JOINT SPECIAL SCHOOL BUILDING COMMITTEE
THURSDAY, JUNE 26, 2008
NASHUA HIGH SCHOOL NORTH LECTURE HALL
7:00 PM

A meeting of the Joint Special School Building Committee was held at Nashua High North on **Thursday, June 26, 2008.** Alderman Bolton called the meeting to order at **7:15 p.m.** Alderman Bolton read the prayer, and Mr. Kelley led the Pledge of Allegiance.

Present: Alderman Bolton, Alderman Cookson, Alderman Cox, Alderman Flynn, Alderman McCarthy, Alderman Tabacsko, Alderman Tamposi, Mr. Dowd, Mr. Haas, Mr. Hallowell, Mrs. Kwan, Mr. Kelley, Mr. Mosher, Mr. Vaughan

Also Present: Mr. Smith, Alderman Teeboom, Harvey Construction & Turner System representatives, *The Telegraph*, *Videographer*

Previous Meeting Minutes Approval

Alderman McCarthy moved to waive the reading of the minutes of the JSSBC Committee meeting held on **5/22/08**, accept them, place them and file. **So voted.**

Remarks by Chairman

Alderman Bolton
Thank you all for being here.

Committee Report – Construction Projects Committee

Alderman McCarthy moved to waive the reading of the minutes of the Construction Committee meetings held on **5/22/08** accept them, place them and file. **So voted.**

Alderman McCarthy moved that the rules be suspended to allow for an oral report of a meeting held earlier this evening. **So voted.**

ALDERMAN McCARTHY MOVED TO APPROVE PAYMENT TO TRI-TURF IN THE AMOUNT OF $3,725.22 REPRESENTING THE FINAL PAYMENT FOR RECONSTRUCTION OF THE UPPER FIELDS OF THE SCHOOL.

Alderman McCarthy
The Construction Committee made two recommendations this evening.

ALDERMAN McCARTHY MOVED TO AUTHORIZE TURNER TO DESIGN A QUICK CONNECT SYSTEM FOR THE TEMPORARY BOILER TO BE INSTALLED (IF NECESSARY) AT FAIRGROUNDS ELEMENTARY SCHOOL.

SO VOTED.

Alderman McCarthy
The Committee had extensive discussion about the design of the HVAC system at the 3 elementary schools and I'd like to recap a little of that. We again went over the proposed differences between the designs. In my mind, one of the more important distinctions is going forward with displacement air rather than unit ventilators. So the Committee agreed in the end to direct Turner to proceed with the displacement air system powered by the geothermal loop for Fairgrounds Elementary School and to engage Dr. Phetteplace if possible, to do a peer review of that system. Also based on discussions with Mr. Smith about the condition of the equipment at Charlotte Avenue, the Committee voted to ask this Committee to recommend to the Board of Education that we defer the work at Charlotte Avenue until after the completion at Fairgrounds and Ledge as a follow on project.

> ALDERMAN McCARTHY MOVED THAT THE JSSBC CONCUR WITH THE CONSTRUCTION COMMITTEE'S RECOMMENDATION TO HAVE TURNER PROCEED WITH THE DESIGN OF THE GEOTHERMAL DISPLACEMENT SYSTEM, AND TO ENGAGE DR. PHETTEPLACE TO DO A PEER REVIEW OF THAT DESIGN AND TO RECOMMEND TO THE BOARD OF EDUCATION THAT THE RENNOVATIONS AND IMPROVEMENTS TO CHARLOTTE AVENUE SCHOOL BE DELAYED OUT OF THIS PORTION OF THE HVAC PROJECT.

Mr. Haas
I want to make sure that we do a program that is cost effective and results in what we're looking for. In all the examples I sent you there is no conversation of distributive air systems. They are all individual resource pumps, which seem to be the industry standard at this time. So I share some of the concerns about this design never having been tested anywhere in the world yet. I'm glad we'll be having a peer review, as I think that's critical. I think we have the priorities backwards though. It was suggested tonight at the Committee to first do the distributive air system and then decide we're going to do the geothermal. In my mind it should be the other way around. We should decide on geothermal if that's what we want and then decide what's the best design for the geothermal system. I'm going to let you read the materials I sent you and I'm delighted that we're going to have a peer review.

Alderman McCarthy
I think if we were to do a top down design, where the top is cost, that's probably the way we would approach it. If we did a top down design where the top is air quality and the quality of the environment we put the students in, we might approach it the way we did this evening. The displacement air system is not common in this country, but is extremely common elsewhere. However the experience in this county by those who have used it is very good. The displacement systems provide a substantially better air quality at the height at which people are breathing. That is our experience both anecdotally and measured with the displacement system that we installed at Fairgrounds Middle High School. That is the reason why I believe a number of Committee members are committed to looking at the displacement system. Now, having done that we then say what can we do to minimize cost of building and operating that system, and that is to introduce the geothermal component. There is complexity there because we're taking technologies that have not necessarily been utilized together very often… at least here. I think the biggest problem we would have with the unit per classroom system is the fact that it requires over 1,000 trips to the ceiling to change filters over the course of the year. Pragmatically, that's just not going to happen. The system will operate at substantially degraded capacity and will not meet code with fresh air. I also believe that the amount of air that system has to handle will cause substantial problems in the classroom.

To me, those are the reasons we moved to displacement system because we think it has the best air quality. To reduce the cost by using geothermal… Turner believes that those systems can be integrated and performs well and does not cost as much to operate. We have asked to invoke the peer view by others who understand geothermal who may in fact have arguments with displacement systems, but I would welcome those comments from professionals. We know that the displacement technology does result in better air quality and that's why we'd like to pursue it.

Mr. Haas
Based on the reading I've done, there are 500-600 individual heat pump systems installed in the country and all talk about doing quality air control. And they must in order to comply with state & federal regulations. So to me, there's no belief that these individual units do an adequate job of purifying the air for the students in the room. There are 500 other schools in the country that I assume have healthy air.

Mr. Vaughan
I have some concern about displacement vs. unit ventilator discussion, but I do agree with Alderman McCarthy. If this discussion can take place with the professionals, I think that's better than looping through us trying to understand the technologies. And I did send Mr. Haas an article that the new and upcoming technology for geothermal use in schools is central.

Alderman Teeboom
I do not agree with what Alderman McCarthy just said about the quality of air. We were given a presentation and there was plenty of air and very quiet. But I think we should go with a trial system. We can do a wing in a school this summer and see if the conventional geothermal for the classroom works. If it doesn't, then we lost maybe $300,000. I'm an engineer and like to see test data. We haven't seen any of that. We've seen claims by a reputable firm who unfortunately hasn't installed a single system anywhere in the world that's being proposed to this committee. Short of an installation, which I think is best, at least we should have an evaluation.

Mr. Hallowell
I just want to make sure that whoever is going to do this peer review is going to come and present something to the Committee so we'll have some sort of tangible report.

Alderman Bolton
We won't know that until we enter into a contract and we may want to discuss what it will cost for a written report and an oral presentation.

Mr. Hallowell
Well, I guess I'm putting in my request for a written report and an oral presentation.

Alderman Bolton
We'll have plenty of time to go through that when we have it in front of it. But that's a good point for discussion.

Mr. Hallowell
My concern was that there was discussion that we have the engineers battle it out somewhere in a private room, and while that may be true, I'd like to have the reviewer tell us what he thinks the answer is.

Mr. Mosher
My concern is the period of time for payback. Anything over 10 years is too long. We should be looking at something that can be paid for in 10 years or less.

Alderman McCarthy
When we did the life cycle analysis, what we look at is the capital cost of building, which is actually amortized over 20 years, plus the operating costs. If we took our current system and brought it up to meet air handling code, it would have a higher cost of ownership in years 1, 2, and year 20 than the system that is proposed. So the annual cost of paying for the construction and the fuel to run it and the maintenance to upkeep it, is lower from day one with the system that is being proposed than it is with what's there at the moment.

Mr. Mosher
People are listening to this and they want to know, if the system costs X amount of dollar, they want to know that in 10 years the system will have paid for itself.

Alderman Bolton
It is cheaper than the other alternative on the first day. So the extra up front costs are more than balanced out. Because you pay for it all on the first day. So every, single day this system is cheaper. So to answer your question of when does it pay for itself? As opposed to the alternative, on day one.

Alderman Flynn
Speaking to the motion of authorizing Turner, do we have numbers of what we've paid Turner to date, what we owe Turner and what we expect it to cost for Turner to go forth with the parameters made in the motion?

Alderman McCarthy
I don't have that here.

Mr. Mealey
I can provide that quickly with one visit back to my office, but I don't have it here with me now. I thing that about half of the contract has been expended so far. I believe the original contract us $116,000. We've expended about $60,000 to date.

Alderman Flynn
Is there any expectation what this motion might cost?

Alderman Bolton
No one has that off the top of their head.

Alderman McCarthy
I'm assuming it's within the scope of the existing contract.

Alderman Flynn
It's not real comforting to know that we might spend another $60-70,000 and not get to where we want to be. The other question I had is how many janitors do we have at Fairgrounds Elementary School? I think the real number we're talking about for changing filters is 180 divided by 3 janitors divided by 52 weeks. So I think we're only talking about a few hours a week that we would have to find some efficiencies or better management to get it done. I don't think that number is quite as imposing or as threatening when you divide it by the number of people and the number of schools. *I'm not convinced that 3 janitors per school can't change 60 filters per year per school. My first thought is that it doesn't threaten my decision to consider that as a genuine consideration.

Alderman McCarthy
No matter how you slice it, there are 60 filters in each school and there are 3 schools. That's 180 filters. They must be changed 3 times per year. That's 540 filter changes. They are 14 feet off the ground. Someone must go up the ladder, take it down, go clean the filter somewhere and take it back. That is 1,080 trips up and down the ladder and 540 motions of the ladder that are not required today. No matter what, there are 1,000 more operations that weren't required the year before and therefore require more labor.

Mr. Dowd
And I might point out that those janitors are already full employed. So they're doing all these other chores and these filters would be on top of what they normally do and we might have to employ more people.

Mr. Mealey
Normally when you change a filter you check other aspects of the equipment and make sure it's running properly and see what else it needs. But you don't get that when you have the custodians do it, which is what we have to do to accomplish that task.

Alderman Teeboom
I don't know where three times a year is coming from… I heard one time a year.

Alderman Bolton
I believe at the previous meeting, Mr. Smith said 3 times a year and as far as I know he's in charge of this system.

Alderman Teeboom
I understand the peer review was discussed at the Committee meeting. What is it that they're reviewing? What level of the design? I would propose to you that in the report that we got from Mr. Smith it's done by Turner… 2 detailed diagrams, plus the concept… that is adequate design to do a peer review on. So I propose that you consider

a conceptual design review. The concept is designed as proposed. And I propose that you not spend any more money on designing the system further and you can proceed on a peer review on what you already have. It if not sufficient you need to give some instruction to the Turner contractor, or you can quickly have unnecessary expense.

Voting on Motion:

ALDERMAN McCARTHY MOVED THAT THE JSSBC CONCUR WITH THE CONSTRUCTION COMMITTEE'S RECOMMENDATION TO HAVE TURNER PROCEED WITH THE DESIGN OF THE GEOTHERMAL DISPLACEMENT SYSTEM, AND TO ENGAGE DR. PHETTEPLACE TO DO A PEER REVIEW OF THAT DESIGN AND TO RECOMMEND TO THE BOARD OF EDUCATION THAT THE RENNOVATIONS AND IMPROVEMENTS TO CHARLOTTE AVENUE SCHOOL BE DELAYED OUT OF THIS PORTION OF THE HVAC PROJECT.

SO VOTED.

Comments by Members of the Public
None.

Comments by Committee Members
None.

Alderman McCarthy moved to adjourn. **So voted at 7:50 p.m.**

Submitted by Jacki Waters