

Alberta Infrastructure

School Facility Evaluation Project



MINCHAU ELEMENTARY SCHOOL Edmonton, Alberta

Edmonton Public Schools, District #7

Prime Consultant: Lotus Architecture

Mechanical: Suncord Engineering Ltd.

Electrical: KSJ Engineering Ltd.

April 2000

EXECUTIVE SUMMARY

In April 2000, Alberta Infrastructure engaged Lotus Architecture to evaluate conditions of several schools by using a facilities conditions form, developed by Alberta Infrastructure.

The school was built in 1983 and two sets of four attached portables (pods) were added in 1988 and 1992. There are two additional freestanding portables on site but have been taken off inventory because of poor condition. The school has not been upgraded nor modernized. The building is of steel frame construction with face brick and cedar siding exterior and flat roof. It also has a series of clear storey glazing with sloped roofs. The building is fully sprinklered. The school was evaluated on April 13, 2000.

Summary of Observations and Recommendations:

The following is noted:

Site and Building: Generally building and site conditions are good. Surface drainage conditions on east side require upgrading for both, grass areas and asphalt paving. Site drainage around main entrance should also be improved. The flat roof is in poor condition and should be replaced. Carpet in high traffic areas is worn out and should be replaced. Portables are generally in good condition.

Mechanical: In general, the school is heated and air conditioned by unitary heat pumps. The piping used to supply water to sprinkler heads is also used as the primary heating and cooling piping circuit. This piping circuit should be reviewed for proper operations and building code implications. Problems of inadequate heating have been reported. Several heat pumps have failed and failures are on-going. A detail analysis of school's heating requirements should be carried out and consideration should be given to replacing all the units or converting to a different heating system. All air systems should be re-balanced, including the heat pumps. Since the portables use central heating and ventilation systems, the portable mechanical conditions have been reported together with the main building's systems.

Electrical: Recommendation is to replace the fire alarm system panel; to upgrade lighting in classrooms and upgrade the PA/Intercom and telephone system.

Costs of Evaluation Ratings 3 or Less:

The estimated construction cost for the remedial work identified in the attached evaluation forms has been based on Costing Unit Rate Chart developed by the Alberta Infrastructure. The evaluator from his best judgement estimated items of unit costs, not identified in the chart.

1 Site related work	\$ 61,500.00
2 Building exterior	134,000.00
3 Building interior	21,000.00
4 Mechanical	49,500.00
5 Electrical	65,700.00
6 Portable structures	<u>18,500.00</u>
Total Estimated Cost:	\$ 350,200.00

Space Adequacy Assessment:

The existing area is deficient, based on School Building Area Guidelines and Supplement – Maximum Gross Area of School Building Projects.

Existing total area (sq. m.)	3,867.00 sq. m.
Projected required area (sq. m.)	3,983.21 sq. m.
Deficit (sq. m.)	-116.21 sq. m.

Further Investigation:

The piping, which supplies water to the sprinkler system, is also used to supply water to the unitary heat pumps throughout the school. The code implications and the pressure and flow implications should be reviewed in detail. The heating loads for the school should be recalculated and compared to the capacities of the installed equipment.

Available Supplementary Information:

Mini-plans were supplied to the consultant. The plans have been updated and attached to this report. No other reports are available.