

Review of Green Preservation Projects: An Approach

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A current hot topic in preservation has been the incorporation of new sustainable strategies into historic projects. Traditional thinking has been that the twin goals of energy conservation and historic preservation were at odds with each other. Closer examination of the issue, however, is revealing more of a synergy, if the project is approached appropriately.

The new sustainable strategies involve a point system and third party certification that guarantees a level of meaning and consistency when a building is called “green”. Whether the system used is [LEED](#) (Leadership in Energy and Environmental Design) or the California-based [GreenPoint Rated](#) system used for new home construction and remodeling, all describe criteria and provide a point system or checklist that determines a minimum standard of conservation. These systems typically target more energy efficient performance than building codes require, usually 15% higher.

A tax credit or Section 106 project is ready for review, but the client has also mandated a “green” building. A green building is a positive signal to the customer that the owner or lessee is contributing toward the solution of climate change and resource conservation. Sometimes it is perceived that this signal must be visible; this is where third party certification can be preservation’s best friend.

That’s Not Poor Gutter Maintenance, it’s a Green Roof

Nothing says green more than a building bristling with photovoltaic cells, hot water heat exchangers, brand new low-e windows and a light-colored roof, right? Developers and governmental jurisdictions alike want to show that they are responding to the need to reduce energy and material use. An historic building needs a lighter touch, however, as outlined in the Secretary of the Interior’s Standards. Third party certification is that signal, but one that isn’t physically visible. Where do the two criteria meet?

State the Goal

First, sustainable features in a preservation project work best when planned from the beginning. Any project submitted for preliminary review, a Part 2 tax credit review, a Section 106 review, or other consultation should state in the correspondence or application that the project has a sustainable component as a goal. The goal should be stated as a quantification of the target energy or resource saved, generated, reused or recycled.

State the Strategy

Next, explain how the goal will be achieved in the historic resource. What equipment is needed, and where will it be located? How invasive is the installation process? What is involved with tightening or insulating the building envelope? What is the strategy for window retrofit, repair, or replacement? Will the property or site be impacted in some way? In addition to a description in the correspondence, schematic mechanical drawings help to illustrate the concept of what is being proposed.

Successful Strategies

Simply put, successful strategies meet the Secretary's Standards. There is more latitude for new additions or construction on the site, but the same Standards must be observed for those too: the massing, size, scale and architectural features shall be compatible to protect the historic property and its environment.

Many older historic buildings were built to work with the environment, employing many passive strategies to keep its occupants comfortable. Explore the original strategies that may be present in the project. Do they still exist? Can they be repaired and reused? Many buildings have had their passive strategies thwarted over time as mechanical systems were introduced.

This is where third party point system certification works well. Like the Standards, there is a certain amount of flexibility and interpretation to achieve the goal. These systems are goal oriented without detailing how the goal is met.

For example: LEED Energy and Atmosphere credit 1, Optimizing Energy Performance, gives a target percentage of energy cost savings, and gives two scales, one for new buildings and one for existing buildings. The existing building scale has a lower threshold of performance than new buildings for the same points earned, which is amenable to historic buildings. The credit does not specifically require window replacement, or even repair; just that the threshold be met.

Another illustration of low-impact points earned from the perspective of the Standards is the reuse of existing materials generated from your site, or even another site. One point can be earned from the purchase of green-generated power produced off-site, which has no impact on the historic property itself.

Many of the points for LEED certification involve proximity to services, transportation alternatives, or performances of systems that are typically retrofitted into a historic building and are not normally visible. An important point to make here is the 2007 update to the California Historical Building Code, which

still exempts historic buildings from meeting the energy requirements of Title 24 building codes, but now requires compliance with Title 24 for large appliances installed within.

Unsuccessful Strategies

Projects that are initially submitted with no sustainable goals and are subsequently resubmitted late in the process with a “green” patina will receive a critical review. The quantified energy or resource goal of the sustainable redesign should still be stated in the revised application, and all drawings that support the sustainable goal should be submitted, including revised mechanical drawings incorporating any new equipment. Even if the equipment is on a new construction or addition, the final design of these new structures is frequently the result of negotiations that the sustainable revisions may nullify.

Likewise, jurisdictions with projects they desire to demonstrate or showcase particular sustainable technologies need to select their exhibit carefully. The project should actively demonstrate the sustainable effect and not just illustrate a technology, such as heat sinks, insulation or thermal masses that do not affect interior space. Those demonstrations are better suited to new construction and not incorporated into a historic project.

A Happy Ending

The good news is that preservation and sustainability are not mutually exclusive but rather can work well together. Plan on meeting both goals from the start, and describe the energy goals and strategies sufficiently in correspondence and drawings. Third party certification is not a requirement for the incorporation of sustainable strategies into your historic project, but it does provide a signal that not only is your project historic; it's contributing to a cleaner world.

The architectural unit of OHP looks forward to the challenge and reward of assisting in innovative preservation projects that incorporate sustainable principles and is available for consultation when planning for a green preservation project. Be sure to consult early in the process, and visit the [LEED page](#) of our website.