
CONSTRUCTION PROJECTS COMMITTEE
MONDAY, DECEMBER 10, 2007
ADMINISTRATION BUILDING
5:30 PM

A meeting of the Construction Projects Committee was held at the School Administration Building on **Monday, December 10, 2007**. Alderman McCarthy called the meeting to order at **6:20 p.m.**

Present: Alderman McCarthy, Alderman Tabacsko, Mrs. Kwan

Also Present: Mr. Mealey, Mr. Smith, Mr. Hogan, Mr. Harvey, Mr. DuBois, Steve Caulfield, Mr. Drew

Discussion and Approval – Selection of HVAC Alternative

Mr. Smith

Provided 3 handouts with 3 options for HVAC system from Harvey. These represent construction costs and do not include soft costs. Our recommendation is still to go with the Geothermal System. We're looking to hopefully get your concurrence for at least that piece tonight so we can get started.

Alderman McCarthy

I think we are going to need JSSBC approval to advise us to proceed in whichever direction the committee decides on this evening. Why does the unit ventilator cost go up by almost \$1 million from \$1.60 to \$1.70 and then only up by another \$800,000 from \$1.70 to \$1.80? I would have expected that to be a very similar impact.

Unidentified Speaker

Well it's actually about \$840 and then it goes up another \$840. I looked at that too, but if you do the math I think it's a similar increase. With Harvey's numbers I would expect this to be even more favorable to the geothermal option. The first 2 options actually increase the cost by less than the Geothermal. These numbers are based on our schematic costs.

Mrs. Kwan

Are these projections starting at 2010-2011 or 2008-2009?

Unidentified Speaker

I think starting in 2009-2010.

Mr. Mealey

You can quantify the change in the cost of gas, but there's also a value to not being reliant on natural gas as we move forward.

Alderman McCarthy

Do we have the annual numbers of what it would cost us between fuel costs?

Unidentified Speaker

The lifecycle cost that's there includes the capital cost, the cost of financing, maintenance, fuel costs and I believe additional operations.

Alderman McCarthy

I'm asking what the annual cost of all of that is.

Unidentified Speaker

The annualized cost is basically a 25th of that. We broke it out over a 10-year period, so the first 10 years are heavily loaded with payments as well as fuel costs.

Alderman McCarthy

So, these are including 10 year financing?

Unidentified Speaker

Yes.

Alderman McCarthy

We would normally do probably 20 years in City bonds, which would make the finance costs actually a little higher, but lower total cost.

Alderman Tabacsko

Who makes the decision about whether it's 10 or 20 years?

Alderman McCarthy

That's just how we generally do things. We can decide to do it differently.

Mrs. Kwan

Do these numbers differ in the projections you gave in the costing of operating systems that you originally gave us?

Unidentified Speaker

I don't even remember what those original numbers were. They're relatively similar. We've been refining because in the time of the original spreadsheet and this graph we changed the design of the geothermal system and reduced quite a bit of equipment that was in there. It also changed the fuel consumption. So it's going to be different, but this is more reality because the first numbers were just based on just a schematic outline and we're beyond that now.

Alderman McCarthy

Those numbers are actually pretty similar.

Mr. Hogan

Is this the 25-year life cycle of one system?

Unidentified Speaker

No, all three. This is just the life-cycle cost of the mechanical system. The \$18 million includes other parts of the construction. The mechanical system is the part that would be different. There are things in the \$18 million that have to be done regardless of which mechanical system we choose. So we just costed the difference in the variable rather than putting the whole cost in there.

Alderman McCarthy

What are those other things that are not in there?

Unidentified Speaker

You have the penthouse build out, new ceilings and corridors, glass replacement, etc.

Alderman McCarthy

Would we change the penthouses if we were to do option 1?

Unidentified Speaker

Yes.

Alderman McCarthy

What costs are there that are not reflected in the life cycle cost that actually vary from option to option?

Unidentified Speaker

There aren't that many. You've got the breakdown in each one.

Alderman McCarthy

We're just trying to get to the point where we're convinced that the geothermal is the lowest yearly cost of ownership.

Mrs. Kwan

In the geothermal life cycle cost, is paving included in that?

Unidentified Speaker

There is a little bit of paving and there is some roofing included.

Alderman McCarthy

Are there any other questions?

Unidentified Speaker

As Shawn said, the alternates can be decided on later. The concern is to get started on a system... either 1 2 or 3. The concern is that if we're going to get started in June, we back out the schedule and some are lengthy items and we're beginning to get a little concerned.

Mrs. Kwan

So if I were to try and estimate the yearly cost of those 3 alternates, I would just divide it by 25 years (including construction)... and that is on a ten-year bond?

Alderman McCarthy

That would be correct for the average. The first 10 years of the bond would be more expensive.

Unidentified Speaker

The first 10 years have the bonding cost in there under our analysis. Then we've also added in equipment replacements. At 5 years, there are minor replacements and at 20 years we have a major equipment replacements. And that's for all of these because there are some parts of the mechanical system that are going to fail. We figured that based on a percentage of the total installed equipment. But that's a big "if". In reality, how you budget that may be different.

Alderman Tabacsko

Is the geothermal a complete rebuild at the end of 20 or 25 years? What is the lifespan of a geothermal?

Unidentified Speaker

On the compressors, it's probably on the 15-20 year range. What we did for the analysis was to just assume a percentage of the first costs. So I think we took 6% of the cost for what you would expend out over 20 years plus escalation. We would expect fans, coils, etc. to fail and need to be replaced. There isn't really a good way to predict it, so we base it on a percentage of the total cost. We're probably over estimating, but it's better to be conservative with that.

Alderman Tabacsko

Are we going to be faced with another capital project at 20-25 years once this is paid for in 3 buildings?

Unidentified Speaker

No, it's not a capital project, but it's something you have to keep in mind that's going to need some equipment replacement over time.

Mr. Smith

Could this be covered in deferred maintenance?

Unidentified Speaker

Yeah, it's equipment that would just be taken out and put back in. It's not a complete rebuild like we're talking about now. One of the things I couldn't shoot down that we're having a problem with... because we don't design a lot of schools with unit ventilators... I'll be up front we don't like them. We're not even sure you can meet the new sound guidelines in classrooms with unit ventilators. There are manufacturers who claim you can, so I didn't want to take it out as an option. But it is difficult to meet the new acoustic guidelines in classrooms with ventilators because they make so much noise. And when they're new, they claim they can meet it. But after 10-15 years they don't sound like they did when they're new.

Mrs. Kwan

Have you accounted for the same kind of maintenance and equipment replacement as you did for geothermal?

Unidentified Speaker

Yes. Each one has an equipment replacement cycle included.

Mrs. Kwan

Does the schedule that you've set up require work during the school year? Are we going to have to shut portions of buildings down, reconfigure where kids go, portables if necessary, etc.? Are those costs being projected? I'm looking at Shawn, because that really wouldn't fall on your shoulders.

Mr. Smith

Yes, we're looking at taking a wing out of each school at a time. We see up to 5-6 phases in a year. As we complete sections, we turn it back over to the school. I've spoken with Chuck Healey, the principal at Fairgrounds Elementary. He feels he can get by without a wing. I'd rather not go to portable classrooms.

Alderman McCarthy

So how do we do that? Is that by having larger class sizes than we would like for the duration of construction?

Unidentified Speaker

Each school has a certain amount of extra space in it right now. We've taken out the 6th grade, so you do have some vacant space to work with. It looks like it's going to work. There will be a fair amount of work done in the summertime. The key is to get into the administration area in the summer in each of the school years and get the steel up in the building. We've got to get administration put back by mid August and we need 7-8 weeks to accomplish that.

Mrs. Kwan

Mr. Mealey, other than sports are there any other scheduling concerns that we need to consider?

Mr. Mealey

After the Joint Special, I'll touch base with the principals and others to see what other considerations there are.

Unidentified Speaker

I think we're going to have to remain somewhat fluid until late spring with designing the phases. Outside of the front work that has to be done in the summer, because they're not even going to have their school calendars until the end of this year. So we will try to work out the connections and things that have to be made between these phases so we can then do them in any order. Once we identify the parts that are important to keep everything running, we can then put them in any order and make sure we cover all of those. But I don't think we're at a point now where we can even try to come up with a plan.

Mr. Mealey

But we can at least identify what some of the possible concepts will be.

Unidentified Speaker

We'll do our part to make sure you understand if certain phases have to be done prior to others.

Mr. Smith

This is all proven technology and there's been a lot of research leading up to this point. There are currently over 1,000 schools across the country with geothermal cooling and heating, and not just in the southern regions where you might expect it. I'm very comfortable with the technology. Utility savings will be immediate. We're looking at 50% gas, electricity...

Unidentified Speaker

A lot more than 50% for gas. Probably more like 90% for gas because we're shifting that into electricity.

Mr. Smith

The last point, which we haven't spoken about tonight, is the green nature of what we're proposing to do. The city of Nashua has the Green Team, and this follows suit.

Unidentified Speaker

We've also included running the air conditioner all summer in the costs and if the school is shut down, that cost goes down as well.

ALDERMAN TABACSKO MOVED TO RECOMMEND TO THE JOINT SPECIAL SCHOOL BUILDING COMMITTEE THAT WE PROCEED WITH THE GEOTHERMAL OPTION.

SO VOTED.

Discussion - HVAC Construction Alternate

Mr. Smith

The alternates can wait for next time.

Mrs. Kwan moved to adjourn. **So voted at 7:10 p.m.**

Submitted by Jacki Waters