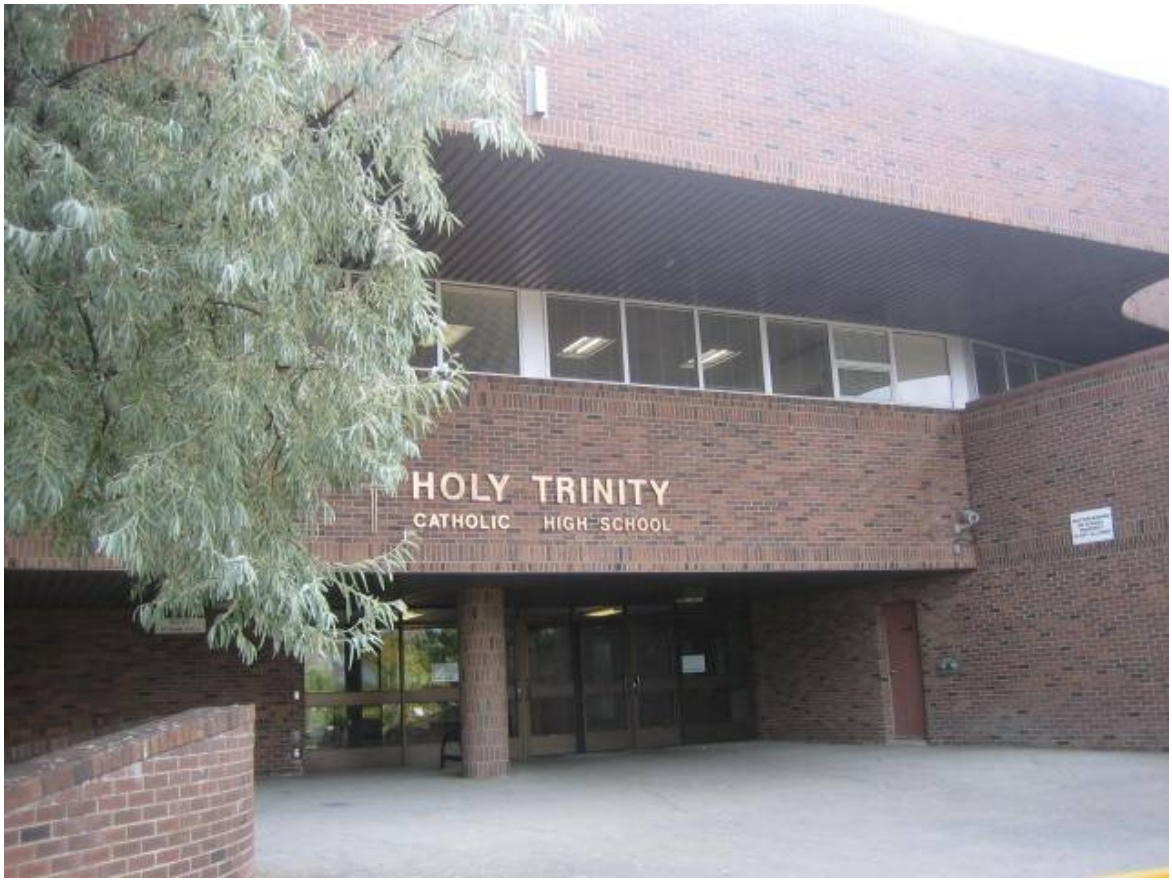
RECAPP Facility Evaluation Report

Edmonton RCSSD #7



Holy Trinity Catholic High School

B3155A

Edmonton

Report run on: March 20, 2012 10:55 AM

Facility Details

Building Name: Holy Trinity Catholic High Sc
Address: 7007 - 28 Avenue
Location: Edmonton

Building Id: B3155A
Gross Area (sq. m): 8,591.60
Replacement Cost: $26,257,000
Construction Year: 1982

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: October 24 2011
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$4,171,700**
5 year Facility Condition Index (FCI): **15.89%**

General Summary:

Holy Trinity Catholic High School, originally built in1982 is a two-storey structure with an area of 8591 m2. Holy Trinity is attached along the west elevation of Millwoods Recreational Centre and shares the site with Millwoods Recreational Centre and J. Percy Page High School. The school includes several classrooms, a chapel, a library, computer rooms, science room, a food science lab, cafeteria, a CTS lab, wood shop, music / drama room, a gymnasium, weight room, change rooms, staff room and administration offices. Several interior renovations have been conducted in recent years throughout the school.

The 2011 student enrollment 814

Structural Summary:

The foundations consist of a reinforced cast-in-place concrete, including concrete pile assembly. The building has cast-in-place 150mm concrete slabs-on-grade with conventional steel reinforcement. The second level floor construction consists of a 65mm concrete topping slab on a 75mm thick metal deck supported masonry block walls, steel columns and beams. The two mezzanines opposite the CTS lab and Wood Shop are steel framed supported by load bearing concrete block masonry. Structural reinforced concrete block partitions and beams are located throughout the building. The exterior access ramp at the main entrance has a poured in place concrete assembly. The exterior stairs at the main west entrance have a poured in place concrete assembly. The roofs have a metal roof deck on OWSJ supported by exterior & interior concrete walls.

Overall, the building structure is in acceptable condition.

Recommendations:

-Study - Conduct an intrusive structural investigation
-Repair structural components as outlined in the Structural Investigation

Envelope Summary:

The building typically has a brick veneer cladding assembly. Sealant is located around all window, door and exterior cladding assemblies. The interior portion of the exterior walls comprises primarily of the masonry wall assembly. Exterior metal louvres are located on the exterior walls opposite the mechanical rooms. A steel framed continuous soffit with a prefinished linear panel is located along the perimeter of the building. The windows consist of sealed double glazed aluminum units with fixed and operable awning units. The main west and east entrances have an anodized aluminum storefront assembly. The utility doors and secondary entrances have insulated hollow metal exterior doors, single leaf, complete with closures, panics, thresholds, push plates pull handles, locksets and weatherstripping. An insulated metal sectional overhead door is located in the automotive shop (room 151). The roof has the original conventional 4ply-built-up bituminous roof assembly. Four acrylic metal framed skylights are located above the religious educational room - 228. A roof access hatch is provided in the second floor west-end mechanical room.

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

Recommendations:

-Repair damaged brick walls at the main west and north elevations
-Replace exterior window gaskets as required - 60 Windows

-Replace original Built-up roof assembly (Area - 4400m2)

Interior Summary:

The majority of the interior walls have a concrete block wall assembly.Gypsum board partitions are located in the office areas and in the renovated areas. Fixed interior glazed windows with GWG are located throughout most classroom and general office area. Glass block windows are located throughout the chapel area - room 228. The majority of the interior classroom and office doors have metal door in a painted steel frame and lever hardware assembly. The doors in the corridors & stairwells are painted metal frame doors with GWG panels. The doors are rated and labeled. Folding aluminum doors are located in the cafeteria servery and at the reception counter opposite the general office area. Whiteboards and tackboards are located throughout the school. Prefinished metal washroom stall partitions are located in each boy's & girls washroom & change rooms. Prefinished metal lockers are located throughout the corridors and boy's & girl's change rooms. The lockers in the corridors were refinished in 2009. Metal storage shelving throughout the mezzanines, custodial utility rooms and staff supply rooms. The washrooms & change rooms are equipped with typical washroom accessories: Paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors.
The stairwells are typically steel framed with concrete filled pans. The 4 main stairwells have a quarry tile floor finish. The stairs to the two mezzanine areas have a rubber floor finish. The main 4 stairwells have a a stained wood handrail with painted steel pickets. The stairs to the mezzanine have a painted steel handrail, wall mounted.
A wood panel is located on the north wall in the cafeteria.Gypsum wallboard finish is located throughout the offices areas. Ceramic tile wall finish is located in the shower change rooms and Food Lab and cafeteria kitchen areas. The interior concrete block and gypsum board partitions throughout the school have a paint finish. Painted/sealed concrete floors are located in the utility room, mechanical room, auto shop, wood shop and mezzanine areas. Ceramic floor tile is located throughout the washrooms, change rooms and showers. Quarry tile flooring is located throughout the main entrances, vestibules food services lab, cafeteria servery and shared link vestibule at the south entrance. The gymnasium has a hardwood wood strip floor. The hardwood floor was refinished in 2004. A cork flooring is located in the Drama room and the lecture area of the CTS lab. The weight room and gym instructor offices have a rubber floor finish. Sheet vinyl flooring is located in two computer rooms, copy room, medical room, book store and science prep rooms. VCT flooring is located throughout the main circulation corridors and replaced in 2009. VCT flooring is located in the classrooms, corridor, most labs, staff room, office area and cafeteria. Carpeting flooring is located in the library, religious room (chapel) and a prep room. Suspended gypsum board ceilings are located in change rooms and washrooms. The majority of the ceilings in the main entrance, offices, corridors and classrooms have a 610mm x 1220mm suspended acoustical tile assembly. All the gypsum board and exposed steel structure in the gymnasium, shops, mechanical rooms and drama room have a paint finish.

Overall, the interior finishes are in acceptable condition.

Recommendations:

-Refinish stained handrail in all stairwells
-Replace movable bleachers in the Gymnasium - Based on 500 seats
-Provided power operators for barrier free access at the main west & east entrance
-Repaint crack and repaint concrete floors in the mechanical & utility rooms (Area- 200m2)

Mechanical Summary:

MECHANICAL SUMMARY (October 2011)

The building is heated by hot water which is supplied from two natural gas fired hot water boilers to the building heating terminal units (force flow convection cabinets, finned tube radiation cabinets, unit heaters, and reheat coils). One natural gas fired steam boiler provides steam for the duct mounted humidification systems.

Ventilation for the building is provided by ten natural gas fired packaged rooftop heating and ventilating units. A natural gas fired packaged rooftop make-up air unit provides make-up air to balance the exhaust from the kitchen cooking hood. Fresh air supplied to the building by the packaged rooftop heating and ventilating units and by the make-up air unit is balanced by the exhaust flow from 29 exhaust fans.

Building HVAC equipment actuators and thermostats are generally pneumatic (electric controls are used for the force flow convection heaters and the unit heaters), and the control air supply system for the building consists of two air compressors mounted on an air receiver tank, and includes a refrigerated air dryer. There is an Andover Controls building management and control system which provides monitoring and control functions for the main HVAC

equipment.

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 41 toilets, 15 urinals, and 42 lavatories in the building. Other plumbing fixtures in the building include drinking fountains (five wall mounted units), various sinks (68) and showers (21 stations). Two natural gas fired domestic hot water boilers and a domestic hot water storage tank provide domestic hot water for the building lavatories, sinks and showers.

Fire protection for the building consists of a standpipe system feeding standard fire hose cabinets and fire extinguishers located in recessed wall mounted cabinets, on wall mounted brackets and in most of the fire hose cabinets. The standpipe system is equipped with a fire pump and a jockey pump. There is a fire suppression system for the cafeteria kitchen cooking hood.

Current mechanical system requirements include the repair of the half Bradley type wash fountain in the industrial arts area, inspection and testing of the steam boiler to bring it back into service, replacement of the steam boiler feedwater treatment equipment, cleaning and painting of the roof mounted cabinet exhaust fans, inspection and testing of the steam humidifiers to bring them back into service, replacement of the building management and control system, and repair of the fire pump. Overall, the building mechanical equipment and systems are in acceptable condition.

Electrical Summary:

Holy Trinity School is fed from a utility owned padmount transformer. The main switchboard is rated at 1600A, 347/600V. There are two main 600-120/208V secondary transformers rated 300kVA and 225kVA as well as two emergency transformers rated at 9kVA. Westinghouse original branch circuit panels are located throughout the school. The mechanical loads within the building are fed from individual starters and manual starter switches. A 75kW diesel powered generator has been provided for emergency loads.

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

The interior fluorescent lighting fixtures were retrofitted in 2002 with T8 lamps and 120V electronic ballasts. The exit signs are LED type. The emergency lighting is fed from the emergency lighting panel and supplementary emergency lighting battery packs. The exterior lighting consists primarily of wall mounted H.P.S. Floodlights and surface mounted HPS fixtures.

The fire alarm system is a conventional, zoned system equipped with a Simplex 2100 fire alarm control panel and two remote annunciators. Detection and end devices include, smoke and heat detectors, bells, and pull stations.

The various communications systems within the building include structured wiring systems for the telephone and data systems. There are intrusion detection and video surveillance systems in the building. The P.A. System is a new Telecor XL system that is integrated with the telephone system.

It is recommended, as routine maintenance, that a program for annual examination of major electrical components be instituted. Maintenance should include thermographic scans for hot spots and power shut down to allow examination of interior components for accumulated debris and signs of corrosion.

The main concerns for Holy Trinity School are:
- Emergency lighting battery units are aged. Reliability is questionable.
- The fire alarm system is no longer manufactured. Replacement parts are not readily available. There are no strobes in the school.
- Installation of GFCI type receptacles near all sinks should be completed for code and safety purposes.
- Replace damaged and missing lenses for fluorescent lighting fixtures.

Overall the electrical systems for Holy Trinity School are in acceptable condition.

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

S1 STRUCTURAL

A1010 Standard Foundations*

The foundations consist of a reinforced cast-in-place concrete, including concrete pile assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

A1030 Slab on Grade*

The building has cast-in-place 150mm concrete slabs-on-grade with conventional steel reinforcement.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Repair structural components as outlined in the Structural Investigation

Recommendation:

Type	Year	Cost	Priority
Repair	2013	$100,000	Medium

Updated: MAR-12

Event: Study - Conduct an intrusive structural investigation

Concern:

Cracks were observed on the outdoor slab and exterior columns opposite the main west entrance. Hairline cracks were observed on the floor and walls in isolated areas throughout the main floor kitchen and cafeteria.

Recommendation:

Due to the nature of the building design, conduct a study to determine the excessive movement observed at the south-west end of the school.

Movement of concrete slab opposite the west elevation of the school

Type	Year	Cost	Priority
Study	2012	$10,000	Medium

Updated: MAR-12

B1010.01 Floor Structural Frame (Building Frame)*

The second level floor construction consists of a 65mm concrete topping slab on a 75mm thick metal deck supported masonry block walls, steel columns and beams.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

Structural reinforced concrete block partitions and beams are located throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1010.05 Mezzanine Construction*

The two mezzanines opposite the CTS lab and Wood Shop are steel framed supported by load bearing concrete block masonry.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1010.06 Ramps: Exterior*

The exterior access ramp at the main entrance has a poured in place concrete assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1010.07 Exterior Stairs*

The exterior stairs at the main west entrance have a poured in place concrete assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1010.09 Floor Construction Fireproofing*

Floor Construction Fireproofing - Where visible the steel floor assembly is sprayed with fire-proofing material.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1010.10 Floor Construction Firestopping*

Floor Construction Firestopping - Observed only where visible in the mechanical and electrical utility areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1020.01 Roof Structural Frame*

The roofs have a metal roof deck on OWSJ supported by exterior & interior concrete walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B1020.06 Roof Construction Fireproofing*

Roof Construction Fireproofing - Where visible the steel floor assembly is sprayed with fire-proofing material.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The building typically has a brick veneer cladding assembly.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Repair damaged brick walls at the main west and north elevations

Concern:
Several of the brick retaining walls at the main entrance and columns are cracked. See A1030 Slab on Grade and G2040.11 Retaining Walls for further details

Recommendation:
Repair brick walls and columns along the west and north ends of the elevations.

Type	Year	Cost	Priority
Repair	2012	$15,000	Medium

Updated: MAR-12

Cracked columns opposite the main entrance.

B2010.01.09 Expansion Control: Ext. Wall*

Expansion/control joints are located throughout the brick cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	20	MAR-12

Event: Replace sealant located around all window & exterior doors - 1800LM

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

Updated: MAR-12

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

The interior portion of the exterior walls comprises primarily of the masonry wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B2010.06 Exterior Louvers, Grilles, and Screens*

Exterior metal louvres are located on the exterior walls opposite the mechanical rooms

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B2010.09 Exterior Soffits*

A steel framed continuous soffit with a prefinished linear panel is located along the perimeter of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1983	0	MAR-12

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

The windows consist of sealed double glazed aluminum units with fixed and operable awning units. The window sills have an aluminum finish.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	40	MAR-12

Event: Replace exterior window gaskets as required - 60 Windows

Concern:
The window gaskets fail on a regular basis and has become an on-going maintenance issue.

Recommendation:
Replace exterior window gaskets as required.

Type	Year	Cost	Priority
Preventative Maintenance	2012	$15,000	Low

Updated: MAR-12

Failed window gasket observed in several locations

Event: Replace original windows (356 Window Units)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$540,000	Unassigned

Updated: MAR-12

B2030.01.01 Aluminum-Framed Storefronts: Doors**

The main west and east entrances have an anodized aluminum storefront assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace main east & west entrance doors c/w hardware - (8 doors & sidelights)

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

Updated: MAR-12

B2030.02 Exterior Utility Doors** - 1982 Section

The utility doors and secondary entrances have insulated hollow metal exterior doors, single leaf, complete with closures, panics, thresholds, push plates pull handles, locksets and weatherstripping.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace all exterior doors and hardware assembly - (33 doors)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$115,000	Unassigned

Updated: MAR-12

B2030.03 Large Exterior Special Doors (Overhead)*

An insulated metal sectional overhead door is located in the automotive shop (room 151).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B3010.01 Deck Vapour Retarder and Insulation*

Deck Vapor Retarder and Insulation - Not Visible

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel)** - 1982 Section

The roof has the original conventional 4ply-built-up bituminous roof assembly.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	25	MAR-12

Event: Replace original Built-up roof assembly (Area - 4400m2)

Concern:
The roof has several blisters, many isolated repairs and evidence of excessive ponding.
Recommendation:
Replace original Built-up roof assembly (Area - 4400m2)

Type	Year	Cost	Priority
Failure Replacement	2013	$750,000	Medium

Updated: MAR-12

Ongoing repair on the upper roof areas.

B3020.01 Skylights**

Four acrylic metal framed skylights are located above the religious educational room - 228.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	25	MAR-12

Event: Replace 4 Roof Skylights

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

Updated: MAR-12

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

A roof access hatch is provided in the second floor west-end mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

The majority of the interior walls have a concrete block wall assembly.Gypsum board partitions are located in the office areas and in the renovated areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1010.05 Interior Windows*

Fixed interior glazed windows with GWG are located throughout most classroom and general office area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1010.07 Interior Partition Firestopping*

Fire stopping at all ceiling, wall and floor penetrations.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1010.08 Other Partitions* - Glass Block

Glass block windows are located throughout the chapel area - room 228.

Rating	Installed	Design Life	Updated
5 - Good	1982	0	MAR-12

C1020.01 Interior Swinging Doors (& Hardware)*

The majority of the interior classroom and office doors have metal door in a painted steel frame and lever hardware assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1020.03 Interior Fire Doors*

The doors in the corridors & stairwells are painted metal frame doors with GWG panels. The doors are rated and labeled.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1020.04 Interior Sliding and Folding Doors*

Folding aluminum doors are located in the cafeteria servery and at the reception counter opposite the general office area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1030.01 Visual Display Boards**

Whiteboards and tackboards are located throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	20	MAR-12

Event: Replace Visual Display Boards - (Based on the 65 teaching areas)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$65,000	Unassigned

Updated: MAR-12

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

Prefinished metal washroom stall partitions are located in each boy's & girls washroom & change rooms

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace washroom & shower partitions - 40 Stalls

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

Updated: MAR-12

C1030.08 Interior Identifying Devices*

The room number or room name is mounted on or above the interior doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1983	0	MAR-12

C1030.10 Lockers**

Prefinished metal lockers are located throughout the corridors and boy's & girl's change rooms. The lockers in the corridors were refinished in 2009.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace lockers in corridors & change rooms - 900 lockers

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$425,000	Unassigned

Updated: MAR-12

C1030.12 Storage Shelving*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C1030.14 Toilet, Bath, and Laundry Accessories*

The washrooms & change rooms are equipped with typical washroom accessories: Paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C2010 Stair Construction*

The stairwells are typically steel framed with concrete filled pans.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C2020.01 Tile Stair Finishes*

The 4 main stairwells have a quarry tile floor finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C2020.05 Resilient Stair Finishes**

The stairs to the two mezzanine areas have a rubber floor finish.

Rating	Installed	Design Life	Updated
5 - Good	2003	20	MAR-12

Event: Replace rubber finish on stairs to mezzanine - 2 stairs, 1 flight

Type	Year	Cost	Priority
Lifecycle Replacement	2023	$20,000	Unassigned

Updated: MAR-12

C2020.08 Stair Railings and Balustrades*

The main 4 stairwells have a a stained wood handrail with painted steel pickets. The stairs to the mezzanine have a painted steel handrail, wall mounted.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Refinish stained handrail in 4 stairwells

Concern:
The finish on the wood handrail is worn and deteriorated.
Recommendation:
Refinish stained handrail in 4 stairwells

Type	Year	Cost	Priority
Preventative Maintenance	2012	$6,000	Low

Updated: MAR-12

Deteriorated finish on wood handrail in all stairwells

C3010.02 Wall Paneling**

A wood panel is located on the north wall in the cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace wood panel in cafeteria - Area -50m2

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

Updated: MAR-12

C3010.04 Gypsum Board Wall Finishes (Unpainted)*

Gypsum wallboard finish is located throughout the offices areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

C3010.06 Tile Wall Finishes**

Ceramic tile wall finish is located in the shower change rooms and Food Lab and cafeteria kitchen areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace ceramic tiles in kitchens and change rooms (Area -500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$120,000	Unassigned

Updated: MAR-12

C3010.11 Interior Wall Painting*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1993	0	MAR-12

C3020.01.02 Painted Concrete Floor Finishes*

Painted/sealed concrete floors are located in the utility room, mechanical room, auto shop, wood shop and mezzanine areas.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Repaint crack and repaint concrete floors in the mechanical & utility rooms (Area- 200m2)

Concern:

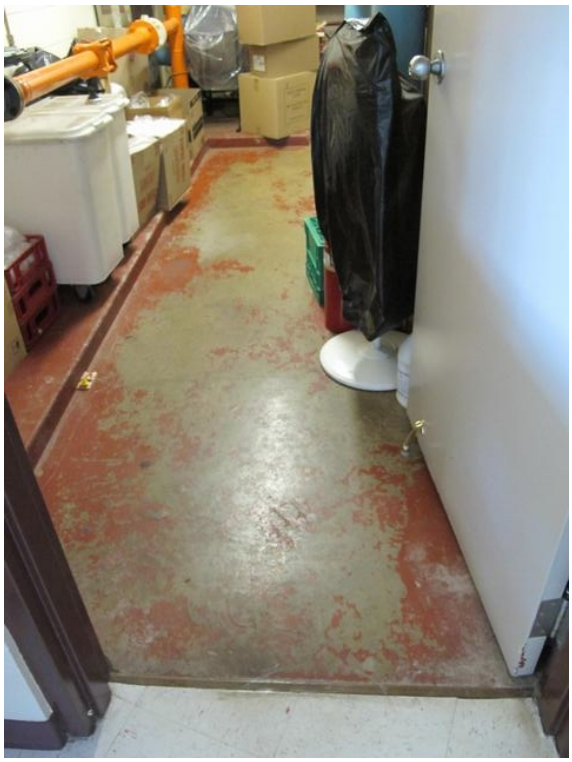
The paint finish in the utility room and mechanical room is worn and faded.

Recommendation:

Repaint crack and repaint concrete floors in the mechanical & utility rooms (Area- 200m2)

Type	Year	Cost	Priority
Preventative Maintenance	2012	$10,000	Low

Updated: MAR-12



Deteriorated paint finish in the meter room.

C3020.02 Tile Floor Finishes** - Ceramic Tile

Ceramic floor tile is located throughout the washrooms, change rooms and showers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	50	MAR-12

Event: Replace ceramic floor tile (Area - 500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2032	$80,000	Unassigned

Updated: MAR-12

C3020.02 Tile Floor Finishes** - Quarry tile

Quarry tile flooring is located throughout the main entrances, vestibules food services lab, cafeteria servery and shared link vestibule at the south entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	50	MAR-12

Event: Replace quarry floor tile (Area - 800m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2032	$200,000	Unassigned

Updated: MAR-12

C3020.04 Wood Flooring**

The gymnasium has a hardwood wood strip floor. The hardwood floor was refinished in 2004.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace hardwood floor in gymnasium - 655m2

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$160,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - Cork

A cork flooring is located in the Drama room and the lecture area of the CTS lab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	20	MAR-12

Event: Replace Cork flooring in the CTS and Drama Room - Area - 90m2

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

Updated: MAR-12

C3020.07 Resilient Flooring** - Rubber

The weight room and gym instructor offices have a rubber floor finish.

Rating	Installed	Design Life	Updated
5 - Good	2009	20	MAR-12

Event: Replace rubber floor in weight room and gym offices (Area - 100m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2029	$10,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - Sheet Vinyl

Sheet vinyl flooring is located in two computer rooms, copy room, medical room, book store and science prep rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	20	MAR-12

Event: Replace sheet vinyl flooring (Area - 300m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$25,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - VCT - Corridors

VCT flooring is located throughout the main circulation corridors

Rating	Installed	Design Life	Updated
5 - Good	2009	20	MAR-12

Event: Replace VCT flooring in Corridors (Area - 1500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2029	$75,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring** - VCT - Teaching areas

VCT flooring is located in the classrooms, corridor, most labs, staff room, office area and cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	20	MAR-12

Event: Replace origina VCT flooring in the teaching areas - 4000m2

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$200,000	Unassigned

Updated: MAR-12

C3020.08 Carpet Flooring**

Carpeting flooring is located in the library, religious room (chapel) and a prep room.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	15	MAR-12

Event: Replace Carpet Flooring (Area - 450 m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$45,000	Unassigned

Updated: MAR-12

C3030.04 Gypsum Board Ceiling Finishes (Unpainted)*

Suspended gypsum board ceilings are located in change rooms and washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

The majority of the ceilings in the main entrance, offices, corridors and classrooms have a 610mm x 1220mm suspended acoustical tile assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	25	MAR-12

Event: Replace suspended acoustic tile ceilings. (Area - 7200m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$350,000	Unassigned

Updated: MAR-12

C3030.07 Interior Ceiling Painting*

All the gypsum board and exposed steel structure in the gymnasium, shops, mechanical rooms and drama room have a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D1010.01.02 Hydraulic Passenger Elevators**

Otis hydraulic type passenger elevator (may be a single wall hydraulic cylinder), two stops, estimated 2,000 pound capacity (907 kg), estimated 100 feet per minute (0.508 m/s), 20 hp (14.91 kW).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Refurbish the passenger elevator

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

Updated: MAR-12

D1010.02 Lifts** - Stage

Stage wheelchair lift, estimated 450 pound (205 kg) capacity.

Rating	Installed	Design Life	Updated
5 - Good	2010	25	MAR-12

Event: Replace the stage wheelchair lift

Type	Year	Cost	Priority
Lifecycle Replacement	2035	$25,000	Unassigned

Updated: MAR-12

S4 MECHANICAL

D2010.04 Sinks** - c.1982

Original c.1982 sinks in the building include 52 general purpose sinks, two vitreous china hair wash sinks, one plastic laundry tub, and four plastic mop sinks. The general purpose sinks include single and double bowl stainless steel sinks and chemical resistant laboratory sinks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the original c.1982 sinks (59)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$88,500	Unassigned

Updated: MAR-12

D2010.04 Sinks** - c.1982 - Wash Fountain

There is one half Bradley type terrazzo wash fountain located in the industrial arts area.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	30	MAR-12

Event: Refurbish the wash fountain in the industrial arts area (1)

Concern:
The wash fountain mechanical components are in marginal condition due to wear and scaling.

Recommendation:
Refurbish the mechanical components of the half Bradley type wash fountain in the industrial arts area.

Type	Year	Cost	Priority
Repair	2012	$1,500	Low

Updated: MAR-12

Event: Replace the half Bradley type wash fountain in the industrial arts area (1)

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

Updated: MAR-12

D2010.04 Sinks** - c.2010

There are seven c.2010 general purpose stainless steel sinks in classroom 113 (food sciences) and one c.2010 general purpose stainless steel sink in the staff room (room 224).

Rating	Installed	Design Life	Updated
6 - Excellent	2010	30	MAR-12

Event: Replace the c.2010 sinks in rooms 113 and 224 (8)

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$12,000	Unassigned

Updated: MAR-12

D2010.05 Showers**

Showers are located in the boy's and girl's change rooms and in the physical education office. In the boy's change room, there is one prefabricated metal shower stall as well as a communal shower with nine stations (two Bradley stainless steel gang type showers consisting of multiple shower heads mounted around a common riser). In the girl's change room, there are four prefabricated metal shower stalls as well as a communal shower with five stations (one Bradley stainless steel gang type shower consisting of multiple shower heads mounted around a common riser). In the physical education office, there are two individual shower stalls. In the change room communal showers and in the physical education office showers, the shower walls and floors have architectural finishes (ceramic tile) and this element covers only the mechanical components of the showers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the showers (21)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$26,000	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers**

There are five wall mounted stainless steel refrigerated drinking fountains located in the corridors throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace the refrigerated drinking fountains (5)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$17,500	Unassigned

Updated: MAR-12

D2010.09 Other Plumbing Fixtures*

Some of the science rooms are equipped with emergency safety showers and/or emergency eyewash stations.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - c.1982

Original c.1982 washroom plumbing fixtures include floor mounted vitreous china flush valve type toilets (39), wall mounted vitreous china flush valve type urinals (15), counter mounted enameled steel lavatories (3), and wall mounted vitreous china lavatories (7).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace the c.1982 washroom plumbing fixtures (39 toilets, 15 urinals, and 10 lavatories)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$121,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - c.1994

There are 30 counter mounted stainless steel lavatories in the washrooms installed in c.1994.

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	35	MAR-12

Event: Replace the c.1994 washroom plumbing fixtures (30 lavatories)

Type	Year	Cost	Priority
Lifecycle Replacement	2029	$45,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - c.2010

Washroom plumbing fixtures installed in c.2010 include the two floor mounted vitreous china tank type toilets and the two counter mounted vitreous china lavatories in the washrooms located in the staff room (room 224).

Rating	Installed	Design Life	Updated
6 - Excellent	2010	35	MAR-12

Event: Replace the c.2010 washroom plumbing fixtures (two toilets and two lavatories)

Type	Year	Cost	Priority
Lifecycle Replacement	2045	$7,000	Unassigned

Updated: MAR-12

D2020.01.01 Pipes and Tubes: Domestic Water*

There is one municipal water supply to the building (200 mm diameter) which feeds the building domestic water distribution system (100 mm diameter branch equipped with a 50 mm diameter water meter), and the building standpipe system (150 mm diameter branch). The water supply enters the building in the meter room at the west end of the building. The building domestic water pressure piping is copper.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2020.01.02 Valves: Domestic Water**

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the domestic water distribution system valves (8,591 SM GFA)

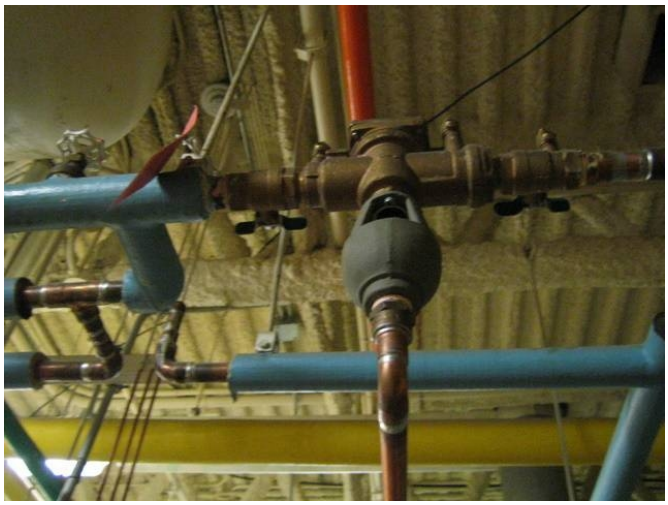
Type	Year	Cost	Priority
Lifecycle Replacement	2022	$47,000	Unassigned

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)** - c.1992

There is a 150 mm diameter backflow prevention device for the water feed to the building standpipe system (located in the meter room).

Rating	Installed	Design Life	Updated
4 - Acceptable	1992	20	MAR-12



Backflow preventer.JPG

Event: Replace the c.1992 backflow prevention device for the standpipe system (150 mm diameter)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$11,000	Unassigned

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)** - c.1994

There is a 100 mm diameter backflow prevention device for the water feed to the building domestic water distribution system (located in the meter room).

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	20	MAR-12

Event: Replace the c.1994 backflow prevention device for the domestic water distribution system (100 mm diameter)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$5,500	Unassigned

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)** - c.2007

There is a 25 mm diameter backflow prevention device for the make-up water supply to the building steam boiler and closed loop hot water heating system (located in the boiler room).

Rating	Installed	Design Life	Updated
4 - Acceptable	2007	20	MAR-12

Event: Replace the c.2007 backflow prevention device for the heating system make-up water supply (25 mm diameter)

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$1,000	Unassigned

Updated: MAR-12

D2020.02.02 Plumbing Pumps: Domestic Water**

There is a circulation pump (P5) to circulate domestic hot water from the domestic hot water boilers (B3 and B4) to the domestic hot water storage tank (TK2). There is a circulation pump (P6) for the domestic hot water system which maintains the domestic hot water circulation loop at temperature. The domestic hot water circulation pumps P5 and P6 are located in the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	20	MAR-12

Event: Replace the domestic hot water circulation pumps P5 and P6

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$4,400	Unassigned

Updated: MAR-12

D2020.02.03 Water Storage Tanks** - DHW Storage Tank TK2

The domestic hot water heating system consists of two natural gas fired domestic hot water boilers (boilers B3 and B4), and a domestic hot water storage tank (storage tank TK2). This element covers the domestic hot water storage tank. The domestic hot water storage tank is insulated and has a capacity of 3,000 L. The domestic hot water storage tank is located in the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the domestic hot water storage tank TK2 (3,000 L)

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

Updated: MAR-12

D2020.02.06 Domestic Water Heaters** - DHW Boilers B3 and B4

The domestic hot water heating system consists of two natural gas fired domestic hot water boilers (boilers B3 and B4), and a domestic hot water storage tank (storage tank TK2). This element covers the domestic hot water boilers. Each of the domestic hot water boilers is a Raypak model 383-WTB with an input heating capacity of 345,000 Btu/h (101.12 kW). The domestic hot water boilers are located in the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	20	MAR-12

DHW Heaters.JPG

Event: Replace DHW boilers B3 and B4 (two at 101.12 kW each)

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

Updated: MAR-12

D2020.03 Water Supply Insulation: Domestic*

Where visible, the domestic cold water piping is insulated to prevent condensation and the domestic hot water piping is insulated to reduce heat loss. The insulation assembly consists of fiberglass insulation protected with a painted fabric cover in exposed areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2030.01 Waste and Vent Piping*

Visible waste and vent piping is generally copper in smaller diameters and cast iron in larger diameters. The building sanitary drainage system discharges at the east end of the building to the municipal sanitary sewer system (200 mm diameter discharge line).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2030.02.04 Floor Drains*

Floor drains are used in the building in various areas including the washrooms, the greenhouse, the shipping area, the kitchen, the shop areas, and the boiler room. The floor drains discharge to the building sanitary drainage system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2040.01 Rain Water Drainage Piping Systems*

The flat roof areas of the building drain via standard roof drains and internal storm water drainage piping. The storm water drainage piping in the building is generally cast iron. The building storm water drainage system discharges on the east side of the building to the municipal storm sewer system (450 mm diameter discharge line).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D2040.02.04 Roof Drains*

Storm water drainage for the building flat roof areas is via roof drains with internal drainage piping. The roof drains are equipped with metal strainers and are not equipped with flow control weirs. There are eight 150 mm diameter roof drains, seven 100 mm diameter roof drains and one 50 mm diameter roof drain.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

Roof drain.JPG

D3010.01 Oil Supply Systems (Fuel, Diesel)*

There is a fuel oil (diesel fuel) supply system for the building standby generator. The fuel oil supply system is located in the standby generator room and consists of a fuel oil storage tank and related piping and controls. The fuel oil storage tank has a secondary containment enclosure.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3010.02 Gas Supply Systems*

The natural gas supply to the building is underground to the meter room at the west end of the building (100 mm diameter supply line). The gas meter and pressure reducing station are located in the meter room. The natural gas piping is schedule 40 steel. Natural gas is used in the building for the heating system hot water boilers B1 and B2, the domestic hot water boilers B3 and B4, the steam humidification boiler B5, the packaged rooftop air handling units, and for miscellaneous kitchen equipment and science room use. Isolation valves and pressure regulators are utilized at each point of use.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3020.01.01 Heating Boilers & Accessories: Steam** - Humidification Boiler B5

There is one natural gas fired steam boiler located in the boiler room which provides steam for humidification (boiler B5). The steam boiler is a Weil-McLain boiler with an input heating capacity of 850,000 Btu/h (249.14 kW). The steam boiler is not functional and is not currently being used.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	35	MAR-12

Event: Replace the steram humidification boiler B5 (249.14 kW)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$30,000	Unassigned

Updated: MAR-12

Event: Service and test steam boiler B5 (249.14 kW)

Concern:
The steam humidification boiler B5 has been taken out of service.

Recommendation:
Service and test the steam humidification boiler to prepare it for operation.

Type	Year	Cost	Priority
Repair	2012	$4,000	Low

Updated: MAR-12

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

The combustion gases from the steam boiler discharge through insulated breeching to a common stack which penetrates the roof above the boiler room (the common stack serves the heating boilers B1 and B2 and the steam humidification boiler B5). This element covers the steam boiler breeching to the common stack.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace the steam boiler breeching to the common stack (4 m)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$2,600	Unassigned

Updated: MAR-12

D3020.01.04 Water Treatment: Steam Boilers*

Feedwater treatment equipment for the steam boiler includes a water softener and chemical addition using a chemical dosing pump.

Rating	Installed	Design Life	Updated
2 - Poor	1982	0	MAR-12

Event: Replace the steam boiler feedwater treatment equipment (water softener and chemical dosing pump)

Concern:
The feedwater treatment equipment is not used and is not functional.

Recommendation:
Replace the steam boiler feedwater treatment equipment.

Type	Year	Cost	Priority
Failure Replacement	2012	$5,000	Medium

Updated: MAR-12

D3020.02.01 Heating Boilers and Accessories: H.W.** - Hot Water Heating Boilers B1 and B2

There are two natural gas fired hot water boilers located in the boiler room which provide hot water for building heating (boilers B1 and B2). Each boiler is a Raytherm model 4000-WTD with an input heating capacity of 4,000,000 Btu/h (1,172.4 kW).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Boilers.JPG

Event: Replace the two hot water heating boilers B1 and B2 (1,172.4 kW each)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$140,000	Unassigned

Updated: MAR-12

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

The combustion gases from the two hot water boilers discharge through insulated breeching to a common stack which penetrates the roof above the boiler room. There is a combustion air supply duct to the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace the hot water boiler breeching, the common stack and the combustion air supply (15 m)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$18,000	Unassigned

Updated: MAR-12

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

Water treatment for the closed loop hot water heating system consists of manual chemical addition via a pot feeder and sidestream cartridge filtration in parallel with the hot water circulation pumps (P3 and P4).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

Air distribution fans remote from the packaged rooftop units include transfer fans, heating fans and and a fresh air supply fan (eight fans total).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3040.01.03 Air Cleaning Devices: Air Distribution*

The packaged rooftop heating and ventilating units (RTU1 through RTU10) and the packaged rooftop make-up air unit)MUA1) are equipped with filters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3040.01.04 Ducts: Air Distribution*

The air distribution ducts include the supply air and return air duct systems for the packaged rooftop units serving the building (RTU1 through RTU10 and MUA1). The duct systems include associated components not specifically listed elsewhere, including duct insulation, turning vanes, dampers, mixing boxes, etc.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Air outlets and inlets include supply air diffusers and return air grilles for the air distribution systems associated with the packaged rooftop HVAC units. Typical supply air diffusers include rectangular duct mounted diffusers (in the gymnasium and shop areas), wall mounted grilles and square cone type supply air diffusers mounted in the T-bar ceiling grid. Typical return air grilles include wall mounted rectangular grilles and eggcrate type return air grilles in the T-bar ceiling grid.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

This element includes the steam distribution piping from the steam boiler to the duct mounted humidification systems and the condensate drain piping from the humidifiers and steam traps to the floor drains (there is no condensate collection system). The steam distribution system includes the steam distribution piping, condensate drain piping, piping fittings, piping insulation, valves, piping specialties, and the steam traps.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the steam distribution system (8,591 SM GFA)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$35,000	Unassigned

Updated: MAR-12

D3040.03.01 Hot Water Distribution Systems**

The building is heated with a hot water heating system. The hot water heating system provides hot water to the hydronic terminal units (including finned tube radiation cabinets, force flow convection heaters, unit heaters, and terminal reheat coils). There are two main hot water circulation pumps (P3 and P4). The hot water distribution system includes all components of the closed loop hot water heating system including piping, valves, piping insulation, piping specialties, circulation pumps, and the expansion tank. The circulation pumps and the expansion tank are located in the boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the hot water distribution system (8,591 SM GFA)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$750,000	Unassigned

Updated: MAR-12

D3040.04.01 Fans: Exhaust**

There a total of 29 exhaust fans providing sanitary, local and general exhaust for the building. The exhaust fans include eight interior exhaust fans, 17 roof mounted cabinet exhaust fans and four roof mounted mushroom type exhaust fans.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	30	MAR-12

Event: Clean and paint the roof mounted cabinet exhaust fans (17)

Concern:
The 17 roof mounted cabinet exhaust fans are deteriorating due to weathering and corrosion.

Recommendation:
Clean and paint the roof mounted cabinet exhaust fans to extend their service life.

Type	Year	Cost	Priority
Repair	2012	$3,500	Low

Updated: MAR-12

Event: Replace the building exhaust fans (29)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$65,000	Unassigned

Updated: MAR-12

D3040.04.02 Air Cleaning Devices: Exhaust* - Dust Collection System

There is a dust collection system for the woodworking shop. The dust collection system includes the exterior dust collector, the collection ducts (including fittings, blast gates, supports, etc.), and the return air duct.

Rating	Installed	Design Life	Updated
4 - Acceptable	2009	0	MAR-12

D3040.04.03 Ducts: Exhaust*

Exhaust duct systems include the collection and discharge ducts (as applicable) associated with the 29 building exhaust fans. This element includes all components of the exhaust duct systems not specifically covered under other elements, including ducts, duct supports, dampers, insulation, etc.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust air inlets include the inlet grilles associated with the exhaust system collection ducts. Exhaust air outlets include the discharge terminations for the interior exhaust fans.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D3050.01.01 Computer Room Air Conditioning Units**

The computer server room is equipped with a split ductless direct expansion type air conditioning unit. The capacity of the unit is estimated to be three tons (36,000 Btu/h or 10.55 kW).

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	30	MAR-12

Event: Replace the server room split ductless air conditioning unit (10.55 kW)

Type	Year	Cost	Priority
Lifecycle Replacement	2032	$8,000	Unassigned

Updated: MAR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)** - Make-Up Air Unit MUA1

The packaged rooftop make-up air unit for the kitchen is a Climate Master model CDFR-6 with an input heating capacity of 286,500 Btu/h (83.97 kW) and a flow capacity of 2,400 CFM (1,132.8 L/s).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace packaged make-up air unit MUA1 (83.97 kW and 1,132.8 L/s)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$35,000	Unassigned

Updated: MAR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)** - Packaged Rooftop Units RTU1 through

Ventilation for the building is provided by ten packaged rooftop heating and ventilating units (RTU1 through RTU10). Each packaged rooftop unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, a supply air fan, a natural gas fired heating section, and a return air fan (return air fans for units RTU1 through RTU5 only). Packaged rooftop unit RTU1 is a Climate Master model FLSR-H-210 with a single stage input heating capacity of 210,000 Btu/h (61.55 kW) and a flow capacity of 5,800 CFM (2,737.6 L/s). Packaged rooftop unit RTU2 is a Climate Master model FLSR-H-420 with a two stage input heating capacity of 420,000 Btu/h (123.10 kW) and a flow capacity of 11,200 CFM (5,286.4 L/s). Packaged rooftop unit RTU3 is a Climate Master model FLSR-H-420 with a two stage input heating capacity of 420,000 Btu/h (123.10 kW) and a flow capacity of 10,550 CFM (4,979.6 L/s). Packaged rooftop unit RTU4 is a Climate Master model FLSR-H-420 with a two stage input heating capacity of 420,000 Btu/h (123.10 kW) and a flow capacity of 15,300 CFM (7,221.6 L/s). Packaged rooftop unit RTU5 is a Climate Master model FLSR-H-420 with a two stage input heating capacity of 420,000 Btu/h (123.10 kW) and a flow capacity of 13,000 CFM (6,136.0 L/s). Packaged rooftop unit RTU6 is a Climate Master model FLSR-H-210 with a single stage input heating capacity of 210,000 Btu/h (61.55 kW) and a flow capacity of 5,800 CFM (2,737.6 L/s). Packaged rooftop unit RTU7 is a Climate Master model FLSR-H-210 with a single stage input heating capacity of 210,000 Btu/h (61.55 kW) and a flow capacity of 5,800 CFM (2,737.6 L/s). Packaged rooftop unit RTU8 is a Climate Master model FLSR-H-420 with a two stage input heating capacity of 420,000 Btu/h (123.10 kW) and a flow capacity of 7,000 CFM (3,304.0 L/s). Packaged rooftop unit RTU9 is a Climate Master model FLSR-H-630 with a three stage input heating capacity of 630,000 Btu/h (184.65 kW) and a flow capacity of 4,000 CFM (1,888.0 L/s). Packaged rooftop unit RTU10 is a Climate Master model FLSR-H-1680 with an eight stage input heating capacity of 1,680,000 Btu/h (492.41 kW) and a flow capacity of 12,000 CFM (5,664.0 L/s).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace packaged rooftop units RTU1 through RTU10 (average 4,269 L/s and 147.72 kW each)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$450,000	Unassigned

Updated: MAR-12

D3050.02 Air Coils** - Terminal Reheat Coils

Hot water reheat coils are located in the air distribution ducts to provide air temperature control. There are an estimated 40 reheat coils.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the hot water reheat coils (40)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$48,000	Unassigned

Updated: MAR-12

D3050.03 Humidifiers**

Duct mounted steam humidifiers provide humidification for the building. It is estimated that there are ten humidifiers (one for each packaged rooftop heating and ventilating unit).

Rating	Installed	Design Life	Updated
3 - Marginal	1982	25	MAR-12

Event: Inspect and test the steam humidifiers (10)

Concern:
The steam humidifiers are not currently being used.
Recommendation:
Inspect and test the steam humidifiers to prepare them for operation.

Type	Year	Cost	Priority
Repair	2012	$4,000	Low

Updated: MAR-12

Event: Replace the duct mounted steam humidifiers (10)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$20,000	Unassigned

Updated: MAR-12

D3050.05.01 Convectors** - Force Flow Convection Heaters

Wall and ceiling mounted hot water force flow convection heaters are used in high heat load areas including the entrance vestibules. There are seven force flow convection heaters (FF1 through FF7).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the force flow convection heaters (FF1 through FF7)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$28,000	Unassigned

Updated: MAR-12

D3050.05.03 Finned Tube Radiation**

Hot water finned tube radiation cabinets provide perimeter heating for many areas of the building. The estimated length of finned tube radiation cabinets is 375 m.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the finned tube radiation cabinets (375 m)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$170,000	Unassigned

Updated: MAR-12

D3050.05.06 Unit Heaters**

Suspended hot water unit heaters are used in utility areas in the building including the mechanical rooms, the gymnasium, and the shipping area. There are 16 unit heaters in the building (UH1 through UH16).

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the unit heaters (UH1 through UH16)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$53,000	Unassigned

Updated: MAR-12

D3060.02.01 Electric and Electronic Controls**

Electric controls are used for some of the HVAC equipment including the force flow convection heaters and the unit heaters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace the electric controls for the force flow heaters and the unit heaters (23)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$7,000	Unassigned

Updated: MAR-12

D3060.02.02 Pneumatic Controls**

The building HVAC system controls and actuators are generally pneumatic (electric controls are used for the force flow convection heaters and the unit heaters - see D3060.02.01 Electric and Electronic Controls**). The control air supply system is located in the boiler room and consists of two air compressors mounted on an air receiver tank, as well as a refrigerated air dryer. Pneumatic controls include pneumatic thermostats, control valves for the heating terminal units (finned tube radiation cabinets and reheat coils), and control valves for the humidifiers. This element includes the control air distribution system and components, and the control air supply system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the pneumatic controls (8,591 SM GFA)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$45,000	Unassigned

Updated: MAR-12

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

A building management and control system (BMCS) provides monitoring and control functions for the main HVAC equipment. The BMCS is an Andover Controls model AC256M installed in c.1991. Approximately 20% of the original system was upgraded to Andover Continuum components in c.2006. The existing system has approximately 185 control points.

Rating	Installed	Design Life	Updated
3 - Marginal	1991	20	MAR-12

DDC Controls.JPG

Event: Replace the building management and control system (8,591 SM GFA)

Concern:

The building management and control system (BMCS) is obsolete and replacement parts for the original Andover Controls system are difficult to obtain.

Recommendation:

Replace the building management and control system.

Type	Year	Cost	Priority
Failure Replacement	2014	$185,000	Medium

Updated: MAR-12

D4020 Standpipes*

The building is equipped with a standpipe system feeding standard fire hose cabinets located throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D4030.01 Fire Extinguisher, Cabinets and Accessories*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

There is a fire suppression system for the cafeteria cooking hood.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace the fire suppression system for the cafeteria cooking hood (1)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$12,500	Unassigned

Updated: MAR-12

D4090.07 Fire Pumps & Water Storage Tanks*

The building standpipe system is equipped with a fire pump (P1) and a jockey pump (P2). The fire pump capacity is 500 USGPM (31.54 L/s).

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Repair or replace the fire pump packing

Concern:
The fire pump shows evidence of leakage around the packing and the casing of the pump is corroding due to the leakage.
Recommendation:
Repair or replace the fire pump packing.

Type	Year	Cost	Priority
Repair	2012	$2,000	Low

Updated: MAR-12

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The incoming hydro service to Holy Trinity School is a 347/600V, 3-phase, 4-wire service from an exterior padmounted transformer located on the north side of the school. The padmounted transformer is owned and maintained by EPCOR. The EPCOR meter is located in the main electrical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

D5010.02 Secondary Electrical Transformers (Interior)**

Transformer TA is a 225kVA, 600-120/208V Polygon transformer located in the 2nd floor mechanical room. Transformer TB is a 300kVA, 600-120/208V Polygon transformer located in the main electrical room. There are two 9kVA, 600-120/208V polygon transformers for emergency panels EA and EB.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace 600-120/208V Secondary Transformers (1 x 300kVA, 1 x 225kVA & 2 x 9kVA)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$51,000	Unassigned

Updated: MAR-12

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

The main electrical switchboard is a Westinghouse switchboard with mains rated at 1600A, 347/600V, 3-phase, 4-wire. The switchboard has a 1600A, main breaker and a distribution section with moulded case breakers feeding distribution panel HA, Transformer TB, Panel MA, Panel HB, Elevator #1 and the Emergency Transfer Switch. The switchboard is located in the main electrical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	40	MAR-12

Event: Replace Main Distribution Switchboard (1600A, 347/600V)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$32,000	Unassigned

Updated: MAR-12

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

The majority of the school's electrical branch circuit panelboards are original. There are seven 347/600V panels (2 emergency) fed from the main switchboard or distribution panel HA. There are fifteen 120/208V branch circuit panelboards (2 emergency) in the school. Eleven of the 120/208V branch circuit panels are 84 circuit and the other four are 42 circuit panels. Panels K, L, R and S have an isolated ground bus. The panels are all manufactured by Westinghouse and there is spare capacity in most panels for future loads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace Branch Circuit Panels (22 panels)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$120,000	Unassigned

Updated: MAR-12

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

There are three main distribution panels in the school. Distribution panel HA is an 800A, 347/600V, Westinghouse distribution panel located in the 2nd floor mechanical room. Distribution panels A and B are 1200A, 120/208V, Westinghouse distribution panels that feed most of the 120/208V branch circuit panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace Distribution Panels (1 x 800A, 347/600V & 2 x 1200A, 120/208V)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$52,000	Unassigned

Updated: MAR-12

D5010.07.02 Motor Starters and Accessories**

Individual motor starters in the school are Westinghouse motor starters. Motor rated starter switches have been provided for fractional horsepower motor loads. The starters are typically located within the mechanical rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace Motor Starters (25 starters and 25 manual starter switches)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$65,000	Unassigned

Updated: MAR-12

D5020.01 Electrical Branch Wiring*

The majority of the cabling is standard building wire in EMT conduit. Armoured cable has been provided, in selected locations, for final connections to mechanical and miscellaneous equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

Event: Replace Receptacles with GFCI Type (120 receptacles)

Concern:
Receptacle locations near wet areas such as sinks or water coolers are not ground fault protected.

Recommendation:
Replace outlets with GFCI style outlets.

Type	Year	Cost	Priority
Code Upgrade	2012	$12,000	Low

Updated: MAR-12

Receptacles within 1m of sink location are not GFI type.

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

Lighting is typically controlled by low voltage switches. Low voltage relay panels are typically located adjacent to the lighting panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent fixtures have been installed in areas such as the staff room and religious studies room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D5020.02.02.02 Interior Fluorescent Fixtures**

The fluorescent lighting fixtures within the school were upgraded in 2002. T8 lamps and electronic ballasts have been installed in the fluorescent lighting fixtures. The typical classroom lighting fixtures are surface mounted T8 fluorescent wrap-around fixtures. T5 fluorescent fixtures have been provided in the gymnasium. T8 industrial fluorescent fixtures with wire guards have been installed in the shop areas. There are recessed compact fluorescent downlights in the cafeteria.

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	30	MAR-12

Event: Replace Damaged or Missing Lenses (100 lenses)

Concern:
Many of the fluorescent fixtures in the building have damaged or missing lenses.

Recommendation:
Replace damaged and missing lenses on fluorescent lighting fixtures.

Type	Year	Cost	Priority
Repair	2012	$10,000	Low

Updated: MAR-12

Lenses missing on fluorescent lighting fixtures.

Event: Replace Interior T8 Fluorescent Lighting (8591 m2 gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2032	$532,000	Unassigned

Updated: MAR-12

D5020.02.02.05 Other Interior Fixtures*

Theatrical floodlights and spotlights have been provided for the stage area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D5020.02.03.01 Emergency Lighting Built-in*

Emergency lighting is provided by standard lighting fixtures that are connected to the emergency power panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	0	MAR-12

D5020.02.03.02 Emergency Lighting Battery Packs**

Battery powered emergency lighting units have been provided in the generator room, main electrical room and stage area.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	20	MAR-12

Event: Replace Emergency Lighting Battery Units (3 units)

Concern:
Emergency lighting battery units are aged. Units may not be able to maintain emergency lighting for the 30 minutes required by the building code.

Recommendation:
Replace emergency lighting battery units.

Type	Year	Cost	Priority
Failure Replacement	2012	$3,300	High

Updated: MAR-12

Aged emergency lighting battery unit in generator room.

D5020.02.03.03 Exit Signs*

The exit signs are typically installed at building exits and along egress routes. The exit signs are metal, stencil faced exit signs that have been retrofitted with LED lamps.

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	0	MAR-12

D5020.02.07 Dimming Control*

There are two 12-channel Lightronics dimmer packs, located in the stage area.

Rating	Installed	Design Life	Updated
5 - Good	2005	0	MAR-12

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

H.P.S floodlights and surface mounted HPS fixtures have been provided for exterior lighting.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

Photocell control has been provided for the exterior lighting fixtures.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D5030.01 Detection and Fire Alarm**

A single stage, conventional, supervised, non-coded fire detection and alarm system has been provided within the school. The system consists of pull stations, smoke detectors, heat detectors, audible (bells) signal devices and shutdown interlocks to mechanical air handling systems. The main control panel is a Simplex 2100 panel, located in the administration office area. Remote fire alarm annunciators with passive graphics are provided at the main entrance and the shared link. The fire alarm control panel has 30 zones (23 active). The 2010 inspection report indicated that there were no deficiencies for the system.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	25	MAR-12

Event: Replace Fire Alarm System (8591 sq. m. gfa)

Concern:

Existing Simplex 2100 fire alarm panel is no longer manufactured and repair parts no longer available. Fire devices are aged and may no longer be reliable. There are no strobes in the school.

Recommendation:

Provide new addressable fire alarm system to current code requirements. Provide strobe coverage throughout.

Type	Year	Cost	Priority
Failure Replacement	2012	$129,000	High

Updated: MAR-12

Aged Simplex 2100 fire alarm control panel in administration area.

D5030.02.02 Intrusion Detection**

The main DSC security system panel is located in the telephone room. Security keypads have been provided in various locations within the school. PIR motion detectors have been provided throughout the school. Door contacts have been installed on exterior doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	25	MAR-12

Event: Replace Intrusion Detection System (1 panel, 2 keypads, 43 motion detectors & 17 door contacts)

Type	Year	Cost	Priority
Lifecycle Replacement	2023	$36,000	Unassigned

Updated: MAR-12

D5030.02.04 Video Surveillance**

Surveillance cameras have been provided in the building. There are a total of 6 exterior cameras located around the perimeter of the school. Switching and recording equipment for the surveillance system is located in the CTS area and the telephone room. There are 16 cameras monitored in the administration area.

Rating	Installed	Design Life	Updated
5 - Good	2009	25	MAR-12

Event: Replace Video Surveillance System (24 cameras + recording and control equipment)

Type	Year	Cost	Priority
Lifecycle Replacement	2034	$29,000	Unassigned

Updated: MAR-12

D5030.03 Clock and Program Systems*

Most clocks are battery operated. There are some LED clocks controlled by the Telecor communications system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

D5030.04.01 Telephone Systems*

The telephone system is an NEC system. Handsets are located in the classrooms and selected areas such as the general office. The telephone system is integrated with the Telecor system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	0	MAR-12

D5030.04.04 Data Systems*

Data system servers are located in selected rooms within the school. The network wiring within the school is typically Cat. 5 or better. Supernet has been installed in the school. A fibre optic feed is utilized for high speed data transmission. The network switches and patch panels are rack mounted.

Rating	Installed	Design Life	Updated
5 - Good	2004	0	MAR-12

D5030.05 Public Address and Music Systems**

The public address system is a Telecor XL system located in the telephone room. Speakers are typically surface mounted square units or recessed round units. The system is integrated with the telephone system.

Rating	Installed	Design Life	Updated
5 - Good	2011	20	MAR-12

Event: Replace P.A. System (Head-end equipment and 50 classrooms)

Type	Year	Cost	Priority
Lifecycle Replacement	2031	$65,000	Unassigned

Updated: MAR-12

D5030.06 Television Systems*

Coaxial cable for television systems has been installed within the school. A Blonder Tongue signal amplifier is located in the main electrical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

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

A 75kW/93.8kVA, BBC, diesel powered emergency generator is located in the main floor generator room near the shipping room. The generator has a 347/600V three phase, 4 wire output.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace Emergency Generator (75kVA generator)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$33,000	Unassigned

Updated: MAR-12

D5090.02 Packaged Engine Generator Systems (Emergency Power System)** - Transfer Switch

The transfer switch is a Thomson Technology transfer switch rated at 250A, 347/600V.

Rating	Installed	Design Life	Updated
5 - Good	2009	35	MAR-12

Event: Replace Emergency Transfer Switch (250A, 347/600V transfer switch)

Type	Year	Cost	Priority
Lifecycle Replacement	2044	$11,000	Unassigned

Updated: MAR-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theatre and Stage Equipment*

Full compliment of curtains, audio visual and lighting equipment in the drama room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

E1090.03 Food Service Equipment*

A Food Science Lab is located opposite the Cafeteria kitchen. Kitchen equipment consists of stainless steel built-in and movable type; for meat preparation, food preparation, cooking, baking, pot, dishwashing, refrigerator/freezers and storage. Stainless Steel fume hoods are located in the food prep area.The cafeteria kitchen includes a complete servery. The Food Lab was upgraded in 2010.

Rating	Installed	Design Life	Updated
5 - Good	2010	0	MAR-12

E1090.04 Residential Equipment*

The food science lab is equipped with refrigerator, stoves, microwaves and several small kitchen appliances. The staff kitchen area is equipped with a refrigerator, dishwasher and microwaves. Microwave ovens are located in the lunch room

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Electronic scoreboards, movable basketball hoops are located in the gymnasiums. Exercise equipment is located in the weight room opposite the gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

E2010.02 Fixed Casework**

Most classrooms are equipped with custom wood open faced and/or painted cabinet units. Each science laboratory is equipped with upper wood cabinets, lower cupboards c/w counter-top, open fixed shelving. Most of the other labs, such as; cosmology, wood shop all have fixed storage wood cabinets throughout the room. The library has fixed and moveable wood shelving casework. Room 200 has fixed wood tables. The main entrance reception area has solid wood counter. Glass display cabinets are located in the corridors & entrance area. The change rooms & washrooms have fixed seating. The staff and cafeteria kitchens are equipped with upper and lower custom wood cabinet. The washrooms have plastic laminate counter tops. The staff room has granite counter tops. The staff room millwork was upgraded in 2010.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	35	MAR-12

Event: Replace all original millwork (Based on 8591m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$760,000	Unassigned

Updated: MAR-12

E2010.03.01 Blinds**

The windows in most classrooms have integral blinds within the assembly. Several interior windows and office windows have either vertical or roller type blinds. Many windows throughout the school do not have a blind assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	30	MAR-12

Event: Replace horizontal metal blinds (Approx 120 units)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$120,000	Unassigned

Updated: MAR-12

E2020.02.03 Furniture*

All classroom, shops, labs and offices areas are equipped with movable desks and chairs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

F1010.02.03 Glazed Structures* - Greenhouse - Room 244

An aluminum framed, sealed double glazed greenhouse is located adjacent to the Biology lab (Rm. 244) on the second floor.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

F1010.02.05 Grandstands and Bleachers**

Wood Bleachers on re-tractable metal frames are located in the gymnasium.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	30	MAR-12

Event: Replace movable bleachers in the Gymnasium - Based on 500 seats

Concern:

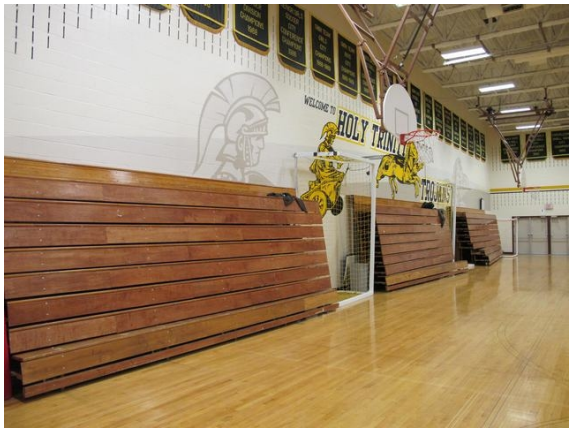
The school board representative indicated that the bleachers are not opening and closing properly, creating a safety concern to students and staff.

Recommendation:

Replace movable bleachers in the Gymnasium - Based on 500 seats

Type	Year	Cost	Priority
Failure Replacement	2012	$200,000	Medium

Updated: MAR-12



Re-tractable wood bleachers in gymnasium.

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

A handicapped parking space is provided. Barrier free access from the parking area to the main building entrance is provided on the north-west elevation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K4010.02 Barrier Free Entrances*

There is a barrier free access ramp at the main entrance to the facility. Power assist doors are not provided throughout the entire school.

Rating	Installed	Design Life	Updated
3 - Marginal	1982	0	MAR-12

Event: Provided power operators for barrier free access at the main west & east entrance

Concern:

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

Recommendation:

Provided power operators for barrier free access at the main west & east entrance

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

Updated: MAR-12

K4010.03 Barrier Free Interior Circulation*

Generally, barrier free access is provided throughout the public spaces of the school. An elevator is located opposite the main office area. The drama/music room has a lift for the stage area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K4010.04 Barrier Free Washrooms*

Four barrier free washrooms are identified in the school, two on the main and two on the second floor.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K4030.01 Asbestos*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April, 2008 for details. Report indicates minor asbestos presence in window caulking and cement board. No costs were provided by ECDSB.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K4030.04 Mould*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April 2008. No mould issues know or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K4030.09 Other Hazardous Materials*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April 2008.No hazardous issues know or reported.

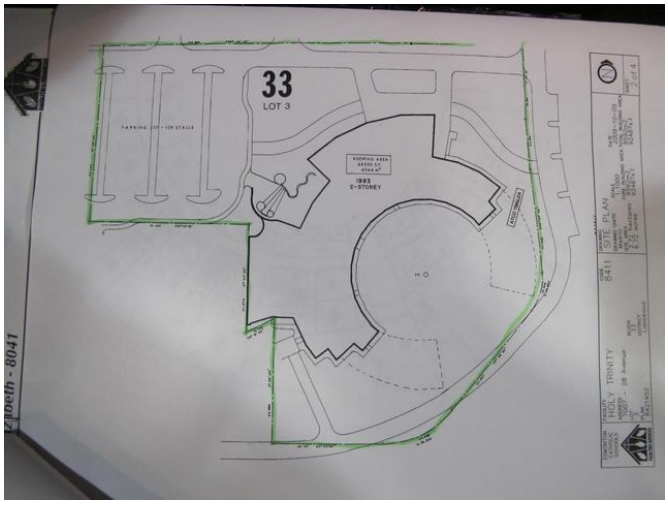
Rating	Installed	Design Life	Updated
4 - Acceptable	1982	0	MAR-12

K5010.02 Building Documentation*

The evaluation was conducted on October 24, 2011, by Asset Evolution Inc.

Holy Trinity Catholic High School, originally built in1982 is a two-storey structure with an area of 8591 m2. Holy Trinity is attached along the west elevation of Millwoods Recreational Centre and shares the site with Millwoods Recreational Centre and J. Percy Page High School. The school includes several classrooms, a chapel, a library, computer rooms, science room, a food science lab, cafeteria, a CTS lab, wood shop, music / drama room, a gymnasium, weight room, change rooms, staff room and administration offices.

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



Holy Trinity Catholic High School - Site Plan and Roof Plan