

RECAPP Facility Evaluation Report

Calgary School District #19



Glendale Elementary School

B2651A

Calgary

Facility Details

Building Name: Glendale Elementary School
Address: 2415 Kelwood Drive S. W.
Location: Calgary

Building Id: B2651A
Gross Area (sq. m): 2,769.60
Replacement Cost: \$7,426,405
Construction Year: 1956

Evaluation Details

Evaluation Company: Golder Associates Ltd.
Evaluation Date: August 20 2010
Evaluator Name: Peter Kelly

Total Maintenance Events Next 5 years: **\$2,020,000**
5 year Facility Condition Index (FCI): **27.20%**

General Summary:

The Glendale Elementary School is a K-6 school with 268 students in 2009-10.

The original 2231.8 m2 one-storey (plus partial basement) was constructed in 1954. A 637.8 m2 one-storey addition was constructed in 1959. The current gross floor area is reported to be approximately 2770 m2.

The school building and improvements are generally in acceptable condition overall.

Structural Summary:

The building foundations likely consist of a poured concrete assembly with concrete grade beams and spread footings. The structure consists of reinforced, poured concrete floors at the basement level and load-bearing concrete/masonry block walls. Suspended floors are wood plank flooring on wood floor joists, posts and beams. The roof structure likely consists of a tongue-and-groove wood roof deck, supported by wood beams and joists.

The fireproofing of the basement storage room ceiling (suspended floor above) is in marginal condition and requires a Repair over the time frame of this report.

The structure of the building is generally in acceptable condition.

Envelope Summary:

Exterior cladding consists of a combination of clay brick, painted stucco and prefinished metal siding.

There are six identifiable flat roof sections that are protected by a Modified Bituminous Membrane (SBS) roof membrane system. All entry doors are metal doors in painted metal frames with transom windows in painted metal frames. Window units are fixed and operable insulated glass units (IGUs) in aluminum frames.

The building envelope is generally in acceptable overall condition.

Interior Summary:

Classrooms and corridors have sheet vinyl or vinyl tile flooring. Carpeting is provided in the library while the main boiler room and the stairs to the basement level have painted/sealed concrete floors. The floor of the basement and crawl spaces are bare concrete. Student washroom floors are ceramic tile. The majority of the interior walls are painted plaster or painted masonry block. The majority of the building has painted plaster and 8"x8" acoustic tiles.

Interior finishes are generally in Acceptable overall condition.

Mechanical Summary:

Domestic water distribution is copper and waste water piping (storm and sanitary) is cast iron. Domestic hot water is provided by a 151L "Giant" natural gas-fired water heater located in the boiler room. Heating is provided by an original "Brownweld" steam boiler located in the boiler room supplying perimeter unit ventilators, convectors and finned tube radiation. Fire protection is provided by standpipes and hoses present in corridors throughout.

Heating is reported to be adequate for the building. However, the single boiler is the sole source of heating for the building: there is no built-in redundancy and in the event of a boiler failure the school would be unusable. The existing boiler is original (1954) and has surpassed its expected useful lifecycle (EUL) of 35 years. Replacement during the evaluation term of this report is expected. Unit ventilators, convectors and finned tube radiation units are original to

the school. Replacement in conjunction with the boiler replacement is recommended.

The mechanical systems are in acceptable overall condition.

Electrical Summary:

The electrical service is fed from a utility-owned pole-mounted transformer north of the site, located along Gatefield Avenue SW. The electrical power is fed underground to the main electrical switchgear located in the electrical room. The school is equipped with an original Canadian Westinghouse 400 Amp, 120/208 Volt single phase and a newer (assumed 2000) Square D, 400 Amp 3-phase service. A splitter distributes power to various sub-panels distributed throughout the school.

The original distribution panels in the east and west classroom wings are at full capacity and breakers are obsolete. These panels (2) should be replaced in the next 2 to 5 years. Newer (assumed 2000) Square D panelboards average 75% capacity. Unused circuits have blank covers. There are insufficient number of outlets in approximately half of the classrooms, and these classrooms rely on use of extension chords and power bars to provide the required power supply to these rooms. A general upgrade of the electric system should be considered within the next 2 to 5 years to accommodate increasing use of computers, SMART Boards and computer projectors, etc.

Interior lighting throughout was upgraded to T-8 fluorescent fixtures circa 2000. Emergency lighting is by battery packs with integral and remote heads in corridors and student washrooms, etc., and exit signage is by modern energy-saving LED fixtures.

The original Bogen public address system remains in place and is a back-up to a newer Nortel Meridian telephony with intercom/PA modules.

The fire protection system is a Mircom fire alarm system installed in 2003. Intrusion alarming is provided by a Regency / Silent Knight keyed alarm system with motion sensors throughout and installed circa 1998.

The electrical system is in acceptable overall 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 building foundations likely consist of a combination of cast-in-place concrete pad footings and perimeter grade beams with conventional steel reinforcement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

A1030 Slab on Grade*

Concrete slab-on-grade at the basement level mechanical room, storage rooms and crawl spaces and under wood floors in the instructional wings of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

A2020 Basement Walls (& Crawl Space)*

Crawl space and basement walls are cast-in-place (CIP) concrete foundation walls and concrete block (CMU) partition walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

B1010.01 Floor Structural Frame (Building Frame)*

The main floor, where suspended, is supported by wood joists, beams and columns. Floors in perimeter class rooms and the gym have wood flooring on wood strapping laid over concrete slabs on grade.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

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

Interior walls supporting the floor and roof are CMU.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

B1010.03 Floor Decks, Slabs, and Toppings*

Where suspended, the main floor consists of wood decking supported by wood joists. Floor decks above crawl spaces reportedly consists of wood decking on wood strapping and suspended concrete slab.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

B1010.05 Mezzanine Construction*

There is a mezzanine along two sides of the Boiler Room. The suspended floor structure consists of a painted concrete slab supported on steel posts and wood decking on concrete block and poured concrete walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

B1010.06 Ramps: Exterior*

Concrete ramps with base-mounted, painted metal handrails are provided at the building northeast, southeast and southwest entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	0	MAR-11

B1010.09 Floor Construction Fireproofing*

Non-combustible concrete floors above service tunnels. Unfinished gypsum ceiling in the basement storage room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Repair Fireproofing

Concern:

Fireproofing of the floor structure is incomplete. There are unprotected penetrations through the gypsum and the wood beams and posts are not protected.

Recommendation:

Install a rated fire damper at ventilation penetrations. Add fireproofing to the wood beams and joists in accordance with the Alberta Building code.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$1,500	Medium

Updated: MAR-11

B1010.10 Floor Construction Firestopping*

Unfinished gypsum ceiling in basement storage room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Provide ULC-approved Fire Stops

Concern:

Firestopping is missing at mechanical and electrical penetrations through rated assemblies in the boiler room, basement crawl space and electrical room.

Recommendation:

Provide ULC-approved fire stopping at all penetrations through rated floor assemblies. Patch and seal penetrations through gypsum. Tape and mud all joints in gypsum.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$1,500	Low

Updated: MAR-11

B1010.11 Other Floor Construction*

In the Boiler Room, a pair of wood planks have been laid over the mezzanine guard rail spanning across to the top of the boiler and loosely tied with rope to the guard rail for access to the top of the boiler.

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

Event: Install New Catwalk (~ 4m)

Concern:

The wood planks access to the boiler is a significant workplace hazard.

Recommendation:

Install a new engineered painted metal catwalk with guard rails.

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

Updated: MAR-11

B1010.11 Other Floor Construction*

A steel coal chute cover is located at the northwest corner of the building, above the natural gas meter room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Remove Coal Chute Plate

Concern:

Site personnel reported occasional moisture ingress into the natural gas meter room in the school basement from the steel coal chute plate at the northwest corner of the building. The chute plate was observed to be heavily corroded from prolonged exposure to moisture. Concrete surfaces surrounding the chute plate were also observed to be deteriorated, and localized areas of exposed steel reinforcement were identified.

Recommendation:

Remove the steel coal chute plate and reconstruct the concrete structure in this area, complete with an overlying waterproofing membrane.

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

Updated: MAR-11

B1020.01 Roof Structural Frame*

Likely comprised of a tongue-and-groove roof deck supported by wood beams/joists and load-bearing masonry block walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

B1020.04 Canopies*

Likely wood-framed and is supported by base-mounted, painted metal poles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

Exposed and unfinished clay brick is present at each entrance on the building's perimeter.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Repair Chimney Mortar (~3 m2)

Concern:

Brick mortar is failing around the top of the chimney.

Recommendation:

Repointing of brick mortar.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$1,800	Low

Updated: MAR-11

B2010.01.06.03 Metal Siding**

Metal siding located along the lower portion of exterior walls around the perimeter of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	40	MAR-11

Event: Replace Metal Siding (~340 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2046	\$105,000	Unassigned

Updated: MAR-11

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

Painted stucco comprises the primary exterior wall finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1959	0	MAR-11

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

Joint sealers are provided in construction joints between cladding types and at windows and doors perimeters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	20	MAR-11

Event: Add Sealer to Stucco Soffits (~155 m)

Concern:

The stucco soffits do not have a finished edge (J-Trim or drip edge) where they meet the fascia or inside corners. This location is subject to damage and water ingress.

Recommendation:

Add sealer to the stucco soffits at the inside corners and adjacent to the fascia.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2011	\$4,700	Low

Updated: MAR-11

Event: Replace Joint Sealers (~463m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$13,900	Unassigned

Updated: MAR-11

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

All exterior stucco finish has been painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	15	MAR-11

Event: Repaint Exterior Stucco (~916 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$25,100	Unassigned

Updated: MAR-11

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

Two cast-in-place concrete walls separate the east and west wings from the remainder of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Repaint Firewall and Install Coping Flashing (~80 m2)

Concern:

Pitting and spalling on the top and surface of both concrete walls.

Recommendation:

Repaint the firewall and install new coping flashing to match the existing metal flashing.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$3,500	Medium

Updated: MAR-11

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

Portions of the building's exterior wall construction is load-bearing masonry block.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

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

Concealed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

B2010.06 Exterior Louvers, Grilles, and Screens*

Painted metal louvers are on most building faces and at univent air intakes.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

B2010.09 Exterior Soffits*

Exterior soffits located along the perimeter of the building consist of painted wood and stucco.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

B2020.01.01.01 Steel Windows (Glass & Frame)**

Steel framed window transoms over steel framed entry doors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	40	MAR-11

Event: Replace Metal Framed Transom Windows (~13.0 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2046	\$14,000	Unassigned

Updated: MAR-11

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

Windows in both the 1956 and 1959 portions of the building have been replaced throughout with aluminum framed fixed and operable insulated glass units.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	40	MAR-11

Event: Replace Aluminum Framed Windows (~245 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2046	\$285,000	Unassigned

Updated: MAR-11

B2030.01.02 Steel-Framed Storefronts: Doors**

Steel framed entry doors are located at the main entrance, and around the exterior of the building. Doors are insulated steel with double-pane vision glass inserts, panic bars and self-closing devices.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	30	MAR-11

Event: Replace Steel Framed Storefront Doors (12 ea.)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$29,300	Unassigned

Updated: MAR-11

B2030.01.06 Automatic Entrance Doors**

One door at the main entrance is equipped with push button power assisted door opener. The door is insulated steel with double-pane vision glass insert, panic bar and a self-closing device.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	30	MAR-11

Event: Replace Automatic Entrance Door (1 ea.)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$20,400	Unassigned

Updated: MAR-11

B2030.02 Exterior Utility Doors**

There is a metal utility door off the storage room adjacent to the gymnasium. The door is insulated steel with no vision glass insert; but has a panic bar and a self-closing device are installed. There is also a half-sized utility door from the Basement Level Gas Meter Room to the outside where the gas meter is located.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	40	MAR-11

Event: Replace Steel Framed Utility Door (2 ea.)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2043	\$3,000	Unassigned

Updated: MAR-11

B3010.01 Deck Vapor Retarder and Insulation*

Concealed.

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

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

General cleanup of debris is required as part of the regular ongoing maintenance of the roof (<\$1000).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2008	25	MAR-11

Event: Replace SBS Roofing (~2867 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2033	\$526,200	Unassigned

Updated: MAR-11

B3010.08.02 Metal Gutters and Downspouts**

Canopies and small flat roof sections are sloped to direct storm water toward metal gutters and downspouts which discharge to landscaped areas at ground level, or to lower adjacent main roof levels. Cleaning of the scupper opening is required. (<\$1000).

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

Event: Replace Prefinished Metal Gutters & Downspouts

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2038	\$1,000	Unassigned

Updated: MAR-11

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

There is one roof hatch and multiple vents throughout the roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior fixed partitions are generally comprised of painted CMUs or painted plaster on metal lath over CMUs. Interior CIP concrete foundation walls at the basement level act as partition walls. CIP concrete firewalls separate the Southeast and southwest wings from the rest of building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

C1010.01.01 Cast-in-place Concrete: Partitions

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	100	MAR-11

C1010.03 Interior Operable Folding Panel Partitions**

A metal roll shutter separates the kitchen from the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1956	30	MAR-11

Event: Replace Metal Roll Shutter (~1.2 m2)

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

Updated: MAR-11

C1010.05 Interior Windows*

Interior windows, typically located near the general office and clerestory windows between the classrooms and corridors consist of fixed, single-pane units set in painted metal and wood frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

C1010.06 Interior Glazed Partitions and Storefronts*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

C1010.07 Interior Partition Firestopping*

Firestopping is missing in electrical and mechanical penetrations through the basement crawl space, storage room and main electrical room partitions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Provide ULC-approved Firestop Sealant

Concern:

Firestopping is missing and rated assemblies have been damaged at multiple mechanical and electrical penetrations through rated assemblies in the basement crawl spaces, storage rooms and main electrical room.

Recommendation:

Provide ULC-approved firestop sealant.

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

Updated: MAR-11

C1020.01 Interior Swinging Doors (& Hardware)*

Interior swinging doors generally consist of solid core wood doors set in painted wood frames equipped with standard door knobs or latches. Also refer to K4010.03.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

C1020.02 Interior Entrance Doors*

Painted metal doors with glass inserts in metal frames equipped with panic bars, self-closing devices and hold-open devices located at building exit foyers at the southeast and southwest classroom wings and at the exits adjacent to the student washrooms. Wood doors with glass inserts in wood frames equipped with self-closing devices located at the main entry foyer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C1020.03 Interior Fire Doors*

Interior fire doors in corridors consist of unrated, painted, solid core wood doors with glazed inserts set in painted wood frames. Doors in corridors and some rooms have been furnished with hold-open devices and self-closing devices.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Install Rated Hold Open Devices (2 sets of doors)

Concern:

Doors through the firewalls have manual hook-and-eye hold-open devices.

Recommendation:

Remove manual hold-open devices where installed. Install new magnetic hold-open devices with an automated release and activated by the building fire control system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2011	\$7,000	Medium

Updated: MAR-11

Event: Replace Unrated Doors (~15 doors)

Concern:

Fire door assemblies are unrated.

Recommendation:

Replace all doors through rated assemblies with ULC rated doors and frames furnished with ULC rating tags.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2011	\$15,000	Medium

Updated: MAR-11

C1020.04 Interior Sliding and Folding Doors*

This is a wood bi-fold door to the coat closet in the staff lounge.

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

C1030.01 Visual Display Boards - SMART Boards**

Electronic SMART Boards are provided in every class room and and the staff conference room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2008	20	MAR-11

Event: Replace SMART Boards (~15 ea.)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2028	\$127,500	Unassigned

Updated: MAR-11

C1030.01 Visual Display Boards - White Boards and Tack Boards**

Whiteboards are provided in classrooms, the library and staff room. Bulletin boards are located in classrooms, the library and corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2010	20	MAR-11

Event: Replace Bulletin Boards (~189 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$18,900	Unassigned

Updated: MAR-11

Event: Replace White Boards (~109 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$163,500	Unassigned

Updated: MAR-11

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

Washroom stall partitions throughout the building are typically comprised of pre-finished metal.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	30	MAR-11

Event: Replace Fabricated Compartments (14)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$18,700	Unassigned

Updated: MAR-11

C1030.08 Interior Identifying Devices*

Doors to rooms and spaces have identifying labels/signage indicating room number and/or use. The labels on some of the doors to rooms in the Boiler Room area are not up to date, and it is recommended that these be replaced. (<\$1000).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C1030.12 Storage Shelving*

General storage of clear finished and painted wood shelving units and cabinets are located throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C1030.14 Toilet, Bath, and Laundry Accessories*

The washrooms are equipped with standard washroom accessories including paper towel and toilet paper dispensers, soap dispensers and wall mounted mirrors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C2010 Stair Construction*

The staircase leading to the boiler room and crawl space is comprised of CIP concrete with conventional steel reinforcement. Stairs leading to and from the stage are wood-framed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1956	0	MAR-11

C2020.05 Resilient Stair Finishes**

The split level stairs have a vinyl tile finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	20	MAR-11

Event: Replace Vinyl Stair Tiles

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$1,100	Unassigned

Updated: MAR-11

C2020.08 Stair Railings and Balustrades*

Stair railings are typically comprised of base and wall-mounted, painted metal handrails. Wood boards have been added to the guard rails at the stairs to the basement and stage to meet Building Code requirements for guard rails.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1956	0	MAR-11

C2020.10 Stair Painting*

Stairs leading to the stage have a painted/varnished finish. Stairs leading to the basement and boiler room area are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2010	0	MAR-11

C3010.01 Concrete Wall Finishes (Unpainted)*

Unpainted concrete walls occur at the basement level only. All other concrete walls are either painted or are finished with painted plaster.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C3010.02 Wall Paneling**

Clear stained wood wall paneling on all four walls of the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1956	30	MAR-11

Event: Replace Gymnasium Wall Paneling (~160 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$14,700	Unassigned

Updated: MAR-11

C3010.06 Tile Wall Finishes**

Ceramic tile wall finishes are located around urinals in boys washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1956	40	MAR-11

Event: Replace Wall Tiles

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

Updated: MAR-11

C3010.09 Acoustical Wall Treatment**

There are four acoustic wall panels along the interior perimeter of the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1956	20	MAR-11

Event: Replace Acoustic Wall Panels (~18 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$4,000	Unassigned

Updated: MAR-11

C3010.11 Interior Wall Painting*

Interior walls and partitions are typically painted throughout the building.

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

C3020.01.02 Paint Concrete Floor Finishes*

Painted/sealed concrete floors are located in the boiler room on the basement floor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Repaint Boiler Room Floor (~62 m2)

Concern:

Concrete floor finish is worn and flaking off, leaving the concrete exposed to potential damage.

Recommendation:

Repaint the the floor of the Boiler Room and surrounding spaces.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$5,100	Low

Updated: MAR-11

C3020.02 Tile Floor Finishes**

Ceramic tile flooring is located in the student washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	50	MAR-11

Event: Replace Ceramic Tile Flooring (~60 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$10,600	Unassigned

Updated: MAR-11

C3020.03 Terrazzo Floor Finishes*

Terrazzo flooring is located in corridors at the courtyard entrance adjacent to the student washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1956	0	MAR-11

C3020.04 Wood Flooring**

The gymnasium and stage are finished with hardwood flooring.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	30	MAR-11

Event: Replace Wood Flooring (~318 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$82,600	Unassigned

Updated: MAR-11

C3020.07 Resilient Flooring - Sheet Vinyl**

Sheet vinyl flooring is located in the classrooms, library, staff room and offices.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1954	0	MAR-11

Event: Replace Sheet Vinyl Flooring (~1238 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$104,500	Unassigned

Updated: MAR-11

C3020.07 Resilient Flooring - Vinyl Tile**

Vinyl tile flooring is provided in corridors and some classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	20	MAR-11

Event: Replace Vinyl Tile Flooring (~492 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$26,200	Unassigned

Updated: MAR-11

C3020.08 Carpet Flooring**

Carpet flooring is in the library and portions of some classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	15	MAR-11

Event: Replace Carpet Flooring (~198 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$13,600	Unassigned

Updated: MAR-11

Event: Replace Carpet with Sheet Vinyl (~120 m2)

Concern:

Carpets in classrooms require more frequent maintenance and cleaning.

Recommendation:

Replace carpets in classrooms with sheet vinyl flooring.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2013	\$10,200	Medium

Updated: MAR-11

C3030.01 Concrete Ceiling Finishes (Unpainted)*

Unpainted concrete ceiling in basement crawl spaces. All other concrete ceilings are located at the basement level and are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

C3030.04 Gypsum Board Ceiling Finishes (Unpainted)*

The ceiling of the basement storage room is unpainted and untaped gypsum board. (Refer to B1010.09 re. Repair).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

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

Suspended T-bar grid with inlaid acoustic panels are provided in the teachers lounge and part of the corridor outside the main office and half of the library.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	25	MAR-11

Event: Replace Acoustic Ceiling Tile (~157 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$7,300	Unassigned

Updated: MAR-11

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

Acoustic ceiling tiles glued to gypsum ceilings are located in corridors, classrooms, library and gymnasium. Some ceiling tiles are stained in random isolated locations are stained (repairs ~\$1000).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Replace Ceiling Tiles (~2100 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$97,200	Unassigned

Updated: MAR-11

C3030.07 Interior Ceiling Painting*

Portions of the corridors and classrooms are finished with painted or stippled plaster ceilings.

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

S4 MECHANICAL

D2010.04 Sinks** - Janitor Sinks

Two wall-mounted enamel iron service sinks in janitor storage rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	30	MAR-11

Event: Replace Wall-mounted Sinks with Floor-mounted Models (2 units)

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

Updated: MAR-11

D2010.04 Sinks** - Stainless Steel Service Sinks

Stainless steel service sinks provided in classrooms and the staff kitchen.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	30	MAR-11

Event: Replace Stainless Steel Sinks (~12 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2035	\$20,800	Unassigned

Updated: MAR-11

D2010.08 Drinking Fountains/Coolers**

There are approximately 5 non-refrigerated vitreous china drinking fountains in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	35	MAR-11

Event: Replace 5 Drinking Fountains

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$8,300	Unassigned

Updated: MAR-11

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

16 vitreous china toilets with manual tankless flush valve.
 4 wall-mounted vitreous china urinals with tank flush valve type fixture.
 2 vitreous china lavatories and 9 stainless steel lavatories with standard trim.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	35	MAR-11

Event: Replace 16 Toilets, 4 Urinals and 2 Lavatories

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$40,700	Unassigned

Updated: MAR-11

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - Stainless Steel Lavatories**

9 stainless steel lavatories with standard trim provided in student and some staff washrooms.

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

Event: Replace Stainless Steel Lavatories (~9 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$15,700	Unassigned

Updated: MAR-11

D2020.01.01 Pipes and Tubes: Domestic Water*

Galvanized steel water main with Type "L" copper distribution throughout. Mostly original with some replacement due to renovations (<10%).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D2020.01.02 Valves: Domestic Water - 1954**

Isolation valves on domestic water distribution to staff washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	40	MAR-11

Event: Replace Domestic Water Valves (~8 units).

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$9,500	Unassigned

Updated: MAR-11

D2020.01.02 Valves: Domestic Water - 2005**

Isolation valves on domestic water distribution to classroom and staff service sinks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	40	MAR-11

Event: Replace Domestic Water Valves (~22 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2045	\$25,900	Unassigned

Updated: MAR-11

D2020.01.03 Piping Specialties (Backflow Preventors)**

Backflow prevention installed on domestic water supply, fire suppression system and boiler make-up water (no irrigation system installed at this facility)

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

Event: Replace Backflow Preventors (6 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$18,700	Unassigned

Updated: MAR-11

D2020.02.02 Plumbing Pumps: Domestic Water**

Domestic hot water recirculating pump (3/4 HP) installed on domestic water line.

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

Event: Replace Water Pump (1 unit)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$5,200	Unassigned

Updated: MAR-11

D2020.02.06 Domestic Water Heaters**

Domestic hot water is supplied to the building by a single John Wood 150L domestic hot water heater tank.

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

Event: Replace Hot Water Heater

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$1,900	Unassigned

Updated: MAR-11

D2020.03 Water Supply Insulation: Domestic*

Domestic distribution lines are mostly uninsulated where observed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Insulate Domestic Hot Water Lines (~400 m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2012	\$20,000	Low

Updated: MAR-11

D2030.01 Waste and Vent Piping*

Cast iron waste water (storm and sanitary) piping is connected to the City collection sewers. ABS (plastic) soil and ceiling vents extend above the roof surface throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D2030.03 Waste Piping Equipment*

A sump with a single stage submersible pump is installed in the boiler room to collect drainage water.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D2040.01 Rain Water Drainage Piping Systems*

Roof drains convey water to interior rainwater leaders which drain to storm water system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D2040.02.04 Roof Drains*

Roof drains with cast aluminum strainers and internal rainwater leaders.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	0	MAR-11

D3010.02 Gas Supply Systems*

Natural gas line to boiler and hot water tank.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D3020.01.01 Heating Boilers & Accessories: Steam**

The boiler plant consists of a single original (1954) cast iron "Brownweld" steam boiler equipped with natural gas burners and condensing water tank. The boiler provides low pressure steam to original perimeter unit ventilators and convectors along the building periphery. Backup heat is not available in the school in the event that the steam boiler fails.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	35	MAR-11

Event: Replace Steam Boiler Plant (1 unit)

Concern:

The boiler plant is operating but excessive maintenance is required. This boiler is the sole source of heat for the building resulting in closure of the school whenever the boiler malfunctions.

Recommendation:

Replace boiler plant with a system using 2 or more boilers for built-in redundancy and continual heating supply if a boiler shuts down or misfires.

Replacement costs provided herein are for replacement with 2 hot water heating boilers and related accessories (expansion tank, chemical feed, de-aerator, etc.) as opposed to steam supply for increased energy efficiency. A contingency allowance has been included due to increased difficulty in removing the existing boiler from the boiler pit.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$703,300	High

Updated: MAR-11

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

The boiler breeching is connected to a masonry chimney. Combustion air supply consists of original sheetmetal ducting.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	35	MAR-11

Event: Replace Chimney & Comb.Air (~25 m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$16,500	Medium

Updated: MAR-11

D3020.01.04 Water Treatment: Steam Boilers*

The boiler water is treated using a manual chemical pot feeder system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D3040.01.04 Ducts: Air Distribution*

Non-insulated sheetmetal ducting throughout service tunnels, basement storage and bulkheads. Balance of ducts are concealed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Original cone-type and grilled diffusers throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

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

Original black pipe distribution piping in crawl space service tunnels.
2 - 3 hp. electric motors on circulation pumps. Mostly original steam traps with random replacements due to attrition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	40	MAR-11

Event: Replace Steam Distribution Piping (~500 m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$257,700	High

Updated: MAR-11

D3040.04.01 Fans: Exhaust**

Existing general classroom exhaust fan from the original (1954) section is a Trane 10hp centrifugal fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	30	MAR-11

Event: Replace Exhaust Fans (3 units total)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$22,100	Unassigned

Updated: MAR-11

D3040.04.03 Ducts: Exhaust*

Updated conical exhaust equipment was installed on the rooftop at the time of the roofing replacement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	0	MAR-11

D3040.04.05 Air Outlets and Inlets: Exhaust*

Eggcrate and grilled exhaust inlets are original to each section of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

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

A rooftop mounted packaged heating / air conditioning unit provides conditioned air to the library.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2008	30	MAR-11

Event: Replace Rooftop HVAC unit (1 unit)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2038	\$34,500	Unassigned

Updated: MAR-11

D3050.05.01 Convectors**

Primary heating is provided to classroom and office spaces by wall mounted convection heaters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	40	MAR-11

Event: Replace Convectors (46 units)

Concern:

Convectors are original equipment and have surpassed their theoretical design life of 40 years.

Recommendation:

Replace in conjunction with boiler plant replacement.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$33,800	High

Updated: MAR-11

D3050.05.03 Finned Tube Radiation**

Finned tube radiation is limited to the raised ceiling area in the main corridor outside the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	40	MAR-11

Event: Replace Finned Tube Radiation (~ 6 m)

Concern:

Finned tube radiation is original and has surpassed its theoretical service life of 40 years.

Recommendation:

Replace in conjunction with boiler plant replacement in 2013.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$2,800	Low

Updated: MAR-11

D3050.05.07 Unit Ventilators**

Original steam unit ventilators (univents) along building periphery (typically 1 univent and 2 convectors per classroom).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	30	MAR-11

Event: Replace Unit Ventilators (~16 units).

Concern:

Unit ventilators are original equipment and have surpassed their theoretical design life of 30 years.

Recommendation:

Replace in conjunction with boiler plant replacement.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$146,700	High

Updated: MAR-11

D3060.02.02 Pneumatic Controls**

Original pneumatic system with DeVilbiss compressor and dryer in the boiler room. Johnson Controls EMCS was being installed to replace pneumatic controls at the time of the evaluation survey.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	40	MAR-11

Event: Remove Pneumatic Control System (1 unit)

Concern:

Pneumatic controls were being replaced with a new EMCS at the time of the evaluation survey, are obsolete and will be redundant once the EMCS installation is completed.

Recommendation:

Remove pneumatic controls once EMCS installation is completed.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$15,900	Low

Updated: MAR-11

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

Johnson Controls EMCS were being installed throughout the school at the time of the evaluation survey.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
6 - Excellent	2010	30	MAR-11

Event: Replace Electronic Control System (~2770 m2/gfa)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$4,500	Unassigned

Updated: MAR-11

D4020 Standpipes*

Original standpipe system is installed throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Wall-mounted ABC-type fire extinguishers are located throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Replace Hose Reels with Cabinets (4 units)

Concern:

The fire hoses are mounted on exposed hose reels in corridors throughout the school and are accessible to student tampering and vandalism.

Recommendation:

Provide lockable hose cabinets throughout.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2012	\$14,000	Medium

Updated: MAR-11

S5 ELECTRICAL

D5010.01 Main Electrical Transformers**

A utility-owned pad-mounted transformer was present on site.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	40	MAR-11

D5010.03 Main Electrical Switchboards (Main Distribution)** - 1954

The main electrical service is a Canadian Westinghouse 400 Amp, 120/208 Volt and single phase.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	40	MAR-11

Event: Replace Original Distribution Panel (1 unit)

Concern:

The original electrical switchgear is obsolete and parts are increasingly more difficult to obtain or are being scavenged from other locations as electrical upgrades are completed in other schools.

Recommendation:

Replace the original Canadian Westinghouse switchgear.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$14,200	Medium

Updated: MAR-11

D5010.03 Main Electrical Switchboards (Main Distribution)** - 2000

Square D switchgear and central distribution panel rated for 120/208 Volts, 400 Amp, 3-phase service.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	40	MAR-11

Event: Replace Square D Switchgear and CDP (1 Unit)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$45,600	Unassigned

Updated: MAR-11

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) - 1954**

Original 30 cct. breaker panelboards are provided in the east and west classroom wing corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	30	MAR-11

Event: Replace Original Electrical Panelboards (2 Units)

Concern:

Panelboards are at full capacity with no spares, and are obsolete. Parts are difficult to source.

Recommendation:

Replace panelboards with modern pieces.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$9,800	Medium

Updated: MAR-11

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) - 2000**

30 and 42 circuit panelboards are located throughout the basement/service tunnels and main floor area, where needed. Panels generally have sufficient capacity with several blank circuits.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	30	MAR-11

Event: Replace Secondary Distribution Panels (6 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$29,300	Unassigned

Updated: MAR-11

D5010.07.02 Motor Starters and Accessories**

Original stand alone Allen-Bradley motor starters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	30	MAR-11

Event: Replace Motor Starters (approx. 12 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$44,100	Unassigned

Updated: MAR-11

D5020.01 Electrical Branch Wiring*

The electrical wire in the building is standard wire in conduit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Provide Additional Circuits to Classrooms (~15 Circuits)

Concern:

Insufficient outlets provided in some classrooms. Use of extension chords and multi-bars/power bars is prevalent in most classrooms.

Recommendation:

Provide additional circuits where needed.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2012	\$35,200	High

Updated: MAR-11

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

Line voltage switches throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D5020.02.02.02 Interior Fluorescent Fixtures**

The interior lighting is provided by T-8 fluorescent fixtures with electronic ballasts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	30	MAR-11

Event: Replace T-8 Fluorescent Lighting (~2770 m2/gfa)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$241,800	Unassigned

Updated: MAR-11

D5020.02.03.02 Emergency Lighting Battery Packs**

Emergency lighting in the school is provided by battery packs with integral and remote heads.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	20	MAR-11

Event: Replace Emergency Light Battery Packs (~8 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$9,300	Unassigned

Updated: MAR-11

D5020.02.03.03 Exit Signs*

LED exit signs installed throughout the school.

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

D5020.03.01.03 Exterior Metal Halide Fixtures*

Wall-mounted HID fixtures around the perimeter of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	0	MAR-11

D5020.03.01.05 Other Exterior Fixtures*

High intensity discharge lamp standards in asphalt parking area south of the school. Residual lighting also provided by neighbouring street lights.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	0	MAR-11

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

Exterior lighting is controlled by photocell and timer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D5030.01 Detection and Fire Alarm**

The building has a supervised Mircom fire alarm panel. Terminal devices include manual pull stations, heat detectors, horns and strobes.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	25	MAR-11

Event: Replace Detection and Fire Alarm System (~2770 m2/gfa)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2028	\$76,200	Unassigned

Updated: MAR-11

D5030.02.02 Intrusion Detection**

The intrusion detection system consists of a Silent Knight / Regency system installed in 1998 with motion detectors located throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1998	25	MAR-11

Event: Replace Intrusion Panel and 6 Sensors

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2023	\$9,300	Unassigned

Updated: MAR-11

D5030.02.04 Video Surveillance**

A single video camera is mounted facing the main entrance and monitored (live only, no recording) in the main office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2003	25	MAR-11

Event: Replace Surveillance Equipment (1 system)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2028	\$6,100	Unassigned

Updated: MAR-11

D5030.03 Clock and Program Systems*

Simplex master clock integrated with PA system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

D5030.04.01 Telephone Systems*

The building is equipped with a Nortel Meridian telephone system that provides internal and external calling, paging and intercom service.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1998	0	MAR-11

D5030.04.04 Data Systems*

Fibre optic service installed. Cat 5 cable throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	0	MAR-11

D5030.04.05 Local Area Network Systems*

LAN system is installed throughout the school. Wireless WIFI service installed throughout in 2010.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	0	MAR-11

D5030.05 Public Address and Music Systems**

The original Bogen PA system is integrated with telephone system. Speakers throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	20	MAR-11

Event: Replace PA system (1 system)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$5,400	Unassigned

Updated: MAR-11

D5030.06 Television Systems*

CATV service provided by Shaw Cable Systems.

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

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.02 Library Equipment*

Library tables, chairs, computer stations, book & magazine shelves and computers throughout the library.

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

E1020.03 Theater and Stage Equipment*

Operable fabric stage curtains and stage lighting are provided in the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

E1020.05 Audiovisual Equipment*

Ceiling-mounted, operable projection screens are provided in each classroom and in the library. The library and gymnasium contain wall-mounted speakers.

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

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Retractable basketball equipment is provided in the gymnasium. Athletic pads and various other equipment in storage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

E2010.02 Fixed Casework**

Fixed casework is located throughout the school in classrooms, offices area, staff lounge and library. A glass-front display case and 1" x 6" stained wood boards with coat hooks are installed throughout the corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	35	MAR-11

Event: Replace Fixed Casework (~2769 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2014	\$253,800	Unassigned

Updated: MAR-11

E2010.03.01 Blinds**

Exterior windows on the main floor have metal venetian blinds.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	30	MAR-11

Event: Replace Horizontal Blinds (~245 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$26,200	Unassigned

Updated: MAR-11

E2010.04 Fixed Floor Grilles and Mats*

Rubber floor mats are recessed in the floor inside each of the building entry foyers.

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

S8 FUNCTIONAL ASSESSMENT

K3010.04 Power Supply & Electrical Outlets* - Power Conditioning

None provided.

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

Event: Provide System-Based Surge Protection. (1 unit)

Concern:

No surge suppression or power conditioning installed for computers and other sensitive electronics to accommodate power fluctuations.

Recommendation:

Install a system-based surge suppressor.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2011	\$3,500	Medium

Updated: MAR-11

K3020.03 Air Conditioning/Cooling* - Computer Room A/C

None Provided.

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

Event: Install Computer Room A/C Unit (1 Ea.)

Concern:

Computer labs/server rely on base building ventilation and keeping doors open to cool servers.

Recommendation:

Install air conditioning in computer/server rooms.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2011	\$18,200	Medium

Updated: MAR-11

K4010.01 Barrier Free Route: Parking to Entrance*

Roadside handicapped/wheelchair parking is available along the east side of the property.

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

K4010.02 Barrier Free Entrances*

There is a push button operated automated entry door is provided at the main entry to the school.

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

K4010.03 Barrier Free Interior Circulation*

Horizontal pathways are sound and of sufficient width to allow wheelchair passage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1954	0	MAR-11

Event: Install Barrier Free Drinking Fountains (2 ea.)

Concern:

Drinking fountains located in school corridors are not accessible to handicap/wheelchair users.

Recommendation:

Install at least two barrier free drinking fountain in the building.

Consequences of Deferral:

Poor access for handicapped users and non-compliance with current barrier-free standards.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2014	\$3,300	Medium

Updated: MAR-11

Event: Install Lever-type Handsets to Classroom Entry Doors (16 doors)

Concern:

Doors to classrooms and main office are equipped with standard door knobs.

Recommendation:

Provide at least one lever-type handset per classroom and office entries.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2014	\$6,000	Low

Updated: MAR-11

Event: Install Wheelchair Lift

Concern:

No wheelchair or barrier free access to the gym stage is provided.

Recommendation:

Install a vertical elevating device or a wheelchair lift to the gymnasium stage.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2014	\$26,000	High

Updated: MAR-11

K4010.04 Barrier Free Washrooms*

A barrier free washroom is provided in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1956	0	MAR-11

K4030.01 Asbestos*

Asbestos-containing material is in mechanical piping insulation, piping elbows, original vinyl floor tile and acoustic ceiling tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

Event: Continue Asbestos Management Program

Concern:

An asbestos management program is in place and has identified friable asbestos-containing materials.

Recommendation:

Continue asbestos management program with periodic survey updates.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2012	\$3,500	Medium

Updated: MAR-11

Event: Encapsulate Exposed Asbestos (Order of Magnitude Estimate)

Concern:

Exposed asbestos insulation on mechanical piping in the basement crawl space and storage areas.

Recommendation:

Full seal/patch all damage and joints in asbestos pipe insulation.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Hazardous Materials Abatement	2011	\$5,000	High

Updated: MAR-11

K4030.02 PCBs*

Interior lighting was replaced with T-8 fluorescent fixtures and electronic ballasts. No known or reported PCBs identified.

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

K4030.04 Mould*

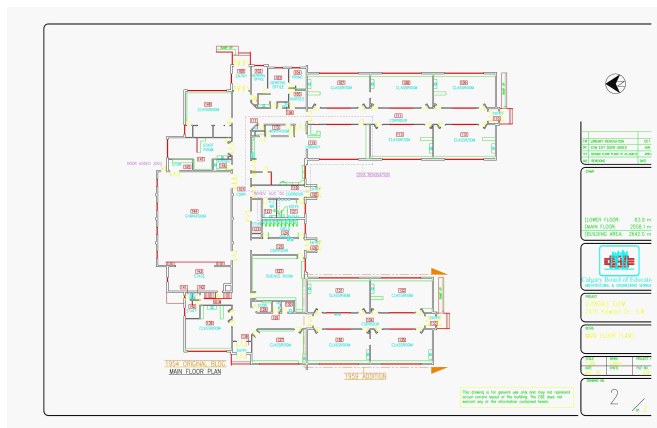
No visible signs of mould were identified in the building during the assessment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1954	0	MAR-11

K5010 Reports and Studies*

Glendale Elementary School was evaluated August 20, 2010 by Golder Associates Ltd.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2010	0	MAR-11



Glendale Elementary - Main Floor Plan (2000)