

June 5, 2015

Hello, members of the Common Council~

I would like to add this letter to the record regarding my request for a Certificate of Appropriateness (COA) to install skylights in my roof at 926 N. 34th Street in Concordia Historic District. I would greatly appreciate it if the members would read this in its entirety as it adds significantly more information regarding the basis for my request and this appeal.

I. Legislative support

My request for skylights was made to reduce costs through more responsible energy use and to finish restoration of my attic. Wisconsin law supports renewable energy improvements, and under statute 66.0401(m), no municipality may restrict an individual's right to solar applications, which skylights without doubt are. Defined under s. 13.48 (2)(h)1.g: “ “*Solar energy system*” means equipment which directly converts and then transfers or stores solar energy into usable forms of thermal or electrical energy.” The meaning is clear, and skylights sit squarely within the language of the statute.

Through various existing technologies, skylights concentrate and convert solar energy into useable thermal energy, then transfer it into the room below where it is stored or used as heat. Denial of the COA to install the skylights is not permissible under Wisconsin state law and falls outside the purview of the HPC. The language of the statute, and the intent of the law as demonstrated through Wisconsin's legislative history, reminds us that access to renewable resources is protected and was meant to remain unfettered. I believe there is a general misunderstanding as to what a solar energy system is, and why skylights without question qualify as one, so I have included further information regarding this at the end of this document in ***Appendix I***.

II. Compliance with HPC Guidelines and intent

If it were the position of the HPC that no historic property could be altered in any way not consistent with its *original* appearance, then this discussion would only be on solar rights. I would say, okay—my house didn't have skylights originally (though it could have), so I can't put in any now. Fair enough. That's a definitive standard. However, that is not the basis upon which COA's are approved.

COA's are routinely given to make changes when an owner is remodeling, or for additions, fences, decks, changes in exterior features or for any number of other reasons, *whether or not* the alterations are original to the property for which they are being requested. So, that is clearly not the criteria upon which these decisions are based.

I had no concerns when requesting a COA for the skylights, knowing them to be well within the interests of historic preservation because they are common to both the time period and geographic area. They were also carefully chosen for minimal visibility and intended for

placement in line with HPC preferences. But, there appeared to be some confusion regarding what was meant when I referred to them as historically accurate, and the comment was made that “these are contemporary modern appendages on houses.”

Put that way, it sounds as if no one living in Milwaukee at the time my house was built in 1900 would have recognized what a skylight was, or understood its purpose. It would have been an oddity. However, in reality, the opposite is true and it is very unlikely that anyone wouldn't have known what a skylight was at the time—especially since Milwaukee's brand-new City Hall had opened its doors only five years previously. Skylights might more likely have been considered modern by *those* folks for that reason, and because they were used in contemporary homes and other public buildings. But, if asked, they also probably couldn't have said exactly when skylights first came into use because they go so far back into history as to have been forgotten. If skylights are now considered “modern” it is because they still remain popular after thousands of years. And if they are “contemporary” it is because popularity drives continual modernizing... and on it goes in circles. Historically, flat skylights have been used on sloped roofs; while hipped, domed, and gabled ones were placed on flat roofs.

This Old House Interiors magazine (Sept, 2002) was asked: “My house is rather dark in a few places—upper stair hall, a north-side bathroom—and would benefit from the addition of a skylight or two. But when I think of the “big glass holes” in the roofs of condos we've seen rented, I can't imagine doing that to my 1906 house. Is there such a thing as an old-fashioned skylight?” They answered, “Acrylic/polycarbonate bubble domes are new; skylights are old. Urban row houses built during the Victorian era have them; in a 1910 photo of my own house, there it is, a plain glass skylight. A skylight of reasonable size can bring natural light in without anachronism outside.” [emphasis added]. This is what I have been attempting to convey; that skylights are historically authentic to Victorian homes and the era, and requests for them cannot be considered out of place.

At the meeting on May 11th it was suggested to me that a dormer might be approved because the HPC does not object to an owner finishing 3rd floors. I was told that permissions had previously been given in the past for “modifications that included a proper gable” which created “sort of a historic feature”. (This would be interpreted to mean fundamentally constructing the aforementioned dormer where there was none).

However, in the guidelines, dormers are included in the same category as skylights and solar panels with respect to alterations (“*Dormers, skylights and solar collector panels may be added to roof surfaces if they do not visually intrude upon those elevations visible from the public right-of-way.*”) Given this, how is it reasonably possible that the one alteration (dormers) would be approved, while the other (skylights) was not?

The HPC was therefore mistaken to suggest that a much more architecturally disruptive alteration would be preferable to the less visible (and more functional) skylights. That

recommendation constitutes a preferential application of the guidelines for one type of alteration over another with no rational basis. It also specifically violates other guidelines that recommend not changing the roofline or altering the proportions of the house.

When there are competing interests, the decisions should not be selective and subjective, but based on the historical accuracy of the change or feature requested. Please see **Appendix II** for further information related to skylights and my property.

III. Historic support and policy of US, Wisconsin and Milwaukee

The state of Wisconsin is frequently cited as one of the most progressive in its renewable energy legislation; recognizing “the power of the sun” in *Prah v Maretti* (among others) and that all its citizens have a right to access solar and wind power regardless of the area in which they live. Milwaukee itself is a leader in promoting solar energy with programs like Milwaukee Shines; and large amounts of taxpayer’s dollars are spent on it, wind, and other renewable energy alternatives. As a resident of the city and a conscious consumer, I am simply trying to do the best I can within the means at my disposal to reduce my artificial energy consumption and footprint. As a matter of good public policy it is illogical and fiscally imprudent to legislate and promote alternative energy options while at the same time dispensing an arbitrary decision that denies protected, legislated access to them in violation of state law.

The “intent and purpose” of the HPC, as defined in Milwaukee city ordinances, is in part to “stabilize and improve property values”. Granting the COA would be entirely consistent with city policy and practice, and specifically with that of the HPC. Refusal, by contrast, denies an owner the right to improve his property *within historic bounds* and is in opposition to the stated purpose of historic preservation. Please see **Appendix III** for further expansion on skylights in the US and Milwaukee.

Without a factual, legal or historic foundation upon which to base the denial, I would suggest that the decision made by the HPC was in error. Approving the request would be consistent with state and city policy and practice. It also lies entirely within the historic bounds advocated and promoted by the HPC. Under no reasonable definition can skylights be considered anachronistic, and they function critically in energy management and thermal energy creation. Under the legal rights afforded all citizens to solar access, my request for skylights is fully within statutory bounds and outside HPC or municipal restrictions.

Therefore, I would ask that the Common Council reconsider the previous decision as having been made without benefit of sufficient information, and grant my appeal for a COA to allow installation of the requested skylights.

Thank you very much.

Maggie McCracken

APPENDIX I—SKYLIGHTS AS SOLAR TECHNOLOGY

Without doubt *all* skylights function as solar energy systems. Solar energy occurs primarily as light (photovoltaic or PV) or radiant (heat) energy. Both can produce electricity, but radiant energy can be used directly to heat air or water as well. Because solar radiation occurs predominantly through the roof, skylights are among the best solar applications available to convert solar radiation directly to thermal energy.

Proper *management* of a renewable energy system (solar or wind) is necessary as natural energy sources must be efficiently and effectively utilized. Skylights distribute radiant energy in the form of heat in the winter and reject solar heat in the summer when this is correctly done. Passive solar technologies use sunlight without active mechanical systems, converting sunlight into usable heat (in water, air, and thermal mass), cause air-movement for ventilation and cooling through convection without other energy sources.

[Direct conversion should not be confused with “active” v “passive” systems in this definition—the physics are the same, it is the method of delivery that differs, which is not restricted under the law. Direct conversion is *intentional* by some type of means (passive or active), while indirect conversion is usually of a type employed without means.]

Depending on the location of the skylights on a roof, different results will occur. Elements to be considered include window placement and glazing type, and thermal insulation. For my purposes, I am interested in maximizing light in general and thermal heat gain particularly in the winter. For this, the south face of the roof is best because it faces the equator. When I do not want maximum heat gain, I will use insulated shading to reflect out heat until the sun no longer shines directly on the roof. Then opening the skylights will cool the entire house through convection and ventilation. Thermal radiation moves from a warmer surface to a cooler one, so any warm air in the house, including from the second floor and below, will move up and out, causing air movement for ventilating as well.

Solar heat gain can be significant even on cold clear days, and this can be facilitated by the types of glazing offered on skylights and also the degree to which they can be automatically managed. In some cases, it is not necessary to manually control shading or insulating against thermal heat gain in the summer, depending on the skylight. There are some that have a PV strip that powers a charge to the window. This occurs in real time according to the exterior weather conditions—if it is hot and bright outside, the window can reflect up to 91% of the heat gain that might otherwise have occurred. When it clouds over, the reverse occurs. It is also possible to control this through an app on a smart phone or tablet if one wants to manage the conditions themselves. Powered entirely by a PV strip, these particular skylights are purely solar energy systems which, without doubt, fall under the definition in s. 13.48 (2)(h)1.g, Wisconsin Statutes. (See more at: <http://www.bdcnetwork.com/chapter-3-how-building-technologies-contribute-reconstruction-advances#sthash.9ub9wNZ8.dpuf>)

APPENDIX II—SKYLIGHTS RELATIVE TO 926 N. 34TH STREET

In consideration of HPC's own guidelines, the skylights are not intended for installation on a primary façade. At most, they can be seen for only 45 feet from the longest line of visibility, which is the western sidewalk across the street. To the left is a recent photo of the house,



which is quite different from the one shown previously. This one is not zoomed or enlarged—it just shows the house in its actual correct perspective. I was unable to get the entire roof into the frame from any position without some type of obstruction. Taken from the east side of the street, this is the greatest visibility possible.

The second floor windows are about 36" by 76" on the exterior, and one planned skylight would take up approximately a quarter of the area of one for reference. The center of the roof begins at about mid-way between the downspout and the barely visible second floor window to its right. The skylights are intended for placement past (to the right) of that point on the roof.

The skylights are small, and the shrinking perspective of the rear of the roof from the street level reduces their visibility significantly further.

This photo was taken five feet closer and five feet to the left of the previous picture (if that), and all visibility of the roof vanishes because of the steep pitch of the gable. Yet, the previous photo showed the most visibility I could get of the roof only five feet to the right.



The guidelines for alterations also recommend accomplishing the ends by the least intrusive means. A dormer would in no way result in the ends I desire, but also put it beyond my financial willingness to undertake—in addition to disturbing the structure physically and more visibly than skylights would.

The Wisconsin Historical Society suggests “add light with a dormer window or skylight on the rear roofline.” Again, skylights are recommended in the same context as a dormer, not *instead of*.

A skylight doesn’t attempt or need to re-design a home; it takes advantage of the existing lines and spaces without appreciably altering the exterior. It’s fully in keeping with the goals and purposes of historic “preservation” rather than historic “improvement”, and should be permitted.

APPENDIX III—SKYLIGHTS AND RECENT HISTORY



Thomas Jefferson's Monticello



Skylight on 3rd floor at Monticello

As mentioned in my COA application, Thomas Jefferson's Monticello has thirteen skylights. They were installed for essentially the same purposes as those today—lighting, cooling, heating and ventilating the home as necessary. As seen though, they also look pretty much the same as any contemporary skylight—fairly flat to the roof and operated by a hand crank to open—yet, they are undoubtedly historic, some 250 years old.

Below is a Victorian era skylight. This one was meant for over a staircase to illuminate dark areas, which was common for the time. One of the skylights I am asking for will be used for the same reason.



Frank Lloyd Wright, one of Wisconsin's own—also used skylights in his houses freely—plain or stained glass.



This is Taliesin, his home in Spring Green, Wisconsin.

Wright is probably one of the most famous architects in the United States, if not world. Taliesin was built in 1911, only eleven years after mine. History is not something that can be confined to a particular conception of what “should be” or is “right”. History simply *is* what was *then*.

Milwaukee City Hall is on the following page. We need look no further than our own city to see historic skylights in a building that was famous throughout the country when its doors in 1895. That was five years before my house was built, and at the time it was the third-tallest building in the country.

This huge, impressive and beautiful skylight illuminates the interior of City Hall for 10 stories from attic to basement. It is considered so historically important that it has been restored twice; once in 1978 and again in 1997.

Yet, in viewing it, this massive skylight looks like one might perhaps expect to see on any newer building. Sometimes, you just can't tell by looking.



Another view more closely shows the steel girders with which it was built, almost 120 years ago.



Steel girders and metal casements on skylights might not seem “historic” to the minds of many. But it is a fact that metal began to replace wood construction of skylights in the U.S. by the early- to mid-1800’s to avoid rotting and leakage. It is often only our perception of what history was that informs us. I would request that the Common Council approve my appeal and COA with fresh understanding of skylights’ place in Milwaukee’s history and relative to the Victorian home I own.