RECAPP Facility Evaluation Report

Medicine Hat S Dist #76



Vincent Massey School
B3787A
Medicine Hat

Medicine Hat - Vincent Massey School (B3787A)

Facility Details

Building Name: Vincent Massey School **Address:** 901 Hargrave Way N. W.

Location: Medicine Hat

Building Id: B3787A
Gross Area (sq. m): 3,314.05
Replacement Cost: \$10,697,000

Construction Year: 1960

Evaluation Details

Evaluation Company: DC Stewart Architect Limited

Evaluation Date: November 2 2011

Evaluator Name: Don Stewart

Total Maintenance Events Next 5 years: \$2,054,500 5 year Facility Condition Index (FCI): 19.21%

General Summary:

Vincent Massey School was developed, in 1960, with an area of 2208 sm. An addition of classrooms was added to the original school in 1965, and a gymnasium storage area in 1986, resulting in a total area of 3314 sm. The building is one storey, although the gymnasium rises higher than the other parts of the building. Part of the roof is shallow sloped, and is finished in the original asphalt and gravel membrane, which requires continual repairs. The balance of the roof is a two ply SBS membrane. The exterior of the school is a combination of brick masonry veneer, anodized aluminum windows and aluminum doors and frames. The interior is constructed of durable materials and has been well maintained. The capacity of this school is 475 students and the current enrollment is 285, in grades K to 6. Overall, this school is in acceptable condition.

Structural Summary:

Foundations for this school building are primarily concrete spread footings and reinforced concrete grade beams, with concrete slab floors on grade. Walls are primarily concrete block masonry, with some gypsum board partitions. The roof structure is primarily steel columns and beams, with exposed cedar tongue and groove decking. The 1986 Addition has metal deck on steel joists supported by loadbearing concrete block walls. No major upgrade work, associated with the structural components, was identified with this building. Overall, the structure of this school building is in acceptable condition.

Envelope Summary:

The exterior of this school building has a finish of modular brick masonry veneer, on concrete block supporting wall construction. The window units are double glazing on the original and sealed double glazed units on the addition, in anodized aluminum frames, with some vents in classrooms and offices. Exterior entrance doors are safety glazed anodized aluminum, in aluminum frames. Service doors are flush steel in pressed steel frames, with a paint finish. The original built-up asphalt roof remains on the gymnasium, while the rest of the roofing was upgraded to a two ply SBS membrane. Overall, the building envelope is in acceptable condition.

Interior Summary:

Interior division in this facility is mostly concrete block masonry, with some partitions constructed of wood stud framing and gypsum board finish. All interior walls and partitions are painted. Flooring is mostly vinyl asbestos tiles, with some classrooms and offices finished with carpet. There is some ceramic tile in the washrooms, and quarry tile in the entrances. The gymnasium is provided with a wood sports floor finish. Ceilings are primarily glue-on acoustic tile. Washrooms, janitor rooms, storage rooms, and locker rooms are painted gypsum board ceilings. Interior doors are mostly solid core wood in a wood frame, painted. There is a considerable amount of plywood millwork throughout, finished with plastic laminate and paint. Overall, the interiors of this facility are in acceptable condition.

Mechanical Summary:

The school has had very little new mechanical equipment installed since the original construction in 1960 and addition in 1965. Vitreous china fixtures are used in the washrooms with Bradley sinks installed in the student washrooms in the 1965 wing. Stainless steel sinks with bubblers are installed in classrooms. The domestic water isolation valves need replacement. A single tank type domestic water heater with a circulation pump provides domestic hot water to the school. The school is not fire sprinkled but has multi-purpose dry type fire extinguishers and fire hose cabinets throughout.

The school's heating is provided with hot water heating boilers installed in 2008. This boiler plant replaced two separate heating plants from 1960 and 1965. The school ventilation is provided by ceiling mounted constant volume air handlers. Air handlers serving the 1960 portion utilize a combustible return air plenum. The air handlers and

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corresponding condensing units require replacement. The gymnasium does not have a ventilation system. Exhaust fans are recommended for replacement.

An older electric control system controls the 1960 school and a pneumatic system controls the mechanical systems in the 1965 school. Pneumatic components have started to fail. The controls system should be replaced. Major equipment problems are driving the need for ancillary system replacements.

Overall, the mechanical systems are in marginal condition.

Electrical Summary:

The school has a 600 amp 120/208 volt 3 phase 4 wire Federal Pioneer main service that was installed in 2002. The service is fed from a 150 KVA utility owned pad mounted transformer. The branch circuit panelboards installed through out the facility have surpassed their service life, are obsolete and should be replaced. The lighting throughout the facility consists of T12 fluorescents in the corridors, offices and classrooms. Gymnasium lighting consists of metal halide high bay fixtures. It is recommended that the T12 lighting be upgraded to T8 to reduce energy costs. The incandescent exit lights include self contained battery packs. The emergency lighting utilizes battery packs throughout.

The fire alarm system is an Edwards 2820, and has surpassed its expected service life. The system is no longer manufactured and replacement should be considered. The telephone system and paging were upgraded in 2005. The telephone system is a VOIP system complete with handsets in each classroom and office.

Several components within the school have surpassed the expected lifecycle replacement dates. Although there were no visible signs of deterioration noted, increased maintenance costs should be expected.

Overall, the electrical systems are rated as in acceptable condition.

Rating Guide			
Condition Rating	Performance		
1 - Critical	Unsafe, high risk of injury or critical system failure.		
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.		
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.		
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.		
5 - Good	Meets all present requirements. No deficiencies.		
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.		

S1 STRUCTURAL

A1010 Standard Foundations*

Reinforced concrete foundation walls, on concrete strip footings, and reinforced concrete piers on concrete pad footings.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

A1030 Slab on Grade*

Reinforced concrete slab on grade throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B1010.02 Structural Interior Walls Supporting Floors (or Roof)*

Concrete block masonry walls throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B1020.01 Roof Structural Frame*

Structural steel columns and beams supporting tongue and groove cedar decking.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B1020.03 Roof Decks, Slabs, and Sheathing*

The 1960 and 1965 flat roof deck is assembled of cedar tongue and groove decking, supported on steel beams. The small 1986 addition roof deck is constructed of ribbed steel decking, supported on open web steel joists

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B1020.04 Canopies*

Structural steel columns and beams, supporting tongue and groove cedar roof decking.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

Modular clay brick masonry throughout. Lower portions have been painted to obscure graffiti.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.01.06.03 Metal Siding**

Prefinished metal, vertical ribbed panels under windows of original building, and over glass block windows of gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable199140APR-12

Event: Replace 130 sm prefinished metal siding

TypeYearCostPriorityLifecycle Replacement2031\$38,000Unassigned

Updated: APR-12

B2010.01.09 Expansion Control: Ext. Wall*

Expansion control joints located in brick masonry at appropriate locations.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.01.11 Joint Sealers (caulking): Ext. Wall**

Joints caulked around window frames, door frames, and between dissimilar materials.

RatingInstalledDesign LifeUpdated4 - Acceptable199120APR-12

Event: Replace 1300 lm joint caulking

TypeYearCostPriorityLifecycle Replacement2015\$38,000Unassigned

Updated: APR-12

B2010.02.03 Masonry Units: Ext. Wall Const.*

Brick masonry walls are backed up with concrete block masonry units.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.02.03.04 Glass Masonry Units (Glass Block): Ext. Wall Const.

Glass block wall between main entry doors. Glass block exterior windows in gymnasium are covered by exterior metal panels.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.03 Exterior Wall Vapour Retarders, Air Barriers, and Insulation*

Brick veneer with air space and semi-rigid fiberglass cavity wall insulation on vapor barrier adhesive on loose fill insulated concrete block.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.06 Exterior Louvers, Grilles, and Screens*

Painted metal mechanical wall louvers.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2010.09 Exterior Soffits*

Exposed cedar roof deck, at entrances, with exposed, painted steel beams.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1960 Section

Double glazed vertically hung windows, anodized aluminum frames.

RatingInstalledDesign LifeUpdated4 - Acceptable196040APR-12

Event: Replace 134 double glazed window units

TypeYearCostPriorityLifecycle Replacement2015\$263,000Unassigned

Updated: APR-12

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1965 Section

Sealed double glazing, in anodized aluminum frames, some awning vents.

RatingInstalledDesign LifeUpdated4 - Acceptable196540APR-12

Event: Replace 24 sealed double glazed windows

TypeYearCostPriorityLifecycle Replacement2015\$47,000Unassigned

Updated: APR-12

B2030.01.01 Aluminum-Framed Storefronts: Doors**

Insulated aluminum doors and sidelights, with sealed glazing in top half, insulated aluminum panels in lower half. Thermally broken aluminum frames. Rim panic hardware.

RatingInstalledDesign LifeUpdated4 - Acceptable199130APR-12

Event: Replace 14 glazed aluminum entrance doors

TypeYearCostPriorityLifecycle Replacement2021\$45,000Unassigned

Updated: APR-12

B2030.02 Exterior Utility Doors**

Exterior utility doors are flush steel in pressed steel frames, paint finish.

RatingInstalledDesign LifeUpdated4 - Acceptable196040APR-12

Event: Replace 3 flush steel utility doors

TypeYearCostPriorityLifecycle Replacement2015\$3,000Unassigned

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)** - Gymnasium

Built-up asphalt and gravel roofing, to gymnasium and to 1986 gymnasium storage addition.

RatingInstalledDesign LifeUpdated3 - Marginal198025APR-12

Event: Replace 500 sm asphalt and gravel roofing

Concern:

Roofing is worn, bubbled and uneven. Leakage has been

noted.

Recommendation:

Replace roofing with upgraded insulation and 2 ply SBS

roofing membrane.

TypeYearCostPriorityFailure Replacement2013\$84,000Medium

Updated: APR-12

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)**

Two ply SBS roofing installed on balance of roof, except for gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable200025APR-12

Event: Replace 2400 sm SBS roof membrane

TypeYearCostPriorityLifecycle Replacement2025\$402,000Unassigned

Updated: APR-12

B3010.08.02 Metal Gutters and Downspouts**

Prefinished metal gutters and downspouts at long sides of gymnasium roof.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace 75 Im gutters and downspouts

TypeYearCostPriorityLifecycle Replacement2015\$2,000Unassigned

Updated: APR-12

B3020.01 Skylights**

Double domed acrylic skylight on aluminum curbs in original building.

RatingInstalledDesign LifeUpdated4 - Acceptable196025APR-12

Event: Replace 14 plastic domed skylights

Recommendation:

Replace skylight domes, (10 units).

TypeYearCostPriorityLifecycle Replacement2015\$15,000Unassigned

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Concrete block masonry walls, and wood studs partitions with gypsum board both sides.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1010.03 Interior Operable Folding Panel Partitions**

Vinyl clad, steel framed, acoustic moveable wall between classrooms in the 1965 addition.

RatingInstalledDesign LifeUpdated4 - Acceptable196530APR-12

Event: Replace 100 sm folding panel partitions

TypeYearCostPriorityLifecycle Replacement2015\$109,000Unassigned

Updated: APR-12

C1010.05 Interior Windows*

Single glazed, in wood frames, painted.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1010.07 Interior Partition Firestopping*

Where visible, penetrations of partitions appear to be fire sealed.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1010.08 Other Partitions*

Glazed brick walls in playground entrance mudrooms and in student washrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1020.01 Interior Swinging Doors (& Hardware)*

Original solid core wood doors in wood frames, paint finish. Worn, but still serviceable.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1020.03 Interior Fire Doors*

Rated flush metal and wood doors in pressed steel frames, to storage and mechanical rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1020.07 Other Interior Doors*

Steel rollup shutter to kitchen opening off gymnasium. Small steel rollup shutter at floor level to gymnasium storage room to move large gymnastic mat into gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-12

C1030.01 Visual Display Boards**

Whiteboards and tack boards in aluminum frames. No chalkboards.

RatingInstalledDesign LifeUpdated4 - Acceptable200620APR-12

Event: Replace 90 visual diaplay boards

TypeYearCostPriorityLifecycle Replacement2026\$56,000Unassigned

Updated: APR-12

C1030.02 Fabricated Compartments (Toilets/Showers)**

Prefinished metal toilet partitions in student washrooms, floor mounted, overhead braced.

RatingInstalledDesign LifeUpdated4 - Acceptable199230APR-12

Event: Replace 15 steel toilet partitions

TypeYearCostPriorityLifecycle Replacement2022\$17,000Unassigned

Updated: APR-12

C1030.08 Interior Identifying Devices*

Engraved plastic and metal door signs.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1030.10 Lockers**

Prefinished steel, half height lockers, located in corridors.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace 150 prefinished steel lockers

TypeYearCostPriorityLifecycle Replacement2015\$71,000Unassigned

Updated: APR-12

C1030.12 Storage Shelving*

Painted and varnished wood shelving in storage and janitor rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1030.14 Toilet, Bath, and Laundry Accessories*

Chrome, single roll toilet tissue dispensers. Plastic liquid soap dispensers. Enameled steel paper towel dispensers. Chrome framed glass mirrors. Stainless steel grab bars.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C1030.17 Other Fittings*

Prefinished metal, fold down boot racks in vestibules.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C3010.04 Gypsum Board Wall Finishes (Unpainted)*

Gypsum board on wood and metal stud walls.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C3010.06 Tile Wall Finishes**

Glazed ceramic wall tile on furred out section where wall hung" Bradley" washbasins are installed.

RatingInstalledDesign LifeUpdated4 - Acceptable200440APR-12

Event: Replace 10 sm ceramic wall tile

TypeYearCostPriorityLifecycle Replacement2044\$2,000Unassigned

Updated: APR-12

C3010.11 Interior Wall Painting*

Concrete block walls and gypsum board partitions are painted.

RatingInstalledDesign LifeUpdated4 - Acceptable20000APR-12

C3020.01.02 Painted Concrete Floor Finishes*

Painted concrete floors in mechanical and service rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19900APR-12

C3020.02 Tile Floor Finishes**

Original quarry tile flooring in entries and washrooms of building.

RatingInstalledDesign LifeUpdated4 - Acceptable196050APR-12

Event: Replace 300 sm quarry tile flooring

TypeYearCostPriorityLifecycle Replacement2015\$76,000Unassigned

Updated: APR-12

C3020.04 Wood Flooring**

Cushioned hardwood sports flooring in the gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace 450 sm hardwood flooring

TypeYearCostPriorityLifecycle Replacement2015\$112,000Unassigned

Updated: APR-12

C3020.07 Resilient Flooring**

Original vinyl asbestos tile, with rubber base, in hallways and classrooms throughout. Tile appears sound and not broken or cracked.

RatingInstalledDesign LifeUpdated4 - Acceptable196020APR-12

Event: Replace 1800 sm vinyl asbestos tile flooring

TypeYearCostPriorityLifecycle Replacement2015\$92,000Unassigned

Updated: APR-12

C3020.08 Carpet Flooring**

Level loop carpet in administration areas and in library.

RatingInstalledDesign LifeUpdated4 - Acceptable199615APR-12

Event: Replace 250 sm carpet flooring

TypeYearCostPriorityLifecycle Replacement2015\$16,000Unassigned

Updated: APR-12

C3030.07 Interior Ceiling Painting*

Gypsum board ceilings and bulkheads, and exposed steel beams and varnished sections of exposed wood roof deck in corridors, are all painted.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

C3030.09 Other Ceiling Finishes* - Glued Acoustic Tile

Mineral fibre acoustic ceiling tile, adhesive applied to backup.

Rating Installed Design Life Updated 4 - Acceptable 1960 25 APR-12

C3030.09 Other Ceiling Finishes* - Mechanical Room

Asbestos cement boards on ceiling in 1960 Section mechanical room.

Rating Installed Design Life Updated 2 - Poor 1960 0 APR-12

Remove and replace cement asbestos board Event:

ceilings

Concern:

Hazardous material could be disturbed when doing renovating work in mechanical room such as drilling to install pipe hangers.

Recommendation:

Replace asbestos cement boards with fire rated gypsum board.

Type Priority Year Cost Hazardous Materials 2013 \$10,000 High Abatement

S4 MECHANICAL

D2010.04 Sinks**

Stainless steel sink - 11 Units Enameled steel sink - 8 Units Janitor poly sink - 2 Units Wall hung SS sink - 2 Units

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace Sinks - 23 Units

TypeYearCostPriorityLifecycle Replacement2015\$35,000Unassigned

Updated: APR-12

D2010.08 Drinking Fountains/Coolers**

Wall mounted electric cooled drinking fountains - 3 Units

RatingInstalledDesign LifeUpdated4 - Acceptable199535APR-12

Event: Replace Drinking Fountains - 3 Units

TypeYearCostPriorityLifecycle Replacement2030\$9,000Unassigned

Updated: APR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - 1960

WC flush valve - 16 Units Urinal floor mounted - 9 Units Lav wall hung China - 2 Units Lav drop in China - 10 Units Lav drop in enameled steel - 2 Units

RatingInstalledDesign LifeUpdated4 - Acceptable196035APR-12

Event: Replace Washroom Fixtures - 39 Units

TypeYearCostPriorityLifecycle Replacement2015\$60,000Unassigned

Updated: APR-12

D2010.10 Washroom Fixtures (WC, Lav, UrnI)** - 1965 Student W/R's

Bradley wall mounted infrared wash fountains - 2 Units

RatingInstalledDesign LifeUpdated4 - Acceptable200435APR-12

Event: Replace Bradley Sinks - 2 Units

TypeYearCostPriorityLifecycle Replacement2039\$6,000Unassigned

Updated: APR-12

D2020.01.01 Pipes and Tubes: Domestic Water*

Copper distribution throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D2020.01.02 Valves: Domestic Water**

Gate valves where exposed.

RatingInstalledDesign LifeUpdated3 - Marginal196040APR-12

Event: Replace Valves - 12 Units

Concern:

Valves no longer hold. **Recommendation:**Replace with ball valves.

TypeYearCostPriorityFailure Replacement2013\$8,000Low

Updated: APR-12

D2020.01.03 Piping Specialties (Backflow Preventers)**

Backflow preventers provided for domestic water and fire protection.

RatingInstalledDesign LifeUpdated4 - Acceptable199520APR-12

Event: Replace Backflow Preventors - 2 Units

TypeYearCostPriorityLifecycle Replacement2015\$5,000Unassigned

Updated: APR-12

D2020.02.02 Plumbing Pumps: Domestic Water**

Inline type, domestic hot water circulation pump.

RatingInstalledDesign LifeUpdated4 - Acceptable199520APR-12

Event: Replace Recirc Pump - 1 Unit

TypeYearCostPriorityLifecycle Replacement2015\$1,500Unassigned

Updated: APR-12

D2020.02.06 Domestic Water Heaters**

Tank type natural gas, natural draft. John Wood model JW40S34V-04 with 13.2kW input, 150 litre tank, and 109 l/hr recovery.

RatingInstalledDesign LifeUpdated4 - Acceptable200020APR-12

Capacity Size Capacity Unit kW

Event: Replace Domestic Water Heater - 1 Unit

TypeYearCostPriorityLifecycle Replacement2020\$5,000Unassigned

Updated: APR-12

D2020.03 Water Supply Insulation: Domestic*

Fiberglass insulation with jacket.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D2030.01 Waste and Vent Piping*

Cast iron and DWV where exposed.

RatingInstalledDesign LifeUpdated4 - Acceptable19600JAN-07

D2030.02.04 Floor Drains*

Floor drains are provided in the mechanical room, washrooms and utility rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D2040.01 Rain Water Drainage Piping Systems*

Rain water is collected internally and ties into the municipal service.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D2040.02.04 Roof Drains*

Roof drains are provided.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D3010.02 Gas Supply Systems*

Natural gas meter and regulator assembly located outside the boiler room. Steel natural gas piping throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600JAN-07

D3020.02.01 Heating Boilers and Accessories: H.W.**

Heating boiler upgrade in 2008 combined two old boiler plants into one. Two Lochinvar Power Fin hot water boilers provided, model PBN1302. Each boiler has a circulation pump. Grundfos building heating pumps were also provided at the time of the upgrade.

RatingInstalledDesign LifeUpdated5 - Good200835APR-12

Capacity Size Capacity Unit kW

Event: Replace HW Boiler and Accessories - 2 Boilers

TypeYearCostPriorityLifecycle Replacement2043\$120,000Unassigned

Updated: APR-12

D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler**

Each boiler is vented individually with double wall stainless steel venting. Each boiler has a direct combustion air duct.

RatingInstalledDesign LifeUpdated4 - Acceptable200835APR-12

Event: Replace Boiler Venting - 4m Each, Two Vents

TypeYearCostPriorityLifecycle Replacement2043\$15,000Unassigned

Updated: APR-12

D3020.02.03 Water Treatment: H. W. Boiler*

Chemical pot feeders and micron filters provided. Water treatment program followed. Chemical/water feed tank and pump provided, Axiom model.

RatingInstalledDesign LifeUpdated4 - Acceptable20080APR-12

D3030.06.02 Refrigerant Condensing Units**

Rebuilt 1967 condensing unit serves 1960 classroom air handlers.

Rebuilt 1967 condensing unit serves 1965 addition.

RatingInstalledDesign LifeUpdated2 - Poor196725APR-12

Event: Replace Refrigerant Condensing Units - 2 Units

Concern:

Condensing units have far exceeded their life expectancy.

Reliability and operating costs are a concern.

Recommendation:

Replace both condensing units with new units.

TypeYearCostPriorityFailure Replacement2013\$18,000Medium

Updated: APR-12

D3040.01.01 Air Handling Units: Air Distribution** - 1960

There are three constant volume air handlers with supply fans, heating coils, cooling coils and filters. Two units are installed above T-bar ceiling and have poor maintenance access.

RatingInstalledDesign LifeUpdated3 - Marginal196030APR-12

Event: Replace Air Handling Units - 2 Units

Concern:

Existing air handling units have far exceeded their life expectancy and reliability is a concern. It is also difficult to access as the 1960 units as they are located in a ceiling plenum.

Recommendation:

Provide new air handlers on the roof.

TypeYearCostPriorityFailure Replacement2013\$50,000High

Updated: APR-12

D3040.01.01 Air Handling Units: Air Distribution** - 1965

Constant volume air handler with supply fan, heating coil, cooling coil and filters. The air handler in the 1965 portion is located in a penthouse.

RatingInstalledDesign LifeUpdated3 - Marginal196530APR-12

Event: Replace 1965 Penthouse AHU

Concern:

Existing air handling unit has exceeded its life expectancy, reliability is a concern.

Recommendation:

Replace air handling unit.

TypeYearCostPriorityFailure Replacement2013\$25,000Medium

Updated: APR-12

D3040.01.03 Air Cleaning Devices: Air Distribution*

Disposable filter media is provided.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D3040.01.04 Ducts: Air Distribution*

Galvanized steel supply ducts, corridor return air.

RatingInstalledDesign LifeUpdated2 - Poor19600APR-12

Event: Duct R/A to AHU (based on GFA of 3,314 sm)

Concern:

Air handling units in the 1960 portion utilize a combustible return air plenum.

Recommendation:

Duct the R/A to the 1960's air handling units.

TypeYearCostPriorityCode Upgrade2013\$15,000High

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Sidewall supply grilles, door or above door grilles transfer air to the corridor.

RatingInstalledDesign LifeUpdated4 - Acceptable19600JAN-07

D3040.03.01 Hot Water Distribution Systems**

Steel and copper piping throughout, generally gate valve used for isolation purposes. New heating piping was installed in 2008 to inter-connect the original boiler plants. Portions of the heating distribution in the 1960 portion of the school is located in a crawlspace.

RatingInstalledDesign LifeUpdated4 - Acceptable196040APR-12

Event: Replace Hydronic Heating Distribution System

(GFA)

TypeYearCostPriorityLifecycle Replacement2015\$300,000Unassigned

Updated: APR-12

D3040.04.01 Fans: Exhaust**

Roof mounted gymnasium exhaust and washroom exhaust fans, mushroom cap style - 12 Units

RatingInstalledDesign LifeUpdated3 - Marginal196030APR-12

Event: Replace Exhaust Fans - 12 Units

Concern:

Exhaust fans have surpasses their life expectancy, weather

has deteriorated the fans.

Recommendation:

Replace all exhaust fans.

TypeYearCostPriorityFailure Replacement2013\$30,000Medium

Updated: APR-12

D3040.04.03 Ducts: Exhaust*

Exhaust ducts are constructed of galvanized sheet metal.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust grilles are provided in utility rooms and washrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)**

Lennox packaged gas heating and DX cooling RTU serves classroom 113 and 118. Model GS164111005P.

RatingInstalledDesign LifeUpdated4 - Acceptable199130APR-12

Capacity Size Capacity Unit kW

Event: Replace RTU - 1 Unit

TypeYearCostPriorityLifecycle Replacement2021\$7,500Unassigned

Updated: APR-12

D3050.05.01 Convectors**

Convectors installed in corridors.

RatingInstalledDesign LifeUpdated4 - Acceptable196040APR-12

Event: Replace Convectors - 6 Units

TypeYearCostPriorityLifecycle Replacement2015\$12,000Unassigned

Updated: APR-12

D3050.05.02 Fan Coil Units**

Surface mounted cabinet heaters in entrance vestibules.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace Cabinet Heaters - 5 Units

TypeYearCostPriorityLifecycle Replacement2015\$12,000Unassigned

Updated: APR-12

D3050.05.03 Finned Tube Radiation**

Slope top cabinets installed on perimeter walls and gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable196040APR-12

Event: Replace Finned Tube Radiation (GFA)

TypeYearCostPriorityLifecycle Replacement2015\$150,000Unassigned

Updated: APR-12

D3050.05.06 Unit Heaters**

Propeller driven hot water unit heater in the old mechanical room.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace Unit Heater - 1 Unit

TypeYearCostPriorityLifecycle Replacement2015\$3,500Unassigned

Updated: APR-12

D3060.02.01 Electric and Electronic Controls**

Electric controls installed in the 1960 classrooms to control perimeter radiation.

RatingInstalledDesign LifeUpdated3 - Marginal196030APR-12

Event: Replace Control System (1960 Terminal Heating

Control)

Concern:

Replacement control components are no longer available, no energy saving features.

Recommendation:

Replace terminal heating controls.

TypeYearCostPriorityFailure Replacement2013\$20,000Medium

D3060.02.02 Pneumatic Controls**

Pneumatic controls installed on the 1965 classrooms to control perimeter radiation.

RatingInstalledDesign LifeUpdated3 - Marginal196540APR-12

Event: Replace Pnuematic Controls (1965 Terminal

Heating Control)

Concern:

Pneumatic system is unreliable, parts are difficult to locate.

Recommendation:

Replace pnuematic controls.

TypeYearCostPriorityFailure Replacement2013\$25,000Medium

Updated: APR-12

D4020 Standpipes*

Fire hose cabinets throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Multipurpose, dry type, fire extinguishers throughout. Fire extinguishers are on an annual service plan.

RatingInstalledDesign LifeUpdated4 - Acceptable20050APR-12

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The facility is fed from a 150kVA 13800:120/208 volt utility owned pad mount transformer.

RatingInstalledDesign LifeUpdated5 - Good200240APR-12

Capacity Size Capacity Unit kVA

D5010.03 Main Electrical Switchboards (Main Distribution)**

The main service was upgraded in 2002 to a 600A, 208/120VAC, three phase four wire main main fused disconnect that feeds a federal pioneer 600 amp Central Distribution Panel (CDP). There is limited room for expansion.

RatingInstalledDesign LifeUpdated4 - Acceptable200240APR-12

Capacity Size Capacity Unit amps

Event: Replace 600 amp Fusible Disconnect and 600 amp

Central Distribution Panel

TypeYearCostPriorityLifecycle Replacement2042\$65,500Unassigned

Updated: APR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)**

Several branch circuit panels are installed throughout the facility. All the panels appear to be Federal Pioneer.

RatingInstalledDesign LifeUpdated3 - Marginal196030APR-12

Event: Replace panelboards (Approx 10 Panels)

Concern:

The existing panel boards have far surpassed their exoected service life and replacement beakers are obsolete.

Recommendation:

Replace branch circuit panels.

Consequences of Deferral:

The risk of extended power outages exist as breakers are no longer readily available, if a failure occurs.

TypeYearCostPriorityFailure Replacement2013\$35,500Medium

Updated: APR-12

D5010.07.02 Motor Starters and Accessories**

Several loose starters are installed throughout the facility. The starters are from the original 1960 construction.

RatingInstalledDesign LifeUpdated3 - Marginal196030APR-12

Event: Replace motor starters (Approx 10 starters)

Concern:

The existing motor starters have far surpassed their expect service life and are no longer manufactured. Finding replacement parts will be very difficult.

Recommendation:

Replace the starters.

Consequences of Deferral:

The equipment controlled by the starters may not be operational for extended period of time while replacements are obtained, should the starters fail.

TypeYearCostPriorityFailure Replacement2013\$7,500Medium

Updated: APR-12

D5020.01 Electrical Branch Wiring*

Branch circuit wiring consists of single conductor cable in conduit. Teck cable is used for some panel feeders, AC90 cable for light fixture drops, and flexible conduit is used for connection of mechanical equipment. The use of PVS conduit, complete with single conductor cable, was noted for installations on the roof.

RatingInstalledDesign LifeUpdated3 - Marginal19600APR-12

Event: Replace the PVC conduit on the Roof with EMT

Concern:

The PVC conduit is pulling apart at the couplings and joints, which then exposes the branch circuit conductors.

Recommendation:

Replace all conduit with EMT complete with Rain tight Fittings.

Consequences of Deferral:

The conductors that are exposed to the elements could fail over time, which would cause the equipment that is controlled by those conductors to be in operable.

TypeYearCostPriorityFailure Replacement2013\$10,000Low

Updated: APR-12

D5020.02.01 Lighting Accessories: Interior (Lighting Controls)*

Interior lighting is controlled with line voltage toggle switches throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D5020.02.02.02 Interior Fluorescent Fixtures**

T12 fluorescent lighting complete with magnetic ballasts throughout, including surface mounted fixtures with acrylic lenses in the corridor and suspended eggcrate style fixtures in classrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable196030APR-12

Event: Replace T12 fluorescent fixtures (Approx. 395)

Fixtures)

TypeYearCostPriorityLifecycle Replacement2015\$98,500Unassigned

Updated: APR-12

Event: Retrofit T12 fixtures with T8 lamps and electronic

ballasts (Approx. 395 Fixtures)

Concern:

The existing T12 lamps and magnetic ballasts are energy

inefficient.

Recommendation:

Retrofit the existing lamps and ballasts with T8 and electronic ballasts, replace damaged light control devices and clean

fixtures.

Consequences of Deferral:

Increased energy costs and maintenance costs.

<u>Type</u> <u>Year</u> <u>Cost</u> <u>Priority</u> Energy Efficiency Upgrade 2013 \$75,500 Low

D5020.02.02.03 Interior Metal Halide Fixtures*

The facility has metal halide high bay fixtures installed in the gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

Event: Replace Metal Halide Fixtures With T5 High Output

Fixtures (Approx. 20 Fixtures)

Concern:

Metal halide fixtures are not as energy efficient as the new T5 fluorescent high output fixtures.

Recommendation:

Replace the metal halide fixtures with T5 fluorescents

throughout the gymnasium. Consequences of Deferral: Increased energy costs.

TypeYearCostPriorityEnergy Efficiency Upgrade2013\$15,500Low

Updated: APR-12

D5020.02.03.02 Emergency Lighting Battery Packs**

There are several remote mounted emergency lights with integral battery packs. These fixtures were installed in 1982.

RatingInstalledDesign LifeUpdated4 - Acceptable198220APR-12

Event: Replace approx. 10 battery packs

TypeYearCostPriorityLifecycle Replacement2015\$7,500Unassigned

Updated: APR-12

D5020.02.03.03 Exit Signs*

Incandescent exit lights are installed throughout the facility. Each exit light has a self contained battery pack to provide emergency power during loss of power.

RatingInstalledDesign LifeUpdated4 - Acceptable19820APR-12

D5020.03.01.01 Exterior Incandescent Fixtures*

Surface mounted, decorative bronze down lighting cans are installed around the main entrance to the school.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Some wall mounted high pressure sodium fixtures are installed above the doors that are not covered by the incandescent down lighting. Some surface mounted high pressure sodium fixtures are also installed under the soffit near some exit doors.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

D5020.03.02 Lighting Accessories: Exterior (Lighting Controls)*

The exterior lighting is controlled with a photocell.

Rating Installed Design Life Updated
4 - Acceptable 1960 0 APR-12

D5030.01 Detection and Fire Alarm**

The fire alarm in this facility is an Edwards 2280 non-addressable system. Notification is provided by 10 inch bells throughout. The system includes manual pull stations, and heat and smoke detectors throughout.

RatingInstalledDesign LifeUpdated3 - Marginal198225APR-12

Event: Replace fire alarm system (Based on 3300 SQM)

Concern:

The existing fire alarm system has surpassed the expected lifecycle replacement. As the existing system is no longer manufactured, find9ing replacement parts will be difficult.

Recommendation:

Replace the fire alarm devises and control panel with new equipment.

Consequences of Deferral:

If the fire alarm system does fail, the system will be in operable for an extended amount of time while the system is replaced or repaired.

TypeYearCostPriorityPreventative Maintenance2013\$71,000High

D5030.02.02 Intrusion Detection**

A DSC PC 3000 control panel monitors passive infrared motion sensors and door contacts. Numeric keypad arms and disarms system.

RatingInstalledDesign LifeUpdated4 - Acceptable199025APR-12

Event: Replace DSC 3000 Security System (Based on 2300

SQM)

TypeYearCostPriorityLifecycle Replacement2015\$18,500Unassigned

Updated: APR-12

D5030.02.03 Security Access**

The facility has a Galaxy door access control system. The staff entrance door utilizes a card access controller to release the door magnets for school board staff entry.

RatingInstalledDesign LifeUpdated5 - Good201025APR-12

Event: Replace Access Control On Staff Door (1 Door)

TypeYearCostPriorityLifecycle Replacement2035\$4,000Unassigned

Updated: APR-12

D5030.03 Clock and Program Systems*

The facility has a Simplex clock controller located in the main administration office.

RatingInstalledDesign LifeUpdated4 - Acceptable19900APR-12

D5030.04.01 Telephone Systems*

The facility has a VOIP telephone system with handsets in all classrooms and offices.

RatingInstalledDesign LifeUpdated6 - Excellent20050APR-12

D5030.04.04 Data Systems*

Data cabling in this facility consists of Category 5 and 5E horizontal service. The installation of Alberta SuperNet was also completed in 2000.

RatingInstalledDesign LifeUpdated5 - Good20000APR-12

D5030.04.05 Local Area Network Systems*

A wireless network is installed throughout the facility. Each wireless access point is connected to the closest data rack with a CAT5E cable.

RatingInstalledDesign LifeUpdated4 - Acceptable20050APR-12

D5030.05 Public Address and Music Systems**

An Inter M PAM-120 public address amplifier is installed in the main administration office. The paging speakers are the original wall mounted speakers. Paging can be completed through the VOIP telephone system, and from each handset.

RatingInstalledDesign LifeUpdated4 - Acceptable200520APR-12

Event: Replace Paging System (Based on 3300 SQM)

TypeYearCostPriorityLifecycle Replacement2025\$35,500Unassigned

Updated: APR-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1090.04 Residential Equipment*

Residential refrigerators, stoves and dishwashers in staff room and kitchen.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Plywood basketball backboards on steel frames, paint finish. Motorized winch and pulley system to move large gymnastic mats from gymnasium storage room addition through a floor level, shuttered opening.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

E2010.02 Fixed Casework**

Varnished wood cabinets with plastic laminate countertops. Painted wood display case with sliding glass doors in lobby. Painted wood cabinets in classrooms, with plastic laminate counters.

RatingInstalledDesign LifeUpdated4 - Acceptable196035APR-12

Event: Replace 150 lm cabinets and casework

TypeYearCostPriorityLifecycle Replacement2015\$113,000Unassigned

Updated: APR-12

E2010.03.01 Blinds**

Vertical louver blinds on exterior windows.

RatingInstalledDesign LifeUpdated4 - Acceptable199130APR-12

Event: Replace 158 vertical window blinds

TypeYearCostPriorityLifecycle Replacement2021\$32,000Unassigned

Updated: APR-12

E2020.02.03 Furniture*

Desks, chairs and tables of various types and ages.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-12

S8 SPECIAL ASSESSMENT

K3020.04 Air Quality (Exhaust, Ventilation & Humidity)*

The gymnasium has no ventilation provided.

RatingInstalledDesign LifeUpdated3 - Marginal19600APR-12

Event: Add gymnasium ventilation (1 AHU & ducting)

Concern:

No ventilation provided in the gymnasium.

Recommendation:

Provide a dedicated air handling unit for the gymnasium.

TypeYearCostPriorityIndoor Air Quality Upgrade2013\$50,000Medium

Updated: APR-12

K4010.01 Barrier Free Route: Parking to Entrance*

Level access from parking lots and drop off areas to entry doors.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

K4010.02 Barrier Free Entrances*

No power operators on any of the entrance doors.

RatingInstalledDesign LifeUpdated3 - Marginal19600APR-12

Event: Install 2 power door operators

Concern:

No power operators on main entry doors.

Recommendation:

Install power door operators to one set of exterior and vestibule doors (two doors).

Type Year Cost Priority
Barrier Free Access Upgrade 2013 \$10,000 Low

K4010.03 Barrier Free Interior Circulation*

Corridors are wide and unobstructed. School is all on one level.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

K4010.04 Barrier Free Washrooms*

Barrier free access to one set of student washrooms. Wheelchair accessible toilet stalls with grab bars and vanity sinks have electronic, hands free faucets. Staff washrooms are not barrier free.

RatingInstalledDesign LifeUpdated4 - Acceptable19600APR-12

K4030.01 Asbestos*

Asbestos cement board on ceiling of mechanical room, removal costs identified in C3030.09 (Mechanical Room Ceiling). Vinyl asbestos floor tile throughout, however, it is sound and not damaged and does not require removal at this time.

RatingInstalledDesign LifeUpdated3 - Marginal19600APR-12

K4030.04 Mould*

No conditions supporting mould growth were noted or reported in our site inspection.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-12

K4030.09 Other Hazardous Materials*

No other hazardous materials were noted or reported in our site inspection.

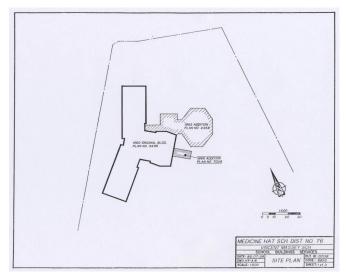
RatingInstalledDesign LifeUpdated4 - Acceptable00APR-12

K5010.01 Site Documentation*

Site plan drawing provided from Alberta Infrastructure records.

Prime Consultant: Don Stewart - DC Stewart Architect Limited. Evaluation Date: Nov. 2, 2011.

RatingInstalledDesign LifeUpdated4 - Acceptable20110APR-12



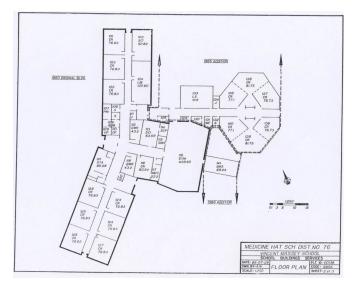
Site Plan

K5010.02 Building Documentation*

Floor plan drawing provided from Alberta Infrastructure records.

Prime Consultant: Don Stewart - DC Stewart Architect Limited. Evaluation Date: Nov. 2, 2011.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	2011	0	APR-12



Floor Plan