

MAHS Sustainability Sub-committee Meeting 22 December 2015

Prepared by sub-committee member Jessica Damon

Summary:

Tonight's discussion centered on using the OPR sustainability list (section 6) to spring from; we went point-by-point through the document. There are already many good points in there that we discussed in terms of what is important to this group. What does sustainability mean in the context of this committee? One goal that is supported by most of the group is that this building should be built to last a long time—a 100 year building.

Tonight's discussion:

Jane said that our committee meeting minutes are not posted on the district website; discussed at least 2 different email points-of-contact to send or post them to the site. Both Steve and Ryan are capable of posting the meeting minutes. It was discussed that the meeting minutes would be approved by the committee chair (Mike) who would then forward to Steve for posting to the website.

We need to focus our conversations on putting out a set of goals from this committee that will guide the design team in their project efforts.

When the budget enters the equation, this will help shape and focus our goals better; so far it hasn't been part of our discussions other than it needs to be understood that the budget will later drive many of the discussions as to what can and cannot be funded.

What does sustainability mean in the context of this committee?

- Using the building as a tool (connections to the natural environment; looking at how the building itself functions and using this as a learning example...)—there must be a return on the investment based on the life cycle of the building.
- “Future Ready”
 - allow for expansion
 - adaptability/flexibility (as requirements change over time, walls can come down, etc)
 - PV (solar)-ready
- Focus on the envelope (high insulation R-value)
- Resilient energy systems (ground source heat pumps for cooling, for example and summer-ready because, in the short and long-term, the school may be increasingly used in the summer months)
- Longevity (100 year building)**
- Efficiency of operation (to include economic sustainability as well as energy)

- Healthy indoor environment that is clean, dry and pollutant-free.
- Greenhouse as a building tool (to be used as an experimental platform for science classes) and a place to grown own food (provide some produce for the cafeteria).
- Energy dashboard as a way for students to understand their own use. Not just in 1 location, but virtually accessible throughout the school as well.
- Locally-sourced work or materials (sourcing local vendors/products) as much as possible.
- Windows- may not be able to get locally as there may be more efficient ones available in Canada or Europe but they need to be high performing types.
- Daylighting (and also controlling amount of light with shading)
- How much local business support can we create?
- Prefabricated panels may be utilized to cut down erection time and less exposure to weather. Reduces waste and reduces construction related water issues in the building materials. Similar to SIPS utilized in residential construction projects.
- Low-impact development (native species for plantings; minimal or no irrigation on sports fields)
- Transportation...no public transport so many of the LEED criteria in this category don't apply.
 - Bike parking, maybe covered to protect from weather, to encourage students biking to school.
 - Consider a shower for staff use to encourage bike or other non-vehicle commuting to school.
- Main building entry areas configured with snow melting systems instead of tracking sand and salt treatments into the building, necessitating more cleaning, floor material wear and contaminates in the building that impact indoor air quality.
- Consider displacement ventilation systems (fresh/ventilation air that is introduced where the people are instead of at the ceiling)
- Do not permit geothermal open-well system use due to many downsides to this approach, despite a lower installation cost.
- Encourage the use of geothermal closed loop system in our school.
- Time to tap for hot water to reach faucets needs to be minimized. Reduced flow fixtures intended to save water may be delayed in receiving hot water and thus waste water and discourage personal hygiene.
- Waterless urinals not recommended due to cleaning and maintenance issues. Recommend pint flush urinals instead as a good trade-off between water savings and maintenance issues.
- Reducing water use overall, but not necessarily sensor operated fixtures everywhere.
- Building "flush-out" period required (to work out kinks in the systems and purge construction material systems contaminates before school opens)
- Assuming the students stay in the current school during construction, building material reuse will not be possible (because demo won't proceed

until the new school is finished). However, the group was interested in exploring demo material re-use by the demolition contractor.

- The demolition phase needs an outdoor air quality standard because it will likely be going on during the calendar year and dust from the demolition of the old building can impact the air quality in the new building.
- Would like some solar panels from the start, to be used for educational purposes at first, maybe add more later (future-ready)
- Consider systems that dehumidify the air for building occupant comfort without mechanical cooling as a cost savings (first and operating)
- \leq 40% glazing in the building envelope as a maximum to be in compliance with ASHRAE 90.1 standard (Maine Code)

Ideas for guiding principles for demo/material reuse:

- reuse and/or repurpose building materials (minimal opportunities for the new school, but contractor could reuse on other projects or sell?)
- minimize what gets hauled offsite (disposed/landfilled)
- careful attention to demolition process

Going forward:

Department of Education (DOE) meeting on 6 Jan — Mt Ararat Learning Commons, 2nd floor, 5:30 PM, to provide more construction oversight understanding/explanation from the DOE side. This will be a valuable meeting for members of this committee to attend.

Then we should have a combined meeting with the Systems subcommittee (proposed for 11 Jan 16, 5:00, District office)