

RECAPP Facility Evaluation Report

Edmonton School District No. 7



Centennial School

B3073A
Edmonton

Facility Details

Building Name: Centennial School
Address: 17420 - 57 Avenue
Location: Edmonton

Building Id: B3073A
Gross Area (sq. m): 0.00
Replacement Cost: \$5,124,455
Construction Year: 0

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 9 2006
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **\$1,021,000**
5 year Facility Condition Index (FCI): **19.92%**

General Summary:

Centennial Elementary School is a one-storey school with a second floor mechanical room and a total building area is 3073.00m². The original school was built in 1981 with an area of 2367.64m². In 1981, a six classroom addition (Pod) was added at the north end of the school with an area of 695.24m².

No Portables are located on site.

The one storey school comprised of 13 classrooms, a gymnasium, a library, a science and music room.

The 2006 student enrollment is 283 children.

Structural Summary:

Original 1981 building - The foundations consist of cast-in-place concrete grade beams and spread footings. The original building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement. The roof comprises of a metal roof deck with steel structure supported by exterior & interior concrete walls. The structural walls and columns are poured in place concrete.

1983 Addition - Structure - Wood frame construction with structural steel & concrete piers bearing on undisturbed soil.

Overall the structural components are in acceptable condition.

Envelope Summary:

Original 1981 school - The exterior cladding consists primarily of brick with stained wood siding above around the perimeter of the school. The exterior walls on the gymnasium are clad with prefinished textured stucco panels.

The exterior cladding on the 1983 addition(POD) has prefinished metal siding with stained wood siding above around the perimeter of the addition. Painted blue plywood is located directly below the window assembly.

Original 1981 school -The exterior window units are double glazed aluminum frame with operable awning units above fixed panels. Metal screens have been fastened to several of the windows for safety concerns. The majority of the exterior doors are painted metal doors with metal frames.

The 1983 addition are double glazed aluminum frame with operable slider units .

The roof covering over the original 1981 and 1983 addition appears to be the original built-up roof assembly. A large skylight is located above the main foyer of the school.

Overall, the envelope of the building is in acceptable to marginal condition.

Interior Summary:

Original - 1981 school

The entrance vestibules, main foyer and washrooms/change rooms have a quarry tile and/or ceramic tile floor finish. The

majority of the classrooms, staff room, administration area, library and music room including portions of the corridors have a carpet floor finish. VCT is located throughout the corridors and in the science room. The gymnasium has a hardwood floor finish. The majority of the utility areas and mechanical rooms have a paint finish on the concrete slab.

The majority of the interior walls are painted masonry block walls and gypsum board with a vinyl wall covering. Wood paneling is located in the library and office area. The library has glazed walls with GWG panels.

The interior doors are painted steel doors in hollow metal frames. Several classroom doors have sidelights with GWG inserts.

The majority of the school has a suspended 2'x4' acoustical tile ceiling. The structure is painted and exposed in the gymnasium.

Addition - 1983 (Pod)

The entrance vestibules and corridor has a vinyl floor tile (VCT) floor finish. The classrooms have a carpet floor finish with VCT at the entrance area.

The majority of the interior walls are painted masonry block walls and gypsum board with a vinyl wall covering.

The interior doors are painted steel doors in hollow metal frames. Several classroom doors have sidelights with GWG inserts.

The addition has a suspended 2'x4' acoustical tile ceiling.

Overall, the interior finishes are in acceptable condition.

Mechanical Summary:

Space heating for the 1981 building is provided by two gas-fired Ruud hot water atmospheric boilers. Mid-efficiency gas-fired furnaces provide space heating to the 1983 pods classrooms. Hot water is distributed to the heating coils in 2 Air Handling Units (AHU), perimeter hot water radiators, convector, unit heater and forced flow heaters at the entrances.

Ventilation is provided by the 2 AHU's. One of the AHU's is serving the Gymnasium. The other AHU is serving the rest of the building. A steam boiler in mechanical penthouse serves as a steam humidifier to increase humidity in the building.

The pneumatic HVAC control system consists of air compressor, thermostats, control valves for perimeter hot water radiators and forced flow heaters. The thermostats for forced flow heaters are equipped with temperature and fan speed control. Furnaces in the Pods are controlled independently by bi-metal type thermostats.

The plumbing fixtures include stainless steel sinks, vitreous china and stainless steel lavatories, flush valve floor mounted water closets, flush tank floor mounted water closets, flush valve floor mounted urinals, showers, janitor sinks, anti-scalding mixing valve, floor drains, non-freeze type hose bibbs and wall mounted porcelain drinking fountains. Most of the plumbing fixtures are original. Original lavatories in washrooms were replaced with new stainless steel bowls and metering self-closing faucets in 1999. Both water and gas meters are located in the Exterior Storage room at southeast corner of the building.

Fire protection system includes standpipe system, duct smoke detector and fire extinguishers. This building is not sprinkler protected. Two fire hose cabinets are located in Gymnasium. The air handling units are monitored by the duct smoke detector.

Based on the age and condition of the mechanical systems, the following components are recommended for repair and replacement within the years 2006 to 2010.

- Replace original domestic hot water recirculating pump
- Install missing roof drain strainers
- Replace original gas pipe supports on roof
- Replace original hot water boilers B-1 and B-2 and the associated chimneys and water treatment system
- Replace furnaces and associated flue pipes in Pods

Overall the mechanical systems are in acceptable condition.

Electrical Summary:

Centennial Elementary School is fed from an EPCOR padmounted transformer located on the school grounds. The main switchboard is rated at 600A, 120/208V. There are individual motor starters for the major mechanical equipment. A 15kW natural gas emergency generator is located in the main electrical room.

The wiring in the building is typically standard wiring in conduit.

The interior fluorescent lighting fixtures have T-12 lamps and magnetic ballasts. The exit lighting in the building consists of metal units that have been retrofitted with LED lamps. The emergency lighting is fed from standard fluorescent fixtures fed from an emergency panel. The exterior lighting consists of wall mounted H.I.D fixtures at entrance doors and recessed incandescent fixtures in the canopy.

The building is equipped with an Edwards 6500 system. Detection and end devices include, smoke and heat detectors, bells and pull stations.

The various communications and security systems within the school include; a DSC Maxsys PC4020 security system that monitors motion detectors, an obsolete Rauland P.A. system and a Norstar/Meridian telephone system. Cable TV and data systems are installed within the school.

It is recommended, as routine maintenance, that a program for annual examination of major electrical components be instituted. Maintenance should include thermographic scans for hot spots and power shut down to allow examination of interior components for accumulated debris and signs of corrosion.

Based on the condition of the electrical systems the following replacements are scheduled for replacement during the years 2006 to 2010.

- Replace the Edwards 6500 Fire Alarm system
- Replace the obsolete Rauland P.A. system

Overall the electrical components for Centennial Elementary School are 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***

Original 1981 building - The foundations consist of cast-in-place concrete grade beams and spread footings.

1983 Pod Addition - Concrete piers bearing on undisturbed soil.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

A1030 Slab on Grade*

Original 1981 building - The building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

B1010.01 Floor Structural Frame*(Building Frame)

Original 1981 building - Concrete structural flat slab supported by steel joists spanning between steel beams & column and foundation walls.

1983 - Addition - Structure - Wood frame construction with structural steel

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

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

Original 1981 building - Structural reinforced concrete block walls

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

B1010.09 Floor Construction Fireproofing*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

B1010.10 Floor Construction Firestopping*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

B1020.01 Roof Structural Frame*

1981 Original school - Metal roof deck with steel structure supported by exterior & interior concrete walls.

1983 Addition - Wood frame construction assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

B1020.06 Roof Construction Fireproofing*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

S2 ENVELOPE**B2010.01.02.01 Brick Masonry: Ext. Wall Skin***

Exterior brick cladding is located around the lower portion of the building

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	75	AUG-06

B2010.01.05 Exterior Insulation and Finish Systems (EIFS)*

1981 Original building - The exterior walls of the gymnasium and panels below the window assemblies have a aggregate stucco panel assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	75	AUG-06

B2010.01.06.03 Metal Siding**

1983 Addition - Prefinished metal siding is located along the lower portion of the exterior walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	40	AUG-06

B2010.01.06.04 Wood Siding**

Original 1981 & 1983 Addition - Stained wood siding is located above the upper portion of the exterior wall assembly. Painted plywood panels are located below the window assembly in the 1983 addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

Event: Replace Wood Siding**Concern:**

Water appears to have penetrated the plywood panels below the windows in the 1983 addition.

Recommendation:

Replace all damaged panels and repaint.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2007	\$5,000	Medium

Updated: AUG-06

B2010.01.09 Expansion Control: Exterior Wall Skin*

Expansion/control joints are located throughout the cladding assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	75	AUG-06

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

Sealant is located around all window, door and exterior cladding assemblies.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	20	AUG-06

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

The exterior wood siding has a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	15	AUG-06

Event: Repaint wood siding**Concern:**

Exceeded theoretical useful life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$30,000	Low

Updated: AUG-06

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

Interior concrete block construction on the exterior wall assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

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

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	AUG-06

B2010.06 Exterior Louvers, Grilles, and Screens*

Metal security screens are present on several classroom windows.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	AUG-06

B2010.09 Exterior Soffits*

Painted wood soffits are located above the exterior entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	AUG-06

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

Original 1981 school - The windows throughout the school have an aluminum frame assembly with a combined fixed glazed portion, metal louvre and an operable awning unit.

1983 Addition - The windows are aluminum frame double glazed operable sliding units.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

B2030.01.02 Steel-Framed Storefronts**

The entrance doors are painted steel doors with painted steel frames. There are approximately a total of 20 exterior exit doors throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

B3010.01 Deck Vapor Retarder and Insulation*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	25	AUG-06

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

Original 1981 & 1983 Addition - Built-up Bituminous roof assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	25	AUG-06

Event: Replace Built-up Bituminous Roof

Concern:

Exceeded theoretical useful life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$375,000	Low

Updated: AUG-06

B3020.01 Skylights**

Acrylic Skylights are located above the main foyer

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	AUG-06

Event: Replace Skylights**Concern:**

Exceeded theoretical useful life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$10,000	Low

Updated: AUG-06

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

There is one metal roof hatch in the boiler room that provides access to the roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	25	AUG-06

S3 INTERIOR**C1010.01 Interior Fixed Partitions***

Interior partitions typically consist of painted masonry block walls and painted gypsum board walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

C1010.06 Interior Glazed Partitions and Storefronts*

Interior glazed partitions with GWG are located in the library and main office area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	AUG-06

C1010.07 Interior Partition Firestopping*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

C1020.01 Interior Swinging Doors**

The interior swing doors generally consist of solid core painted and/or clear finished wood doors in painted steel frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

C1020.03 Interior Fire Doors*

Fire doors are located in the common area corridors between the original building and each addition. The majority of the doors are rated and labeled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

C1030.01 Visual Display Boards**

Tackboards, chalkboards and whiteboards are located in each classroom area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	AUG-06

Event: Replace Visual Display Boards**Concern:**

Exceeded theoretical useful life

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$25,000	Low

Updated: AUG-06

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

1981 Original building - Painted metal washroom stall partitions are located in each boy's & girls washroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

C1030.08 Interior Identifying Devices*

The room number or room name is painted on the interior doors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	20	AUG-06

C1030.12 Storage Shelving*

Clear finish plywood storage shelving throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	20	AUG-06

C1030.14 Toilet, Bath, and Laundry Accessories*

The washrooms are equipped with typical washroom accessories: Paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	20	AUG-06

C2010 Stair Construction*

The stairs to the upper mechanical penthouse are open steel stairs with a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	100	AUG-06

C2020.08 Stair Railings and Balustrades*

Painted steel handrails on the stairwell stairs to the mechanical penthouse.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

C3010.01 Concrete Wall Finishes*

The concrete walls in the mechanical room are exposed with no wall finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	AUG-06

C3010.02 Wall Paneling**

Stained wood panels are located in the library and office area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

C3010.04 Gypsum Board Wall Finishes*

Several of the demising walls in the building consist of painted gypsum walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	60	AUG-06

C3010.09 Acoustical Wall Treatment**

Acoustical wood wall panels are located throughout the gymnasium, library & in the music room

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	AUG-06

Event: Replace Acoustical Wall Treatment**Concern:**

Exceeded theoretical useful life

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$75,000	Low

Updated: AUG-06

C3010.11 Interior Wall Painting**

(1999) - The interior partitions throughout the school have a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1999	10	AUG-06

C3010.12 Wall Coverings**

1981 Original Building & 1983 Addition - A majority of the interior demising walls in the building consist of gypsum walls with a vinyl and/or fabric wall covering.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	15	AUG-06

Event: Replacem Vinyl Coverings**Concern:**

Exceeded theoretical useful life

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$30,000	Low

Updated: AUG-06

C3020.01.02 Paint Concrete Floor Finishes**

Painted/sealed concrete floors are located in the mechanical room and custodial rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	10	AUG-06

Event: Repaint Concrete Floors**Concern:**

Exceeded theoretical useful life

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$5,000	Low

Updated: AUG-06

C3020.02 Tile Floor Finishes**

Quarry tile & ceramic tile flooring is located in the entrance vestibules, washrooms and change rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

C3020.04 Wood Flooring**

Hardwood flooring is located in the gymnasium

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

C3020.07 Resilient FlooringVCT**

1981 Original Building - VCT is located in the science room, corridors and small ancillary rooms.
 1983 Addition - VCT is located throughout a portion of the classrooms and corridor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	20	AUG-06

Event: Replace Resilient FlooringVCT - 1981 Original Bldg****Concern:**

Exceeded theoretical useful life

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$25,000	Low

Updated: AUG-06

Event: Replace Resilient FlooringVCT - 1983 Addition****Concern:**

The VCT flooring in the 1983 Addition is deteriorated with several warping in the floor.

Recommendation:

Replace all VCT in the 1983 addition.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$20,000	High

Updated: AUG-06

**C3020.08 Carpet Flooring****

(2000) - Carpeting is located in several classrooms, office area, music room and library.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	15	AUG-06

C3030.04 Gypsum Board Ceiling Finishes*

Gypsum board ceilings are located in the washrooms & change rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	AUG-06

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

The majority of the ceilings have a 2'-0"x4'-0"suspended acoustical tile assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	25	AUG-06

Event: Replacement Acoustic Ceiling Tiles**Concern:**

Exceeded theoretical useful life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$125,000	Low

Updated: AUG-06

C3030.07 Interior Ceiling Painting**

All gypsum board ceilings & exposed steel structures have a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	AUG-06

Event: Repaint Interior Ceilings**Concern:**

Exceeded theoretical useful life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$25,000	Low

Updated: AUG-06

S4 MECHANICAL**D2010.01 Water Closets****

Original floor mounted water closets with flushometers in the Boys and Girls Washrooms and Change Rooms; flush tanks units in the Staff Washrooms and other small washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

D2010.02 Urinals**

Original floor mounted urinals with flushometers in Boy's Washrooms, Boy's Change Rooms and Men Staff washroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

D2010.03 Lavatories**

All original lavatories in Boy's and Girl's Washrooms were replaced with stainless steel, counter top lavatories and metering self-closing faucets in 1999. One wall mounted vitreous china lavatory with metering self-closing faucet and two original wall mounted vitreous china lavatories with manual faucets locate in other small washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1999	35	AUG-06

D2010.04 Sinks**

Sinks includes floor mounted mop receptor type service sink in Mechanical Room and Janitor Room, stainless steel single-compartment kitchen sink in Staff Room, stainless steel 3-compartment kitchen sink in kitchen and stainless steel hand sinks in classrooms. Typical hand sink in classroom consists of manual operated hot and cold water faucets and drinking fountain.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D2010.05 Showers**

Shower heads and metered faucets are located in Boys and Girls Change Room. The shower are constructed with partition walls, shower curtain and floor drains. The supply water temperature for showers is controlled by an anti-scalding valve.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D2010.08 Drinking Fountains / Coolers**

Original vitreous china wall mounted porcelain drinking fountains are located in the corridors. The stainless steel sinks in the classrooms are also equipped with drinking fountains.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

D2020.01.01 Pipes and Tubes: Domestic Water*

Incoming water meter is located in Exterior Storage Room at southeast corner of the building. Original 100mm incoming water main is reduced to 50mm diameter water pipe with 32mm diameter water meter. The 50mm water pipe is serving the whole building. Generally, the water pipes are original copper pipes.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D2020.01.02 Valves: Domestic Water**

Sinks, lavatories, water closets and drinking fountains are equipped with isolating valves. An anti-scalding mixing valve in boiler room is serving the shower.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D2020.01.03 Piping Specialties (Backflow Preventors)**

A fill assembly equips with backflow preventor and pressure reducing valve is serving the hot water and steam boiler systems. This device was installed in 1997.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	20	AUG-06

D2020.02.02 Plumbing Pumps: Domestic Water**

A domestic hot water recirculating pump located in boiler room to serve the domestic hot water system in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	AUG-06

Event: Replace domestic hot water recirculating pump

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$3,000	Low

Updated: AUG-06

D2020.02.06 Domestic Water Heaters**

One gas-fired hot water heater located in the Boiler Room. The heater is State model SBT75-250-NEI-DCGA; Gas Input=225MBH, 75 Gallon. An abandoned domestic hot water heater is found in the mechanical and shall be removed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	20	AUG-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
340	litre

D2020.03 Water Supply Insulation: Domestic*

Original domestic water pipe insulation in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D2030.01 Waste and Vent Piping*

The sanitary system consists of black steel pipes and connects to the municipal sewage. The vent pipes are through the roof type.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

D2040.01 Rain Water Drainage Piping Systems*

The rain water drainage system consists of roof drains, rain water leaders and internal pipes connected to the municipal storm pipe.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

D2040.02.04 Roof Drains**

The roof drains are conventional type without storm water management control device. Some roof drains covers are missing and requires replacement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1981	40	AUG-06

Event: **Replace missing roof drain covers.**

Concern:

Some roof drain covers are missing.

Recommendation:

Install missing roof drain covers.

Consequences of Deferral:

Large debris can go into the pipe and block the system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2006	\$3,000	Medium

Updated: OCT-06



D3010.02 Gas Supply Systems*

The underground incoming 75mm diameter high pressure gas main along with pressure regulator and gas meter is located in the Exterior Storage Room at the southeast corner of the building. After the meter, 150mm diameter, 7" water gauge pressure gas main is serving a steam boiler, two hot water boilers, a domestic hot water tank and an emergency generator. The support for the gas pipe on roof is deteriorating and requires repair.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1981	60	AUG-06

Event: Replace gas pipe support on roof**Concern:**

All gas pipe supports on roof are deteriorating. The wood blocks supporting the gas pipe are sitting directly on the roof without any foam board. It may damage the roof membrane and cause roof leaks.

Recommendation:

Replace all gas pipe supports with new.

Consequences of Deferral:

Insecure gas pipe support and possible roof leaks.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2006	\$15,000	Medium

Updated: OCT-06

D3020.01.01 Heating Boilers & Accessories: Steam**

Steam humidifier system consists of one gas-fired cast iron sectional steam boiler and burners in Mechanical Room. Boiler is HB Smith boiler, model C-300, gas input=450MBH, heat output=360MGH. This boiler provides steam to the humidifiers serving two Air Handling Units.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

D3020.01.03 Chimneys (&Comb. Air) : Steam Boilers**

Chimney system for steam boiler include the B-vent flue and rain cap. Chimney is insulated inside the Mechanical Penthouse

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

D3020.01.04 Water Treatment: Steam Boilers*

The existing chemical treatment system consists of a chemical barrel and a feeding pump locate beside the steam boiler.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

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

(1981) Heating boiler system consists of two gas-fired atmospheric hot water boilers and burners. Boilers are Ruud Multi-tube Model CB1440-2SS; gas input=440 MBH each. These boilers are the source to provide space heating in the whole building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	129	kW	

Event: Replace original hot water boilers

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$120,000	Low

Updated: NOV-06

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

Chimney system for hot water boilers include B-vent and rain cap for each hot water boiler. Chimney is insulated inside the Mechanical Penthouse

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

Event: Replace original chimneys for hot water boilers

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$15,000	Low

Updated: NOV-06

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

The water treatment system for hot water system includes strainers, water filter and chemical treatment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

Event: Replace original water treatment for hot water boiler

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$5,000	Low

Updated: OCT-06

D3020.03.01 Furnaces**

Each pod classroom is served by a mid-efficiency gas-fired furnace. The furnaces are located in the classroom furnace rooms. Supply air is discharged from the bottom of unit and distributed with ductwork along the perimeter wall. Return air is taken from the top of the unit ducted from the sidewall grille. All six furnaces are original. They are Palmaire model PAC105AH; gas input=94.5MBH; output=75.6MBH.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1983	25	AUG-06

Event: Replace original furnaces in Pods

Concern:

The original furnaces have exceeded their life expectancy. Sign of rusting has shown on the unit housing.

Recommendation:

Replace original mid-efficiency furnaces with new of the same capacity.

Consequences of Deferral:

No heat in Pod Classrooms

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$52,000	Medium

Updated: AUG-06



D3020.03.02 Chimneys (&Comb. Air): Furnace*

The flue pipes for the furnaces are B-vents through roof. Combustion air is taken from outdoor and controlled by motorized damper.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1983	30	AUG-06

Event: Replace existing B-vent for furnace system**Concern:**

The flue vent for the furnace shall be replaced when the corresponding furnace system is being replaced as per item D3010.03.01.

Recommendation:

Replace original flue vent with new to match new furnace.

Consequences of Deferral:

No heat in Pod Classrooms.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$9,000	Medium

Updated: AUG-06

D3040.01.02 Fans: Air Distribution* - F-1 and F-2

Inline axial supply air fan F-1 and centrifugal cabinet return air fan F-2 in mechanical penthouse are serving the areas other than Gymnasium and the pods. F-1 is Trane model 33QB-9-1H with 3 HP motor. F-2 is also Trane unit with 7.5 HP motor. Both fans are interlocked with duct smoke detector. Fans will be shut down when smoke is detected.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3040.01.02 Fans: Air Distribution* - F-3 and F-4

Two belt driven centrifugal cabinet fans, F-3 and F-4 locate in mechanical penthouse are serving the Gymnasium area. F-3 is Trane supply air fan; model T10LPHFTHA. F-4 is also Trane return air fan; model T10LPHCTHR with 3 HP motor. Both fans are interlocked with duct smoke detector. Fans will be shut down when smoke is detected.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3040.01.04 Ducts: Air Distribution*

Air distribution duct system includes supply air ducts, return air ducts, duct insulation, volume dampers, fire dampers, acoustic lining and motorized dampers. Round exposed supply air duct is serving the Gymnasium at high level and return at low level by side wall grille. Ventilation air to other areas is distributed by supply and return air duct in corridor. Branch ducts are terminated with sidewall diffusers or grilles in the classrooms at high level or ceiling diffusers and eggcrate in area with false ceiling. Supply air duct in Pod Classrooms is built under the cabinet along perimeter wall. Air is supplied through the floor register built on top of cabinet.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

D3040.01.07 Air Outlets & Inlets:Air Distribution*

Air outlets and inlets for air distribution system includes ceiling mounted or wall mounted linear diffusers, eggcrates return air grille, door grilles, square ceiling diffusers, opposed type volume dampers for diffusers, outdoor louvers, volume damper for return air grilles and residential type floor registers in Pods.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3040.02 Steam Distribution Systems: Piping/Pumps**

Steam distribution system includes steam pipes, pipe insulation and steam condensate return sump and pumps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3040.03.01 Hot Water Distribution Systems**

Hot water distribution system include two hot water main circulating pumps, hot water pipes, pipe insulation, pressure gauges, thermometers, regulating valves, strainers, shut-off valves, control valves, 3-way mixing valves, pressure different valves, expansion tank and air vents. The expansion tank is Amtrol vertical tank, model AX-120V. The two main circulating pumps are base mounted in-line centrifugal pumps with 3 HP motor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D3040.04.01 Fans: Exhaust**

About six rooftop centrifugal cabinet fans and one centrifugal fan locate in mechanical penthouse to serve the washroom and two kitchen range hoods in the staff Kitchen and and kitchen beside classroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3040.04.03 Ducts: Exhaust*

All exhaust fans are connected with ductwork to serve washrooms, kitchen, change rooms and crawl space for the Pods.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust outlets and inlets include aluminum wall mounted exhaust air grilles and ceiling mounted eggcrate.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3050.02 Air Coils**

Two hot water heating coils in mechanical penthouse are serving the two air distribution systems for Gymnasium and other building areas respectively. Hot water reheat coils are located in the air distribution ductwork to provide temperature control in the classrooms and offices.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3050.03 Humidifiers**

Two steam humidifiers are serving two air distribution systems for Gymnasium and other building areas respectively. The steam is fed from the steam boiler in mechanical penthouse.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	25	AUG-06

D3050.05.01 Convectors**

Hot water convectors are located in washrooms and change rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D3050.05.03 Finned Tube Radiation**

Perimeter hot water finned tube radiators are located in classrooms, washrooms and offices. Wall mounted hot water radiators locate at high level behind the wood bar to offset the heat loss from the high ceiling.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D3050.05.06 Unit Heaters**

Hot water unit heaters are located in mechanical penthouse and emergency generator room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3050.05.07 Unit Ventilators**

Ceiling mounted hot water forced flow heaters are located at each exit. They are controlled by a thermostat with fan speed control.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3060.02.01 Electric and Electronic Controls**

The furnaces in Pod classrooms are controlled by the bi-metal type thermostat.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

D3060.02.02 Pneumatic Controls**

The pneumatic control system consists of air compressor and zone sensors to control the control valves, 3-way valves and actuators for motorized dampers. A remote alarm system will notify the main office if the boilers fail.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D3060.02.03 Pneumatic and Electric Controls

Washroom exhaust fan control panel and a timer control panel for the air distribution systems are located in Custodian's Office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	40	AUG-06

D4020 Standpipes*

Fire hose cabinets are located in Gymnasium only. It is fed from the same cold water main with domestic water system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	60	AUG-06

D4030.01 Fire Extinguisher, Cabinets and Accessories**

Water type fire extinguishers with hand pump locate mainly in corridor. Most of the fire extinguishers are housed in a recessed wall mounted cabinet.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

S5 ELECTRICAL**D5010.01 Main Electrical Transformers****

The incoming hydro service to Centennial Elementary School is a 120/208V, 3-phase, 4-wire service from an exterior padmounted transformer located on the Southeast side of the school property. The padmounted transformer is owned and maintained by EPCOR. The EPCOR meter is located in the main electrical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	40	AUG-06

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

The main electrical switchboard is a Square D, I-Line switchboard rated at 800A, 120/208V, 3-phase, 4-wire. The switchboard has a 600A main breaker and a distribution section with moulded case breakers feeding the transfer switch and branch circuit panels within the school. The main electrical switchboard is original equipment that was installed when the school was constructed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	40	AUG-06

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

The majority of the electrical branch circuit panelboards are Westinghouse panels that appear to have been installed when the building was originally constructed. Several panels have associated contactors. Stab-Lok panels are used in the 1983 pod classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5010.07.02 Motor Starters and Accessories**

The motor starters within the school are individual motor starters (Westinghouse) and motor rated starter switches.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5020.01 Electrical Branch Wiring*

The majority of the cabling is standard building wire in EMT conduit. Armoured cable has been provided, in selected locations, for final connections to mechanical and miscellaneous equipment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	50	AUG-06

D5020.02.01 Lighting Accessories (Lighting Controls)*

Low voltage relays have been provided for the lighting. Control switches for the corridor and washroom lighting are located in the Custodian's office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5020.02.02.01 Interior Incandescent Fixtures*

PAR lamp fixtures have been provided at the skylight locations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5020.02.02.02 Interior Florescent Fixtures**

The typical lighting within the school consists of 1x4 and 2x4, recessed, Acrylic, lensed, 2 lamp or 4 lamp fluorescent units. The Library has surface mounted, 2x4, 4 lamp, acrylic lensed fixtures. Two lamp fluorescent fixtures with wire guards have been provided in the gymnasium. The typical classroom fixture in the 1983 pod is a wrap-around, two lamp fluorescent fixture, surface mounted on the ceiling. The fluorescent lighting fixtures throughout the school have T12 lamps and magnetic ballasts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5020.02.03.01 Emergency Lighting Built-in*

Existing building fluorescent lighting fixtures, fed from emergency panels, are utilized for emergency lighting.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	35	AUG-06

D5020.02.03.03 Exit Signs*

The majority of the exit signs are metal, stencil faced exit signs that have been retrofitted with LED lamps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	30	AUG-06

D5020.03.01.01 Exterior Incandescent Fixtures*

Recessed incandescent fixtures are mounted in the building canopy. The recessed fixtures have been protected with acrylic covers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

H.P.S. wallpack fixtures have been provided on the exterior walls, typically at exit door locations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

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

A timer and contactor have been provided for exterior lighting control.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	30	AUG-06

D5030.01 Detection and Fire Alarm**

The fire alarm system control panel is an Edwards 6500 panel with 7 active zones and 5 spare zones. The control panel is located in the general office and there is a remote annunciator at the main entrance. The audible devices within the school are 10" dia. Bells. Strobes have not been installed. Duct mounted smoke detection has been provided for the gymnasium air handling equipment. Previous reports indicate false alarm problems with the panel.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1982	25	AUG-06

Event: Replace fire alarm system

Concern:

There have been false alarms reported for the Edwards 6500 fire alarm control panel. The Edwards 6500 system is no longer manufactured. Additional fire alarm devices are required within the school.

Recommendation:

Replace existing fire alarm system with a new addressable system.

Consequences of Deferral:

Continued false alarms and costly maintenance for system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$30,000	High

Updated: AUG-06



D5030.02.02 Intrusion Detection**

The security system is a DSC Maxsys PC4020 system with the main panel located in storage room 138. A security system keypad has been installed in the custodian room. PIR smoke detectors have been provided throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	25	AUG-06

D5030.03 Clock and Program Systems**

The majority of the clocks within the school are plug-in clocks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	25	AUG-06

Event: Replace clocks**Concern:**

Clocks have reached their theoretical life.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$4,000	Low

Updated: AUG-06

D5030.04.01 Telephone Systems**

The telephone system is a Norstar Meridian system. Meridian handsets are located in the classrooms and selected areas such as the general office. The main telephone equipment is located in storage room 138.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	25	AUG-06

D5030.04.04 Data Systems**

The data system servers are located in the AV room and the computer room. Cat. 5 cables are used for the network wiring within the school. Supernet has been installed in the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	25	AUG-06

D5030.05 Public Address and Music Systems**

The public address system is a Rauland MCI 250, analogue system that is obsolete. Return call switches have been provided in the classrooms. Speakers are typically round, recessed ceiling mounted units. The Rauland unit is located in the General Office area. A separate TOA sound system has been provided for the gymnasium with wall mounted speakers. The program bells are initiated from the Rauland P.A. system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1982	20	AUG-06

Event: Replace Rauland P.A. system

Concern:

Existing Rauland P.A. System is obsolete. Replacement parts are no longer available. Standard system for schools is a microprocessor based system.

Recommendation:

Replace existing P.A. System with new microprocessor based system (Bogen Multicom 2000).

Consequences of Deferral:

Inoperable P.A. system.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$15,000	Medium

Updated: AUG-06

D5030.06 Television Systems*

Coaxial cable for television systems has been brought into storage room No. 35 across from the General Office. Cable TV outlets have been provided in selected rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	20	AUG-06

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

An ONAN natural gas emergency generator is located in the main electrical room. The generator is rated 15kW, 18.75kVA at 120/208V. A transfer switch has been installed for the emergency power distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	35	AUG-06

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION**E1090.07 Athletic, Recreational, and Therapeutic Equipment***

Basketball hoops are located in the gymnasium. A climbing apparatus is also located in the gym area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	15	AUG-06

E2010.02 Fixed Casework**

Each classroom is equipped with custom wood open faced and/or painted cabinet units along the exterior wall. The staff room has painted wood upper and lower cabinet units. The science room is equipped with upper wood cabinets, lower cupboards c/w counter-top, open fixed shelving. The library has fixed and moveable wood shelving casework. Glass display cabinets are located in the main entrance area and in the corridors. The washrooms have plastic laminate counter tops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	35	AUG-06

E2010.03.01 Blinds**

A variety of metal blinds are located in several classrooms & in the office areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	AUG-06

E2010.03.06 Curtains and Drapes**

Curtains are located in the administration rooms and several of the classrooms in both the original and 1983 addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	30	AUG-06

E2020 Moveable Furnishings*

Chairs, desks and tables are located in all the classrooms, library and administration areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	20	AUG-06

F2020.01 Asbestos*

Suspected asbestos-containing materials observed in the building include vinyl tile flooring in the school corridors, classrooms, texture coated ceilings and piping insulation. All asbestos presently encapsulated.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	AUG-06

F2020.04 Mould*

No mould known or reported

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	AUG-06

F2020.09 Other Hazardous Materials*

No hazardous material known or reported

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	AUG-06

S8 FUNCTIONAL ASSESSMENT**K4010.01 Barrier Free Route: Parking to Entrance**

Barrier free access from the parking area to the building entrance is available on the south elevation (front of school). Signage for a designated handicap parking space is not provided.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	AUG-06

K4010.02 Barrier Free Entrances

No automatic door entrances are provided.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	AUG-06

Event: Barrier Free Access Upgrade**Concern:**

No automatic access is currently provided from any exterior entrance doors.

Recommendation:

Provide power operators for barrier free access at the south entrance of the original 1981 building.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2006	\$3,500	Medium

Updated: AUG-06

K4010.03 Barrier Free Interior Circulation

Barrier free access is provided to most areas of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	AUG-06

K4010.04 Barrier Free Washrooms

The current washroom areas do not provide a barrier free accessible compartment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	AUG-06

Event: Provide barrier free unisex washroom**Concern:**

No barrier free washroom is provided.

Recommendation:

Provide barrier free unisex washroom

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2006	\$25,000	Medium

Updated: AUG-06

RECAPP Facility Evaluation Report



Centennial School

S3073
Edmonton

Facility Details**Building Name:** Centennial School**Address:****Location:** Edmonton**Building Id:** S3073**Gross Area (sq. m):** 0.00**Replacement Cost:** \$0**Construction Year:** 0**Evaluation Details****Evaluation Company:** Asset Evolution Incorporated (AEI)**Evaluation Date:** May 9 2006**Evaluator Name:** Mario Plastina**Total Maintenance Events Next 5 years:** **\$95,000****5 year Facility Condition Index (FCI):** **0%****General Summary:**

The site of Centennial Elementary School includes an asphalt paved roadway & parking area accessible from 57th Avenue. A sodded playing field is located at the north end of the property. Grass, shrubs and trees are located along the south and west elevations of the school. An asphalt paved playground is located north-east end of the school. Pedestrian concrete walkways are located at the main entrances and along the south & west elevation. Site drainage slopes away from the building with no problems indicated or observed.

There are no portables on site.

Overall the site elements are in acceptable condition

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.

S7 SITE**G2010.02.02 Flexible Pavement Roadway (Asphalt)****

An asphalt paved roadway to the main parking areas is accessible from 57th Avenue located at the south-east corner of the site.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	25	AUG-06

Event: Repave Roadway**Concern:**

Exceeded theoretical life expectancy

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$15,000	Low

Updated: AUG-06

G2010.05 Roadway Curbs and Gutters*

Precast concrete curbs are located around the perimeter of the asphalt paved roadway.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	25	AUG-06

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

The asphalt paved parking area is located at the south-east end of the property.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1983	10	AUG-06

Event: Repave Parking Lot**Concern:**

Exceeded theoretical life expectancy

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$40,000	Low

Updated: AUG-06

G2020.05 Parking Lot Curbs and Gutters*

Poured in place concrete curbs are located around the perimeter of the parking lot

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	25	AUG-06

G2020.06.04 Pavement Markings*

The parking lots have yellow painted lines identifying the parking spaces.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	25	AUG-06

G2030.03 Pedestrian Unit Pavers**

Several walkways are paved with concrete unit pavers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	20	AUG-06

G2030.04 Rigid Pedestrian Pavement (Concrete)**

The playground area along the school at the north-east is paved in concrete. Poured in place concrete walkways lead to all the school entrances. The lifecycle should be 40 years for concrete surfaces.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1983	15	AUG-06

Event: Replace concrete walkways.**Concern:**

The concrete walkways along the school have severely shifted away from the building. The problem may be with the initial substructure soil compaction.

Recommendation:

Remove concrete walkways and provided an adequate substructure for the surface material. Filling in the gaps does not solve the on-going shifting of the walkway, however a more economical solution.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$40,000	High

Updated: AUG-06

G2040.03 Athletic and Recreational Surfaces**

(2004)Basketball hoops are located adjacent to the asphalt paved playground along the east elevation of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2004	25	AUG-06

G2040.05 Site and Street Furnishings*

Bicycle racks are located along the west end of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	15	AUG-06

G2040.06 Exterior Signs*

Exterior wall-mounted signage is provided on the building's main entrances. School signage is located on the south wall. A free-standing signage panel is located adjacent to the main entrance.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	25	AUG-06

G2040.08 Flagpoles*

A flagpole is located on the south elevation of the property adjacent to the main entrance.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	AUG-06

G2050.04 Lawns and Grasses*

Grassed areas are located along the south and west sides of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	15	AUG-06

G2050.05 Trees, Plants and Ground Covers*

Mature trees and shrubs are located along the south & west sides of the site.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	10	AUG-06

G3010.02 Site Domestic Water Distribution*

100mm diameter domestic water main runs from street main to the exterior storage room at the southeast corner of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

G3010.03 Site Fire Protection Water Distribution*

The standard pipe system shares the same water line with domestic water system. This pipe runs from street main to the exterior storage room at the southeast corner of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

G3020.01 Sanitary Sewage Collection*

Main sanitary waste pipe is connected to municipal main drain.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

G3030.02 Storm Water Equipment*

Storm water equipment includes area drain and pipes in the west side parking area. A building main drain is expected collecting the rain water from the area drain at parking area and connect to the municipal drain in 57th Avenue. Most of the storm water goes to sod area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

G3060.01 Gas Distribution*

A 75mm diameter gas main runs from 57th Avenue to the exterior storage room at southeast corner of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	50	AUG-06

G4010.03 Electrical Power Distribution Equipment*

An EPCOR padmounted transformer is located on the South East side of the site. The transformer and secondary feeder into the building were installed in 1982. The transformer is owned and maintained by EPCOR.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	50	AUG-06

G4010.04 Car Plugs-ins*

There are 24 energized parking stalls. Plug-in receptacles for block heaters are mounted on a metal railing. An adequate number of car plug-ins have been provided

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	25	AUG-06

G4020.01 Area Lighting*

The area lighting for Centennial Elementary School consists of pole mounted shoebox style fixtures with H.P.S.lamps illuminating the parking areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1982	25	AUG-06