet, there are many things each of us, as individuals, can do to reduce our carbon emissions. The choices we make in our homes, our travel, the food we eat, and what we buy and throw away all influence our carbon footprint and can help ensure a stable climate for future generations. (www.nature.org)



To calculate your personal carbon footprint visit www.nature.org

Help Lower Your Company's Carbon Footprint

Form Car & Van Pools

Use the Energy Saving Option on Copiers

Don't make hard copies of documents unless absolutely necessary

Use Recyclable Kitchen Supplies

Participate in Greenway's Recycling Program - paper, cardboard, plastic and aluminum

Turn Lights Out When Not in Use

Use Daylight for Office Lighting When Possible

**ALWAYS
THINK GREEN
FIRST**

Conserve Water

Use Recycled Paper, Toner Cartridges & Other Office Supplies

GREENWAY PLAZA RECOGNIZED BY HOUSTON CHAPTER OF THE U.S. GREEN BUILDING COUNCIL



Keith Rheil (far left) and Dennis Cruse (center) with Houston Chapter USGBC members at award ceremony.

The Houston Area Chapter of the U.S. Green Building Council recognized Greenway Plaza at its 2008 Annual Award Celebration which was held at Minute Maid Park on December 11, 2008 when its Environmental Team received honorable mention in the Top Environmental Team category for its "green initiative" efforts at Greenway Plaza. The team, implemented by Dennis Cruse, energy services manager for Crescent Real Estate Equities, LLC, is made up of key Greenway Plaza personnel and is divided into groups known as "Discipline Champion Teams" covering individual subjects including: Green Cleaning, Recycling and Sustainable Purchasing; Water Efficiency, Energy Efficiency and Commissioning; Sustainable Construction Materials, Processes and Building Standards; Commuting/Transportation; and Site/Landscaping. Rheil Engineering has partnered with Crescent as the LEED Consultant on the team. The focus is on Greenway's "green initiative" and the pursuit of eventual

LEED Existing Building certification on several buildings within the 51 acre complex. When these buildings are certified it will provide the framework for a comprehensive campus LEED EB plan. In order to implement the plan intended to capture and maintain efficiencies of operation it is necessary for many of Greenway's service partners to be involved. These service partners are working to help push the "green initiative" program forward by implementing green practices within their own companies and in the services they provide at Greenway.

ABOUT GREENWAY PLAZA'S GREEN INITIATIVE

Greenway Plaza was built between 1968 and 1982. Though not constructed to meet today's "green" standards, the original developers envisioned the vast "green" areas as park like amenities from which its namesake was derived. "Green" has a much different connotation today.

Greenway has a long tradition of innovative and creative approaches to conducting business and prides itself on being a good steward of the environment and a responsible business partner. In keeping with these core philosophies, Greenway has undertaken numerous initiatives to create efficiencies in energy consumption which reduced both project expenses and power plant emissions. Since 1994, Greenway has spent over \$10 million in operating and capital funds in pursuit of greater energy efficiencies which led to an annual reduction of electricity consumption of over 22,500 Megawatt-hours and removed approximately 14,700 tons of greenhouse gases (GHG's) from the environment.

Though these statistics are as impressive as the Greenway Plaza project itself, a new strategic initiative is underway to further distinguish it to its customers, employees, peers, business partners and the community at large. Greenway has chosen a holistic approach to reducing energy use and improving the condition of its internal and external environments through the development and implementation of a Green Building Initiative for efficiency and sustainability. This initiative speaks to Greenway's philosophy of evaluating and implementing operational and physical improvements in recognition that economic, environmental, technological and community considerations can be mutually supportive, not exclusive. This is achieved by taking an integrated approach to design, construction, maintenance, operations and disposal and by evaluating projects and procedures using the life-cycle cost method versus simple payback or "first cost" consideration. This initiative has helped create innovative workplaces for customers and employees that are healthy, profitable, and environmentally accountable. By approaching upgrades and operational changes in this manner, Greenway Plaza will achieve sustainability in a deliberate, disciplined, well managed manner over the long term and will lead to "greener", more sustainable and efficient buildings, which will gradually lead to possible LEED - EB (Existing Buildings) certification. Currently, all 10 Greenway Plaza buildings are Registered LEED - EB with the USGBC.



GREENWAY PLAZA

Putting the Green in Greenway.

GREENWAY PLAZA'S RECYCLING PROGRAM

Greenway Plaza adopted a new and improved focus on recycling in January of this year after 20 years of a comprehensive paper and cardboard recycling program. With a goal of keeping as much material out of landfills as possible the program has been expanded to include: **newsprint, magazines and colored paper. Additionally, aluminum and plastic recycling are now available to our customers.**

We encourage everyone working at Greenway Plaza to join in our Green Initiative to help protect the environment by participating in the Recycling Program. Recycling boxes are available upon request through your tenant contact or by calling your Crescent Management office. Currently each individual is responsible for emptying their paper recycling box into the larger containers located in the freight elevator hallways on each floor.

If you are interested in any of our recycling options or for additional information call your Crescent Customer Service Team:

Phase I Buildings (713) 965-2913 / Phase II Buildings (713) 965-2212



WHAT YOU CAN RECYCLE

"Just about any thing that tears;±"

- News Quality Papers, e.g. newspapers, phone books and magazines
- All white, colored and coated papers (except brown).
- Carbonless forms
- Scratch, message and memo pads, self-adhesive notes.
- Paper from legal pads, steno pads, note pads.
- Photo copy and typing paper (any color).
- Fax and telex sheets
- Computer printouts, NCR invoices
- Receipts
- Envelopes (even with plastic windows or labels on them, except the dark brown envelopes).
- Folders - manila, coated, colored (except brown) even if they have plastic tabs on them.
- All mail correspondence including direct mail pieces, advertisements, junk mail, etc.
- Brochures, pamphlets
- Posters – paperboard, cardboard
- Paper-back books with white pages
- Manuals with glued bindings
- Small cardboard items

Materials "Not" Recycled

- Confidential Documents
- Tissues or Restroom waste
- Food containers
- Food wrappers
- Aluminum foil



ENERGY STAR Awards For Greenway Buildings

The International Real Estate Management Association (IREM) LEED and ENERGY STAR Award Luncheon is scheduled for April 14 at the Wortham Center at 500 Texas Avenue in downtown Houston. Mayor Bill White will be presenting ENERGY STAR Awards to those buildings who received the ENERGY STAR designation for meeting standards set up by the Environmental Protection Agency (EPA). Eight buildings at Greenway Plaza received the ENERGY STAR designation and will be receiving ENERGY STAR Awards including: One, Two, Three, Four, Five, Eight, Eleven and Twelve Greenway Plaza. The remaining two Greenway buildings -- 3800 Buffalo Speedway and Nine Greenway Plaza did not have the required minimum occupancy level over the previous twelve month period to qualify for the ENERGY STAR designation.



What is the ENERGY STAR Program

For more than a decade, EPA has worked with businesses and organizations to reduce greenhouse gas emissions through strategic energy management practices. The ENERGY STAR Program was established in 1992 and looks exclusively at energy consumption in existing assets. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. It is a energy-benchmarking tool and a flag for the nation's most energy-efficient properties.

For a commercial building to qualify for the ENERGY STAR designation, a building must score in the top 25 percent based on the EPA's National Energy Performance Rating System. To determine the performance of a facility, EPA compares energy use among other, similar types of facilities on a scale of 1-100; buildings that achieve a score of 75 or higher may be eligible for the ENERGY STAR. The EPA rating system accounts for differences in operating conditions, regional weather data, and other important considerations (www.energystar.gov).

Greenway Plaza/Crescent Offices Lead By Example

To keep up with the Green Building Initiative Crescent offices at Greenway Plaza have taken steps to do their part in reducing the amount of landfill material produce on a daily basis. Disposable paper products such as Styrofoam plates, cups and plastic tableware have been replaced with reusable products. Personnel are encouraged to print hardcopies only when necessary and all employees participates in paper recycling and more recently in the newly implemented plastic and aluminum recycling. Recycled office supplies are used where possible including refurbished toner cartridges for printers. These are only some of the steps we are taking to reduce our carbon footprint. We will continue to find new ways to conserve our natural resources and lower landfill and energy emissions.

**WHAT
ARE YOU DOING?????**



GREENWAY'S SECURITY DEPARTMENT GOES PAPERLESS

New Paperless Procedure in Place for Access Control Cards

For years Greenway Plaza's Security Services department used a three-part paper form for access card requests from customers. In an effort to eliminate volumes of paper that eventually ends up in a landfill, to simplify the process for our customers and to save on operating costs the security department decided to restructure the access badging process.

David MacLeod, Greenway Plaza's assistant security manager/access control and lead man on the project created an e-request form through the access system software already in place. A PDF file form will be sent to all Customer Representatives by way of e-mail so that it is readily available for their use. When the customer needs to make an access request, they will open the form, enter the appropriate information and hit the Submit by E-Mail block at the top of the page. The form will be translated into a data file and attached to an e-mail to security. Security will review the form for completeness and accept or reject it depending on its completeness. Once accepted, the customer will receive an e-mail confirming receipt and providing status information.

The new e-process for access card requests will speed up the badging process by automatically entering the information into the access control system once it is accepted by security. With the information already in the system the customer will spend little time having their photo ID taken and the appropriate clearance added to the badge.

The test phase of this project has been completed with several major customers volunteering to participate. The new process will be rolled out to all Greenway Plaza customers by the end of April 2009 and will save approximately \$5,000 and over 360 lbs of paper per year while improving customer service.

GREENWAY PLAZA REDUCES ENERGY CONSUMPTION THE "GREEN WAY"

Annual savings of approximately 4,553,000 kilowatt hours (\$515,000) and 1,175,000 ton hours of Air Conditioning

During 2008 several projects were completed at Greenway in connection with its ongoing sustainability and energy reduction plan which is part of the "green initiative" program. One of those projects was a massive garage lighting retrofit project which is expected to reduce energy consumption by 2,553,000 kilowatt hours annually with an annual cost savings to the project of approximately \$285,000. Other projects included a lighting retrofit in the Phase II buildings which is designed to reduce electrical consumption by 2,000,000 kilowatt hours annually at a savings of \$230,000.

Other projects that will reduce the annual ton hour demand for a/c were also completed including the installation of window film at 3 Greenway Plaza, an Energy Management System at 4 Greenway Plaza and a damper project that together are expected to reduce the ton hour demand by 1,175,000.

Greenway Plaza's aggressive and on-going pursuit toward eventual Green Building certification is showing both a significant reduction in energy consumption and a healthy annual cost savings to the project. All of these projects have a 2 year payback.



Garage lighting retrofit improved color rendering index scores & supports the LEED energy & atmosphere credit by improving the scoring potential for ENERGY STAR rating. (Left: new lighting, Right: old