RECAPP Facility Evaluation Report

Edmonton School District No. 7

Braemar School

B5467A

Edmonton

Report run on: March 28, 2012 10:13 AM

Facility Details

Building Name: Braemar School
Address: 9359 - 67A Street
Location: Edmonton

Building Id: B5467A
Gross Area (sq. m): 4,867.70
Replacement Cost: $14,876,000
Construction Year: 1959

Evaluation Details

Evaluation Company: Asset Evolution Inc.
Evaluation Date: October 19 2011
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$2,873,500**
5 year Facility Condition Index (FCI): **19.32%**

General Summary:

Braemar School, originally built in 1959 is a 1-storey structure, including a crawl space with an area of 2766.7m². A one-storey addition was added in 1965 at the north-east end of the school with an area of 1048.4m². A second addition was added in 1972 at the south end of the school with an area of 1052.6m². The school has a total building area of 4867m². Braemar School includes several classrooms, a library, a cafeteria, a computer room, science room, home economics rooms, sewing room, two gymnasiums, a fitness room, child care rooms, medical office and administration area.

Braemar School is an Edmonton Public School site devoted to the education of pregnant and parenting teens. Braemar School works in partnership with The Terra Association for Pregnant and Parenting Teens. In 2007, several modifications were conducted to accommodate a child care facility.

The 2011 student enrollment 120

Structural Summary:

The foundations in the 1959, 1965 and 1972 Sections consists of reinforced cast-in-place spread footings and foundation wall assembly.
The building has a cast-in-place concrete slab-on-grade with a conventional steel reinforcement assembly.
The interior structure in the 1959, 1965 and 1972 Sections is comprised of concrete block masonry walls, concrete columns and beams.
The 1959 Section has a Siporex concrete deck bearing on OWSJ supported by perimeter concrete masonry walls and pilasters. The 1965 Section has a wood deck bearing on OWSJ supported by perimeter concrete masonry walls.
The 1972 Section has a metal roof deck bearing on OWSJ supported by perimeter concrete masonry walls and interior steel columns.

Overall the structural elements are in acceptable condition

Envelope Summary:

Pre-cast concrete panels are located on the north elevation, between the original 1959 building and the 1965 addition. The 1965 and 1972 Sections have an exterior brick cladding assembly. The majority of the original 1959 building consists of painted concrete block walls. The north and west elevations of the original building has a exterior cement plaster finish. A portion of the original windows along the west elevation have been covered with an EFIS assembly. Metal siding is located along the upper portion of the exterior walls around the perimeter of the 1972 Addition. Sealant is located around all window, door and exterior cladding assemblies. The exterior concrete block walls and exterior cement plaster finish on the original 1959 Section has a paint finish. Exterior metal louvres are located on the exterior walls opposite the mechanical room.
The original 1959 windows in the southwest wing have anodized aluminum windows in a wood frame construction. A majority of the windows have painted metal security screens. The windows in the 1965 Section are a combination of fixed aluminum frame double glazed units with operable hopper type units. The 1972 Section has aluminum framed fixed double glazed windows with a tinted finish. The windows in the north-west corner of the original 1959 Section have vinyl framed double glazed fixed and operable awning windows.
The F1, F2, F3, F4 and F5 entrances have painted hollow metal doors with pressed steel frames. Several doors have glazed transom and side-lites (GWG) with metal screens. The utility doors in the storage room and gym are painted steel doors in a painted steel frame assembly.
The 1972 section of the building has the original built-up roof assembly system. The lower roof above the original 1959 Section have a 2-ply modified bitumen roof membrane assembly. The upper roof section in the original 1959 Section and 1965 section have a 2-ply modified bitumen roof membrane assembly.

The building envelope is in acceptable condition.

Recommendations:
- Replace sealant on window, door and exterior cladding assemblies. (1000LM)
- Replace window assemblies throughout the South wing of the 1959 Section - 64 sections
- Replace complete 1972 roof assembly (Area - 1100m²)
- Provide a lift to access the main west gymnasium

Interior Summary:

Interior partitions typically consist of painted masonry block walls, plaster and painted gypsum board walls. Painted steel railings are located on the main floor level opposite the lower gymnasium floor level. The main entrance foyer and office areas have metal framed glazed partitions. Fixed interior glazed windows with GWG are located in the library and cafeteria.
The interior swing doors generally consist of solid core wood doors in painted metal frames. Hardware includes aluminum kick plates, chrome door knobs with locks. The majority of the interior doors in the corridors and utility rooms are painted steel and/or solid wood doors in a painted steel and/or wood frame and GWG panel inserts. The vestibule doors have GWG transom and sidelight panels. Several fire-rated labels are painted on the frames & doors. Tackboards and whiteboards are located in each teaching area. Pre-finished metal shower & washroom stall partitions are located in each boy's & girl's washroom. Pre-finished metal lockers are located throughout the corridors and change rooms. Metal and wood storage shelving throughout the vestibules, custodial utility rooms and staff supply rooms. The washrooms are equipped with typical washroom accessories: paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors.
Cast-in-place concrete stairs are located opposite the original gymnasium. Steel-framed stairs lead to the boiler room. The stairs have wall mounted painted steel handrails. The concrete stairs to the Gymnasium have an epoxy finish.
The concrete walls in the mechanical room are exposed with no wall finish. Painted gypsum board walls are provided in the administrative area and renovated classroom areas in the daycare area. Ceramic tile wall finish is located behind the urinals in the boy's washooms. Stained wood acoustic panels are located in the original 1959 gymnasium. The interior concrete block and gypsum board wall partitions throughout the school have a paint finish.
Painted/sealed concrete floors are located in the mechanical rooms. Ceramic floor tiles are located in the showers & washrooms of the 1965 section only. Terrazzo flooring is located in the washrooms of the original 1959 Section. The gymnasium in the 1959 Section has a hardwood floor finish on wood sleepers. The gym floor in the 1972 section consists of wood strip flooring. The fitness room has a rubber flooring finish. Sheet vinyl is located throughout the main corridors and medical room areas. Vinyl floor tiles (VAT) are located throughout most classrooms, isolated washrooms, isolated corridors, custodial room and portions of the daycare rooms. Carpet flooring is provided in the administration area, staff room, library and classrooms within the daycare centre located at the south end of the original 1959 section.
The renovated office areas, fitness room, cafeteria and corridors in the 1965 Section have either a 610mm X 610mm or 610mm X 1220mm suspended acoustical tile assembly. A suspended perforated panel ceiling is located throughout the corridors in the 1959 Section. The OWSJ and siporex roof deck in the original 1959 Section is exposed and painted throughout. The wood structure and wood roof deck in the 1965 Section is exposed and painted throughout. The OWSJ and metal roof deck in the gym area in the 1972Section is exposed and painted.

The school interiors are in acceptable condition.

Recommendations:
- Replace Washroom Partitions - 20 Stalls
- Provide a designated barrier free parking space with signage in the roadway parking area opposite the south-east entrance F4.
- Convert and/or provide a unisex barrier-free washroom centrally located within the school.
- Provide power operators for barrier free access at the main F1 and F4 entrances.
- Provide a lift to access the main west gymnasium

Mechanical Summary:

The 1959 original building and the 1972 building addition are heated by steam which is supplied from two natural gas fired steam boilers to the building heating terminal units (force flow convection heaters, finned tube radiation cabinets and unit ventilators), and to the west gymnasium air handling unit steam heating coil. Ventilation for the 1959 original building and the 1965 building addition is provided by 28 unit ventilators and by the west gymnasium air handling unit. Ventilation and heating for the 1972 building addition is provided by an air handling unit equipped with a natural gas fired heating section. Fresh air supplied to the building by the unit ventilators and the air handling units is balanced by the exhaust flow from 16 roof mounted general and sanitary exhaust fans. Ventilation and cooling for the computer room is provided by a self contained direct expansion type air conditioning system. Building HVAC equipment

actuators and thermostats are pneumatic and the control air supply system for the building consists of an air compressor mounted on an air receiver tank. The computer room air conditioning unit is controlled by an independent electric (digital) thermostat. There is a basic building management and control system which provides monitoring and control functions for some of the main HVAC equipment located in the mechanical rooms (A Reliable Controls system).

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 18 toilets, 12 urinals, and 16 lavatories in the building. Other plumbing fixtures in the building include drinking fountains (six wall mounted units, three floor mounted refrigerated units, and six sink mounted units), various sinks (41), and showers (seven shower stalls). One natural gas fired domestic hot water heater provides domestic hot water for the building lavatories, sinks and showers.

Fire protection for the building consists of a standpipe system feeding standard fire hose cabinets and fire extinguishers located on wall mount brackets, in recessed wall mounted cabinets and in most of the fire hose cabinets.

Current mechanical system requirements include replacement of the original sinks, replacement of the refrigerated drinking fountains, replacement of the original washroom plumbing fixtures, replacement of the domestic water distribution system valves, the need for a backflow prevention device for the domestic water supply system, replacement of the roof mounted exhaust fans, replacement of the air handling unit for the 1972 building addition, and conversion of the building steam heating system to a hot water heating system (including replacement of the steam heating boilers with hot water heating boilers, replacement of the boiler chimney and combustion air supply, replacement of the west gymnasium air handling unit, replacement of the steam distribution and condensate collection systems with a hot water distribution system, replacement of the steam force flow convection heaters with hot water force flow convection heaters, replacement of the steam finned tube radiation cabinets with hot water finned tube radiation cabinets, replacement of the steam unit ventilators with hot water unit ventilators, and replacement of the pneumatic controls).

Overall, the building mechanical equipment and systems are in marginal condition.

Electrical Summary:

Braemar School is fed from a utility owned padmount transformer. The main switchboard is rated at 400A, 120/208V (electrical room). The mechanical loads within the building are typically fed from individual starters or manual starter switches.

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

The interior fluorescent lighting fixtures typically have T8 lamps and 120V electronic ballasts. The exit signs have LED lamps. The emergency lighting is fed from emergency lighting battery packs. The exterior lighting consists primarily of roof mounted Metal Halide floodlights and recessed incandescent fixtures.

The building is equipped with an Edwards EST 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 P.A. system and a Nortel Meridian telephone system. A data network has been 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 concerns for Braemar School are:
- The main switchboard is aged - no spare capacity and no surge protection has been provided.
- The original branch circuit panels are aged - replacement parts are not available.
- The motor starter switches are aged - contacts wear out over time.
- The original building wiring is 52 years old and should be inspected.
- The original lighting switches are aged
- Exterior incandescent lighting is not energy efficient. Fixtures are in poor condition.
- Emergency lighting battery units are aged. Reliability is questionable.

The following are recommendations for the electrical systems:

- Inspect and test branch circuit wiring.

Overall the electrical systems for Braemar School 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*

The foundation in the 1959, 1965 and 1972 Sections consists of reinforced cast-in-place spread footings and foundation wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

A1030 Slab on Grade*

The 1959, 1965 and 1972 Sections have a cast-in-place concrete slab-on-grade with a conventional steel reinforcement assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1010.01 Floor Structural Frame (Building Frame)*

The floor structural frame of the original 1959 section consists of concrete masonry pilasters and concrete masonry walls supporting open web steel joists.
The floor structural frame of 1965 section consists of load bearing perimeter concrete masonry walls supporting wood joists.
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	1959	0	MAR-12

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

The interior structure in the 1959, 1965 and 1972 Sections is comprised of concrete block masonry walls, concrete columns & beams.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1010.03 Floor Decks, Slabs, and Toppings* - 1959 Section

The suspended structural concrete slab over the crawl space is supported by concrete foundation walls. Repairs were conducted in 2007

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1010.09 Floor Construction Fireproofing*

Floor Construction Fire-proofing - Not visible during site visit

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1010.10 Floor Construction Firestopping*

Floor Construction Fire-stopping - Not visible during site visit

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1020.01 Roof Structural Frame*

The 1959 Section has a Siporex concrete deck bearing on OWSJ supported by perimeter concrete masonry walls and pilasters.
The 1965 Section has a wood deck bearing on OWSJ supported by perimeter concrete masonry walls.
The 1972 Section has a metal roof deck bearing on OWSJ supported by perimeter concrete masonry walls and interior steel columns.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B1020.06 Roof Construction Fireproofing*

Roof Construction Fireproofing - Not visible during site visit

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin* - 1965 Section

Pre-cast concrete panels are located on the north elevation, between the original 1959 building and the 1965 addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B2010.01.02.01 Brick Masonry: Ext. Wall Skin* - 1965 & 1972 Sections

The 1965 & 1972 Sections have an exterior brick cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B2010.01.02.02 Concrete Block: Ext. Wall Skin* - 1959 Section

The majority of the original 1959 building consists of painted concrete block walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.01.05 Exterior Insulation and Finish Systems (EIFS)* - 1959 Section

A portion of the original windows along the west elevation have been covered with an EFIS assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	0	MAR-12

B2010.01.06.03 Metal Siding** - 1972 Section

Metal siding is located along the upper portion of the exterior walls around the perimeter of the 1972 Addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	MAR-12

Event: Replace metal siding (2000m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$220,000	Unassigned

Updated: MAR-12

B2010.01.08 Cement Plaster (Stucco): Ext. Wall* - 1959 Section

The north and west elevations of the original building has a exterior cement plaster finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.01.09 Expansion Control: Ext. Wall*

Expansion/control joints are located between the additions of the exterior masonry wall and stucco wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.01.11 Joint Sealers (caulking): Ext. Wall** - 1959 & 1965 Sections

Sealant is located around all windows, doors and brick cladding assembly. The sealant was replaced during the replacement of the windows in the 1965 and north-west windows in the 1959 Section.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	20	MAR-12

Event: Replace sealant on window, door and exterior cladding assemblies (1000LM)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$25,000	Unassigned

Updated: MAR-12

B2010.01.11 Joint Sealers (caulking): Ext. Wall** - 1959 & 1972 Sections

Sealant is located around all window, door and exterior cladding assemblies. The sealant is original on the south wing of the 1959 Section and the1972 Addition.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	20	MAR-12

Event: Replace sealant on window, door and exterior cladding assemblies (1000LM)

Concern:

The sealant around the original 1959 and 1972 windows and doors is brittle and deteriorated.

Recommendation:

Replace sealant on window, door and exterior cladding assemblies.

Type	Year	Cost	Priority
Failure Replacement	2015	$25,000	Low

Updated: MAR-12

B2010.01.13 Paints (& Stains): Ext. Wall** - 1959 Section

The exterior concrete block walls and exterior cement plaster finish on the original 1959 Section has a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	15	MAR-12

Event: Repaint exterior concrete masonry and stucco walls (2000m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$80,000	Unassigned

Updated: MAR-12

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

The interior portion of the exterior walls on all sections are comprised primarily of a concrete block wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

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

Exterior Wall Vapor Retarders, Air Barriers, and Insulation - Not visible

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.06 Exterior Louvers, Grilles, and Screens*

Exterior metal louvres are located on the exterior walls opposite the mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.09 Exterior Soffits*

The exterior main entrance soffits have either a prefinished metal or textured painted soffit (Stucoo)

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2010.10 Other Exterior Walls*

A painted steel trellis is located along the perimeter of the original 1959 Section.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1959 Section (South Wing)

The original 1959 windows in the south wing west have anodized aluminum windows in a wood frame construction. A majority of the windows have painted metal security screens.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace aluminum windows in South wing of 1959 Section (64 sections)

Concern:

The original aluminum windows are aged and not energy efficient. The wood sections between the aluminum frames are deteriorating due to condensation.

Recommendation:

Replace window assembly throughout the South-wing of the 1959 Section - 64 sections

Type	Year	Cost	Priority
Failure Replacement	2015	$180,000	Medium

Updated: MAR-12

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

The windows in the 1965 Section are a combination of fixed aluminum frame double glazed units with operable hopper type units. A majority of the windows have painted metal security screens.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	40	MAR-12

Event: Replace aluminum windows in 1965 Section (24 units)

Type	Year	Cost	Priority
Lifecycle Replacement	2041	$48,000	Unassigned

Updated: MAR-12

B2020.01.01.02 Aluminum Windows (Glass & Frame)** - 1972 Section

The 1972 Section has aluminum framed fixed double glazed windows with a tinted finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	MAR-12

Event: Replace aluminum windows in 1972 Section (2 units)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$5,000	Unassigned

Updated: MAR-12

B2020.01.01.06 Vinyl, Fibreglass & Plastic Windows** - 1959 Section (North-West Corner Only)

The windows in the north-west corner of the original 1959 Section have vinyl framed double glazed fixed and operable awning windows.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	40	MAR-12

Event: Replace vinyl windows in north-west corner of 1959 Section (74 Sections)

Type	Year	Cost	Priority
Lifecycle Replacement	2041	$210,000	Unassigned

Updated: MAR-12

B2030.01.02 Steel-Framed Storefronts: Doors**

The F1,F2,F3,F4 and F5 entrances have painted hollow metal doors with pressed steel frames. Several doors have glazed transom and side-lites (GWG) with metal screens.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	MAR-12

Event: Replace entrance doors & sidelights c/w hardware (10 doors)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$80,000	Unassigned

Updated: MAR-12

B2030.02 Exterior Utility Doors** -1972 Section

The utility doors in the storage room and gym are painted steel doors in a painted steel frame assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	MAR-12

Event: Replace exterior doors, frames & hardware (3 doors)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$9,000	Unassigned

Updated: MAR-12

B3010.01 Deck Vapour Retarder and Insulation*

Deck Vapor Retarder and Insulation - Not Visible

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)** - 1972 Section

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

Rating	Installed	Design Life	Updated
3 - Marginal	1972	25	MAR-12

Event: Replace 1972 roof assembly (1100m²)

Concern:
Several blisters were observed in isolated areas. Repairs have been conducted in recent years.
Recommendation:
Replace complete 1972 roof assembly (Area - 1100m2)
Consequences of Deferral:
Roof leaks lead to partial shut down of the school.

Type	Year	Cost	Priority
Failure Replacement	2013	$190,000	Medium

Updated: MAR-12

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)** - 1959 & 1965 Upper Sections

The upper roof section in the original 1959 Section and 1965 section have a 2-ply modified bitumen roof membrane assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	25	MAR-12

Event: Replace SBS roof on upper sections of 1959 & 1965 Sections (1525m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2028	$260,000	Unassigned

Updated: MAR-12

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)** - 1959 Section

The lower roof above the original 1959 Section have a 2-ply modified bitumen roof membrane assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1996	25	MAR-12

Event: Replace SBS roof on lower 1959 Sections (2560m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$430,000	Unassigned

Updated: MAR-12

B3010.08.02 Metal Gutters and Downspouts**

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

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	30	MAR-12

Event: Replace Metal Gutters and Downspouts (200LM)

Type	Year	Cost	Priority
Lifecycle Replacement	2033	$3,000	Unassigned

Updated: MAR-12

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

Roof access and ladder provided in the original building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	OCT-06

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1010.04 Interior Balustrades and Screens, Interior Railings*

Painted steel railings are located on the main floor level opposite the lower gymnasium floor level.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1010.05 Interior Windows*

Fixed interior glazed windows with GWG are located in the library and cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1010.06 Interior Glazed Partitions and Storefronts*

The main entrance foyer and office areas have metal framed glazed partitions.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1010.07 Interior Partition Firestopping*

Firestopping observed only in the janitor closets, mechanical and electrical utility areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1020.01 Interior Swinging Doors (& Hardware)*

The interior swing doors generally consist of solid core wood doors in painted metal frames. Hardware includes aluminum kick plates, chrome door knobs with locks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1020.03 Interior Fire Doors*

The majority of the interior doors in the corridors and utility rooms are painted steel and/or solid wood doors in a painted steel and/or wood frame and GWG panel inserts. The vestibule doors have GWG transom and sidelight panels. Several fire-rated labels are painted on the frames & doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

Event: Replace Interior Fire Doors c/w hardware (20 doors)

Concern:
Original doors and frames in fire separations are not labeled and dated. The Fire doors may not conform to current fire code requirements.

Recommendation:
Replace Interior Fire Doors - 20 doors c/w hardware

Type	Year	Cost	Priority
Code Upgrade	2015	$60,000	Medium

Updated: MAR-12

C1030.01 Visual Display Boards**

Tackboards and whiteboards are located in each teaching area.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	20	MAR-12

Event: Replace Visual Display Boards - (Based on the 30 teaching areas)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$30,000	Unassigned

Updated: MAR-12

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

Pre-finished metal shower & washroom stall partitions are located in each boy's & girl's washroom.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace Washroom Partitions (20 Stalls)

Concern:
Several of the toilet partitions are loose and the hardware no longer functional.

Recommendation:
Replace Washroom Partitions - 20 Stalls

Type	Year	Cost	Priority
Failure Replacement	2014	$30,000	Low

Updated: MAR-12

C1030.08 Interior Identifying Devices*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C1030.10 Lockers**

Prefinished metal lockers are located throughout the corridors and change rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	30	MAR-12

Event: Replace all lockers in corridors and change rooms (300 Units)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$90,000	Unassigned

Updated: MAR-12

C1030.12 Storage Shelving*

Metal and wood storage shelving throughout the vestibules, custodial utility rooms and staff supply rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

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	2001	0	MAR-12

C2010 Stair Construction*

Cast-in-place concrete stairs are located opposite the original gymnasium. Steel-framed stairs lead to the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C2020.08 Stair Railings and Balustrades*

The stairs have wall mounted painted steel handrail.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C2020.11 Other Stair Finishes* - Epoxy

The concrete stairs to the Gymnasium have an epoxy finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C3010.01 Concrete Wall Finishes (Unpainted)*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C3010.04 Gypsum Board Wall Finishes (Unpainted)*

Painted gypsum board walls are provided in the administrative area and renovated classroom areas in the daycare area.

Rating	Installed	Design Life	Updated
4 - Acceptable	2007	0	MAR-12

C3010.06 Tile Wall Finishes**

Ceramic tile wall finish is located behind the urinals in the boy's washooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	40	MAR-12

Event: Replace ceramic tile in boy's washrooms (100m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$10,000	Unassigned

Updated: MAR-12

C3010.09 Acoustical Wall Treatment**

Stained wood acoustic panels are located in the original 1959 gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1979	20	MAR-12

Event: Replace acoustic wall treatment on Gymnasium walls (300m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$75,000	Unassigned

Updated: MAR-12

C3010.11 Interior Wall Painting*

The interior concrete block and gypsum board wall partitions throughout the school have a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	0	MAR-12

C3020.01.02 Painted Concrete Floor Finishes*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C3020.02 Tile Floor Finishes**

Ceramic floor tiles are located in the showers & washrooms of the 1965 section only.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	50	MAR-12

Event: Replace ceramic tile flooring (100m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$18,000	Unassigned

Updated: MAR-12

C3020.03 Terrazzo Floor Finishes*

Terrazzo flooring is located in the washrooms of the original 1959 Section.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

C3020.04 Wood Flooring** - 1959 Section

The gymnasium in the 1959 Section has a hardwood floor finish on wood sleepers.

Rating	Installed	Design Life	Updated
5 - Good	2008	30	MAR-12

Event: Replace Wood Flooring in Gymnasium (223m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2038	$60,000	Unassigned

Updated: MAR-12

C3020.04 Wood Flooring** - 1972 Section

The gym floor in the 1972 section consists of wood strip flooring. The floor was refinished in 2008.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	MAR-12

Event: Replace Wood Flooring in Gymnasium (220m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$60,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - Rubber

The fitness room has a rubber flooring finish.

Rating	Installed	Design Life	Updated
5 - Good	2007	20	MAR-12

Event: Replace rubber flooring in Fitness Room (200m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$20,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - Sheet Vinyl

Sheet vinyl is located throughout the main corridors and medical room areas.

Rating	Installed	Design Life	Updated
5 - Good	2007	20	MAR-12

Event: Replace sheet vinyl flooring in corridors & medical room areas (1000m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$80,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - VAT

Vinyl floor tiles (VAT) are located throughout most classrooms, isolated washrooms, isolated corridors, custodial room and portions of the daycare rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	20	MAR-12

Event: Replace VAT flooring (2500m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$250,000	Unassigned

Updated: MAR-12

C3020.08 Carpet Flooring**

Carpet flooring is provided in the administration area, staff room, library and classrooms within the daycare centre located at the south end of the original 1959 section.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	15	MAR-12

Event: Replace carpet flooring (1000m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$100,000	Unassigned

Updated: MAR-12

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

The renovated office areas, fitness room, cafeteria and corridors in the 1965 Section have either a 610mm x 610 mm or 610mm x 1220 mm suspended acoustical tile assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	25	MAR-12

Event: Replace acoustical tile ceilings (750m²)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$60,000	Unassigned

Updated: MAR-12

C3030.07 Interior Ceiling Painting*

The OWSJ and siporex roof deck in the original 1959 Section is exposed and painted throughout. The wood structure and wood roof deck in the 1965 Section is exposed and painted throughout. The OWSJ and metal roof deck in the gym area in the 1972Section is exposed and painted.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

C3030.09 Other Ceiling Finishes* - Corridors

A suspended perforated panel ceiling is located throughout the corridors in the 1959 Section.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

S4 MECHANICAL

D2010.04 Sinks** - 1997

Most of the building sinks were replaced in 1997, including one plastic laundry tub and 25 general purpose stainless steel sinks (23 single bowl sinks and two double bowl sinks).

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	30	MAR-12

Event: Replace 1997 sinks (26)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$39,000	Unassigned

Updated: MAR-12

D2010.04 Sinks** - 2007

Some of the building sinks were replaced in 2007, including one plastic laundry tub and nine general purpose stainless steel sinks (three single bowl sinks and six double bowl sinks).

Rating	Installed	Design Life	Updated
5 - Good	2007	30	MAR-12

Event: Replace 2007 sinks (10)

Type	Year	Cost	Priority
Lifecycle Replacement	2037	$15,000	Unassigned

Updated: MAR-12

D2010.04 Sinks** - Original 1959, 1965 & 1972

Original 1959, 1965 and 1972 sinks in the building include three enameled cast iron custodian sinks, one plastic mop sink, and one general purpose single bowl stainless steel sink (located in the boiler room).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace original 1959, 1965 & 1972 sinks (5)

Concern:
The original sinks are in marginal condition due to age, wear and corrosion.
Recommendation:
Replace the original 1959, 1965 and 1972 sinks.

Type	Year	Cost	Priority
Failure Replacement	2013	$9,000	Low

Updated: MAR-12

D2010.05 Showers** - 1965

There are six shower stalls located in the girl's change room (room 30). The shower stalls have painted concrete block walls, ceramic tile floors and metal partitions between the stalls. This element covers the shower trim (shower heads and shower control valves).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace shower trim for shower stalls in girl's change room (6)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$6,000	Unassigned

Updated: MAR-12

D2010.05 Showers** - 2001

There is one prefabricated metal shower stall located in one of the male washrooms (room 47).

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	30	MAR-12

Event: Replace prefabricated metal shower stall in room 47 (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2031	$2,000	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers** - Non-Refrigerated

Original 1959, 1965 and 1972 non-refrigerated drinking fountains include six wall mounted vitreous china drinking fountains (all double station drinking fountains). In addition, some of the general purpose stainless steel sinks in the building are equipped with drinking fountain attachments (six sink mounted drinking fountains total).

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	35	MAR-12

Event: Replace non-refrigerated drinking fountains (12)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$12,000	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers** - Refrigerated

Original 1965 and 1972 refrigerated drinking fountains include three floor mounted refrigerated drinking fountains.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	35	MAR-12

Event: Replace refrigerated drinking fountains (3)

Concern:
The refrigerated drinking fountains are in marginal condition due to age and wear.

Recommendation:
Replace the refrigerated drinking fountains.

Type	Year	Cost	Priority
Failure Replacement	2013	$10,500	Low

Updated: MAR-12

D2010.09 Other Plumbing Fixtures* - Emergency Safety Shower

There is an emergency safety shower located in the Science Room (room 28).

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	0	MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - 1997

Washroom plumbing fixtures installed in 1997 include three floor mounted vitreous china tank type toilets (one in room 3 and two in room 70) and two counter mounted enameled steel lavatories (in room 70).

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	35	MAR-12

Event: Replace 1997 washroom fixtures (3 toilets & 2 lavatories)

Type	Year	Cost	Priority
Lifecycle Replacement	2032	$9,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - 2001

Most of the building lavatories were replaced in 2001. There are 14 2001 stainless steel lavatories.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	35	MAR-12

Event: Replace 2001 stainless steel lavatories (14)

Type	Year	Cost	Priority
Lifecycle Replacement	2036	$21,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - Original 1959 & 1965

Original 1959 and 1965 washroom plumbing fixtures in the building include floor mounted vitreous china flush valve type toilets (13), floor mounted vitreous china tank type toilets (2), and floor mounted vitreous china tank type urinals (12).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	35	MAR-12

Event: Replace 1959 & 1965 washroom fixtures (15 toilets & 12 urinals)

Concern:

The original 1959 and 1965 washroom plumbing fixtures are in marginal condition due to wear, obsolescence and surface finish deterioration.

Recommendation:

Replace the original 1959 and 1965 washroom plumbing fixtures (15 toilets and 12 urinals).

Type	Year	Cost	Priority
Failure Replacement	2014	$54,000	Low

Updated: MAR-12

D2020.01.01 Pipes and Tubes: Domestic Water*

There is one municipal water supply to the building which feeds the building domestic water distribution system and the building fire protection system (50mm diameter supply line to the building). There is a water meter for the building domestic water distribution system (50mm diameter). The municipal water supply enters the building in the boiler room (room 39). The domestic water distribution system piping in the buildings is copper.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D2020.01.02 Valves: Domestic Water**

Domestic water distribution system valves include the domestic water supply main isolation valves, the domestic water distribution system zone isolating valves, and plumbing fixture isolating valves. The main isolation valves are ball type valves.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace domestic water valves (4,867m²/gfa)

Concern:
The domestic water distribution system valves are in marginal condition due to seizure and inadequate sealing.
Recommendation:
Replace the domestic water distribution system valves.

Type	Year	Cost	Priority
Failure Replacement	2013	$25,000	Low

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)**

There is one 50 mm diameter backflow prevention device located in the boiler room for the standpipe system and there is one 19 mm diameter backflow prevention device located in the boiler room for the make-up water supply to the steam boilers. There is no backflow prevention device for the domestic water supply to the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	20	MAR-12

Event: Install backflow preventer on domestic water supply to building (1)

Concern:
The domestic water supply to the building is not protected from potential backflow from the building.
Recommendation:
Install a backflow prevention device on the domestic water supply to the building (50 mm diameter).

Type	Year	Cost	Priority
Code Upgrade	2012	$5,000	Low

Updated: MAR-12

Event: Replace 1998 backflow preventers (2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$4,000	Unassigned

Updated: MAR-12

D2020.02.02 Plumbing Pumps: Domestic Water**

Domestic water plumbing pumps include the domestic hot water circulation pump located in the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	20	MAR-12

Event: Replace domestic hot water circulation pump (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$1,800	Unassigned

Updated: MAR-12

D2020.02.06 Domestic Water Heaters**

One storage tank type natural gas fired domestic hot water heater is located in the boiler room. The domestic hot water heater is an A.O. Smith model BTRC197-110 with an input heating capacity of 179,100 Btu/h (52.49 kW), a volume capacity of 94 US gallons (356 L), and a recovery rate of 173.7 US gallons per hour (657.5 L/h).

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	20	MAR-12

Event: Replace domestic hot water heater (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$4,800	Unassigned

Updated: MAR-12

D2020.03 Water Supply Insulation: Domestic*

Where visible, the domestic cold water piping is insulated to prevent condensation and the domestic hot water piping is insulated to reduce heat loss.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D2030.01 Waste and Vent Piping*

Visible waste and vent piping is generally copper in smaller diameters and cast iron in larger diameters. There are three sanitary drainage system discharges from the building to the municipal combined sewer system (three 100 mm diameter discharge lines).

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D2030.02.04 Floor Drains*

Floor drains are used in the building in various areas including the washrooms and the girl's change room. The floor drains discharge to the building sanitary drainage system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D2040.01 Rain Water Drainage Piping Systems*

The flat roof areas of the building drain via roof drains and internal storm drainage piping. The storm water drainage piping in the building is generally cast iron. The building storm water drainage system discharges on the west side of the building near the north end to the municipal combined sewer main on 67A Street (300 mm diameter discharge line).

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D2040.02.04 Roof Drains*

Storm water drainage for the building flat roof areas is via roof drains with internal drainage piping. Most of the building roof drains are equipped with metal strainers and are not equipped with flow control weirs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3010.02 Gas Supply Systems*

The natural gas supply to the building is underground from the north side of the property to the outside storage room (room 38) where the natural gas pressure reducing station and meter are located. The natural gas supply line is a 75mm diameter line. Natural gas in the building is supplied to the two heating boilers, the domestic hot water heater, and the air handling unit for the 1972 building addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3020.01.01 Heating Boilers & Accessories: Steam**

There are two natural gas fired steam heating boilers located in the boiler room which provide steam for building heating. The firetube steam boilers were manufactured by Reliance Welding Works.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	35	MAR-12

Event: Replace steam heating boilers with hot water heating boilers (2)

Concern:

The steam boilers are in marginal condition due to age and obsolescence. The steam boilers require frequent maintenance and repairs, and replacement parts are not readily available.

Recommendation:

Convert the building heating system from steam to hot water including replacement of the steam heating boilers with hot water heating boilers. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, and D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**).

Type	Year	Cost	Priority
Failure Replacement	2014	$180,000	Medium

Updated: MAR-12

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

Insulated breeching for each boiler and a common brick chimney provide combustion gas discharge for the two steam boilers. Two independent combustion air intakes serve the two steam boilers.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	35	MAR-12

Event: Replace boiler combustion gas discharge system & combustion air supply system when boilers are replaced (30LM)

Concern:

The breeching and the chimney for the steam boilers are in marginal condition due to age and corrosion.

Recommendation:

Replace the boiler combustion gas discharge system and combustion air supply system when the boilers are replaced. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$26,000	Low

Updated: MAR-12

D3020.01.04 Water Treatment: Steam Boilers*

Water treatment for the steam boiler feedwater consists of chemical addition via a chemical feed pump and manual pot feeders.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3040.01.01 Air Handling Units: Air Distribution** - 1959 Gymnasium

An original Trane constant volume air handling unit (AHU) equipped with a steam heating coil provides ventilation for the 1959 west gymnasium. This air handling unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, a steam heating coil, and a supply air fan. The estimated air handling unit flow capacity is 4,500 cfm (2,124 L/s).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace west gymnasium air handling unit (1)

Concern:

The west gymnasium air handling unit is in marginal condition due to age, wear and obsolescence. Frequent maintenance and repairs are required to keep the equipment in operation.

Recommendation:

Replace the gymnasium air handling unit (replacement unit to utilize a hot water heating coil). Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$34,000	Low

Updated: MAR-12

D3040.01.01 Air Handling Units: Air Distribution** - 1972 Building Addition

The 1972 building addition is served by an Engineered Air model SD-EC-540 air handling unit equipped with a natural gas fired heating section (located in mechanical room 36 adjacent to the cafeteria). This air handling unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, natural gas fired heaters, a supply air fan, and an associated return air fan (covered under a separate element). The estimated air handling unit flow capacity is 6,000 cfm (2,832 L/s).

Rating	Installed	Design Life	Updated
3 - Marginal	1972	30	MAR-12

Event: Replace 1972 building addition air handling unit (1)

Concern:

The 1972 building addition air handling unit is in marginal condition due to age, wear and obsolescence.

Recommendation:

Replace the 1972 building addition air handling unit (2,832 L/s).

Type	Year	Cost	Priority
Failure Replacement	2014	$40,000	Low

Updated: MAR-12

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

Air distribution fans remote from the air handling units include the return air fan for the air handling unit serving the 1972 building addition. The axial flow return air fan is located in mechanical room 36 adjacent to the cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	0	MAR-12

D3040.01.03 Air Cleaning Devices: Air Distribution*

Air filters are installed on the air handling units (including the west gymnasium air handling unit and the 1972 building addition air handling unit).

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3040.01.04 Ducts: Air Distribution*

The air distribution ducts include the fresh air, return air, and supply air duct systems for the 1959 west gymnasium air handling unit and the 1972 building addition air handling unit. 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	1959	0	MAR-12

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Air outlets and inlets include the supply air diffusers and return air grilles for the air distribution systems associated with the building air handling units (the 1959 west gymnasium air handling unit and the 1972 building addition air handling unit). The west gymnasium supply air diffusers are duct mounted round cone type diffusers and the west gymnasium return air inlets consist of rectangular wall mounted grilles. In the 1972 building addition, the supply air diffusers are generally square cone type diffusers mounted in the T-bar ceiling grid or floor mounted linear diffusers, and return air inlets are generally eggcrate type grilles mounted in the T-bar ceiling grid. In the 1972 east gymnasium, the supply air diffusers are floor mounted linear diffusers and the return air inlets consist of rectangular wall mounted grilles.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

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

The 1959 original building and the 1965 building addition are heated with a steam heating system. The steam heating system provides steam to the heating terminal units (including finned tube radiation cabinets, force flow convectors, and unit ventilators), and to the west gymnasium air handling unit heating coil. The steam distribution system includes all components of the steam heating system including the steam piping, condensate piping, valves, piping insulation, piping specialties, steam traps, and the condensate collection tank and pump. The condensate collection tank and pump are located in the boiler room.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace steam distribution & condensate collection systems with hot water heating system (4,867m²/gfa)

Concern:

The steam condensate return piping is in marginal condition due to corrosion.

Recommendation:

Replace the steam distribution and condensate collection systems with a hot water heating system. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.01.01 Air Handling Units: Air Distribution**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$350,000	Low

Updated: MAR-12

D3040.04.01 Fans: Exhaust**

There are approximately 16 roof mounted exhaust fans for the building providing general and sanitary exhaust. Most of the building exhaust fans are original (eight 1959 exhaust fans, six 1965 exhaust fans and two 1972 exhaust fans).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace 1959, 1965 & 1972 roof mounted exhaust fans (16)

Concern:

The original roof mounted exhaust fans are in marginal condition due to age and wear.

Recommendation:

Replace the original 1959, 1965 and 1972 roof mounted exhaust fans (16).

Type	Year	Cost	Priority
Failure Replacement	2014	$42,000	Low

Updated: MAR-12

D3040.04.03 Ducts: Exhaust*

Exhaust duct systems include the collection ducts associated with the 16 roof mounted building exhaust fans. This element includes all components of the exhaust duct systems not specifically covered under other elements, including ducts, duct supports, dampers, insulation, etc.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust air inlets include the inlet grilles associated with the exhaust system collection ducts. Wall mounted air transfer grilles are located in the classrooms to allow the fresh air supplied by the unit ventilators to be balanced by air flow from the classrooms into the corridors where it is exhausted by the general exhaust fans.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D3050.01.01 Computer Room Air Conditioning Units**

The computer room (room 18) is equipped with a self contained direct expansion type air conditioning system. The air conditioning unit is mounted against the exterior wall and contains an evaporator coil, a supply air fan, a compressor and a condenser coil. The air conditioning unit is a Change Air Series 1100 model CAH 1000-PA-VP with a nominal cooling capacity of three tons (35,500 Btu/h or 10.41 kW).

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	30	MAR-12

Event: Replace computer room air conditioning unit (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2036	$8,000	Unassigned

Updated: MAR-12

D3050.05.01 Convectors** - Force Flow Heaters

Steam force flow convectors are used in high heating load areas including the building entrance vestibules (six force flow heaters total).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace steam force flow heaters with hot water force flow heaters (6)

Concern:

The steam force flow convection heaters are in marginal condition due to age and wear.

Recommendation:

Replace the steam force flow heaters with hot water force flow heaters when the building heating system is converted from steam to hot water. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$24,000	Low

Updated: MAR-12

D3050.05.03 Finned Tube Radiation**

Steam finned tube radiation cabinets provide perimeter and interior heating for some areas of the building (estimated 40 m).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace steam finned tube radiation cabinets with hot water finned tube radiation cabinets (40 m)

Concern:

The steam finned tube radiation cabinets are in marginal condition due to age and wear.

Recommendation:

Replace the steam finned tube radiation cabinets with hot water finned tube radiation cabinets when the building heating system is converted from steam to hot water. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.07 Unit Ventilators**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$20,000	Low

Updated: MAR-12

D3050.05.07 Unit Ventilators**

Original Trane unit ventilators at the perimeter wall provide heating and ventilation for most of the building rooms in the 1959 original building and in the 1965 building addition. Each unit ventilator is equipped with a steam heating coil, a circulation fan, and an outside air damper. There are a total of 28 unit ventilators.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace steam unit ventilators with hot water unit ventilators (28)

Concern:

The steam unit ventilators are in marginal condition due to wear and obsolescence. In addition, some of the classrooms have been divided so that some unit ventilators serve two rooms, which creates temperature control problems.

Recommendation:

Replace the steam unit ventilators with hot water unit ventilators when the building heating system is converted from steam to hot water (alternately, the unit ventilator system could be replaced with new air handling units and air distribution systems). Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3060.02.02 Pneumatic Controls**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Consequences of Deferral:

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

Type	Year	Cost	Priority
Failure Replacement	2014	$252,000	Low

Updated: MAR-12

D3060.02.02 Pneumatic Controls**

The building HVAC system controls and actuators are generally pneumatic (the computer room air conditioning unit is controlled by a digital electric thermostat). The control air supply system is located in the boiler room and consists of an air compressor mounted on an air receiver tank (covered under a separate element). Pneumatic controls include pneumatic thermostats, control valves for the heating terminal units, a control valve for the gymnasium air handling unit steam heating coil, and damper actuators. This element includes the control air distribution system and components.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace pneumatic control system components (4,867m²/gfa)

Concern:

The pneumatic control system components are in marginal condition due to age, wear and obsolescence.

Recommendation:

Replace the pneumatic control system components when the building heating system is converted from steam to hot water. Coordinate with the replacement of the other components affected by the conversion from steam to hot water heating (including D3050.05.07 Unit Ventilators**, D3050.05.03 Finned Tube Radiation**, D3050.05.01 Convectors** - Force Flow Heaters, D3040.02 Steam Distribution Systems: Piping/Pumps**, D3040.01.01 Air Handling Units: Air Distribution**, D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**, and D3020.01.01 Heating Boilers & Accessories: Steam**).

Type	Year	Cost	Priority
Failure Replacement	2014	$23,000	Low

Updated: MAR-12

D3060.02.02 Pneumatic Controls** - Control Air Supply System

The control air supply system is located in the boiler room and consists of an air compressor mounted on an air receiver tank.

Rating	Installed	Design Life	Updated
5 - Good	2008	40	MAR-12

Event: Replace control air supply system (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2048	$5,000	Unassigned

Updated: MAR-12

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

The building has a basic BMCS (building management and control system) which monitors and controls some of the main HVAC equipment located in the mechanical rooms. The BMCS is a Reliable Controls system.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	20	MAR-12

Event: Replace building management & control system (4,867m²/gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2026	$106,000	Unassigned

Updated: MAR-12

D4020 Standpipes*

The building is equipped with a standpipe system which feeds standard fire hose cabinets.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Fire extinguishers are located throughout the building on wall mounted brackets, in recessed wall mounted cabinets, and in most of the fire hose cabinets.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The incoming hydro service to Braemar School is from a hydro pole located on 94th Avenue. An underground feeder conduit has been run from the hydro pole to the transformer vault adjacent to the boiler room (no access to vault). The incoming feeder to the switchboard is a 400A, 120/208V, 3-phase, 4-wire service. The EPCOR meter is located in the boiler room adjacent to the main switchboard.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

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

The main electrical switchboard is a Square D switchboard rated at 400A, 120/208V, 3-phase, 4-wire. The switchboard has a 400A main breaker and a distribution section with moulded case breakers feeding the fire alarm panel and six branch circuit panels within the school. The main electrical switchboard, located in the boiler room, is original equipment that was installed when the school was constructed.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	40	MAR-12

Event: Replace Main Switchboard

Concern:

The main switchboard is original. Contacts wear out over time. There is no surge suppression protection for the switchboard and no capacity for expansion.

Recommendation:

Replace 400A, 120/208V main switchboard. Provide surge protection. Review electrical consumption and increase ampacity if required.

Type	Year	Cost	Priority
Failure Replacement	2012	$25,000	High

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1959

The original electrical branch circuit panelboards are Square D panels. There are six original Square D panels (A to F).

Rating	Installed	Design Life	Updated
3 - Marginal	1959	30	MAR-12

Event: Replace Branch Circuit Panels (6)

Concern:

The original branch circuit panels are well past their life expectancy. Over the life of the panel, breaker contacts become worn and the breakers will no longer operate correctly and may trip unnecessarily. Older panels do not readily accept newer style breakers.

Recommendation:

Replace panels with new 120/208V branch circuit panels c/w sufficient circuits to accommodate building loads and provide capacity for additional loads in the future.

Type	Year	Cost	Priority
Failure Replacement	2012	$30,000	Medium

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1972

Panels J and K are Westinghouse branch circuit panels that were added as part of the 1972 addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	MAR-12

Event: Replace Branch Circuit Panels (2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$10,000	Unassigned

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1997

Panels L and M are Federal Pioneer panels that were installed to accommodate additional building loads. Panel N is a Cutler Hammer panel in the south corridor of the original building. A Square D panel has been installed in the leased office space.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	30	MAR-12

Event: Replace Branch Circuit Panels (4)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$20,000	Unassigned

Updated: MAR-12

D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers** - Distribution Panel

Distribution panel JKLM is a 400A, 120/208V Westinghouse Panaflex CDP panel installed as part of the 1972 addition.

Rating	Installed	Design Life	Updated
3 - Marginal	1972	30	MAR-12

Event: Replace Distribution Panel

Concern:
The distribution panel is approximately 39 years old. The panel has been installed where it is not accessible without the use of a ladder.

Recommendation:
Incorporate the 5 panel breakers in the distribution panel into the new main switchboard.

Type	Year	Cost	Priority
Failure Replacement	2012	$9,000	Medium

Updated: MAR-12

D5010.07.02 Motor Starters and Accessories**

The original motor starters within the school are individual motor starters (Square D) or motor rated starter switches. There are two GE motor starters in the 1965 addition.

Rating	Installed	Design Life	Updated
2 - Poor	1959	30	MAR-12

Event: Replace Motor Starters (8 starters and 10 manual starter switches)

Concern:
The original motor starters in the building are aged. Replacement parts are no longer readily available.

Recommendation:
Replace motor starters and manual motor starter switches.

Type	Year	Cost	Priority
Failure Replacement	2012	$22,000	Medium

Updated: MAR-12

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. Improper usage of extension cords was observed in some areas of the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Electrical Wiring Study

Concern:

The original branch wiring in the building has exceeded its theoretical life expectancy. With age the wiring insulation can break down, which can lead to short circuits and potential fire hazards.

Recommendation:

Inspect and test the wiring systems within the building to determine the condition of the wiring. Study should include costing for any proposed replacements.

Type	Year	Cost	Priority
Study	2012	$5,000	Medium

Updated: MAR-12

Event: Replace Branch Wiring (2766m²/gfa)

Concern:

The original branch wiring in the building has exceeded its theoretical life expectancy. With age the wiring insulation can break down, which can lead to short circuits and potential fire hazards.

Recommendation:

Replace aged branch circuit wiring as recommended by study.

Type	Year	Cost	Priority
Failure Replacement	2012	$148,000	High

Updated: MAR-12

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

The lighting within the school is typically controlled by 120V line voltage switches. Original switches are still in use in some areas of the school. The gymnasium has low voltage relay panels for lighting control.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Replace Original Lighting Switches (4867m²/gfa)

Concern:
The original switches are aged. Contact will wear over time making the switch inoperable. Potential electrical hazard.

Recommendation:
Replace original lighting switches.

Type	Year	Cost	Priority
Failure Replacement	2013	$10,000	Low

Updated: MAR-12

D5020.02.02.01 Interior Incandescent Fixtures*

There is limited use of incandescent lighting in the school. Some incandescent fixtures have been provided in the child care areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

D5020.02.02.02 Interior Fluorescent Fixtures**

The fluorescent lighting fixtures within the school were upgraded in 2007. The typical lighting consists of continuous wrap-around, two lamp fluorescent fixtures that are surface mounted or suspended. Two lamp fluorescent fixtures with wire guards have been provided in the gymnasium. T8 lamps and electronic ballasts have been installed in the fluorescent lighting fixtures.

Rating	Installed	Design Life	Updated
5 - Good	2007	30	MAR-12

Event: Replace Interior Fluorescent Fixtures (4867m²/gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2037	$301,000	Unassigned

Updated: MAR-12

D5020.02.03.02 Emergency Lighting Battery Packs** - 1972

The emergency lighting in the building is provided by battery powered emergency lighting units and remote emergency lighting heads.

Rating	Installed	Design Life	Updated
3 - Marginal	1972	20	MAR-12

Event: Replace Emergency Lighting Battery Packs (10)

Concern:
The emergency lighting battery packs are aged. Units may no longer be able to maintain the emergency lighting for the required 30 minute period.

Recommendation:
Replace emergency battery units with new units to current code requirements.

Type	Year	Cost	Priority
Failure Replacement	2012	$11,000	High

Updated: MAR-12

D5020.02.03.02 Emergency Lighting Battery Packs** - 1997

The emergency lighting in the building is provided by battery powered emergency lighting units and remote emergency lighting heads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	20	MAR-12

Event: Replace Emergency Lighting Battery Packs (6)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$6,600	Unassigned

Updated: MAR-12

D5020.02.03.03 Exit Signs*

The exit signs are typically installed at building exits and along egress routes. The majority of the exit signs are metal, stencil faced exit signs with LED lamps.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

D5020.03.01.01 Exterior Incandescent Fixtures*

Incandescent recessed lighting fixtures are installed in some entrance canopies.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Replace Exterior Incandescent Fixtures (6)

Concern:
The exterior incandescent lighting is not energy efficient. Some fixtures are in poor condition.

Recommendation:
Replace incandescent exterior lighting with new energy efficient exterior lighting fixtures.

Type	Year	Cost	Priority
Failure Replacement	2012	$3,000	Low

Updated: MAR-12

D5020.03.01.03 Exterior Metal Halide Fixtures*

Roof mounted metal halide floodlights have been installed on the South and East sides of the building for security lighting.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

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

A timer has been provided for exterior lighting control.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

D5030.01 Detection and Fire Alarm**

A central microprocessor based, single stage, addressable, supervised, non-coded fire detection and alarm system has been provided within the school. The system consists of pull stations, smoke detectors, heat detectors, audible (bells) and visual (strobes) signal devices. The main control panel is a Edwards EST panel, located at the main entrance. A remote annunciator is located in the administration office.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	25	MAR-12

Event: Replace Fire Alarm System (4867m²/gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$127,000	Unassigned

Updated: MAR-12

D5030.02.02 Intrusion Detection**

The Magnum Alert security system panel is located in the telecom room (room 50). Security system keypads have been located in the daycare, boiler and computer lab. PIR motion detectors have been provided throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	25	MAR-12

Event: Replace Intrusion Detection System (Panel, 3 keypads and 20 motion detectors)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$20,000	Unassigned

Updated: MAR-12

D5030.03 Clock and Program Systems*

The majority of the clocks within the school are plug-in or battery operated type. Digital clocks with a temperature and date readout have been provided in the 1965 wing of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

D5030.04.01 Telephone Systems*

The telephone system for the school is a Nortel Meridian system. Nortel handsets are located in the classrooms and selected areas such as the general office. The main telephone equipment is located in the telecom room (room 50). The telephone system is interconnected with the P.A. system. A separate Meridian telephone system has been provided for the leased office space.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	0	MAR-12

D5030.04.04 Data Systems*

The data system server is located in room 19. The network wiring within the school is typically Cat. 5 or better. Supernet has been installed in the school. The fiber optic cabling enters the building underground through the storage room adjacent to the main entrance. The network servers and patch panels are rack mounted. 12 wireless access points were installed in 2007.

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	0	MAR-12

D5030.05 Public Address and Music Systems**

The public address system is a Bogen system. The public address system uses in-room telephones and speakers for communications. A TPU-60A amplifier and control equipment for interfacing with the telephone system has been provided in the storage room adjacent to the stage (room 50).

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	20	MAR-12

Event: Replace P.A. System (Based on head-end equipment and 30 classrooms)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$36,000	Unassigned

Updated: MAR-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1090.04 Residential Equipment*

The home economics lab is equipped with refrigerator, stoves, microwaves and several small kitchen appliances. The staff kitchen area is equipped with a refrigerator, dishwasher and microwaves.

Rating	Installed	Design Life	Updated
4 - Acceptable	2007	0	MAR-12

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.

Rating	Installed	Design Life	Updated
4 - Acceptable	2007	0	MAR-12

E2010.02 Fixed Casework**

Most classrooms, offices and child care rooms are equipped with custom wood open faced and/or painted cabinet units. The science laboratory, upgraded in 2001, is equipped with upper wood cabinets, lower cupboards c/w counter-top, open fixed shelving. Most of the other labs, such as; home economics, sewing and computer room all have fixed storage wood cabinets throughout the room. The library has fixed and moveable wood shelving casework. The staff and cafeteria kitchens are equipped with upper and lower custom wood cabinet. The kitchens and washrooms have plastic laminate counter tops. Remaining original millwork and counter-tops are located in few isolated areas in the 1959 and 1965 Sections.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	35	MAR-12

Event: Replace original millwork (4867m²/gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2036	$425,000	Unassigned

Updated: MAR-12

E2010.03.01 Blinds**

Vertical and roller blinds are located throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	2001	30	MAR-12

Event: Replace vertical & roller blinds (164 units)

Type	Year	Cost	Priority
Lifecycle Replacement	2031	$164,000	Unassigned

Updated: MAR-12

E2010.03.06 Curtains and Drapes**

Curtains are located in the upper windows in the west gym.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	30	MAR-12

Event: Replace curtains in west gym (12 Sections)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$12,000	Unassigned

Updated: MAR-12

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

A designated handicap parking space is not provided in the unpaved parking area.

Rating	Installed	Design Life	Updated
2 - Poor	1959	0	MAR-12

Event: Provide designated barrier free parking space with signage in roadway parking area opposite south-east entrance F4.

Concern:

Signage & a designated barrier free parking space is not allocated in the parking area.

Recommendation:

Provide a designated barrier free parking space with signage in the roadway parking area opposite the south-east entrance F4.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2012	$5,000	Low

Updated: MAR-12

K4010.02 Barrier Free Entrances*

Power assist doors are not provided throughout the entire school.

Rating	Installed	Design Life	Updated
2 - Poor	1959	0	MAR-12

Event: Provide power operators for barrier free access at main F1 and F4 entrances.

Concern:

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

Recommendation:

Provide power operators for barrier free access at the main F1 and F4 entrances.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2012	$10,000	Medium

Updated: MAR-12

K4010.03 Barrier Free Interior Circulation*

Generally, barrier free circulation is provided throughout the public spaces of the school, however, access is restricted to the main west Gymnasium.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Provide lift to access main west gym

Concern:
The Auditorium Gymnasium is accessed by concrete stairs.
Recommendation:
Provide a lift to access the main west gymnasium

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2012	$25,000	Medium

Updated: MAR-12

K4010.04 Barrier Free Washrooms*

The boy's & girl's washrooms in the 1975 section have been modified with larger toilet stalls, however, they do not comply with the current barrier free standards.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Convert and/or provide unisex barrier free washroom centrally located in the school.

Concern:
Existing washrooms will not accommodate barrier free user requirements.
Recommendation:
Convert and or provide a unisex barrier free washroom centrally located within the school.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2012	$40,000	Medium

Updated: MAR-12

K4030.01 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. Report indicates low levels of asbestos presence in vinyl tile, debris in crawl space , pipe-fitting insulation, boiler insulation and duct insulation.

Rating	Installed	Design Life	Updated
3 - Marginal	1959	0	MAR-12

Event: Initiate an Asbestos Abatement Program

Concern:
No asbestos abatement has been carried out since the initial survey.

Recommendation:
Initiate an Asbestos Abatement Program

Type	Year	Cost	Priority
Hazardous Material Management Upgrade	2012	$59,276	Medium

Updated: MAR-12

K4030.02 PCBs*

No PCBs observed or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	MAR-12

K4030.04 Mould*

No mould observed or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

K4030.09 Other Hazardous Materials*

No hazardous material known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1959	0	MAR-12

K5010.01 Site Documentation*

The evaluation was conducted on October 19, 2011, by Asset Evolution Inc.

Braemar Elementary School is located at 9359 - 67A Street, Edmonton, Alberta. The site of Braemar ES includes a gravel parking area accessible from 93A Avenue at the south-west corner of the site. The parking lot has been extended for additional parking along the east elevation of the school. A sodded playing field is located at the east end of the property. Grass, shrubs and mature trees are located around the perimeter of the building. An asphalt paved playground is located at the south end of the school. Pedestrian concrete paved walkways are linked to all the main entrances of the school.

For site plan see K5010.02.

Rating	Installed	Design Life	Updated
4 - Acceptable	2011	0	MAR-12

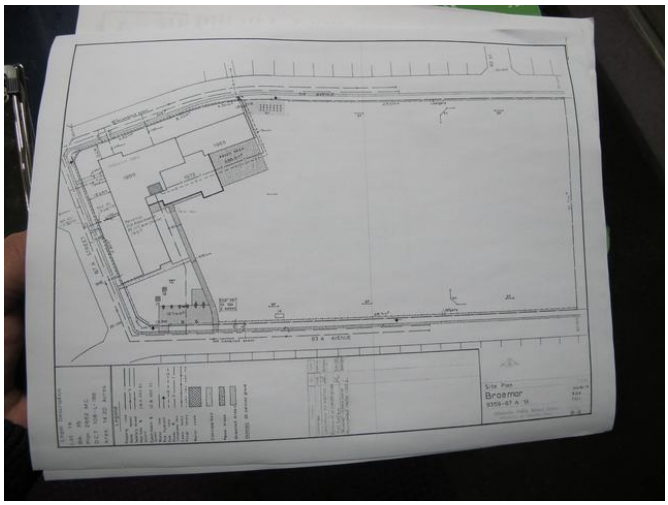
K5010.02 Building Documentation*

The evaluation was conducted on October 19, 2011, by Asset Evolution Inc.

Braemar School, originally built in 1959 is a 1-storey structure, including a crawl space with an area of 2766.7m2. A one-storey addition was added in 1965 at the north-east end of the school with an area of 1048.4 m2. A second addition was added in 1972 at the south end of the school with an area of 1052.6 m2. The school has a total building area of 4867 m2. Braemar School includes several classrooms, a library, a cafeteria, a computer room, science room, home economics rooms, sewing room, two gymnasiums, a fitness room, child care rooms, medical office and administration area.

Braemar School is an Edmonton Public School site devoted to the education of pregnant and parenting teens. Braemar School works in partnership with The Terra Association for Pregnant and Parenting Teens. In 2007, several modifications were conducted to accommodate a child care facility.

Rating	Installed	Design Life	Updated
4 - Acceptable	2011	0	MAR-12



Braemar School - Site Plan