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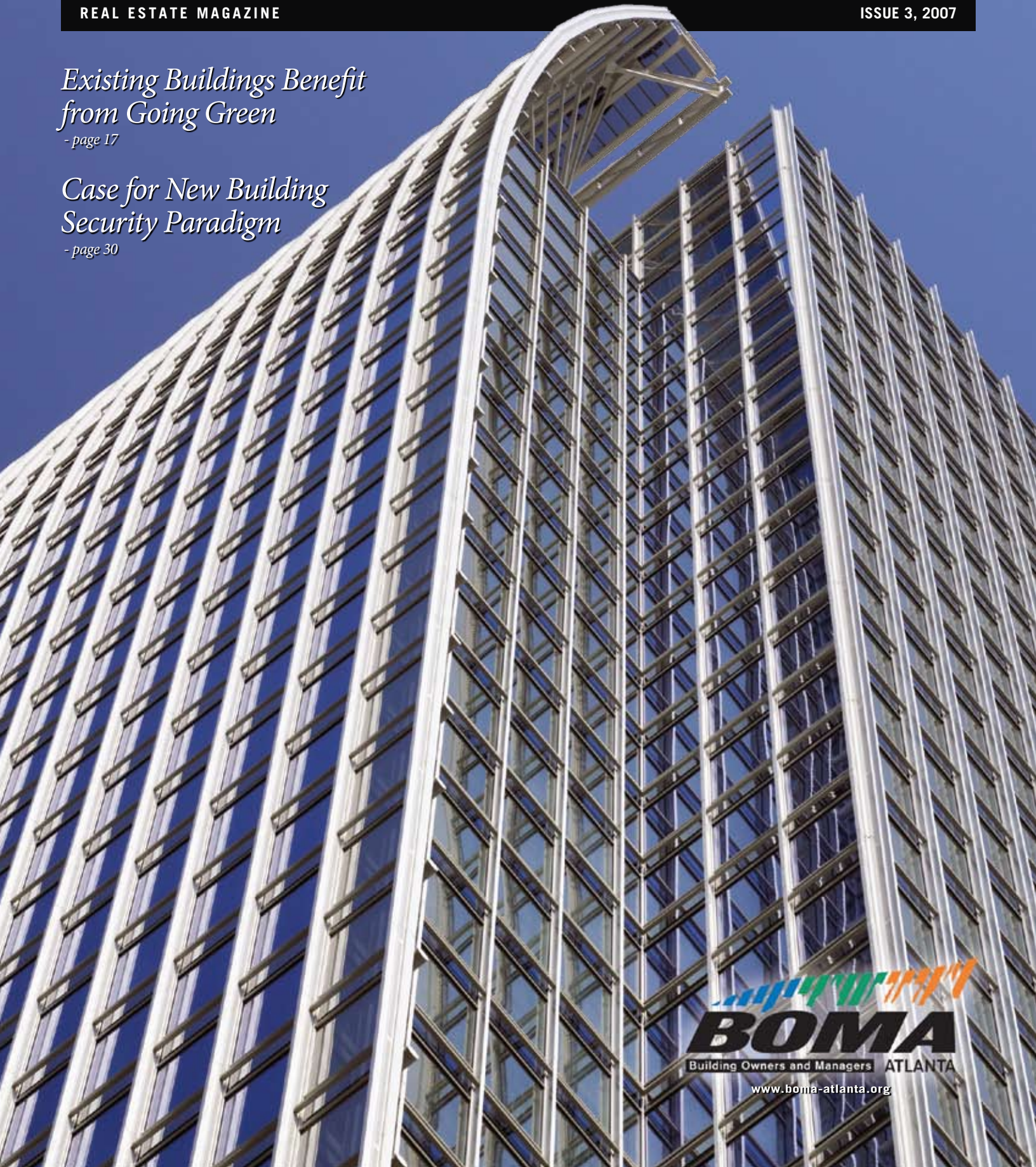
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REAL ESTATE MAGAZINE

ISSUE 3, 2007

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# The Value of Green

## Utilizing LEED Standards

While the “value of green” may have different measurements based on differing perspectives, the

real estate investment world will always calculate the value of green in dollars and cents. Clearly, the race is on to calculate the potential value increases cautiously anticipated for the green building industry, but real world examples are starting to show results.

Landlords are scampering to effectively meet and anticipate new demands from corporate tenants, as well as governmental agencies and institutional partners. Design firms, FF&E manufacturers, base building contractors, engineering firms, interiors groups, lenders, insurance companies and occasionally, a real estate broker, are all seeking to position themselves to benefit from the potential business growth.

But to effectively make “green decisions” in a capitalist society, decision makers need

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Building Council (USGBC) is the logical first step.

The question is NOT how much more does green COST? A better question is how green can we BE with our given budget?

Most “green” or sustainability consultants today will take a formulaic and implementation approach to the analysis. What this means is that the consultant will generally look at the building’s current performance against the LEED for Existing Building standards and produce a preliminary scorecard to show the facilities’ likely current performance against the standard. The analysis may often include recommendations for the implementation of changes that may effectively cause the building to score higher for a certification, or actually perform better day-to-day. However, Sustainable Office determined early on that to effectively audit a building compared to the LEED for Existing Building standards, an analysis needs to be created to properly estimate the costs associated with each of the 14



interviews with management and operations personnel are used to determine current policy and procedure, as well as to determine the likelihood of corporate buy-in to additional changes in policy and procedures.

The analysis may then be tailored for the intent of the client. In buildings where there is a multi-tenant situation and the owner or property manager is only interested in hard-cost savings, the analysis may be performed to include only those benefits that produce hard savings like reduced water and energy use. For clients who are owner-occupiers, and are interested in potential productivity gains, the analysis may be presented to include “soft” benefits, such as employee productivity and the attraction and retention of labor. Soft benefits can be determined through benchmarks and studies that have already begun to show statistical data that support productivity and other soft benefits of green buildings.

### LEED-EB AUDIT PROCESS

Sustainable Office created the LEED-EB Audit process and documentation format to provide owners and managers of buildings with the data they need to make good business decisions relating to sustainable changes in their property. The audit itself provides an order of magnitude for costs associated with implementation, but also shows the benefits and financial paybacks that are gained in the process.

The procedure for a LEED-EB Audit is relatively uncomplicated. The real key is to

**The question is NOT how much more does green COST? A better question is how green can we BE with our given budget?**

to have confidence they have the proper information regarding costs and benefits. Additionally, the integrated design approach required for effective green development has resulted in heretofore unknown offsetting costs and benefits that need to be understood and related to the financial objectives.

Clearly, a thorough review of a multimillion dollar investment in relation to the now widely accepted LEED Green Building Rating System standards administered by the United States Green

prerequisites and 85 credits. Additionally, registration, certification and consulting fees must all be included to correctly price any green building initiatives.

And in order to make greener decisions better, the potential benefits (from costs savings to revenue generating) for each prerequisite and credit also need to be calculated and articulated. Sustainable Office uses a sophisticated analysis program to identify hard costs associated with the implementation of changes. Lengthy

be sure that the appropriate personnel are involved, and information is available. The process can be seen in the following few steps.

1. Meet with property management, building engineering to view property
2. Perform a work session with the same personnel to evaluate the building compared to each prerequisite and credit of the LEED-EB standard
3. Produce initial building scorecard
4. Obtain the building's current Energy Star score, energy and water usage information
5. Evaluate data, gather benchmarks and cost estimates for computer analysis
6. Prepare report showing requirements and opportunities, along with recommendations for implementation, including: Net Present Value, Cumulative Cash Flow, Energy Performance Analysis and Return On Investment

Clearly, communicating with the audit recipient becomes a key to their ability to make informed decisions. Charts and graphs are used to illustrate points where possible, along with specific recommendations on implementation methods. Below is a chart that is used to help communicate the number of credits available, along with the current and recommended performance areas for the facility.

As you can see in this example, the building performed relatively well, but beneath LEED-EB Certified level requirements. However, due to the optimization of credit versus costs and returns, the recommendation of 16 additional points places this building squarely within the Silver rating level.

To further assist decision makers, Sustainable Office uses its Value of Green

	Initial Cost	10-year Cumulative Gross Savings	Cost/Ft <sup>2</sup>	Annual Savings/Ft <sup>2</sup>	Payback Term	ROI
<b>Certified</b>	\$314,726	\$1,594,700	\$0.50	\$0.26	2.0	50.7%
<b>Silver</b>	\$445,009	\$2,383,150	\$0.71	\$0.38	1.9	53.6%
<b>Gold</b>	\$1,020,474	\$3,741,950	\$1.63	\$0.60	2.7	36.7%
<b>Platinum</b>	\$2,157,774	\$6,416,050	\$3.45	\$1.03	3.4	29.7%

matrix (see above) to illustrate cost versus returns in a quick snapshot view. Notice on the above example how the Silver level of certification is the optimal and recommended level, based on real financial information. This information becomes useful for communicating decisions to shareholders, as well as various levels of management within an organization.

#### THE MYTH: LEED-EB IS ALL FIRST-COSTS

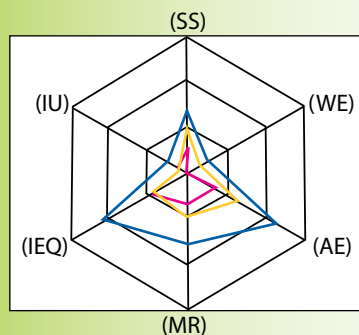
One of the other comments that is prevalent in the market today is the false assumption that LEED-EB implementation is a costly proposition. We have found that even for those who look at the information provided above and express concerns over first costs, there is an answer. The implementation of LEED for existing building standards can be implemented over time, allowing for any changes or upgrades to be placed in a normal five-year maintenance and operations budget, thus mitigating any first-cost issues. In essence, such an implementation strategy becomes cost neutral.

#### LEED-EB AUDITS IN TODAY'S MARKETPLACE

It is clear, when presented with good financial information, that green decisions can be cost-justified. Property owners and managers will continue to be faced with difficult decisions regarding the implementation of green initiatives as the groundswell for such changes grows. But now, these decisions can be made using sound business practices. The LEED-EB Audit is growing in popularity, and the day is coming when such audits will be required as part of a normal due diligence process for investors looking to purchase existing buildings, and shareholders will require them as back-up for the implementation of sustainable building initiatives for all existing buildings within a portfolio.

With existing buildings representing 98% of the market in real estate, finding ways to improve the inventory and bringing it up to sustainable standards becomes even more important. In order for existing buildings to be able to compete for tenants in this competitive real estate environment, LEED-EB Audits will be needed to develop implementation plans and justify costs for upgrades. **OC**

Definition of Green — "Design, construction and management practices that significantly reduce or eliminate the negative impact of buildings on the environment and on the occupants."



#### PRELIMINARY LEED-EB POINT STRATEGY

Available Points	Blue
Yes Points	Pink
Recommended Points	Yellow

	Sustainable Sites (SS)	Water Efficiency (WE)	Energy & Atmosphere (AE)	Materials & Resources (MR)	Indoor Environmental Quality (IEQ)	Innovation in Design (IU)	Totals
<b>Available Points</b>	14	5	23	16	22	5	<b>85</b>
<b>Yes Points</b>	5	0	7	7	9	2	<b>30</b>
<b>Recommended Points</b>	4	3	6	3	0	0	<b>16</b>
<b>Target Totals</b>	9	3	13	10	9	2	<b>46</b>

# A Validation of High-Performance Buildings

During the past few years, most of the press coverage and real estate industry notoriety in the green building world

has been focused on newly designed and constructed structures. However, given the increasing concerns with greenhouse gas emissions, enhanced recycling efforts and healthful awareness of the effects of indoor environmental quality on building occupants, most experts now agree the greatest opportunity to affect positive and profitable environmental change throughout the United States is to address the tens of thousands of existing buildings.

Since first introducing the Leadership in Energy and Environmental Design (LEED) Green Building Rating System in the mid-1990's as a voluntary standard that defines high performance buildings, the United States Green Building Council (USGBC) has researched and documented strategies to create more environmentally

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responsible AND economically profitable places to work, live, eat and shop.

And while the USGBC has developed a comprehensive suite of LEED assessment tools and rating systems for all aspects of the "new" built environment, the LEED for Existing Buildings Rating System (LEED-EB) is distinctly different in that it reflects both initial redesign and reconstruction, as well as ongoing operations and maintenance efforts.

LEED-EB's stated purpose is to give building owners and operators a third-party validation structure from which to create operations, maintenance and upgrade strategies that focus and measure the economic and environmental performance objectives of your building(s) and organization.

## LEED-EB OVERVIEW

- Introduced by USGBC in 2004
- Set of performance-based standards
- Includes 14 prerequisites and 85 distinct credits
- Provides a road map for sustainable

operation of existing buildings

- Comprehensive in scope; simple in operation

## LEED-EB PROMOTES "BEST PRACTICES" IN THESE AREAS

- Exterior building site management
- Efficient water and energy consumption
- Waste stream management
- Indoor air quality/occupant comfort
- Environmentally safe janitorial services

The USGBC created and administers the LEED-EB Green Building Rating System as a "voluntary, consensus-based, market-driven building rating system that is based on accepted energy and environmental principles and seeks to strike a balance between established practices and emerging concepts." Compiled by a group of industry experts to compliment the LEED for New Construction (LEED-NC) Rating System, LEED-EB was initially piloted in 100 various types of buildings to ensure its practicality as a tool for achieving sustainability.

Sustainability: "To meet the needs of the present generation without compromising the ability of future generations to meet their needs"

## Benefits of LEED-EB Certification

- Third-party validation of sustainable accomplishments
- Maximize operational efficiencies
- Provide effective benchmarking and verification
- Improved indoor environmental quality
- Positive public relations and enhanced marketability

LEED-EB is a performance-oriented system where credits (aka "points") are earned for satisfying specific performance criteria. Different levels of green building certification are awarded based on the total points earned.

## LEVELS OF CERTIFICATION

85 Total Points Available





## OVERVIEW OF LEED FOR EXISTING BUILDINGS RATING SYSTEM

The following represent six LEED-EB categories, which make up the 14 prerequisites and 85 credits available in this system. Under each listing is a brief explanation of the USGBC's stated environmental objective for that category. The prerequisites and credits are then used as the various courses of action to achieve the intent.

### 1 SUSTAINABLE SITES 2 prerequisites and 14 potential points

**Intent:** Environmentally sensitive site maintenance practices have been proven to reduce site operation and maintenance costs while creating and maintaining an outdoor space that is healthy for building occupants and local plant and wildlife

**Goals:**

- Reuse existing buildings and/or sites
- Protect natural and agricultural areas
- Support alternative transportation
- Protect and/or restore natural sites

### 2 WATER EFFICIENCY 2 prerequisites and 5 potential points

**Intent:** Maximize the use of strategies and technologies that reduce the amount of potable water consumed in buildings

**Goals:**

- Reduce quantity of water needed for building
- Reduce municipal water supply and treatment burden

### 3 ENERGY AND ATMOSPHERE 3 prerequisites and 23 potential points

**Intent:** Verify that fundamental building systems and assemblies are performing as intended to meet current needs and sustainability requirements

**Goals:**

- Establish energy efficiency and system performance
- Optimize energy efficiency
- Encourage renewable and alternative energy sources
- Support ozone protection protocols

## Why is LEED-EB becoming widely accepted as the standard for energy efficiency and environmentally responsible operations of existing buildings?

According to *FMLink*, a leading facilities management Web site, green upgrades and operations are a financially responsible business strategy that leads to a host of additional financial benefits:

- Increase productivity by as much as 10%
- Increase job satisfaction by as much as 24%
- Reduce absenteeism by as much as 45%
- Reduce utility costs by up to 50%

Additionally, a unique and dynamic set of circumstances are now converging that will catapult forward the LEED-EB efforts for corporate and institutionally owned real estate facilities. These compelling forces include:

1. Increased governmental regulations with regards to the environmental performance of buildings in general, (with special emphasis on reducing greenhouse gas emissions)
2. Building owners aggressively seeking to improve operating efficiencies to increase asset values in the face of rising costs
3. Corporate America continuing to seek ways to increase profits, improve reputations while reducing risk and liability
4. Major players in the design, construction and brokerage industries are embracing the environmental initiatives and understanding the costs versus benefits for various options

With over 8,000 projects currently registered with the USGBC for LEED certification and thousands of real estate professionals now designated as LEED Accredited Professionals, the LEED for Existing Buildings system is destined to become the standard by which all types of buildings will be deemed "high performance and green" or "needs improvement." What is your strategy to compete in this arena?

### 4 MATERIALS AND RESOURCES 3 prerequisites and 16 potential points

**Intent:** Establish a sustainable building operations program with policies that describe responsible procurement practices and effective waste management strategies

**Goals:**

- Use materials with less environmental impact
- Reduce and manage waste
- Reduce the amount of materials needed


### 5 INDOOR ENVIRONMENTAL QUALITY 4 prerequisites and 22 potential points

**Intent:** Establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in the building in order to contribute to the health and well-being of the building occupants

**Goals:**

- Establish good indoor air quality
- Eliminate, reduce and manage the sources of indoor air pollution
- Ensure thermal comfort and systems controllability
- Provide for occupant connection to the outdoor environment

### 6 INNOVATION IN UPGRADES, OPERATIONS AND MAINTENANCE 0 prerequisites and 5 potential points

**Intent:** Recognize exemplary performance in any achieved LEED-EB credit and innovation in green building NOT addressed by current standards 

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