



CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

HISTORIC PRESERVATION COMMISSION

MEMORANDUM

Site: 44 Meacham Road c.1892 Henry R. Glover (developer) House
Case: HPC 2016.018 Meacham Road/ Campbell Park Local Historic District

Applicant Name: Sarah & Colby Swettberg, Owners
Applicant Address: 130 Liberty Road, Somerville, MA 02144

Date of Application: March 29, 2016
Legal Notice: *Replace windows.*
Staff Recommendation: **Unable to recommend at this time**
Date of Public Hearing: April 26, 2016

BACKGROUND

The applicants/owners of the property at 44 Meacham Road received a Certificate of Appropriateness¹ (COA) dated November 19, 2015 with extensive approvals from the Historic Preservation Commission (HPC).² Included in the COA was approval to replace the existing windows with the exception of the Queen Anne window on the stairs.³ Another condition of the COA is that the window glazing shall have no low-E coating.⁴ The applicants/owners have applied afresh to the HPC for approval to install replacement windows with low-E coating in order to obtain the best SHGC⁵ rating possible.

HPC POLICY

The Somerville Historic Preservation Commission (HPC) has had a policy of not approving the use of low-e coatings on replacements windows installed on structures within local historic districts (LHDs).

¹ A copy of the Certificate of Appropriateness is attached to this Memorandum. The HPC case number corresponding to the COA is **HPC 2015.074**. A copy of the original Staff Report is also attached to this Memorandum.

² The Certificate of Appropriateness also contained details relative to the Certificate of Non-Applicability related to siding, slate roof, foundation and gutters.

³ See items 8-10 in the COA.

⁴ See item 11 in the COA.

⁵ SHGC = "solar heat gain coefficient". This is the fraction of incident solar radiation that can pass through a window through direct transmission as well as through absorption and subsequent release inward. SHGC is represented in numbers from 0 to 1. The lower the number, the less solar heat a window transmits. A window with a higher SHGC rating is more effective at collecting solar heat during the winter. Those with a lower SHGC rating are more effective at blocking heat gain from the sun during the summer (see <http://energy.gov/energysaver/energy-performance-ratings-windows-doors-and-skylights>)

The HPC has found that the change in reflectivity that low-E coatings cause on the glass warp the reflected image in a way that looks very different from a historical window. In the past, the HPC had approved some replacement windows with low-E coatings and it is from these experiences of the unpredictability of the coatings on the reflected images that this policy stemmed.

STAFF RECOMMENDATIONS

Staff has spent significant time assessing this issue with the Planning Director, Director of Sustainability, Planning Directors and Historic District Commissions in other communities as well. The Director of Sustainability takes no position on the Meacham case and the Planning Director and Preservation Planner concur on the following items immediately below:

1. The applicants/owners shall bring physical examples of the windows to be installed so that the HPC can determine in person if the reflectivity is a concern with the exact model proposed for 44 Meacham;
2. Applicants/owners shall identify existing examples of their proposed windows with low-e to demonstrate the reflective quality. Good quality photo representations will suffice, but addresses should be provided;
3. The HPC shall designate to staff the ability to work through the nuances of this issue with the applicants/owners and their architect until the matter is resolved by a vote of the HPC;
4. The applicants/owners shall identify and present alternative means of achieving a satisfactory SHGC rating.

Staff, including the Planning Director, strongly recommend that the HPC and applicants/owners agree to continue this case to the second meeting in May (the first May meeting is already booked).

ADDITIONAL STAFF COMMENTS

In addition to the above recommendations, Staff offers the following comments for consideration.

- The HPC should recall that the case before them is not a case of hardship irrespective of the cost of replacement windows/storms.
- The HPC should recall that their purview is not the overall efforts at sustainability pertaining to the building envelope, mechanicals or otherwise at 44 Meacham Road, but as to the appropriateness of the proposed replacement windows and the historic context of the structure.
- The historic preservation community as a whole is very much in agreement that preservation and sustainability go hand-in-hand. The National trust for Historic Preservation often states that the greenest building is the one already built and the one being preserved. Without a doubt preservation and energy efficiency can co-exist. We know that the HPC feels the same way; both the applicants and the HPC should work to find a reasonable solution.
- The numbers for energy efficiency have been provided by the manufacturers of replacement windows whose aim is to make a profit on their product. The numbers provided also reflect the estimated energy efficiency of new windows; they do not reflect how much the energy efficiency degrades over the life of the window. What are those numbers? According to Energy Star, the numbers provided by manufacturers should be viewed with caution:

Don't be swayed by ratings the manufacturer may post on its own label. A window or door's frame and other components (weather stripping, sidelights, transoms) can significantly affect its energy efficiency, so NFRC measures based on the entire unit, not just the window glass or door slab

alone. Manufacturers, on the other hand, sometimes report values that don't take the entire unit into account, according to Energy Star.
<http://www.houselogic.com/home-advice/windows-doors/understanding-energy-ratings-for-windows-and-doors/#ixzz46sctvrGe>

- Applicants/owners and the Commission should note that the HPC has no purview over storm windows in an LHD. It would be possible for the applicants/owners to install high-quality, low-E coated storms over their replacement windows with no input from the HPC at all. It would be of further value to the applicants/owners to calculate the energy efficiency of a combination of replacement windows and low-E storms.

As the process moves forward with the applicants/owners and as they do further research into their proposal, Preservation Planners are committed to working closely with them and their architect.