



Memorandum

vancouver school board



Date: 2009 October 06

ITEM 5

To: Committee II - Planning and Facilities

From: Mark Dale, Assistant Secretary-Treasurer
Doug McClary, Manager of Maintenance and Construction

Re: **AFG Impact Analysis**

This report outlines the impact the District would face if the Annual Facilities Grant (AFG) budget was not reinstated this year and in future years. There would be immediate, near term (over the next year), and long term impacts to the building infrastructure, the building envelope, and health and safety issues within the building. Further, due to the lack of AFG budget certainty prior to the 2009 summer period, the VSB staff reduced or postponed several planned maintenance projects.

The impacts are listed under each category below:

Previous Impact (this summer)

- **Asphalt Repairs** – with normal funding, \$200,000 worth of major repairs at various schools would have been completed. However, only \$12,000 of patch work was completed. It is estimated that there is a backlog of about \$1,000,000 worth of major repair work throughout the district. It is important to note that patching only resolves immediate safety issues and that long term repair costs will escalate further due to ongoing damage.
- **Lighting Upgrades** – completion of lighting energy upgrades at Thompson School would have been achieved at a cost of \$150,000. Due to contractual obligations to BC Hydro, this work will now be completed with Capital Reserve funds.
- **Heating Plant Upgrades** – replacement of an old steam heating plant would have been achieved at Osler Elementary – at an estimated cost of \$1,500,000 – reducing carbon footprint and creating energy savings. This work will now be indefinitely delayed.
- **Non-structural Seismic Upgrades** – priority non-structural seismic and energy upgrades to exterior windows at various schools would have been funded to \$200,000. This work will now be done through the remainder of the school year using capital reserve funds.
- **Carpet Replacements** - \$50,000 worth of carpet replacement work at various schools was put on indefinite hold.

- Washroom Upgrades - \$250,000 of washroom upgrade work was put on hold – this work will now be completed over the remainder of the school year using capital reserve funds.
- Flooring Repairs – \$100,000 of repairs to the sagging/settling gym floor at Pt. Grey were put on hold. A \$50,000 portion of this work will be done over the remainder of the school year using capital reserves. An additional \$50,000 worth of flooring replacement work has been put on indefinite hold.
- Site Safety Upgrades - \$225,000 of repairs to retaining walls was put on indefinite hold at Beaconsfield, Brock, and Van Horne. Only half of the retaining wall work was completed at Britannia over the summer, and an additional \$50,000 will be done to complete the project this fall using capital reserves

Total value of work put on hold - \$2.7 million

Immediate Impact

Complete loss of the AFG budget, (approximately \$10.6 million), would result in a reduction to the district's budget of approximately 50% and result in the immediate lay off of 50% of our trade's staff core list. Hence 62 out of 124 core list staff would face almost immediate layoff. The labour code considers a layoff of this proportion to be a "major disruption" to the workplace and therefore requires the employer to enter into discussions with the unions about an "adjustment plan" and which would include that all affected employees receive 60 days notice.

Maintenance related project work would be cancelled unless it was contractually obligated or part of our regulatory requirements. Remaining staff would be challenged to continue the minimum maintenance requirements of high priority health and safety inspections and emergent work. This list would include:

- Annual fire alarm,
- sprinkler testing, and
- boiler safety control inspections
- high priority emergencies such as floods, power outages, building security issues, loss of heat, failures in washroom facilities, communication systems failures, and vandalism.
- All asbestos abatement work (\$700,000 annual AFG budget item) is normally funded by the AFG budget. Asbestos work is essential work associated with repairs to leaks in insulated plumbing/heating lines containing asbestos insulation. Asbestos is also often found in the walls, window putty, ceilings, flooring, wiring, and heating systems within our older school buildings.

Near Term Impact

The limited manpower resources would mean that all lower priority maintenance work, including planned and preventative maintenance would slow down to the point where the building infrastructure systems would start to fail. This in fact would be the start of a "downward spiral" in which the planned/preventative maintenance cannot be suitably achieved. Consequently, further emergent failures would occur and require more staff re-directed from planned/preventative maintenance. The following list outlines some of those areas that would need to be discontinued:

- Lack of sufficient trades manpower could mean that washrooms would have toilets and other fixtures decommissioned as neither sufficient budget nor staff would be available to keep all fixtures working properly.
- AFG funding supplies the budget to replace aging/failing roofs on a planned basis, the lack of those funds would effectively cancel the program and the failing /leaking roofs would cause further damage to the building including damage to ceilings, walls, floors, electrical system, and structural components. Hence, the lack of planned/preventative maintenance ultimately has a multiplier effect on the downstream costs of maintaining our schools.
- Lack of funds to maintain the boiler replacement program at its present 50 year cycle rate would make it increasingly likely that total boiler failures could occur, in the least closing down the school, and at the worst jeopardizing the safety of the occupants.
- Lighting upgrade programs would also have to be cancelled, eliminating the opportunity for the school district to achieve ongoing reductions in operating costs as well as reducing its carbon footprint.
- Non-structural upgrade programs such as securing shelving, and windows will not be achieved resulting in exposing students and staff to greater risk should a seismic event occur.
- The existing exterior painting program protects the building envelope and is funded from the AFG budget. In the short term, eliminating the AFG budget for this program will create additional costs when funding allows the painting to proceed at a later date, as there will be substantially more work to do to prepare the exterior cladding for painting.
- The AFG budget also funds issues including loss prevention, educational functional improvements, technology, accessibility for the disabled, health and safety, site upgrades, and servicing. Without AFG funding all these issues will not be addressed, except by using the already overextended operating budget. The district will not only stagnate, it will start showing visible signs of deterioration to all its building systems and infrastructure.

Long Term Impact

In the longer term the lack of adequate exterior protection on the outside surfaces of the building will create building envelope failures, with the attendant issues of jeopardizing both the health of the buildings occupants and the structural integrity of the building. The continued lack of a roofing program would ultimately start to compromise the structural integrity and safety of all schools with older roofs.

The lack of a lighting and electrical distribution program would make day to day operation of the classroom unpredictable. Aging heating plants would create frequent uninhabitable schools through the winter months. The lack of adequate day to day maintenance would create a dilapidated appearance which would be immediately apparent upon entering the schools.

By comparison, a similar situation was realized two years ago in the Washington DC Public School System in which the infrastructure had been so neglected and underfunded in the previous years that a crisis was declared. They are now undergoing

a five year plan to upgrade their school buildings at approximately US\$300 million per year. Their analysis indicated that the lack of annual funding to maintain the infrastructure in previous years had increased the overall deterioration and contributed to significantly more cost to repair ultimately. The Washington School District is slightly smaller in enrolling students than the Vancouver School District.

Summary

The District is starting to get a better picture of the magnitude of its deferred maintenance and replacement backlog. Through the facility audits of sixty schools currently underway, we are developing an inventory of High to Low priority work within the buildings. The audits do not include any structures or grounds beyond the school building. The initial findings at the first 12 schools indicate many of the building components are beyond their intended life span and should be replaced. We expect a similar picture to be drawn for the remainder of schools of the same vintage within the district.

The estimated value of just the immediate maintenance requirements/renewals for the 12 schools is **\$63,523,448**, or \$66.64/sqft. The audit report also looks at the longer term maintenance requirements of the schools over the next 20 years. For the same 12 schools the longer term requirements would be a total of **\$315,225,037**.

If we use these schools as an indicator of the results for other facilities within the district and extrapolated the square footage cost, the figure for the immediate maintenance renewal issues throughout the district would total **\$538,222,891** with a total district maintenance requirement over the next 20 years of **\$2.645 billion or \$132,250,000 per year**.

This report is for information only.