# **RECAPP Facility Evaluation Report**

**Edmonton School District No. 7** 



W. P. Wagner High School
B3354A
Edmonton

# Edmonton - W. P. Wagner High School (B3354A)

# **Facility Details**

Building Name: W. P. Wagner High School

Address: 6310 Wagner Road

Location: Edmonton

Building Id: B3354A

Gross Area (sq. m): 23,007.00

Replacement Cost: \$52,542,317

Construction Year: 1969

## **Evaluation Details**

Evaluation Company: Jacques Whitford AXYS Ltd.

Evaluation Date: August 13 2008

Evaluator Name: Mike Plomske

Total Maintenance Events Next 5 years: \$13,997,000 5 year Facility Condition Index (FCI): 26.64%

#### **General Summary:**

The W.P. Wagner High School is located at 6310 Wagner Road in Edmonton, Alberta. The school is a partial two-storey concrete and masonry block structure, which was constructed circa 1969 and includes no known additions. The school encompasses a reported total floor area of 23,007 square metres. The school houses general and science classrooms, a library, three gymnasiums, industrial arts classrooms, music and drama rooms, and other vocational classrooms. A greenhouse is attached to the school via an interior corridor link on the west end.

Large-scale modifications and renovations to the facility were mainly conducted in 1992 and 1994.

## **Structural Summary:**

The school's foundations are understood to consist of cast-in-place concrete piles and strip footings with frost walls and concrete slabs-on-grade. The structural framing for the majority of the building consists of load-bearing concrete or masonry block walls with structural steel framing at the gymnasium. A second floor is provided in the northeast classroom wing of the building, which is constructed with pre-cast concrete double-T beams covered with a concrete topping. The majority of the roof structure is comprised of pre-cast and reinforced concrete slabs. The roof structure of the gymnasium is comprised of a metal deck supported by open web steel joists and steel wide flange beams.

Recommended work includes the following:

- Study and repair noted slab settlement and misalignment throughout the building
- Study and repair a wood-framed mezzanine in the student lounge of the industrial wing

The building's structural elements are in acceptable condition overall.

#### **Envelope Summary:**

Exterior cladding for the facility consists mainly of clay brick veneer and pre-cast concrete wall panels. Sloped metal roofing and wall panels are present above the roofline along the building's north end. Exterior window assemblies consist primarily of fixed insulating glazing units set in a combination of aluminum and fiberglass frames. Exterior main entrance doors consist of painted wood-framed double doors. The roof is protected by modified bituminous and built up roofing systems. Sections of modified bituminous roofing were reportedly replaced in 2004 and 2006.

Recommended work includes the following:

- Study and repair noted movement between pre-cast concrete wall panels
- Replace deficient sealant on the building perimeter
- Replace rotting wood entrance, utility and overhead doors
- Replace built-up roof membrane assembly roofing

The building envelope components are in acceptable condition overall.

## **Interior Summary:**

The majority of the interior partitions in the facility consist of painted gypsum board and painted concrete block. Flooring in the facility consists mainly of resilient tile flooring, terrazzo and carpet. Painted concrete flooring is present in mechanical areas and several industrial arts classrooms. Wood flooring is present in the Main Gymnasium and Ancillary Gymnasium. Parquetry flooring is present in the Spare Gymnasium, Drama Room and a Computer Room. Epoxy-finished flooring is located in some corridors and classrooms. Ceramic tile flooring is present in washrooms and locker rooms. The ceilings for the facility consist of suspended T-bar assemblies with inlaid acoustic tiles or painted gypsum board. The gymnasium ceilings consist of adhered ceiling tiles. Mechanical areas, shops and storage areas consists of exposed and painted floor or roof structures. Interior swinging doors generally consist of painted wood or metal units set in metal frames.

#### Recommended work includes the following:

- Repair of interior partition firestopping at fire separations
- Repainting interior swinging doors and frames where required
- Replace washroom and shower stall partitions
- Repaint and add handrails where necessary
- Replace original locker units throughout the school corridors
- Replace deteriorated gypsum board walls
- Repaint interior wall surfaces where damaged/faded
- Replace epoxy flooring in the Hair Styling classroom
- Repaint concrete floors in wood working classrooms
- Replace cracked quarry tile flooring in corridors
- Refinish wood flooring in the Main Gymnasium
- Refinish parguetry flooring in classrooms and spare gymnasium
- Replace stained or damaged ceiling tiles and suspended ceiling panels
- Repair damaged casework counter top laminate
- Replace locker room bench seating
- Provide barrier-free parking stalls and automated building entry
- Refurbish the passenger elevator and multi-user washrooms to accommodate handicapped users

The building's interior finishes are in acceptable condition, overall.

#### **Mechanical Summary:**

W. P. Wagner High School was built in 1969 with no major renovations or upgrades to the mechanical systems.

The building is heated by two natural gas fired steam boilers. Heating water is generated by three main heat exchangers and is supplied to heating coils in the building's air handling units, the perimeter heating system, the unit heaters, and the entrance heaters. There is a centrifugal chiller system in place that was decommissioned approximately 10 years ago.

Ventilation is provided by approximately 30 central station air handling units.

Various exhaust fans serve areas such as the washrooms, kitchens, storage rooms, and common areas.

The water service entering the building is equipped with backflow prevention devices. Domestic hot water is generated by three gas fired water heaters and a boiler system with remote storage tanks.

The building is equipped with a standpipe system with fire hose cabinets throughout. A sprinkler system has been added to serve a small portion of the school.

Fire extinguishers are located throughout the building and appear to be regularly checked for correct operation.

The following are recommended actions for the next five years:

- Replace the custodial and classroom sinks;
- Replace the shower fixtures;
- Replace the drinking fountains;
- Replace the original washroom plumbing fixtures;
- Replace the domestic water valves;
- Replace the domestic hot water pumps;
- Replace the domestic hot water boiler;
- Conduct a study to review the condition of the waste piping systems;
- Replace the waste piping systems as determined by the study;
- Replace the heating boilers;
- Replace the chimneys and combustion air system;
- Replace the cooling system including the chiller, cooling tower and associated pumps;
- Replace the cafeteria kitchen cooler and freezer refrigeration units;
- Replace or refurbish the air handling units;
- Replace the condensate receiver and pumps;
- Replace the exhaust fans;
- Replace the heat exchangers;
- Replace the perimeter convection heaters;

- Replace the entrance and unit heaters; and,
- Replace the pneumatic controls.

The mechanical systems in this facility are in marginal to acceptable condition overall.

#### **Electrical Summary:**

W. P. Wagner High School was built in 1969, upgrades to the electrical systems include:

- Replacement of some of the electrical distribution panels;
- Upgrades to the interior fluorescent lighting;
- Installation of LED lamps in the exit lighting fixtures;
- Upgrade of the telephone system;
- Replacement of the fire alarm system; and
- Upgrades to the computer network systems.

Power is fed to the main electrical vault at 13.8 kV and is stepped down by an internal transformer to 347/600V. The majority of interior lighting is T8 fluorescent fixtures that have been recently installed. A 40kW emergency generator serves the school.

The following are recommended actions for the next five years:

- Replace the primary transformer;
- Replace the secondary transformers;
- Replace the main distribution panel;
- Replace the original secondary distribution panels;
- Provide surge protection on some of the electrical distribution systems;
- Replace the motor control centres;
- Replace the aged emergency lighting fixtures;
- Replace the security system;
- Replace the PA console;
- Replace the emergency generator.

The electrical systems in this facility are in acceptable condition overall.

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

# S1 STRUCTURAL

# A1010 Standard Foundations\*

The school foundations are understood to consist of concrete piles and perimeter and interior cast-in-place concrete strip footings under load-bearing frost walls.

<u>Rating</u>	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-09

#### A1030 Slab on Grade\*

The majority of the building's main floor is constructed at grade and consists of cast-in-place concrete slabs-on-grade which are presumed to include conventional steel reinforcement. The basement mechanical/electrical rooms also have cast-in-place concrete slabs-on-grade.

RatingInstalledDesign LifeUpdated3 - Marginal19690MAR-09

#### **Event: Investigate Slab Movement/Settlement**

#### Concern:

Widespread differential settlement was observed and reported throughout the facility, most notably at the southeast corner of the school. The settlement is creating tripping hazards on exterior sidewalks and minor sloping and localized cracking of interior corridor floors and finishes.

#### Recommendation:

Conduct a study of the noted settlement to determine its cause and extent, and to provide options for remedial action.

## **Consequences of Deferral:**

Ongoing differential settlement resulting in the development of additional trip hazards, damage to interior finishes and disruptions to school operations.

<u>Type</u>	<u>Year</u>	Cost	<b>Priority</b>
Study	2009	\$20,000	High

**Updated:** MAR-09

## **Event: Repair Settled Areas and Finishes**

#### Concern:

Widespread differential settlement was observed and reported throughout the facility, most notably at the southeast corner of the school. The settlement is creating tripping hazards on exterior sidewalks and minor sloping and localized cracking of interior corridor floors and finishes.

#### **Recommendation:**

Repair settled areas and damaged finishes as necessary, based on the results of the preliminary investigation. An allowance to conduct the necessary repairs has been included, however the exact amount cannot be determined until the results of the investigation are known.

#### **Consequences of Deferral:**

Ongoing differential settlement resulting in the development of additional trip hazards, damage to interior finishes and disruptions to school operations.

<u>Type</u>	<u>Year</u>	Cost	<b>Priority</b>
Repair	2010	\$200,000	High

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

Basement level mechanical/electrical room walls are constructed with cast-in-place concrete.

RatingInstalledDesign LifeUpdated4 - Acceptable1969100MAR-09

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

The majority of the school's structural frame consists of steel-reinforced concrete columns and beams, or load-bearing concrete block walls.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The majority of the interior walls are load-bearing and consist of concrete block or cast-in-place concrete.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Suspended floors within the building consist of pre-cast concrete double T-beams with lightweight concrete topping.

Rating	<u>Installed</u>	Design Life	<b>Updated</b>
4 - Acceptable	1969	0	MAR-09

#### **B1010.05 Mezzanine Construction\***

Mezzanine floors are generally constructed with cast-in-place or pre-cast concrete suspended floors. Approximately three wood-framed mezzanines are located in shop classrooms in the industrial arts wing, a portion of which were reportedly constructed by students.

RatingInstalledDesign LifeUpdated3 - Marginal19690MAR-09

## **Event:** Investigate Student-Built Mezzanine

#### Concern:

A review of the wood-framed mezzanine structure within the student lounge area in the industrial arts wing revealed construction practices and assembly methods which appeared unsafe.

#### **Recommendation:**

Conduct an investigation to determine the adequacy of the student-built mezzanine and whether structural modifications are required.

## **Consequences of Deferral:**

Unsafe conditions resulting in potential injury.

TypeYearCostPriorityStudy2009\$3,000High

Updated: MAR-09

#### **Event: Repair Student Lounge Mezzanine**

#### Concern:

A review of the wood-framed mezzanine structure within the student lounge area in the industrial arts wing revealed construction practices and assembly methods which appeared unsafe.

#### Recommendation:

Conduct structural modifications or repairs based on the results of the initial study. An allowance to complete these repairs is included.

#### **Consequences of Deferral:**

Unsafe conditions resulting in potential injury.

TypeYearCostPriorityRepair2009\$20,000High

Updated: MAR-09

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

Mechanical ductwork and conduit penetrations through floor slabs are sealed with fire stopping material where gaps or voids are present.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### **B1010.11 Other Floor Construction\***

A steel-framed, ceiling-mounted catwalk is installed over the Drama room at the centre of the school.

RatingInstalledDesign LifeUpdated4 - Acceptable20060MAR-09

# B1020.01 Roof Structural Frame\*

The roof structural framing consists mainly of reinforced pre-cast concrete double T-beams or metal decking supported by open web steel joists.

<u>Rating</u>	<u>Installed</u>	Design Life	<b>Updated</b>
4 - Acceptable	1969	0	MAR-09

# B1020.04 Canopies\*

The building's roof structure is cantilevered such that canopies are formed along the building perimeter and at various building entrances.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-09

# B1020.06 Roof Construction Fireproofing\*

A spray-on fireproofing material is applied to the soffit of the gymnasium roof deck. A spray-on material is also applied to interior wall and ceiling surfaces above the library and adjoining foyers and gathering areas.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1969	50	MAR-09

## S2 ENVELOPE

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

The exterior walls are finished in part with pre-cast concrete panels.

Rating Installed Design Life Updated 3 - Marginal 1969 75 MAR-09

# **Event:** Investigate Movement Between Pre-Cast Concrete Panels

#### Concern:

Evidence of movement between sections of pre-cast concrete panels was observed on the school roof, which appeared to coincide with the north wall of the student cafeteria. The movement is understood to have been present since at least 2004, as metal copings above the pre-cast concrete panels have been modified to account for the non-linear plane of the neighbouring panels.

#### **Recommendation:**

Conduct a study to determine whether exterior wall repairs are necessary based on the current misalignment and suspected movement of pre-cast concrete panels in this area.

## **Consequences of Deferral:**

Ongoing movement resulting in potential moisture ingress or eventual failure.

TypeYearCostPriorityStudy2009\$15,000Medium

**Updated: MAR-09** 

## Event: Repair Pre-cast Concrete Panels (approx. 20 sq. m)

#### Concern:

Evidence of movement between sections of pre-cast concrete panels was observed on the school roof, which appeared to coincide with the north wall of the student cafeteria. The movement is understood to have been present since at least 2004, as metal copings above the pre-cast concrete panels have been modified to account for the non-linear plane of the neighbouring panels.

## Recommendation:

Repair the pre-cast concrete wall panels in the area of the noted movement based on the results of the preliminary study. An allowance to conduct the repairs is included, however actual costs cannot be determined until the results of the investigation are known.

## **Consequences of Deferral:**

Ongoing movement resulting in potential moisture ingress or eventual failure.

TypeYearCostPriorityRepair2010\$75,000Medium

Updated: MAR-09

#### B2010.01.02.01 Brick Masonry: Ext. Wall Skin\*

Portions of the building's exterior walls are finished with brick veneer.

RatingInstalledDesign LifeUpdated4 - Acceptable196975MAR-09

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

Pre-cast concrete soffits on the building perimeter have an exposed or cement plaster (parged) finish.

RatingInstalledDesign LifeUpdated4 - Acceptable196975MAR-09

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

Expansion / contraction control joints are installed in the exterior brick veneer at regular intervals.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

A sealant/caulking is installed in the control joints of the exterior brick veneer finishes and between pre-cast concrete wall panels.

RatingInstalledDesign LifeUpdated2 - Poor199220MAR-09

# Event: Replace Deficient Caulking (Approx. 3,000 m)

#### Concern:

Cohesively-failed sealant was observed in several control joints on the building perimeter, most notably between precast concrete wall panels.

#### **Recommendation:**

Replace deficient sealant as necessary on the building perimeter.

#### **Consequences of Deferral:**

Potential moisture ingress into the building envelope.

TypeYearCostPriorityFailure Replacement2009\$105,000Medium

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

Exterior doors, louvers and trim have a painted finish.

RatingInstalledDesign LifeUpdated4 - Acceptable196915MAR-09

**Event:** Repaint Exterior Surfaces (Approx. 300 m2)

TypeYearCostPriorityLifecycle Replacement2012\$10,000Unassigned

Updated: MAR-09

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

Exterior walls of the building are constructed in part with cast-in-place concrete.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## B2010.02.02 Precast Concrete: Ext. Wall Const\*

Exterior walls of the building are constructed in part with pre-cast concrete wall panels.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Exterior walls of the building are constructed in part with concrete block.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

A limited number of pre-finished metal louvers, vents, etc. are situated on the exterior walls of the facility in various locations.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## B2010.09 Exterior Soffits\*

Exterior soffits below cantilevered roof structures consist of parged or unfinished pre-cast concrete.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The majority of exterior windows in the building consist of fixed and operable, insulating glazing units set in aluminum frames. Fixed metal-framed clearstory windows with insulating glazing units are provided along the northeast classroom wing, above the roofline.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event: Replace Aluminum Windows (Approx. 934 m2)** 

TypeYearCostPriorityLifecycle Replacement2012\$1,300,000Unassigned

**Updated: MAR-09** 

# B2020.01.01.06 Vinyl, Fibreglass &Plastic Windows\*\*

Operable windows which appear to be of fiberglass construction have been installed in the main office area of the building. The windows incorporate sealed, insulating glazing units.

RatingInstalledDesign LifeUpdated5 - Good200840MAR-09

**Event:** Replace Fibreglass Windows (Approx. 20 m2)

TypeYearCostPriorityLifecycle Replacement2048\$25,000Unassigned

Updated: MAR-09

#### B2030.01.10 Wood Entrance Door\*\*

Entrance doors consist of painted pivot-type wood double doors with inset wired glazing in metal frames.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

**Event: Replace Exterior Entrance Doors (Approx. 44** 

Doors).

Concern:

Exterior doors are worn and rotted, and do not close properly. Exterior door hardware is also reported to function poorly.

**Recommendation:** 

Replace exterior entrance doors, including hardware.

Consequences of Deferral:

Ongoing deterioration resulting in potential loss of functionality.

TypeYearCostPriorityFailure Replacement2009\$110,000Medium

**Updated:** MAR-09

#### B2030.02 Exterior Utility Doors\*\*

Painted wood pivot-type doors set in painted metal frames are positioned in various locations along the building perimeter.

RatingInstalledDesign LifeUpdated2 - Poor196940MAR-09

# **Event: Replace Exterior Utility Doors (Approx. 26 Doors)**

#### Concern:

Exterior utility doors are worn, rotted and do not close properly. Utility door hardware is also reported to function poorly.

#### **Recommendation:**

Replace exterior utility doors and associated hardware.

# **Consequences of Deferral:**

Further deterioration, resulting in a loss of functionality.

TypeYearCostPriorityFailure Replacement2009\$40,000Medium

Updated: MAR-09

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

Two sectional overhead doors comprised of insulated metal are provided on the west industrial wing of the building.

RatingInstalledDesign LifeUpdated4 - Acceptable200030MAR-09

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

Two sectional overhead doors comprised of painted wood are provided on the west industrial wing of the building.

RatingInstalledDesign LifeUpdated2 - Poor196930MAR-09

## **Event: Replace Wood Overhead Doors**

#### Concern:

The sectional wood overhead doors were exhibiting signs of rotting and deterioration of finishes and surfaces.

#### Recommendation:

Replace the wood overhead doors.

## **Consequences of Deferral:**

Potential loss of functionality.

TypeYearCostPriorityFailure Replacement2009\$8,000Low

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

Architectural drawings were not available for review during the assessment and no ceiling cavities were entered as part of the site visit. It is assumed a vapor retarder and insulation are present on all roofing sections.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The majority of the low-slope roof sections on the building are equipped with a conventional built-up bituminous roof membrane assembly with asphalt and gravel cover.

Rating Installed Design Life Updated
3 - Marginal 1969 25 MAR-09

## **Event: Replace Built-Up Roofing (Approx. 13,000 m2)**

#### Concern:

The built-up roofing assemblies are generally aged. Deficiencies observed include deteriorated flood coats, deteriorated finishes and metal surfaces on copings, exposed and deteriorated roofing felt, and widespread storm water retention. Stained ceiling finishes throughout the school also suggest historical leakage.

#### Recommendation:

Replace the built-up roofing assemblies.

#### **Consequences of Deferral:**

Further deterioration of the roof systems resulting in additional moisture intrusion and increased repair efforts.

TypeYearCostPriorityFailure Replacement2010\$1,950,000Medium

**Updated: MAR-09** 

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

Modified bituminous membrane assemblies are provided for low-slope roof sections over the north end of the industrial arts wing (installed in 2006) and the main mechanical room, a portion of the ancillary gymnasium, and culinary arts classrooms (installed in 2004).

RatingInstalledDesign LifeUpdated4 - Acceptable200525MAR-09

**Event: Replace Modified Bituminous Roofing (Approx.** 

5,340 m2)

TypeYearCostPriorityLifecycle Replacement2030\$935,000Unassigned

**Updated:** MAR-09

#### B3010.07 Sheet Metal Roofing\*\*

Sloped, pre-finished metal roofing is provided above the two-storey classroom wing on the northeast corner of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event:** Replace Sloped Metal Roofing (Approx. 1,500 m2)

TypeYearCostPriorityLifecycle Replacement2012\$400,000Unassigned

**Updated: MAR-09** 

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

Metal roof hatches and fixed (wall-mounted) internal ladders provide access to the school roof.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

# S3 INTERIOR

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

Interior fixed partitions consist of a combination of wood stud framing and concrete block construction.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

# C1010.01.03 Unit Masonry Assemblies: Partitions\*

Glass block partition walls are provided in the library.

RatingInstalledDesign LifeUpdated4 - Acceptable1969100MAR-09

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

Interior demountable panel partition walls with vinyl wall covering are provided in the sewing room.

RatingInstalledDesign LifeUpdated4 - Acceptable196950MAR-09

#### C1010.03 Interior Operable Folding Panel Partitions\*\* - Cafeteria

An operable (sliding) wood panel partition wall separates the cafeteria from the serving area.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

#### **Event: Replace Cafeteria Sliding Partition (Approx. 25 m2)**

TypeYearCostPriorityLifecycle Replacement2012\$40,000Unassigned

**Updated:** MAR-09

#### C1010.03 Interior Operable Folding Panel Partitions\*\* - Classrooms

Track-mounted, operable folding panel partitions separate some adjoining classrooms in the northeast classroom wing.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event: Replace Classroom Folding Partitions (Approx. 30** 

<u>m2)</u>

TypeYearCostPriorityLifecycle Replacement2012\$50,000Unassigned

#### C1010.03 Interior Operable Folding Panel Partitions\*\* - Spare Gymnasium

An interior operable wood panel partition separates the main gymnasium from the adjoining spare gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event:** Replace Spare Gymnasium Partition (Approx. 50

<u>m2)</u>

TypeYearCostPriorityLifecycle Replacement2012\$15,000Unassigned

Updated: MAR-09

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

Metal screen partition walls are present in several storage rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## C1010.05 Interior Windows\* - Fixed Windows

Interior windows in corridors, administrative areas and the gymnasium mezzanine are comprised of single-pane units set in painted wood or metal frames with tempered or wired glass.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### C1010.05 Interior Windows\* - Pass-Through Windows

Two metal roll-up pass-through shutters are present in the culinary arts section, including the staff kitchen/lunch room.

RatingInstalledDesign LifeUpdated4 - Acceptable200080MAR-09

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

Interior glazed partitions with wired glazing set in painted metal frames are located in several school corridors.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Mechanical ductwork and conduit penetrations through fire wall separations are generally sealed with fire stopping material.

Rating Installed Design Life Updated 1969 0 MAR-09

**Event: Repair Interior Partition Firestopping (Approx. 40** 

<u>m2)</u>

Concern:

Voids and gaps around penetrations through fire separations are unsealed.

Recommendation:

Seal voids and gaps around penetrations through fire separations.

**Consequences of Deferral:** 

Spread of fire or smoke through fire separations.

TypeYearCostPriorityCode Repair2009\$10,000Medium

**Updated:** MAR-09

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

Interior swinging doors consist of painted wood set in painted metal frames, some with sidelights.

RatingInstalledDesign LifeUpdated3 - Marginal196940MAR-09

**Event: Refinish Interior Doors and Frames (Approx. 100** 

Doors)

Concern:

Interior doors exhibited minor wearing or peeling of paint finishes in high traffic areas.

Recommendation:

Refinish worn interior doors and frames.

**Consequences of Deferral:** 

Further deterioration and loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$15,000Low

Updated: MAR-09

## C1020.03 Interior Fire Doors\*

Interior fire doors are solid core wood with inset wired glazing set in painted metal frames.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

An interior sectional wood overhead door separates adjoining storage rooms adjacent to the greenhouse at the building's west end.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

# C1030.01 Visual Display Boards\*\* - Black Boards / Green Boards / Tack Boards

Wall-mounted chalk boards are present in a portion of the classrooms. Most classrooms contain wall-mounted tack boards.

RatingInstalledDesign LifeUpdated4 - Acceptable196920MAR-09

**Event: Replace Chalk Boards (Approx. 50 Units)** 

TypeYearCostPriorityLifecycle Replacement2012\$40,000Unassigned

Updated: MAR-09

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

Wall-mounted white boards are present in a portion of the classrooms and administrative offices.

RatingInstalledDesign LifeUpdated4 - Acceptable199520MAR-09

**Event: Replace White Boards (Approx. 45 Units)** 

TypeYearCostPriorityLifecycle Replacement2015\$72,000Unassigned

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

Pre-finished and/or painted metal stall partitions are provided in each multi-purpose washroom in the building. Shower stalls are provided in the girls change room near the main gymnasium.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

**Event: Replace Toilet/Shower Partitions (Approx. 60** 

Stalls)

Concern:

Toilet and shower stall partitions are aged and corroded. Minor damage to metal surfaces was also noted in random locations.

Recommendation:

Replace all toilet and shower stall partitions.

**Consequences of Deferral:** 

Further deterioration, resulting in potential loss of functionality and a loss of aesthetic appeal.

TypeYearCostPriorityFailure Replacement2009\$72,000Low

#### C1030.06 Handrails\*

Wall-mounted wood handrails are provided within some corridors. Painted metal railings are present along the open edge of the mezzanine overlooking the main gymnasium.

Rating Installed Design Life Updated 1969 0 MAR-09

## **Event: Provide Handrails at Storage Mezzanine**

#### Concern:

A storage mezzanine is located above the office area within the main mechanical room on the building's south end. The open edge of the mezzanine level is without any handrails or guardrails.

## Recommendation:

Provide handrails or guardrails along the open edge of the mechanical room storage mezzanine.

#### **Consequences of Deferral:**

The absence of handrails poses a potential safety hazard to school staff.

TypeYearCostPriorityProgram Functional Upgrade2009\$3,000High

Updated: MAR-09

## **Event: Repaint Handrail Finishes**

#### Concern:

Peeling and faded finishes were noted on mechanical room handrails.

#### **Recommendation:**

Refinish mechanical room handrails.

# **Consequences of Deferral:**

Further deterioration of finishes and loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$5,000Low

**Updated: MAR-09** 

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

Interior signage consists of wall-mounted lamicoid signage, painted on lettering and colored construction paper cutout lettering.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## C1030.10 Lockers\*\* - Corridors - New

Upgraded lockers are provided in corridors, change rooms and several classrooms, and consist of pre-finished metal.

RatingInstalledDesign LifeUpdated5 - Good200030MAR-09

**Event: Replace Metal Lockers (Approx. 300 Units)** 

TypeYearCostPriorityLifecycle Replacement2030\$330,000Unassigned

Updated: MAR-09

# C1030.10 Lockers\*\* - Corridors - Original

Pre-finished or painted student lockers are located in corridors.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

## **Event: Replace Corridor Lockers (Approx. 850 Lockers)**

#### Concern:

Corridor lockers are generally worn and include damaged metal surfaces and peeling finishes.

#### Recommendation:

Replace student lockers in corridors.

#### **Consequences of Deferral:**

Further deterioration resulting in potential loss of functionality, and a loss of aesthetic appeal.

TypeYearCostPriorityFailure Replacement2010\$930,000Low

**Updated: MAR-09** 

## C1030.12 Storage Shelving\*

Wood and metal storage shelving is located in classrooms and storage areas throughout the school.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Standard commercial quality washroom hardware is located in the washrooms and locker rooms (wall-mounted mirrors, soap dispensers, paper towel dispensers, and paper dispensers, etc.). Two commercial-grade washers and one commercial-grade dryer are located in the team laundry room, adjacent to the ancillary gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable020MAR-09

#### C2010 Stair Construction\*

Cast-in-place concrete stairs provide access to basement mechanical rooms and several mezzanine levels. Metal stair systems and metal ladders provide access to mechanical areas and roof levels. Wood-framed staircases provide access to mezzanine levels in several industrial arts classrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## C2020.01 Tile Stair Finishes\*

Ceramic tile nosings are provided on most common area staircases.

RatingInstalledDesign LifeUpdated4 - Acceptable196960MAR-09

#### C2020.02 Terrazzo Stair Finishes\*

Main staircases have terrazzo finishes on steps/risers/landings.

RatingInstalledDesign LifeUpdated4 - Acceptable196960MAR-09

## C2020.08 Stair Railings and Balustrades\*

Main staircases throughout the school are equipped with wall-mounted painted wood handrails. Stairways in mechanical areas have base and wall-mounted, painted metal pipe railings. Wood-framed stairs in the industrial arts wing have base-mounted, unfinished wood handrails.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### C2020.10 Stair Painting\*

Metal staircases or fixed ladders in mechanical spaces typically include a painted finish.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### C2020.11 Other Stair Finishes\* - Metal Nosings

Integral metal nosings are provided on concrete stairs in mechanical areas for a non-slip surface.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## C3010.02 Wall Paneling\*\* - Wood Paneling

Full height or wainscotting comprised of wood wall paneling is provided in the spare gymnasium, two adjoining stairwells leading to the main gymnasium floor, the east and west walls of the main gymnasium, and the south wall of a teaching space adjoining the staff lunch room.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

Event: Replace Wood Wall Paneling (Approx. 420 m2)

TypeYearCostPriorityLifecycle Replacement2012\$90,000Unassigned

Updated: MAR-09

## C3010.04 Gypsum Board Wall Finishes (Unpainted)\*

Where present, wood or aluminum stud partition walls are finished with gypsum board.

RatingInstalledDesign LifeUpdated3 - Marginal196960MAR-09

#### **Event: Replace Damaged Gypsum Board**

#### Concern:

Peeling finishes and damaged surfaces were observed on the gypsum board wall surface behind washing machine equipment in the school laundry room.

# **Recommendation:**

Replace the damaged gypsum board and re-finish as necessary.

## **Consequences of Deferral:**

Potential microbial growth and loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$2,000Medium

**Updated: MAR-09** 

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

Ceramic tile wall finishes are present in washrooms, shower rooms and staff change rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event:** Replace Ceramic Wall Tile (Approx 400 m2)

TypeYearCostPriorityLifecycle Replacement2012\$120,000Unassigned

**Updated: MAR-09** 

#### C3010.09 Acoustical Wall Treatment\*\*

Wall-mounted fabric acoustical wall treatments are present in the drama room, music room and adjoining rehearsal rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable197920MAR-09

**Event: Replace Acoustical Wall Treatment (Approx. 500** 

<u>m2)</u>

TypeYearCostPriorityLifecycle Replacement2012\$115,000Unassigned

Updated: MAR-09

## C3010.11 Interior Wall Painting\*

A paint finish is applied to the majority of the concrete, masonry block and gypsum board walls in the facility.

RatingInstalledDesign LifeUpdated3 - Marginal200010MAR-09

## **Event: Repaint Damaged Wall Finishes (Approx. 1,000 m2)**

#### Concern:

Interior painted finishes are peeling and fading in localized areas.

#### **Recommendation:**

Repair damaged areas and repaint heavily worn surfaces.

#### **Consequences of Deferral:**

Further deterioration of the paint finish and underlying wall surfaces, resulting in a loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$25,000Low

Updated: MAR-09

## C3010.12 Wall Coverings\*

Vinyl wall covering is provided on partition walls in administrative areas.

RatingInstalledDesign LifeUpdated4 - Acceptable196915MAR-09

#### C3020.01.01 Epoxy Concrete Floor Finishes\*

Epoxy concrete floor finishes are located in various classrooms and science rooms in the industrial arts wing at the school's east end, including storage rooms and laundry rooms on the building's south end.

RatingInstalledDesign LifeUpdated3 - Marginal19690MAR-09

**Event: Replace Epoxy Flooring in Hair Styling Classroom** 

(Approx. 80 m2)

Concern:

Epoxy floor finishes in the hair styling classroom are worn and

pitted.

Recommendation:

Replace epoxy flooring in the hair styling classroom.

**Consequences of Deferral:** 

Further deterioration resulting in a loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$12,000Low

Updated: MAR-09

## C3020.01.02 Paint Concrete Floor Finishes\*

Exposed concrete floors in industrial arts classrooms have a painted finish.

RatingInstalledDesign LifeUpdated3 - Marginal196910MAR-09

## **Event: Repaint Wood Shop Floors (Approx. 200 m2)**

Concern:

Paint finishes on concrete floors in wood shop classrooms are peeling and worn.

Recommendation:

Repaint wood shop classroom floors.

**Consequences of Deferral:** 

Further deterioration of paint finish and a loss of aesthetic appeal.

 Type
 Year
 Cost
 Priority

 Repair
 2009
 \$5,000
 Low

## C3020.02 Tile Floor Finishes\*\* - Ceramic Tile

Ceramic tile flooring is generally provided in washrooms and change rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable196950MAR-09

**Event: Replace Ceramic Tile Flooring (Approx. 600 m2)** 

TypeYearCostPriorityLifecycle Replacement2019\$115,000Unassigned

Updated: MAR-09

# C3020.02 Tile Floor Finishes\*\* - Quarry Tile

Quarry tile flooring is provided in several culinary arts classrooms, storage rooms, and the entrance foyer adjacent to the library.

RatingInstalledDesign LifeUpdated3 - Marginal196950MAR-09

## **Event:** Repair Damaged Quarry Tile Finishes

#### Concern:

A portion of the quarry tile floor finishes in the corridors are cracked.

#### **Recommendation:**

Replace damaged quarry tile floor finishes in conjunction with the settlement study, as noted under A1030.

#### **Consequences of Deferral:**

Loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$5,000Low

Updated: MAR-09

**Event:** Replace Quarry Tile Flooring (Approx. 1,500 m2)

TypeYearCostPriorityLifecycle Replacement2019\$420,000Unassigned

Updated: MAR-09

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

Terrazzo flooring is located in various hallways throughout the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196975MAR-09

## C3020.04 Wood Flooring\*\* - Ancillary Gymnasium

Maple hardwood sports flooring is provided in the ancillary gymnasium at the southwest corner of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event:** Replace Wood Flooring (Approx. 760 m2)

TypeYearCostPriorityLifecycle Replacement2012\$230,000Unassigned

Updated: MAR-09

# C3020.04 Wood Flooring\*\* - Main Gymnasium

Wood flooring is located in the gymnasium and the small gymnasium.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

**Event: Refinish Main Gymnasium Flooring (Approx. 850** 

<u>m2)</u>

Concern:

Wood flooring in the main gymnasium appeared scuffed, scratched and worn.

Recommendation:

Refinish the wood flooring in the main gymnasium.

**Consequences of Deferral:** 

Further deterioration and loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$45,000Low

**Updated: MAR-09** 

Event: Replace Main Gymnasium Wood Flooring (Approx.

850 m2)

TypeYearCostPriorityLifecycle Replacement2012\$240,000Unassigned

## C3020.04 Wood Flooring\*\* - Parquetry Flooring

Wood parquetry flooring is provided in the spare gymnasium, computer laboratory and drama room.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

**Event: Refinish Parquetry Flooring (Approx. 580 m2)** 

Concern:

Wood parquetry flooring in the spare gymnasium, computer lab and drama room is scuffed and scratched.

**Recommendation:** 

Refinish the wood parquetry flooring.

**Consequences of Deferral:** 

Further deterioration and loss of aesthetic appeal.

TypeYearCostPriorityRepair2010\$30,000Low

Updated: MAR-09

**Event:** Replace Parquetry Flooring (Approx. 580 m2)

TypeYearCostPriorityLifecycle Replacement2012\$145,000Unassigned

Updated: MAR-09

## C3020.07 Resilient Flooring\*\*

Resilient flooring is present in the lunchroom and some administrative areas.

RatingInstalledDesign LifeUpdated4 - Acceptable199220MAR-09

**Event:** Replace Resilient Flooring (2,850 m2)

TypeYearCostPriorityLifecycle Replacement2012\$230,000Unassigned

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

Carpet flooring is present in the majority of the classrooms in the northeast classroom wing, a portion of the industrial arts classrooms, and most administrative areas.

RatingInstalledDesign LifeUpdated4 - Acceptable199415MAR-09

**Event:** Replace Carpet Flooring (Approx. 5,125 m2)

TypeYearCostPriorityLifecycle Replacement2012\$325,000Unassigned

**Updated:** MAR-09

# C3020.14 Other Floor Finishes\* - Cork Flooring

Cork flooring is present in two rooms in the industrial arts section of the school.

RatingInstalledDesign LifeUpdated4 - Acceptable20010MAR-09

#### C3020.14 Other Floor Finishes\* - Rubber Mat Flooring

Interlocking rubber mat floor tiles are present in the Health and Wellness Center.

RatingInstalledDesign LifeUpdated4 - Acceptable00MAR-09

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

Gypsum board ceilings are provided in washrooms and locker rooms throughout the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196960MAR-09

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

Suspended acoustical tile ceilings are present in classrooms, hallways, the library, offices and staff areas throughout the school.

RatingInstalledDesign LifeUpdated3 - Marginal199425MAR-09

## **Event: Repair Stained Ceiling Tiles**

#### Concern:

Water-stained and otherwise damaged suspended ceiling panels are located throughout the facility.

#### Recommendation:

Replace damaged and/or stained acoustical ceiling panels.

## **Consequences of Deferral:**

Loss of aesthetics and potential development of microbial growth.

TypeYearCostPriorityRepair2009\$2,000Medium

Updated: MAR-09

## **Event:** Replace Suspended Ceilings (Approx. 4,000 m2)

TypeYearCostPriorityLifecycle Replacement2019\$200,000Unassigned

Updated: MAR-09

## C3030.07 Interior Ceiling Painting\*

Where present, the soffit of exposed roof or floor structural framing has a painted finish. Painted or stippled gypsum board ceilings are present in the majority of washrooms, locker rooms and staff change rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable196920MAR-09

# C3030.08 Ceiling Trim and Decoration\*

A decorative wood ceiling assembly with integral fluorescent and incandescent light fixtures is provided in the staff lunch room and an adjoining teaching space.

RatingInstalledDesign LifeUpdated4 - Acceptable19920MAR-09

## C3030.09 Other Ceiling Finishes\* - Ceiling Tile

Adhered acoustic ceiling tiles are provided in the main and spare gymnasiums.

RatingInstalledDesign LifeUpdated2 - Poor19690MAR-09

# **Event:** Repair Damaged or Missing Ceiling Tile

#### Concern:

Adhered ceiling tiles in the spare gymnasium are loose and damaged in random locations.

## Recommendation:

Repair damaged ceiling tiles and replace missing tiles as needed.

#### **Consequences of Deferral:**

Additional tile failure resulting in potential injury to students or staff members.

TypeYearCostPriorityRepair2009\$3,000High

Updated: MAR-09

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

The school is equipped with one Montgomery brand elevator (2,000 lbs capacity) which is located in the northeast classroom wing. The elevator is maintained by Thyssen Dover under a full service maintenance contract, which includes monthly service calls.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

#### **Event: Refurbish Hydrualic Passenger Elevator**

TypeYearCostPriorityLifecycle Replacement2012\$80,000Unassigned

## S4 MECHANICAL

#### D2010.04 Sinks\*\*

Sinks are located in areas such as science classrooms, other classrooms, shops, cafeteria kitchen, and utility sinks in custodial closets. Sinks are typically stainless steel or vitreous china. The majority of the science lab sinks have been replaced in the modernizations that occurred in the mid 1990's, the remaining sinks are typically original.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

Event: Replace the classroom, cafateria and custodial

sinks (approximately 84 vitreous china or stainless

steel sinks, 8 custodial sinks)

TypeYearCostPriorityLifecycle Replacement2012\$150,000Unassigned

Updated: MAR-09

**Event:** Replace the science classroom sinks

(approximately 26 units)

TypeYearCostPriorityLifecycle Replacement2025\$65,000Unassigned

Updated: MAR-09

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

There are communal showers in the gymnasium change rooms and individual shower enclosures in some of the staff washrooms. The grouped showers in the boys change room are wall mounted units and the showers in the girls change room are central column units.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

Event: Replace shower fixtures, enclosures and hardware

(approximately 6 individual units and 2 grouped

units)

TypeYearCostPriorityLifecycle Replacement2012\$50,000Unassigned

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

Drinking fountains are located in areas such as the corridors, cafeteria, weight room, and gym change rooms. Approximately 1/3 of the drinking fountains are refrigerated.

RatingInstalledDesign LifeUpdated4 - Acceptable196935MAR-09

Event: Replace the drinking fountains (approximately 4

refrigerated units and 8 standard units)

TypeYearCostPriorityLifecycle Replacement2012\$24,000Unassigned

Updated: MAR-09

# D2010.10 Washroom Fixtures (WC, Lav, UrnI)\*\*

Washroom plumbing fixtures in the building consist of approximately 70 water closets, 65 lavatories, and 20 urinals. The majority of the fixtures appear to be the original units.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

# **Event:** Replace the original washroom plumbing fixtures

(approximately 70 water closets, 65 lavatories, and

20 urinals)

#### Concern:

The washroom plumbing fixtures throughout appear to be original and many of the fixtures appeared worn. Staining and cracking was observed on many of the fixtures.

#### Recommendation:

Replace the original washroom plumbing fixtures throughout.

#### **Consequences of Deferral:**

Increased maintenance requirements, less efficient water usage.

TypeYearCostPriorityFailure Replacement2010\$270,000Low

Updated: MAR-09

## D2020.01.01 Pipes and Tubes: Domestic Water\*

Domestic water piping system consists of the original copper piping.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### D2020.01.02 Valves: Domestic Water\*\*

Standard isolation valves on the domestic water system. Valves are typically original.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event:** Replace the domestic water system isolation

valves (approximately 450 units)

TypeYearCostPriorityLifecycle Replacement2012\$140,000Unassigned

Updated: MAR-09

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

The domestic water supply is equipped with check valves that separate the domestic water system from the fire suppression systems. The valves appear to have been installed in the last 10 years.

RatingInstalledDesign LifeUpdated4 - Acceptable199820MAR-09

**Event:** Replace the two backflow preventers

TypeYearCostPriorityLifecycle Replacement2018\$18,000Unassigned

**Updated: MAR-09** 

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

There are two inline domestic hot water recirculation pumps installed in the boiler room.

RatingInstalledDesign LifeUpdated4 - Acceptable199020MAR-09

Event: Replace the two domestic hot water recirc pumps

TypeYearCostPriorityLifecycle Replacement2012\$4,000Unassigned

#### D2020.02.03 Water Storage Tanks - DHW\*\*

There are three A.O. Smith domestic hot water storage tanks located in the boiler room. The tanks have storage capacities of approximately 100 US gallons and were installed in 1990.

RatingInstalledDesign LifeUpdated4 - Acceptable199030MAR-09

**Event:** Replace the three domestic hot water storage

tanks

TypeYearCostPriorityLifecycle Replacement2020\$6,000Unassigned

Updated: MAR-09

#### D2020.02.06 Domestic Water Heater - Boiler\*\*

There is a natural gas fired domestic hot water boiler located in the boiler room. The boiler was manufactured by A.O. Smith and has a heating capacity of 300,000 BTUh.

RatingInstalledDesign LifeUpdated4 - Acceptable199020MAR-09

**Event:** Replace the domestic hot water boiler

TypeYearCostPriorityLifecycle Replacement2012\$8,000Unassigned

**Updated:** MAR-09

## D2020.02.06 Domestic Water Heaters\*\*

There are three State natural gas fired domestic water heaters located in the boiler room. The water heaters have heating capacities of 180,000 BTUh and storage capacities of 100 US gallons. The water heaters were installed in approximately 2001.

RatingInstalledDesign LifeUpdated4 - Acceptable200120MAR-09

**Event:** Replace the three domestic water heaters

TypeYearCostPriorityLifecycle Replacement2021\$9,000Unassigned

Updated: MAR-09

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

The domestic water piping is typically insulated.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Generally waste and vent piping is the original piping; the majority of piping observed was cast iron waste piping.

RatingInstalledDesign LifeUpdated3 - Marginal19690MAR-09

# Event: Replace the waste piping as determined by the study recommended in 2009

#### Concern:

The waste piping throughout the building is typically the original cast iron piping. Portions of the piping have required replacement and split sections of pipe were observed.

#### Recommendation:

Replace the aged and damaged portions of the waste piping system as determined by the study recommended in 2009. Scope and budget should be adjusted to reflect the outcome of the study.

TypeYearCostPriorityFailure Replacement2010\$200,000Low

**Updated: MAR-09** 

## **Event:** Study to review the condition of the waste piping

#### Concern:

The waste piping throughout the building is typically the original cast iron piping. Portions of the piping have required replacement and split sections of pipe were observed.

## Recommendation:

Conduct a study to review the condition of the waste piping to determine the extent of replacement and repairs that are required on the system.

#### **Consequences of Deferral:**

Deterioration and possible failure of the piping system.

 Type
 Year
 Cost
 Priority

 Study
 2009
 \$10,000
 Low

Updated: MAR-09

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

There is a grease trap installed on the waste piping serving the cafeteria kitchen.

<u>Rating</u>	<u>Installed</u>	Design Life	<b>Updated</b>
4 - Acceptable	1969	0	MAR-09

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

The building's roofs are equipped with roof drains. The rain water drainage piping observed was typically insulated near the roof connections. The system drains by gravity and is connected to the municipal storm water system.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### D2040.02.04 Roof Drains\*

The roof incorporates roof drains which are each fitted with gravel/debris strainers.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

## D3010.02 Gas Supply Systems\*

Natural gas service is provided to the building and is supplied to the heating boilers, the domestic water heater, the generator, and to the kitchens. The gas service is metered and is likely original.

RatingInstalledDesign LifeUpdated4 - Acceptable196960MAR-09

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

The building is heated by two Cleaver Brooks natural gas fired steam boilers. The boilers each have heating capacities of 20,922 MBH and are original to the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196935MAR-09

## Event: Replace the two heating boilers

TypeYearCostPriorityLifecycle Replacement2012\$800,000Unassigned

**Updated: MAR-09** 

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

The boilers each have individual stacks. There is a combustion air duct with a relief air vent serving the natural gas fired appliances in the Boiler room.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

## Event: Replace the stacks and the combustion air system

TypeYearCostPriorityLifecycle Replacement2012\$120,000Unassigned

Updated: MAR-09

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

Standard chemical treatment system serving the heating water system. Chemical pot feeders serve the various heating water loops.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## D3030.02 Centrifugal Water Chillers\*\*

The building was originally cooled by a Trane - Centravac centrifugal chiller. The chiller has a reported capacity of approximately 800 tons. The cooling system was reportedly decommissioned in approximately 1997. The original refrigerant in the system was R-11. The R-11 has been reclaimed from the system and has been replaced with an inert gas (nitrogen).

RatingInstalledDesign LifeUpdated2 - Poor196925MAR-09

## Event: Replace the centrifugal chiller

#### Concern:

The chiller has been out of commission for over 10 years and there are very few air conditioned areas in the building.

#### **Recommendation:**

Replace the existing chiller.

Consequences of Deferral:

No operational cooling system for the majority of the building.

TypeYearCostPriorityFailure Replacement2009\$380,000High

**Updated: MAR-09** 

## D3030.05 Cooling Tower\*\*

There is a Marley - Hydrotower cooling tower that serves the cooling system in the building. The cooling system was reportedly decommissioned in approximately 1997. The cooling tower is located in the boiler room and appears to be the original unit.

Rating Installed Design Life Updated 2 - Poor 1969 25 MAR-09

## **Event:** Replace the cooling tower

#### Concern:

The cooling tower has been out of commission for over 10 years and is likely no longer in operating condition.

#### **Recommendation:**

Replace the cooling tower.

**Consequences of Deferral:** 

No operational cooling system for the majority of the building.

TypeYearCostPriorityFailure Replacement2009\$90,000High

Updated: MAR-09

#### D3030.06.01 Refrigeration Compressors\*\*

Refrigeration compressors serving the kitchen walk in coolers and freezers. The age of the compressors is uncertain.

RatingInstalledDesign LifeUpdated4 - Acceptable196915MAR-09

**Event:** Replace the four walk in cooler and freezer

compressors

TypeYearCostPriorityLifecycle Replacement2012\$16,000Unassigned

Updated: MAR-09

## D3030.06.02 Refrigerant Condensing Units\*\*

Refrigeration condensers located in each of the kitchen walk in coolers and freezers. The condensers appear to be original.

RatingInstalledDesign LifeUpdated4 - Acceptable196925MAR-09

**Event:** Replace the four walk in cooler and freezer

condensers

TypeYearCostPriorityLifecycle Replacement2012\$12,000Unassigned

#### D3040.01.01 Air Handling Units: Air Distribution\*\*

Most areas of the building are served by central station air handling units which are located in the building's main mechanical rooms. There are four kinds of air handling units in the school which are: dual duct, dual zone, multizone, and single zone. The air handling units are typically composed of a supply fan, a remote return fan, filtration, mixed air dampers, a heating coil and a cooling coil. The majority of the air handling units are the original Trane units with two units that have been replaced, an Engineered Air unit in the boiler room and a Haakon unit in the penthouse mechanical room.

Rating Installed Design Life Updated 4 - Acceptable 1969 30 MAR-09

**Event:** Replace or refurbish the Engineered Air air

handling unit

TypeYearCostPriorityLifecycle Replacement2032\$60,000Unassigned

**Updated:** MAR-09

**Event:** Replace or refurbish the Haakon air handling unit

TypeYearCostPriorityLifecycle Replacement2025\$60,000Unassigned

Updated: MAR-09

Event: Replace or refurbish the original air handling units

(approximately 30 units)

TypeYearCostPriorityLifecycle Replacement2012\$1,800,000Unassigned

**Updated:** MAR-09

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

The distribution ductwork is the original sheet metal ductwork. The ducts were in the process of being cleaned at the time of the site visit in August of 2008.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The grilles and diffusers are typically original throughout the building.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

Steam distribution system from the main heating boilers to the various mechanical rooms. Piping is generally original. The main condensate receiver is located in the boiler room and has two 5 HP condensate pumps. The receiver and pumps appear to be original.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event:** Replace the condensate receiver and pumps

TypeYearCostPriorityLifecycle Replacement2012\$20,000Unassigned

**Updated: MAR-09** 

## D3040.03.01 Hot Water Distribution Systems\*\*

There are multiple heating water distribution systems in the building that are centred in three locations; the boiler room, the penthouse mechanical room, and the basement mechanical room in the two storey portion of the school. Each of the systems is composed of a steam to hot water heat exchanger, two circulating pumps and distribution piping. The pumps in the boiler room are Armstrong units with capacities of 147GPM/5HP and 63GPM/2HP. The pumps in the penthouse mechanical room are Armstrong units with capacities of 63GPM/2HP. The pumps in the basement mechanical room are Armstrong units with capacities of 111.7 GPM/1.5 HP. The heating water circulation pumps all appear to have been replaced in the last 10 years. The heating system distribution piping is typically copper and appears to be original.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event:** Replace the heating water distribution pumps (6)

<u>units)</u>

TypeYearCostPriorityLifecycle Replacement2015\$20,000Unassigned

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

Chilled water was originally generated by the chiller that has since been decommissioned. Condenser water was originally circulated by two 40 HP pumps that are located in the boiler room. Chilled water within the building was originally circulated by three 10 HP pumps and two 2 HP pumps. The distribution system originally supplied chilled water to the building's air handling units. The chilled water and condenser water pumps appear to be original.

 Rating
 Installed
 Design Life
 Updated

 2 - Poor
 1969
 40
 MAR-09

# Event: Replace the chilled water and condenser water circulation pumps (7 units)

#### Concern:

The cooling system pumps have been out of commission for over 10 years and are likely no longer in operating condition.

## **Recommendation:**

Replace the two condenser water pumps and the five chilled water pumps.

#### **Consequences of Deferral:**

No operational cooling system for the majority of the building.

TypeYearCostPriorityFailure Replacement2009\$40,000High

**Updated: MAR-09** 

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

Various rooftop, penthouse and through wall exhaust fans serve the various exhaust systems in the building. The majority of the fans appear to be original.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1969	30	MAR-09

#### **Event:** Replace the exhaust fans (approximately 30 units)

TypeYearCostPriorityLifecycle Replacement2012\$75,000Unassigned

Updated: MAR-09

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

The exhaust ductwork is the original sheet metal ductwork. The ducts were in the process of being cleaned at the time of the site visit in August of 2008.

Rating	Installed	Design Life	<b>Updated</b>
4 - Acceptable	1969	0	MAR-09

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

Original exhaust grilles throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## D3040.05 Heat Exchangers\*\*

There are three heat exchangers located in the main mechanical rooms. The heat exchangers are steam-to-hot water units that serve heating coils in many of the air handling units.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

### Event: Replace the three heat exchangers

TypeYearCostPriorityLifecycle Replacement2012\$30,000Unassigned

Updated: MAR-09

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

Perimeter fin tube convection heaters throughout the majority of the building. The perimeter heaters are original to the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

## **Event: Replace the perimeter heaters (approximately 2400'**

of fin tube radiation)

TypeYearCostPriorityLifecycle Replacement2012\$720,000Unassigned

**Updated: MAR-09** 

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

Forced flow entrance heaters within the building's main entrance foyers. Ceiling suspended unit heaters in the weight room and the shop and utility areas of the building. The unit heaters are typically original to the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event: Replace the entrance and unit heaters** 

(approximately 30 units)

TypeYearCostPriorityLifecycle Replacement2012\$55,000Unassigned

#### D3060.02.02 Pneumatic Controls\*\*

A compressed air distribution system is used for HVAC controls in the building and is fed by air compressors that are located in the boiler room. The system controls the HVAC systems in the building. End devices are typically pneumatic components such as damper and valve actuators and local thermostats. The pneumatic controls are tied into the DDC building automation system for the main HVAC systems.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

## Event: Replace the pneumatic control system

TypeYearCostPriorityLifecycle Replacement2012\$150,000Unassigned

Updated: MAR-09

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

There is an Barber Coleman DDC building automation system that controls the main HVAC components in the building. The system is tied into the original pneumatic controllers and appears to have been installed in the last 10 to 15 years.

RatingInstalledDesign LifeUpdated4 - Acceptable199320MAR-09

## Event: Replace the building automation system

TypeYearCostPriorityLifecycle Replacement2013\$500,000Unassigned

Updated: MAR-09

#### **D4010 Sprinklers: Fire Protection\***

A sprinkler system has been installed recently that serves the gym storage room, the stage, and the storage area under the stage.

Rating Installed Design Life Updated 5 - Good 2002 60 MAR-09

## D4020 Standpipes\*

A standpipe system serves the school with fire hose cabinets in the corridors throughout. The fire hoses appear to be routinely inspected and replaced as required.

RatingInstalledDesign LifeUpdated4 - Acceptable196960MAR-09

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

Hand held ABC dry chemical fire extinguishers located throughout the building. The extinguishers are typically located within the fire hose cabinets. There are some wall mounted fire extinguishers in select areas. The fire extinguishers appear to be routinely inspected and replaced as required.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

## D4090.02 Carbon Dioxide Fire Extinguishing Systems\*\*

The kitchen exhaust canopies in the cafeteria kitchen (335) and the instructional kitchen (344) are equipped with fire suppression systems. The age of the systems is uncertain.

RatingInstalledDesign LifeUpdated4 - Acceptable196950MAR-09

**Event:** Replace the hood suppression systems in the

cafeteria and instructional kitchens

TypeYearCostPriorityLifecycle Replacement2019\$28,000Unassigned

## S5 ELECTRICAL

#### D5010.01 Main Electrical Transformers\*\*

Electrical service enters the site underground and is fed to an internal transformer that is located in the main electrical room. The transformer is a Federal Pacific 13.8 kV to 600 V, 2250 kVA unit that appears to be original.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

Capacity Size Capacity Unit

**Event: Replace the primary transformer** 

TypeYearCostPriorityLifecycle Replacement2012\$70,000Unassigned

Updated: MAR-09

#### D5010.02 Secondary Electrical Transformers (Interior)\*\*

There are various dry type 600V to 120V secondary transformers located throughout the school that range in capacity from approximately 150 to 500 kVA.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event: Replace the secondary transformers** 

(approximately 4 units)

TypeYearCostPriorityLifecycle Replacement2012\$30,000Unassigned

**Updated: MAR-09** 

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

Electrical service to the school is fed to a FPE 347/600V, 3 phase, 4 wire distribution panel that is located in the main electrical room that is adjacent to the boiler room.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

Event: Replace the main distribution switchboard

TypeYearCostPriorityLifecycle Replacement2012\$90,000Unassigned

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

There are various 347/600V and 120/208V secondary distribution panels throughout the school. Many of the distribution panels are the original Federal Pacific panels that typically have 100A to 225A capacities. Approximately 25% of the distribution panels appear to have been replaced in the last 10 to 15 years. There are no surge protection devices currently installed on the electrical distribution systems.

RatingInstalledDesign LifeUpdated3 - Marginal196930MAR-09

# **Event:** Provide surge protection to the library, computer rooms, and lab distribution systems

#### Concern:

There is currently no surge protection provided to the electrical distribution systems.

## **Recommendation:**

Install surge protection to serve the distribution panels in the library, the computer rooms, and the labs.

#### **Consequences of Deferral:**

Possible electrical surges could damage electronic equipment used in these areas.

Type	<u>Year</u>	Cost	<b>Priority</b>
Operating Efficiency Upgrade	2009	\$20,000	Low

Updated: MAR-09

# Event: Replace the original distribution panels (approximately 30 units)

#### Concern:

The original distribution panels have exceeded their theoretical lives and replacement parts are becoming difficult to obtain.

#### Recommendation:

Replace the remaining original distribution panels.

## **Consequences of Deferral:**

Higher potential of failure and increased downtime as replacement parts are more difficult to obtain.

<u>Type</u>	<u>Year</u>	Cost	<b>Priority</b>
Failure Replacement	2010	\$90.000	Low

**Updated:** MAR-09

## **Event:** Replace the second genearation distribution

panels (approximately 10 units)

TypeYearCostPriorityLifecycle Replacement2025\$30,000Unassigned

Updated: MAR-09

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

There are four General Electric motor control centres that are located in main mechanical areas of the building. The MCC's serve the various main HVAC system components, mainly the pump and fan motors. The MCC's are original to the school.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event: Replace the four motor control centres** 

TypeYearCostPriorityLifecycle Replacement2012\$250,000Unassigned

**Updated:** MAR-09

## D5020.01 Electrical Branch Wiring\*

The electrical branch wiring in the school is typically the original copper wiring that is run in EMT conduit.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

### D5020.02.01 Lighting Accessories (Lighting Controls)\*

The lighting throughout the building are 347/600V fixtures that are controlled by local low voltage switches and relay control boxes. The lighting controls in many areas of the school have been upgraded with motion sensors.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## D5020.02.02.02 Interior Florescent Fixtures\*\*

The lighting throughout the facility has been replaced with energy efficient T8 fluorescent fixtures in the 1992-1993 modernizations. Lighting is typically ceiling mounted 2 and 4 lamp fluorescent fixtures.

RatingInstalledDesign LifeUpdated4 - Acceptable199330MAR-09

**Event:** Replace the interior fluorescent lighting fixtures

(approximately 4500 fixtures)

TypeYearCostPriorityLifecycle Replacement2023\$1,400,000Unassigned

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

Wall mounted battery pack emergency lighting fixtures are located throughout the school. The majority of the fixtures appear to have been replaced in the last 10 years. There are still some aged fixtures in place.

Rating Installed Design Life Updated 3 - Marginal 1969 20 MAR-09

**Event:** Replace the aged emergency lighting fixtures

(approximately 10 units)

Concern:

There are still some aged battery pack emergency lighting fixtures in place.

Recommendation:

Replace the aged and original emergency lighting fixtures.

**Consequences of Deferral:** 

Possible failure or short battery life of the fixtures which would pose a safety concern.

TypeYearCostPriorityFailure Replacement2010\$10,000Low

Updated: MAR-09

Event: Replace the second generation emergency lighting

fixtures (approximately 30 units)

TypeYearCostPriorityLifecycle Replacement2020\$30,000Unassigned

**Updated:** MAR-09

#### D5020.02.03.03 Exit Signs\*

Illuminated exit signs indicate the paths of egress throughout the building. The fixtures were upgraded with LED lamps in approximately 2000.

Rating Installed Design Life Updated 5 - Good 2000 0 MAR-09

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

There are various HID wall packs, flood lights, and recessed canopy fixtures around the perimeter of the building.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The exterior lighting is controlled by photo electric cells.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

The building is equipped with manual pull stations, smoke detectors and some heat detectors which are connected to a centralized fire alarm system. The control panel is an Edwards EST3 unit. The system includes alarm bells with strobes. The system was upgraded in 2002.

RatingInstalledDesign LifeUpdated5 - Good200225MAR-09

Event: Replace the fire alarm system

TypeYearCostPriorityLifecycle Replacement2027\$250,000Unassigned

Updated: MAR-09

## D5030.02.02 Intrusion Detection\*\*

The school is equipped with a motion sensor security system with a Magnum Alert control keypads. The main controller is located in the boiler room and the communicator is an Ademco unit. The system was originally installed in 1981.

RatingInstalledDesign LifeUpdated4 - Acceptable198125MAR-09

**Event:** Replace the security system

TypeYearCostPriorityLifecycle Replacement2012\$60,000Unassigned

**Updated: MAR-09** 

#### D5030.02.04 Video Surveillance\*\*

The facility is equipped with a video surveillance system that monitors some of the entries, hallways, and portions of the site. The system was upgraded in 2001 and additional cameras have been installed as required. It was reported that the system has been continually upgraded to meet the school's requirements.

RatingInstalledDesign LifeUpdated4 - Acceptable200125MAR-09

**Event:** Replace the surveilance system

TypeYearCostPriorityLifecycle Replacement2026\$40,000Unassigned

Updated: MAR-09

## D5030.03 Clock and Program Systems\*

The clock system in the building is a Simplex system with the control panel located in main office. The clocks throughout the building are analog Simplex clocks.

RatingInstalledDesign LifeUpdated4 - Acceptable196925MAR-09

#### D5030.04.01 Telephone Systems\*

There is a telephone system within the school with the main service provided to the office administrative area. The system is a Nortel - Norstar Meridian system that appears to have been upgraded in the last 10 years.

RatingInstalledDesign LifeUpdated4 - Acceptable199925MAR-09

## D5030.04.05 Local Area Network Systems\*

The majority of the building is equipped with Cat 5 cabling and hubs. There is also a fiber optic cable system. The system was likely originally installed in the 1990's modernizations with many additions provided to the system in 2000. It was reported that the network system in the school was going to be upgraded from a cable distribution system to a wireless system throughout the building in late 2008.

RatingInstalledDesign LifeUpdated4 - Acceptable19920MAR-09

## D5030.05 Public Address and Music Systems\*\*

The building is equipped with a central Bogen Multicom PA system.

RatingInstalledDesign LifeUpdated2 - Poor196920MAR-09

### **Event: Replace the PA console**

#### Concern:

The PA console in place is aged and unreliable. It was reported that the system typically fails every 3 to 4 months.

#### **Recommendation:**

Replace the aged PA console.

## **Consequences of Deferral:**

Possible PA failure which is a safety concern.

TypeYearCostPriorityFailure Replacement2009\$60,000Unassigned

**Updated:** MAR-09

## D5030.06 Television Systems\*

There is a cable television distribution system in the school with the inlet and main splitter located in the library communications room.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

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

A natural gas emergency generator serves the building's emergency power system. The unit is an Kohler 40 kW, 50 kVA unit that is located in the boiler room. The generator is reportedly tested monthly and is original to the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196935MAR-09

Capacity Size Capacity Unit kVA

**Event:** Replace the emergency generator

TypeYearCostPriorityLifecycle Replacement2012\$80,000Unassigned

## S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

#### E1010.05.01 Barber and Beauty Shop Equipment\*

Standard salon equipment is located in the hair dressing classroom.

RatingInstalledDesign LifeUpdated4 - Acceptable00MAR-09

## E1020.02 Library Equipment\*

The library is equipped with painted and stained wood shelving units, tables, chairs and desks, and electronic theft detection gates.

RatingInstalledDesign LifeUpdated4 - Acceptable19920MAR-09

## E1020.03 Theater and Stage Equipment\*

Ceiling-mounted curtains and lighting equipment are provided in the drama room, which also contains a stage and tiered (operable) seating area.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## E1020.07 Laboratory Equipment\*

Science labs are located in the industrial arts and classroom wings and are equipped with standard science laboratory equipment.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## E1090 Other Equipment\*

Woodworking equipment, including saw dust collectors installed in 1982, is present in the wood shop classrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable00MAR-09

#### E1090.03 Food Service Equipment\*

The cafeteria kitchen and culinary arts classroom are equipped with commercial quality kitchen equipment, including walk-in coolers/freezers, cook lines with ovens, stove tops, fryers, exhaust fume hoods, stainless steel tables, kettles, dishwasher, etc.

RatingInstalledDesign LifeUpdated4 - Acceptable19920MAR-09

#### E1090.04 Residential Equipment\*

The staff lounge, home economics classroom and special needs classrooms have residential-grade kitchen equipment, including refrigerators, stoves, microwaves, etc.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## E1090.07 Athletic, Recreational, and Therapeutic Equipment\*

The health and wellness center contains stationary exercise bicycles, free weights and benches, and nautilus equipment, etc. Retractable or fixed basketball backboards are mounted to the ceilings or walls of the main, spare and ancillary gymnasiums. A wall-mounted, electronic scoreboard is provided in the main gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## E2010.02 Fixed Casework\*\* - New Wood Laminate

Fixed wooden casework with plastic laminate counter tops is located throughout the school in classrooms, shop areas, administrative and storage areas.

RatingInstalledDesign LifeUpdated5 - Good200035MAR-09

## **Event:** Replace Upgraded Casework (Approx. 720 m)

TypeYearCostPriorityLifecycle Replacement2035\$950,000Unassigned

## E2010.02 Fixed Casework\*\* - Original Wood Laminate

Fixed wooden casework with plastic laminate counter tops is located throughout the school in classrooms, shop areas, administrative and storage areas.

Rating Installed Design Life Updated 3 - Marginal 1969 35 MAR-09

## **Event: Repair Damaged Casework**

#### Concern:

Casework counter top laminate is de-bonding or stained in random areas throughout the building.

#### **Recommendation:**

Repair or replace damaged casework counter tops as necessary.

### **Consequences of Deferral:**

Further deterioration, resulting in a potential loss of functionality and loss of aesthetic appeal.

TypeYearCostPriorityRepair2009\$25,000Low

Updated: MAR-09

## **Event:** Replace Casework (Approx. 500 m)

TypeYearCostPriorityLifecycle Replacement2012\$650,000Unassigned

Updated: MAR-09

#### E2010.02 Fixed Casework\*\* - Stainless Steel

Stainless steel counters and preparation tables are provided in the home economics classroom and main kitchen area.

RatingInstalledDesign LifeUpdated4 - Acceptable200035MAR-09

## **Event:** Replace Stainless Steel Casework (Approx. 135 m)

TypeYearCostPriorityLifecycle Replacement2035\$315,000Unassigned

**Updated:** MAR-09

#### E2010.03.01 Blinds\*\*

Operable vertical fabric blinds have been installed on several interior window units in the building.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event:** Replace Blinds (Approx. 100 m2)

TypeYearCostPriorityLifecycle Replacement2012\$13,000Unassigned

**Updated: MAR-09** 

## E2010.03.03 Shades\*

Where present, coverings consist of vinyl pull shades on exterior windows.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## E2010.03.06 Curtains and Drapes\*\* - Main Gymnasium Divider

An operable track-mounted divider curtain is provided at the centre of the main gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event: Replace Gymnasium Divider Curtain (Approx. 230** 

m2)

TypeYearCostPriorityLifecycle Replacement2012\$30,000Unassigned

## E2010.05 Fixed Multiple Seating\*\* - Gymnasium Mezzanine

Painted wood bench seating is provided on the mezzanine level overlooking the main gymnasium.

RatingInstalledDesign LifeUpdated3 - Marginal196935MAR-09

**Event: Repaint Bench Seating Overlooking Gymnasium** 

Concern:

Peeling finishes were observed on wood bench seating overlooking the gymnasium.

Recommendation:

Repaint the wood benches on the mezzanine level.

**Consequences of Deferral:** 

Further deterioration of painted surfaces and loss of aesthetics.

TypeYearCostPriorityRepair2010\$8,000Low

**Updated:** MAR-09

**Event: Replace Gymnasium Mezzanine Seating (Approx.** 

130 m2)

TypeYearCostPriorityLifecycle Replacement2012\$30,000Unassigned

Updated: MAR-09

E2010.05 Fixed Multiple Seating\*\* - Locker Room Benches

Painted wood benches with painted metal supports are located in locker rooms.

RatingInstalledDesign LifeUpdated3 - Marginal196935MAR-09

Event: Replace Locker Room Benches (Approx. 20 m)

Concern:

Deteriorated finishes and corroded metal surfaces were observed on locker room benches.

Recommendation:

Replace the locker room benches.

**Consequences of Deferral:** 

Ongoing deterioration resulting in loss of aesthetic appeal and eventual failure of the component.

TypeYearCostPriorityFailure Replacement2010\$8,000Low

#### E2010.06 Fixed Interior Landscaping\*

Fixed interior landscaping set in painted concrete planter boxes is provided in the entrance foyer adjacent to the library.

RatingInstalledDesign LifeUpdated4 - Acceptable196910MAR-09

## E2020.02.03 Furniture\*

Classroom desks, chairs and tables were generally noted to be in acceptable condition.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## F1010.02.03 Glazed Structures\* - Greenhouse

A greenhouse is attached to the west side of the school via interior corridor link. The greenhouse is constructed with concrete and gravel floors, cast-in-place concrete pony walls and steel frame supporting glass upper walls and pitched roof. The interior of the greenhouse contains multiple wood tables with wire mesh table tops, a small coy pond with a small wood bridge, and typical spraying and misting systems.

Corridor walls were replaced in 2006. Greenhouse modifications were reportedly carried out in 2008.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

## F1010.02.05 Grandstands and Bleachers\*\* - Drama Room

A metal-framed, tiered and retractable seating structure is also provided in the drama room.

RatingInstalledDesign LifeUpdated4 - Acceptable196930MAR-09

**Event: Replace Drama Room Seating Structure (Approx.** 

110 Seats)

TypeYearCostPriorityLifecycle Replacement2012\$40,000Unassigned

#### F1010.02.05 Grandstands and Bleachers\*\* - Gymnasium Bleachers

Retractable bleachers (steel framed with wood seats) are present along the north and south walls of the main gymnasium.

RatingInstalledDesign LifeUpdated4 - Acceptable196940MAR-09

**Event: Replace Gymnasium Bleachers (Approx. 600** 

<u>Seats)</u>

TypeYearCostPriorityLifecycle Replacement2012\$200,000Unassigned

Updated: MAR-09

## F1020.02 Special Purpose Rooms\* - Darkroom

A dark room is located on the second floor in the north classroom section in the building.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### F1020.02.13 Paint Booths\*

A self-contained paint booth is present in the shop area.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### **F2020.01 Asbestos\***

PHH Environmental performed an evaluation for the presence of asbestos in the building in 2000. According to PHH Environmental's Hazardous Materials Management Project report dated April 28, 2000, asbestos is present in pipe insulation, ceiling acoustic spray texture, fireproofing spray in second floor areas around the gymnasium, straight run parging insulation on hot water pipes, duct parging material, boiler heading, chiller and boiler breaching insulation, packing in cast iron bell and spigot rain water leaders and sanitary drains, and 12"x2" black with white streaked floor tile. Materials visually identified by PHH and suspected to contain asbestos included asbestos cement boards located in the football storage room and asbestos cement gaskets located in a storage room adjacent to the boiler room. No other asbestos containing materials were identified in the building.

According to a summary of projects conducted at the facility, asbestos abatement was conducted in 1992, 1997, 1999, 2003 and 2006.

RatingInstalledDesign LifeUpdated4 - Acceptable19690MAR-09

#### F2020.04 Mould\*

No suspected mould growth was noted on visible surfaces during the assessment. Wall cavities, crawlspace cavities, and ceiling cavities were not reviewed during the site visit.

RatingInstalledDesign LifeUpdated4 - Acceptable00MAR-09

## F2020.09 Other Hazardous Materials\*

A metal flammable materials cabinet is located in the wood working shop area. A metal chemical storage cabinet is also located in a science classroom. Hazardous materials observed during the assessment appeared to be stored in an appropriate manner. No other hazardous materials were identified during the review of the facility.

<u>Rating</u>	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	0	0	MAR-09

## **S8 FUNCTIONAL ASSESSMENT**

#### K4010.01 Barrier Free Route: Parking to Entrance\*

Building-mounted barrier-free parking signage for handicapped parking is located adjacent to the south wall of the building.

RatingInstalledDesign LifeUpdated3 - Marginal00MAR-09

## **Event: Provide Barrier Free Parking Stalls**

#### Concern:

Although wall-mounted signage is posed on the school perimeter, appropriately-sized and marked barrier free parking stalls are not provided at the site.

#### Recommendation:

Provide appropriately-sized barrier-free parking stalls with approved signage in parking areas.

#### **Consequences of Deferral:**

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

Type Year Cost Priority
Barrier Free Access Upgrade 2009 \$4,000 Medium

Updated: MAR-09

#### K4010.02 Barrier Free Entrances\*

Exterior doors on the building perimeter are manually-operated, pivot-type doors.

RatingInstalledDesign LifeUpdated3 - Marginal00MAR-09

#### **Event: Provide Automated Entrance Doors**

#### Concern:

Exterior doors at main entrances are manually-operated, pivot-type doors (i.e., automated entry to the building is not provided).

#### Recommendation:

Install automated door openers at entrances located nearest to future barrier free parking stalls.

#### **Consequences of Deferral:**

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

TypeYearCostPriorityBarrier Free Access Upgrade2009\$6,000Medium

**Updated:** MAR-09

#### K4010.03 Barrier Free Interior Circulation\*

Interior circulation is barrier free throughout most of the school; however, the elevator is not compliant with current barrier-free standards.

Rating Installed Design Life Updated 0 MAR-09

## **Event: Upgrade Elevator Interiors**

#### Concern:

The existing elevator interiors and controls/call buttons are not in compliance with barrier-free standards.

#### Recommendation:

Upgrade the elevator interior finishes and controls to comply with the barrier-free standards.

## **Consequences of Deferral:**

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

TypeYearCostPriorityBarrier Free Access Upgrade2009\$30,000Medium

Updated: MAR-09

## K4010.04 Barrier Free Washrooms\*

Wheelchair accessible washroom stalls equipped with grab bars are provided in several multi-user washrooms in the school.

RatingInstalledDesign LifeUpdated3 - Marginal00MAR-09

## **Event: Provide Barrier-Free Washroom Accessories**

#### Concern:

Multi-user washrooms observed during the assessment appeared to be only partially compliant with current barrier-free standards, and require the installation of additional accessories (e.g., mirrors, dispensers, faucet levers, etc.) or vanities to provide proper access to handicapped persons.

## Recommendation:

Provide barrier-free washroom accessories and vanities in a set of multi-student washrooms to comply with current barrier-free standards.

#### **Consequences of Deferral:**

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

TypeYearCostPriorityBarrier Free Access Upgrade2009\$20,000Medium