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Executive Summary

In March 2000, Alberta Infrastructure engaged Building Science Specialists to evaluate the condition of 21 schools within the Calgary Board of Education. A standardized form, developed by Alberta Infrastructure and supplied to the evaluation team by the regional coordinator was used to document the condition and recommendations.

The original building was constructed in 1961. An open courtyard was enclosed in 1964 to form a larger library and study and lunchroom area. Minor renovations have been made to the building, upgrading two CTS areas, some Science Labs and the Home Economics area as well as the drama change rooms.

The school is constructed of concrete slab on grade and suspended slabs at the upper floors and tunnels. Walls are poured in place concrete beams and columns with curtain wall infill. Gymnasium and shop areas are OWSJ with T&G wood decking and brick veneer infill between columns. Interior walls are generally brick, with some concrete block and gypsum board and some demountables. Roofs are all flat.

Summary of Observations and Recommendations

The school jurisdiction has a roof replacement program. No reports are available for the roof and further investigation is required. The presence of hazardous materials in the building is expected in piping insulation, and stipple ceilings in storage areas. These issues are dealt with as the jurisdiction undertakes upgrading. The costs associated with removing hazardous materials have not been included in any of the costing.

Architectural

The exterior of the building is finished in curtain walls panels. Many glazing sections have blown seals. Several of the metal panels are rusting and leaking. The wall system requires replacement. The exposed concrete beams and columns are showing extensive blistering and peeling of the paint and should be repainted, or covered in cladding as part of the window wall upgrade. Curb cuts for handicapped parking and building access are required. Handicapped accessibility in the building has been addressed. Some of the science room lab counters need to be replaced, as do many of the toilet and shower partitions. New boilers were installed in the basement and existing firespray was removed. This acted as insulation to the floor above and should be replaced.

Mechanical

The heating plant is new to the building. The ventilation system requires many upgrades and replacement of old components. The Automotive shop is unsafe and need a new MAU and proper CO exhaust system. Humidification is required to be added to all the ventilation units.

Electrical

The lighting throughout should be upgraded to T-8's. A new telephone intercom system should be added. The new computer hubs should be provided with additional cooling.

Costing

The estimated construction costs for the remedial work in the attached evaluation form has been based on the Costing Unit Rate Chart developed by Alberta Infrastructure. Where this data was incomplete or inappropriate to the recommended work, unit costs based on the local Calgary market were used.

1.	Site related work	\$11,000.00
2.	Building exterior	\$1,390,000.00
3.	Building interior	\$185,000.00
4.	Mechanical systems	\$344,000.00
5.	Electrical systems	\$392,500.00
6.	Portables – n/a	<hr/>
	Total Estimated Costs	\$2,322,500.00

Space Adequacy

The existing area, according to the School Building Area Guidelines and Supplement – maximum Gross Area of School Building Projects is deficient.

Existing Total Gross Area (square metres)	15803.8
Projected required total gross area (square metres)	<u>18317.0</u>
Overage / (Deficiency) (square metres)	(2513.2)

Further Investigation

Further investigation is required to determine the impact of the removal of hazardous material during any renovation work. Code related issues with respect to fire separations, their locations and completeness should be reviewed. Cracking of columns and beams relative to brick infill is noted and should be reviewed. There is no report on the roof; it requires further review, as do the roof accessories.

School Plan Data Information

The plan information for the building was supplied by the school jurisdiction. Area information was provided by Alberta Infrastructure. The information generally appears to be up to date with some minor room function revisions.

**Henry Wise Wood Senior High School
Project
Calgary Board of Education**

School Facilities Evaluation

April 16, 2000

Building Science Specialists