

BROOKLINE SCHOOL BOARD

OCTOBER 28, 2020

MEETING MINUTES

A regular meeting of the Brookline School Board was conducted on Wednesday, October 28, 2020 at 6:04 p.m. at the Captain Samuel Douglass Academy.

Kenneth Haag, Chairman, presided:

Members of the Board Present: Erin Sarris, Vice Chairman
Karen Jew, Secretary
Rebecca Howie
Alison Marsano

Members of the Board Absent:

Also in Attendance: Gina Bergskaug, Assistant Superintendent of Curriculum and Instruction
Bob Thompson, Assistant Superintendent of Student Services
Kelly Seeley, Business Administrator
Daniel Molinari, Principal, Richard Maghakian Memorial School
Life Scout William Scales, Troop 260
Mike Davey, Business Devel. Mgr., Energy Efficient Investments
Dick Henry, DDH Energy Consulting Serv. (participated electronically)
David Healey, Windy Hill Associates (participated electronically)

AGENDA ADJUSTMENTS - None

CORRESPONDENCE/RESIGNATIONS/NOMINATIONS - None

APPROVAL OF MINUTES

Brookline School Board [September 23, 2020](#)

The following amendments were offered:

Page 1, Line 36; replace “the issues” with “that issues”

Page 11, Line 21; replace “the” with “then”

MOTION BY MEMBER MARSANO TO APPROVE, AS AMENDED

MOTION SECONDED BY MEMBER HOWIE

MOTION CARRIED

5-0-0

PUBLIC INPUT - None

There being no objection, the Board went out of the regular order of business to take up the Principals’ Report.

PRINCIPALS' REPORT

Daniel Molinari, Principal, Richard Maghakian Memorial School (RMMS), spoke of ongoing parent conferences taking place for grades PreK-6.

This year the District has been undergoing benchmark testing (AimsWeb Plus), which is a valuable tool that provides nearly instant results. They are able to do that for both ELA and Math. Currently they are completing testing for all in-person students, and are about to begin testing remote students.

The Captain Samuel Douglass Academy (CSDA) is in the process of completing the NH Statewide Assessment System (SAS) testing.

- Eagle Scout Project

Life Scout William Scales, Troop 260, provided a model depicting his proposed Eagle Scout project; to construct an outdoor (covered) pavilion (12' by 12' with the roof being 16' x 12') to be donated to RMMS. The pavilion would be located in the outdoor learning classroom area.

The estimated cost of the project is \$2,600 (including rented equipment and food and water for volunteers). Fundraising ideas include holiday wreaths, bake sale items. Anticipated is the need for 10-20 volunteers to take the project from start to finish.

Asked about a timeline for completion, Life Scout Scales stated the desire for the structure to be completed by the start of school next year. Anticipated is that construction will begin over the summer. Materials will include pressure treated 6' x 6' posts and non-treated lumber for the remainder.

MOTION BY MEMBER MARSANO TO APPROVE LIFE SCOUT SCALES' EAGLE SCOUT PROJECT OF A PAVILION FOR THE OUTDOOR LEARNING ENVIRONMENT AT THE RICHARD MAGHAKIAN MEMORIAL SCHOOL
MOTION SECONDED BY MEMBER SARRIS
MOTION CARRIED
5-0-0

During the month of October, students in grades 4-8 are completing the NH SAS testing. They are completing the testing for the grade from last year because we were unable to complete the testing in the spring due to COVID. The testing has been able to be done for in-person and remote because it does not, this year, require a secure browser. Results received to date appear quite stable and steady.

Principal Molinari noted the district's pivot day was October 9th. Taken into consideration were requests received from families looking to change enrollment status. At RMMS, 9 students moved from remote to in-person, 2 students moved into the district, 2 families requested a change and chose to remain in remote, 1 family moved from in-person to remote, and 1 family moved to a homeschool environment. At CSDA, there were 2 students who moved from remote to in-person, 3 students moved into the district, 2 went from in-person to remote, and 1 student moved to the homeschool environment.

Those that recently moved into the district have an in-person enrollment status. Additional families are moving into the district. Looked at will be their move-in date and/or next pivot date. The district is approaching maximum in-person enrollment numbers at some grade levels. An additional teacher had to be added to grades 4 and 6, which has resulted in a few spots remaining open.

Any additional requests for consideration of a change to enrollment status must be received in advance of November 23rd for a change, if approved, to become effective on November 30th.

Principal Molinari noted November 3rd is a collaboration day for staff (no school for students). November 11th is a holiday.

Member Marsano questioned the AimsWeb Plus testing; if it is in place of prior testing tools. Principal Molinari noted the district had previously used Dibbles (progress monitoring tool for ELA), and had not previously had a standards based tool for math. AimsWeb Plus is a benchmark tool being used across elementary grades. It is a local assessment.

Assistant Superintendent Bergskaug stated the SAU had been using NWEA for grades 2-6, and did not have an assessment in 7th and 8th grades. We started PSAT for grades 8 and 9. There wasn't something in place to look at data over time. A concern with NWEA is the length of time required for the assessment. However, it was nice to capture historical data. This past budget cycle, RMMS had budgeted for AimsWeb Plus because of the math piece. HPS had been using it for years. It still wasn't part of the plan for CSDA and HUES or the middle school. When we went into remote and really wanted to look at our special education students to see if there is a particular shift in progress they were making during remote learning or not, and given the time efficiency of it, all of the students upon entering the Extended School Year tested with AimsWeb Plus. Believing it best to have data school-wide so that they could be compared to their typical peers, how quickly it can be administered, and the number of progress monitoring tools built within it, the decision was made to move away from NWEA and forward with AimsWeb Plus K-7 for this year and then grades 8 and up will be doing the STAR assessment, which has similar features but is more appropriate for an older learner. That is being done in Brookline and Hollis and grade 7 in the middle school.

Asked if it is an adaptive test, Assistant Superintendent Bergskaug responded it is very quick and short. There are different measures/probes. Some consist of 2 or 4 questions, so you avoid the 40-question test fatigue. When you get the results, if something looks out of line you can focus on that one area instead of re-testing across the board. She spoke of being excited to see what the results show. Asked, she stated, as a district, they wanted to look at how we did, if there are things to focus on for remote learning, was there any level of regression for all learners, and then the State testing was handed over/required. Although we are doing SAS and AimsWeb Plus, they are both a little bit shorter and quicker to get through than what we had historically been doing. Yes they were both done in October, but at least for SAS it is 3 days of testing instead of potentially 5 or 6. Principal Molinari stated it to be from 25 minutes to an hour for the AimsWeb Plus testing. It is done in a class time.

Asked if it is easy to administer remotely, Principal Molinari stated there to be a set of iPads that have TestNav installed, which is the application used for AimsWeb Plus. Third grade is being tested starting November 2nd. Once that is completed (1 day), the iPads will be dropped off and cleaned before being distributed to grade 2, etc. Some families are opting to download the application and utilize their personal devices. It can also be pushed out on the district-owned Chromebooks. Another option for parents is to choose not to have their child tested.

Member Jew questioned how the schools are handling keeping doors and windows open as the temperatures drop and the opportunities to go outdoors are not as plentiful. Principal Molinari responded they will continue to go outdoors for recess, weather permitting, and do movement breaks indoors. We want to continue to have proper airflow and are encouraging staff to crack open windows while maintaining the health and safety of those indoors. He believes they will be able to continue to function as they have been, weather permitting. Assistant Superintendent Thompson commented it is one of the challenges we will begin to face. We have had the benefit of warm weather and a lot of classes moving outdoors. As the weather gets cooler we need to move

inside. That means going from having completely open windows to now windows that are cracked. The benefit we have is that we have excellent ventilation systems. An analysis by an independent consulting group was done over the summer. They determined that our ventilation is doing the job it is supposed to be doing; pulling fresh air from the outside into the building and then pushing the air out.

The reopening plan indicates we will keep windows and doors open in classrooms and school buses when appropriate. It is appropriate in September and October and becomes less appropriate when you move into the colder months.

Asked if there is building-wide communication that is consistent to teachers as to how to handle this, Assistant Superintendent Bergskaug spoke of a leadership team meeting conducted earlier in the day during which it was communicated that this needs to be reiterated. They are also setting up a meeting that teachers can attend (Zoom) to provide them with information regarding the HVAC system, its effectiveness, how airflow through the windows is not a necessity, it is just an additional feature when appropriate. Our HVAC systems are working as all the reports identified. It is believed the individual who completed the report on the systems will be present for the meeting to answer any questions posed.

During the Thanksgiving recess, air quality tests will be re-done, and the results provided to the community and staff as soon as they become available. There are no concerns, but there is the need to ensure that, when appropriate, we can open the windows and when not appropriate we need to have them more cracked open.

The Board returned to the regular order of business.

PUBLIC HEARING

MOTION BY MEMBER SARRIS TO RECESS UNTIL THE CONCLUSION OF THE PUBLIC HEARING

MOTION SECONDED BY MEMBER MARSANO

MOTION CARRIED

5-0-0

The Board recessed at 6:29 p.m.

The Board reconvened at 6:38 p.m.

DISCUSSION

- COVID 19 Update

Since the initial case at RMMS on September 17th, there have been no new cases in the Brookline schools. In the 6 schools across SAU 41, there have been a total of 7 cases; 2 staff members, 4 in-person learners, and 1 remote learner. The SAU has had very successful mitigation efforts, which is really the result of the vigilance of the staff and the very tight protocols that are in place.

Assistant Superintendent Thompson thanked the nurses for the time, effort, and energy that they have put into our COVID-19 response. When there is a new known case, our mitigation efforts result in a quarantine of a group of individuals or a classroom. He commended Principal Molinari who has done an amazing job of putting cohort modeling in place in RMMS that served as a model for some of the other schools. This is such an important component of our response. He provided the example of a situation that occurred earlier in the day in a neighboring community where they closed a very large elementary school; the entire school, because of a single case. Given our protocols, we should not have to close the whole school because of a single case.

Again, we talked about some of the challenges as we move into the colder weather. In addition to closing doors and windows, it is also flu season. We do have to make some adjustments for that. There is a weekly conference call with the DHHS that the State Epidemiologist participates in. Principal Molinari and the school nurses have been participating in that phone call. The State is getting ready to release updated guidance around travel quarantine, particularly with the holiday season coming up. Their item of interest with the travel quarantine is we're about to enter college visit season. A lot of these college visits right now are being done virtually, but at some point parents are going to want to take their children to visit schools. DHHS is working on guidance to allow that to happen. When that guidance comes up, it will be reviewed by the leadership team and then our procedures and protocols will be put in place.

There has been a lot of discussion across the State about the holiday break season. There are some districts that are exploring going into full remote for that time. The leadership team has had some preliminary discussions. It is not our intention to go remote, at this point, from Thanksgiving to the holiday break. Every day that we are in school is a blessing. If our numbers continue to trend the way they are, we would like to keep our schools open for all of the reasons that we wanted to have our schools open in late August. That could change, and we may have to come up with a different plan, but staying open from Thanksgiving to that holiday break gives us greater flexibility when we enter into the peak of the flu season, which in Hollis and Brookline tends to be the January/February timeframe.

Member Marsano remarked because we are only having the 1 remote day during that Thanksgiving break, a lot of families will be considering traveling over that week. There is the need to remind folks that if you are traveling outside of New England there is the need for a two-week quarantine upon returning. She commented in the school she works in there has been discussion of how some of the other states nearby are also now talking about Massachusetts being a quarantinable state. We need to be cognizant of what is going on around us, and what we are doing over our holiday breaks.

Assistant Superintendent Thompson stated all of the building Principals have included information in their newsletters requesting families indicate whether or not they intend to travel outside of New England. Right now that number is very low. Families need to be made aware that if leaving New England you will need to quarantine upon return.

Member Jew noted in the newsletter a statement that if you travel outside of this region you are not necessarily guaranteed a remote space when you need to quarantine for two weeks. Assistant Superintendent Bergskaug responded students are guaranteed access to their Google Classroom, but not guaranteed access to the Zoom sessions with the remote teacher.

Asked when the updated travel guidance is expected, Assistant Superintendent Thompson stated DHHS typically updates their guidance every two weeks. They were non-comital in the meeting today when that question was asked by several of the districts. They would not provide a timeline for when it will be released.

Vice Chairman Sarris questioned if it is being looked at as there could be the possibility of a New England state included on the quarantine list, or if the SAU has a trigger of some sort that we would consider. Assistant Superintendent Thompson stated that issue to have come up in the conference call. Every state in New England has different travel guidance from their DHHS. Massachusetts is very restrictive (cannot travel to RI). New Hampshire has steadfastly stated it is travel outside of New England. At this point, it doesn't seem as though they will change that position.

The travel guidance is specific to families traveling for the express purpose of a college visit. There does not seem to be any indication there will be a change in the guidance when it comes to traveling for the holidays. That is not the intention of the DHHS. This is specifically around college visits.

Asked if there would be consideration, as a district, Assistant Superintendent Thompson responded absolutely; with the Governor's Safer-at-Home Orders there is some guidance for school. However, we follow the DHHS guidance. In Safer-at-Home it encourages school districts to develop procedures and policies relative to college visits. If we do not receive the guidance from DHHS we will develop those procedures. Conversations were had earlier in the day with the high school Principal around what that might look like. Typically when the district is in a position of developing its own guidance, it tends to be at a higher standard than that of DHHS. Assistant Superintendent Bergskaug added that for COOP students (grades 7-12) who are more likely to be doing college visits, the model of instruction there is such that it is much easier to switch to remote for the two weeks to make it doable if you make the decision to travel outside of New England. If there are younger siblings, we cannot necessarily guarantee that there is space.

Asked for additional information on the thought process behind the holiday season, Assistant Superintendent Thompson stated some of the districts considering going fully remote during that time is the result of travel; if families travel over Thanksgiving break that period would be the two-week quarantine period. Other districts have experienced that timeframe as a heavier time for the flu season.

Chairman Haag remarked it is noteworthy there has been no spread in our school. Noted was that DHHS has indicated there are really only 3 school districts within the State where there is any evidence of school-based community spread. Chairman Haag remarked it is important for families to recognize that the risk is outside of the schools. It is the community events, travel, etc. that could shut down the schools.

- Governor's Proposal to Allocate \$200/Student (based on 2019 enrollment) Directly to School Districts

This topic was discussed fully during the Public Hearing.

- Calendar Discussion; January 2021 – June 2021

The calendar for the school year was modified over the summer to reflect the current conditions under the pandemic, e.g., built in collaboration days, remote days. The general consensus is the October 9th remote day was very successful. When originally constructing the modified calendar the intention of the Administration was to not go beyond December. Conversation is beginning around what the second half of the year looks like.

A lot of different ideas are being considered. A look of the second half of the year was reviewed to consider times when remote days might abut a three-day weekend or vacation. Also discussed were snow days. A preliminary plan includes utilizing snow days as remote days. If to utilize a snow day as a remote day, it really leads to the question of whether we should be building in additional remote days in January and February.

Board feedback was sought. That feedback and the feedback of the other two school boards in the SAU would be brought to the leadership team to develop a plan that would be brought back before the boards in November or December.

Chairman Haag stated his preference for utilizing snow days as remote days. He believes that option to be one that would be beneficial this year and in future years. The three-day weekends offer more opportunities for travel.

Vice Chairman Sarris stated agreement. She would like the second half of the year to resemble the first in terms of concepts. She would like built in remote days. She questioned if focus should be on the month of January as a month where we don't have a built in remote day and think about a built in day in February. She would prefer a Google Classroom remote day versus the Zoom remote day for snow days.

Chairman Haag commented from the standpoint of a working parent, snow days are very difficult as it is, and throwing that on top of it would be worrisome.

Member Marsano stated her belief there should be built in remote days and snow days treated as remote days. She likes the idea of doing that and having an earlier release in the summer.

Member Jew commented on how students enjoy sleeping in on a snow day. However, getting out earlier in the summer is appreciated. She questioned if there are any additional pivot opportunities in the second half of the year. Assistant Superintendent Bergskaug remarked the Administration is looking at natural breaks for pivot days. They don't have to be on practice remote days. The problem faced is that of available space.

Member Marsano commented one of her bigger concerns going into the winter season is illness. Assistant Superintendent Thompson remarked that is exactly why they don't want to say we will close over Thanksgiving break. If we are operating how we are now where people are relatively healthy and our numbers are low, and then in January the flu hits us hard, having the option to close down for a week or two will be a benefit.

Chairman Haag commented on how in Asia the flu this year was almost non-existent because everyone was wearing masks. There is a very real possibility that we will have a great flu year because of masks. He would like to avoid a planned shutdown over Thanksgiving and Christmas. Member Marsano stated agreement.

Member Howie stated her preference for snow days as remote days. She appreciates the structure of the bell schedule.

Assistant Superintendent Bergskaug commented one of the pieces being looked at is viewing it as a delayed opening day so there remains time to deal with snow cleanup (shoveling of driveway), organizing everything, and then sitting down, after a two-hour delay, and having the school day. Another aspect to consider is if the snow is significant chances are there won't be power.

Vice Chairman Sarris commented on some colleges discussing the possibility of not having spring break and doing the scheduling around that. She questioned if there have been discussions around the two vacation weeks, e.g., if by April things are going really well, and there has been a lot of remote time, etc. Assistant Superintendent Thompson commented going back to March, there has been a lot of flexibility. Who would have thought last year we would have skipped an entire April break to just keep going to June? For us to sit here right now and say yes or no would be very naïve on our part.

- FY 2020 Revenue and Expense Report

Ms. Seeley stated the amount of unreserved fund balance that will be returned to the general fund to offset the amount that has to be raised through taxes is \$409,731. The original estimate was \$35,000. Within the budget, the areas of regular education, special education, and benefits did not expend the budgeted amounts for reasons that were and were not COVID related. There were a lot of unfilled positions and hiring savings. COVID related were savings in the substitute costs, stipends, etc. Savings were achieved in the transportation line item (negotiated agreement with the transportation company to pay less on the contract). Although there was still professional development in the spring, the look and cost were different.

Asked about the impact of how the food service program is being currently managed, Ms. Seeley responded the district has been enjoying the free lunches, which was just extended to the end of the school year (by the USDA). That is for the typical identified meal. There is some revenue generated by students choosing a-la-carte items. The largest impact to the finances of the district will be with regard to free and reduced lunch applications. The number of applications for free and reduced lunches is used in the calculations for grant monies, and with everyone receiving free lunches, there is no incentive for individuals who would otherwise do so to apply. The Food Service Director is currently reaching out to families notifying of the need to apply.

Asked if there are administrative savings achieved as a result of not having to manage that, Ms. Seeley stated her belief the Food Service Director is likely managing more because it is different in every school.

- Diversity, Equity and Inclusion Committee Update

Assistant Superintendent Bergskaug stated the Superintendent's Advisory Committee has had the opportunity to meet twice. The first was utilized for introductions and organizational structure. Tiffany Testa is serving as co-facilitator. She is a member of the community having extensive training in facilitating meetings. Dr. Marie Ramos is acting as the process and procedures coordinator. There are a lot of diverse opinions on the committee. The thought is that the committee will be bringing forward a draft vision as well as some action items for the Board's consideration in November.

PRESENTATION – Energy/Equipment Discussion – RMMS

Mike Davey, Business Devel. Mgr., Energy Efficient Investments (EEI), stated EEI is an energy efficiency and school consulting company based in Merrimack. They work with the largest school districts in the State on comprehensive energy assessments, and getting projects done while standing behind the savings and maintenance of any equipment installed. They currently work on all 22 schools in Manchester and the Nashua school district.

They work with the districts to meet them where they are to develop plans to reduce energy costs and improve the buildings. RMMS is reaching a state where the ventilation equipment is nearing the end of its useful life. The building lacks a central building control system. Most buildings have a central control system where you can put the building into snow day mode or remote mode, shut the building off. The best way to save energy is by shutting things off when not needed.

The Administration had reached out to Control Technologies (do controls at high school) looking to identify who could assist with establishing a long-term plan. Pre-COVID, EEI came onsite and met with Principal Molinari.

The quick takeaway on RMMS is that it wasn't really designed with ventilation in mind. It is sort of a ranch style, almost residential, design. It is nice and everything there is well maintained. In most commercial buildings, the ventilation equipment is located on the roof or a large mechanical room. At RMMS, it is scattered across the lawn (around back of building). The boiler system is unique to say the least. The example was provided of Nashua North High School where there are two boilers that do the entire building. At RMMS, there are 9 boilers doing a small school. There are 3 boilers and a hot water heater in one plant, 2 in another, and a 3rd separate boiler room with 2 more boilers and another hot water heater. There is a massive amount of equipment (oil fired) in some very small rooms. The impression is they are sort of residential or light commercial boilers.

Mr. Davey remarked there is no other school they work with (Nashua, Keene, Portsmouth, Manchester) that is quite like RMMS. That being said, it is not like it is not working, it is just not the way most commercial buildings are designed.

He believes the school to be at an inflection point. His company would look to make the system more efficient with better controls, improved lighting, etc., and look at a comprehensive plan so that the Board could go to the voters if wanting to modernize to put in a central ventilation and central heating system. EEI brought their engineer in-house. In the gym there is a mechanical mezzanine housing 1 hot water heater and the gym unit. There is enough space to construct a platform to put all ventilation there. Also, the boiler room in the basement is large enough to house everything. It does not have to be done all at once. A plan could be developed whereby when a piece of equipment breaks rather than replacing it in kind you move towards the more comprehensive solution. A warrant article could be developed if choosing to complete the project in a single phase. The project could be funded with a lease purchase over time, and get everything done at once.

EEI does approx. 7-8 of these projects each year. Some items that separate EEI from others in the industry include not charging for the assessment and standing behind the quoted price.

Mr. Davey provided a PowerPoint [presentation](#) (tape counter 1:24:04). There are three main funding mechanisms: 1) budgeted over time (LED lights, modern control system (same as high school), modernize boilers and perhaps change to propane or wood heat, and improve ventilation (perhaps providing the nurse office(s) with an independent ventilation system)), 2) through a warrant article, and 3) lease.

Mr. Davey spoke of the follow-up done by EEI. They stay behind to ensure the energy savings are achieved. There is a monthly report provided to the school board showing how they could continue to improve. If the report is used as a tool, they can substantially improve on the energy savings once a new system is in (watch for behaviors that can be adjusted resulting in savings, etc.). They guarantee the savings.

They look at improving the buildings, reducing costs, looking at solar and renewable options. It has been somewhat common to do solar systems with mini-split VRFs so you can get cooling and heating. The pro is it is electric heat and the con that electric heat is expensive. It really makes sense when you want air conditioning. If you don't need air conditioning it doesn't make a lot of sense. The life cycle of a system like that is shorter than a traditional boiler and ventilation system.

Mr. Davey commented they look at all of the pros and cons, reducing consumption, and guaranteeing the savings. Likely the reason most of the districts go with them is the single source responsibility. When they create a budget they are responsible for helping sell it to the town and guaranteeing the work comes in at that number or less and then guaranteeing the energy savings for the life of the finance period.

In Manchester, they did \$4 million in projects in 2013. They got \$800,000 in grants and rebates and \$325,000 in guaranteed energy savings.

RMMS uses 42% more energy than a comparable school in Manchester. It lacks the central controls and ventilation system to set back at night. The gym mezzanine is an excellent location for central ventilation system. LED lighting would reduce expense by about \$10,000/year.

Not wanting to make changes to the mechanical and ventilation without getting to know the long-term needs of the building, they brought Banwell Architects onsite to perform a walkthrough and identify anything that should be looked at either in conjunction with this type of project or as a separate project. Some of the suggestions were re-configuration of the main entrance (bring main office downstairs), review utilization of nurse and Admin space, review sprinkler and ADA requirements, consolidate the boilers, consolidate the ventilation, and LED lights.

A chart was displayed that compared costs for heating (prepared pre-COVID). In New Hampshire electricity has been the most expensive way to heat followed by oil, propane, and wood. The district is on oil, which is inexpensive at this moment, but if looking at a 10-year graph, propane has beat oil, and can be burned much more efficiently. Pellets would be less expensive, but have a higher infrastructure cost.

A chart was displayed showing data on the Belmont High School; budget was \$130,000 in energy. A project was done there that paid for itself in 6 years. It was budget neutral. The budget was kept the same for 6-7 years and then started to pay for itself in year 8. Items that have a short Return on Investment (RoI) are lighting and controls. Ventilation units in the mezzanine or consolidating boilers would have a RoI more in the area of 20 years.

In terms of next steps, EEI does not charge for audits. If the Board chooses, they will work with the school to go through the building to conduct an assessment to be brought back to the Board. If the Board wishes to proceed, they could return to provide dollar values.

Chairman Haag spoke of the items having a 20[±] year RoI and questioned the lifecycle of the equipment. Mr. Davey spoke of existing equipment that is still running noting you can get 33 years out of ventilation equipment. Boiler life expectancy is 30 years. The lighting and controls might make sense on energy. If this building is going to be in your community for the next 50 years then it doesn't really make sense to keep replacing one of the 9 boilers and hot water heaters every year.

On paper, you will look at the cost and the payback being 25 years if just dividing the cost by the savings. The savings will come the next time you go to do a heater; instead of having to do one a year, you don't have to do another boiler for 30 years and then when you do have to, it is a much lower expense. The difference in maintenance associated with two pieces of equipment versus 9 is great. You get your energy usage down so there is the 40% reduction in carbon emissions as well.

The reason the energy savings is important is that it is there, is real, helps offset the lease payment. The reason to do it is not as a business investment, it is because that is how you want to run the building for the next generations.

Asked if the energy audit would identify the RoI, estimated savings, etc., Mr. Davey stated it would. It would be put before the Board in a spreadsheet form and would provide a comparison of the available options.

Asked if the end result of both options, piecemeal or long-term, would be the same, Mr. Davey responded if staying with piecemeal and wanting to do a \$35,000 boiler every two years then you will just keep spending \$35,000 replacing the boilers the way they are. If you want to go to a comprehensive, it would make some sense to do it all at once or at the very least rather than a \$35,000 boiler replacement, put in the big boiler and now you are spending \$150,000 instead of \$35,000 with the idea that in the future you will expand it. The pro to that is there is no interest rate, and the con is the project becomes a little disjointed and the impact on the budget is up one year and down the next.

Asked about the potential for the next year or two to be most favorable in terms of interest rates and rebates/credits, Mr. Davey remarked rebates have been steady. What cannot be projected is grant funding. This is a really good time based on interest rates and rebates. What cannot be understood is how taxpayers will feel in the post-COVID era. That is the piece that is the bigger question. Asked if the industry anticipates anything significant in the way of rebates, etc. Mr. Davey stated he could imagine a second stimulus having funds earmarked for school ventilation.

Member Jew noted what was being discussed was energy efficiency and modernization of the system. Mr. Davey stated the current system is old, but operating. Member Jew continued by stating this would be a good opportunity to modernize to handle the next issue that may come along. Mr. Davey stated there is no system in any New Hampshire school that is designed to the new guidelines post-COVID. It would be an opportunity to bring it up to the standards that came out in June.

Chairman Haag questioned if 6 years is the typical RoI on LED lighting and controls, and was told in a school yes. It is all about run time hours; cost and savings in kilowatt hours. Asked if the HVAC is proprietary, Mr. Davey stated he would put in whatever control system the district desires. They would most likely recommend Control Technologies because they do the high school, and their system is open source, which means anyone can work on it. There are other companies such as Johnson Controls and Siemens that make products that are probably cheaper to install initially, but are proprietary and you are locked into them for eternity. They make their money back over time with higher service cost. Chairman Haag questioned if that kind of information would be detailed within the report, and was told what is typically done is a two-step process. The first step is a spreadsheet where they identify all kinds of options, e.g., solar, wood heat, perhaps move the front office. In order to avoid spending a ton of time designing options the Board may not choose, the figures that would be provided would be with 80% accuracy. If an option is chosen, they firm up the budget, and then return to the Board with a report that addresses the type of equipment. A full packet would be done prior to final approval. EEI does not charge at any point during that period.

They only charge if it passes. The reasoning being during the time when stimulus funding was available in 2008 there were hundreds of energy audits completed with no plan of action. Every school in the State got a free energy audit they didn't use. EEI decided they did not want to be charging for energy audits, they wanted to be in the business of doing projects.

There being no objection, the Board went out of the regular order of business to take up Deliberations.

DELIBERATIONS

- To see what action the Board will take regarding the receipt and expenditure of Fiscal Year 2021 unanticipated revenue associated with the CARES Act and any other local, state or federal resources set forth in RSA 198:20-b.

MOTION BY MEMBER SARRIS TO APPROVE THE ACCEPTANCE AND EXPENDITURE OF FISCAL YEAR 2021 UNANTICIPATED REVENUE ASSOCIATED WITH THE CORONAVIRUS AID, RELIEF, AND ECONOMIC SECURITY (CARES) ACT AND ANY OTHER LOCAL, STATE OR FEDERAL RESOURCES SET FORTH IN RSA 198:20-B. THE BOARD TO BE PROVIDED WITH A FULL ACCOUNTING OF THE REVENUE AMOUNT AND EXPENDITURES

MOTION SECONDED BY MEMBER MARSANO

MOTION CARRIED

5-0-0

The Board returned to the regular order of business.

Dick Henry, DDH Energy Consulting Services, stated RMMS is a 68-year-old school building constructed in 1952 with additions in '61, '67, '88, '92, and '95. It is 57,263 square feet, and, in discussions with Principal Molinari, functions well from an educational standpoint. It is an old building that needs, in their opinion, a thorough refurbishment as opposed to replacement.

A replacement building in today's market would cost between \$17 and \$20 million. To refurbish it would cost between \$3 and \$5 million. The building has several problems; poor insulation, old windows, and is poorly air sealed. The mechanical control system is at end of life and needs to be replaced. The heating distribution system is beyond end of life as are one or more boilers. The exterior clapboards are also at end of life. Most importantly, the recent engineering evaluation of the ventilation systems indicates that many units are at end of life. However, since that report, a considerable effort has been made to improve the operation of much of this aging equipment.

Also discussed were security upgrades desired to be included in a comprehensive project. The overarching problem at this stage in a 68-year-old building is the increased probability of a catastrophic failure of some unforeseen component. The resulting emergency repairs are extremely expensive and can close the building for days or weeks. This type of patchwork response does not improve the overall functioning, efficiency, or comfort of the building and by definition does not fit into a long-term plan.

There has never been a better time to finance a renovation and extend the life of this building by 30-50 years.

Dave Ely is an architect who has specialized, over the last 30 years, in highly efficient buildings and has extensive experience with net zero schools.

Dick Henry has been involved in energy conservation, efficiency, and renewable energy for more than 20 years and is focused on helping school districts move to low or net zero buildings.

Dana Nute runs Resilient Buildings Group with 14 employees who have been doing energy efficiency work, testing, commissioning, auditing, construction management, and LEED certification throughout the State in the school, commercial, and low-income housing areas for the past 10 years.

They have joined together, and take a holistic approach to each building. All building components are interrelated. If you have a poorly insulated building you will have to spend a lot of money not only on heating oil but also on electricity to run motors, pumps and fans and in the end you won't have a very comfortable building.

On the other hand, if you insulate the shell of the building well, you significantly reduce the amount of heating and cooling required, you save not only on the initial capital cost but also on operating costs over the life of the building, because the HVAC equipment can be much smaller. You can improve the situation by investing in more efficient heating and cooling equipment, energy recovery ventilation, pumps, motors, control systems, and lights. If you add solar to the building, you can run much of your equipment and lighting off energy you generate onsite. This way you can reduce operating costs to a low number or in some cases zero.

The current rough estimate is that the school could possibly support 400 kW of solar that would generate about 500,000 kWh/year, which is probably more than the school is currently using. The beauty in solar is the fuel is free for the life of the installation.

Much of RMMS is built with a combination of concrete block and wood frame with clapboard siding. The clapboard siding is at end of life affording the opportunity to upgrade the insulation while replacing it from the outside enhancing the thermal mass of the concrete block to keep the building warm in the winter and cool in the summer.

They could then increase insulation and air seal the roof, and work to reduce heat loss through the floor slab edge. They then replace the windows with a triple glazed system and have an air tight shell that greatly reduces the demand for heating or cooling.

While upgrading the shell and the mechanical systems, they can incorporate functional and security upgrades.

As an example, Mr. Henry cited the Hollis Primary School and the Hollis Montessori School where all of the measures implemented over the past 5 years demonstrate these principles.

COVID-19 has put a tremendous strain on our school system and probably will continue to do so through 2023. After taking the major steps of masking, social distancing, and frequent hand washing, the next crucial issue schools need to face is ventilation. None of the schools, nationwide, were designed with a pandemic in mind. We need to retrofit schools with ventilation systems that provide 100% fresh air entering every classroom and ensure that no air is recirculated between classrooms unless it is thoroughly filtered.

They are confident that in the next few months and years there will be a great deal of money made available for K-12 schools throughout the country to further combat COVID-19. These funds will be specifically designed to refurbish existing schools. There may also be additional grants from the State Public Utilities Commission (PUC) and the utilities themselves. But to take best advantage of these new and existing sources of funds, the school district must know what it wants and be shovel ready to qualify for these funds.

To define and clarify exactly what you want out of a project, one of the key goals is to help the district write an Owner's Project Requirement document (OPR). This document clearly defines the goals, what performance standards you expect from the refurbished building, and provide the framework for the design team so implementation meets expectations. It is a living document that can evolve as the project progresses.

Their goal is to share their knowledge with the district and help to develop the documents which define the architectural, engineering, renewable energy and security goals. The document can then be used to draft Requests for Qualifications for the design team and subsequently to write a Request for Proposal for either a construction manager or a Contractor. They help develop the document with input from the Board, the Finance Committee, school district, Principal, teachers, and then reach out to the community-at-large. This is critical for any successful project as you need community support to pass the necessary financing at the annual meeting. They recommend the following sequence to put the plan in action.

- Work with the Board between now and the March school district meeting in 2021 to review the existing information and execute a free energy audit.
- Help develop a warrant article that can be presented at the March 2021 district meeting, which would include the development of an OPR and a price estimate for the planning process.
- If the funding is approved, help the district enter the design phase and plan for architecture and engineering. This would be completed in time to present a request to fund the full project the following year (March 2022).
- Help with development of presentation materials throughout the project for the variety of audiences you will need to address.
- Working with the Board and district, help to determine how to finance the project, whether through a municipal lease purchase or State bond.
- Assist with application for grant funding and rebates as they become available.
- If project funding is approved, they assist through the contractor selection process so that construction can begin in either the summer of 2022 or 2023 depending on timing.
- Depending on the size of the project construction may take 2 years.
- They stay with the district through construction, commissioning, and final training for operation by staff.
- Also can continue to advise after that to ensure the building is operating up to expectations.

One distinct advantage the district has is that by belonging to SAU41 the leadership team has been through this process over the past five years in the Hollis School District and will be able to help to support this approach in the community.

To take maximum advantage of current and future grant opportunities and to finance the work at today's unbelievably low rates for school districts, you must own the building and its contents. Giving up that ownership of equipment in exchange for a long-term service contract is an extremely expensive alternative.

The overarching savings to the district and community is the ability to rehabilitate an existing building as opposed to letting it deteriorate further and be forced, in time, to build a new school. Refurbishment, including a solar array can cost anywhere from \$70-\$100/square foot whereas new construction can cost anywhere from \$300-\$400/square foot. It is this avoidance of new construction that is the true savings to taxpayers, and in the case of RMMS, it is on the order of about \$14 million.

RMMS has good bones and a good educational layout. Right now, is an unusual opportunity to make this kind of cost-effective investment, which will not only provide a "new" school, but will also improve the educational environment and the overall safety of the school. It will also stabilize operating costs over the next 20-30 years.

Vice Chairman Sarris departed at 8:12 p.m.

With regard to leasing versus refurbishment, an example was provided of a school district not that dissimilar from Brookline's population. They have been renting two portable classrooms for their fifth grade for the last 20 years. The rent has been \$36,000/year and the utilities have run at about \$6,400/year for a total expenditure of \$42,400/year. Over the last 20 years they have spent \$848,000 for 4,000 sq. ft. of classrooms. That works out to \$212 sq. ft. for two modular units neither of which have any bathrooms. All staff and students have to go into the main building to use the facilities.

After 20 years they now need to replace this classroom space as these two modules are beyond end of life. The replacement value of this building brand new is about \$325/sq. ft. They would need to spend \$1.3 million to replace this space with a new building which will still have ongoing utility costs.

This is the typical pattern that most school districts around the State have followed over the past many years when State construction money for new schools covered between 45-60% of the cost. Districts ran a building into the ground and then built a new building with the help of State funding. State construction support largely ended in 2011. When last checked, the amount of State money available for school construction is about \$100 million, and the current waiting list is requesting \$660 million.

If, however, the district chooses to refurbish one of its existing school buildings, the financing situation is quite different. If we take our hypothetical case and they are willing to pay \$42,400/year for the next 20 years, at 2% interest or less, the money they have available to invest in their school building is about \$700,000.

If they invest \$700,000 in refurbishing one of their existing buildings, convert its heating and cooling from fossil fuels to electric air source heat pumps, install heat recovery ventilation, new LED lights and build an onsite solar array, they can generate a great deal of their own energy. With this approach they can now retrofit approximately 8,750 sq. ft. using that \$700,000 which includes a solar array. In addition they will reduce their operating costs to close to zero. Now, over the next 20 years they will know exactly what their heating, cooling, ventilation, and electricity bills will be and be essentially free from the volatile electric and fossil fuel markets.

A RMMS, a \$4.5 million project spread out over the course of 20 years would cost about \$273,177/year if the project were solely financed through a municipal lease purchase. Grants and rebates would reduce the overall number and the yearly payments, but should not be counted on. The payment would also be reduced by about \$100,000/year in reduced energy costs.

The important concept here is that to use this approach you must own the building and all of the equipment that is in the building to qualify for most grants and low cost financing. By taking into consideration both the capital cost of refurbishing an existing building and the reduction in utilities, these two factors will save the district millions of dollars over the next 20 years; \$4.5 million for refurbishment versus \$18.5 million for a new building. After the loan matures, the building shell and the solar equipment will last for another 20 years. HVAC equipment generally has a shorter life of around 17-25 years, but by then new technology will likely be even more efficient, and further reduce costs.

In today's world where a school district can borrow money at or below 2% fixed interest for 15-20 years through a municipal lease purchase or a bond, you can refurbish an existing building like RMMS to a very high standard and spread the capital and operating costs out over the life of the loan. Interest rates have never been this low, and because the school is a taxable authority, banks are eager to lend money at these extremely low rates.

No commercial entity offering a service contract can come close to borrowing at these rates. This is a unique opportunity when the district can finance a major overhaul of an existing building and be certain of continued use for the next 30-40 years. By having a clear OPR document and being shovel ready, there is an excellent chance of receiving additional funds from newly developing federal and State grants.

Member Jew questioned if the water systems and sewerage disposal systems were addressed within the scope of the Hollis project, and was informed it dealt with only the heating water system.

David Healey, Windy Hill Associates, remarked they approach projects holistically and as such they don't just look at the mechanical systems and installing solar. They like to make upgrades as are necessary for security or if there is a water issue or something similar, they would look to include that in the project.

Mr. Henry added when they toured the building with Principal Molinari they were shown a drainage issue at the cul-de-sac, which would be something they would address as part of the project.

Asked about the scope of the Hollis project, Mr. Henry stated HPS and HUES buildings were done simultaneously as the initial thought was to join the two schools with a BioMat heating system. After studying it, they split the project into two, which had the benefit of allowing individual rebates for each school from utilities for electrical work. They also received a fairly large rebate for each school from the PUC for solar installation. HPS had a block structure with a brick veneer and absolutely no insulation in the walls, which made the classrooms very uncomfortable in the winter. It also had an extreme amount of windows, which was typical of the 1952 era. They wrapped the building from the outside with insulation and put on a new outside covering. That took the insulation value of the walls up from R1 to R30, which made a huge difference. An ancillary benefit was it cut down on noise significantly.

Mr. Healey stated the windows that were in the building were the old double glazed windows. The new windows were triple glazed (called tilt turn windows). They have a dual function; can turn handle half way and the window swings in. More often the handle is turned all the way up and they tilt in from the top (about 6"), which allows ventilation but also affords a good security measure because no one can enter through that window. Also, you can store things on the windowsill without swiping them off when you swing the window open.

Mr. Henry commented another problem was a very old oil fired hydronic heating system, which posed a number of problems. The one they were most concerned about was 70-year-old piping in the ceiling, which could have failed and flooded the classrooms with 180° water. They abandoned the hydronic system in place and replaced it with air source heat pumps and energy recovery ventilation both of which were electrically driven. They added 100kW of solar to the roof. Much of that equipment is brought off the electricity that is generated during the day.

One of the big advantages of solar for school is there is a solar generation curve that is synonymous with the school day. You can use a great deal of the electricity you generate behind the meter without ever having to go to the grid.

In the case of RMMS, you have a fairly large roof. It's pitched, which raises some other issues for solar, but instead of putting 100KW on the roof, there could be 300-400kW, which would generate about 500,000 KW hours/year; likely more than the school is using right now. If you replace the oil fired system with air-sourced heat pumps and ventilation, you would be able to use all of that electricity easily. The other advantage of going that route is you can pretty much guarantee 100% fresh air for each individual classroom without any recirculated air, which has become a problem with conventional ventilation systems.

They also spent \$100,000 replacing the electrical wiring of the building as much of it was still the 1952 wiring, which was dangerous. In the second phase of this project, at the request of the fire chief, a sprinkler system is added. There will also be LED lighting.

Ms. Seeley commented RMMS is aging with equipment at end of life. The way we have been addressing these issues does work, but we are looking to ensure safety of all users of the facility and avoid catastrophic failures. Chairman Haag commented on the timing being good with a bond maturing. It is an older school and there are valid concerns. What has been noted around interest rates is a valid point. He personally is interested in

receiving additional feedback. Particularly given the no cost opportunity for additional information, it seems prudent. Some of the discussion touched on items having a 6-10 year RoI and being budget neutral because of savings. He is very interested in learning more.

Member Marsano spoke of wanting to see where that information would lead. She is also interested in what Principal Molinari has for input given his background and familiarity with the building. She also found it very interesting, as a Board member, to find out that we are replacing a boiler every year.

Principal Molinari remarked both companies have creative thoughts behind how they would go about this. It is almost like we have repaired the school as if it were a house (as things came up). He believes there to be the need to explore the options. He spoke of the amount of time spent on the facility; constantly servicing the units.

Assistant Superintendent Bergskaug noted the first presenter is a no-cost up front approach to present a comprehensive plan with 80% confidence and you move forward. The second presenter has the approach of a warrant article in March to do a very comprehensive study to make recommendations to the Board based on more specific long-term benefits. There is a bit of a difference in philosophy.

Chairman Haag commented on liking the approach of an 80% solution provided at no cost. That provides a ballpark and an approach we could be ready to talk about in a few months and have data for a public meeting in the next session. We could get agreement around some projects that could be pursued next year and not lose a whole cycle. He does worry about interest rates increasing in the coming years.

Member Marsano stated a concern with an advisor that will help guide you towards a construction consultation on who will do the work and will follow up with you afterwards if you choose to have them to ensure the energy audit is going in the same direction as you would hope it would versus the more comprehensive follow through ensuring everything is guaranteed and turnkey. There is a little more guarantee and a bit more to it.

Chairman Haag stated agreement with a preference for turnkey. Member Marsano spoke of being more comfortable with that if looking at something that doesn't have an up front cost and has a little more of a willingness to stand behind things going forward.

Principal Molinari questioned if there was a committee formed for the Hollis project. Ms. Seeley stated there was. It consisted of school board members, Mr. Henry and Mr. Healey, the Hollis Energy Committee (a good many technical individuals), and John Penney who did the engineering evaluations for the airflow. It was a very good process and one she would believe to be less expensive than turnkey because you are paying for that sort of hands off. The process Mr. Henry is suggesting gives the Board and committee a lot of opportunities to make decisions on the spot whereas a turnkey approach is turning the project over.

Chairman Haag questioned how the process was, believing it to be long. Ms. Seeley stated it is a long process. If the desire is to bang this out right away, EEI is the way. DDH is already committed to a lot of things, and will not likely be able to do something right away. In terms of taxpayer confidence, she believes the Hollis taxpayers would say they are very comfortable with the way the Hollis project was done, they were very well educated with many public sessions. Although EEI will probably do that, she just doesn't have that experience with him.

Expressed was the desire to receive additional information, e.g., cost/savings benefits of different approaches/phased projects versus comprehensive, etc.

Principal Molinari stated a desire to understand the experiences other schools have had with each of the presenters. It may be a good idea for the Board to be able to participate in a tour of the school with both groups to hear their thought process.

Ms. Seeley commented on the Board being pleased with the approach of being provided additional information at no cost to the District. She will reach out to DDH to see if they are also able to provide a ballpark estimate at no cost.

Chairman Haag was in favor of the Board, Principal Molinari, and Facilities Director participating in a building tour with the presenters.

ADJOURNMENT

MOTION BY MEMBER MARSANO TO ADJOURN

SECONDED BY MEMBER JEW

MOTION CARRIED

4-0-0

The October 28, 2020 meeting of the Brookline School Board was adjourned at 8:40 p.m.

Date _____ Signed _____