



The Local Landmarker

Issue 10, December 2008



On the Cover: The National Register listed Engine Nine (Delaware Station) Firehouse in the City of Albany. Albany became a CLG in 2008, although it has had a preservation law and commission since 1980. The firehouse, designed by noted local architect Marcus Reynolds and constructed in 1912, is an example of how Reynolds reflected Albany's history (in this case the Dutch) in many of his buildings. Engine Nine is still active as a firehouse and is a prominent and well loved local landmark for city residents.

From the Coordinator

This Issue

In this issue of the *Landmarker* I hope to demystify how the trend towards going “green” affects the work of historic preservation commissions, including a bit on Leadership in Energy and Environmental Design (“LEED”) ratings. Energy conservation is a large part of how “going green” can affect historic buildings, in that people want to do such things as replace windows, add exterior insulation, and install new heating, ventilation, and air conditioning systems. Some seem to think that if a property owner wants to add new technology such as solar panels to an historic building, then that should trump any historic preservation concerns. The quick answer is that these types of projects should be treated like any other proposals; what will the impact be to historic materials or design? New technology and materials have always been used at historic buildings, and the challenge, as it has been always, is to incorporate them into an historic building or district while protecting and preserving historic character.

Grants

I expect grant awards for FY2009 to be announced in December, and the projects will be moving towards contract shortly thereafter. This year’s round was highly competitive, and some projects did not get funding. If your project is in the group that was not funded, do not despair or consider that your application was somehow “flawed”. The applications, successful or not, give us an idea of what is needed and wanted by our CLG partners, and help us plan projects or programs that will help address these matters. In fact, several proposals pointed up the fact that we as a state preservation office need to develop “generic” or standardized design guidelines that communities can then use as a base for more specific materials, cutting development costs and helping everyone’s money go farther.

New CLGs

In the past year, we have added several new CLGs: The City of Albany (Albany County), the Village of Salem (Washington County), the City of Elmira (Chemung County), the Village of Fairport (Monroe County), the Village of Kinderhook (Columbia County), and the Town of Clarence (Erie County). Soon the Village of Palmyra (Wayne County) will join them as the newest CLG. Interest in the program continues to grow, and I encourage existing CLGs to welcome these new communities into the network, and get to know their members and their work. Part of being a CLG is about being part of a network from which you can learn.



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The New York State Office of Parks, Recreation and Historic Preservation oversees the Certified Local Government program. This office receives federal funding from the National Park Service. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination in the departmental federally assisted programs on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of federal assistance should write to: Director, Equal Opportunity Program, U.S. Department of the Interior, National Park Service, P.O. Box 37127, Washington, D.C. 20013-7127.

The Green Movement and Historic Preservation Commissions

Over the last decade, we have seen a movement in building technology and design that has the potential to affect our historic buildings and neighborhoods. Some parts of this movement have been around for some time, but recent concerns with energy security, global warming, and limited natural resources has certainly exacerbated the trend. The term “green” is the word that most people use to sum up all the trends in materials, energy conservation, recycling, reducing carbon “footprints”, etc: All these efforts look to introduce “sustainability” into everything we make, build, use, or do. Simply put, sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”¹

While the green/sustainability movement may seem like a revolution, looking to incorporate new technology and materials into our homes and businesses, this isn't the first time historic buildings have encountered the onslaught of new technology. For example, if you live in an historic house, think about the mechanical systems that you take for granted, but may not have been original. These systems can be as simple as electrical wiring, or as complicated as a heating system. Perhaps you have installed some yourself during your tenancy. Hopefully, these systems were installed sensitively, protecting historic materials and character. At the time they were installed, they were the latest and greatest, achieving things such as better lighting, more efficient and thorough heating, sanitary plumbing (maybe even bringing the plumbing indoors), or even adding elements such as a garage to incorporate new fangled things such as the car. I'm certain you've seen some improvements that weren't installed with the greatest sensitivity, such as large satellite dishes or early generation solar panels mounted on the front slope of a roof, many of which seem to have outlived their usefulness, but not their function as monuments to outmoded technology.

I had one person ask me if the need for “green” technologies “trumped” historic preservation concerns. My answer was “not at all”. It's important that historic buildings accept and incorporate new technology so that they can remain viable and useful for years to come. However, this should be done carefully so that historic character and materials are not damaged or lost. The job of the historic preservation commission in this era of green technology and design remains the same as it always has been: managing change within their communities while protecting historic character.

The Greenest Building

Much has been written in preservation circles over the past few years about the greenest building being the one already built. An article written by Carl Elefante, published in the September 2007 National Trust for Historic Preservation Forum Journal discusses that concept pretty thoroughly.² There is much truth in the thought, in the fact that the wood has already been cut, the clay for the bricks mined, formed and fired, the nails already forged...the list could go on. It took energy to make the materials and construct the building, and that energy still exists in the form of the building. This concept is called “embodied energy”. In a speech entitled *Economics, Sustainability, and Historic Preservation*³, Donovan Rypkema, an expert in historic preservation and economics, describes the concept of embodied energy and other issues regarding historic preservation and

¹ <http://www.epa.gov/Sustainability/> accessed December 3rd, 2008

² http://www.preservationnation.org/issues/sustainability/additional-resources/Forum_Journal_Summer2007_Elifante.pdf, accessed December 3rd, 2008

³ <http://www.ptvermont.org/rypkema.htm>, accessed December 3rd, 2008

sustainability. Demolishing a building essentially wastes the energy it took to make the building as well as its constituent materials. Add to this the fact that many of the materials in existing buildings are high quality, and some, like old growth wood or hand worked iron, are not available any longer or are extremely expensive to replace

Many buildings constructed before 1920 were designed to take the best advantage of natural light, air circulation, solar heat gain, and other such things. With that in mind, you can think of a pre-1920 building as a passive machine designed to be reactive (with its occupant's assistance) to climatic changes and natural system opportunities. I always remind people that humans were getting cold or hot in their homes for millennia and developed ways to remain comfortable before electricity was harnessed or new materials were discovered. There are extremely sophisticated examples of passive building systems in some Southern United States cities where heat was addressed through high ceilings, vertical air circulation (at times pulling cooler air through natural convection from the basement or crawl space through very effective ducting), doubled exterior brick walls with air spaces, and the use of wide porches to shade windows. In the Northeast, houses were built to keep heat in and cold out, through location and siting, encasing the chimney mass in the bulk of the house to keep its thermal mass inside the house (as opposed to the exterior as was done in the south to keep the heat *out*), the use of storm sash, vestibules between inner and outer doors, and smaller and shallower porches so as not to block warming sunlight. These "machines" operated at peak efficiency when its residents knew when to draw blinds, close curtains, open and close windows, extend awnings, install storms, etc. Unfortunately, as active mechanical systems were introduced (electric lighting, forced air heat, etc.) the construction of our homes and businesses became less attuned to the natural world, and more reliant on technology. Additionally, we became less attuned to how to operate our buildings to their best performance.

It has also been noted that while many people are very committed to recycling bottles, cans, and newspapers, they treat the demolition of an existing building and the carting away of its building materials to the landfill as something not in the same realm. In fact, rehabilitating a historic building can be the ultimate form of recycling, having a much greater impact on the environment than years of individual recycling efforts.

The National Trust has been taking some very progressive actions in the area of "green" and sustainability, and has many resources for homeowners, business owners and preservation commissions in the sustainability section of their website:

<http://www.preservationnation.org/issues/sustainability/>

What is LEED?

You may have heard the term LEED mentioned in magazines, by architects, or by building officials. However, many people have no idea what the letters stand for. Terms like "LEED Gold" or "LEED Platinum" are mentioned as a goal for a new building to achieve, but what does it mean?

LEED stands for **L**eadership in **E**nergy and **E**nvironmental **D**esign, and was created by the U.S. Green Building Council (USGBC). The USGBC is a not-for-profit group founded in 1993, comprised of corporations, companies and individuals who are active in the building trades and design fields. Their mission, as stated on their website is "To transform the way buildings and communities are designed, built, and operated, enabling an environmental and socially responsible, healthy and prosperous environment that improves the quality of life."⁴

⁴ <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=124>, accessed December 5, 2008.

LEED is a voluntary point system created by the USBGC whereby a building can be graded and “certified” against standards to determine its performance and how it impacts the environment. The point system results in the ratings “Certified”, “Gold”, “Silver”, and “Platinum”, Platinum being the highest rating. The points add up much like a scorecard and are given for use of materials, high efficiency systems (heating, cooling, water, electrical, etc.), operations, transportation impacts, and many other areas. The standards are set by the USGBC; building owners/builders apply for certification if they so choose. The standards give builders marks to aim for, and encourage project designers to get the highest rating possible.

There has been some criticism of the LEED system in the historic preservation community, due to the fact that initially LEED was slanted heavily towards new construction, and did not take into consideration the green effects that rehabilitating an already constructed building could have. However, LEED is an evolving system; in fact there is currently an existing building rating system that can be used to rate work at historic buildings. While currently imperfect from a preservationist’s view, we expect that it will continue to grow and address our concerns. Currently there are LEED rating systems for new construction, the maintenance and operation of existing buildings, commercial interiors, core and shell construction, schools, retail buildings, healthcare buildings, private homes, and neighborhood development. If you wish to read more about the USGBC and the LEED system, you can go to the USGBC’s website at www.usgbc.org. It never hurts to know the language of this system, as you will undoubtedly hear it from an Certificate of Appropriateness applicant if you haven’t already.

Energy Conservation

The acknowledgement of the eventual depletion of fossil fuels and the dangers of adding more carbon to our atmosphere makes energy conservation a large part of the green and sustainability movements. One of the biggest arguments homeowners give in coming to a preservation commission for a certificate of appropriateness is to make changes to make their home more energy efficient. With the recent spike in oil and gas prices, this seems like a logical thing to want to accomplish in our homes, and commission should be prepared with the facts of energy efficiency and historic buildings rather than trusting the claims of new building material manufacturers.

To date, window replacement is the biggest issue coming out of this recent effort for higher energy efficiency. Applicants claim that the old windows are drafty, won’t operate, or are just worn out. They have seen claims by window manufacturers that new windows can save hundred if not thousands of dollars in heating costs. Some commissions feel under pressure to allow these replacements, or be characterized as not caring about the “realities” of living in an older building.

The fact is that many older windows **can** be drafty and difficult to operate. However, this does not mean that they are at the end of their useful life or that a new window can perform any better, be more cost effective, or be “greener” than the existing sash. Additionally, they are highly character defining elements of a historic building, so replacing them can have a significant impact on the building’s overall character.

Consider the following:

- Many older windows 60 years old or older are made of old-growth wood, a non-renewal resource which is highly rot-resistant with proper maintenance
- Drafts can be effectively dealt with by proper weather-stripping. In fact, most heat loss in an older building is through the roof. Adding additional insulation at the attic is a much more cost effective way to prevent heat loss

- Problems with the operation of historic windows are usually the result of broken sash cords, which can cost pennies to replace or repair, and were always meant to be replaced as they wore out
- Studies are showing that a properly maintained and weather-stripped window, with an appropriately installed storm window is just as energy efficient, and more cost effective in the longer term than a new sealed-unit window
- New windows are not designed for the long term and are made of materials than in some cases cannot be recycled; vinyl can warp and sealed units can fail and require the entire window to be replaced
- From the green and sustainable angle, the removal of thousands of repairable old-growth wood windows and their disposal in a landfill is not desirable. Also the manufacture of new windows uses large amounts of energy and natural resources.

These points are condensed from an excellent architect entitled What Replacement Windows Can't Replace: The Real Cost of Removing Historic Windows⁵ by preservation architects Walter Sedovic and Jill Gotthelf. This article can be accessed at :

www.state.il.us/hpa/PS/images/replacement_windows.pdf

Preservation commissions should be proactive in educating property owners about how to care for and repair historic windows. It would be helpful to develop a list of window “craftsmen” or repair specialists in your area. Holding a window “workshop” is also a great idea, because it can be recorded and used for ongoing training and education. The City of Niagara Falls, a CLG, is planning exactly that type of project, covering not only windows, but porch, roof and siding repair as well. The recorded workshops will be available on the City’s website after they are completed.

Alternative Energy

One of most promising trends coming out of the green/sustainability movement is the move to develop and use alternative energy sources. While this was also a movement in the days of the 1970’s energy crisis, the momentum was lost as cheap energy once again came on the market in the 1980’s and 1990’s. The new systems being proposed both for residential and large system-wide use have the potential to impact historic resources, so historic preservation commissions need to be prepared to act on applications proposing their use. While not the only systems a commission may seem solar panels and wind turbines seem to be in the front lines.

Solar panels: The installation of residential solar panels seems to be the first wave of new technology commissions are being asked to review. Remember, however that is not truly the first time solar panels have been used at residential structures. As I noted early in this article, we can see earlier solar water heating systems still perched on rooftops (sometimes in highly visible locations) in neighborhoods around the country. The newer systems have come extremely far in efficiency, and can include both heating and photovoltaic (producing electricity from sunlight) panels. Since these systems rely on appropriate exposure to sunlight to work at peak efficiency, their locations are critical to their operation. This has raised issues of locating solar panels on roof slopes visible from the public right or way, in yards, or on new structures built expressly for the installation of the panels.

There are no cut and dried solutions to the installation of solar panels, but I do advise commissions to treat them as any other proposed addition to an historic building, taking into consideration the

⁵ Walter Sedovic and Jill H. Gotthelf, “What Replacement Windows Can’t Replace: The Real Cost of Removing Historic Windows,” *APT Bulletin: Journal of Preservation Technology* 36:4 (2005): 25-29

fact that they must have good sun exposure. A commission can ask a property owner to consider alternative locations, such as locating panels on the lot rather than the building, at an ancillary building, or on less prominent roof slopes than that associated with the main elevation. Their installation should not cause damage or loss to historic materials, and should be entirely reversible; remember these systems are evolving rapidly and a smaller or much less intrusive system may be on the market in a relatively short time.

Wind turbines: Most large wind turbine systems are outside the purview of many preservation commissions, as they are typically located outside cities and villages. Township preservation commissions may be asked to comment on their impact, but they are freestanding structures, not typically considered an alteration to a designated structure. However, a locally designated scenic viewshed or historic building setting may be impacted. At the State Historic Preservation Office, we have dealt with a number of proposed turbine installations, and have found that they can be very difficult situations to mitigate in regard to their impact on historic resources. Turbines have to be located where the wind is; moving them is not always an easy option. Typically, we ask for alternative locations if we find that visual impacts to historic resources are extremely high, or that the project be slightly downsized to remove the most egregious installations. We have also asked for mitigation funds to support the work of local historic preservation.

Preservation commission should be thinking down the road to the day when wind turbine technology becomes efficient enough that residential installations are a possibility. I have not personally seen such an installation to date, but I am sure one of our commissions will in the near future. Again, I would advise the commission to consider the installation like any other proposal, albeit one that will likely be one of the most challenging they will have seen.

Conclusion

I have in no way meant this article to be all-inclusive or the end-all for issues coming from the green/sustainability movement. I do hope, however, that it will educate, inform, and provoke discussion among commission members about these issues. I will repeat what I do believe about these new issues:

- That new technology has to be incorporated into historic buildings to keep them viable
- That new technology can be incorporated into historic buildings sensitively, and
- That preservation commissions must be prepared to address Certificate of Appropriateness applications dealing with new technologies.

In some regards, we will all be finding our way on these issues, but it helps to have thought about them, read about them, and have resources at your disposal that you can refer property owners to and fellow commission members to for information.

Featured Websites

If you notice the change in the name of this section, you're a close reader of the *Landmarker*. I usually give only one website per newsletter, but since the topic of this newsletter is so wide-ranging, I thought I'd give several sources of information and assistance. Several of the sites are in the text of the article, but I thought it would be good to include them here as well. Let me know if you know of some other good websites dealing with historic preservation and energy efficiency or green technology.

http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=8217&Itemid=22

This website from the City of Boulder, Co., entitled "Historic Building Energy Efficiency Guide" is an excellent primer on treating your historic building as a system to be fine tuned for efficiency, rather than looking to one or two items (such as windows) as stopgap measures.

<http://www.changeworks.org.uk/content.php?linkid=373>

A publication from the City of Edinburgh, Scotland, this has sections dealing with energy efficiency at "listed" buildings, the equivalent to our "designated landmarks". The guide is written very clearly, with illustrations. If you can read past the different spellings and terms (such as draught proofing instead of weather stripping), you will learn a lot.

<http://www.preservationnation.org/issues/sustainability/>

The National Trust has created this excellent resource on their website with tips for homeowners, and main streets, with access to speeches and publications on historic buildings and sustainability. It can help you prepare responses to many claims made by homeowners about energy efficiency and historic buildings and materials.

www.usgbc.org

The United State Green Building Council is the organization that created and oversees the LEED system. If you are interesting in learning more about the ratings, or in reading and commenting on upcoming changes and additions to the rating system, this is the location for you.

Before and After



Before and after photographs of 165 Jay Street in Albany, in the historic Center Square neighborhood. Center Square is a National Register and locally designated historic district containing a great number of rowhouses, from modest to mansion, and an Olmsted inspired historic city park.. Once in the path of a massive urban arterial project, this area was one of the first areas of the city to undergo an urban renaissance, and currently contains well maintained residences, churches, and an active and regionally popular commercial street with restaurants, shops, and galleries.

The Back Page

Grants from the National Endowment for the Arts

Part of the National Endowment for the Humanities' *We the People* program, these grants can be helpful to a municipalities preservation efforts. I encourage you to check them out and see if you have a project that may be a good fit. Keep us informed if you are applying for a grant as we may be able to help!

http://www.neh.gov/grants/guidelines/IAHP_Implementation.html

Interpreting America's Historic Places grant projects may interpret a single historic site or house, a series of sites, an entire neighborhood, a town or community, or a larger geographical region. The place taken as a whole must be significant to American history, and the project must convey its historic importance to visitors. The audience for Interpreting America's Historic Places projects is the general public.

http://www.neh.gov/grants/guidelines/IAHP_Planning.html

Interpreting America's Historic Places planning grants support planning that leads to the interpretation of a single historic site or house, a series of sites, an entire neighborhood, a town or community, or a larger geographical region. The place taken as a whole must be significant to American history, and the project must convey its historic importance to visitors. The audience for Interpreting America's Historic Places projects is the general public.