Christopher Kennedy <ckennedy@ma-ke-arch.com> 10/24/2022 3:21 PM

Re: Energy Costs - Renovated Stowell Library

To Laura Cousineau <lauracousineau@gmail.com> Copy Evelyn Chambers <echambers@ma-ke-arch.com> • KATHI PATTERSON <kalpatterson@comcast.net> • Larry Dingee <larrydingee@comcast.net>

Laura,

In order to answer your question with any degree of reality, we would have needed to have done Energy Modeling for the project. We included Energy Modeling in our original proposal as an optional Value Added Service ($4,378). This was not selected when the proposal was accepted by the town. Later (mid August) we submitted a Supplemental Services Agreement for Energy Modeling ($2,650) and Life Cycle Analysis. Again this was not approved.

At this time, we are not able to provide you with anything regarding those anticipated annual costs beyond a total guess. I really do not feel comfortable doing this. Especially since there are a number of factors that need to be taken into consideration in order to provide you with an answer, such as the annual hours of operation, the impact of the historical society, the estimated amount of use of the meeting room after hours, etc.

I can state that the addition in this project will be very energy efficient and that the existing Stowell Library building will be significantly improved (attic and foundation insulation). However the exterior walls of the main floor of the existing Stowell Library will only be weatherized because any additional intervention (insulating them) would impact the historic character defining features of the interior spaces.

My gut tells me that it is unlikely that there will be a significant difference in the energy costs to operate either one of the options you are considering because these are not very large buildings, however that is not based on any type of analysis.

One thought would be to apply the same energy cost per sf to both projects. However that would assume that the General Store option, includes removing all the interior finishes and completely reinsulating the framing cavities, removing all the exterior siding and adding at least R12 continuous insulation around the entire perimeter of the building and air sealing the building as well. If the plan is to do a lesser extensive renovation of the thermal envelope, then I might conclude that the Stowell Library option could be more energy efficient.

One possible point of difference in energy consumption could be the commercial kitchen space in the General Store. This would likely be the one significant difference in energy consumption, and could be exacerbated by the methodology utilized to provide make up air for the hood (if there is one). Kitchen hoods create a challenge for energy efficiency due to the amount of outdoor air required to be brought into the project when the hood is in operation.

I really wish I could provide you with a better answer.

Chris

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On Mon, Oct 24, 2022 at 2:35 PM Laura Cousineau <lauracousineau@gmail.com> wrote:

> Dear Chris and Evelyn
>
> As we put together the final report for our Cornish Library Exploratory Committee, we are unable to locate the estimated energy costs per year for a renovated Stowell Building. This would cover the heat, AC, and electricity, and assumes heat pumps. The figure from Banwell for the renovated general store is $6,602. Would we be able to use the same figure for a renovated Stowell building per your plans? If not, could you give us your best estimate/guess-timate that we could use?
>
> We are hoping that we can finalize all documentation at tomorrow night's meeting and approve a report for the Select Board.
>
> Thank you.
>
> Yours
> Laura
>
> Laura Cousineau
> (she, her, hers)
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