

The Homer Building: Constructing a Historical Past with a Sustainable Future

Introduction

The Homer Building, located in the heart of the business district in Washington DC, is a striking example of how smart design is inherently sustainable. Originally constructed in 1913,

The Homer Building is a definitive example of neoclassical style and, “represents some of the finest design work that was going on in the nation at the turn of the [20th] century.”

(Washington Post, 1988) As the Pennsylvania Corridor



Revitalization began in the 1970s, demolishing the four-story building was an attractive prospect to developers. However, the building was historically landmarked in 1987 putting to rest any thoughts of tearing down this architectural gem. Instead, developers opted to simply raise the roof. In 1987, developer, Akridge Company, general contractor, The George Hyman Construction Company and local architect, Shalome Baranes Associates began the redevelopment of the Homer Building which included preserving the historic façade, excavating five stories below-grade, gutting outdated interiors and building up an additional 8 stories. Challenging the development were strict historical preservation requirements, zoning codes demanding street level retail, digging around the DC Metro schedule and a “curse” of asbestos that ultimately led to the demolition of most of the original interiors. Despite the many trials, the new 421,084 sf Homer Building, which delivered in the spring of 1990, was designed to be, “the best of the early 20th century with the best of today's design and technology.” (Washington Post, 1988)

Over 20 years later, The Homer Building has been submitted for LEED EB:OM Gold,



proving that historical preservation, smart design and prudent operations can yield a trophy- class, sustainable building. The building boasts an exquisite 12-story atrium lobby that is not only visually stunning, but also provides natural lighting to the entire office. Furthermore, the design of each floor plate ensures efficient space usage, allows for individual temperature control and a real sense of presence. The building has evolved over the past two

decades into a model of sustainability; however, it is the original, sophisticated design that has allowed for such a capable transition.

Sustainable Site

Located directly above DC's Metro Center subway stop, The Homer Building is located in the center of the business district, just three blocks from the White House and the National Mall. The 1990 design ensured that the building was built out to the property line and the three levels of parking are underground. Ample public rail and bus transportation is available within one block of the building and an estimated 62% of building occupants utilize public transportation for their daily commute. The Homer Building also houses one of DC's Zipcars, whose annual fee is waived for all tenants. Furthermore, DC zoning required the development of street level retail. The Homer Building's retail tenants include Carhou Coffee, Lawson's Deli and Banana Republic.

One of the building's many amenities is the 20,000 sf rooftop terrace. Striking DC views and lush natural flora planters provide building occupants with an "escape" for the daily grind. Over the years, native plants have been added to the rooftop planters to minimize upkeep and water demand while still maintaining aesthetic appeal. The rooftop terrace is an excellent example of a "pseudo-green" roof that was envisioned and designed before commercial green roofs really existed. During the LEED certification process the building management team did investigate retrofitting the roof with some type of storm water management tank. Ultimately, they decided that retrofitting an existing urban building for a storm water management would not be an efficient use of resources.

One challenge the building management has faced over the past decade was light pollution. Although the building standards require all new interior construction to include motion sensors, the building clientele has had adverse reactions to the requirement. The building tenants, who include law firms, public relations firms, and government relations groups, insisted that dark offices would give the impression that people were not working. Although it took nearly a decade, nearly 80% of the offices are now motion sensed. The building exterior was also designed with up-lighting to highlight the building façade in the evening. However, in the late 90s the lights were retrofitted with timers to allow the up-lights to remain lit in the early evening when the city was still populated, but after 10:00 pm, the lights turn off to conserve energy and reduce light pollution.

Water Efficiency

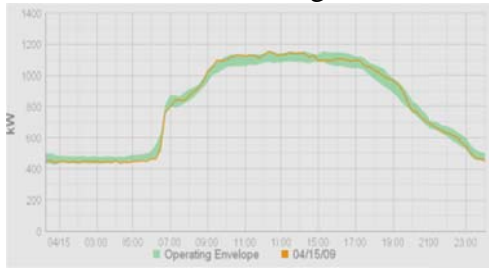
The management team recognizes that without a storm water management system, the restrooms are the main area for potential water reduction. In 2000 the building began a five-year plan to retrofit restrooms with hands-free faucets. In 2008 the existing faucets were retrofitted with low-flow aerators. Also, given that advanced porcelain fixtures were used in the original design, the management team has been able to retrofit the existing porcelain with low-flow flush valves. Too often “value engineering” occurs during the initial development and low-cost finishes and equipment are installed. These are often ripped out and replaced within the first five years of a building’s life. This practice is neither sustainable nor economic in the long-term, but is common in commercial development. The cooling tower installed during the original development was designed to code and utilizes non-potable rain water which is treated onsite. In my opinion, water efficiency and LEED falls short for existing, urban commercial buildings. For buildings without extensive landscaping and who were not designed with storm water management systems, water efficiency is not yet a high priority. Waterless and low-flow fixtures simply do not perform at a necessary level for commercial use. Also, the high cost point of these fixtures, versus the relatively low cost of water makes the payback period too long for standard commercial buildings. Although water utility costs have been steadily increasing over the past ten years and water efficient technology has gradually improved over the past several years, water efficiency does not seem to be the primary focus of sustainable design.

Energy and Atmosphere

The 1990 redevelopment of the Homer Building included an energy-efficient heat pump mechanical system that provided individual occupant control and a dial-in weekend and after hours automatic HVAC request system. This system and the building’s original Siemens energy management system (EMS) continues to be utilized successfully today. Efficient design and practical operations has allowed the Homer Building to reduce its energy consumption by 5% annually for the past decade.¹ Furthermore, the building has received the Energy Star Designation every year since 2007 and retains a current Energy Star score of 94. In 2008, a new energy monitoring system called MACH Energy Asset Manager was installed at the building. This system is a web-based tool used to measure, manage and control electric consumption and

¹ The building management team has an annual goal of 5% energy reduction from the average of the previous 5-year’s consumption.

costs. A special electric meter is used that sends electrical consumption readings in 15 minute intervals. These readings are available within the next 24 hours. This web-based system allows



for real time readings of your building's electrical consumption. Furthermore, it normalizes for degree days and provides the management and engineering team with a daily graph of energy consumption. The Homer Building's Property Manager, Jennifer Laforest remarks,

“Energy is the single largest controllable operating expense in a commercial building. Energy consumption also creates the highest carbon output for a building. It is something we focus on every single day. Even though Homer's age is a challenge, we continue to maintain and operate the building as it was designed to be... comfortable and efficient.” (Laforest, 2010)

Materials and Resources

Solid waste management was one area that the building team revisited during the LEED certification process. After completing a waste stream audit, the building realized they were recycling far more than they were throwing away. As a result, they switched to single stream recycling in the building's compactor and now only use 4 totes for trash. For a multi-tenant building with over 50 different tenants, tracking sustainable purchasing is nearly impossible. However, what the management team at the Homer Building has done is educate the tenants of sustainable purchasing vendors. They are also working to create “Homer's List” to allow tenants buy and trade durable goods. Finally, beginning in 2010 all interior construction must be completed to LEED CI standards. The building exemplified sustainable interior design and construction when it renovated the building's fitness center in May. They first donated all of the outdated fitness equipment and ensured that the carpet and other fixtures were recycled. The new fitness center employs low VOC paints and carpeting, LED lighting and Energy Star fitness equipment.

Indoor Environmental Quality

“As a property manager I really thought I knew everything there was to know about my building. And then I started LEED. I now have an intimate, almost disgusting, understanding of my building. I know the chemical dilution for the marble cleaner. Seriously, I know everything.” (Laforest, 2010) Although green cleaning had been the standard practice at the Homer Building since 2001, during the certification system, the management team realized that

the cleaning vendors “best practices” did not always follow green cleaning protocol. These issues were resolved prior to the LEED performance period. What the management team was



delighted to realize is that certain design elements of the building, including the lobby walk-off mats and the air handling units, naturally lent themselves to LEED. Furthermore, the building’s sky-lit 12-story atrium allows for an “efficient layout [which] provides the typical floor with approximately 50 percent windowed offices, the balance of space on the floor being no more than 20 feet from a window.” (Stepanek, 1991) Materials and Resources is a clear example of how design and operations can positively affect occupant comfort.

Innovation

Akridge places great emphasis on education and tenant involvement. Quarterly office managers meetings, educational handouts and gifts, and celebrating “Green Week” in conjunction with Earth Day allows the management team to educate and excite building tenants about sustainability and actions they can take in their office. LEED is often criticized for adding undue costs. The management team was able to complete the certification process in-house and with only a few minor projects that ultimately enhanced the building. “The truth is this building was already running efficiently and we are creating value for our Clients and Investors through sustainable and eco-friendly practices. Hopefully we will soon have a plaque that validates what we have been doing for nearly a decade. And when something better than LEED is created, I have no doubt that we’ll be first in line to sign up. Until then, I am ecstatic with our impending LEED Gold Certification.” (Laforest, 2010)

Conclusion

“When you strip away the rhetoric, preservation is simply having the good sense to hold on to things that are well designed, that link us with our past in a meaningful way, and that have plenty of good use left in them.” (Moe, 2008) The Homer Building is a natural example of how historical preservation, refined design and discreet operations can create an energy efficient, sustainable building that is also beautiful and aesthetically interesting. Creating a work place

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that is safe, healthy and attractive is a rare achievement. LEED Gold Certification is just one achievement that highlights this building's triumphs.

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