RECAPP Facility Evaluation Report

Edmonton School District No. 7



Braemar School B5467A Edmonton

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Edmonton - Braemar School (B546/A

Facility Details	Evaluation Details	
Building Name: Braemar School Address: 9359 - 67A Street Location: Edmonton	Evaluation Company: Jacques Whitford Limited Evaluation Date: June 7 2006	
Building Id: B5467A Gross Area (sq. m): 4,867.70	Evaluator Name: Carina Wong	
Replacement Cost:\$9,160,910Construction Year:0	Total Maintenance Events Next 5 years:\$1,758,0005 year Facility Condition Index (FCI):19.19%	

General Summary:

The Braemar Elementary School is a single storey building with a service crawl space. It is located at 9358 - 67Ath Street in Edmonton, Alberta. The original building was built in 1959 (2,766.7 square metres), an addition was constructed at the northeast corner of the original building in 1965 (1,048.4 square metres) and another addition was added to the east elevation of the original building in 1972 (1,052.6 square metres).

The building is a single storey concrete masonry structure on concrete foundation with open web steel joists (OWSJ) and metal roof decking in the 1972 section, wood beam and deck roof construction in the 1965 section, and pre-cast concrete and open web steel joists (OWSJ) in the original 1959 section.

The current student population is 125.

Structural Summary:

The building is a single-storey, concrete masonry framed structure on a concrete foundation. The building consists of a service crawl space underneath the original building. The original 1959 building consists of a pre-cast concrete roof deck on open web steel joists supported by concrete masonry walls and pilasters. The 1965 addition consists of wood roof deck construction on open web steel joists supported by concrete masonry walls. The 1972 addition consists of metal roof deck construction on open web steel joists supported by perimeter concrete masonry walls and interior steel columns.

There are some cracks on the foundation walls at the north and west elevations of the original building. Some of the cracks observed on the exterior foundation walls have progressed and caused some distress to the interior finishes. It appears the slab in the General Office on the ground floor has settled towards the east direction. Repair and regular monitoring of the cracks is recommended for the concrete slab and the foundation walls.

The structure of the school is in acceptable condition.

Envelope Summary:

The exterior walls of the original section of the building have painted concrete masonry. The 1965 and 1972 sections of the building are primarily clad with a face-sealed brick system. Metal siding was present on the upper portion of the exterior walls.

The majority of the windows have been upgraded from aluminum framed to vinyl framed windows in 2001 and 2002, beside the south end of the original section of the building.

The roof was replaced in 2003 except for the roof area over the 1972 section. The roof assembly systems replaced in the 1990s consist of modified bitumen membrane. The roof over the centre wing is a conventional built-up roof membrane with pea gravel cover. Stains on the ceiling finishes of the Auditorium Gymnasium were observed. Roof replacement over the 1972 section of the building is anticipated. The original aluminum framed windows require replacement.

The building envelope is in acceptable condition.

Interior Summary:

Interior walls are generally painted concrete masonry walls, with some wood framed with painted plaster finish. Interior doors are mostly solid core wood units in metal frames.

Typical classroom finishes include exposed roof deck construction with vinyl flooring. Terrazzo flooring is present in the

corridors, entrance areas and washrooms.

Damaged interior finishes were observed in the administrative area. Refinish the damaged area after structural repair is recommended. Replace all aged vinyl tiles containing asbestos in the building with either sheet vinyl flooring or vinyl composite tiles.

The school interiors are in acceptable condition.

Mechanical Summary:

The boiler plant consists of three natural gas-fired firetube boilers. The boilers are manufactured by Reliance Welding Works and are original to the building. The boilers have a heating surface of approximately 50 sq.m. each and supply steam to unit ventilators and the gymnasium air handling unit.

The 1972 section of the building is served by an Engineered Air model SD-EC-540 natural gas-fired forced air furnace located in the mechanical room adjacent to the cafeteria. The west gymnasium (1959) is served by a Trane air handling unit located in the gymnasium area. The unit is equipped with steam coils.

Heating and ventilation for the original building and the 1965 addition is provided by unit ventilators equipped with steam heating coils. All unit ventilators are original.

Domestic hot water is provided by one natural gas-fired domestic hot water heaters manufactured by A.O. Smith and located in the boiler room. The heater has a 94 USG capacity and are rated at 179 MBh (input).

Pneumatic controls are used throughout the building. The control air is provided by a Brunner reciprocating air compressor. No air dryer was observed.

Overall, the mechanical systems are in marginal condition.

Electrical Summary:

The main electrical service enters the building underground and terminates at the main switchboard located in the boiler room. The service terminates in an electrical switchboard manufactured by Square D and rated at 400A, 120/208 V, 3 phase, 4 wires. The switchboard is located in the boiler room and is original.

Fluorescent fixtures are used throughout the school and consist of recessed and surface mounted T12 fixtures with magnetic ballasts. Lens types include wrap around acrylic lenses, flat acrylic lenses, and wire guard lenses.

Exterior lighting is provided by incandescent fixtures with acrylic lenses. The fixtures are generally mounted under the entrance canopies. Two high intensity discharge (HID), high-pressure sodium (HPS) fixtures provide illumination at the main entrance to the building. The fixtures are rooftop mounted.

The building is protected by an Edwards EST fire alarm system. The main panel is located at the northwest entrance. There is an annunciator panel located in the office area. The system is complete with pull-stations, heat and smoke detectors, alarm bells, and strobes. The system was installed in approximately 1997. Emergency lighting is provided by battery packs located throughout the school.

Overall, the electrical systems are in marginal 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*

Where observed in the building, cast-in-place concrete footings are used. The foundation appears to consist of concrete strip footings beneath the foundation walls.

Rating	Installed	Design Life	Updated
3 - Marginal	0	100	OCT-06

Event: Repair Cracks On Foundation Walls

Concern:

Multiple hairline cracks were observed along the north and east foundation walls of the original building. The cracking on the foundation walls have progressed, causing some interior finishes to be disturbed. The interior drywall finishes are damaged with cracking which extends from the window sill to the floor level at the west elevation of the original 1959 building. See also B1010.01.

Recommendation:

It appears that the original building is showing some early signs of differential settlement. Repairing cracks and regular monitoring of the progression of the cracks is recommended for the foundation walls of the original building.

Consequences of Deferral:

Further damage to the building structure.

Туре	Year	<u>Cost</u>	Priority
Repair	2006	\$4,000	High

Updated: OCT-06

A1030 Slab on Grade*

The majority of the building has slab on grade construction besides the area above the service crawl space in the 1959 section.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	100	OCT-06

A2020 Basement Walls (& Crawl Space)*

Concrete foundation walls in the boiler room.

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





B1010.01 Floor Structural Frame*(Building Frame)

(1959)The floor structural frame of original section consists of concrete masonry pilasters and concrete masonry walls supporting open web steel joists.

(1965)The floor structural frame of 1965 section consists of load bearing perimeter concrete masonry walls supporting wood joists.

(1972)The floor structural frame of 1972 section consists of load bearing perimeter concrete masonry walls and interior steel columns supporting open web steel joists.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	100	OCT-06

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

Painted concrete masonry walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	100	OCT-06

B1010.03 Floor Decks, Slabs, and Toppings*

The suspended structural concrete slab over the crawl space is supported by concrete foundation walls.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
2 - Poor	0	100	OCT-06

Event: Repair Suspended Floor Slab

Concern:

The suspended structural concrete slab on the first floor in the General Office is settling down towards the east direction. Cracks above the door opening were noted on the finished drywall and a bump on the carpeted floor in the General Office was observed. Also see A1010.

Recommendation:

The suspended concrete slab floor requires adjustment and releveling. Complete associated repairs to finishes after commencing the structural investigation. Costs provided are for allowance purposes.

Consequences of Deferral:

Ongoing settlement of suspended slab resulting in ongoing deterioration or potential damage to the school structure.

Туре	Year	Cost	Priority
Repair	2006	\$35,000	High

Updated: OCT-06

Event: Study Suspended Floor Slab

Concern:

The suspended structural concrete slab on the first floor in the General Office is deflecting down towards the east direction. Cracks above the door opening were noted on the finished drywall. A bump on the carpeted floor in the General Office was observed. Also see A1010.

Recommendation:

A structural investigation is recommended to determine the cause for deflection of the suspended floor slab.

Consequences of Deferral:

Deterioration of the school structure.

Туре	Year	Cost	Priority
Study	2006	\$3,500	High

Updated: OCT-06

B1010.06 Ramps: Exterior**

A cast-in-place concrete ramp is located at the entrance to the Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	OCT-06

B1010.09 Floor Construction Fireproofing*

Floors above the crawl space are suspended structural concrete slabs.

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

B1010.10 Floor Construction Firestopping*

No apparent penetrations in floors.

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

B1020.01 Roof Structural Frame*

(1959) Pre-cast concrete roof deck construction bearing on open web steel joists supported by perimeter concrete masonry walls and pilasters.

(1965) Wood roof deck construction bearing on open web steel joists supported by perimeter concrete masonry walls. (1959) Metal roof deck construction bearing on open web steel joists supported by perimeter concrete masonry walls and interior steel columns.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	100	OCT-06

B1020.04.02 Precast Concrete: Canopies

Recessed canopies at the entrances at the roof level. (1953) Canopy at the west elevation is framed with pre-cast concrete roof structure framing with stucco finishes and supported by concrete masonry wall.

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

B1020.04.03 Structural Metal Framing: Canopies

Recessed canopies at the entrances at the roof level. (1972) There are two canopies, one located at the southwest corner and the other located between the original building and the 1972 addition. The canopy is framed with metal deck roof structure supported by OWSJ and clad with metal sidings.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	OCT-06

B1020.04.07 Glued-Laminated Construction: Canopies

Recessed canopies at the entrances at the roof level. (1965) Canopy at the east elevation is framed with wood deck structure supported by OWSJ and clad with pre-cast concrete panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	OCT-06

B1020.06 Roof Construction Fireproofing*

Concrete masonry walls extend to the underside of the roof deck construction.

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

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin*

(1965) Pre-cast concrete panels are present on the north elevation, between the original 1959 building and the addition 1965 and on the fascia of the entrance canopy on the east elevation.

Rating	Installed	Design Life	Updated
5 - Good	0	75	OCT-06

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

(1965)(1972) The exterior cladding of the building primarily consists of face-sealed brick veneer. Face-sealed brick veneer cladding extends from the bottom to the mid-section of the walls of the Gymnasium.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	75	OCT-06

B2010.01.02.02 Concrete Block: Ext. Wall Skin*

(1959) The east elevation of the original building consists of painted concrete block walls.

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

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

A strip of exterior insulation and finish system is provided on the upper portion of the north elevation of the original (1959) building.

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

B2010.01.06.03 Metal Siding**

(1972) Metal siding is provided on the upper portion of the exterior walls of the Gymnasium and above the windows.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	40	OCT-06

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

(1959) Stucco finished exterior walls are present along the north and west elevations of the original building. Some cracks was observed on the exterior walls, see A1010.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	75	OCT-06

B2010.01.09 Expansion Control: Exterior Wall Skin*

Expansion joints in the brick veneer walls.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	75	OCT-06

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

Window sealants along window perimeters. See B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1953 for failure replacement.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	20	OCT-06

B2010.01.11 Joint Sealers (caulking): Ext. Wall** - 2001

Joint sealants along window perimeters. Window replacement on the west side at the north end and on the 1965 section.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	20	OCT-06

B2010.01.11 Joint Sealers (caulking): Ext. Wall** - 2002

Joint sealants along window perimeters. Window replacement on the north side at the west end.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2002	20	OCT-06

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

Painted concrete masonry walls on the original building. The paint finishes appear to be less than 5 year old.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	15	OCT-06

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

(1959) Concrete masonry (single wythe) load bearing walls finished with stucco or paint. (1965)(1972) Load bearing standard concrete block back up walls, as part of the cavity wall system with exterior brick veneer cladding.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	100	OCT-06

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

It was not possible to determine the make-up of all the components of the exterior wall due to concealment. Assumed loose fill insulation on the original 1959 building, and 25mm / 38mm fibre board insulation on masonry wall. The insulation value is expected to be below the current standards.

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

B2010.04 Exterior Wall Interior Skin

Painted concrete masonry walls on the perimeter interior walls.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	0	0	OCT-06

B2010.05 Parapets*

Metal capped roof perimeter curb.

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

B2010.06 Exterior Louvers, Grilles, and Screens*

A strip of painted metal mesh is installed over windows on the east elevation of the original building and some unit metal meshes are installed on the south elevation of the 1965 addition for deterring vandals.

Various aluminum grilles on exterior walls are related to crawl space ventilation in the original building and the 1965 addition. Pre-finished metal grills on the south wall of the 1972 addition.

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

B2010.09 Exterior Soffits*

Soffits with metal cladding or stucco finishes are present at the entrance canopies.

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

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1953

Original windows at the southwest corner of the original building are narrow frame anodized aluminum windows on wood frames.

Rating	Installed	Design Life	Updated
2 - Poor	1953	40	OCT-06

Event: Replace Original Windows

Concern:

Existing original aluminum windows are of old design and not energy efficient. Wood sections between aluminum frames are deteriorating due to condensation. The windows have surpassed their theoretical life. Windows are old and dated. Some are difficult to open.

Recommendation:

Replace all original windows with new vinyl window sections of an approximate area of 150 square metres to match, complete with hermetically sealed double glazing and awning sections.

Consequences of Deferral:

Potential loss of energy due to inefficient design of current windows.



Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2007	\$50,000	High

Updated: OCT-06

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 2001

(1965) The aluminum framed windows with single glaze pane are used throughout the 1965 addition. The windows were replaced in 2001 in an exterior window upgrade.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	40	OCT-06

B2020.01.01.06 Vinyl, Fibreglass & Plastic Windows** - 2001

The original exterior windows on the north end of the west elevation have been replaced with vinyl framed windows in 2001.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	40	OCT-06

B2020.01.01.06 Vinyl, Fibreglass & Plastic Windows** - 2002

The original exterior windows on the west end of the north elevation have been replaced with vinyl framed windows in 2002.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	40	OCT-06

B2030.01.02 Steel-Framed Storefronts**

(1959)(1965)(1972) At the entrances, hollow metal double doors on steel frames are complete with upper half glazed, transome and sidelites (Georgian wired glass) and weather stripping. Other hardware includes closers, lock sets, pull bars, push plates and panic sets.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	30	OCT-06

Event: Replace Original Entrance Doors

Concern:

Ten entrance doors have exceeded their theoretical life.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2010	\$18,000	Low

Updated: OCT-06

B2030.02 Exterior Utility Doors**

The utility doors providing access to the storage room located adjacent to the main entrance is single leaf metal unit in metal frame with knob type hardware and to the Gymnasium is double leaf, metal units in metal frames with weather strips.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	40	OCT-06

B3010.01 Deck Vapor Retarder and Insulation*

New deck vapor retarder and rigid insulation, tapered to internal roof drains were presumably installed during the re-roofing of the roof area. Replace deck vapor retarder and rigid insulation when re-roofing. See B3010.04.01.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	25	OCT-06

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

The 1972 section of the building has the original built-up roof assembly system.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1972	25	OCT-06

Event: Replace Roofing Assembly

Concern:

The stained acoustic ceiling panels indicate possible roof leaks in the gymnasium. The roof of the 1972 addition has ridges and asphalt flood coat deterioration. The roof has surpassed its theoretical life.

Recommendation:

Replace roofing of an approximate area of 1,050 square metres over the 1972 addition with two-ply SBS roofing, complete with new sloped insulation, perimeter metal cap flashing and drains. **Consequences of Deferral:**

Roof leaks lead to partial shut down of the school.



Гуре	Year	<u>Cost</u>	Priority
Failure Replacement	2006	\$77,000	High

Updated: OCT-06

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

The original section and the 1965 section of the building was re-roofed in 2003 with perimeter metal cap flashing. The roof area over this portion is approximately 3,815 square metres.

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

B3010.08.02 Metal Gutters and Downspouts**

There are two overflow scuppers at the north elevation of the 1965 addition.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2003	30	OCT-06

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

Roof access and ladder provided in the original building.

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

S3 INTERIOR

C1010.01.03 Unit Masonry Assemblies

The majority (approximately 80%) of the interior partitions consist of load bearing and non-load bearing painted concrete masonry walls.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
5 - Good	0	0	OCT-06

C1010.01.03 Unit Masonry Assemblies - Brick

An interior partition consist of wythe brick covered with paint in the Fitness Centre.

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

C1010.01.07 Framed Partitions (Wood Stud)

Wood stud walls with painted gypsum board was observed in the administrative area and counseling room.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	0	0	OCT-06

C1010.03 Interior Operable Folding Panel Partitions**

Manually operated, wood framed fabric accordion folding panel partitions in daycare centre.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1997	30	OCT-06

C1010.04 Interior Balustrades and Screens, Interior Railings*

Metal pipe railings along the interior steel framed stairs. Interior screens of metal fabrication are protecting the equipment in the Gymnasium.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	0	40	OCT-06

C1010.05 Interior Windows*

Metal framed windows with single pane glazing between the library and cafeteria area.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	0	40	OCT-06

C1010.06 Interior Glazed Partitions and Storefronts*

Metal framed with glazed pane partitions are located between the administrative area and the west entrance foyer.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	30	OCT-06

C1010.07 Interior Partition Firestopping*

Masonry walls in fire separations observed in the boiler room extend to underside of deck. All other partitions extend to ceilings.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	50	OCT-06

C1020.01 Interior Swinging Doors** - 1959

Single leaf, solid core wood set in steel frames (some with upper glazed portions and sidelites). Hardware includes aluminum kick plates, chrome door knobs with locks.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1959	40	OCT-06

Event: Replace Original Wood Doors

Concern	:							
45 interio	or wood	doors	within	the	original	1959	building	have
surpasse	d their th	neoretic	cal life.					
Туре			Yea	r C	Cost		Prior	ity

Турс	TCar	0030	<u>1 11011</u>
Lifecycle Replacement	2010	\$36,000	Low

Updated: OCT-06

C1020.01 Interior Swinging Doors** - 1965

Single leaf, solid core wood set in steel frames (some with upper glazed portions and sidelites). Hardware includes aluminum kick plates, chrome door knobs with locks.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	40	OCT-06

Event: Replace Wood Doors

Concern:

The 15 interior wood doors within the 1965 section of the building have surpassed their theoretical life.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2010	\$12,000	Low

C1020.01 Interior Swinging Doors** - 1972

Solid core wood doors mounted on metal frames. Except for doors to the Gymnasium, all doors are single leaf, solid core wood on steel frames (some with upper glazed portions and sidelites). Hardware includes aluminum kick plates, chrome door knobs with locks.

Gymnasium doors are double leaf, solid core wood, mounted on steel frames.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1972	40	OCT-06

Event: Refinish Wood Doors

Concern:

Several double leaf wood door and frame surfaces have deteriorated (cracks and wear). Surfaces appear dated. **Recommendation:** Refinish and re-paint the wood doors. **Consequences of Deferral:** Loss of aesthetic appeal.

Туре	Year	Cost	Priority
Repair	2007	\$1,000	Medium

Updated: OCT-06

C1020.03 Interior Fire Doors*

Thin gauge metal doors on steel frames to the boiler room. Solid core wood units on wood and steel frames in corridors. The majority are not labeled. Hardware is original. Corridor doors to exits have sidelites. Doors to the Gymnasium and hallways incorporate glazing in upper half and have chrome knobs. Hardware is original.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	0	50	OCT-06

Event: Replace Interior Fire Doors

Concern:

Original doors and frames in fire separations are not labeled and dated. Original hardware is obsolete and does not meet requirements for rated doors.

Recommendation:

Replace 20 interior fire doors and frames with new wood or hollow metal fire doors, as applicable, on steel frames, complete with new hardware.

Consequences of Deferral:

Fire doors do not conform to current fire code requirements.

Туре	Year	<u>Cost</u>	Priority
Code Repair	2006	\$34,000	Unassigned

C1030.01 Visual Display Boards** - 1959

Chalkboards are provided in most of the classrooms in the original 1959 section.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1959	20	OCT-06

Event: Replace Chalkboards

Concern:

Chalkboards in the 1959 school section have surpassed their theoretical design life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$8,000	Low

Updated: OCT-06

C1030.01 Visual Display Boards** - 1965

Chalkboards are provided in most of the classrooms in the 1965 section.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	20	OCT-06

Event: Replace Chalkboards

Concern:

Chalkboards in the 1965 school section have surpassed their theoretical design life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$9,000	Low

Updated: OCT-06

C1030.01 Visual Display Boards** - Tackboards & Whiteboards

Small wall-mounted whiteboards and tackboards are installed in classrooms. Approximately 20% of the classrooms have whiteboards.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2001	20	OCT-06

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

(1959) (1965) (1972) Pre-fabricated metal toilet partitions in Boys' and Girls' washrooms in the building.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1959	30	OCT-06

Event: Replace Washroom Partitions

Concern:

The 25 toilet partitions of the original section, 1965 ad 1972 sections have exceeded their theoretical life.

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

Updated: OCT-06

C1030.06 Handrails*

(1959) Metal railings between the common corridor and the stair to the Gymnasium Auditorium.

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

C1030.08 Interior Identifying Devices*

Combination of lamicoid signs on doors, cast aluminum signs and laminated paper signs.

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

Event: Replace Paper Signs

Concern:

Temporary laminated paper signs on the classroom doors. **Recommendation:**

Replace the temporary signs with lamicoid signs.

Consequences of Deferral:

Loss of aesthetic appeal.

Updated: OCT-06

Туре	<u>Year</u>	<u>Cost</u>
Program Functional Upgrade	2007	\$1,000

Priority Medium



C1030.10 Lockers**

Free-standing full size lockers are located in the corridors. Industrial five-tier box lockers with legs in the washroom of the 1965 section.

Rating

4 - Acceptable

Installed	d Design Life	<u>Updated</u>
1959	30	OCT-06

Event: Replace Aged Lockers

Concern:

The full size lockers of an approximate length of 90 metres and the industrial five-tier lockers in the original 1959 section, 1965 and 1972 sections have exceeded their theoretical life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$60,000	Low

Updated: OCT-06



C1030.12 Storage Shelving*

Storage shelving is primarily of original plywood construction. There is some metal shelving.

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

C1030.14 Toilet, Bath, and Laundry Accessories*

Stainless steel tissue paper dispensers, soap dispensers, paper napkin dispensers, waste bins, individual mirrors above sinks. Stainless steel sinks were replaced in 2001. The shower room was renovated in 2001.

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

C2010 Stair Construction*

Cast-in-place concrete stairs are provided at the entrance to the Gymnasium Auditorium. Pre-fabricated steel-framed stairs lead to the boiler room.

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

C2020.02 Terrazzo Stair Finishes*

Cast-in-place concrete stairs providing access to the Gymnasium Auditorium have terrazzo finishes and non-slip tile nosing.

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

<u>C2020.0</u>	8 Stair Railings and	d Balustrad	<u>les</u> *			
(1959) S railing is	Steel railings are mo provided at the pre-	ounted on v finished ste	valls along the eel staircase ir	e stairs providing ac the boiler room.	cess to the Gymnasi	um Auditorium. A steel pipe
<u>Rating</u> 4 - Accep	otable	Installed 0	Design Life 50	Updated OCT-06		
<u>C3010.0</u>	1 Concrete Wall Fi	nishes*				
Painted	concrete masonry w	alls are loc	ated througho	ut the building.		
<u>Rating</u> 5 - Good		Installed 0	Design Life 100	Updated OCT-06		
<u>C3010.0</u>	2 Wall Paneling**					
Wood a	coustic panels in the	Auditorium	n Gymnasium.			
<u>Rating</u> 4 - Accep	otable	Installed 1979	Design Life 30	Updated OCT-06		
C3010.0	4 Gypsum Board V	Vall Finishe	<u>es</u> *			
Painted	gypsum board walls	are provide	ed in the admi	nistrative area.		
<u>Rating</u> 3 - Margir	nal	Installed 0	Design Life 60	Updated OCT-06		
<u>Event:</u>	Repair Damaged I Concern: Damaged wall surfamovement cracking Recommendation Repair damaged Incorporate control Consequences of Loss of aesthetic a	Drywall aces were r g. wall sur joints if rec Deferral: ppeal.	noted in the G faces after juired.	eneral Office due to structural repair.		
	<u>Type</u> Repair	<u>Yea</u> 200	ar <u>Cost</u> 99 \$2,000	<u>Priority</u> Medium		
	Updated: OCT-06					
<u>C3010.0</u>	9 Acoustical Wall	Freatment*				
Fabric c	overed acoustic wal	l tiles in gric	ls are present	along the west inter	ior wall of the Day Car	e Centre.
<u>Rating</u> 5 - Good		Installed 1997	Design Life	Updated OCT-06		

C3010.11 Interior Wall Painting**

Painted concrete masonry walls and drywall throughout the building. The paint finishes appear to less than five years old.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2001	10	OCT-06

C3020.01.02 Paint Concrete Floor Finishes**

Painted concrete floor finishes in the boiler room.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1959	10	OCT-06

Event: Repaint Concrete Floor

Concern:

Original paint in the boiler room has deteriorated. Painted surfaces appear dated, exposing bare concrete surfaces. **Recommendation:**

Clean surfaces and repaint all areas of the concrete floor. Consequences of Deferral:

Potential deterioration of exposed concrete surfaces and loss of aesthetic appeal.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2009	\$3,000	Medium



Updated: OCT-06

C3020.02 Tile Floor Finishes**

(1965) Ceramic floor tiles in boys' and girls' washrooms in the 1965 section.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	50	OCT-06

C3020.03 Terrazzo Floor Finishes*

(1959) Terrazzo floor tiles in one of the ladies' washrooms in the original building.

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

C3020.04 Wood Flooring** - 1959

The Gymnasium floor in the 1959 section consists of wood strip flooring.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1959	30	OCT-06

Event: Refinish Wood Strip Flooring

Concern:

The wood flooring in the auditorium gymnasium appears to be dated and worn out. Surface appears to have never been refinished.

Recommendation:

Sand and re-finish the gymnasium flooring of an approximate area of 220 square metres. Paint game lines as required. Install appropriate bases and thresholds.

Consequences of Deferral:

Ongoing deterioration resulting in increased maintenance and repair costs.

Туре	Year	<u>Cost</u>	Priority
Repair	2007	\$11,000	High

Updated: OCT-06

Event: Replace Wood Strip Flooring

Concern:

Wood strip flooring in the Gymnasium has surpassed its theoretical design life (approximately 220 square metres).

Туре	Year	Cost	Priority
Lifecycle Replacement	2010	\$42,000	Low

Updated: OCT-06

C3020.04 Wood Flooring** - 1972

The Gymnasium floor of the 1972 section consists of wood strip flooring.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	30	OCT-06

Event: Replace Wood Flooring -1972

Concern:

The maple sports flooring of an approximate area of 223 square metres has exceeded its theoretical life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$49,000	Low

C3020.07 Resilient Flooring**

(1959) (1965) (1972) Vinyl floor tiles in classrooms, some washrooms, corridors, vestibules, custodial room, Daycare Centre. Vinyl asbestos tiles throughout.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1959	20	OCT-06

Event: Replace Vinyl Flooring

Concern:

Vinyl floor tiles have surpassed their theoretical design life (approximately 4,000 square metres).

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2010	\$133,000	Low

Updated: OCT-06



C3020.08 Carpet Flooring** - 1959

Carpet in administrative area and the French Classroom in the 1959 original section. Some areas in the classrooms are carpeted.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1959	15	OCT-06

Event: Replace Carpet in Administrative Area

Concern:

Carpet flooring of an approximate area of 240 square metres in the Administrative Area has some seam failures. Some of the carpeted area is loose. The carpet has served beyond its life expectancy.

Recommendation:

Replace carpet in the Administrative Area.

Consequences of Deferral:

Ongoing deterioration resulting in increased maintenance and repair costs.

<u>Type</u> Failure Replacement <u>Year</u> <u>Cost</u> 2009 \$14,000 Priority Medium



C3020.08 Carpet Flooring** - 1965

The computer room in the 1965 area of the school is carpeted. Some areas in classrooms are also carpeted.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	15	OCT-06

Event: Replace Carpeting in Comuper Room

Concern:

The carpeting in the computer room in the 1965 section of the building has exceeded its theoretical life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$6,000	Low

Updated: OCT-06

C3020.08 Carpet Flooring** - 1972

The library in the 1972 section has carpet flooring. Some areas in classrooms are also carpeted.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	15	OCT-06

Event: Replace Carpet in Library

Concern:

The library carpet flooring of an approximate area of 275 square metres has exceeded its theoretical life.

Туре	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$13,000	Low

Updated: OCT-06

C3020.08 Carpet Flooring** - 1997

Carpet flooring is provided in classrooms within the daycare centre located at the south end of the original section.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	1997	15	OCT-06

C3030.01 Concrete Ceiling Finishes*

(1959) The ceiling in the original 1959 section of the building consists of painted pre-cast concrete panels.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	0	100	OCT-06

C3030.02 Ceiling Paneling (Wood)*

Painted wood roof deck construction in the 1965 section of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	60	OCT-06

C3030.06 Acoustic Ceiling Treatment (Susp.T-Bar)** - 1959

(1959) (1965) (1972) suspended acoustic ceiling tiles in the corridors, lunch room, some washrooms, medical rooms, the administrative area and the majority of the 1972 section except for the Gymnasium. There are combination of 2x4 pinhole tiles, 12x12 suspended ceiling tiles in the original 1959 section, 1965 and 1972 sections of the building. Besides the ceiling tiles in the office which were replaced in 1995, the majority was original.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	25	OCT-06

Event: Replace Acoustical Tile

Concern:

Acoustical tile, drop ceiling has exceeded its theoretical life (approximate area is 750 square metres).

Туре	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$26,000	Low

Updated: OCT-06

C3030.07 Interior Ceiling Painting**

The majority of the classrooms in the building have exposed roof decks which are painted. The interior ceiling painting appeared to be less than 10 year old.

Rating	Installed	Design Life	Updated
3 - Marginal	1996	20	OCT-06

Event: Repaint Gymnasium Ceiling

Concern:

Stains were observed on the ceiling finishes of the auditorium gymnasium.

Recommendation:

The stains appear to be caused by roof leaks. Repaint the ceiling finishes after roofing replacement.

Consequences of Deferral:

Ongoing deterioration of interior finishes and loss of aesthetic appeal.

Гуре	Year	<u>Cost</u>	Priority
Repair	2008	\$1,000	Medium



S4 MECHANICAL

D2010.01	Water	Closets**
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There are approximately 18 water closets consist of floor mounted, flush valve and flush tank vitreous china fixtures.

Rating 4 - Accep	otable	Installed 1965	Design Life 35	Updated OCT-06			
		•					
Event:	Replace the water of	closets					
	Concern: Lifecycle replaceme	ent					
	<u>Type</u> Lifecycle Replacemen	Yea 10 1	r <u>Cost</u> 0 \$20,000	Priority Low			
	Updated: OCT-06						
D2010.0	2 Urinals**						
There ar	e approximately 8 uri	nals that co	onsist of floor	mounted flush valve fi	xtures.		
Rating		Installed	Desian Life	Updated			
4 - Accep	otable	1965	35	OCT-06			
Event:	Replace the urinals	<u>i</u>					
	Concern: Lifecycle replaceme	ent.					
	Type Lifecycle Replacemen	t 201	r <u>Cost</u> 0 \$10,000	<u>Priority</u> Low			
	Updated: OCT-06						
D2010.0	3 Lavatories**						
The lava	tories are generally c	ounter-rec	essed stainle	ss steel fixtures and a	re equipped with push	button self-closing valves.	

Rating	Installed	Design Life	Updated
5 - Good	1998	35	OCT-06

D2010.04 Sinks**	
There are approximately 40 sinks of varying types located throughout the school.	
RatingInstalledDesign LifeUpdated4 - Acceptable196530OCT-06	
Event:Replace the sinksConcern: Lifecycle replacement.Type Lifecycle ReplacementYear 2010Yout S35,000Updated: OCT-06	
D2010.05 Showers**	
A total of 6 showers are located in the boys and girls changerooms.	
Rating Installed Design Life Updated 4 - Acceptable 1965 30 OCT-06 Event: Replace the showers Image: Comparison of the showers Image: Comparison of the showers	
Concern: Lifecycle replacement.	
TypeYearCostPriorityLifecycle Replacement2010\$6,000Low	
Updated: OCT-06	
D2010.08 Drinking Fountains / Coolers**	
There are approximately 24 drinking fountains in the school consist of both non-refrigerated, wall-mounter fixtures and three refrigerated drinking fountains.	ed, vitreous china
RatingInstalledDesign LifeUpdated4 - Acceptable196535OCT-06	
Event: Replace the drinking fountains Concern: Lifecycle replacement.	
TypeYearCostPriorityLifecycle Replacement2010\$27,000Low	
Updated: OCT-06	

				Edmonton - Braemar School (B5467A)
D2020.01.01 Pipes and Tub	bes: Domes	stic Water*		
The domestic water piping in	n the schoo	l is copper.		
Rating 4 - Acceptable	Installed 1965	Design Life 40	Updated OCT-06	
D2020.02.06 Domestic Wat	er Heaters*	*		
Domestic hot water is prov located in the boiler room. 1	rided by or The heater l	ne natural gas nas a 94 USG	-fired dome capacity and	estic hot water heaters manufactured by A.O. Smith and d are rated at 179 MBh (input).
Rating 4 - Acceptable	Installed 1997	Design Life 20	Updated OCT-06	
D2020.03 Water Supply Ins	ulation: De	omestic*		
Both the domestic cold wate	er line and th	ne domestic ho	ot water line	are insulated.
Rating 4 - Acceptable	Installed 1997	Design Life 30	Updated OCT-06	
D2030.01 Waste and Vent F	Piping*			
The waste piping is connect	ed to the m	unicipal syster	n. The vent	piping is through the roof of the building.
Rating 4 - Acceptable	Installed 1965	Design Life 50	Updated OCT-06	
D2040.01 Rain Water Drain	age Piping	Systems*		
The rain water drainage pipi to the municipal storm sewe	ng system r system.	consists of su	rface roof d	rains connected to internal rain water leaders that connect
Rating 4 - Acceptable	Installed 1965	Design Life 50	Updated OCT-06	
D2040.02.04 Roof Drains**				
The roof drains are equippe	d with cast	iron dome type	e screens.	
Rating 4 - Acceptable	Installed 1965	Design Life 40	Updated OCT-06	

Event: Replace roof drains

Concern:

Roof drains have exceeded their theoretical life cycle.

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

Updated: MAR-07

D3010.02 Gas Supply Systems*

The natural gas service is supplied by Atco and enters through the storage room adjacent to the main entrance to the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	60	OCT-06

D3020.01.01 Heating Boilers & Accessories: Steam**

The boiler plant consists of three natural gas-fired firetube boilers. The boilers are manufactured by Reliance Welding Works and are original to the building. The boilers have a heating surface of approximately 50 sq.m. each and supply steam to unit ventilators and the gymnasium air handling unit.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1965	35	OCT-06

Event: Replace the steam heating boilers

Concern:

The boilers are inefficient and require frequent maintenance. Parts are not readily available. **Recommendation:**

Replace both boilers with modern, efficient heating boilers.

Consequences of Deferral:

Deferral may result in boiler failure, increased maintenance costs, increased downtime, reduced capacity, and decreased system reliability.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2007	\$320,000	Unassigned

Updated: OCT-06

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

The boiler breeching is connected to a masonry chimney. Combustion air is gravity fed into the boiler room.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	35	OCT-06

D3020.01.04 Water Treatment: Steam Boilers*

The boiler condensate is treated using a chemical pot feeder system.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	35	OCT-06

D3020.03.01 Furnaces**

The 1972 section of the building is served by an Engineered Air model SD-EC-540 natural gas-fired forced air furnace located in the mechanical room adjacent to the cafeteria.

<u>Rating</u> 4 - Accep	otable	Installed 1972	Design Life 25	Updated OCT-06
Event:	Replace the forced	d air furnac	e_	
	Concern: Lifecycle replacem	ent.		
	Type Lifecycle Replaceme	ent 201	ar <u>Cost</u> 0 \$30,000	Priority Low
	Updated: OCT-06			
D3040.0	1.01 Air Handling L	<u> Jnits: Air D</u>	istribution**	
The wes with stea	st gymnasium (1959 am coils.) is served	by a Trane a	air handling unit located in the gymnasium area. The unit is equipped
Rating 4 - Accer	otable	Installed 1972	Design Life 30	Updated OCT-06

Replace the gymnasium air handling unit Event:

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

Updated: OCT-06

Concern:

D3040.01.03 Air Cleaning Devices: Air Distribution*

Air filters are installed on the air handling units.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1972	30	OCT-06

D3040.01.07 Air Outlets & Inlets: Air Distribution*

The air outlets and inlets vary in type and include supply air diffusers, and supply, return, and transfer grilles.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	30	OCT-06

D3040.02 Steam Distribu	tion Systems: Piping/	/Pumps**	
The steam distribution sys	stem consists of insulate	ted iron steam and condensate piping.	
Rating 4 - Acceptable	Installed Design L 1965 30	Life Updated OCT-06	
Event: Replace the ste	am and condensate pi	iping.	
Concern: Lifecycle replace	ement.		
Type Lifecycle Replace	Year Cost ment 2010 \$240,),000 Low	
Updated: OCT-0	06		
D3040.04.01 Fans: Exhau	<u>ust*</u> *		
Several rooftop exhaust fa	ans of varying type and	l size provide ventilation to the school.	
Rating 4 - Acceptable	Installed Design L 72 30	Life Updated OCT-06	
D3050.05.01 Convectors	-		
Steam convectors are loc	ated at the entrances to	o the building and are controlled by pneumat	ic thermostats.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	40	OCT-06

D3050.05.07 Unit Ventilators**

Heating and ventilation for the original building and the 1965 addition is provided by unit ventilators equipped with steam heating coils. All unit ventilators are original.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	30	OCT-06

Event: Replace all original unit ventilators (approx. 27)

Concern:

The original unit ventilators require frequent maintenance, and parts are not readily available. Some of the classrooms have been divided so that only half of the unit ventilator serves the room. Additional ventilators are required.

Recommendation:

Replace all unit ventilators (approx. 27)

Consequences of Deferral:

Deferral may result in increased maintenance costs and reduced indoor air quality and thermal comfort.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Failure Replacement	2008	\$162,000	Unassigned

Updated: OCT-06

D3060.02.02 Pneumatic Controls**

Pneumatic controls are used throughout the building. The control air is provided by a Brunner reciprocating air compressor. No air dryer was observed.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	40	OCT-06

Event: Replace the pneumatic system with a modern DDC

<u>system</u>

Concern:

The pneumatic system is outdated and does not provide adequate control. Numerous complaints from building occupants with respect to temperature and humidity have been reported.

Recommendation:

Replace the pneumatic system with a modern, direct digital control (DDC) system.

Consequences of Deferral:

Deferral may result in increased maintenance and decreased occupant comfort.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Energy Efficiency Upgrade	2009	\$65,000	High

D4030.01 Fire Extinguisher, Cabinets and Accessories**

Wall mounted fire extinguishers are located throughout the school.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	OCT-06

S5 ELECTRICAL

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

The main electrical switchboard is manufactured by Square D and is rated at 400A, 120/208 V, 3 phase, 4 wires. The switchboard is located in the boiler room and is original.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	OCT-06

Event: Replace the main switchboard

Concern:

Lifecycle replacement.

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

Updated: OCT-06

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

Circuit breaker panels are located throughout the school and consist of both 120/208V panels. The panels are generally manufactured by Square D.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	30	OCT-06

Event: Replace the original panelboards

Concern: Lifecycle Replacement.			
Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2010	\$50,000	Low

Updated: OCT-06

D5010.07.02 Motor Starters and Accessories**

The motor starters are generally combination type starters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	OCT-06

Event: Replace the motor starters.

Concern:

Lifecycle replacement.

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

D5020.01 Electrical Branch Wiring*

The electrical wiring in the building is standard wire in conduit. Flexible conduit and cabling is provided to motors and other mechanical equipment.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	50	OCT-06

Event: Replace the original building wiring based on the recommendations of the study

Concern:

The wiring in the original section of the building is aged and has exceeded its theoretical useful life of 50 years. The wiring insulation becomes deteriorated with time and should be replaced.

Recommendation:

Replace the building wiring.

Consequences of Deferral:

Deferral may result in electrical system failure which may cause building shutdown.

Туре	Year	Cost	Priority
Lifecycle Replacement	2010	\$80,000	Unassigned

Updated: OCT-06

D5020.02.01 Lighting Accessories (Lighting Controls)*

The lighting controls in the school consist of line voltage switching. No low voltage switches or relays are installed.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	OCT-06

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent fixtures are generally located in the storage, service, utility, and mechanical rooms.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	OCT-06

D5020.02.02.02 Interior Florescent Fixtures**

Fluorescent fixtures are used throughout the school and consist of recessed and surface mounted T12 fixtures with magnetic ballasts. Lens types include wrap around acrylic lenses, flat acrylic lenses, and wire guard lenses.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	30	OCT-06

Event: Upgrade the existing T12 fluorescent fixtures to T8 fixtures with electronic ballasts

Concern:

The existing T12 fixtures are considered inefficient by today's Significant energy savings are possible by standards. upgrading the existing fixtures. **Recommendation:**

Upgrade the existing T12 fluorescent fixtures to T8 fixtures with electronic ballasts

Consequences of Deferral:

Deferral may result in increased energy costs.

Туре	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2008	\$80,000	Medium

Updated: OCT-06

D5020.02.03.02 Emergency Lighting Battery Packs**

Emergency lighting is provided by battery packs located throughout the school.

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

D5020.02.03.03 Exit Signs*

The exit signs are LED type fixtures.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1997	30	OCT-06

D5020.03.01.01 Exterior Incandescent Fixtures*

Exterior lighting is provided by incandescent fixtures with acrylic lenses. The fixtures are generally mounted under the entrance canopies.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	OCT-06

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Two high intensity discharge (HID), high-pressure sodium (HPS) fixtures provide illumination at the main entrance to the building. The fixtures are rooftop mounted.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	OCT-06

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

The exterior light fixtures are controlled by a time clock.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	OCT-06

D5030.01 Detection and Fire Alarm**

The building is protected by an Edwards EST fire alarm system. The main panel is located at the northwest entrance. There is an annunciator panel located in the office area. The system is complete with pull-stations, heat and smoke detectors, alarm bells, and strobes. The system was installed in approximately 1997.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	25	OCT-06

D5030.02.02 Intrusion Detection**

The building is protected by a Magnum Alert security system. The system is complete with infrared motion sensors in the corridors.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1997	25	OCT-06

D5030.02.03 Security Access**

Three keypads located in the boiler room, computer room, and daycare area provide security access to the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	25	OCT-06

D5030.03 Clock and Program Systems**

There is no central clock system used in the school. Battery powered and plug-in clocks are used throughout.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	25	OCT-06

Event: Replace clock system

Concern:

Clock system has exceeded its theoretical design life.

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

Updated: MAR-07

D5030.04.01 Telephone Systems**

Telephones are provided in all classrooms and are used for intercom, paging, and external calling. The telephone service is provided by Telus and the hardware is manufactured by Norstar.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	25	OCT-06

D5030.04.04 Data Systems**

A new data system (Supernet) was installed recently by Bell West Inc. The fibre optic cabling enters the building underground through the storage room adjacent to the main entrance. Category 5 cabling is used throughout the school.

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

D5030.05 Public Address and Music Systems**

The public address system uses in-room telephones and speakers for communications. A Bogen TPU-6A communication system is located in the storage room adjacent to the stage.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	20	OCT-06

D5090.01 Uninterruptible Power Supply Systems**

Uninterruptible power supply systems are generally installed for the computer servers only.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	30	OCT-06

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

SO EQUIPINIENT, FU	UKINISH	ING5 ANL	SPECIAL CONSTRUCTION
E1010.08 Office Equipmen	<u>t</u>		
Photocopier machine and co	omputers ir	the administra	ative area.
Rating 4 - Acceptable	Installed 0	Design Life 0	Updated OCT-06
E1020.02 Library Equipme	<u>nt</u> *		
Photocopier machine, comp	outers and v	vooden book (drop-off cabin in the Library.
Rating 4 - Acceptable	Installed 0	Design Life 25	Updated OCT-06
E1020.05 Audiovisual Equ	ipment		
Portable television set in all	classrooms	s. Projection s	creens in some of the classrooms.
Rating 4 - Acceptable	Installed 0	Design Life 0	Updated OCT-06
E1020.07 Laboratory Equi	oment*		
Science lab in the 1965 sec	tion of the t	ouilding.	
<u>Rating</u> 4 - Acceptable	Installed 0	Design Life 25	Updated OCT-06
E1020.08.02 Examination a	and Treatm	ent Equipme	<u>nt</u>
Examination bed with cupbo	ard undern	eath is in the n	nedical room in the original section of the building.
Rating 4 - Acceptable	Installed 0	Design Life 0	<u>Updated</u> OCT-06
E1090.02 Solid Waste Han	dling Equi	pment*	
Commercial garbage bins a	t the main e	entrance.	
Rating 4 - Acceptable	Installed 0	Design Life 25	Updated OCT-06
E1090.03 Food Service Eq	uipment*		
There is a microwave oven,	toaster, co	untertop grill a	nd refrigerator in the kitchen area of the Lunch Room.
Rating 4 - Acceptable	Installed 0	Design Life 25	Updated OCT-06

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Two fixed wall mounted basketball hoops in the Gymnasium. Weight lifting and cardio exercise equipment in the Fitness Centre.

OCT-06

Rating Installed Design Life Updated 5 - Good 0 15

E2010.02 Fixed Casework**

A combination of original and new perimeter cabinets and painted cupboards with open shelving is present in the classrooms. The science labs have countertops with sinks. Countertops are a combination of transite panels, linoleum and plastic laminate.

Casework with cupboards, sinks and countertop of plastic laminate in Lunch Room.

Island type stations in Science Rooms, complete with stainless steel sinks, gas, power and water outlets. An upgrade on science facilities was carried out in 2001. It is assumed the laboratory casework was installed during the upgrade.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	35	OCT-06

Event: Replace Casework in Room 58

Concern:

The cabinets in room 58 have exceeded their theoretical life.

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

Updated: OCT-06



E2010.03.01 Blinds**

Vertical blinds are used throughout the school. The blinds appear to be installed with the window replacement.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2001	30	OCT-06

E2010.03.06 Curtains and Drapes**

There are curtains on the Auditorium Gymnasium windows at the roof level

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1959	30	OCT-06

Event: Replace curtains

Concern:

The curtains on the Auditorium Gymnasium windows at the roof level have exceeded their theoretical life.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$9,000	Low

Updated: OCT-06

E2020 Moveable Furnishings*

Classroom desks and chairs (plastic laminate), computer tables (plastic laminate), birch round tables and chairs (fabric finish) and sofas in Staff room. Majority of the moveable furnishings is new.

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

F2020.01 Asbestos*

An asbestos survey was completed for the Edmonton Public Schools in 2001 by PHH Environmental Limited. It identified asbestos containing materials located within the building and mechanical systems. These materials include; some floor tiles(1.5-5.3% Chrysotile Asbestos); pipe run located in crawl space (35% Amosite Asbestos); debris in crawl space (35% Amosite Asbestos); pipe fitting material located throughout the building (75% Chrysotile Asbestos); duct in mechanical room (65% Chrysotile Asbestos); duct insulation in the boiler room (75% Chrysotile Asbestos); boiler insulation (75% Amosite Asbestos); boiler (

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
2 - Poor	0	0	OCT-06

Event: Initiate an Asbestos Abatement Program

Concern:

Various pipe runs, fittings and insulation were observed to be torn, damaged or breached. No asbestos abatement has been carried out since the initial survey.

Recommendation:

It is recommended that some sections of pipe runs and fittings in moderate condition in the boiler room and crawl space to be removed or repaired, damaged sections of exposed insulation in the boiler room be repaired, duct parching in the fan room (Room 36) to be removed or repaired and pipe fittings in in a return air plenum in the Gymnasium fan room (Room 54) be removed. The remaining asbestos containing materials can remain until future renovation.

Budget allowance for asbestos removal and disposal. **Consequences of Deferral:**

Potential health risk for students and teaching staff.

Туре	Year	<u>Cost</u>	Priority
Hazardous Material	2006	\$45,000	Unassigned
Management Upgrade			

Updated: OCT-06

F2020.02 PCBs*

Ballasts in fluorescent fixtures in the original building may contain PCBs.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	OCT-06

F2020.04 Mould*

Not known or reported, although some stains were observed on the ceiling finishes in the Auditorium Gymnasium.

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

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

There is no barrier free stall in the gravel paved parking lot. A new parking lot and access road have been proposed. - see site evaluation.

Rating	Installed	Design Life	Updated
2 - Poor	0	0	OCT-06

K4010.02 Barrier Free Entrances*

The entrance doors are original, at grade entry. No power assist door operators.

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

Event: Install Automatic Door Openers

Concern:

The school has no barrier free entrances with power assist doors.

Recommendation:

Install automatic door openers with the replacement of the entrance doors.

Consequences of Deferral:

Non-compliance with current barrier-free standards and poor accessibility to handicapped persons.

Туре	Year	<u>Cost</u>	Priority
Barrier Free Access Upgrade	2010	\$9,000	Medium

Updated: OCT-06

K4010.03 Barrier Free Interior Circulation*

There are little restrictions for barrier free travel within the building, except for the Auditorium Gymnasium.

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

Event: Barrier free access to Auditorium Gymnasium

Concern:

The Auditorium Gymnasium is accessed by concrete stairs. **Recommendation:**

Install a wheelchair lift at one of the entrances to the Auditorium Gymnasium.

Consequences of Deferral:

Non-compliance with current barrier-free standards and poor accessibility to handicapped persons.

Туре	Year	<u>Cost</u>	Priority
Barrier Free Access Upgrade	2007	\$13,000	High



K4010.04 Barrier Free Washrooms*

Washrooms are not barrier free, although some barrier free features have been incorporated into the washroom setting.

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

Event: Upgrade washroom to comply with barrier free access

Concern:

The grab bars for the barrier free stall are too short. No automatic door openers are provided at the entrance of the washroom. The mounting height of the sinks are non-code compliant.

Recommendation:

Upgrade washroom to barrier free standards, such as; modify floors and walls new plumbing, install / modify metal partitions to facilitate barrier free space requirement, install grab bars and accessories, provide automatic door openers.

Consequences of Deferral:

Non-compliance with current barrier-free standards and poor accessibility to handicapped persons.

Туре	Year	<u>Cost</u>	<u>Priority</u>	/
Barrier Free Access Upgrade	2007	\$17,000	High	



RECAPP Facility Evaluation Report



Braemar School S5467 Edmonton

Report run on: March 26, 2007 3:06 PM

Edmonton - Braemar School (S546)

Facility Details		Evaluation Details	
Building Name:	Braemar School	Evaluation Company: Jacques Whitford Limited	
Address:	Edmonton	Evaluation Date: June 7 2006	
Location:	Edmonton	Evaluator Name: Carina Wong	
Building Id:	S5467		
Gross Area (sq. m):	0.00		
Replacement Cost:	\$0		
Construction Year:	0	Total Maintenance Events Next 5 years:	\$131,000
		5 year Facility Condition Index (FCI):	0%

General Summary:

The Braemar Elementary School is located at 9359 - 67A Street, Edmonton, Alberta, the southeast corner of the intersection of 67A Street NW and 94th Avenue NW, on the east side of 67A Street NW, bounded by 93A Avenue on the south. The property is accessed from 67A Street. Main entrance, bus and parent drop off area are located to the south. There is a gravel paved parking lot located to the south of the building.

Major work recommended includes paving of the gravel surfaced parking lot, partial sidewalk reconstruction and repairs on the south end of the school, the addition of pre-cast concrete bumper pads in the parking lot, and re-grading of a gravel laneway.

The site improvements 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

G1030 Site Earthwork (Site Grading)*

The area of the property slopes gradually from the east towards the west. Surface drainage at the site appears to follow the general slope of the Site, which is approximately east to west.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	50	OCT-06

G2010.02.01 Aggregate Roadway (Gravel)**

A gravel surfaced roadway is located on the south portion of the Site and is used to access the garbage dumpster.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1959	10	OCT-06

Event: Re-surface Gravel Laneway

Concern:

The gravel surfaced roadway on the south portion of the Site was observed to have uneven surfaces.

Recommendation:

Re-surface the gravel laneway (add 100 mm of gravel) for an approximate area of 500 square metres.

Consequences of Deferral:

Uneven surfaces may result in poor storm water management.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2007	\$10,000	High

Updated: OCT-06

G2010.05 Roadway Curbs and Gutters*

There are no parking curb bumper pads provided on site.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	0	25	OCT-06

Event: Provide Pre-cast Concrete Bumper Pads

Concern:

Parking spaces are provided immediately along the building perimeters. Bumper pads should be provided to avoid impact damage.

Recommendation:

Provide pre-cast concrete parking bumper pads in the parking lot located immediately along the building perimeter.

Consequences of Deferral:

Impact damage on the exterior walls.

Туре	Year	<u>Cost</u>
Operating Efficiency Upgrade	2007	\$2,000





G2020.02.01 Aggregate Parking Lots (Gravel)**

A gravel paved parking lot is located west of the building.

Rating	Installed	Design Life	Updated
2 - Poor	1959	10	OCT-06

Event: Pave Gravel Parking Lot

Concern:

The gravel paved parking lot is has significant rutting and uneven surfaces.

Recommendation:

Upgrade parking lot with asphalt pavement (approximately 1,000 square metres) and include a barrier-free parking stall. Provide markings

Туре	Year	Cost	Priority
Operating Efficiency Upgrade	2009	\$70,000	High



G2020.06.03 Parking Lot Signs*

Steel plate signs are mounted on the exterior walls of the building.

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

G2030.03 Pedestrian Unit Pavers**

Unit pavers are located along the perimeters of the playground located to the southwest corner of the Site.

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



G2030.04 Rigid Pedestrian Pavement (Concrete)**

Cast-in-place concrete walkway is located along the south perimeter of the building and south of the main entrance, providing access from 67A Street and 93A Avenue.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1972	15	OCT-06

Event: Reconstruct Concrete Sidewalks

Concern:

Remainder of concrete sidewalks have surpassed their theoretical design life (approximately 300 square metres).

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

Updated: OCT-06

Event: Reconstruct Settled Sidewalk

Concern:

The concrete walkway has settled and cracked along the south building perimeter. A gap allowing water infiltration has developed between the concrete sidewalk and the building perimeter.

Recommendation:

Replace the cracked concrete sidewalk (an approximate area of 100 square metres) and seal the gap between the building perimeter and the sidewalk.

Consequences of Deferral:

Ongoing deterioration of the concrete sidewalk and moisture infiltration between the sidewalk and building perimeter.

TypeYearCostPriorityFailure Replacement2007\$14,000Medium

Updated: OCT-06



G2030.06 Exterior Steps and Ramps*

Concrete step at the entrance and concrete ramp at the Auditorium Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	15	OCT-06

G2040.02 Fences and Gates**

Wood privacy fence is located around the play field at the southwest corner of the property.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	30	OCT-06

				Edmon
G2040.02.01 Chain Link Ga	ites			
Chain link fence is controlling	g access to	the play field.		
Rating 4 - Acceptable	Installed 1997	Design Life 0	Updated OCT-06	
G2040.03 Athletic and Rec	reational S	urfaces**		
Concrete pads are located t	o the east o	of the 1972 se	ction.	
Rating 4 - Acceptable	Installed 1972	Design Life 25	Updated OCT-06	
Event: Replace concrete Concern: The concrete pad metres have excee Type	pads Is of an a ded their th <u>Ye</u> a	pproximate a neoretical life. <u>ar Cost</u>	rea of 500 square <u>Priority</u>	
Lifecycle Replaceme	nt 201	10 \$67,000	Low	
Updated: OCT-06				
G2040.04.01 Play-Field Equ	uipment ar	d Structures*		
Play-field equipment is locat	ed to the s	outhwest of the	e building.	
Rating 4 - Acceptable	Installed 0	Design Life 10	Updated OCT-06	
G2040.06 Exterior Signs*				
The school signage is moun	ted on the	west exterior v	vall.	
<u>Rating</u> 5 - Good	Installed 0	Design Life 25	Updated OCT-06	
G2040.08 Flagpoles*				
A flagpole is located to the v	vest of the	building.		
Rating 4 - Acceptable	Installed 0	Design Life 30	Updated OCT-06	

G2050.04 Lawns and Grasses*

The grass covered areas are located to the north, east and west of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	15	OCT-06

G2050.05 Trees, Plants and Ground Covers*

Trees and plants are primarily located along the north and west perimeters of the original section of the building.

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

G3010.02 Site Domestic Water Distribution*

Domestic water supply from municipal mains on 93A Avenue.

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

G3020.01 Sanitary Sewage Collection*

Sanitary sewer connected to the municipal main on 67A Street.

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

G3030.01 Storm Water Collection*

The gravel paved areas slope to catch basins on the 67A Street which are connected the municipal main storm sewer.

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

G3060.01 Gas Distribution*

Gas supply from the gas main line of 94th Avenue NW.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	50	OCT-06

G4010.02 Electrical Power Distribution Lines*

Overhead fed from the main lines off of 94th Avenue.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	50	OCT-06

G4010.04 Car Plugs-ins*

Metal rail plug-ins in the parking lot.

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