

# **RECAPP Facility Evaluation Report**

## **Lethbridge School Dist #51**

**Lethbridge Collegiate Institute**  
B3687A  
Lethbridge

**Facility Details**

**Building Name:** Lethbridge Collegiate Institut  
**Address:** 1701 - 5 Avenue  
**Location:** Lethbridge

**Building Id:** B3687A  
**Gross Area (sq. m):** 20,645.20  
**Replacement Cost:** \$64,526,573  
**Construction Year:** 1949

**Evaluation Details**

**Evaluation Company:** Stantec Consulting Ltd.  
**Evaluation Date:** December 7 2010  
**Evaluator Name:** Michael Just

**Total Maintenance Events Next 5 years:** **\$10,488,000**  
**5 year Facility Condition Index (FCI):** **16.25%**

**General Summary:**

The Lethbridge Collegiate Institute is made up of multiple additions that were added to the 1949 original building, comprised of the D-wing and E-wing (both two and a half storey) and the F-wing (one and a half storey). The additions include a portion of the F-wing (one storey) in 1955, the B-wing (three storey) in 1957, and the A-wing (one storey plus main entry), C-wing (three storey) and G-wing (one storey) in 1970. The H-wing (one storey of office additions and classrooms on the second floor) was added in 1986, concurrent with general modernizations to the school.

The current student enrollment is approximately 1000 students, and the total floor area of the building is 20,645 square metres.

**Structural Summary:**

The facility and its wings generally include concrete foundations and concrete slab-on-grade floors. The original building includes wood-framed floors and roof joists/decking. All subsequent additions employ concrete masonry unit walls and pilasters, and a combination of wood or steel joists that support wood or steel suspended floor/roof decking.

Recommended work includes the following:

- Investigate and repair cracking of brick cladding at the D-wing south elevation

Structural components were observed to be in acceptable condition, overall.

**Envelope Summary:**

The exterior walls of the facility include a clay brick veneer on all elevations, installed over a concrete masonry unit substrate. Exterior glazing is comprised of fixed and operable windows with insulating glass set in aluminum frames and some original wood windows. Exterior entry doors on the south elevation consist of fully-glazed storefronts with sealed glass units set in steel frames that include matching sidelights and transoms. Exterior utility doors are insulated metal units that are hinge-mounted in pressed steel frames. Low-slope roof sections are covered with either a two-ply modified bituminous membrane assembly or a built-up bituminous assembly.

At the time of the assessment, the roof surfaces were covered in snow and did not permit observing surface condition.

Recommended work includes the following:

- Repair or replace stucco parging on the B and D-wing exteriors
- Replace sealants around windows, doors, and control joints
- Investigate and repair cracked brick veneer at the original building's southeast corner (D-Wing)
- Replace wood windows on the D and F-wings
- Repair loose seals and flashings on exterior windows
- Repair glass block on the D and F-wings
- Replace the skylight over the F-wing

Building envelope components were observed to be in marginal condition, overall.

**Interior Summary:**

The facility interior is made up of painted concrete block and gypsum wall board partition walls. The floors are primarily covered with resilient sheet goods in corridors, the cafeteria and classrooms. Carpet flooring is installed in the administration office, band room and library, while wood flooring is present in the A and E-wing gymnasiums. Ceramic tile is installed in multi-user washrooms and change rooms, and quarry tile is present in the C-wing corridor and

entrance foyers. Terrazzo flooring is present in the D-wing . The ceiling finishes are comprised of suspended T-bar with acoustical tile in corridors, classrooms, library, and administration office. Painted gypsum board is provided on bulkheads and in multi-user washrooms and change rooms.

Recommended work includes the following:

- Investigate and repair cracking on the concrete walls above the corridor doors leading to the D-wing
- Repair A-wing gymnasium perimeter masonry chase way/partition walls
- Investigate railing / balustrade configurations to determine their current adequacy, and replace as necessary
- Replace a fire door in the C-wing computer room
- Replace wooden stairs in the Industrial Arts classroom
- Replace damaged resilient stair coverings
- Repair resilient flooring adjacent to stairs
- Replace carpet flooring
- Refurbish the hydraulic passenger elevator in B-Wing
- Repair the gas appliance installation in the Home economics classroom and confirm ventilation requirements
- Install door operators to facilitate Barrier Free access at two entrances
- Install wheelchair lifts in Wings E and D to facilitate improved barrier-free access within the facility
- Install roof tie-back anchors on low-slope roof surfaces

The building interior components were observed to be in acceptable condition, overall.

### **Mechanical Summary:**

Domestic water is supplied by the municipality. Domestic water for the G-Wing is provided by a separate connection from the main building. Domestic hot water is provided by a series of natural gas fired domestic water heaters. Backflow prevention devices are installed on the domestic water line for the heating/cooling water system connection, heat exchanger connection, fire system connection, and irrigation.

Heating is provided by hot water distribution systems. The A-Wing is heated by perimeter finned tube radiation and natural gas fired forced air furnaces. B-Wing, C-Wing, D-Wing, E-Wing, F-Wing, and H-Wing (except shop areas) are heated by a series of heat pumps in the main building. The G-Wing (except shop areas) is also heated by a series of heat pumps. There are approximately 110 heat pumps throughout the building. Shop areas are typically heated by ceiling suspended unit heaters. Heating water is provided by natural gas fired hot water boilers. Heating water is understood to be approximately 50% glycol. Chilled water is provided by an outdoor cooling tower. Ventilation is provide by a series of air handling units. General exhaust is provided by exhaust fans in the washrooms. HVAC equipment in the building is almost completed connected to the DDC building automation system.

The shop classroom and autobody paint booths are protected by a wet pipe sprinkler system. The building is equipped with standpipe cabinets. A dry chemical fire suppression system is installed on the cafeteria range hood. Handheld fire extinguishers are located throughout the building.

Recommended work within the next five years includes:

- Replace domestic water supply piping in C-Wing.
- Replace mixing valves for shower fixtures.
- Repair dampers in B-wing air handling unit.
- Abandon flooded underground ductwork in A-Wing and replace with ceiling-level ductwork.
- Investigate actions to prevent vehicle exhaust from entering the H-Wing air handling unit intake.

Overall, the mechanical components appear to be in acceptable condition.

### **Electrical Summary:**

The building receives electricity from a utility-owned pad mounted transformer on the site. The main electrical service enters the building through a 2,000A 347/600V 3 phase 4 wire switchgear unit. Approximately 15 225kVA secondary transformers step the voltage down from 347/600V to 120/208V. Approximately 20 electrical panelboards serve the lighting, equipment, and plug loads throughout the building. A motor control centre and several remote motor starters serve the various pieces of HVAC equipment throughout the building. Heating water pumps, cooling tower fans, and a supply fan are controlled by VFDs.

Interior lighting is primarily provided by fluorescent tube fixtures with T12 bulbs and magnetic ballasts. Lighting in the A-Wing ("small") gymnasium and the automotive shop is provided by high pressure sodium fixtures. Exterior lighting around the building perimeter is provided by high pressure sodium wall packs controlled by a photocell. Emergency

lighting in the main building is provided by hallway and exit lighting connected to an emergency power circuit. Emergency power is provided by a John Deere diesel generator. Emergency lighting in the G-Wing building is provided by wall mounted battery packs connected to additional remote heads.

The building is monitored by a GE EST3 addressable fire detection and alarm system. Devices include smoke and heat detectors, duct detectors, pull stations, and horns/strobes. Security systems include intrusion detection, card access, and video surveillance systems.

Other miscellaneous electrical systems include clock and program, telephone, paging, data, PA, and television systems.

Recommended work within the next five years includes:

- Install surge protection on the main switchgear unit.
- Retrofit interior lighting for electronic ballasts and T8 bulbs.
- Upgrade A-Wing gymnasium and automotive shop lighting to fluorescent tube fixtures with T5 bulbs and electronic ballasts.
- Replace the clock and program system.

Overall, the electrical systems appear to be in acceptable condition.

Rating Guide	
Condition Rating	Performance
1 - Critical	Unsafe, high risk of injury or critical system failure.
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.
5 - Good	Meets all present requirements. No deficiencies.
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.

## S1 STRUCTURAL

### A1010 Standard Foundations\*

Construction drawings were not available for review during the assessment; however, standard foundations for the original 1949 building, 1955 addition, 1957 addition, 1970 addition, and 1986 addition are understood to consist of cast-in-place concrete grade beams and spread footings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

### A1030 Slab on Grade\*

The original 1949 construction and 1955, 1957, and 1970 additions are constructed at grade and include cast-in-place concrete slab-on-grade floors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

### A2020 Basement Walls (& Crawl Space)\*

A partial basement level is provided in the 1949 original building, D-wing, mechanical room, which is constructed with masonry block walls. A partial basement level is also provided in the 1957 addition, B-wing, mechanical room, which is bordered with cast-in-place concrete foundation walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

### B1010.01 Floor Structural Frame (Building Frame)\*

The suspended floor decks in the facility are understood to be supported by concrete beams and load-bearing concrete masonry unit walls and pilasters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

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

Structural interior walls supporting floors or roofs within the facility are comprised of load-bearing masonry block.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

### B1010.03 Floor Decks, Slabs, and Toppings\*

The suspended floor decks of the Lethbridge Collegiate Institute are understood to be comprised of cast-in-place concrete.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**B1010.05 Mezzanine Construction\***

The 1957 and 1970 mezzanine levels are constructed with steel decking with concrete topping, supported by concrete walls.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**B1010.07 Exterior Stairs\***

Exterior cast-in-place concrete stairs and landings are situated at the former south main entrance and east secondary entrance to the Lethbridge Collegiate Institute (D-Wing). The stairs include base-mounted, painted metal pipe handrails. The north exterior exits of the Main floor of F-wing are provided with welded structural steel stairs that include metal treads, and welded pipe handrails.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**B1010.10 Floor Construction Firestopping\***

Ductwork or conduit penetrations through floors are sealed where voids are present.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**B1020.01 Roof Structural Frame\***

Roof structural framework for the facility is understood to be comprised of open web steel joists and beams supporting suspended wood or steel roof decks

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**B1020.03 Roof Decks, Slabs, and Sheathing\***

Wood sheathing and metal roof decks are supported by open web steel joists.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**B1020.04 Canopies\***

A canopy is located above the south former main entrance to the 1949 original building (D-wing ) and is comprised of a pre-cast concrete structure supported by brick masonry pilasters. A cantilevered canopy is provided on the east secondary entrance of the 1949 original building and is finished with a painted fascia. A canopy is located on the northwest secondary entrance of the 1957 addition B-Wing and is understood to be comprised of a steel frame, metal flashing, pre-finished fascia and low-slope built-up roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1949	0	APR-11

**Event: Investigate Condition of Canopy Support Structure**

**Concern:**

The previous 2005 assessment report indicated that a portion of the brick pilaster which supports a concrete roof canopy over the old southeast entry on D-wing is breaking away from the building structure. This deficiency was not directly observed during our assessment due to height restrictions, however, confirmation could not be obtained as to whether the deficiency has been adequately addressed.

**Recommendation:**

A study is required to determine whether this deficiency remains at the facility. If the deficiency still remains, the study should recommend action to correct the deficiency and the underlying cause(s).

**Consequences of Deferral:**

The broken section of pilaster represents a potential falling hazard to the public, and poses a risk to the building's structural integrity at the front entrance.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2011	\$10,000	High

**Updated:** APR-11

**B1020.06 Roof Construction Fireproofing\***

The roof decking in the mechanical rooms of the facility are provided with a spray-on fire-proofing material.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

## S2 ENVELOPE

### B2010.01.01 Precast Concrete: Exterior Wall Skin\*

A pre-cast concrete roof fascia is provided on the original 1949 building. A pre-cast concrete fascia feature is also provided on the perimeter of all facility elevations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11



**B2010.01.02.01 Brick Masonry: Ext. Wall Skin\* - 1949 Original Building**

A clay brick veneer is provided on all elevations of the 1949 original building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1949	0	APR-11

**Event: Completed - Repair the damaged portion of the pilasters**

**Concern:**

The pilasters that is holding up the concrete canopy at the front entry is cracked at the top portion and is significantly separating. There is concern about the structural integrity of the pilasters and may need to be investigated by an engineer to determine the extent of the damage.

1949-Wing D-Front entry south side concrete and brick pilasters are cracked.

**Recommendation:**

Repair the damaged portion that is separating as this could pose as a danger for the public using the school. This applies to both the pillars that has sustained damage.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2008	\$15,000	High

**Updated:** APR-11

**Event: Investigate Cracking and Movement of Brick Veneer**

**Concern:**

A large crack is present within the brick veneer at the 1949 original building's southeast corner (D-Wing). The crack extends to the roof parapet that is also separating from the adjacent section. The crack is approximately 3 meters in length on both sides of a corner.

This deficiency is understood to have been discussed on the previous 2005 facility assessment report, and no repairs are understood to have been conducted to-date.

**Recommendation:**

Conduct a study to determine the cause(s) of the cracking and separation, and recommend an appropriate means of repair.

**Consequences of Deferral:**

The brick veneer appears to have separated from the adjoining portion and could pose as a danger of total separation. The cracked and separated area also presents an avenue for moisture infiltration.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2011	\$15,000	High

**Updated:** APR-11

**Event: Repair Brick at Southeast Corner (approx. 40 m²)**

**Concern:**

A large crack is present within the brick veneer at the 1949 original building's southeast corner (D-Wing). The crack extends to the roof parapet that is also separating from the adjacent section. The crack is approximately 3 meters in length on both sides of a corner.

This deficiency is understood to have been discussed on the previous 2005 facility assessment report, and no repairs are understood to have been conducted to-date.

**Recommendation:**

Conduct repairs to the brick veneer, parapet and roof, if necessary, based on the outcome of the preliminary study. An allowance for repair is provided; however, actual repair costs can only be determined once the results of the initial study are known.

**Consequences of Deferral:**

The brick veneer appears to have separated from the adjoining portion and could pose as a danger of total separation. The cracked and separated area also presents an avenue for moisture infiltration.



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<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$25,000	High

**Updated:** APR-11

**B2010.01.02.01 Brick Masonry: Ext. Wall Skin\* - 1957 & 1986 Additions**

A clay brick veneer is provided on all elevations of the 1957 and 1986 additions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	0	APR-11

**B2010.01.02.01 Brick Masonry: Ext. Wall Skin\* - 1970 Addition**

A clay brick veneer is provided on all elevations of the 1970 addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**Event: Completed - 1970 (Wing A) and 1957 (Wing B) - between the two wings there is a crack on the exterior brick veneer at the base of the buildings.**

**Concern:**

The previous report indicated the following:  
Further investigation is required to determine if this crack on the exterior of the building is a significant factor in the cracks within the interior of the two junctions of the building.

**Recommendation:**

The previous report indicated the following recommendation:  
Consult structural engineer to study the damage on the exterior portion of the two buildings and determine the extent of the damage if it is attributed to the cracks that are evident along this area of the wall found in the classrooms in Wing B. The site contact indicated that this was completed in 2008.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$2,000	Medium

**Updated:** APR-11

**Event: Completed - Repair brick mortar**

**Concern:**

The previous report indicated the following:  
The 1970 Addition, (C-Wing), Mechanical Room third floor, brick masonry wall skin has lost its grout and daylight can be seen from the interior.

**Recommendation:**

Re-point clay brick mortar.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2008	\$1,000	Low

**Updated:** APR-11

**B2010.01.06.03 Metal Siding\*\***

Pre-finished metal siding is provided above and below the exterior windows and doors on the 1957 Addition (B-Wing).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	APR-11

**Event: Replace Metal Siding (approx. 1300 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$176,000	Unassigned

**Updated:** APR-11

**B2010.01.08 Cement Plaster (Stucco): Ext. Wall\* - 1949 Original Building & 1957 Addition**

The lower sections of building elevations on the original building and 1957 addition, including in-fills above and below windows, are finished with a cement plaster (stucco) finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1949	0	APR-11

**Event: Repair Stucco parging on B & D-Wings (approx. 50 sq m)**

**Concern:**

The south and east elevations of D-Wing and the west, north and east elevations of B-Wing have areas of damaged, cracked and deteriorated stucco plaster.

**Recommendation:**

Repair and refinish the stucco plaster finish on the B and D Wings.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$6,000	Medium

**Updated:** APR-11

**B2010.01.08 Cement Plaster (Stucco): Ext. Wall\* - 1970 & 1986 Additions**

The lower sections of wall elevations on the 1970 and 1986 additions are finished with a cement plaster (stucco) finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**B2010.01.09 Expansion Control: Exterior Wall Skin\***

Expansion joints are provided at periodic intervals for thermal expansion/contraction.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

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

Sealant is installed within construction joints and around exterior window/door openings and louvered air intakes on the building perimeter. Sealant has likely been upgraded from original construction. Age could not be determined.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1986	20	APR-11

**Event: Replace Joint Sealers (approx. 3,000 m)**

**Concern:**

Sealant around exterior window/door openings and in construction joints was observed to be cracked, brittle and separated.

**Recommendation:**

Replace sealant at windows/doors and construction joints on the facility perimeter.

**Consequences of Deferral:**

The deficient sealant presents an avenue for moisture/air movement through the building envelope.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$94,000	Medium

**Updated:** APR-11

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

Cement plaster surfaces and window and door trim are finished with paint.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	15	APR-11

**Event: Replace Exterior Paint (approx. 4,000 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$83,000	Unassigned

**Updated:** APR-11

**B2010.02.01 Cast-in-place Concrete: Ext. Wall Const\***

Cast-in-place concrete back-up walls are constructed at various locations behind exterior brick veneer on the facility perimeter.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

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

Concrete masonry unit back-up walls are constructed behind exterior brick veneer on the building perimeter. Glass block in-fill window units are provided on the east and west elevations of the first and second floors of the 1949 original building (D-Wing and E-Wing).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1949	0	APR-11

**Event: Replace Damaged Glass Blocks (approx. 6 sq m)**

**Concern:**

Glass block infill windows in the stairwells of Wings D and E have some blocks that are damaged and/or broken.

**Recommendation:**

Replace broken blocks as necessary.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$3,000	Medium

**Updated:** APR-11

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

Construction drawings were not available for review as part of the assessment, however it is understood that exterior walls incorporate insulation and a vapour barrier. Based on the age of the facility, the presence of an intentional air barrier is considered unlikely.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**B2010.06 Exterior Louvers, Grilles, and Screens\***

Air in-take louvers consisting of pre-formed steel are installed on the building perimeter to support air-flow and ventilation within the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**B2020.01.01.02 Aluminum Windows (Glass & Frame)\*\* - 1949 Original Building**

Exterior windows installed on the original building perimeter are comprised of sealed glass units set in fixed aluminum frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	40	APR-11

**Event: Replace Aluminum Windows (approx. 90 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$109,000	Unassigned

**Updated:** APR-11

**B2020.01.01.02 Aluminum Windows (Glass & Frame)\*\* - 1957 Addition**

Exterior windows installed on the 1957 addition perimeter are comprised of sealed glass units set in fixed aluminum frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	40	APR-11

**Event: Repair Exterior Windows (approx. 12 sq m)**

**Concern:**

Several exterior windows on the facility perimeter exhibited loose seals and sill flashings.

**Recommendation:**

Reset loose seals and flashings as necessary.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$5,000	Low

**Updated:** APR-11

**Event: Replace Aluminum Windows (approx. 250 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$302,000	Unassigned

**Updated:** APR-11

**B2020.01.01.02 Aluminum Windows (Glass & Frame)\*\* - 1970 Addition**

Exterior windows installed on the 1970 addition perimeter are comprised of sealed glass units set in fixed aluminum frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace Aluminum Windows (approx. 680 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$822,000	Unassigned

**Updated:** APR-11

**B2020.01.01.02 Aluminum Windows (Glass & Frame)\*\* - 1986 Addition**

Exterior windows installed on the 1986 addition perimeter are comprised of sealed glass units set in fixed aluminum frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	40	APR-11

**Event: Replace Aluminum Windows (approx. 150 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$181,000	Unassigned

**Updated:** APR-11

**B2020.01.01.05 Wood Windows (Glass & Frame)\*\***

Single-pane, wood-framed windows are provided on the 1949 original building, D-Wing and F-Wing, at the lower floor exterior elevation and 1957 addition exterior elevations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1957	35	APR-11

**Event: Replace wood windows (approx. 80 sq m)**

**Concern:**

The wood windows are beyond their useful life have deteriorated (rotting) components. The exterior frames are cracked and all the seals no longer function.

**Recommendation:**

Replace all wood windows.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$97,000	Medium

**Updated:** APR-11

**B2030.01.02 Steel-Framed Storefronts: Doors\*\***

Exterior entry doors are comprised of single leaf, glazed, hinged units with insulating glass set in steel frames with matching sidelights.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	30	APR-11

**Event: Replace Steel-Framed Storefronts (approx. 22 door leafs)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$57,000	Unassigned

**Updated:** APR-11



**B2030.02 Exterior Utility Doors\*\* - 1949 Original Building**

Exterior utility doors on the original building are comprised of a single leaf, painted and insulated metal hinged units with panic hardware set in painted metal frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	40	APR-11

**Event: Replace Exterior Utility Doors (approx. 5 doors)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,000	Unassigned

**Updated:** APR-11

**B2030.02 Exterior Utility Doors\*\* - 1955 Addition**

Exterior utility doors on the 1955 addition are comprised of a single leaf, painted and insulated metal hinged units with panic hardware set in painted metal frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1955	40	APR-11

**Event: Replace Exterior Utility Doors (approx. 3 doors)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$5,000	Unassigned

**Updated:** APR-11

**B2030.02 Exterior Utility Doors\*\* - 1957 Addition**

An exterior utility door on the 1957 addition is comprised of a painted and insulated metal hinged unit with panic hardware set in a painted metal frame.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	APR-11

**Event: Replace Exterior Utility Doors and hardware (1 door)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$2,000	Unassigned

**Updated:** APR-11

**B2030.02 Exterior Utility Doors\*\* - 1970 Addition**

Exterior utility doors on the 1970 addition are comprised of single leaf, painted and insulated metal hinged units with panic hardware set in painted metal frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace Exterior Utility Doors (approx. 5 doors)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,000	Unassigned

**Updated:** APR-11

**B2030.02 Exterior Utility Doors\*\* - 1986 Addition**

Exterior utility doors on the 1986 addition are comprised of single leaf, painted and insulated metal hinged units with panic hardware set in painted metal frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	40	APR-11

**Event: Replace Exterior Utility Doors (approx. 4 doors)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$6,000	Unassigned

**Updated:** APR-11

**B2030.03 Large Exterior Special Doors (Overhead)\***

Pre-finished, sectional metal panel overhead doors are provided on F-Wing and G wings, complete with electric operators.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	0	APR-11

**Event: Completed - 1949 (Wing F) and 1970 ( Wing G) - Wood overhead doors need to be replaced**

**Concern:**

The doors are in bad shape and need to be replaced.

**Recommendation:**

Replace the old wooden doors with steel roll up doors. There are six bays with doors that are 3m x 2.43m in width.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2006	\$20,000	High

**Updated:** APR-11

**B3010.01 Deck Vapor Retarder and Insulation\***

Low-slope roof sections are understood to include a vapour barrier and tapered rigid insulation below roof membrane assemblies.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)\*\* - 1949 Original Building**

Low-slope roof surfaces over the D-Wing and F-Wing are covered with a Built-up Bituminous Roofing assembly. Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	25	APR-11

**Event: Replace Built-up Bituminous Roofing (approx. 4500 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$865,000	Unassigned

**Updated:** APR-11

**B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)\*\* - 1955 Addition**

Low-slope roof surfaces over a portion of the F-Wing is covered with a Built-up Bituminous Roofing assembly. Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1955	25	APR-11

**Event: Replace Built-up Bituminous Roofing (approx. 300 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$58,000	Unassigned

**Updated:** APR-11

**B3010.04.04 Modified Bituminous Membrane Roofing (SBS)\*\* - 1957 Addition**

Low-slope roof surfaces over the 1957 addition are covered with a modified bituminous roofing assembly (SBS), understood to have been installed circa 1988. Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1988	25	APR-11

**Event: Replace SBS Roofing (approx. 900 sq m)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2014	\$173,000	Unassigned

**Updated:** APR-11

**B3010.04.04 Modified Bituminous Membrane Roofing (SBS)\*\* - 1970 Addition (1988 Installation)**

Low-slope roof surfaces over the A-Wing, C-Wing, and G-Wing are covered with a modified bituminous roofing assembly (SBS), understood to have been installed circa 1988. Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1988	25	APR-11

**Event: Replace SBS Roofing (approx. 3900 sq m)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2014	\$750,000	Unassigned

**Updated:** APR-11

**B3010.04.04 Modified Bituminous Membrane Roofing (SBS)\*\* - 1970 Addition (2008 Installation)**

Low-slope roof surfaces over the A-Wing, C-Wing, and G-Wing are covered with a modified bituminous roofing assembly (SBS). Approximately 600 sq m was replaced in 2008. Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2008	25	APR-11

**Event: Replace SBS Roofing (approx. 600 sq m)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2033	\$116,000	Unassigned

**Updated:** APR-11

**B3010.04.04 Modified Bituminous Membrane Roofing (SBS)\*\* - 1986 Addition**

Low-slope roof surfaces over a portion of the E-Wing and H-Wing are covered with a modified bituminous roofing assembly (SBS). Expansion and roof section joints are covered with metal flashing.

At the time of the assessment, the roof surface was covered in snow and did not permit observing surface condition. The site contact indicated that there are no apparent leaks of concerns.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	25	APR-11

**Event: Replace SBS Roofing (approx. 565 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$109,000	Unassigned

**Updated:** APR-11

**B3020.01 Skylights\*\***

A vaulted skylight comprised of insulating glazing units set in fixed aluminum framework is situated above the second floor of the 1986 addition at its east end.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1986	25	APR-11

**Event: Replace skylight (approx. 24 sq m)**

**Concern:**

The skylight is reported to leak. This was further reinforced by the presence of flaking paint finishes on gypsum board surfaces, as viewed from the interior. Several glazing units on the skylight exhibited a fogged appearance, and may have failed seals.

**Recommendation:**

Replace skylight glazing and flashing.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$62,000	High

**Updated:** APR-11

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

The low-slope roof sections include multiple curbed and flashed penetrations that support roof-mounted mechanical units, ducts, vents, etc.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**S3 INTERIOR**

**C1010.01 Interior Fixed Partitions\***

Interior fixed partitions are comprised of masonry or clay brick, and metal or wood stud framing. Steel stud partitions sheathed with gypsum board are provided in some classroom and office areas. Some interior partitions bordering corridors, stairwells and classrooms are comprised of painted cast-in place concrete.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
3 - Marginal	1949	0	APR-11

**Event: Investigate Crack in Concrete Wall at D-Wing Entrance**

**Concern:**

A large diagonal crack is evident on the concrete wall above the entrance doors that connect the D-Wing to the C-Wing. Signage above doorway is D300.

**Recommendation:**

Conduct an investigation to determine whether the structural integrity of the wall opening has been compromised, and whether there is any need to provide a supplemental means of reinforcement. The investigation should also provide options for remedial action, if deemed necessary.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Study	2011	\$10,000	Medium

**Updated:** APR-11

**Event: Repair Concrete Wall at D-Wing Entrance (approx. 6 sq m)**

**Concern:**

A large diagonal crack is evident on the concrete wall above the entrance doors that connect the D-Wing to the C-Wing. Signage above doorway is D300.

**Recommendation:**

Repair the concrete wall based on recommendations made in the initial investigation. An allowance for repair work is provided; however, actual repairs costs are subject to the results of the initial study.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Repair	2012	\$20,000	Medium

**Updated:** APR-11

**Event: Repair masonry block wall (approx. 200 sq m)**

**Concern:**

The secondary interior masonry block wall within the mechanical chase way of the A-Wing gymnasium has large areas of deteriorated mortar and loose block.

**Recommendation:**

Re-point and repair the masonry block wall, as necessary.

**Consequences of Deferral:**

Further deterioration of masonry block wall from gymnasium use.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$10,000	Medium

**Updated:** APR-11

**C1010.02 Interior Demountable Partitions\***

Modular wall partitions set in metal framework form offices within the administration office area, situated on the main floor of the 1949 original building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1010.03 Interior Operable Folding Panel Partitions\*\***

A full height, track mounted, folding wooden panel divider is provided in the gymnasium of E-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	30	APR-11

**Event: Replace Interior Operable Folding Panel Partition (approx. 180 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$260,000	Unassigned

**Updated:** APR-11



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

Horizontal metal pipe balustrades are provided in the stairwell landings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1970	0	APR-11

**Event: Investigate configuration of stair ballustrades**

**Concern:**

Stair landings have horizontal pipe balustrades that provide a climbing surface.

**Recommendation:**

Conduct a study to determine if balustrades are within code and if remedial action is required.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2011	\$5,000	Medium

**Updated:** APR-11

**Event: Replace Stair Ballustrades (approx. 500 m)**

**Concern:**

Stair landings have horizontal pipe balustrades that provide a climbing surface.

**Recommendation:**

Replace stair railings and balustrades based on the results of the preliminary study. An allowance to replace approximately 500 m of railings and balustrades is provided; however, actual quantities for replacement are subject to the results of the original investigation.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2012	\$95,000	Medium

**Updated:** APR-11

**C1010.05 Interior Windows\***

Interior windows are generally fixed units set in painted metal frames with wired or tempered single-pane glass.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1010.06 Interior Glazed Partitions and Storefronts\***

Interior glazed partitions comprised of tempered glass set in painted metal framing are situated along the corridor adjacent to the D-Wing administration office west, C-Wing second floor classrooms and A-Wing cafeteria.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1010.07 Interior Partition Firestopping\***

Ductwork or conduit penetrations through fire separations are sealed where voids are present.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

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

Interior swinging doors are typically solid core wood or painted, hollow metal, set in painted, pressed steel frames and typically include kick-plates and vision panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1020.03 Interior Fire Doors\***

Interior doors at fire separations, such as stairwells, mechanical room and storage rooms, typically consist of painted, hollow core steel set in painted, pressed steel frames. Fire labels are provided on doors and frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1949	0	APR-11

**Event: Repair C-Wing fire door (1 door)**

**Concern:**

The C-Wing computer room steel fire door has a steel latch that is acting as a security device to prevent entry into the room. The latch has been bolted to the steel fire door.

**Recommendation:**

Remove the latch from the door and repair or replace the damaged steel fire door and frame.

**Consequences of Deferral:**

This exit is hazardous in time of emergency.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2011	\$2,000	High

**Updated:** APR-11

**C1020.05 Interior Large Doors\***

A fire rated rolling shutter door is provided in the F-Wing food service area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1030.01 Visual Display Boards\*\* - Chalk and Tack/Cork Boards**

Several classrooms are equipped with wall-mounted chalk boards. Wall-mounted cork or fabric-covered boards are installed in random locations throughout the building for posting of information.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	20	APR-11

**Event:** **Replace Visual Display Boards (approx. 100 chalk/tack boards)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2014	\$53,000	Unassigned

**Updated:** APR-11

**C1030.01 Visual Display Boards\*\* - White Boards**

Several classrooms are equipped with wall-mounted white boards.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2000	20	APR-11

**Event:** **Replace Visual Display Boards (approx. 50 white boards)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2020	\$78,000	Unassigned

**Updated:** APR-11

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

Floor and wall-mounted, painted metal stall partitions are installed in multi-user washrooms. Partitions have likely been upgraded from original construction. Age could not be determined.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1986	30	APR-11

**Event:** **Replace Stall Partitions (approx. 40 partitions)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2016	\$30,000	Unassigned

**Updated:** APR-11

**C1030.05 Wall and Corner Guards\***

Metal wall corner guards are provided in the corridors.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**C1030.08 Interior Identifying Devices\***

Each room in the facility is labeled with wall-mounted, laminated plastic signage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1030.10 Lockers\*\***

Full-height, painted steel locker units are provided in corridors within the facility. Lockers have likely been upgraded from original construction. Age could not be determined.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Replace Lockers (approx. 1000 lockers)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$640,000	Unassigned

**Updated:** APR-11

**C1030.12 Storage Shelving\***

Metal and wood-framed storage shelving is present in most classrooms, custodial areas and storage rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C1030.14 Toilet, Bath, and Laundry Accessories\***

Accessories in washrooms throughout the facility typically include wall-mounted mirrors, metal grab bars and soap/paper towel/toilet paper dispensers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C2010 Stair Construction\***

Cast-in-place concrete stairs are provided in stairwells and corridors leading to multi-levels of facility wings. Wooden stairs are provided in the gymnasium to access the stage and in the industrial arts classroom of F-Wing. Steel framed stairs are provided within mechanical rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1949	0	APR-11

**Event: Replace F-Wing wood stairs (approx. 13 steps)**

**Concern:**

The Industrial Arts classroom is provided with a wooden staircase that leads from the main floor to the mezzanine storage level. The wooden treads are damaged and split.

**Recommendation:**

Replace wooden stairs.

**Consequences of Deferral:**

The damaged wood treads constitute a potential safety hazard.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$5,000	High

**Updated:** APR-11

**C2020.05 Resilient Stair Finishes\*\***

A resilient stair tread is provided on main stairs within the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1988	20	APR-11

**Event: Replace Resilient Stair Finishes (approx. 600 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$53,000	Unassigned

**Updated:** APR-11

**Event: Replace worn resilient stair treads (approx 105 sq m)**

**Concern:**

Worn and lose stair tread finishes were noted throughout the facility.

**Recommendation:**

Remove and replace worn resilient tread finishes at the Wing A- entry stair, Wing B-north staircase, Wing D-east and west exit stairs.

**Consequences of Deferral:**

The loose stair treads constitute a potential tripping hazard.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$9,000	Low

**Updated:** APR-11

**C2020.06 Carpet Stair Finishes\*\***

Carpet is provided on stairs located in the Library, Band Room and Lecture classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	10	APR-11

**Event: Replace carpet on stairs (approx. 50 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$5,000	Unassigned

**Updated:** APR-11

**C2020.08 Stair Railings and Balustrades\***

Stair railings and balustrades are constructed of painted, welded, metal pipe.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C3010.02 Wall Paneling\*\***

Wood paneling is provided in the 1970 Addition corridor above the display cabinets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	30	APR-11

**Event: Replace Wall Paneling (approx. 20 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$2,000	Unassigned

**Updated:** APR-11

**C3010.06 Tile Wall Finishes\*\***

Ceramic tile wall finishes are installed in multi-user washrooms and change rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	40	APR-11

**Event: Replace Tile Wall Finishes (approx. 300 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$84,000	Unassigned

**Updated:** APR-11

**C3010.11 Interior Wall Painting\***

Gypsum board and concrete masonry unit walls constructed throughout the facility typically include a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2008	0	APR-11

**Event:** Completed - Refinish areas in the school that require painting.

**Concern:**

In some parts of the school the hallways and stair wells are looking old and grey. The same applies to the maintenance and storage rooms that are used quite frequently by cleaning staff.

Many areas of the school need to be painted as it is looking old and unkept. This is mostly evident in the areas of the school with high walls and high traffic and heavy use.

**Recommendation:**

Refinish areas in the school that require painting.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2008	\$160,000	Low

**Updated:** APR-11

**C3010.12 Wall Coverings\***

A vinyl wall covering is provided on some walls throughout the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C3020.01.02 Paint Concrete Floor Finishes\***

Painted concrete floors are provided in the Industrial Arts, storage, automotive shop, and mechanical areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**C3020.02 Tile Floor Finishes\*\***

Ceramic tile floor finishes are installed in multi-user washrooms, change rooms, entrance foyers, and C-Wing corridor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	50	APR-11

**Event:** Replace Tile Floor Finishes (approx. 1200 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$221,000	Unassigned

**Updated:** APR-11

**C3020.03 Terrazzo Floor Finishes\***

The floors within the D-Wing and F-Wing are provided with a Terrazzo floor finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**C3020.04 Wood Flooring\*\* - 1949 Original Building**

A wood sports floor, installed in 2007, is provided in the 1949 A-Wing gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2007	0	APR-11

**Event: Replace Gymnasium floor (approx. 650 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2037	\$178,000	Unassigned

**Updated:** APR-11

**C3020.04 Wood Flooring\*\* - 1970 Addition**

A wood sports floor, refurbished in 2008, is provided in the A-Wing gymnasium

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2008	30	APR-11

**Event: Completed - Gym Floor in Wing A needs to be repaired and refinished**

**Concern:**

The gym floor in wing A needs to be refurbished as it is lose in some areas. It also needs to be refinished and painted new lines.

**Recommendation:**

Repair and refinish the wood floor including new painted lines.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2008	\$123,000	Low

**Updated:** APR-11

**Event: Replace Wood Flooring (approx. 600 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2038	\$163,000	Unassigned

**Updated:** APR-11



**C3020.07 Resilient Flooring\*\***

Resilient sheet flooring, installed in approximately 1986, is provided throughout the A-Wing, B-Wing, C-Wing, F-Wing, and G-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	20	APR-11

**Event: Replace Resilient Flooring (approx. 10,000 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$884,000	Unassigned

**Updated:** APR-11

**Event: Replace damaged resilient flooring adjacent stairs (approx. 55 sq m)**

**Concern:**

Resilient flooring adjacent to stairs are damaged and breaking away from base material.

**Recommendation:**

Replace deficient resilient flooring as necessary.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$5,000	Medium

**Updated:** APR-11

**C3020.08 Carpet Flooring\*\***

Carpeting is provided in Wing-A (music/ drama room), Wing-D (administration office) and Wing-C (library).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1986	15	APR-11

**Event: Replace carpet in Wing-A, Wing-B, Wing-D (approx. 1000 sq m)**

**Concern:**

Carpet is worn where installed and seams have been taped together.

**Recommendation:**

Replace carpets in Office Administration - Wing D, Band Room and Music Room- Wing A, Caretaker Room - Wing B, Library text center.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$51,000	Medium

**Updated:** APR-11

**C3030.04 Gypsum Board Ceiling Finishes (Unpainted)\***

Washrooms and bulkheads in the facility include painted gypsum board ceilings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

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

The ceilings of the classrooms, corridors, and office/administrative areas are finished with suspended T-bar ceilings and inlaid acoustic tiles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	25	APR-11

**Event: Completed - Replace damaged T-bar tiles (approx 500 sq m)**

**Concern:**

Many of the acoustic ceiling tiles throughout the school have stains and some have water damage that has been left to sag and some have surface mold on them.

**Recommendation:**

Remove and replace damaged tiles throughout the school. Approximately 500 sq.m. of ceiling tiles to be replaced

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2009	\$21,000	High

**Updated:** APR-11

**Event: Replace Acoustic Ceiling Treatment (Susp.T-Bar) (approx. 18000 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$1,730,000	Unassigned

**Updated:** APR-11

**C3030.07 Interior Ceiling Painting\***

Washrooms and bulkheads in the facility include painted gypsum board ceilings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**C3030.09 Other Ceiling Finishes\***

The ceiling in the corridor of C-Wing is provided with pre-finished metal panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**D1010.01.02 Hydraulic Passenger Elevators\*\***

An Otis Elevator situated in B-Wing provides service to all levels of the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	30	APR-11

**Event: Refurbish Hydraulic Passenger Elevator (1 elevator)**

**Concern:**

It is reported that breakdowns have increased and maintenance is required more frequently.

**Recommendation:**

It is suggested from operations staff that the elevator be refurbished, as it is near the end of its EUL.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$84,000	Medium

**Updated:** APR-11

**S4 MECHANICAL****D2010.04 Sinks\*\***

Laboratory classrooms and kitchen areas are equipped with stainless steel sinks with manual valve sets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Replace 30 Sinks**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$36,000	Unassigned

**Updated:** APR-11

**D2010.05 Showers\*\***

Showers are installed in the change rooms adjacent to the A-Wing ("small") gym and the H-Wing fitness centre.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Replace 12 Showers**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$24,000	Unassigned

**Updated:** APR-11

**D2010.08 Drinking Fountains/Coolers\*\***

Wall mounted drinking fountains are installed in hallways throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	35	APR-11

**Event: Replace 10 Drinking Fountains**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$35,000	Unassigned

**Updated:** APR-11

**D2010.09 Other Plumbing Fixtures\* - 1970 Handwash Station**

A wall mounted terrazzo handwash station is installed in the G-Wing shop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2010.09 Other Plumbing Fixtures\* - 2000 Handwash Station**

The shop classroom is equipped with a stainless steel handwash station with push-button operated spouts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	APR-11

**D2010.10 Washroom Fixtures (WC, Lav, Urnl)\*\* - 1986 Public Washrooms**

Public washrooms throughout the building are typically equipped with floor mounted flush valve water closets. Men's washrooms are equipped with wall mounted urinals. Approximately 20% of public washrooms are equipped with enameled steel lavatories with manual valve sets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	35	APR-11

**Event: Replace 24 Water Closets, 6 Lavatories & 3 Urinals**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$50,000	Unassigned

**Updated:** APR-11

**D2010.10 Washroom Fixtures (WC, Lav, Urnl)\*\* - 1986 Staff Washrooms**

Staff washrooms throughout the building are typically equipped with floor mounted vitreous china flush tank water closets and wall mounted vitreous china lavatories. Fixtures have manual valves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	35	APR-11

**Event: Replace 4 Water Closets and 4 Lavatories**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$12,000	Unassigned

**Updated:** APR-11

**D2010.10 Washroom Fixtures (WC, Lav, Urnl)\*\* - 2000 Public Washrooms**

Approximately 50% of the washrooms throughout the school are equipped with stainless steel lavatories with manual valve sets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	35	APR-11

**Event: Replace 10 Stainless Steel Lavatories**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2035	\$12,000	Unassigned

**Updated:** APR-11

**D2010.10 Washroom Fixtures (WC, Lav, Urnl)\*\* - 2005 Public Washrooms**

Approximately 30% of the washrooms throughout the building have stainless steel lavatories with hands-free faucets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	35	APR-11

**Event: Replace 8 Handsfree Lavatories**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$10,000	Unassigned

**Updated:** APR-11

**D2020.01.01 Pipes and Tubes: Domestic Water\* - A, B, C & G-Wings**

Copper domestic water piping in the A-Wing, B-Wing, C-Wing, and G-Wing was installed or upgraded in approximately 1970. There is a 100mm line for domestic water and a 150mm line for the fire system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	0	APR-11

**Event: Replace 300m Copper Piping**

**Concern:**

The domestic water piping has had reported problems of leaking in C-Wing.

**Recommendation:**

Replace the domestic water piping in the C-Wing

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$21,000	Low

**Updated:** APR-11

**D2020.01.01 Pipes and Tubes: Domestic Water\* - D, E & H-Wings**

Copper domestic water piping in the D-Wing, E-Wing, and H-Wing was installed or upgraded in approximately 1986. There is a 100mm line for domestic water and a 150mm line for the fire system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D2020.01.02 Valves: Domestic Water\*\* - Shower**

Mixing valves are installed on shower fixtures.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	40	APR-11

**Event: Replace 10 Valves**

**Concern:**

Mixing valves on showers have reportedly failed.

**Recommendation:**

Replace mixing valves on showers.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$10,000	Low

**Updated:** APR-11

**D2020.01.02 Valves: Domestic Water\*\* - Washroom Fixtures**

Isolation valves are installed on the domestic hot and cold water lines.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace 24 Valves**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$12,000	Unassigned

**Updated:** APR-11

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

Backflow prevention devices are installed on the heating/cooling water system connection, fire protection system connection, and irrigation connection. A backflow prevention device is installed at the cooling tower heat exchanger. These devices provide cross connection control for the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	20	APR-11

**Event: Replacce 4 Backflow Prevention devices**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$16,000	Unassigned

**Updated:** APR-11

**D2020.02.02 Plumbing Pumps: Domestic Water\*\***

Recirculation pumps provided on domestic hot water systems.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	20	APR-11

**Event: Replace 4 Domestic Water Recirculation Pumps**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,000	Unassigned

**Updated:** APR-11

**D2020.02.06 Domestic Water Heaters\*\* - 1986 D and H Wing**

Two natural gas fired domestic water heaters and a storage tank provide hot water for the D-Wing plumbing fixtures and two natural gas fired domestic water heaters and a storage tank provide hot water for the H-Wing plumbing fixtures. The units are manufactured by Rheem with a recovery capacity of 600L/h. Each storage tanks has a volume of approximately 320 litre.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	20	APR-11

**Event: Replace 4 Domestic Water Boilers(estimated recovery capacity of 600l/h) and 2 vertical storage tanks (estimated capacity of 320 litre).**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$40,000	Unassigned

**Updated:** APR-11

**D2020.02.06 Domestic Water Heaters\*\* - 1996 G-Wing**

Two natural gas fired domestic water heaters provide hot water for plumbing fixtures in G-Wing. The units are manufactured by Bradford White and Rheem and each have volumes of approximately 120L and a recovery capacities of approximately 150L/h.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	20	APR-11

**Event: Replace 2 Domestic Water Heaters with a recovery capacity of 150L/h.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$4,000	Unassigned

**Updated:** APR-11



**D2020.02.06 Domestic Water Heaters\*\* - 2001 C-Wing**

A natural gas fired domestic water heater provides hot water for plumbing fixtures in C-Wing. The unit is manufactured by State Industries and has a volume of approximately 280L and a recovery capacity of approximately 250L/h.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	20	APR-11

**Event:** Replace 1 Domestic Water Heater with recovery capacity of 250L/h.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$3,000	Unassigned

**Updated:** APR-11

**D2020.02.06 Domestic Water Heaters\*\* - 2007 A-Wing**

A natural gas fired domestic water heater provides hot water for plumbing fixtures in A-Wing. The unit is manufactured by A.O.Smith and has a volume of approximately 250L and a recovery capacity of approximately 1,200L/h.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2007	20	APR-11

**Event:** Replace 1 Domestic Water Heater with a recovery capacity of 1200 L/h.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2027	\$6,000	Unassigned

**Updated:** APR-11

**D2020.03 Water Supply Insulation: Domestic\***

Domestic water supply piping is typically insulated where visible.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2030.01 Waste and Vent Piping\***

Waste and vent piping throughout the building appeared to be a combination of cast iron and PVC.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2030.02.04 Floor Drains\***

Floor drains are installed in the washrooms, shower rooms, service rooms, and shops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2030.03 Waste Piping Equipment\***

A sump is located in the water supply room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2040.01 Rain Water Drainage Piping Systems\***

Rain water leaders are typically cast iron. A portion of the piping is also reported to contain asbestos.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2040.02.04 Roof Drains\***

Roof drains connect to interior rain water leaders and to the underground municipal storm service.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D2090.01 Compressed Air Systems (Non Controls)\*\***

A compressed air system is provided in the shop classrooms for pneumatic tools. Unit estimated to be 1.46kw with 300 litre gallon tank

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event:** **Replace Air Compressor with an estimated capacity of 1.46kw with 300 litre gallon tank.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$7,000	Unassigned

**Updated:** APR-11

**D3010.02 Gas Supply Systems\***

The natural gas supply systems feeds the heating boilers and domestic water heaters. The heating and ventilation for the paint booths in the autobody shop includes two direct fired air handing units. The home economics classroom is equipped with natural gas fired kitchen appliances; an emergency gas shut-off is installed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**D3020.02.01 Heating Boilers and Accessories: H.W.\*\* - 1975 D-Wing**

Two natural gas fired boilers located in the D-Wing mechanical room, with the boilers in B-Wing, serve the hot water distribution loops for the heat pumps. The units are manufactured by HB Smith and have an input capacity of approximately 1,200kW each.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1975	35	APR-11

**Event: Replace 2 Boilers (1,200kW each)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$193,000	Unassigned

**Updated:** APR-11

**D3020.02.01 Heating Boilers and Accessories: H.W.\*\* - 1984 A-Wing**

A single stage natural gas fired boiler provides heating water to the perimeter radiant heating in A-Wing and the heating coil in the adjacent air handling unit serving A-Wing. The unit is manufactured by SuperHot, model 1320MN, and has a heating capacity of approximately 300kW.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	35	APR-11

**Event: Replace 1 Boiler (300kW)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$32,000	Unassigned

**Updated:** APR-11

**D3020.02.01 Heating Boilers and Accessories: H.W.\*\* - 1987 B-Wing**

Two natural gas fired flexible water tube boilers located in the B-Wing mechanical room supply hot water for the heat pump loop. The units are manufactured by UNILUX, model 400W, and each have an input capacity of approximately 1,200kW.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	35	APR-11

**Event: Replace 2 Boilers (1,200kW)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2022	\$193,000	Unassigned

**Updated:** APR-11

**D3020.02.01 Heating Boilers and Accessories: H.W.\*\* - 1996 G-Wing**

A Hydrotherm, 12 piece modular, natural gas fired boiler, with approximately 527 kW input capacity, serve the G-Wing heat pumps, air handing unit heating coils, and unit heater coils.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	35	APR-11

**Event:** Replace a boiler with an input capacity of 527 kw.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2031	\$58,000	Unassigned

**Updated:** APR-11

**D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler\*\* - 1975 D-Wing**

Combustion gases from the HB Smith boilers located in the D-Wing mechanical room are exhausted through galvanized steel chimneys.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1975	35	APR-11

**Event:** Replace 20m Chimneys

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$12,000	Unassigned

**Updated:** APR-11

**D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler\*\* - 1984 A-Wing**

Combustion gases from the boiler in the A-Wing boiler mechanical room are exhausted through a galvanized steel chimney. Combustion air is supplied to the room through a galvanized steel duct to a cold air well.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	35	APR-11

**Event:** Replace 6m Chimney

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$4,000	Unassigned

**Updated:** APR-11

**D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler\*\* - 1987 B-Wing**

Combustion gases from the UNILUX boilers located in the B-Wing mechanical room are exhausted through galvanized steel chimneys.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	35	APR-11

**Event: Replace 20m Chimneys**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2022	\$12,000	Unassigned

**Updated:** APR-11

**D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler\*\* - 1996 G-Wing**

Combustion gases from the Hydrotherm boilers located in the G-Wing mechanical room are exhausted through galvanized steel chimneys.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	35	APR-11

**Event: Replace 36m Chimneys**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2031	\$20,000	Unassigned

**Updated:** APR-11

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

The hot water distribution systems circulate approximately 50% glycol and reportedly follow a chemical treatment program. Pot feeders are provided for chemical make-up.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1975	0	APR-11

**D3020.03.01 Furnaces\*\***

Two Lennox Pulse high efficiency furnaces provide heating for the A-Wing Gymnasium change rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	25	APR-11

**Event: Replace 2 Furnaces**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,000	Unassigned

**Updated:** APR-11

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

Chimneys for the high efficiency furnaces are vented through PVC piping.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D3030.05 Cooling Towers\*\***

Cooling fluid is provided by an outdoor Baltimore Air Coil cooling tower, model VXTN310R. The cooling tower fans are controlled by VFD. The indoor receiver sump and pump were reportedly replaced in 2008.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**Event: Replace Cooling Tower with an estimated capacity of 1089 kw.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$64,000	Unassigned

**Updated:** APR-11

**D3030.06.02 Refrigerant Condensing Units\*\* - 1984 A-Wing**

A refrigerant condensing unit serves the cooling coil in the A-Wing air handling unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	25	APR-11

**Event: Replace 1 Condensing Unit**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$6,000	Unassigned

**Updated:** APR-11

**D3030.07 Heat Pumps\*\***

Approximately 110 packaged terminal heat pumps provide space heating and cooling for the B-Wing, C-Wing, D-Wing, E-Wing, F-Wing, G-Wing, and H-Wings (except the shop areas). The units are typically manufactured by McQuay.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**Event: Replace approximately 110 packaged terminal heat pumps.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$682,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1984 A-Wing**

Ventilation for the A-Wing is provided by an air handling unit manufactured by Engineered Air, model 115 10-W, with supply capacity of approximately 5,000L/s. The heating coil is supplied by the adjacent hot water boiler and the cooling coil is supplied by a rooftop condensing unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-11

**Event: Replace 1 Air Handling Unit (5,00L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$28,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1984 A-Wing Gymnasium**

An indirect, natural gas fired air handling unit provide heating and ventilation for the A-Wing ("small") gymnasium. The unit is manufactured by Engineered-Air, model T-350-1, with heating capacity of approximately 120kW.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-11

**Event: Replace 1 Air Hnalding Unit (< 1,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$10,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1986 H-Wing**

Ventilation for the H-Wing gymnasium is provided by an Engineered Air air handling unit, model LM-13-W, with a capacity of approximately 6,000L/s. The unit has a heating coil connected to the hot water distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Implement study recommendations for preventing exhaust from entering air intake**

**Concern:**

The air intake louver for the H-Wing air handling unit draws in exhaust fumes from vehicles parked out front of the automotive shop. Some complaints of odors inside the building have been reported.

**Recommendation:**

Implement corrective actions from study to prevent vehicle exhaust from entering air intake. A cost allowance is provided, however actual cost will depend on the study's recommendations.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$1,000	Medium

**Updated:** APR-11

**Event: Investigate Corrective Actions to Eliminate Vehicle Exhaust from Air Intake**

**Concern:**

The air intake louver for the H-Wing air handling unit draws in exhaust fumes from vehicles parked out front of the automotive shop. Some complaints of odors inside the building have been reported.

**Recommendation:**

Conduct a study to determine potential corrective actions to prevent vehicle exhaust from entering the air intake.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2011	\$1,000	Medium

**Updated:** APR-11

**Event: Replace 1 Air Handling Unit (6,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$33,000	Unassigned

**Updated:** APR-11



**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1987 B-Wing**

Ventilation for the B-Wing is provided by an Engineered Air air handling unit, model LM-6-W, with a capacity of approximately 3,000L/s. The unit has a heating coil connected to the hot water distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1987	30	APR-11

**Event: Replace 1 Air Handling Unit (3,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$19,000	Unassigned

**Updated:** APR-11

**Event: Replace dampers and damper controls.**

**Concern:**

The dampers and damper controls on the G-Wing air handling unit are reportedly not working properly. Indoor air quality and temperature are reportedly difficult to control.

**Recommendation:**

Replace the dampers and damper controls.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$3,000	Medium

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1987 C-Wing**

Ventilation for the C-Wing is provided by an Engineered Air air handling unit, model LM-8-W, with a capacity of approximately 4,000L/s. The unit has a heating coil connected to the hot water distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	30	APR-11

**Event: Replace 1 Air Handling Unit (4,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$19,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1987 D-Wing**

Ventilation for the D-Wing and E-Wing gymnasium is provided by an Engineered Air air handling unit, model LM-13-W, with a capacity of approximately 5,000L/s. The unit has a heating coil connected to the hot water distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	30	APR-11

**Event: Replace 1 Air Handling Unit (5,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$29,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1996 G-Wing**

Ventilation for the G-Wing is provided by a Lennox multi-zone air handling unit. Ventilation for the autobody shop is provided by two air handling units that use 100% outside air.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	30	APR-11

**Event: Replace 1 AHU (~3,000L/s) and 2 AHUs (~ 1,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$38,000	Unassigned

**Updated:** APR-11

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 2000 F-Wing**

The drama and shop classrooms are each served by an Engineer Air air handling unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	30	APR-11

**Event: Replace 2 Air Handling Units (~1,000L/s)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$19,000	Unassigned

**Updated:** APR-11

**D3040.01.04 Ducts: Air Distribution\***

Galvanized steel ductwork in the ceiling plenum serves the B-Wing, C-Wing, D-Wing, E-Wing, F-Wing, and H-Wing. Underground ducts serve the A-Wing ("small") gymnasium and G-Wing (except shop area).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	0	APR-11

**Event: Abandon Underground Ductwork and Install Ceiling Level Ductwork**

**Concern:**

Underground ductwork in the A-Wing gymnasium are reportedly susceptible to flooding.

**Recommendation:**

Properly abandon underground ductwork and install ceiling level ductwork.

**Consequences of Deferral:**

Continue to impact air quality in the occupied space.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$20,000	Low

**Updated:** APR-11

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

Air inlets and outlets are typically ceiling level diffusers and grilles. A-Wing and G-Wing have floor level supply grilles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D3040.03.01 Hot Water Distribution Systems\*\* - 1970 A-Wing**

Heating water produced by the A-Wing boiler is supplied via circulation pump to the perimeter finned tube radiation terminals in A-Wing and the heating coil in the air handling unit serving A-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace Hot Water Distribution System (2,000m<sup>2</sup> Floor Area)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$180,000	Unassigned

**Updated:** APR-11

**D3040.03.01 Hot Water Distribution Systems\*\* - 1987 B-Wing to F-Wing**

Hot water supplied by boilers in the B-Wing and D-Wing mechanical rooms is distributed to the heat pump loops serve the heat pumps in B-Wing, C-Wing, D-Wing, E-Wing and F-Wing. The system is served by four pairs of circulation pumps; two pairs serve the low temperature hot water loop and two pairs serve the high temperature hot water loop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	40	APR-11

**Event: Replace Hot Water Distribution System (16,000m<sup>2</sup> Floor Area)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2027	\$1,400,000	Unassigned

**Updated:** APR-11

**D3040.03.01 Hot Water Distribution Systems\*\* - 1996 G-Wing**

Heating water produced by the G-Wing boilers is supplied via circulation pump to the heat pumps, air handling unit coils, and unit heater coils in G-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	40	APR-11

**Event: Replace Hot Water Distribution Systems (2,000m<sup>2</sup> Floor Area)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$180,000	Unassigned

**Updated:** APR-11

**D3040.03.02 Chilled Water Distribution Systems\*\***

A chilled water loop supplies the cooling coils in the heat pumps throughout the building. Cooling fluid from the cooling tower interfaces with the chilled water system through a heat exchanger. A set of circulation pumps serve the chilled water loop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	40	APR-11

**Event: Replace Chilled Water Distribution System (16,000m<sup>2</sup> Floor Area)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$800,000	Unassigned

**Updated:** APR-11

**D3040.04.01 Fans: Exhaust\*\***

General exhaust is provided by exhaust fans in washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	30	APR-11

**Event: Replace 6 Exhaust Fans**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$12,000	Unassigned

**Updated:** APR-11

**D3040.04.02 Air Cleaning Devices: Exhaust\* - Dust Collector**

The shop classroom is equipped with a dust collector which exhausts to a hopper on the building exterior.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D3040.04.03 Ducts: Exhaust\***

Exhaust ductwork is typically galvanized metal.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**D3040.04.05 Air Outlets and Inlets: Exhaust\***

Exhaust inlets are typically ceiling level grilles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D3050.05.03 Finned Tube Radiation\*\***

The A-Wing is heated by perimeter finned tube radiation terminals.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace Finned Tube Radiation (2,000m<sup>2</sup> Floor Area)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$90,000	Unassigned

**Updated:** APR-11

**D3050.05.06 Unit Heaters\*\***

Ceiling suspended unit heater in the mechanical rooms and the gas meter room. Approximately 10 ceiling suspended unit heaters provide heating for the F-Wing drama and shop classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Replace 15 Unit Heaters**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$51,000	Unassigned

**Updated:** APR-11

**D3060.02.01 Electric and Electronic Controls\*\***

Ventilation and heat pumps are controlled by DDC sensors and electric thermostats. Shop areas and vestibule unit heaters controlled by electric thermostats.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	30	APR-11

**Event: Replace 100 Thermostats**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2031	\$10,000	Unassigned

**Updated:** APR-11

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

The HVAC controls throughout the building are connected to the central school district BMS.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	20	APR-11

**Event: Replace BMS (20,645m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$400,000	Unassigned

**Updated:** APR-11

**D4010 Sprinklers: Fire Protection\***

The shop and autobody paint booths are equipped with fire sprinklers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D4020 Standpipes\***

The building is equipped with a standpipe system with hose cabinets installed in hallways throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D4030.01 Fire Extinguisher, Cabinets and Accessories\***

Handheld fire extinguishers are installed in wall mounted brackets throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D4090.04 Dry Chemical Fire Extinguishing Systems (Kitchen Hood)\*\***

A dry chemical fire suppression system is provided in cafeteria range hood.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	40	APR-11

**Event: Replace Range Fire Suppression System**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$14,000	Unassigned

**Updated:** APR-11

**S5 ELECTRICAL****D5010.02 Secondary Electrical Transformers (Interior)\*\***

There are approximately 15 secondary transformers located in mechanical rooms throughout the building that step the three phase voltage down from 347/600V to 120/208V. The transformers are manufactured by Federal Pioneer and are typically rated at 225kVA.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	40	APR-11

**Event: Replace 15 - 225 KVa Transformers**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$20,000	Unassigned

**Updated:** APR-11

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

The main switchgear unit is manufactured by Westinghouse and is rated for a 2000A, 600V, 3 phase, 4 wire electrical supply. The unit is complete with metering. The minimum running load is 450 KW. There is spare capacity and service is reportedly adequate for the size of the building. The unit was upgraded in 1987. There is no surge protection for the main service.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	40	APR-11

**Event: Install Surge Suppression for Switchgear Unit****Concern:**

Existing main service has no protection from electrical surges or spikes, this reduces equipment life span and adds to the operating cost of the building.

**Recommendation:**

Install surge suppression for the main service and sub distribution panels.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2011	\$10,000	Low

**Updated:** APR-11

**Event: Replace 1- 600V, 2000A Switchgear Unit**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2027	\$50,000	Unassigned

**Updated:** APR-11



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

Branch circuit panel boards are rated for a 120/208V, 3 phase, 4 wire electrical supply and are typically manufactured by Westinghouse and Federal Pioneer. There are approximately 20 panels throughout the building and they appear to be 80 to 90% full.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	30	APR-11

**Event: Replace 20 Electrical Panelboards**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$104,000	Unassigned

**Updated:** APR-11

**D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers\*\***

The main Motor Control Center is located in the B-Wing electrical room and serves various HVAC equipment throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	30	APR-11

**Event: Replace 4-Panel MCC**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$25,000	Unassigned

**Updated:** APR-11

**D5010.07.02 Motor Starters and Accessories\*\***

Remote motor starters for various pieces of HVAC equipment throughout the building include single starters manufactured by AB and 4-plex starters manufactured by Westinghouse. The average year of installation for motor starters throughout the building is approximately 1970.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	30	APR-11

**Event: Replace 20 Motor Starters**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$20,000	Unassigned

**Updated:** APR-11

**D5010.07.03 Variable Frequency Drives\*\***

Hitachi J300 VFDs with 29.8kw (40hp) and 37.3kw (50hp) capacities are installed on the hot water distribution pumps that serve the B-Wing and D-Wing heat pump loop. The cooling tower fans are controlled by a VFD with a capacity of 37.3kw (50hp). A Hitachi J300 VFD controls the supply fan in the D-Wing air handling unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1987	30	APR-11

**Event: Replace 4 VFDs (ranging from 29.8 to 37.3kw)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$48,000	Unassigned

**Updated:** APR-11

**D5020.01 Electrical Branch Wiring\***

Electrical branch wiring is understood to be copper throughout. The average year of installation of electrical branch wiring throughout the building is approximately 1970.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

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

Lighting controls are line voltage switching in smaller rooms, larger areas have low voltage relay panels for low voltage switching. Lighting controls were reportedly upgraded in 1988.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	0	APR-11

**D5020.02.02.01 Interior Incandescent Fixtures\***

Incandescent lighting is provided in several service and custodial rooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D5020.02.02.02 Interior Fluorescent Fixtures\*\***

Interior lighting throughout the building is primarily provided by fluorescent tube fixtures with T12 bulbs and magnetic ballasts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	30	APR-11

**Event: Replace 1,200 Fluorescent Fixtures**

**Concern:**

T12 bulbs and electronic ballasts are being phased out in favour of newer technology and replacement parts will be increasingly difficult to source.

**Recommendation:**

Retrofit fixtures to incorporate electronic ballasts and T8 bulbs.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2011	\$315,000	Low

**Updated:** APR-11

**D5020.02.02.04 Interior H.P. Sodium Fixtures\***

Lighting in the A-Wing ("small") gymnasium and the F-Wing automotive shop are provided by high pressure sodium fixtures.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	0	APR-11

**Event: Install 100 Fluorescent Fixtures**

**Concern:**

Lighting in the A-Wing ("small") gymnasium and automotive shop is inefficient since it is rarely shut off because of the lengthy fixture start-up time.

**Recommendation:**

Replace lighting in the A-Wing ("small") gymnasium and automotive shop with fluorescent tube fixtures with T5 bulbs and electronic ballasts.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2011	\$38,000	Low

**Updated:** APR-11

**D5020.02.03.01 Emergency Lighting Built-in\***

Built-in emergency lighting consists of fluorescent fixtures located in hallways etc. and are fed from the emergency generator.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	0	APR-11

**D5020.02.03.02 Emergency Lighting Battery Packs\*\***

Emergency lighting for the G-Wing is provided by emergency lighting battery packs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	20	APR-11

**Event: Replace 6 Emergency Lighting Battery Packs**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,000	Unassigned

**Updated:** APR-11

**D5020.02.03.03 Exit Signs\***

Illuminated exit lighting has been updated to incorporate LED technology.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	APR-11

**D5020.02.10 Theatrical Lighting\***

The drama room is equipped with stage lighting.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D5020.03.01.04 Exterior H.P. Sodium Fixtures\***

Exterior lighting around the building perimeter consists of 150W high pressure sodium wall packs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

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

Exterior lighting is controlled by a photocell.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

**D5030.01 Detection and Fire Alarm\*\***

The building is monitored by a GE EST3 addressable fire alarm panel. Detection devices include smoke and heat detectors, manual pull stations, and horns/stobes. The panel is located in the B-Wing telecom room; annunciator panels are located in the front entrance vestibule and the G-Wing front entrance vestibule.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2010	25	APR-11

**Event: Replace Fire Detection and Alarm System (20,645m<sup>2</sup> GFA)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2035	\$535,000	Unassigned

**Updated:** APR-11

**D5030.02.02 Intrusion Detection\*\***

The building is monitored by a Magnum Alert computerized security system panel with motion sensors and door monitors.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1986	25	APR-11

**Event: Replace Intrusion Detection System (20,645m<sup>2</sup> GFA)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2014	\$535,000	Unassigned

**Updated:** APR-11

**D5030.02.03 Security Access\*\***

Security access to the school is controlled by the card reader at the north parking entrance.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2001	25	APR-11

**Event: Replace Card Access Panel**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2026	\$6,000	Unassigned

**Updated:** APR-11

**D5030.02.04 Video Surveillance\*\***

The building is monitored by an Intellex DVMS DV16000 computer based video surveillance system with cameras located throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	25	APR-11

**Event: Replace Security Camera System (Console & 4 Cameras)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$6,000	Unassigned

**Updated:** APR-11

**D5030.03 Clock and Program Systems\***

The building is equipped with an Edwards clock and program system connected to the school bells.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1986	0	APR-11

**Event: Replace Clock and Program System**

**Concern:**

Wall mounted clocks in the hallways are failing.

**Recommendation:**

Replace clock and program system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$6,000	Low

**Updated:** APR-11

**D5030.04.01 Telephone Systems\***

The building is equipped with a Nortel Meridian telephone system. Matching handsets are provided in each classroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2003	0	APR-11

**D5030.04.02 Paging Systems\***

The telephone system has paging functionality.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2003	0	APR-11

**D5030.04.04 Data Systems\***

Central data racks are located in several wings throughout the school, connected together with fibre optic links. The cabling is CAT 5, which is run in conduit on the surface and free air above suspended ceilings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	0	APR-11

**D5030.05 Public Address and Music Systems\*\***

The building is equipped with a public address system powered by TOA and Interm PA amplifiers. The H-Wing fitness centre has an EV sound system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	20	APR-11

**Event: Replace 1 Public Address System**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$6,000	Unassigned

**Updated:** APR-11

**D5030.06 Television Systems\***

The building is equipped with a CATV connection, serviced in the B-Wing telecom room. The library and several classrooms have television service.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	APR-11

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

Emergency power for the building is provided by a John Deer packaged diesel generator with an estimated capacity of 400kW and voltage supply at 600/347V. The transfer switch is manufactured by Cutler Hammer and was upgraded in 2004.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	35	APR-11

**Event: Replace Emergency Generator with an estimated capacity of 445kw.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$280,000	Unassigned

**Updated:** APR-11

**S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION****E1020.02 Library Equipment\***

Computerized library equipment for filing, stocking, and tracking materials as well as moveable shelves, tables, chairs, desks, and casework is located in the library within the C-Wing.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1949	0	APR-11

**E1020.03 Theater and Stage Equipment\***

Theatre curtains are present on the stage in the E-wing.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1986	0	APR-11

**E1030.01 Vehicle Service Equipment\***

Three vehicle service hoists, installed circa 1981, 1982 and 2008, are provided on the F-Wing ground level for the Automotive repair program. A single vehicle service hoist, installed circa 2008, is provided in G-Wing for the Auto body program.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1981	0	APR-11

**E1090.03 Food Service Equipment\***

The food service equipment within the cafeteria is provided and maintained by an outside contractor.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1970	0	APR-11



**E1090.04 Residential Equipment\***

The Home Economics classroom within Wing-F is provided with residential grade appliances such as microwave ovens, refrigerators, electric stoves, mixers, blenders, gas stoves, and washer and dryer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1949	0	APR-11

**Event:** Provide make-up air & fire suppression for gas appliances (5 appliances)

**Concern:**

The electric and gas stoves do not have exhaust hoods, fire suppression hoods (for gas appliances) or emergency gas shutoffs (for gas appliances). The room is being used for purposes other than what it was intended.

**Recommendation:**

Cease use of gas appliances until they are installed to proper code requirements. Add proper ventilation and make-up air for the program use of the space.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2011	\$50,000	High

**Updated:** APR-11

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

Retractable and adjustable basketball nets are provided in the A-Wing and E-Wing gymnasiums.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**E2010.02 Fixed Casework\*\* - 1949 Original Building**

Wall and floor-mounted wood cabinetry is provided in office areas, library, classrooms, staff kitchen, change rooms and wash rooms throughout the building. Counter top surfaces are typically plastic laminate.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	35	APR-11

**Event:** Replace Fixed Casework (approx. 2800 sq m / gfa)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$269,000	Unassigned

**Updated:** APR-11

**E2010.02 Fixed Casework\*\* - 1970 Addition**

The Home Economics class in G-Wing is provided with standard kitchen style wooden upper and lower cabinets with laminate counter tops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	35	APR-11

**Event: Replace fixed casework (approx. 60 m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$82,000	Unassigned

**Updated:** APR-11

**E2010.03.01 Blinds\*\***

Horizontal rollup fabric blinds are provided on exterior windows.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	30	APR-11

**Event: Replace Blinds (approx 400 sq m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$45,000	Unassigned

**Updated:** APR-11

**E2020.02.03 Furniture\***

The facility is equipped with wood and metal-framed desks for students, and chairs, desks and office-type furniture for faculty staff.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**F1010.02.05 Grandstands and Bleachers\*\***

The Lethbridge Collegiate Institute is provided with 10 retractable 8-tier bleachers in the E-Wing gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	30	APR-11

**Event: Replace Bleachers (approx. 1000 seats)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$320,000	Unassigned

**Updated:** APR-11

**F1020.02.13 Paint Booths\***

A self contained commercial automotive paint booth is provided in the G-Wing Auto body program shop.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2008	0	APR-11

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

A level entry is provided between the north parking lot and adjacent entrance to B-Wing. A designated handi-cap parking stall is also provided in the parking lot.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**Event: Completed - Provide handi-cap parking close to a school entrance****Concern:**

At the rear north end between building B and E of the school there is no designated handicap parking stall provided however it is possible to use this area as a possible drop off because the doors are closer from the parking area.

**Recommendation:**

Provide a designated parking stall that is closer to the entry doors other than that which is accessed from the street level. Preferably from the North end of Wing B. Wings E, F, G are also accessible from the rear parking area but modifications would be required to the entry doors to accommodate wheelchair access and a designated sidewalk path to be installed.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2008	\$22,000	Low

**Updated:** APR-11

**K4010.02 Barrier Free Entrances\***

The Lethbridge Collegiate Institute does not have any Barrier Free entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	0	0	APR-11

**Event: Provide door operators at two entrances****Concern:**

The entrances to the school (C-Wing and B-Wing) do not have barrier free entry doors.

**Recommendation:**

Install power door operators to the entrances of the C-Wing south entrance B-Wing north entrance.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2011	\$16,000	Medium

**Updated:** APR-11

**K4010.03 Barrier Free Interior Circulation\***

Barrier Free interior circulation is limited to the main floor only of D-Wing, E-Wing, F-Wing, G-Wing and H-wing. Barrier Free circulation is provided to all floors of A-Wing, B-Wing and C-Wing by an elevator situated in B-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	APR-11

**Event: Install Wheelchair Lifts (3 lifts)**

**Concern:**

Access to the gymnasium and stage floor in Wing-E is permitted via staircase only. Access between Wings D and H on the Main Floor also appears to be restricted via staircase.

**Recommendation:**

Install wheelchair lifts at staircases leading to the gymnasium and stage floor in Wing E, and at the staircase that connects the Main Floors of Wings D and H.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2011	\$82,000	Medium

**Updated:** APR-11

**K4010.04 Barrier Free Washrooms\***

A partial up-grade in 2010 provided barrier free washrooms in A-Wing, B-Wing, C-Wing, D-Wing and F-Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2010	0	APR-11

**K4020.01 Safety Code (Fall Prevention)\***

Low-slope roof levels are not equipped with tie-back anchors to attach a safety harness, or other means of fall protection.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	0	0	APR-11

**Event: Install Roof Tie-Back Anchors (approx. 44 anchors)**

**Concern:**

Low-slope roof surfaces over the facility are above three metres in height and are not equipped with a means of fall protection for those working in close proximity to roof edges.

**Recommendation:**

Install tie-back anchors to the roof structure such that personnel accessing the roof level may secure safety harnesses and complete work in close proximity to the roof edge that may otherwise constitute a safety hazard.

**Consequences of Deferral:**

The absence of tie-back anchors increases the risk of a falling hazard when performing maintenance or repair in close proximity to a roof edge.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2011	\$49,000	High

**Updated:** APR-11

**K4030.01 Asbestos\***

At the time of the assessment, no asbestos report was provided. Building materials that are suspected to contain asbestos include vinyl floor tile in the B-Wing gas meter room, piping elbows and insulation, and gypsum board joint compound.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**K4030.04 Mould\***

No mould was observed or reported during the assessment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**K4030.09 Other Hazardous Materials\***

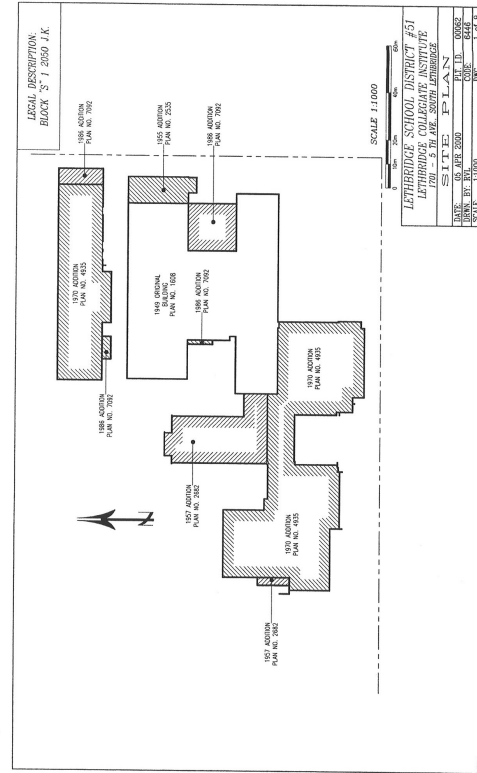
Chemical product storage practices used within the building appeared to be adequate.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1949	0	APR-11

**K5010 Reports and Studies\***

Evaluation Date: December 7, 2010  
Stantec Consulting Ltd.

Rating	Installed	Design Life	Updated
4 - Acceptable	2010	0	APR-11



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