

Phase II Design Task Force Meeting, Sept. 11, 2016

Attendees: Diane Cassity, Bonnie Postlethwaite, Holly Miller, Diann Spencer

Recorder: Bonnie Postlethwaite

I. Presented the group with answers from Amy Eckhoff to Carol Fields questions.

Please review for us the reductions and/or improvements in our building "greenness", with the current concepts, covering such aspects as HVAC, natural and artificial lighting, insulation etc.

Existing Building Improvements

- When the roof systems are replaced, new insulation will be installed throughout. This new insulation will meet the energy code of R-25. The new roof membrane will also be reflective to minimize solar heat gain. Much thermal improvement will be gained through the new roof systems.
- The replacement of the HVAC system would improve energy use in several ways:
 - Units would operate in multiple zones so energy use can be minimized for certain areas when they are not in use.
 - Fresh air will be introduced to the system to improve the quality of the indoor air. In addition, an economizer allows the use of outside air when the temperatures outside are appropriate to minimize how much heating and cooling is used during the spring and fall seasons.
 - Elimination of the gas water heater and recirculation pumps will reduce energy usage required to circulate hot water throughout the facility. Instead, we would use the "instant-hot" style heaters at each sink location. These will use power from the solar array instead of gas power. (Of course, the kitchen will still have a normal water heater)
 - The old air conditioning units (condensing units) are rated at 10 SEER, about 30% below current standard technology, plus they use R-22 freon which is an ozone depleting material. The new units will be far more efficient and environmentally friendly.

New Construction

- All walls will be constructed using the current technology for a rainscreen wall (likely brick veneer) with a continuous air and moisture barrier behind it and continuous insulation outside of the wall studs. In addition, the stud cavity of the wall will be insulated. The resulting wall will exceed the energy code required R-Value of R-13 plus R-7.5 continuous insulation.
- All roofs will have continuous insulation and a vapor barrier. The roof R-value will meet the energy code of R-25.
- All lighting will be LED and we'll use natural daylighting in the office area as much as is possible.

What impact would the Nelson/Bloch-building-like "lantern" have on energy consumption

- The "lantern" will have a net positive effect on energy consumption through its ability to bring a large amount of evenly diffused daylight into the chapel and music space. This will allow ASUUC to rarely use artificial lighting in the space and cut energy usage. For the walls of the lantern, we are proposing to use a material by the name of Kalwall instead of glass. Kalwall contains 20% post-consumer recycled content; allows diffuse natural light without allowing UV light penetration, minimizes solar heat gain and is an insulated system. Compared to glass or the material used at the Nelson, it is a very high-performing light diffusing material.
- The cost of the lantern has been considered in the total conceptual cost estimate for the Music Room/Chapel.

and what does it add to the cost of the plans 5,6 and 7 that we are told are cheaper than 3, (the plan that did not rob the lobby of its preferable energy-wise southern light)?

- We have included the cost of the lantern element in the budget for the music room. The lantern element is only effective and appropriate to the design concept for the south addition as it becomes a standalone element separated slightly from the rest of the building. It is an inspiring element that enhances the use of the music room as a chapel space and makes a visual impact for the exterior.
- The lantern is not as effective of an element in the west addition due to the shape on the site and the different way it connects to the building.
- Option 3 does not include the music room. 5,6 and 7 are not cheaper than 3, but 5,6 and 7 all include the music room.

What is the cost trade-off for adding "natural" light to the lobby through some other elevated light structures in the lobby or through the proposed office space?

- As we continue with the design development, we have discussed studying options for bringing diffused daylight into the Lobby space through the use of sola-tubes or skylights. Improving the existing lighting with LEDs in a higher quality color could also be an improvement visually and use less energy. This will largely be a budget driven decision as these elements will increase the cost of the project and will be evaluated during the design development process.
- An elevated light structure adds the complexity of modifying the structural framing to create a clear opening and additional framing to add an elevated light structure.
- Daylight to the office spaces will be provided by large openings in the east and south façades that will provide views and light to all employees in the administrative area. To try and penetrate this daylight through the office space into the lobby is 1) impractical given the low roof height and distance and 2) would disrupt the art gallery wall.

How and at what cost do you fix hot or glaring summer western afternoon light into a pleasant experience for someone standing in the lobby, particularly facing west. The original building largely avoided it.

- The west facing glass wall will allow ASUUC to achieve their goal of being more open and inviting to the neighborhood and visitors while maintaining a responsible approach toward energy usage. As illustrated in the attached sun study, the building orientation, low roof height and new overhang on the west will help minimize the solar heat gain and sunlight penetration into the lobby. The plan shows that the sunlight will penetrate into the space during the summer late afternoons, but does not extend past the stairwell location. This illustration gives you the most extreme light penetration in the afternoons. It will be less during the late morning/noon hour.

II. Plans for Sept. 18 Church Chat

The plan is to present the resolution for the vote, which will have been finalized by the Steering Committee by Sunday, to the congregation at the beginning of the meeting. That resolution will have 2 options to vote on:

Option 1 – which is the renovation of existing structure only and requires no additional funding besides what has already been raised.

Option 7– which is the South addition with the Music/Chapel addition with the Warwick stairs and the Conover as add alternates if funding allows, i.e. more money is raised and/or the project comes in below budget)

We will have as hand-outs:

- The resolution for the vote
- An abbreviated Questions Asked
- The financial plan

We will briefly discuss the resolution and financial plan in case anyone needs to leave early and then turn it over to GW for their presentation.