



Wembley Public School

Board Meeting Presentation

Presentation by
John Hamalainen, P.Eng. and
Edward Chiesa, P.Eng.

October 20, 2008

Wembley Public School - The \$1 Million Solution
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Introduction

My name is John Hamalainen. I am a consulting engineer with 31 years experience that includes 3.5 million square feet of building condition audit experience, the majority being in the educational sector. Also joining me this evening is consulting engineer Edward Chiesa, with 34 years experience that includes extensive building revitalization experience. We are former Wembley students.

Over the last 5 months, Ed and I have endeavoured to show Rainbow District School Board (RDSB) that Wembley Public School is not a school “prohibitive to repair”, and that it can be repaired for far less than \$4.2 Million as quoted by the Board. Despite overwhelming evidence to support our position, the Board refuses to consider a viable option - repairing the school. Tonight, we are here again in another attempt to show how this can be done.

Site Survey - October 7th 2008

On October 7th, Ed Chiesa and myself conducted a top to bottom site survey of the school. Here is what we found.

Exterior Wall - Brick spalling, moisture penetration, etc.

Over and over again, the Board has used the deteriorating bricks and mortar at Wembley as the primary reason for closing the school. They also claim this item poses a serious health and safety concern and will cost \$1.7 Million to repair. We believe this

number is overstated by \$1.3 Million and that the bricks can be easily repaired for an estimated \$400,000. Before getting into details on this, we would like to bring to your attention several other relevant facts.

1. In 2004, the Board retained a local architectural firm to conduct a study of the Wembley bricks. This study concluded, and I quote, "We recommend the repair of the third floor South elevation as soon as possible. The North, East and West facades are generally in good condition, but should be monitored for signs of deterioration." The study also included a cost estimate which we have attached that confirms the bricks can be repaired for about \$400,000.
2. In 2004, the Board spent approximately \$400,000 for the brick repairs, see details in RDSB October 14/08 email attached.
3. If the majority of the brick repairs were done in 2004, why did this item reappear in 2008 at a cost of \$1.7 Million? I realize there has been some further deterioration of the bricks since 2004 which we will address, but nowhere near the \$1.7 Million figure.

Ed and I surveyed the brick spalling from the roof level. At that vantage point, we could clearly see, touch and examine the bricks and mortar. Photographs of this examination are attached.

What we found was that the brick veneer was generally in a satisfactory condition as per 2004 architect's report. Assuming that brickwork along North, East and West is performed, cost should approximate southend repairs of about \$400,000. This work would consist of removing and replacing the brick on the East and West walls and repointing a portion of the brick on the North wall much like what was done in 2004. Masonry brick has a conservative life of 100 years so this would be a one time permanent fix.

Windows

Another large item the Board has made mention of are the windows. The windows consist of aluminum frames with sealed glass units and appear to have been installed in 1979 judging by the date on the sealed unit. The frames are in excellent condition and do not need to be replaced. Some of the sealed units are damaged and need to be changed. An estimate for this would be approximately \$34,000, compared to \$344,000.

Based on these two items alone, the Wembley repair cost can be reduced by \$1.6 Million from \$4.2 Million to \$2.6 Million.

Other Items

Other items observed in need of repair at Wembley are

1. Roof over former Boiler Room. This is a small item. The main roof for Wembley is in excellent condition as evidenced by the attached photographs.
2. Washroom Renovations. Some washrooms need to be upgraded with new plumbing fixtures and partitions. Part of the cost of these washroom renovations could likely be funded with the reduction in water usage and sewer surcharges through the Board's energy service company (ESCO). In 1991, barrier free washrooms were added to some parts of the school, however additional barrier free washrooms should be considered.
3. Lighting Retrofit. All lighting should be retrofitted with energy efficient T8 lamps and ballasts. This could be done through the energy service company the Board uses at no cost.
4. Doors. While the doors are old, they are still in a good state of repair. Also, they

are grandfathered under the Ontario Building Code with respect to fire separations.

5. Ventilation. A more modern ventilation system could be considered in the future, however, the present system likely still complies with indoor air quality standards which could be easily validated by taking a series of indoor air quality readings.
6. Heating System. A few cabinets are dented, otherwise the heaters are in a good state of repair. Typically electric resistance heaters have a life of 40 years and the present heaters have been in place for about 15 years.
7. Primary Incoming Electrical System. In excellent condition and was changed when the school was converted over to electric heating.
8. Outdoor Asphalt. Although it is cracked and aged, it does not pose an immediate safety hazard and is typical of what you see in many school yards around the City.
9. Exterior Doors. Some minor repairs are required as a result of salt corrosion. There is no need for complete replacement.
10. Room Finishes. Majority of the rooms are in a good state of repair. Some minor painting and floor replacements could be considered.
11. Interior Stairs. The interior stairs are in a good state of repair.
12. Millwork (Cupboards, Counters etc). Dated but still in a good state of repair.
13. Fire Alarm, Exit and Emergency Lighting. All systems are in a good state of repair with no upgrading required.
14. Exterior Lighting. I visited the school one evening and found the lighting to be

adequate and utilizing energy efficient lamps.

Deferred Maintenance

On a number of occasions, including the September 20th Administrative Council presentation by Director Hansen, we heard that deferring repairs to Wembley was not an option. If this is true, why does RDSB allow deferred maintenance to exist in other schools? To demonstrate this, I requested from the Board the facility condition index (FCI) for each school. Unfortunately, the Board denied this request.

Any building with an FCI greater than zero has deferred maintenance, and I am quite certain the vast majority of RDSB schools fit into this category. Deferred maintenance is part of any institution's facility renewal program and is a way to track deficiencies that at some point should be dealt with. I personally think it is a good idea to include everything possibly wrong with a building on the deferred maintenance list so it's accounted for, but this list should not be used in the way it has been to condemn Wembley. The challenge with the deferred maintenance list is to prioritize the items and develop a well thought out facilities renewal plan for dealing with items over an extended period of time. Some items, such as grandfathered building code items, may never get dealt with, but they are on the list so that management is aware of them. As well, from time to time the Ministry of Education has special funding initiatives available for facility renewal, so it is good to have a current deferred maintenance list to take advantage of these programs.

The \$4.2 Million figure the Board is using would bring Wembley's FCI to zero - that is not practical or necessary. A school in a good state of repair should have an FCI between 10-15%. Using these FCI's and the Board's \$4.2 Million figure, Wembley should have a backlog of deferred maintenance between \$500,000 and \$700,000, which would still leave the building in a good state of repair. Subtracting this from the \$4.2 Million, the numbers that the Board should be quoting to the public are \$3.5M to \$3.7 Million, not \$4.2 Million. For the record, we do not agree with the \$4.2 Million

figure, but wanted to demonstrate why that number is not one the Board should be using.

Photographs

We thought it would be appropriate to include a collage of photographs to give you a better idea of the state of Wembley. I think you'll agree after reviewing these photos that the condition of Wembley is typical of many of the 40 elementary schools operated by the Board.

Carbon Friendly

Lately we have heard many messages from RDSB concerning carbon neutral, green and sustainable design. It was also stated that the option to expand Princess Anne would include some of these initiatives. We believe sustainable design makes sense in many situations, however one thing that is often overlooked is the amount of carbon generated through the process of new construction and transportation. For example, the proposed 21,000 square foot expansion of Princess Anne would have about 550 metric tonnes of embodied CO₂ associated with the expansion. This carbon comes from the manufacturing process, transportation of materials to the site and site disturbances. Furthermore, it is anticipated additional carbon will be generated through bus transportation because Princess Anne is not as centrally located in the catchment area as Wembley, see attached map. Speaking as a parent with young children, I would not allow my children to cross the notorious "killers crossing" on their own, so you will likely see more parents with children in grades 1 to 6 dropping off and picking up their children with the Princess Anne option because of this dangerous crossing. When this concern was discussed at the June 26th ARC meeting, a comment was made that if there were safety concerns with students at this crossing, additional transportation could be provided, which would increase the carbon footprint for this option.

Conclusion

Wembley can easily be repaired for far less than \$4.2 Million. Conservatively a figure of \$1 Million would bring the building back to a good state of repair. If there are other reasons for closing Wembley Public School, then the Board should state these in a transparent and open way.

Thank you,

John Hamalainen, P.Eng.

Edward Chiesa, P. Eng.

Encl: Preliminary Order of Magnitude Cost Estimate 2004 (1 page)

Email from Rainbow School detailing Wembley PS Brick Repair in 2004 (1 page)

Map of Catchment Areas for Wembley PS and Princess Anne PS (1 page)

34 Photographs

Preliminary Order of Magnitude Cost Estimate

February 17, 2004

Third Floor Elevation

	NORTH	SOUTH	EAST	WEST
Site work / Removal of Existing Face Brick	19640	21096	12424	13416
Remove existing Parapet Flashing	1222	1274	394	507
Install new spray on Vapour Barrier	7135	7438	2300	2960
Install new Face Brick	73000	76200	29160	34920
Install new helical anchors	9306	9702	3000	3871
Install new parapet tie in flashing	1880	1960	605	780
Sealant	602	627	194	250
Subtotal	112085	118297	48077	56704
Design Contingency (10%)	11209	11830	4808	5670
Construction Contingency (10%)	11209	11830	4808	5670
Total	134503	141957	57693	68044

<i>Total of entire floor Rehabilitation:</i>	402197
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John Hamalainen

From: Diane Cayen-Arnold [cayenad@rainbowschools.ca]
Sent: Tuesday, October 14, 2008 2:33 PM
To: John Hamalainen
Cc: Fred Law; Jean Hanson; Nicole Charette; Ron Spina; Sandi Ackroyd
Subject: Re: Wembley PS Brick Repair 2004

John,

The contract value for the 2004 brick repair done by Capital Construction was approximately \$237,000 which do not include the following:

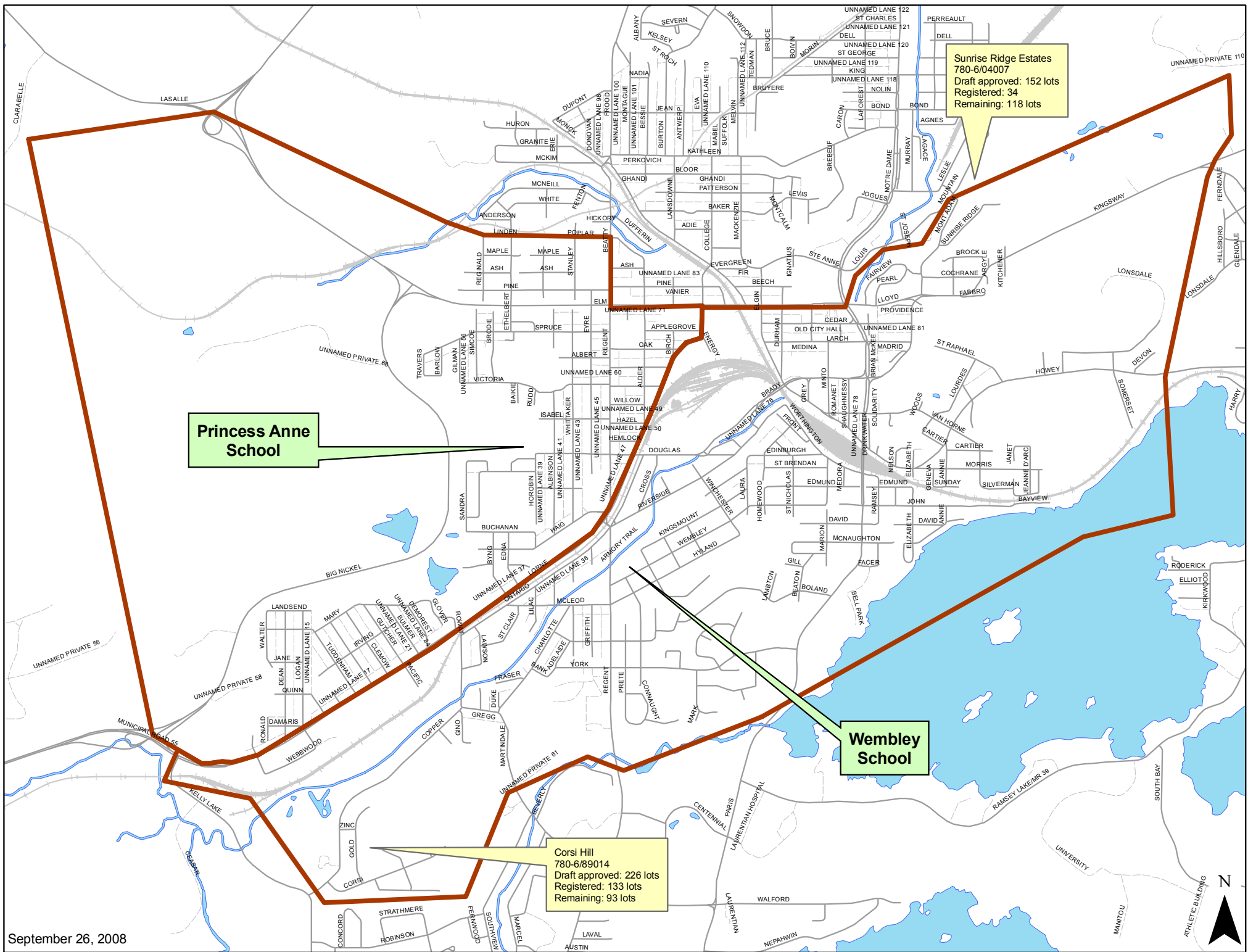
Permit fees
Architectural fees
Structural fees
Interior drywall/ceiling/paint repairs due to brick replacement
Window replacement due to brick replacement
Electrical relocation in existing school due to brick replacement
Ground and fencing repair

All of the above were included in the total project cost of \$400,000.

Diane Cayen-Arnold
Superintendent of Business
Rainbow District School Board
674-3171 ext. 7279

Please consider the environment before printing this e-mail!

"John Hamalainen" <john@consultingengineers.ca> on October 10, 2008 at 2:42 PM -0400 wrote:
Hello Sandi: We are working on our presentation for the October 20th Board meeting and one number we would like to have is the contract value for the 2004 brick repair done by Capital Construction.



Sunrise Ridge Estates
780-6/04007
Draft approved: 152 lots
Registered: 34
Remaining: 118 lots

Princess Anne
School

Wembley
School

Corsi Hill
780-6/89014
Draft approved: 226 lots
Registered: 133 lots
Remaining: 93 lots

34 Photographs