

**Fire and Ambulance Building Committee
Meeting Minutes, 3rd MTG
Thursday September 28th, 2023
10:00am – 12:00pm Select Board Room**

Members Present: Carl Mabbs-Zeno, Tony Cassady, Mandy Sliver, Sarah Steinberg Heller
Not Present: Carol Nelson

Staff: Seth MacLean, Chief Ed Walker, Danica Melone, Gretchen Rae

Selectboard Liaison: Bill Taylor

Visiting: Keith Kelley CM – Harvey Construction
Jason LaCombe – SMP Architecture

All in attendance referenced within will be referred to by their first names.

Meeting Minutes for Approval August 24th, 2023:

- *Motion:* Sarah made a motion to accept draft minutes with clarification of square footage of Kingston Fire Station's training room mentioned at the August 24th meeting.
- *Vote:* Bill seconded. All in favor. Motion carried.

Discuss findings from Public Meetings:

- Assessed as having a great turnout, approx. 40 people (with duplication at each of the two sessions).
- The second session was recorded after the audio issues were resolved and that session is the version that will be posted for viewing.
- All the presenters did a great job and the format worked well so do not have to alter the format for the next public session on October 26th.

Upcoming Public Events for more Community Outreach Opportunities:

- Ed offered an informational table from 10am-2pm at the Fire Station for Peak into Peterborough downtown on October 14th. He is requesting that members of the Building Committee be available for conversations with the public.
- Danica recommends tabling at the Wednesday Farmer's Markets.
- Mandy recommends committee members also visit and talk with the community at the Recycling Center.
- A sign-up sheet for event attendance will be drafted and circulated to the committee members.

Design Feedback:

- Town archive files and server equipment proposed in the building design. Carl asked if this is out of the scope that this committee was asked to include. Carl requested an informational / planning meeting with Fash & IT team to discuss the placement of this service within the emergency building's design. And to discuss a "right-sized" space.

- Parking and traffic were discussed but the idea of the museum space proved to be the second point of consideration in this version of the design.
- Carl's concern is that the file server storage and museum space can be justified to the Townspeople as a needed part of a rescue and fire station building.

Design Feedback cont.:

- The training room size needs continued consideration with need and usage. Mandy pointed out that the training space is not supposed to be considered an option for emergency shelter space due to the availability of the Community Center with a bathroom and kitchen for the public's use if/when needed.
- Carl asked what are the outside funding sources specific to keeping the museum space in this version of the design? Ed offered that at 600ish sqft from a 23,759 total building sqft equals about 1.8% of the total building footprint. The file storage area proposed is about 364sqft. and both needs can be justified with further discussions with leadership.
- Tony asked if the FAQ section of the Zencity site will provide answers to these questions so that messaging is consistent by everyone.
- Carl is asking to thoroughly understand the need for such spaces so when communicating with the public, the committee has accurate data to share. Answers more than anecdotal or personal feelings about the building will be needed by this committee when communicating with the public.
- Carl is also asking for a list of and size requirements of fitness equipment for the proposed fitness room.
- Carl's last question was concerning what's the status of the wetland buffer of the proposed footprint.
 - Jason and Anthony had a conversation with a couple members of the Conservation Committee between the public sessions.
 - It was discovered that ConCom members had an incorrect wetlands boundary map (circa. 2011) that they were referring to.
 - Hoyle & Tanner will be working on a more formal proposal on the impacts of the wetland buffer from corrected maps for submission to the ConCom.
 - Sarah asked if there is a timeline/deadline for the ConCom to have a decision by? Her worry is a derailment of the project if the process doesn't stay on schedule.

SMP update committee on design team meeting:

- Jason and crew had a design team meeting and have handed over all conceptual work to Hoyle & Tanner for next steps of environmental impact research.
- Jason recommends more informal conversations with the ConCom before a meeting with the ZBA is on the calendar.

Update on energy committee meeting with Resilient Building Group:

- Tony shared point by point of proposed systems spreadsheet from Paul with responses from the Energy Committee. Hard copy available for review. **Key points:**
 - Wall construction, recommending blown in cellulose.
 - Plan for EV charger capacity. Reserve space for future battery space.
 - High quality, well-sealed roll up bay doors. (Energy efficiency discussion vs. costs to bi-fold doors)

- Roof construction consider minimizing vents to accommodate as many solar panels as possible.
 - Floor slab – committee suggested going with 4” slab to “save money for solar array” and include radiant flooring. Keith and Jason said that the depth of the concrete will be dictated by the structural engineer.
 - Windows – awning type, nonoperating, double glazed
 - HVAC – Leave space for future thermal storage. Jason requests clarification on details of what is meant by “thermal storage”. Don’t over-size the system = “right size” everything. Jason and Keith said that the system will be built to proper building code.
 - Lighting – Most advanced LEDs with high efficiency.
 - Biomass options for backup power, i.e. propane for generator.
- Carl asked Jason about radiant heat on the apron within the current design and Jason said he has it listed as a “nice to have” option. Jason explained that many designs of heated aprons are a usage of “waste” product from the heat source, i.e. boiler.
 - Sarah shared that she feels the heated apron is more than just a nice-to-have and should be considered as “more needed than not”.
 - Mandy suggested to be in contact with a fire station that did not have them part of the design and really wish they had or not. Jason then suggested that there is a grey zone of creating “an alternate feature” list which would allow these types of options to be considered through the bidding process.
 - Ed asked if the Energy Committee is expecting the solar infrastructure is a given in the current design and budgeting. Tony answered, “not necessarily”. Jason offered that solar IS NOT currently part of his designs and cost limits. Ed and Tony agreed that the Energy Committee understands this about SMP’s design.

“High-Level” review of building mechanical system options*: Discussion intended to provide some direction to SMP under tight timelines for redesigns. Jason presented options with a Pros & Cons list to begin weeding out options that could be taken off the list of considered systems.

***Slide show provided to show each option in detail (Jason will provide PDF file to Seth for distribution to the committee)**

- **Ground Source Heat Pumps (Geothermal)**
 - Water taken from the ground and heat extraction or rejection processes.
 - Closed loop well-field.
 - Pros: can be scaled/expanded, high efficiency, no fossil fuels, can be all under parking.
 - Cons: High ground disturbance with initial well drilling, high front-end costs for wells. Each well estimated costs = \$25-40 per linear foot of drilling with this system (30 wells at 450ft deep each) it is an estimated premium (cost above “standard” system) of \$525,000 just to drill the wells required. A test well would need to be drilled at \$20,000 of additional costs.
- **Water Source Heat Pumps without a well field (same interior set-up)**
 - Connected to a boiler and a chiller. (electric, pellet, propane options)
 - Cooling tower needed?

- **Biomass boiler with an absorption chamber** (Pete library system)
 - Pros: considered “renewal” energy by some.
 - Cons: has unique components for absorption chiller.
- **Air Source Heat Pumps**
 - Two types of systems: Mini-splits and VRF (variable refrigerant flow)
 - VRF for this building would have multiple condensers either mounted on the roof (taking space away from roof for solar but functions in an all-electric building) or on a ground mount but given the site size, not a lot of room to ground mount condensers.
 - Not as efficient as water-source heat pumps, especially in lower air temperatures.
- **Hybrid System (combinations of energy generation types)** A challenge of an all-electric building is emergency backup needs from other energy sources. Discussion within the meeting about the requirements of a generator for a “Command Center” building.
 - Air source heat pump with a biomass backup (boiler)

Discussion: Focus by committee was on the difficulty of narrowing down options to move forward without estimated costs for comparison. Jason shared that a challenge in getting estimated costs is that all engineering time doing the work will incur costs towards the project.

Seth suggests obtaining a “back of the napkin” approach in estimating costs for each system being considered. The committee needs to reconcile the pros and cons to each system while also considering the costs (upfront, efficiency decline, maintenance, and fuel type [operating costs] over time).

Keith reminded the group that when there’s a ceiling to meet in the project budget, upfront costs matter greatly. Ed and Sarah shared that to bring a system to the voters without evaluating long term costs with upfront costs isn’t wise. Jason offered a solution by asking the question of costs differently. Look at the budget as making each option fit within the ceiling cap by finding ways to cut in other areas, which of the system options would the committee support?

Bill, Sarah, and Tony expressed that it will be important to communicate costs of each option the committee considered from upfront costs through to ongoing costs over the life of the building because it’s the taxpayers who will be paying for any system chosen in the design.

Sarah pointed out that the committee will need to have factual and consistent messaging about any of the systems such as answers to anticipated questions like “how would ground source heat pumps affect my drinking water”.

Keith shared that from what he is hearing, he is concerned about time and money required to understand engineering of 5 options to provide a basis of design to begin the estimating process by Harvey’s team. His team is currently working from the premise that Air Source Heat Pumps are the basis of design and are within the cap of 11 million dollars. The assumption is that any other option will be more money than the current basis of design and Harvey was not tasked with considering other sources of funds beyond the set budget cap. Also, the amount of extended time and money to drill down another 4 options is not realistic.

Jason reminded the group that this committee was tasked with choosing an option to move forward but there's an additional 8-10 months of design-team time involved to modify from this starting point with flexibility built into the schedule for changes in design and budget.

Carl asked Tony what the concerns will be from the Energy Committee if this committee decides by consensus that fossil fuels may need to be considered due to budgetary constraints of the project. Tony reminded the group that this community's voters chose by vote to eliminate the Town's fossil fuel usage by 2050 and building this building correctly for its energy needs at the start is a critical step towards the 2050 goal.

Keith reiterated that if this committee wants to delve deeper in engineered alternatives to the standard system that is currently meeting the budget goals, the time needed to do that work, would require this committee to consider pushing this project out to 2025 and remember this will only increase total costs of the project.

Mandy spoke to the point Carl made earlier in the meeting that this committee was given a charge to find a functional building within this budget and time frame and Keith and Jason have delivered that product to the committee. She acknowledged that there will be many difficult decisions ahead of us. If this process takes 2 weeks or 6 months the group must also remember the charge was also to move the project forward. Not everyone's "boxes" of wants can or will be checked off so there will be difficult decisions ahead.

Seth suggested that no one entertain the idea of designing and estimating all system options but to work from the standard system completed and continue the pricing process from an engineering perspective (cost per sq foot) the "premium" costs of the other options. Keith added that asking these engineers to also calculate lifecycle costs is a much bigger lift. Jason confirms that this is his line of thinking, but he is also hearing that this group doesn't necessarily need the numbers for all the proposed systems discussed today.

The key highlights that Jason is hearing from the group is the desire for an all-electric building, your preference (the people heard from) is ground source heat pumps, but air source heat pumps may be acceptable if this is what gets us to a project on budget.

Sarah wants to understand if biomass (renewable fuel sources) options are even still on the table for consideration if it will also meet budget. She wants to make sure there's always room for compromises to meet end-goals like meeting budget and sustainability goals. Sarah also wants to remind the group that the charge was to get things moving and if Harvey & SMP have given the group a design on budget and schedule, then why aren't we moving ahead.

Tony added that he does want the group to look at the other options and how to get them possibly funded from a different source at the added expense to this group. The answer to Carl's question of "who is going to do that work?" was that the Energy Committee has some ideas. The expectation is that Keith and Jason will assist the Energy Committee in their search for numbers. Carl suggests that "back of the napkin" numbers for the other options beyond standard source already estimated and the ground source already with well-drilling costs get looked at.

Jason points out that the team has only been at this for 2 months and we are already this far. SMP is charged with providing Harvey with a design for estimating by December 6th and has given this

committee a date of before Thanksgiving so that there's still 8 weeks to get a proposed project in front of the community that this committee can support. Jason is suggesting water source heat pumps without a well-field due to the building's internal infrastructure being the same if this committee determines down the road that there is alternative funding for a ground-source upgrade.

Mandy asked, "how much time does this committee have to make a decision on which direction to go?". Jason offered to take this back to his team to work in high level terms to get some upfront costs back to the committee for further discussion and not have to make their decision at this meeting. This committee will review these numbers at the next scheduled meeting on Oct.19th.

Bill brought up the budget considerations to be made with a project with or without alternative funding sources, especially from a Select Board member perspective.

In Summary – Jason & Keith

- In 2-3 months, we will have a plan and a design that can be well-supported, and we know, with some considerations, on budget.
- They will provide more costs to this committee by the Oct. 19th meeting after meeting with their teams.
- Keith - Providing a round number cost of sq footage when considering changing i.e. museum space, training room, fitness room, a safe starting number would \$200per sqft. So the current museum open space is "valued" at \$120,000 of the whole building's budget.
- Jason – Be mindful that chasing sq ft isn't necessarily a smart tactic because all square foot usage isn't the same. It's the systems that matter most when considering costs.

Next Building Committee Meeting: Thursday, October 19th at 10am, Select Board Room
Next Listening Session: Thursday October 26th Peterborough Library

Motion: Sarah made a motion to adjourn the meeting at 12:15pm
Vote: Bill seconded. All in favor. Motion carried.

Respectfully Submitted,
Gretchen Rae, Business Manager DPW

BUILDING COMMITTEE Co-CHAIR: Carl Mabbs-Zeno


Signature