RECAPP Facility Evaluation Report

Edmonton School District No. 7



Greenfield School

B3138A Edmonton

Facility Details

Building Name: Greenfield School Address: 3735 - 114 Street

Location: Edmonton

Building Id: B3138A Gross Area (sq. m): 0.00 Replacement Cost: \$7,265,194

Construction Year: 0

Evaluation Details

Evaluation Company: VFA Canada Corporation

Evaluation Date: September 13 2006

Evaluator Name: David S. Greeley, P.Eng.

Total Maintenance Events Next 5 years: \$1,489,250 5 year Facility Condition Index (FCI): 20,50%

General Summary:

Originally built 1968, Greenfield Elementary School is located at 3735 - 114 Street, Edmonton, Alberta, T6J 2G6. In 1971, an addition was added to the north end of the school bringing its total occupied floor space (all on one level) to 4,145.80 square meters. One of the Edmonton Public Schools located in District seven, currently there are 530 students enrolled at Greenfield Elementary School.

The main entrance to Greenfield Elementary School is located on its southern facade at the western end facing 114th Street NW. There are three additional entrances, one is located on its southern facade, one its eastern facade, and one on its western facade. In addition, numerous classrooms in the school have separate exits to the exterior.

Structural Summary:

The Greenfield Elementary School has a concrete slab on grade foundation substructure with perimeter strip footings and thickened slab footings at interior bearing points.

The superstructure of Greenfield Elementary School consists of load bearing concrete block exterior walls supporting glulam wood beams carrying a wood roof deck.

Structurally, the facility is in acceptable condition.

Envelope Summary:

The exterior wall cladding on Greenfield Elementary School consists mainly of clay brick veneer and Portland cement stucco coating. There are accents of wood and metal siding. Soffits are preformed, prepainted aluminum.

The roof membrane on the Greenfield Elementary school consists of a modified bituminous SBS built up roof over a wood deck. Drainage is provided by surface, domed storm drains with internal drain leaders. In addition there are perimeter scupper drains which drain to the exterior to handle storm runoff overflow. Parapet height is approximately 150mm and is capped with prefinished metal cap flashing. There are two mechanical penthouses on the roof.

Windows on the Greenfield Elementary School are aluminum, double glazed, sealed awning style units. Exterior doors are solid wood units with and without glazing. Frames are a combination of wood and metal.

The envelope of Greenfield Elementary School is in acceptable condition. Some wood entry doors are recommended for replacement.

Interior Summary:

Interior floor finishes in Greenfield Elementary School include carpet and vinyl composite tile and sheet flooring. Washrooms have ceramic tile and the gymnasium has strip wood flooring. In the library, carpet covers the floor. Stairs to the mezzanine storage area have vinyl composite tile and bare concrete finishes. The mechanical and or boiler rooms typically have a painted concrete floor finish.

Interior ceiling finishes are generally exposed wood roof deck painted a dark color and from which is suspended a wooden grid or trellis-like painted frame. Washrooms generally have painted gypsum wallboard finish. The gymnasium and music room have varnished exposed wood deck ceilings supported by gluelam wood beams. In the newer, 1971 addition, ceilings are generally suspended acoustical ceiling tile (ACT).

Interior wall finishes are generally painted concrete masonry units (CMU) or painted gypsum wallboard. Washrooms

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typically have ceramic wall tile.

The interior of Greenfield Elementary School is generally in acceptable condition. A recommendation to install a new acoustical tiled ceiling and replacement of classroom casework recommended.

Mechanical Summary:

Mechanical systems for this building include two gas fired 2.52 MMBTU hot water boilers which provide heating hot water to three air handlers, perimeter finned tube radiation, and cabinet heaters near the entrances. Air distribution is by overhead ductwork and ceiling plenum return. The HVAC system is controlled remotely by pneumatic and DDC controls. The heating hot water system and air handlers are in fair condition overall.

Water distribution is by copper piping throughout, and is protected by a backflow preventer. Sanitary and storm drainage is by internal cast iron piping. DHW is provided by a gas fired DHW heater. Plumbing is in good condition overall.

Issues to be addressed include replacing the aged DHW heater, aged boilers and air handling units, and correcting the air flow issues caused by the open ceiling plenum. Also, cooling is recommended be added for computer room areas.

Electrical Summary:

Electrical systems in this building are overall in acceptable to good condition. The electrical service the building is provided is 120Y/208 Volt, 3 phase 4 wire with 600 Amp capacity. The main electrical switchboard and most of the electrical panelboards are nearing the end of their expected life. The fire alarm system, an Edwards 6616, provides adequate coverage and notification, and includes strobe devices. The fluorescent lighting is the energy efficient electronic T8 style. The Kohler natural gas 5KVA (20.8amps @ 120/240volts - single phase) generator is beyond its life expectancy as well as undersized for the purpose.

Replacement within five years of the electrical switchboard and many of the electrical panelboards, as well as the emergency generator is recommended. Installation of GFCI type receptacles near all sinks should be completed for code and safety purposes.

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

A1030 Slab on Grade*

Foundation is slab on grade.

RatingInstalledDesign LifeUpdated4 - Acceptable1968100JAN-07

B1010.01 Floor Structural Frame*(Building Frame)

Building frame is masonry with gluelam wood beams supporting a wood deck roof.

RatingInstalledDesign LifeUpdated4 - Acceptable1968100JAN-07

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

Structural interior walls are composed of concrete masonry units.

RatingInstalledDesign LifeUpdated4 - Acceptable1968100JAN-07

B1010.03 Floor Decks, Slabs, and Toppings*

The mezzanine floor assembly consists of wood decking construction.

RatingInstalledDesign LifeUpdated4 - Acceptable1968100JAN-07

B1020.01 Roof Structural Frame*

Gluelam wood beams.

RatingInstalledDesign LifeUpdated4 - Acceptable1968100JAN-07

B1020.04 Canopies*

A painted wood post and beam structural frame supports a canopy over main entry. A similar canopy and supporting frame can be found at the rear side of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196850JAN-07

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The majority of the facility is clad with clay brick veneer.

RatingInstalledDesign LifeUpdated4 - Acceptable196875JAN-07

B2010.01.06.03 Metal Siding**

Prefinished, vertical metal siding can be found on portions of the exterior walls of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable199840JAN-07

B2010.01.06.04 Wood Siding**

Wood strip siding panels finished with solid stain/paint provide accent interest over some exterior doors.

RatingInstalledDesign LifeUpdated4 - Acceptable199840JAN-07

B2010.01.08 Cement Plaster (Stucco): Ext. Wall*

While by no means the predominant cladding, exterior cement plaster or stucco can be found on the exterior of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196875JAN-07

B2010.01.13 Paints (& Stains): Exterior Wall**

Solid stain/paint finishes can be found on vertical wood strip siding accents.

RatingInstalledDesign LifeUpdated4 - Acceptable199815JAN-07

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

Load bearing concrete masonry units, CMU.

RatingInstalledDesign LifeUpdated5 - Good1968100JAN-07

B2010.06 Exterior Louvers, Grilles, and Screens*

Exterior, prefinished metal trim clads the fascia.

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

B2010.09 Exterior Soffits*

Prefinished strip metal soffit assemblies can be seen on the facility.

RatingInstalledDesign LifeUpdated5 - Good196830JAN-07

B2020.01.01.02 Aluminum Windows (Glass & Frame)**

Aluminum double pane sealed units with awning style openings.

RatingInstalledDesign LifeUpdated4 - Acceptable199840JAN-07

B2030.01.10 Wood Entrance Door**

Entry doors are wood with glazing with latch hardware.

RatingInstalledDesign LifeUpdated3 - Marginal196830JAN-07

Event: Replace Exterior Doors (12 Doors)

TypeYearCostPriorityLifecycle Replacement2010\$22,300Low

Updated: JAN-07



Event: Replace Exterior Doors (Four Doors)

Concern:

The exterior doors from classrooms 12, 13, 35 and 36 are aged and worn and have operational problems especially during colder months when the doors stick.

Recommendation:

Given the age of the doors and the continued maintenance required, replacement is recommended.

Consequences of Deferral:

Continued operational issues will be a consequence of deferral.

TypeYearCostPriorityFailure Replacement2007\$10,200Medium

Updated: JAN-07



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

The facility has a roof assembly consisting of a modified bituminous waterproofing membrane.

RatingInstalledDesign LifeUpdated6 - Excellent200525JAN-07

B3010.08.02 Metal Gutters and Downspouts**

Prefinished metal gutters and downspouts along with interior drain leaders manage roof top storm water runoff.

RatingInstalledDesign LifeUpdated5 - Good199830JAN-07

B3020.02 Other Roofing Openings (Hatch, Vent, etc)*

Roof access is via a small sidewall access door from penthouse.

Rating	<u>Installed</u>	Design Life	Updated
4 - Acceptable	1968	25	JAN-07

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Fixed interior partitions are typically of hollow concrete masonry units.

RatingInstalledDesign LifeUpdated4 - Acceptable196850JAN-07

C1010.02 Interior Demountable Partitions*

Vinyl covered demountable partitions are used on some classroom perimeter walls.

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

C1010.03 Interior Operable Folding Panel Partitions**

A full height, chain and pulley operated, folding panel partition wall assembly can partition off the gymnasium. It stores in the wall at one side of the gym.

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

Event: Replace gym operable partition

TypeYearCostPriorityLifecycle Replacement2010\$20,000Low

Updated: JAN-07

C1020.01 Interior Swinging Doors**

Interior swing doors are of hollow paneled construction with metal frame assemblies and knob hardware.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

Event: Replace Interior Swing Doors (95 Doors)

TypeYearCostPriorityLifecycle Replacement2010\$124,300Low

Updated: JAN-07

C1020.03 Interior Fire Doors*

Rated and labeled fire rated doors and metal frame assemblies can be found in the facility.

 Rating
 Installed
 Design Life
 Updated

 4 - Acceptable
 1968
 50
 JAN-07

C1030.01 Visual Display Boards**

Chalk, white and tack boards can be found in the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196820JAN-07

Event: Replace Visual Display Boards(48 boards)

Recommendation:

Replace visual display boards in classrooms. Assume 24 classrooms, two boards per room: Chalkboards, SL, horiz, two track, 1200 x 3600, 2 sliding panels.

TypeYearCostPriorityLifecycle Replacement2010\$170,865Low

Updated: JAN-07

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

Toilet partitions are prefinished, hollow metal construction.

RatingInstalledDesign LifeUpdated3 - Marginal199130JAN-07

C1030.08 Interior Identifying Devices*

Signs consist of rigid plastic with indented alphanumeric lettering, typically screwed to substrate.

RatingInstalledDesign LifeUpdated4 - Acceptable199820JAN-07

C1030.14 Toilet, Bath, and Laundry Accessories*

Toilet accessories are typically metal construction with a chrome or stainless steel finish.

RatingInstalledDesign LifeUpdated4 - Acceptable199120JAN-07

C2010 Stair Construction*

Metal access ladder with safety cage is used to access penthouse. Precast concrete stairs can also be found adjacent to gymnasium exit doors.

RatingInstalledDesign LifeUpdated5 - Good1968100JAN-07

C2020.08 Stair Railings and Balustrades*

Painted metal.

RatingInstalledDesign LifeUpdated4 - Acceptable196850JAN-07

C2020.11 Other Stair Finishes*

Painted metal finish on access ladders. Concrete stairs are unfinished.

RatingInstalledDesign LifeUpdated4 - Acceptable196810JAN-07

C3010.06 Tile Wall Finishes**

Ceramic tiled finishes can be generally found in washrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

Event: Replace wall tiles (130m2)

Recommendation:

Replace tile wall finishes in all washrooms. Assume 4 boys and 4 girls washrooms. Assume 32.5 square meters of tile per washroom.

TypeYearCostPriorityLifecycle Replacement2010\$41,800Low

Updated: JAN-07

C3010.11 Interior Wall Painting**

Interior wall finish throughout the facility is typically paint.

Rating Installed Design Life Updated 5 - Good 1998 10 JAN-07

Event: Repaint interior walls (5400m2)

TypeYearCostPriorityLifecycle Replacement2010\$37,800Low

Updated: JAN-07

C3020.01.02 Paint Concrete Floor Finishes**

Where concrete floors are finished, ie mechanical room, typically the finish is paint.

RatingInstalledDesign LifeUpdated5 - Good196810JAN-07

Event: Repaint mechanical room floor.(72m2)

TypeYearCostPriorityLifecycle Replacement2010\$2,915Low

Updated: JAN-07

C3020.02 Tile Floor Finishes**

Ceramic tile flooring in washrooms.

RatingInstalledDesign LifeUpdated5 - Good199850JAN-07

C3020.04 Wood Flooring**

Strip wood flooring can be found in the gym.

 Rating
 Installed
 Design Life
 Updated

 5 - Good
 1993
 30
 JAN-07

C3020.07 Resilient Flooring**

A combination of vinyl composite tile and sheet resilient flooring have been used in various spaces throughout the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable199120JAN-07

Event: Replace Flooring Fan Room

Concern:

The VCT floor tile in the fan room, (27) is worn.

Recommendation:

Replace the VCT flooring in the fan room (27). Area is 21m2.

TypeYearCostPriorityFailure Replacement2007\$1,700Medium

Updated: JAN-07

C3020.08 Carpet Flooring**

Sheet carpet flooring has been used in the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable198115JAN-07

Event: Replace Carpet (1670m2)

TypeYearCostPriorityLifecycle Replacement2010\$98,800Low

Updated: JAN-07

C3030.04 Gypsum Board Ceiling Finishes*

Taped, sanded and painted gypsum board ceiling finishes can be found in the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196850JAN-07

C3030.06 Acoustic Ceiling Treatment (Susp.T-Bar)**1971

The 1971 addition has suspended acoustic tile ceiling treatment.

RatingInstalledDesign LifeUpdated4 - Acceptable197125JAN-07

Event: Replace accoustic ceiling (1315m2)

TypeYearCostPriorityLifecycle Replacement2010\$57,800Low

Updated: JAN-07

C3030.07 Interior Ceiling Painting**

Dark colored paint has been used as a finish on the underside of the roof deck.

RatingInstalledDesign LifeUpdated4 - Acceptable199820JAN-07

C3030.09 Other Ceiling Finishes*

Suspended wood grid.

Rating	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	50	JAN-07



Event: Install New ACT Ceiling

Concern:

Staff report continuing issue of dust falling on building occupants due to the suspended, but open, 2x4 wood grid ceiling. Maintenance reports that it is an ongoing cleaning task to keep the grid dust free. The installation of a new suspended acoustical tile ceiling system is recommended. Work with mechanical trades to ensure sufficient air movement/occupant comfort with new, enclosed ceiling.

Recommendation:

Remove existing wood grid ceiling and install new suspended acoustical tile ceiling in the 1968 portion of the school to match the 1971 addition.

Consequences of Deferral:

Continued cleaning of the 38x89 wood grid is a consequence of deferral.

Type Year Cost Priority
Operating Efficiency Upgrade 2009 \$139,700 Medium

Updated: JAN-07

S4 MECHANICAL

D2010.01 Water Closets**

Water closets are typically floor mounted tank type vitreous china units.

RatingInstalledDesign LifeUpdated5 - Good199835JAN-07

D2010.02 Urinals**

Urinals are typically floor mounted vitreous china with manual flush valves.

RatingInstalledDesign LifeUpdated5 - Good196835JAN-07

Event: Replace 11 Urinals

TypeYearCostPriorityLifecycle Replacement2010\$10,000Low

Updated: JAN-07

D2010.03 Lavatories**

Lavatories are typically recessed counter mounted stainless steel bowls with manual spring return faucets.

RatingInstalledDesign LifeUpdated5 - Good199835JAN-07

D2010.04 Sinks**

Classroom sinks are typically recessed counter mounted stainless steel bowls with high spout faucets. Mop sinks are typically floor mounted fiberglass or cast in place concrete. Mop faucets have vacuum breakers.

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

Event: Replace sinks in classrooms (20)

TypeYearCostPriorityLifecycle Replacement2010\$8,000Low

Updated: JAN-07

D2010.08 Drinking Fountains / Coolers**

Drinking fountains are wall mounted vitreous china.

RatingInstalledDesign LifeUpdated4 - Acceptable196835JAN-07

Event: Replace 4 Drinking Fountains

TypeYearCostPriorityLifecycle Replacement2010\$5,000Low

Updated: JAN-07

D2020.01.01 Pipes and Tubes: Domestic Water*

Domestic water is supplied to the building from the municipal water system.

RatingInstalledDesign LifeUpdated4 - Acceptable040JAN-07

D2020.01.02 Valves: Domestic Water**

Domestic water valves are typically brass globe or gate valves.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

Event: Replace domestic water valves

TypeYearCostPriorityLifecycle Replacement2010\$6,000Low

Updated: JAN-07

D2020.01.03 Piping Specialties (Backflow Preventors)**

A backflow preventor is installed to protect the DWS.

RatingInstalledDesign LifeUpdated5 - Good199420JAN-07

D2020.02.06 Domestic Water Heaters**

DHW is provided by a 30 gallon 45,000 BTU gas fired heater.

RatingInstalledDesign LifeUpdated3 - Marginal199020JAN-07

Event: Replace DHW Heater

TypeYearCostPriorityLifecycle Replacement2010\$2,600Low

Updated: JAN-07



D2020.03 Water Supply Insulation: Domestic*

DWS pipe insulation is typically fiberglass.

RatingInstalledDesign LifeUpdated4 - Acceptable030JAN-07

D2030.01 Waste and Vent Piping*

Sanitary sewer and vent piping is cast iron.

RatingInstalledDesign LifeUpdated4 - Acceptable050JAN-07

D2040.01 Rain Water Drainage Piping Systems*

Rain water conveyed from the roof to the municipal storm water system via cast iron pipes.

RatingInstalledDesign LifeUpdated4 - Acceptable050JAN-07

D2040.02.04 Roof Drains**

Internal roof drains have strainers in place, but evidence of past tampering, and some foreign debris in roof drains (bottles).

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

Event: Replace roof drains

TypeYearCostPriorityLifecycle Replacement2010\$50,000Low

Updated: JAN-07

D3010.02 Gas Supply Systems*

Gas is supplied to the building by painted steel pipe. The gas meter and pressure regulator was in place.

RatingInstalledDesign LifeUpdated4 - Acceptable060JAN-07

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

There are two Peerless 2.52 MMBTU/Hr. Gas fired hot water boilers.

RatingInstalledDesign LifeUpdated4 - Acceptable196835JAN-07

Event: Replace 2 Heating HW Boilers

TypeYearCostPriorityLifecycle Replacement2010\$75,000Low

Updated: JAN-07



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

Aged as well as the boilers. Cost for replacing the chimneys is included in the cost estimate for replacing the boilers.

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

D3040.01.01 Air Handling Units: Air Distribution**

Three (3) Recold model AHB-200 air handlers located in individual penthouses on the roof provide air distribution throughout the building.

RatingInstalledDesign LifeUpdated3 - Marginal196830JAN-07

Event: Redesign Air Handling and Distribution System

Concern:

The floor plan and classroom layout has changed from initial construction. The existing air handler and distribution system may not be sized properly for the current configuration of the building. In addition, the existing air handlers have high maintenance costs and parts that are difficult to obtain. In addition, air flow in the open ceiling areas of the building is poor, leading to hot an cold areas throughout

Recommendation:

Perform an engineering study to determine the current heat and cooling load of the building and from this, design and size replacement system accordingly. In addition, a possible solution to remedy the air distribution problem in the open ceiling areas could be to install a drop ceiling with properly placed supply and return air grills.

Consequences of Deferral:

Continued problems with air flow and difficulty in temperature management.

TypeYearCostPriorityStudy2007\$20,000High

Updated: JAN-07

Event: Replace Air Handlers

Concern:

Air handlers are not distributing air properly and are high maintenance items with parts that are difficult to obtain.

Recommendation:

Replace air handlers based on recommendation from an engineering study.

Consequences of Deferral:

Failure of the air handler would mean no air flow or heating. In addition, the ongoing maintenance costs to keep the existing unit running will likely increase, and finding replacement parts will become more difficult.

TypeYearCostPriorityFailure Replacement2008\$260,000High

Updated: JAN-07



D3040.01.04 Ducts: Air Distribution*

Air distribution through the majority of the building is by ceiling hung low velocity metal ductwork. However, the ductwork for the music room is encased in the concrete slab.

RatingInstalledDesign LifeUpdated3 - Marginal050JAN-07

Event: Improve Airflow to Music Room

Concern:

Insufficient air flow and heating in the music room.

Recommendation:

Install a separate furnace or air handler to serve this area.

Consequences of Deferral:

Continued uncomfortable temperatures especially in winter and reduced air flow.

TypeYearCostPriorityIndoor Air Quality Upgrade2007\$25,000High

Updated: JAN-07

D3040.01.07 Air Outlets & Inlets:Air Distribution*

The open ceiling plan appears to be short circuiting air flow in some portions of the building such as the library. In addition to the replacement of a the air handler, the return air system needs to be corrected. Either a suspended ceiling with strategically placed return air grills should be used, or if the open ceiling system is continued, then ducted returns should be installed to ensure that return air is taken from various parts of the room.

The return air grills are typically metal egg crate style and are both wall and ceiling (or duct termination) mounted.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
3 - Marginal	0	30	JAN-07

Event: Modify Ductwork to Improve Airflow

Concern:

Poor air flow in open ceiling areas of the building lead to hot and cold areas.

Recommendation:

The engineering study will determine the ultimate course of action. One option is to install typical acoustic ceiling tile, similar to that being used elsewhere in the building, with strategically placed return air grills to improve air flow. This line items assumes that solution. Cost will need to be adjusted based on the results of the engineering study.

Consequences of Deferral:

Continued poor airflow, hot and cold areas.

<u>Type</u>	<u>Year</u>	<u>Cos</u> t	Priority
Indoor Air Quality Upgrade	2008	\$45.000	Medium

Updated: JAN-07



D3040.03.01 Hot Water Distribution Systems**

Hot water heating piping is steel with circulating pumps. Some insulation is suspected of containing asbestos and will need to be abated if work is to be done on those parts of the system. HW circulation pumps are aged and improperly supported. These should be replaced and reinstalled with proper supports.

RatingInstalledDesign LifeUpdated3 - Marginal196840JAN-07

Event: Replace HW Circulation Pumps

TypeYearCostPriorityLifecycle Replacement2010\$20,000Low

Updated: JAN-07



D3040.04.01 Fans: Exhaust**

Roof mounted exhaust fans. They display some dents, possibly from the covers being blown off or vandalized.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1998	30	JAN-07



D3050.01.01 Computer Room Air Conditioning Units**

Computer lab is not currently cooled and elevated temperatures were noted during the assessment. Installation of a dedicated split DX air condition system is recommended.

Rating 2 - Poor 0 Design Life Updated JAN-07

Event: Add AC for Computer Lab

Concern:

The computer lab is not cooled, and the elevated temperatures are not recommended for the life of the computer equipment. The elevated temperatures also make it uncomfortable to work or study there.

Recommendation:

Install a ductless split DX air conditioning system.

Consequences of Deferral:

Uncomfortable working environment, potentially shorted computer equipment life.

TypeYearCostPriorityProgram Functional Upgrade2008\$7,500Medium

Updated: JAN-07

D3050.05.01 Convectors**

Convectors are used primarily near entry doors.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

Event: Replace unit convection heaters

TypeYearCostPriorityLifecycle Replacement2010\$2,400Low

Updated: JAN-07

D3050.05.03 Finned Tube Radiation**

Finned tube radiation is used around the perimeter of the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

D3060.02.02 Pneumatic Controls**

Pneumatic controls are used for thermostats, valve and damper actuators. Signals are also send to the BMS system.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07



Event: Replace Controls

TypeYearCostPriorityLifecycle Replacement2010\$90,000Low

Updated: JAN-07

D3060.02.05 Building Systems Controls (BMCS, EMCS)**

The BMS is an Andover DDC system and is used to control the building remotely. The DDC system is connected to the existing pneumatic devices in the field such as thermostats, pressure sensors, and damper actuators.

RatingInstalledDesign LifeUpdated5 - Good200025JAN-07



D4020 Standpipes*

A hose and standpipe system is used for fire protection.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	0	60	JAN-07

D4030.01 Fire Extinguisher, Cabinets and Accessories**

The fire extinguishers, both water canister and ABC chemical type are used and located conveniently throughout the building. Inspection tags are up to date.

RatingInstalledDesign LifeUpdated4 - Acceptable200530JAN-07

D4090.07 Fire Pumps & Water Storage Tanks**

The fire pumps are located in the mechanical room.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1968	50	JAN-07

S5 ELECTRICAL

D5010.01 Main Electrical Transformers**

Underground service On-site pad mounted transformer. Utility Owned.

RatingInstalledDesign LifeUpdated4 - Acceptable196840JAN-07

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

Westinghouse brand 600 Amp rated 120Y/208 Volt, 3 phase 4 wire with 600 Amp main breaker.

Rating Installed Design Life Updated
3 - Marginal 1968 40 JAN-07

Event: Replace Main Electrical Switchboards

Concern:

Electrical and mechanical integrity of connections and circuit breakers is likely poor.

Recommendation:

Replace main switchgear. Replace service feed and upgrade to 800A 120Y/208V capacity at this time. The switchgear includes 800A, 208Y/120 volt capacity with breakers and instruments, and twenty feet of conduit and wire. Electrical service feeder, 800 A at 600V. Service feeder to include 200' conduit and wire.

TypeYearCostPriorityFailure Replacement2008\$85,700High

Updated: JAN-07

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

Westinghouse brand electric panels located throughout the building. Ages vary based on location and age of additions

RatingInstalledDesign LifeUpdated4 - Acceptable196830JAN-07

Event: Replace Panelboards

Concern:

Electrical and mechanical integrity of circuit breakers is poor.

Recommendation:

Replace all panels in building. Add panels throughout to allow for additional circuits to be added as necessary. Distribution system includes medium sized concentration of panel boards.

TypeYearCostPriorityFailure Replacement2008\$127,000High

Updated: JAN-07

D5010.07.02 Motor Starters and Accessories**

Wall mounted starters for motor control.

RatingInstalledDesign LifeUpdated5 - Good196830JAN-07

Event: Replace all Motor Starters

TypeYearCostPriorityLifecycle Replacement2010\$8,500Low

Updated: JAN-07

D5020.01 Electrical Branch Wiring*

Branch wiring includes conduit, wiring, receptacles and switches.

RatingInstalledDesign LifeUpdated4 - Acceptable050JAN-07

Event: Replace Receptacles with GFCI Type

Concern:

Certain receptacle location near wet areas such as sinks or water coolers are not ground fault protected.

Recommendation:

Replace outlets with GFCI style outlets.

TypeYearCostPriorityCode Upgrade2007\$1,600Medium

Updated: JAN-07

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D5020.02.01 Lighting Accessories (Lighting Controls)*

Lighting switch control panel.

RatingInstalledDesign LifeUpdated3 - Marginal030JAN-07

Event: Replace Lighting Control Panel

TypeYearCostPriorityLifecycle Replacement2010\$1,500Low

Updated: JAN-07



D5020.02.02.02 Interior Florescent Fixtures**

Various fixtures including 2' x 4' and strip-style T-8 fluorescents. Many surface mounted fixtures. T8 style Electronic ballasts and lamps.

RatingInstalledDesign LifeUpdated5 - Good200430JAN-07

Event: Repair Light Fixtures

Concern:

Some fixtures have missing or damaged lenses.

Recommendation:

Replace lenses/fixtures or remove if no longer in use.

TypeYearCostPriorityRepair2007\$1,700High

Updated: JAN-07

D5020.02.03.01 Emergency Lighting Built-in*

Various hall and classroom fixtures on emergency power.

RatingInstalledDesign LifeUpdated5 - Good035JAN-07

D5020.02.03.03 Exit Signs*

RatingInstalledDesign LifeUpdated4 - Acceptable030JAN-07

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Building mounted fixtures around perimeter. Exterior lighting is photo-cell/time clock controlled.

Rating Installed Design Life Updated 5 - Good 0 30 JAN-07

D5030.01 Detection and Fire Alarm**

Edwards 6616 Control Panel.

RatingInstalledDesign LifeUpdated5 - Good198925JAN-07

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D5030.02.03 Security Access**

Magnum Security 3000 with infrared motion detectors and key pad.

RatingInstalledDesign LifeUpdated5 - Good199825JAN-07

D5030.04.01 Telephone Systems**

Meridian/Nortel Norstar phone server equipment. Interconnected with Bogen Communication System

RatingInstalledDesign LifeUpdated5 - Good199825JAN-07

D5030.04.04 Data Systems**

Fiber optic feed from Alberta SuperNet. Switches and Category 5 wiring.

RatingInstalledDesign LifeUpdated5 - Good199825JAN-07

D5030.05 Public Address and Music Systems**

Bogen Communication System. Interconnected with Meridian/Nortel Norstar phone server equipment.

RatingInstalledDesign LifeUpdated5 - Good199820JAN-07

D5030.06 Television Systems*

Many classroom areas have television connected to local VCRs or DVD players.

RatingInstalledDesign LifeUpdated5 - Good020JAN-07

D5090.02 Packaged Engine Generator Systems (Emergency Power System)**

Kohler natural gas 5KVA (20.8amps @ 120/240volts - single phase) generator in mechanical room (Various hall and classroom fixtures on emergency power). Connected via Zenith ATS.

RatingInstalledDesign LifeUpdated3 - Marginal196835JAN-07

Event: Replace Generator

Concern:

Emergency backup generator is undersized for the current purpose.

Recommendation:

Replace with larger 35KW natural gas Emergency Generator unit. Includes: Emergency Generator, ATS, battery charger, muffler, feeder, wiring and panel. Connect to additional lighting to provide better coverage.

<u>Type</u>	<u>Year</u>	Cost	Priority
Failure Replacement	2007	\$33,270	Unassigned

Updated: JAN-07



S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.02 Library Equipment*

A typical elementary school library with all the associated equipment can be found in the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196825JAN-07

E2010.02 Fixed Casework**

Painted and unfinished wood constructed, fixed casework can be found with upper and lower units.

<u>Rating</u>	<u>Installed</u>	Design Life	Updated
3 - Marginal	1968	35	.IAN-07

Event: Replace Casework

Concern:

The casework in the classrooms is worn and shows signs of deterioration. High maintenance required. The casework in the custodian office is worn.

Recommendation:

Remove and replace the casework in the classrooms. Typical casework is 3m of lower cabinetry with counter top and one sink. Replace in classrooms 11, 12, 13, 14, 22, 23, 65, 66, 60, 61, 62, 70, 34, 35, 36, 37, 55, 56, 57, and 58 (twenty classrooms in total). \$106,356.00

Remove and replace approximately 3m upper and lower casework cabinetry including one counter top and one sink. Location is custodian office. \$7,659.00

Consequences of Deferral:

The deterioration of the visual integrity of the facility and continued maintenance are consequences of deferral.

<u>Type</u>	<u>Year</u>	Cost	<u>Priority</u>
Failure Replacement	2008	\$114,100	High

Updated: JAN-07



F2020.01 Asbestos*

ACM have been identified by the report "Hazardous Materials Management Project - Asbestos Report Submission." Dated 2002.

Rating	<u>Installed</u>	Design Life	Updated
4 - Acceptable	1968	0	JAN-07

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance

No obstructions, or level-changes, can be found between the asphalt parking area and adjacent facility entry points.

RatingInstalledDesign LifeUpdated4 - Acceptable19680JAN-07

K4010.02 Barrier Free Entrances

There is no level change at the numerous entry doors to the school, however automatic door openers were not observed.

RatingInstalledDesign LifeUpdated3 - Marginal19680JAN-07

Event: Provide Automatic Door Opener

Concern:

While there are no level change at the numerous entry doors, there is no automatic door opener observed.

Recommendation:

Install at least one power assisted automatic door opener at one entrance to the facility.

Consequences of Deferral:

Access to the facility will not be completely barrier free.

TypeYearCostPriorityBarrier Free Access Upgrade 2007\$6,900Low

Updated: JAN-07

K4010.03 Barrier Free Interior Circulation

No obstructions to interior circulation observed in the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable19680JAN-07

K4010.04 Barrier Free Washrooms

No barrier free handicap washroom facilities observed.

RatingInstalledDesign LifeUpdated3 - Marginal19680JAN-07

Event: Modify one washroom to barrier free.

Concern:

No handicap washroom in the facility.

Recommendation:

Modify existing washroom to be barrier free. One of the two staff washrooms may be candidate.

Consequences of Deferral:

The facility is not barrier free.

TypeYearCostPriorityBarrier Free Access Upgrade 2007\$10,900Medium

Updated: JAN-07

RECAPP Facility Evaluation Report



Greenfield School

S3138 Edmonton

Report run on: March 12, 2007 2:31 PM

Edmonton - Greenfield School (S3138)

Facility Details

Building Name: Greenfield School

Address:

Location: Edmonton

Building Id: \$3138
Gross Area (sq. m): 0.00
Replacement Cost: \$0
Construction Year: 0

Evaluation Details

Evaluation Company: VFA Canada Corporation

Evaluation Date: September 13 2006

Evaluator Name: Greeley, Michaud, Jackson

Total Maintenance Events Next 5 years: 5 year Facility Condition Index (FCI):

0%

General Summary:

The Greenfield Elementary School site is known as Greenfield Park and is bounded on the south by 37th Avenue NW, on the west by 114th Street NW, on the north by 40th Avenue NW and by 112a Street NW on the east. The site is generally grassed.

Asphalt surfaced basketball court present on the east side of the school. Outdoor ice rink and running track sit to the northeast of the facility. There is a sand based playground area at the north side. A ball diamond sits to the east. Asphalt surfaced parking is provided at the south end of the site. Additional parking at the rear (east side) of the facility is accessed via a side lane. Front and rear yards of the facility are landscaped. There are two pedestrian access points to the site and one vehicle access point. Bicycle racks and precast trash bins can be found on site.

The condition of the overall Greenfield site is acceptable.

Structural Summary:

Envelope Summary:

Interior Summary:

Mechanical Summary:

Electrical Summary:

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.	

Report run on: March 12, 2007 2:31 PM

S7 SITE

G1030 Site Earthwork (Site Grading)*

No drainage problems observed on this generally level, flat site.

RatingInstalledDesign LifeUpdated4 - Acceptable199850JAN-07

G2010.02.02 Flexible Pavement Roadway (Asphalt)**

Flexible pavement roadways to the site.

RatingInstalledDesign LifeUpdated5 - Good199825JAN-07

G2010.05 Roadway Curbs and Gutters*

Concrete road curbs and gutters.

RatingInstalledDesign LifeUpdated4 - Acceptable199825JAN-07

G2020.02.02 Flexible Paving Parking Lots(Asphalt)**

Vehicle parking lots are constructed with flexible asphalt pavement and can be found on the south and east sides of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable199810JAN-07



G2020.06.03 Parking Lot Signs*

No parking lot signage observed.

RatingInstalledDesign LifeUpdated3 - Marginal197125JAN-07

Event: Provide Parking Lot Signage

Concern:

No parking lot signage observed.

Recommendation:

Install signage to improve parking in the parking lot. Assume

at least five new signs.

TypeYearCostPriorityProgram Functional Upgrade2007\$1,000Low

Updated: JAN-07

G2020.06.04 Pavement Markings*

Parking stall pavement markings not observed.

RatingInstalledDesign LifeUpdated2 - Poor197125JAN-07

Event: Add Parking Pavement Markings

Concern:

Parking stall pavement markings were not observed.

Recommendation:

Add parking stall pavement markings in both parking areas.

Consequences of Deferral:

Confusion over parking locations a consequence of deferral.

TypeYearCostPriorityProgram Functional Upgrade2007\$700Medium

Updated: JAN-07

G2030.04 Rigid Pedestrian Pavement (Concrete)**

There are concrete sidewalks on site and surrounding the site.

 Rating
 Installed
 Design Life
 Updated

 4 - Acceptable
 1998
 15
 JAN-07

Report run on: March 12, 2007 2:31 PM

G2030.06 Exterior Steps and Ramps*

Exterior entry step on east side of facility.

RatingInstalledDesign LifeUpdated4 - Acceptable199815JAN-07

G2040.02 Fences and Gates**

Both chain link fencing and low rise pipe rail fencing are found on the site.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1998	30	JAN-07



G2040.03 Athletic and Recreational Surfaces**

Asphalt paved basketball court surface is found on site. Adjacent soccer fields have grass surface. Playground surfaces are sand covered.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1998	25	JAN-07



G2040.05 Site and Street Furnishings*

Precast trash bins are on site as well as painted metal bike stands.

Rating	Installed	Design Life	Updated
5 - Good	1998	15	.IAN-07

G2040.06 Exterior Signs*

Large wooded sign and cast metal sign can be found on the front yard and wall of the facility respectively.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
5 - Good	1998	25	JAN-07



G2050.04 Lawns and Grasses*

Level, grassed areas surround the facility.

RatingInstalledDesign LifeUpdated5 - Good199815JAN-07

G2050.05 Trees, Plants and Ground Covers*

Trees and shrubs can be found on the west and south sides of the facility.

RatingInstalledDesign LifeUpdated5 - Good199810JAN-07

G3010.02 Site Domestic Water Distribution*

Water is supplied to the building by underground galvanized steel piping from the municipal water supply.

RatingInstalledDesign LifeUpdated4 - Acceptable197150JAN-07

G3010.03 Site Fire Protection Water Distribution*

Site fire protection water is supplied from the domestic water supply system.

RatingInstalledDesign LifeUpdated4 - Acceptable197150JAN-07

G3020.01 Sanitary Sewage Collection*

Sanitary sewage is conveyed out of the building through underground cast iron piping and is connected to the municipal waste water system.

RatingInstalledDesign LifeUpdated4 - Acceptable197150JAN-07

G3030.01 Storm Water Collection*

Storm water is conveyed from the building to the municipal storm water system by cast iron pipe.

RatingInstalledDesign LifeUpdated4 - Acceptable197150JAN-07

G3060.01 Gas Distribution*

Gas is brought to the building by underground steel piping from the municipal supply system at the street.

RatingInstalledDesign LifeUpdated4 - Acceptable197150JAN-07

G4010.04 Car Plugs-ins*

About 15 plug-ins on time clock and temperature control.

RatingInstalledDesign LifeUpdated3 - Marginal197125JAN-07

Event: Replace Receptacles with GFCI Type

Concern:

Receptacle locations for car plug-ins are not fault protected. Risk of shock exists when outlets in wet areas are not GFCI.

Recommendation:

Replace outlets with GFCI style outlets and weatherproof covers.

TypeYearCostPriorityCode Upgrade2007\$1,600Medium

Updated: JAN-07

G4020.01 Area Lighting*

Lighting is provided mainly by building mounted fixtures

RatingInstalledDesign LifeUpdated5 - Good197125JAN-07

Report run on: March 12, 2007 2:31 PM