RECAPP Facility Evaluation Report

Edmonton School District No. 7

Malcolm Tweddle Elementary School

B3202A
Edmonton

Report run on: July 16, 2008 2:44 PM

Facility Details

Building Name: Malcolm Tweddle Elementa
Address: 2340 Millbourne Road W.
Location: Edmonton

Building Id: B3202A
Gross Area (sq. m): 3,104.00
Replacement Cost: $6,765,083
Construction Year: 1975

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 9 2007
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$1,278,534**
5 year Facility Condition Index (FCI): **18.90%**

General Summary:

Malcolm Tweddle Elementary School is a one-storey school with a total building area of 3104 m2. The school was built in 1975 with an area of 2276m2. Two clusters of four portables each were added at the east end of the school. Each cluster is 414m2 in area and built in circa 1976.

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

The 2007 student enrollment is 244 children.

Structural Summary:

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 concrete block walls or poured in place concrete.

Overall the structural elements are in acceptable condition.

Envelope Summary:

The exterior cladding consists primarily of brick with painted wood siding above the entrances and windows. The exterior window units are aluminum frame with fixed and awning type units. The majority of the exterior doors are painted metal doors with metal frames. The roof has an SBS assembly.

Overall, the envelope of the building is in good condition.

Interior Summary:

Carpet flooring is found throughout most of the classrooms, staff room, administration offices, library and music room. Ceramic tile flooring is located throughout the washrooms. Vinyl floor tiles are located in the science rooms, corridors and ancillary areas. The gymnasiums have a hardwood floor finish. The utility areas have a sealed and/or paint finish on the concrete slab.

The majority of the interior walls are masonry block walls, gypsum board and demountable partitions walls with vinyl wall coverings. The corridor walls installed to close off the open concept classrooms do not extend to the underside of the structure which is a code violation.

A 2'x4' suspended ceiling tile assembly is located throughout the majority of the school. The structure in the gymnasiums is painted.

The interior swing doors generally consist of stained wood doors with an interior glazed assembly. Painted steel fire doors are located in the corridors. The hardware typically is single cylinder with a stainless steel finish.

Overall, the interior finishes are in acceptable condition.

Mechanical Summary:

The building is heated by two gas fired hot water boilers which supply a hot water distribution system which supplies the classroom air handling unit (AHU1) hot water heating coil, as well as hydronic terminal units including fan coils and reheat coils. There are two air handling units in the building which are both mixed air systems. The classroom air handling unit AHU1 provides heating using a hot water heating coil and the gymnasium air handling unit AHU2 provides heating using two indirect fired gas burners. The mixed air ventilation systems each have an associated return air fan.

The fresh air supplied to the building by the air handling units is balanced by the exhaust air flow from the air handling units and from seven sanitary and local exhaust fans (including six roof mounted exhaust fans).

Building HVAC actuators and controls are pneumatic, and the control air supply system includes an air compressor mounted on an air receiver tank, as well as a refrigerated air dryer. There is a Building Management and Control System (BMCS) providing control and monitoring functions for major HVAC equipment (Barber-Colman Network 8000).

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 23 toilets (17 floor mounted flush valve type and six floor mounted tank type), 20 lavatories (20 counter mounted lavatories including three stainless steel lavatories and 17 vitreous china and enameled steel lavatories), and seven urinals (floor mounted flush valve type) in the building. Other plumbing fixtures in the building include drinking fountains (10), mop sinks (3), a shower stall, and general purpose stainless steel sinks (11). Two gas fired domestic hot water heaters provide domestic hot water for the building lavatories, sinks and shower.

Fire protection for the building consists of cabinet mounted and wall mounted fire extinguishers.

Some mechanical equipment requires replacement or upgrading, including the replacement of several plumbing fixtures, the installation of additional backflow prevention devices, replacement of missing roof drain strainers, the installation of an exhaust fan for the computer network room, replacement of the classroom air handling unit humidification system, the addition of a hydronic heating terminal unit for the gymnasium mechanical mezzanine, and replacement of the control air supply system. Notwithstanding these requirements, the overall condition of the building mechanical equipment and systems is acceptable.

Electrical Summary:

Malcolm Tweddle School is fed with an incoming 120/208V three phase, 4 wire system from an EPCOR pad-mounted transformer. The main switchboard is rated at 1200A, 120/208V with an 800A main breaker. An Allen Bradley MCC has been provided for mechanical equipment.

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

The interior fluorescent lighting fixtures have T-8 lamps and electronic ballasts (2004 retrofit). The exit lighting in the building consists of units with LED lamps. The emergency lighting is fed from emergency lighting battery packs. The exterior lighting consists of wall mounted H.P.S. and incandescent fixtures.

The building is equipped with an Edwards Fireshield fire alarm 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 Magnum Alert security system that monitors motion detectors, a Bogen Multicom 2000 P.A. system and a Nortel Meridian telephone system. 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.

The main areas of concern for the school are the aged emergency lighting units, insufficient exterior lighting and low light levels in the gymnasium.

Overall the electrical systems for Malcolm Tweddle 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 - 1975 Section*

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

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

A1030 Slab on Grade - 1975 Section*

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

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

B1010.01 Floor Structural Frame (Building Frame) - 1975 Section*

Concrete structural flat slab supported by poured concrete & concrete block walls

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

B1010.02 Structural Interior Walls Supporting Floors (or Roof) - 1975 Section*

Structural reinforced concrete block walls

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

B1010.09 Floor Construction Fireproofing - 1975 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

B1010.10 Floor Construction Firestopping - 1975 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

B1020.01 Roof Structural Frame - 1975 Section*

Metal roof deck with OWSJ supported by exterior & interior concrete walls.

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

B1020.06 Roof Construction Fireproofing - 1975 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin - 1975 Section*

Brick cladding is located around the entire exterior perimeter walls.

Rating	Installed	Design Life	Updated
5 - Good	1975	75	NOV-07

B2010.01.06.04 Wood Siding**

Painted wood siding is located above the entrances and windows.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace painted wood siding

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$34,320	Unassigned

Updated: APR-08

B2010.01.09 Expansion Control: Exterior Wall Skin - 1975 Section*

Expansion/control joints are located throughout the cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	75	NOV-07

B2010.01.11 Joint Sealers (caulking): Ext. Wall - 1975 Section**

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

Event: Replace exterior joint sealant.

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$17,160	Unassigned

Updated: APR-08

B2010.01.13 Paints (& Stains): Exterior Wall - 1975 Section**

The wood siding located above the entrances and windows has a paint finish.

Rating	Installed	Design Life	Updated
5 - Good	2000	15	NOV-07

Event: Repaint exterior wood siding.

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$11,440	Unassigned

Updated: APR-08

B2010.02.03 Masonry Units: Ext. Wall Const. - 1975 Section*

The interior face of the exterior brick walls have a concrete block wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	100	NOV-07

B2010.03 Exterior Wall Vapor Retarders, Air Barriers, and Insulation - 1975 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	100	NOV-07

B2010.09 Exterior Soffits - 1975 Section*

The exterior soffits above each entrance have a stained wood finish.

Rating	Installed	Design Life	Updated
5 - Good	1975	50	NOV-07

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

The windows are aluminum frame double glazed fixed & operable awning units.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace exterior windows (10 units)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$57,200	Unassigned

Updated: APR-08

B2030.01.02 Steel-Framed Storefronts: Doors**

The majority of the entrance doors are painted metal doors in a painted steel frame.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace steel framed doors (11 doors)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$34,320	Unassigned

Updated: APR-08

B3010.01 Deck Vapor Retarder and Insulation - 1975 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

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

The main roof has a modified bituminous membrane roof assembly (SBS) replaced in 2002

Rating	Installed	Design Life	Updated
5 - Good	2002	25	NOV-07

Event: Replace SBS roof assembly (2300SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$286,000	Unassigned

Updated: APR-08

B3020.02 Other Roofing Openings (Hatch,Vent, etc) - 1975 Section*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

S3 INTERIOR

C1010.01.03 Unit Masonry Assemblies: Partitions -

Interior partitions typically consist of painted masonry block walls.

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

C1010.01.07 Framed Partitions (Stud) -

Interior partitions consist of gypsum board in the library area.

Rating	Installed	Design Life	Updated
5 - Good	1975	100	NOV-07

C1010.02 Interior Demountable Partitions - *

Interior demountable partitions are typically located throughout the classrooms and administrative area. (The school was originally an open-concept facility).

Rating	Installed	Design Life	Updated
5 - Good	1989	50	NOV-07

C1010.04 Interior Balustrades and Screens, Interior Railings - *

The stairs to the stage area has a wall mounted painted wood handrail.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

C1010.07 Interior Partition Firestopping - *

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

C1020.01 Interior Swinging Doors (& Hardware) - *

The interior swing doors generally consist of solid core doors with a stain finish in a painted steel frames. Several of the original doors & frames do not have a fire rated label.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

C1020.03 Interior Fire Doors - *

Painted steel fire doors are located in the corridors. The majority of the doors are rated and labeled.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

C1030.01 Visual Display Boards - **

Tackboards and whiteboards are located in each classroom area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

Event: Replace Visual Display Boards

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$28,600	Unassigned

Updated: APR-08

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

Prefinished metal washroom partitions are located in all boy's & girl's washrooms.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	30	NOV-07

Event: Replace toilet partitions

Concern:
Several of the toilet partitions are damaged and unstable. Repairs have been made over the years.
Recommendation:
Replace all damaged toilet partitions.

Type	Year	Cost	Priority
Failure Replacement	2008	$10,296	Low

Updated: APR-08

C1030.08 Interior Identifying Devices - *

Signage panels are located above each house and the room number located above & on the interior doors

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

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.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

C3010.02 Wall Paneling - **

Wood paneling is located on the stage wall in the gymnasium.

Rating	Installed	Design Life	Updated
5 - Good	1975	30	NOV-07

Event: Replace Wall Paneling

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$57,200	Unassigned

Updated: APR-08

C3010.06 Tile Wall Finishes - Ceramic**

Ceramic wall tile is located throughout the washrooms

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace ceramic wall tile

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$45,760	Unassigned

Updated: APR-08

C3010.11 Interior Wall Painting - *

The interior partitions throughout the school have a paint finish.

Rating	Installed	Design Life	Updated
5 - Good	1990	15	NOV-07

C3010.12 Wall Coverings - *

Vinyl wall coverings are located on all the demountable partitions.

Rating	Installed	Design Life	Updated
5 - Good	1989	15	NOV-07

C3020.01.02 Paint Concrete Floor Finishes*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	10	NOV-07

C3020.02 Tile Floor Finishes - Ceramic tile**

Ceramic floor tile is located throughout the washroom areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

Event: Replace ceramic floor tile (120SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2025	$22,880	Unassigned

Updated: APR-08

C3020.04 Wood Flooring**

Hardwood flooring is located in the gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace hardwood flooring

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$51,480	Unassigned

Updated: NOV-07

C3020.07 Resilient Flooring - **

Vinyl floor tile is located throughout the corridors and in some classrooms and on the stage area of the gymnasium.

Rating	Installed	Design Life	Updated
5 - Good	2006	20	NOV-07

Event: Replace VCT flooring (1500SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2026	$114,400	Unassigned

Updated: APR-08

C3020.08 Carpet Flooring - **

Carpeting is located in the majority of the classrooms, library & in the office areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1989	15	NOV-07

Event: Replace Carpet Flooring (1200SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$91,520	Unassigned

Updated: APR-08

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

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

Event: Replace Acoustic Ceiling (2500SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$200,200	Unassigned

Updated: APR-08

C3030.07 Interior Ceiling Painting - *

All the gypsum board and exposed steel structures have a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1989	20	NOV-07

S4 MECHANICAL

D2010.04 Sinks - **

There are 14 sinks in the building including three mop sinks and 11 general purpose sinks. Typical general purpose sinks include single and double bowl stainless steel sinks.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	30	NOV-07

Event: Replace the 12 original c.1975 mop sinks and general purpose sinks (not including the two sinks in the custodial office and the early childhood services area)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$16,588	Unassigned

Updated: APR-08

Event: Replace two sinks (in the custodial office and the early childhood services area)

Concern:
The general purpose stainless steel sinks in the custodial office and early childhood services area are in poor condition.
Recommendation:
Replace the sinks in the custodial office and the early childhood services area.

Type	Year	Cost	Priority
Failure Replacement	2008	$2,860	Low

Updated: NOV-07

D2010.05 Showers - **

There is one shower stall located in the physical education instructor's office.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace the shower stall in the physical education instructor's office

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$2,860	Unassigned

Updated: APR-08

D2010.08 Drinking Fountains / Coolers - **

There are ten drinking fountains in the building. The drinking fountains are typically wall mounted vitreous china units and are not equipped with coolers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	35	NOV-07

Event: Replace the drinking fountains (10)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$11,440	Unassigned

Updated: APR-08

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

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 23 toilets (17 floor mounted flush valve type and six floor mounted tank type), 20 lavatories (20 counter mounted lavatories including three stainless steel lavatories and 17 vitreous china or enameled steel lavatories), and seven urinals (floor mounted flush valve type) in the building.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	35	NOV-07

Event: Replace 23 toilets, 20 lavs, 6 urinals

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$86,944	Unassigned

Updated: APR-08

Event: Replace the urinal in the boy's washroom near the main entrance (room 145)

Concern:
The floor mounted flush valve type urinal in the boy's washroom at the main entrance (room 145) is cracked.
Recommendation:
Replace the damaged floor mounted flush valve type urinal with a wall mounted flush valve type urinal.

Type	Year	Cost	Priority
Failure Replacement	2008	$3,432	Low

Updated: NOV-07

D2020.01.01 Pipes and Tubes: Domestic Water - *

There is one domestic water supply to the building located in the mechanical room at the southeast corner of the building (room 149). The water supply is 100 mm diameter and is metered with a 50 mm water meter. Water piping in the building is steel and galvanized steel in larger diameters and is generally copper in smaller diameters. Visible domestic water piping is generally insulated.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

D2020.01.02 Valves: Domestic Water - **

Domestic water system valves include zone isolating valves and fixture isolating valves. The domestic water system valves are generally steel for larger diameters and brass for smaller diameters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace the domestic water distribution system isolation valves

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$17,160	Unassigned

Updated: APR-08

D2020.01.03 Piping Specialties (Backflow Preventors) - **

There is a backflow prevention device installed on the boiler make-up water line. There are no backflow prevention devices for the water supply to the building or for the science room sinks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

Event: Install backflow prevention for the building domestic water supply and isolate the water supply to the science room sinks with local backflow prevention

Concern:

There is potential for contamination of the municipal water supply caused by backflow from the building. In addition, there is potential for contamination of the building potable water distribution system caused by backflow from the science room sinks.

Recommendation:

Install a backflow prevention device on the building domestic water supply. In addition, isolate the domestic water supply to the science room sinks (two sinks total) and install a backflow prevention device for this isolated water supply.

Type	Year	Cost	Priority
Code Upgrade	2008	$12,584	Low

Updated: NOV-07

Event: Replace the backflow prevention device for the boiler make-up water supply

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$1,716	Unassigned

Updated: NOV-07

D2020.02.02 Plumbing Pumps: Domestic Water - **

There is a domestic hot water system circulation pump (M20-8) which maintains the domestic hot water loop at temperature. This pump is located in the mechanical room (room 149).

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

Event: Replace the domestic hot water circulation pump located in the mechanical room

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$2,059	Unassigned

Updated: APR-08

D2020.02.06 Domestic Water Heaters - **

Domestic hot water for the building is provided by two A.O. Smith gas fired domestic hot water heaters (one model BT-80-104 and one model BT-80-100, each with an input heating capacity of 68,400 Btu/h) located in the mechanical room (room 149).

Rating	Installed	Design Life	Updated
5 - Good	2001	20	NOV-07

Event: Replace the two gas fired DHW heaters located in the mechanical room

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$6,864	Unassigned

Updated: APR-08

D2020.03 Water Supply Insulation: Domestic - *

Where visible, the domestic water piping is insulated to prevent heat loss and condensation. The piping insulation is reported to contain asbestos.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

D2030.01 Waste and Vent Piping - *

Visible waste and vent piping is generally copper. Since the building is primarily on one level, most of the waste piping is below grade and not visible. Larger diameter waste piping (buried) is probably cast iron.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

D2030.03 Waste Piping Equipment - *

There is an interceptor on the sanitary drain line from the science room sinks located in the science room below the floor level.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D2040.01 Rain Water Drainage Piping Systems - *

Standard roof drains are used to provide storm water drainage of the flat roof areas. The roof drains discharge into rain water leaders which discharge into below grade storm sewer piping connected to the municipal storm sewer system. The storm water drainage piping generally appears to be cast iron and is insulated where visible.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

D2040.02.04 Roof Drains - *

Standard roof drains are used to provide storm water drainage of the flat roof areas.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	40	NOV-07

Event: Install roof drain strainers where required

Concern:
Many of the roof drains are missing strainers.
Recommendation:
Install strainers on the roof drains not so equipped.

Type	Year	Cost	Priority
Repair	2008	$2,059	Low

Updated: NOV-07

D3010.02 Gas Supply Systems - *

The natural gas supply is underground to the building and the gas meter and pressure reducing station are located in the mechanical room room at the southeast corner of the building (room 149). From the mechanical room, internal gas piping supplies the gymnasium mechanical mezzanine, and underground gas piping supplies the portables. The natural gas piping is steel.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	60	NOV-07

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

There are two gas fired heating boilers providing hot water for building heating (B1 and B2). The hot water heating boilers are located in the mechanical room (room 149). The hot water boilers are Teledyne Laars model HB-1050, with an output heating capacity of 1,050,000 Btu/h each.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	35	NOV-07

Event: Replace the two hot water heating boilers located in the mechanical room

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$45,760	Unassigned

Updated: APR-08

D3020.02.02 Chimneys (&Comb. Air): H.W. Boiler - AHU2 - Mechanical Mezzanine**

The combustion gases from the two burner sections of AHU2 discharge through the roof of the gymnasium mechanical mezzanine via a common stack. There is a combustion air supply vent for the gymnasium mechanical mezzanine.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	35	NOV-07

Event: Replace the burner discharge stack for AHU2 (gymnasium mechanical mezzanine)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$4,576	Unassigned

Updated: NOV-07

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

The combustion gases from the two hot water boilers discharge through the roof of the mechanical room via independent stacks. There is a combustion air supply vent for the mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	35	NOV-07

Event: Replace the two boiler discharge stacks in the mechanical room

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$8,008	Unassigned

Updated: APR-08

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

Water treatment for the closed loop hot water heating system consists of manual chemical addition via a chemical pot feeder.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

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

There are two air handling units for the building including a classroom air handling unit and a gymnasium air handling unit. Both air handling units are mixed air systems which supply a mixture of fresh air and return air to the conditioned spaces. The classroom air handling unit (AHU1) is located in the mechanical room and includes a supply fan, filters, a hot water heating coil, and a humidifier (the humidifier is not currently used). The gymnasium air handling unit (AHU2) is located on the gymnasium mechanical mezzanine. This air handling unit is a packaged indirect gas fired unit equipped with a supply fan, filters, and two heat exchangers. The unit is an Engineered Air model T-350-V1 with an input heating capacity of 630,000 Btu/h.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace classroom air handling unit AHU1 and gymnasium air handling unit AHU2

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$171,600	Unassigned

Updated: APR-08

D3040.01.02 Fans: Air Distribution (Remote from AHU) - *

Air distribution fans for the building other than the air handling unit supply fans include the return air fans associated with the classroom and gymnasium air handling units AHU1 and AHU2. The return air fan for the classroom air handling unit AHU1 is located in the mechanical room above the air handling unit. The return air fan for the gymnasium air handling unit AHU2 is located on the gymnasium mechanical mezzanine above the air handling unit.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D3040.01.04 Ducts: Air Distribution - *

The air distribution ducts include the supply air and return air duct systems for the classroom and gymnasium air handling units AHU1 and AHU2. The duct systems include associated components not specifically listed elsewhere, including duct insulation, turning vanes, dampers, mixing boxes, etc.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

D3040.01.07 Air Outlets & Inlets:Air Distribution - *

Air outlets and inlets include supply air diffusers and return air grilles.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D3040.03.01 Hot Water Distribution Systems - **

The hot water heating system provides primary building heating via hydronic terminal units including fan coil units and reheat coils. The hot water distribution system includes all components of the closed loop hot water heating system including piping, valves, piping insulation, piping specialties, circulation pumps, and expansion tank. There are four main hot water circulation pumps (P1, P2, P3 and P4) located in the mechanical room, as well as a coil circulation pump (M20-9) for the classroom air handling unit AHU1. The hot water loop expansion tank is an atmospheric type tank which is located in the mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace the hot water distribution system including the circulation pumps

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$205,920	Unassigned

Updated: APR-08

D3040.04.01 Fans: Exhaust - **

There are six rooftop exhaust fans for the building providing sanitary ventilation for the main washrooms and local ventilation for some of the classrooms, including a vented work hood in the science room (room 124). An interior exhaust fan provides through the wall sanitary exhaust for the physical education instructor's office washroom.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Install an exhaust fan for the library storage room (room 140)

Concern:
The library storage room (room 140) is used as a computer network room, and the room temperature can be very hot due to a lack of ventilation.

Recommendation:
Install an exhaust fan for the library storage room (room 140).

Type	Year	Cost	Priority
Operating Efficiency Upgrade	2008	$2,288	Low

Updated: NOV-07

Event: Replace the seven exhaust fans

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$21,736	Unassigned

Updated: APR-08

D3040.04.03 Ducts: Exhaust - *

Exhaust duct systems include the collection ducts associated with the six rooftop exhaust fans and the discharge duct for the sanitary exhaust for the physical education instructor's washroom.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

D3040.04.05 Air Outlets and Inlets: Exhaust - *

Exhaust air inlets include the inlet grilles associated with the exhaust system collection ducts.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D3050.02 Air Coils - **

This element covers the air distribution duct reheat coils, but does not include the heating coil in the classroom air handling unit AHU1 or the fan coil units.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace the air distribution system reheat coils (15)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$62,920	Unassigned

Updated: APR-08

D3050.03 Humidifiers - **

The classroom air handling unit AHU1 was originally equipped with a steam humidifier which was supplied with steam from a steam boiler in the mechanical room. Although the humidifier still exists, the steam boiler has been removed.

Rating	Installed	Design Life	Updated
2 - Poor	1975	25	NOV-07

Event: Replace the humidification system for the classroom air handling unit AHU1

Concern:
There is no humidification provided for the building.
Recommendation:
Install a humidification system for the classroom air handling unit AHU1 to replace the original system (steam humidifier and steam boiler).

Type	Year	Cost	Priority
Failure Replacement	2008	$10,296	Low

Updated: NOV-07

D3050.05.02 Fan Coil Units - **

Smaller rooms in the building are equipped with ceiling mounted fan coil units to provide heating and local air circulation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Install a hydronic unit heater on the gymnasium mechanical mezzanine

Concern:

The gymnasium mechanical mezzanine is heated via holes in the supply air duct for the gymnasium air handling unit AHU2, and there is no temperature control for the mezzanine.

Recommendation:

Install a hydronic unit heater with thermostat to provide heating and temperature control on the gymnasium mechanical mezzanine.

Type	Year	Cost	Priority
Operating Efficiency Upgrade	2008	$6,864	Medium

Updated: APR-08

Event: Replace the ceiling mounted fan coil units (12)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$85,800	Unassigned

Updated: APR-08

D3060.02.02 Pneumatic Controls**

The building HVAC equipment controls are primarily pneumatic and include pneumatic thermostats, control valves and dampers. The control air supply system is located in the mechanical room and consists of a receiver mounted air compressor and a wall mounted refrigerated air dryer.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	40	NOV-07

Event: Replace the control air supply system in the mechanical room

Concern:
The control air supply system compressor is worn and in poor condition. There is no standby control air supply system.

Recommendation:
Replace the control air supply system (air compressor, air receiver and air dryer).

Type	Year	Cost	Priority
Failure Replacement	2009	$11,440	Medium

Updated: NOV-07

Event: Replace the pneumatic HVAC controls excluding the control air supply system

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$34,320	Unassigned

Updated: NOV-07

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

The building is equipped with a central Building Management and Control System (Barber-Colman Network 8000), which provides control and monitoring functions for the main HVAC equipment, although the HVAC equipment actuators and room thermostats are pneumatic.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	20	NOV-07

Event: Replace the Barber-Colman building management and control system

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$40,040	Unassigned

Updated: NOV-07

D4030.01 Fire Extinguisher, Cabinets and Accessories - *

Wall mounted and cabinet mounted fire extinguishers are located throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

S5 ELECTRICAL

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

The incoming hydro service to Malcolm Tweddle School is a 120/208V, 3-phase, 4-wire service from an EPCOR pad-mounted transformer, located on the school grounds. The EPCOR meter and switchboard are located in the main mechanical room. The main electrical switchboard is a Federal Pioneer switchboard rated at 1200A, 120/208V, 3-phase, 4-wire. The switchboard has an 800A main breaker and a distribution section with breakers feeding five branch circuit panels, MCC-1 and the portables.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	40	NOV-07

Event: Replace Main Electrical Switchboard

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$22,880	Unassigned

Updated: APR-08

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

The majority of the electrical branch circuit panelboards within the school are original Federal Pioneer panels installed when the building was constructed.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace Electrical Branch Circuit Panelboards

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$22,880	Unassigned

Updated: APR-08

D5010.07.01 Switchboards, Panelboards, and Motor Control Centers**

An Allen Bradley Motor Control Centre is located in the main mechanical room. There are eight starters in the 2-section MCC and space for additional starters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	APR-08

Event: Replace MCC

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$8,580	Unassigned

Updated: NOV-07

D5010.07.02 Motor Starters and Accessories**

The majority of the starters are fed from the MCC. Motor rated starter switches have been provided for fractional horsepower mechanical equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace Motor Starters and Accessories

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$4,576	Unassigned

Updated: APR-08

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.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

D5020.02.01 Lighting Accessories (Lighting Controls)*

There are 120V line switches and low voltage switches within the school used for lighting control. The low voltage relay cabinet is located adjacent to the 120/208V lighting panel.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent lighting fixtures on dimmers for stage lighting.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D5020.02.02.02 Interior Florescent Fixtures**

The standard lighting fixtures used throughout the school are surface mounted, single lamp T8, fluorescent wrap-around fixtures that were installed as part of an energy efficiency upgrade project in 2004.

Rating	Installed	Design Life	Updated
5 - Good	2004	30	NOV-07

Event: Program Functional Upgrade

Concern:
The gymnasium lighting level is low.

Recommendation:
Provide additional lighting or more efficient lighting to bring the lighting levels within the gymnasium up to IES recommended levels.

Type	Year	Cost	Priority
Program Functional Upgrade	2008	$17,160	Low

Updated: NOV-07

Event: Replace Interior Florescent Fixtures

Type	Year	Cost	Priority
Lifecycle Replacement	2034	$177,320	Unassigned

Updated: APR-08

D5020.02.03.02 Emergency Lighting Battery Packs**

The majority of the emergency lighting battery packs are older Emoh-Servlite units. Several of the units were not operational.

Rating	Installed	Design Life	Updated
2 - Poor	1975	20	NOV-07

Aged emergency lighting battery pack.

Event: Replace Emergency Lighting Battery Packs

Concern:
The existing emergency lighting battery packs are aged and their reliability is questionable.

Recommendation:
Replace emergency lighting battery packs with new units.

Consequences of Deferral:
Life safety concern.

Type	Year	Cost	Priority
Failure Replacement	2008	$8,580	High

Updated: APR-08

D5020.02.03.03 Exit Signs*

The exit signs within the school have been retrofitted with LED lamps.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	30	NOV-07

D5020.03.01.01 Exterior Incandescent Fixtures*

There are incandescent surface mounted acrylic fixtures in some of the canopies at the building entrances.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	30	NOV-07

Event: Replace Incandescent Exterior Lighting

Concern:
The lenses are deteriorating on the acrylic fixtures and light output is minimal.
Recommendation:
Replace exterior incandescent lighting fixtures with H.P.S. fixtures.

Type	Year	Cost	Priority
Failure Replacement	2009	$2,288	Low

Updated: NOV-07

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

The exterior lighting for the school consists of HID wallpack fixtures. The lenses on some of the fixtures have deteriorated, There is insufficient exterior lighting around the perimeter of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	30	NOV-07

Event: Program Functional Upgrade

Concern:
There is insufficient exterior lighting for security purposes.
Recommendation:
Provide additional H.P.S. Exterior lighting.

Type	Year	Cost	Priority
Program Functional Upgrade	2008	$11,440	Medium

Updated: NOV-07

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

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

D5030.01 Detection and Fire Alarm**

The fire alarm system is an Edwards Fireshield system that was installed in 2004. The main fire alarm control panel is located in the main mechanical room. There is a remote annunciator in the general office area. Fire alarm bells are located throughout the school. Duct mounted smoke detection has been provided for air handling systems.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	25	NOV-07

Event: Replace Fire Alarm System

Type	Year	Cost	Priority
Lifecycle Replacement	2029	$45,760	Unassigned

Updated: APR-08

D5030.02.02 Intrusion Detection**

The security system is a Magnum Alert system with the main panel located in a storage room by the main entrance. A security system keypad has been provided adjacent to the security panel. PIR motion detectors have been provided throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	25	NOV-07

Event: Replace Intrusion Detection System

Type	Year	Cost	Priority
Lifecycle Replacement	2019	$22,880	Unassigned

Updated: APR-08

D5030.03 Clock and Program Systems*

The majority of the clocks within the school are battery operated.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	25	NOV-07

D5030.04.01 Telephone Systems*

The telephone system is a Nortel Meridian system. Meridian or Premier telephone handsets are located in the classrooms and selected areas such as the general office. The main telephone equipment is located in the storage room near the main entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	25	NOV-07

D5030.04.05 Local Area Network Systems*

The main server is located in the library storage room. Cat. 5 cables are used for the network wiring within the school. Supernet has been installed in the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	15	NOV-07

D5030.05 Public Address and Music Systems**

The public address system is a Bogen Multicom 2000 system. The P.A. system panel is located in the general office storage room. Speakers are typically surface mounted in the classrooms and recessed round type in the corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	20	NOV-07

Event: Replace Public Address and Music Systems

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$17,160	Unassigned

Updated: APR-08

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theater and Stage Equipment - *

Curtains & lighting equipment are located in the theatre.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

E1090.07 Athletic, Recreational, and Therapeutic Equipment - *

Fixed & movable basketball hoops are located in the gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	15	NOV-07

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 has fixed counter-tops around the perimeter of the room. The library has fixed and moveable wood shelving casework. Painted wood coat storage units are located in the corridors. Glass display cabinets are located in the main entrance area and in the corridors. The washrooms have plastic laminate counter tops.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	35	NOV-07

Event: Replace fixed millwork

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$137,280	Unassigned

Updated: APR-08

E2010.03.01 Blinds - **

Horizontal metal blinds are located on all windows

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	30	NOV-07

Event: Replace horizontal blinds (10 windows)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$11,440	Unassigned

Updated: APR-08

F1010.02.04 Portable and Mobile Buildings - North-East*

Portables - North-East cluster - Built in 1976

Structure:
- Wood frame construction with concrete piles bearing on undisturbed soil.

Envelope:
- Cladding - Prefinished aluminum metal siding with vents located at the base of the elevation.
- Windows - The exterior windows are aluminum frame operable slider type windows with exterior metal security screens
- Roof Covering - The roof has a BUR (original) roof assembly.
- Doors - Fire-rated steel door & frame assembly (2003)

Interior:
- Flooring - Carpet flooring in the corridors & classrooms (1998). Vinyl Tile in the utility closets
- Ceiling - Suspended acoustical tile ceiling
- Walls - Painted gypsum board walls with either wood wall construction.
- Equipment - Whiteboards/chalkboards, tackboards, open wood shelving, wall mounted coat hooks & curtains.
- Blinds - Horizontal metal blinds

Mechanical:

Portable heating is provided by a gas fired forced air furnace which provides a mixture of fresh air and return air to the conditioned space. Temperature control is independent and is typically provided by an analog or digital electric thermostat. Classroom portables do not have any plumbing. Portables are typically equipped with a fire extinguisher for fire protection. Exterior storm drainage for the portable consists of gutters and downspouts which discharge to grade.

Mechanical elements within the portables were found to be in acceptable condition.

Electrical:

Each portable classroom is provided with a stablock panel (connected to the school electrical distribution system) that provides power for the individual classroom. The lighting fixture used within each portable classroom is typically a surface mounted, T12, fluorescent, wrap-around fixture. Recessed round P.A. speakers, a telephone and a PIR motion detector are typically provided in each portable classroom. The portables are connected to the school fire alarm system and have pullstations at the exits and heat detectors in the storage and furnace rooms.

The electrical elements within the portables were found to be in acceptable condition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1976	30	NOV-07

F1010.02.04 Portable and Mobile Buildings - South-East*

Portables - North-West cluster - Built in 1976

Structure:
- Wood frame construction with concrete piles bearing on undisturbed soil.

Envelope:
- Cladding - Prefinished aluminum metal siding with vents located at the base of the elevation.
- Windows - The exterior windows are aluminum frame operable slider type windows with exterior metal security screens
- Roof Covering - The roof has a BUR (original) roof assembly.
- Doors - Fire-rated steel door & frame assembly (2003)

Interior:
- Flooring - Carpet flooring in the corridors & classrooms (1998). Vinyl Tile in the utility closets
- Ceiling - Suspended acoustical tile ceiling
- Walls - Painted gypsum board walls with either wood wall construction.
- Equipment - Whiteboards/chalkboards, tackboards, open wood shelving, wall mounted coat hooks & curtains.
- Blinds - Horizontal metal blinds

Mechanical:

Portable heating is provided by a gas fired forced air furnace which provides a mixture of fresh air and return air to the conditioned space. Temperature control is independent and is typically provided by an analog or digital electric thermostat. Classroom portables do not have any plumbing. Portables are typically equipped with a fire extinguisher for fire protection. Exterior storm drainage for the portable consists of gutters and downspouts which discharge to grade.

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The electrical elements within the portables were found to be in acceptable condition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1976	30	NOV-07

F2020.01 Asbestos - *

Suspected asbestos-containing materials observed in the building include cement board in the gym storage area, gypsum board jointing cement and piping insulation. An asbestos report was conducted by PHH Environmetal in March, 2000 and provided by EDSB.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

F2020.04 Mould - *

No mould known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

F2020.09 Other Hazardous Materials - *

No hazardous material known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance - *

Barrier free access from the parking area to the main building entrance is provided at the west elevation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

K4010.02 Barrier Free Entrances - *

No automatic door entrances are provided.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	0	NOV-07

Event: Provided power operators for barrier free access at the main entrance of the building.

Concern:

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

Recommendation:

Provide automatic automatic power operator to main entrance door.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2008	$4,576	Low

Updated: APR-08

K4010.03 Barrier Free Interior Circulation - *

Barrier free access is provided to most areas, excluding the gym stage area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

K4010.04 Barrier Free Washrooms - *

A barrier free washroom stall is provided in the boy's & girl's washrooms at the north-west end of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	0	NOV-07

RECAPP Facility Evaluation Report

Malcolm Tweddle Elementary School

S3202

Edmonton

Report run on: July 18, 2008 12:18 PM

Facility Details

Building Name: Malcolm Tweddle Elementa
Address:
Location: Edmonton

Building Id: S3202
Gross Area (sq. m): 0.00
Replacement Cost: $0
Construction Year: 0

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 16 2007
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$185,900**
5 year Facility Condition Index (FCI): **0%**

General Summary:

The site of Malcolm Tweddle Elementary School includes an asphalt paved roadway & parking area accessible from Millbourne Road. A sodded playing field is located at the north end of the property. Grass, shrubs and trees are located along the west, north and east elevations of the school. An asphalt paved playground is located at the north end of the school. Pedestrian concrete walkways are located at the main entrance (West Elevation). Gravel walkways lead to the portable areas and bicycle rack area. Site drainage appears to slope away from the building with no problems indicated or observed.

There are two clusters of 4 portables on site linked at the east elevation of the main school.

Overall the site elements appeared to be in acceptable condition, however the asphalt paved roadway & parking areas need replacement.

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 Millbourne Road West located at the west end of the site.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	25	NOV-07

Event: Resurface asphalt paved roadway - Area-200SM

Concern:
The asphalt paved surface is deteriorated and settlement is located in several areas.

Recommendation:
Re-surface asphalt paved roadway.

Type	Year	Cost	Priority
Failure Replacement	2008	$17,160	Low

Updated: APR-08

G2010.05 Roadway Curbs and Gutters - *

The roadway curbs are poured in place concrete.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

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

The asphalt paved parking area on the west end of the site is accessible from Millbourne Road.

Rating	Installed	Design Life	Updated
3 - Marginal	1975	25	NOV-07

Asphalt paved parking area with extensive cracks and settlement.

Event: Resurface asphalt paved parking area - Area-1000SM

Concern:
The asphalt paved surface is deteriorated and settlement is located around the catch basins.

Recommendation:
Re-surface asphalt paved parking area.

Type	Year	Cost	Priority
Failure Replacement	2008	$68,640	Low

Updated: APR-08

G2020.05 Parking Lot Curbs and Gutters - *

The parking lot curbs are poured in place concrete.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

G2020.06.02 Parking Bumpers - *

Painted steel parking bumpers are located at each parking stall.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

G2020.06.03 Parking Lot Signs - *

Each parking bumper stall has a reference number.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

G2030.04 Rigid Pedestrian Pavement (Concrete) - **

Poured in place concrete walkways are located around the building and lead to all school entrances .

Rating	Installed	Design Life	Updated
3 - Marginal	1975	25	NOV-07

Event: Repair and/or replace all damaged walkways

Concern:
Several poured concrete walkways are cracked and pose a potential tripping hazard.
Recommendation:
Repair and/or replace all damaged walkways.

Type	Year	Cost	Priority
Repair	2008	$8,580	Medium

Updated: NOV-07

Cracked concrete walkways at the north-west end of the site.

Event: Replace poured concrete walkways

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$45,760	Unassigned

Updated: APR-08

G2040.02.01 Chain Link Fences and Gates*

A chain-link fence encloses a play area along the west elevation.

Rating	Installed	Design Life	Updated
5 - Good	1975	30	NOV-07

G2040.03 Athletic and Recreational Surfaces - **

An asphalt paved playground & a sodded playfield is located at the north end of the property.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	25	NOV-07

Event: Replace asphalt paved playground (600SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$45,760	Unassigned

Updated: APR-08

G2040.05 Site and Street Furnishings - *

Bicycle racks are located along the north end of the school. Basketball hoops are located adjacent to the asphalt paved playground along the east elevation of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	15	NOV-07

G2040.06 Exterior Signs - *

Exterior wall-mounted signage is provided on the buildings main entrances. School signage is located on the west wall. A free-standing signage panel is located at the south-west corner of the site.

Rating	Installed	Design Life	Updated
5 - Good	1975	25	NOV-07

G2040.08 Flagpoles - *

A flagpole is located on the west end of the site, adjacent to the main entrance.

Rating	Installed	Design Life	Updated
5 - Good	1975	30	NOV-07

G2050.04 Lawns and Grasses - *

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

Rating	Installed	Design Life	Updated
5 - Good	1975	15	NOV-07

G2050.05 Trees, Plants and Ground Covers - *

Small trees, shrubs and ground covered areas are located along the west side of the site.

Rating	Installed	Design Life	Updated
5 - Good	1975	10	NOV-07

G3010.02 Site Domestic Water Distribution - *

The building domestic water supply comes from a 300 mm diameter domestic water main on Millbourne Road. The domestic water supply to the building enters the mechanical room at the southeast corner of the building (room 149). The domestic water supply is a 100 mm diameter line and the building water meter is 50 mm.

Rating	Installed	Design Life	Updated
4 - Acceptable	1996	50	NOV-07

G3020.01 Sanitary Sewage Collection - *

The building sanitary sewer discharges to the municipal sanitary sewer system. The sanitary sewer exits the building at the northeast corner.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

G3030.01 Storm Water Collection - *

The building storm sewer discharges to a municipal storm sewer on Millbourne Road. There is a storm sewer catch basin located in the paved parking area near the southwest corner of the building. The building 150 mm diameter storm sewer exits the building at the southwest corner, and the 150 mm diameter storm sewer line for the parking lot catch basin ties into the building storm sewer line which then becomes 200 mm diameter.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

G3060.01 Gas Distribution - *

Natural gas is supplied to the building via 75 mm diameter primary and secondary gas lines which enter the mechanical room. The natural gas supply lines run underground on the east side of the building to the mechanical room at the southeast corner of the building (room 149), where the pressure reducing station and the gas meter are located.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

G4010.03 Electrical Power Distribution Equipment*

An EPCOR padmounted transformer, located on the school grounds, provides 120/208V power to the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1975	50	NOV-07

G4010.04 Car Plugs-ins*

Car Plug-ins have been installed in the parking lot. The car plug-ins are rail mounted with duplex weatherproof receptacles. There are approximately 12 car plug-ins. The car plug-ins are fed from a panel within the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	25	NOV-07

G4020.01 Area Lighting*

There is one single head shoebox style pole mounted fixture installed in the parking lot.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	NOV-07