Memorandum

MIAMI-DADE COUNTY

Date: April 11, 2012

To: Honorable Chairman Joe A. Martinez
and Members, Board of County Commissioner

From: Carlos A. Gimenez
Mayor

Subject: Sustainable Buildings Program Annual Report: December 2010 to December 2011

As part of the County's efforts aimed at improving the economic, social and environmental performance of its operations, the Board of County Commissioners (Board) approved Ordinance 07-65 and Implementation Order IO 8-8 establishing the Sustainable Buildings Program. The following is the required annual progress report summarizing the County's performance under the Sustainable Buildings Program. This report covers the period from December 2010 to December 2011.

Sustainable Building Projects Update

To date, there are thirty qualifying projects in progress that will meet Leadership in Energy and Environmental Design (LEED) Silver certification or higher, seven non-qualifying projects that are voluntarily complying with the ordinance, and eight non-building projects that are voluntarily incorporating sustainable measures into maintenance and small repairs. In addition, there are now two completed projects that have achieved LEED Silver certification or higher; the Internal Services Department (ISD) Trades Shop has achieved LEED Silver, and the recently finished Project Verde Gardens Neighborhood in Homestead.

The Project Verde Gardens Neighborhood consists of 145 townhomes within 23 buildings, a 4,020 square foot community center and a 4,400 square foot fresh market. The residential buildings, as well as the five model units, have achieved LEED Gold certification, the community center has received LEED Silver, and LEED commissioning is in progress for the fresh market, which is seeking LEED Silver certification.

The ISD Trades Shop, a 100,000 square foot facility, has now been in operation for several months. One of the main goals for the ISD Trades Shop project was to divert at least 95% of the waste generated during construction from the landfill. To accomplish this, the concrete from the pre-existing 90,000 square foot facility was crushed and used for the new building pad. Another goal was to reduce energy and water consumption. The design addressed energy through interior cross ventilation, low-e glazing, sunshades, light shelves, and an ENERGY STAR® cap for roofing. Water consumption requirements were addressed through the incorporation of low flow fixtures, drought tolerant plants and Florida friendly yards. It is estimated that this building will perform 28% better than a standard building, which is equivalent to saving $76,600 annually in electricity costs. Moreover, the building will also provide a 40% cost reduction in water consumption.

Nationwide LEED certified office buildings have demonstrated electricity efficiencies of 25-30%, 13% lower maintenance costs, 27% higher occupant satisfaction, and 33% less greenhouse gas emissions compared to traditional buildings of similar size and use. Collectively, County projects currently planned under the Sustainable Buildings Program will encompass over 2 million square feet of new or renovated "green" space. Of the 2,000,000 square feet, about

630,000 square feet are office-type spaces. The Office of Sustainability staff estimates that the 630,000 square feet of office space could translate to monetary savings of around $315,000 per year in electricity alone. As staff gathers data from monitoring electricity use in each completed building, these numbers will become more precise. Some of the upcoming LEED projects include the Marlins Ballpark, the Children's Courthouse, the ISD West Lot, the Northeast Library, the Miami Art Museum and the Miami Science Museum. More detailed information about all the current projects can be found in Appendix A.

Training and Education

- LEED Accredited Professionals in the County

This past year Office of Sustainability staff from the Sustainability, Planning and Economic Enhancement Department (SPEED) has continued to provide training and educational opportunities for County employees who wish to become more knowledgeable about sustainability as it relates to the built environment. Sustainability staff collects and updates information annually on the professional accreditations attained by County employees under the headings of Green Building Design and Construction (LEED Professional Credentials), Energy Management (CEM certification), and other training & certification as it relates to construction or energy management. This information has proven to be a valuable resource, as it provides both guidance for planning future trainings, and benchmarking for our efforts.

As of the end of 2011, the County has ninety-six LEED accredited staff members spanning twelve departments (Aviation; Cultural Affairs; Corrections and Rehabilitation; Internal Services; Parks, Recreation and Open Space; Permitting, Environment and Regulatory Affairs; Public Housing and Community Development; Public Works and Waste Management; Seaport; Sustainability, Planning and Economic Enhancement; Transit; and Water and Sewer). Additionally, there are now six certified energy managers, one Green Building Certification Institute-trained (GBCI) LEED Certification Reviewer and one Certified Green Building Engineer. It is important that staff continue training and gain experience so that Miami-Dade County can fulfill its commitment to transform into a more sustainable place to live, work, and play. We rely on the support and experience of our talented County employees to meet this goal; it is their ability, training, and hard work that moves the County forward. Please refer to Appendix B for a detailed summary of the County's LEED accredited professionals.

- Sustainable Buildings Lecture Series

As part of the Sustainable Buildings Program, Sustainability staff hosts the Sustainable Buildings Lecture Series each month. The lecture series provides training to interested County employees in the area of sustainable development and green building products, practices and technologies. Once monthly, an invited guest gives a presentation on their area of expertise. This past year Sustainability hosted twelve lectures with more than 250 participants. Topics included: Building Optimization, Commissioning, and Operational Excellence; Mitigation of Urban Heat Island, Florida Green Building Coalition Certification Program, Overcoming the Challenges of Humidity for LEED Buildings, Lighting Solutions, and much more. For a complete summary please see Appendix C.

- Green Building Certification Institute (GBCI) Course Approval

Through the efforts of the University of Florida's Institute of Food and Agricultural Sciences (IFAS) and the Miami-Dade County Cooperative Extension, SPEED has secured approval for

the County's first continuing education course for LEED professionals. The course is titled "Green Industries Best Management Practices (GI-BMP)" and covers integrated pest management and water management green industry practices. The course was reviewed by the GBCI and has been approved for 1.5 continuing education (CE) hours.

Enhancing Capital Budgeting, Planning & Improvement Processes for Sustainability

- Sustainable Capital Improvement Process (S-CIP)

In 2010, a Sustainable Capital Improvement Process study was initiated with funding from the Energy Efficiency Conservation Block Grant (EECBG) awarded by the Department of Energy (DOE). The intent of the study was to develop and integrate energy and climate focused policies and procedures into the County's capital improvement process (CIP). The consultant, Reynolds, Smith & Hills, assessed the County's approach to CIP and produced guidelines, policy recommendations, and a training program for capital departments. These documents are available in the "Green Building" section of G-Net, accessible through E-Net at https://secure.miamidade.gov/enet/wps/myportal.

With RS&H's study now complete SPEED and ISD - Capital Improvements are working closely to implement process recommendations offered in the guidelines. Sustainability staff recently presented on the County's Sustainable Buildings Program and S-CIP at the 2011 World Energy Engineering Congress (WEEC) conference and DOE; these events were attended by green building professionals from all over the United States.

- Sustainable Development and Building Code Project

Sustainability staff is pleased to announce the completion of the "Sustainable Development and Building Code Project," funded by the DOE's EECBG. Led by Clarion Associates, the focus of this project was to evaluate current regulations in the County's development and building codes that pertain to energy efficiency and conservation, greenhouse gas reduction and climate change, and renewable energy; and subsequently, incorporate substantive changes to promote these goals.

To initiate the project, the consultants looked at existing regulations in the County's zoning and building code, as well as in the subdivision regulations, landscape ordinance, historic preservation ordinance, tree removal, floodplain regulations and solid waste management provisions related to the above-mentioned sustainability topics. The resulting Final Diagnosis pinpoints potential barriers in the code and suggests possible revisions to remove them. Moreover, the Final Diagnosis also recommends potential incentives for consideration to encourage energy efficiency/conservation, greenhouse gas emission reductions, and increased use of renewable energy; provides specific recommendations to fill regulatory "gaps;" and presents examples of best practices from progressive communities throughout the nation.

Some of the recommendations in the Diagnosis are already taking shape. For instance, planning staff is currently working on and/or has recently completed the Standard Urban Center District Regulations (SUCO); the Electric Vehicle Infrastructure Ordinance; the Accessory Dwelling Unit (ADU) Ordinance; the Bicycle Parking Ordinance; the Complete Streets Resolution; the Solar Photovoltaic Technology Ordinance; and other regulations pertaining to green/cool roofs, farmer markets and community gardens.

Ordinance Updates

- IO 8-8

Implementing Order 8-8 establishes the most current version of the U.S. Green Building Council's (USGBC) LEED rating system as the standard for the planning, design and construction for all new County buildings and major renovations. The Sustainable Capital Improvements Process (S-CIP) project laid out clear pathways for capital improvements managers to follow in order to meet the requirements established in IO 8-8. It also produced a timeline to help streamline the LEED certification process. In July, directors of capital departments, ISD staff and Sustainable Buildings Committee members attended S-CIP training modules to acquaint themselves with the new S-CIP guidelines.

As time passes and more projects are finalized, staff continues to learn from these experiences. To reflect this, Office of Sustainability staff is in the process of updating IO 8-8 to incorporate the new S-CIP guidelines; establish additional sustainability guidelines not currently covered under IO 8-8 for small projects, maintenance and operations, leasing and tenant improvements, and non-building capital improvement projects; and restructure the Sustainable Buildings Committee.

- Sustainable Buildings Committee Restructuring

Following a survey of members of the Sustainable Buildings Committee conducted in June, Sustainability staff concluded that it would be more effective to have a smaller number of members as part of the Sustainable Buildings Committee. Thus, the group has been reduced from around 40 members to a maximum of 26 members (13 core members and up to 13 alternates). Ideally there will be one core member with LEED accreditation from each of the departments involved in capital improvements and/or property management and an alternate from these same departments (if desired). To simplify the exemption process, three of the 13 members will review petitions from individual County building projects that request specific exemptions from the Sustainable Buildings Ordinance and make recommendations on these to the Sustainability Program Manager. Each quarter there will be three different members from the core group tasked with this effort.

Should you have any questions, please contact Patricia Gómez, P.E, Sustainability Program Manager, Sustainability, Planning, and Economic Enhancement at 305-375-4775.

Attachments

c: Office of the Mayor Senior Staff
Department Directors
Patricia Gomez, Sustainability Program Manager,
Sustainability, Planning and Economic Enhancement Department
Sustainable Buildings Committee