RECAPP Facility Evaluation Report

Prairie Rose Regional Div #8



Schuler School

B3992A Schuler

Facility Details

Building Name: Schuler School

Address: P. O. Box 120

Location: Schuler

Building Id: B3992A Gross Area (sq. m): 2,048.30 Replacement Cost: \$6,162,106

Construction Year: 1949

Evaluation Details

Evaluation Company: Golder Associates Ltd.

Evaluation Date: September 16 2010

Evaluator Name: Peter Kelly

Total Maintenance Events Next 5 years: \$659,300

5 year Facility Condition Index (FCI): 10.70%

General Summary:

Schuler School is a K-6 school with a reported population of 55 students in 2010-11.

The original 1-1/2 storey (ie., basement level is not fully below grade level), 682.3 m2 section was constructed in 1949.

A 942.2 m2 single-storey addition was constructed in 1955.

In 1960 a second single-storey addition of 375.4 m2 was constructed.

A single-storey 48.4 m2 third addition was constructed in 1986.

The current gross floor plan area of the school is reported to be approximately 2048 m2 with a reported design capacity of 225 students.

Structural Summary:

The structure of the original 1949 Section is cast in place (CIP) strip footings supporting concrete foundation walls and conventional stud frame (wood) load bearing walls and floor/roof systems.

The 1955 and 1960 Additions are built on CIP concrete foundations with an unexcavated dirt crawl space supports a conventional wood framed floor and load bearing walls supporting wood framed roof structures.

The gym in the 1955 Addition has a concrete slab on grade with structural concrete masonry block walls supporting wood beams and roof structure.

The 1986 Addition has CIP strip footings supporting a concrete foundation wall, CIP slab on grade floor, wood framed load bearing walls above grade supporting the open web steel joists and metal decking roof structure.

Evidence of long term water ingress through the basement foundations in the 1949 Section was observed. As well, superficial damage and a cracking noise were observed/detected when walking on the concrete slab on grade in the southeast basement Play Room (identified as Room 005 on the floor plan included in section K5010).

No evidence of movement or distress in the wood-framed structures above the concrete foundations was identified during the evaluation survey, and no other structural issues were reported by the facility operator.

A study is required to identify the root cause of moisture ingress and to determine appropriate repair options and associated costs.

The building structure is generally in marginal condition overall.

Envelope Summary:

An extensive modernization and replacement of the building envelope was reportedly completed during construction of the 1986 Addition.

The school has a cement stucco exterior finish throughout with conventional asphalt and gravel built-up roof (BUR) assemblies and prefinished metal copings and counterflashings.

Exterior windows consist of fixed (non-operable) insulated glazing units in aluminum frames with operable sections having two sets of single glazed horizontally sliding widows in aluminum frames.

Exterior doors are painted hollow metal in steel frames equipped with interior panic bars and self-closing devices.

Locally damaged and cracked stucco wall cladding and staining around windows was observed on all wall exposures throughout. Repairs will be required during the evaluation period to restore and preserve the integrity of the building envelope.

Crawl space vents around the building are at or below the finished grade and building operators reported frequent water and small animal entry into the crawl spaces. Submersible pumps in pits have been added in the crawl spaces but moisture ingress persists and the dirt floor was wet at the time of the evaluation survey. Remedial action is required over the evaluation term of this report.

The envelope is generally in acceptable condition.

Interior Summary:

Floor finishes include sheet vinyl and vinyl tile throughout with ceramic tile in washrooms, student change rooms and showers, and carpets in the Library.

Interior partitions are stud framed (wood and steel) with wall paneling or painted gypsum wall board throughout, with ceramic wall tile in washrooms, student change rooms and showers.

Ceiling systems throughout consist of suspended T-bar with laid-in acoustic tiles.

Extensive modernization and replacement of the interior finishes were completed during construction of the 1986 Addition. A classroom on the upper floor in the 1949 Section was converted to a teacher's lounge with new interior finishes (flooring, ceilings and cabinetry) in 2009/10.

Repairs to finishes in the basement of the 1949 Section were in progress at the time of the evaluation survey resulting from recent flooding. Exposed wood-framed partitions exhibit rot and water staining, indicative of prolonged exposure to moisture. Repairs were expected to be completed in Fall 2010.

The interior finishes are generally in acceptable condition overall.

Mechanical Summary:

Domestic water distribution is copper and waste water piping (storm and sanitary) is cast iron.

Domestic hot water is provided by two 150L John Wood natural gas-fired domestic water heaters located in the boiler room.

Heating is provided by three Weil-McLain hot water boilers located in the boiler room supplying perimeter finned tube radiation throughout.

Fire protection is provided by standpipes and hoses in corridors throughout.

The mechanical systems are generally in acceptable condition overall.

Electrical Summary:

The electrical supply is fed underground from pole mounted utility-owned transformers to the main distribution switchboard manufactured by Amalgamated Electric rated for 400 Amps, 120/240 Volts, single-phase, 3-wire service. The main distribution panel provides power to other sub-panels that serve the various sections of the building. Panelboards were mostly fully with no capacity for expansion. A general upgrade of the electrical system to modern 3-phase 4-wire service is recommended.

The lighting in the building is primarily fluorescent lighting with T-8 and electronic ballasts. The various entrance foyers are lit using incandescent fixtures.

Exterior lighting around the school is provided by wall-mounted high pressure sodium and incandescent light fixtures. Emergency lighting in the school is provided by battery packs with integral and remote heads. Exit signage is by LED fixtures.

The fire protection system is a Mircom fire alarm system. Intrusion alarming is provided by a DSC keyed alarm system with motion sensors throughout.

The electrical system reportedly meets current demands, however, it is obsolete and replacement parts are increasingly more difficult to obtain as time passes. A general upgrade of the electrical system to modern 3-phase 4-wire service is recommended.

The electrical system is generally 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* - 1949 Section

The original building has reinforced cast in place (CIP) foundations on strip footings throughout.

RatingInstalledDesign LifeUpdated3 - Marginal19490APR-11

Event: Investigate Water Leakage Issues (Rough Estimate)

Concern:

Water stains, cracking with spalling and surficial damage to the concrete foundation walls in the basement of the 1949 Section was identified and repairs to water damaged interior finishes were in-progress at the time of the evaluation survey resulting from recent flooding in the basement (refer to A2020 and C1010.01 later in this report).

The previous facility evaluation report completed in 2005 identified "excessive build up of mineral deposits" on the interior surface of the foundation walls and "erosion of the parged finish" on the exterior surface. Based on current observations and on the findings in the previous report, moisture ingress is likely to be a persistent occurrence at this facility (also see A1030).

A sump pit with a submersible pump has been added in the basement but it is not known whether weeping tile around the foundation perimeter, if any, is connected to the sump or whether the weeping tile is still effective in handling ground water around the foundations.

Recommendation:

Conduct a study to determine the root cause of moisture ingress and the condition/effectiveness of weeping tile and foundation waterproofing, if present.

<u>Type</u>	<u>Year</u>	Cost	Priority
Study	2011	\$17,500	High

Updated: APR-11

Event: Repair Water Leakage Issues (Order of Magnitude Estimate)

Concern:

Long term moisture ingress through foundations in the 1949 Section has resulted in water damage to the interior finishes throughout the basement level.

Recommendation:

Repair water leakage issues. Results from the study are required in order to determine the cause and extent of the issue, appropriate repair options and costs associated with the report options. Therefore, an "Order of Magnitude" estimate has been provided herein.

If the study recommends implementation of a site dewatering program, consideration must be given to structural modifications that may be required resulting from changes to the bearing conditions due to site dewatering.

 Type
 Year
 Cost \$150,000
 Priority

 Repair
 2011
 \$150,000
 High

Updated: APR-11

A1010 Standard Foundations* - 1955, 1960 & 1986 Additions

Reinforced CIP concrete foundations on strip footings throughout.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Acceptable	1955	0	APR-11

A1030 Slab on Grade* - 1949 Section

CIP concrete slab-on-grade throughout the basement of the 1949 Section.

RatingInstalledDesign LifeUpdated3 - Marginal19490APR-11

Event: Repair Slab on Grade

Concern:

Evidence of erosion of the structural fill under the slab on grade and possible moisture ingress from beneath the slab.

Recommendation:

Repair or replace the concrete slab on grade as required. Results of the study are required to determine remedial options and related costs, therefore, order of magnitude costing has been provided.

TypeYearCostPriorityRepair2012\$10,000High

Updated: APR-11

Event: Study Slab on Grade

Concern:

Surficial damage and cracking with moisture stains across cracks were observed in the basement floor of the 1949 Section. Due to recent flooding through the foundation it could not be determine if moisture stains originate from water percolation up through the slab or if the stains are a result of the flooding event.

In addition, a hollow sound and cracking were detected when walking on the concrete slab on grade in the southeast basement Play Room (identified as Room 005 on the floor plan included in section K5010). The previous study from 2005 identified a "high alkali build up" atop the slab on grade at the time of that evaluation.

Recommendation:

A study is required to determine the severity of damage to the basement slab on grade and underlying bearing conditions including coring of the slab to obtain slab samples and samples of the underlying surface for testing and for observation of the underlying conditions.

TypeYearCostPriorityStudy2011\$5,000High

A1030 Slab on Grade* - 1955 Gym & 1986 Addition

CIP concrete slab-on-grade throughout the gym and change rooms in the 1955 Addition, and throughout the 1986 Addition.

Unexcavated crawl space with structural wood floors throughout the remainder of the School.

RatingInstalledDesign LifeUpdated5 - Good1955100APR-11

A2020 Basement Walls (& Crawl Space)* - 1949 Section

CIP concrete foundation walls throughout the basement of the 1949 Section. Refer to comments, recommendations and associated cost estimates provided above in A1010 Standard Foundations* - 1949 Section.

Rating Installed Design Life Updated 3 - Marginal 0 0 APR-11

A2020 Basement Walls (& Crawl Space)* - 1955 & 1960 Additions

Crawl spaces under the 1955 Addition (excepting the gym and student change rooms) and the 1960 Addition have unfinished CIP concrete foundations with stud frame (wood) knee walls above grade.

Rating Installed Design Life Updated 3 - Marginal 1949 0 APR-11

Event: Repair Water Ingress Issues, Ventilation and Surface Drainage (Rough Estimate)

Concern:

Crawl space vents through foundation walls in the 1955 and 1960 Additions are at or below the finished grade outside the building. The facility operator reported issues with moisture and small animal entry at the vent locations and the vents have been covered with prefinished metal panels. Dirt floors inside the crawl spaces were wet at the time of the evaluation survey.

Wall mounted axial exhaust fans were added to improve crawl space ventilation but no means of supply air to the crawl space was observed or reported while on-site (also refer to D3040.04.01 in the Mechanical Report).

Recommendation:

Permanently seal existing vent locations; regrade drainage planes outside the building footprint (in association with repairs recommended above in A1010); and, provide mechanical ventilation with tempered air supply to the crawl space. Provide polyethylene vapour barrier on the floor of the crawls space following grading of the soil to drain to sump pits with submersible pumps.

TypeYearCostPriorityRepair2011\$75,000High

Updated: APR-11

B1010.01 Floor Structural Frame (Building Frame)*

Wood sheathing on wood joists throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

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

Concrete foundations with wood frame knee walls in the basement. Wood framed load-bearing walls above grade.

Rating Installed Design Life Updated 4 - Acceptable 1949 0 APR-11

B1010.07 Exterior Stairs*

CIP concrete stairs leading from the south end of the 1960 Addition and from the east side of the gymnasium. Steel frame exit stairs on the north side of the 1949 Section.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

B1010.09 Floor Construction Fireproofing*

Gypsum board applied to the underside of the suspended wood floor structure.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

B1010.10 Floor Construction Firestopping*

Firestopping sealant is applied to penetrations through rated assemblies.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

B1020.01 Roof Structural Frame*

Wood joist and beams with wood/plywood decking. Steel deck on OWSJs for the 1986 Addition.

RatingInstalledDesign LifeUpdated5 - Good19490APR-11

B1020.06 Roof Construction Fireproofing*

Interior ceiling structure is covered with taped and finished gypsum board throughout.

Rating Installed Design Life Updated
5 - Good 0 0 APR-11

S2 ENVELOPE

B2010.01.06.03 Metal Siding**

~0.3m wide metal fascia band around perimeter of school.

RatingInstalledDesign LifeUpdated5 - Good199440APR-11

Event: Replace Metal Fascia (~80 m2)

TypeYearCostPriorityLifecycle Replacement2034\$11,400Unassigned

Updated: APR-11

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

Stucco finish has been applied to the entire building exterior throughout all sections.

RatingInstalledDesign LifeUpdated2 - Poor19860APR-11

Event: Replace Stucco Finish (~1030 m2)

Concern:

At every window there is water staining and broken or cracked stucco at the lower corners. A stucco edge mould has not been used anywhere on the building. There are no flashings at the windows or the base of the wall.

Recommendation:

When the stucco finish is repaired/replaced, ensure qualified professionals install proper mouldings and flashings. It is also strongly recommended that a stucco system with a capillary break/drainage plane is used.

TypeYearCostPriorityFailure Replacement2012\$78,100High

Updated: APR-11

B2010.01.09 Expansion Control: Exterior Wall Skin*

Galvanized metal strips for expansion control throughout the stucco system.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

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

Sealant has been applied at vatious penetrations through the exterior wall, entrance doors and assorted locations at the base of the building.

Rating Installed Design Life Updated 3 - Marginal 1986 20 APR-11

Event: Replace Joint Sealers (~255m)

Concern:

Most joint sealers have lost their pliablility or have debonded and cracked. Inconsistent use of sealant at base of building where it meets the concrete sidewalk/entrances.

Recommendation:

Remove and replace all joint sealers. Add sealant to base of all walls adjacent to concrete slabs.

TypeYearCostPriorityFailure Replacement2011\$8,400High

Updated: APR-11

B2010.02.05 Wood Framing: Ext. Wall Const.*

Wood framed walls around the perimeter of the school with stucco and gypsum board finish on the interior.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

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

Concealed. Problems observed or reported in the basement. Flood repairs were ongoing at the time of this report. Also refer to A1010 and 2020 for detailed comments and recommendations.

RatingInstalledDesign LifeUpdated3 - Marginal00APR-11

B2010.06 Exterior Louvers, Grilles, and Screens*

The exterior air vents from the crawl space are rusted and eroded in many areas around the school. Replace damaged louvers around the perimeter of the building. Cost is under \$1000.

RatingInstalledDesign LifeUpdated3 - Marginal19490APR-11

B2010.09 Exterior Soffits*

Prefinished metal soffits throughout.

RatingInstalledDesign LifeUpdated5 - Good00APR-11

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

Aluminum windows throughout the school. Operable sections are single-pane double slider. Fixed sections are sealed insulated glazing units (IGUs).

RatingInstalledDesign LifeUpdated5 - Good198640APR-11

Event: Replace Aluminum Windows (~120 m2)

TypeYearCostPriorityLifecycle Replacement2026\$151,700Unassigned

Updated: APR-11

B2020.02 Storefronts: Windows**

Steel-framed storefront transom and sidelight windows located at all building entries.

RatingInstalledDesign LifeUpdated5 - Good198640APR-11

Event: Replace Steel Framed Storefront Windows (~11

<u>m2)</u>

TypeYearCostPriorityLifecycle Replacement2026\$15,000Unassigned

Updated: APR-11

B2030.01.02 Steel-Framed Storefronts: Doors**

Steel-framed entrance doors with vision glass, panic bars, self-closers and kick plates at all entry points.

RatingInstalledDesign LifeUpdated5 - Good198630APR-11

Event: Replace Steel Storefront Doors (9 ea.)

TypeYearCostPriorityLifecycle Replacement2016\$24,100Unassigned

B2030.02 Exterior Utility Doors**

Insulated metal exterior utility doors in metal frames exit from the gymnasium on the east side. Doors are furnished with panic bars, self-closers and kick plates.

RatingInstalledDesign LifeUpdated5 - Good198640APR-11

Event: Replace Exterior Utility Doors (2 ea.)

TypeYearCostPriorityLifecycle Replacement2026\$2,000Unassigned

Updated: APR-11

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

Built-up bituminous roof (BUR) throughout. No significant ponding - roof generally appears to have positive drainage. Small isolated patches of exposed membrane. Debris screens missing at all drains (roof drains and scuppers. (Repair<\$1000).

RatingInstalledDesign LifeUpdated4 - Acceptable199425APR-11

Event: Replace BUR (~1710 m2)

TypeYearCostPriorityLifecycle Replacement2019\$258,200Unassigned

B3010.08.02 Metal Gutters and Downspouts**

PVC downspouts discharge to precast concrete splash pads around the building periphery.

RatingInstalledDesign LifeUpdated3 - Marginal199430APR-11

Event: Redirect ~5m of Downspout and Replace 6

Splashpads

Concern:

Downspouts discharge immediately adjacent to the building footprint. One downspout extension on north side of the 1949 building lies directly at the bottom of the stair. This is a tripping hazard and must be fixed immediately. Some splash pads have deteriorated beyond repair.

Recommendation:

Extend downspouts to drain away from the building footprint. Repair/Replace concrete splash pads.

TypeYearCostPriorityRepair2011\$2,500High

Updated: APR-11

Event: Replace Downspouts (~115 m)

TypeYearCostPriorityLifecycle Replacement2024\$2,500Unassigned

Updated: APR-11

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

Various mechanical vents through the roof. No roof access hatch.

RatingInstalledDesign LifeUpdated5 - Good19490APR-11

Event: Install One New Roof Hatch and Three Ladders

Concern:

There is no roof access hatch or secure fixed ladder access to the roof. Portable ladders must be used to gain access to the main roof level and then hauled up to use to gain access to the higher level roofs.

Recommendation:

Install a roof access hatch with a fixed steel ladder to gain access from the interior of the building to the main roof. Install permanent fixed ladders at each of the higher level 1949 and 1955 roofs.

Type Year Cost Priority
Operating Efficiency Upgrade 2011 \$15,000 Medium

Updated: APR-11

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Concrete block and gypsum wall board (GWB) on stud frame (wood and steel) partitions throughout.

RatingInstalledDesign LifeUpdated5 - Good19490APR-11

C1010.07 Interior Partition Firestopping*

Firestopping at most service penetrations through rated assemblies.

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

Event: Provide Missing Firestop Sealant

Concern:

Firestopping is missing at multiple service penetrations through rated assemblies in the mechanical rooms. Firestopping is missing at the perimeter of the interior mechanical room door in the basement of the 1949 building.

Recommendation:

Provide ULC-approved firestop sealant at all penestrations through rated fire penetrations.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2011	\$1,100	Low

Updated: APR-11

C1020.01 Interior Swinging Doors (& Hardware)*

Solid core wood doors throughout the school. Lever action handles on all doors. Some doors equipped with kick plates and self-closing devices.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1986	0	APR-11

C1020.03 Interior Fire Doors*

Metal doors in metal frames with vision glass, panic bars, kick plates and self-closing devices.

Rating	<u>Installed</u>	Design Life	<u>Updated</u>
4 - Accentable	0	Λ	ΔPR-11

C1030.01 Visual Display Boards** - Chalk Boards & Tack Boards

Chalk boards and tack boards located in educational, administrative and corridor spaces throughout the school.

RatingInstalledDesign LifeUpdated4 - Acceptable198620APR-11

Event: Replace Chalk Boards (~11 Chalk Boards & ~103

m2 Tack Boards)

TypeYearCostPriorityLifecycle Replacement2014\$18,600Unassigned

Updated: APR-11

C1030.01 Visual Display Boards** - SMART Board

SMART Boards were installed in all classrooms within the past 1 to 3 years.

RatingInstalledDesign LifeUpdated5 - Good200720APR-11

Event: Replace SMART Boards (9 ea.)

TypeYearCostPriorityLifecycle Replacement2027\$36,000Unassigned

Updated: APR-11

C1030.01 Visual Display Boards** - White Boards

White boards are provided in educational spaces throughout the school.

RatingInstalledDesign LifeUpdated5 - Good200520APR-11

Event: Replace White Boards (~20 ea.)

TypeYearCostPriorityLifecycle Replacement2025\$32,300Unassigned

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

Acrylic shower stalls in the girls changeroom.

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Acrylic Shower Stall (4 ea.)

TypeYearCostPriorityLifecycle Replacement2016\$5,200Unassigned

Updated: APR-11

C1030.02 Fabricated Compartments (Toilets/Showers)** - Toilet Partitions

Painted metal toilet partitions are used in the washrooms and the change rooms.

RatingInstalledDesign LifeUpdated5 - Good198630APR-11

Event: Replace Fabricated Compartments (~16 ea.)

TypeYearCostPriorityLifecycle Replacement2016\$23,300Unassigned

Updated: APR-11

C1030.08 Interior Identifying Devices*

Room number plates and signs are provided throughout.

RatingInstalledDesign LifeUpdated5 - Good19860APR-11

C1030.10 Lockers**

Full height 1.8m lockers throughout the school: Corridors - 1-tier Change rooms - 2-tier

Staff Washroom - 2-tier

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Metal Lockers (~113 ea.)

TypeYearCostPriorityLifecycle Replacement2016\$75,700Unassigned

Updated: APR-11

C1030.12 Storage Shelving*

Clear finish and painted plywood storage shelving of varying vintages throughout.

RatingInstalledDesign LifeUpdated5 - Good19490APR-11

C1030.14 Toilet, Bath, and Laundry Accessories*

Commercial/Institutional grade mirrors, soap dispensers, paper towel dispensers and toilet tissue holders located in all washrooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19490FEB-06

C2010 Stair Construction*

Wood framed stairs in the 1949 Section.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

C2020.05 Resilient Stair Finishes**

Resilient stair finish on interior wood in the 1949 Section.

RatingInstalledDesign LifeUpdated5 - Good198620APR-11

Event: Replace Resilient Stair finish (~15 m2)

TypeYearCostPriorityLifecycle Replacement2014\$1,400Unassigned

Updated: APR-11

C2020.08 Stair Railings and Balustrades*

Wood balustrades and railing provided for interior stair.

RatingInstalledDesign LifeUpdated5 - Good19490FEB-06

C2020.11 Other Stair Finishes*

Painted CIP concrete stairs at two locations from the basement to the main floor.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

C3010.02 Wall Paneling** - Corridors/Gym

Wood paneling in the corridors of the 1949 Section.

RatingInstalledDesign LifeUpdated5 - Good198630APR-11

Event: Replace Wood Paneling (~353 m2)

TypeYearCostPriorityLifecycle Replacement2016\$35,400Unassigned

Updated: APR-11

C3010.02 Wall Paneling** - Teachers Lounge

Wood wall paneling in the teaches lounge.

RatingInstalledDesign LifeUpdated5 - Good200930APR-11

Event: Replace Wood Wall Paneling

TypeYearCostPriorityLifecycle Replacement2039\$1,200Unassigned

Updated: APR-11

C3010.06 Tile Wall Finishes**

Ceramic wall tile in washrooms and change rooms.

RatingInstalledDesign LifeUpdated5 - Good198640APR-11

Event: Replace Tile Wall Finish (~310 m2)

TypeYearCostPriorityLifecycle Replacement2026\$90,800Unassigned

Updated: APR-11

C3010.11 Interior Wall Painting*

Majority of wall surfaces are painted.

RatingInstalledDesign LifeUpdated5 - Good19850APR-11

C3020.01.02 Paint Concrete Floor Finishes*

Concrete floor in the basement is painted throughout. The floor is currently in the process of being repaired. (Refer to A1010 and A2020).

RatingInstalledDesign LifeUpdated3 - Marginal19850APR-11

C3020.02 Tile Floor Finishes**

Ceramic tile floors in the change rooms and washrooms of the school.

RatingInstalledDesign LifeUpdated5 - Good198650APR-11

Event: Replace Tile Floor Finish (~100 m2)

TypeYearCostPriorityLifecycle Replacement2036\$19,300Unassigned

Updated: APR-11

C3020.04 Wood Flooring**

Wood gym flooring in gymnasium and wood floor on the stage. It was reported that the gym floor gets refinished annually.

RatingInstalledDesign LifeUpdated5 - Good195530APR-11

Event: Replace Wood Floor (~295 m2)

TypeYearCostPriorityLifecycle Replacement2014\$70,000Unassigned

Updated: APR-11

C3020.07 Resilient Flooring** - 1949 Section

Sheet vinyl on the upper floor of the 1949 Section.

Rating Installed Design Life Updated 6 - Excellent 2009 20 APR-11

Event: Replace Sheet Vinyl Flooring (~320 m2)

TypeYearCostPriorityLifecycle Replacement2029\$29,600Unassigned

Updated: APR-11

C3020.07 Resilient Flooring** - Vinyl Tile

Vinyl tile flooring in classrooms, offices and service rooms in the 1955 and 1960 Additions.

RatingInstalledDesign LifeUpdated4 - Acceptable198620APR-11

Event: Replace Vinyl Tile Flooring (~970 m2)

TypeYearCostPriorityLifecycle Replacement2014\$56,500Unassigned

Updated: APR-11

C3020.08 Carpet Flooring**

Carpet provided in the library.

RatingInstalledDesign LifeUpdated4 - Acceptable198615APR-11

Event: Replace Carpet (~76 m2)

TypeYearCostPriorityLifecycle Replacement2014\$5,700Unassigned

Updated: APR-11

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

Suspended T-bar grid system throughout the school with the exception of the basement, gymnasium and stage.

RatingInstalledDesign LifeUpdated4 - Acceptable198625APR-11

Event: Replace Acoustic Ceiling Tiles (~1415 m2)

TypeYearCostPriorityLifecycle Replacement2014\$71,700Unassigned

Updated: APR-11

C3030.07 Interior Ceiling Painting*

Painted GWB ceiling in the basement.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

S4 MECHANICAL

D2010.04 Sinks** - Janitor Service Sinks

The janitor storage room has one floor-mounted plastic sink.

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Janitor Service Sink (1 unit)

TypeYearCostPriorityLifecycle Replacement2016\$1,500Unassigned

Updated: APR-11

D2010.04 Sinks** - Stainless Steel Sinks

Stainless steel sinks are provided in several rooms in the school.

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Stainless Steel Sinks (5 units)

TypeYearCostPriorityLifecycle Replacement2016\$8,300Unassigned

Updated: APR-11

D2010.05 Showers**

Gang shower provided for boys change room and individual stalls provided for girls.

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Showers (3 Stalls and Gang Showers)

TypeYearCostPriorityLifecycle Replacement2016\$18,300Unassigned

D2010.08 Drinking Fountains/Coolers**

Vitreous china drinking fountain and refrigerated fountains provided in corridors.

RatingInstalledDesign LifeUpdated4 - Acceptable198635APR-11

Event: Replace Drinking Fountains (1 China and 1

Refrigerated)

TypeYearCostPriorityLifecycle Replacement2021\$5,900Unassigned

Updated: APR-11

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

10 vitreous china flush tank water closets.

7 wall-mounted vitreous china urinals with dump tank and flush valve type fixtures.

10 vitreous china lavatories with standard trim.

RatingInstalledDesign LifeUpdated4 - Acceptable198635APR-11

Event: Instal 7 Manual or Proximity Sensor Flush Valves

Concern:

The urinals run on continuous dump and refill cycles, wasting water.

Recommendation:

Replace dump tank with manual or proximity sensor flush valves on the urinals.

TypeYearCostPriorityEnergy Efficiency Upgrade2012\$2,200Medium

Updated: APR-11

Event: Replace 10 Toilets, 7 Urinals, and 10 Lavatories.

TypeYearCostPriorityLifecycle Replacement2021\$56,300Unassigned

Updated: APR-11

D2020.01.01 Pipes and Tubes: Domestic Water*

Galvanized steel water main with copper distribution throughout, where visible.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D2020.01.02 Valves: Domestic Water**

Isolation valves on domestic water distribution throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable198640APR-11

Event: Replace Domestic Water Valves (~14 units)

TypeYearCostPriorityLifecycle Replacement2026\$18,100Unassigned

Updated: APR-11

D2020.01.03 Piping Specialties (Backflow Preventors)**

Backflow prevention installed on domestic water supply and boiler make-up water. No irrigation system at this facility.

RatingInstalledDesign LifeUpdated4 - Acceptable199020APR-11

Event: Replace Backflow Preventors (4 units)

TypeYearCostPriorityLifecycle Replacement2014\$13,700Unassigned

Updated: APR-11

D2020.02.02 Plumbing Pumps: Domestic Water**

Domestic hot water recirculating pump installed in line with the hot water heaters.

RatingInstalledDesign LifeUpdated4 - Acceptable200420APR-11

Event: Replace Circulation Pump (1 unit)

TypeYearCostPriorityLifecycle Replacement2024\$5,700Unassigned

Updated: APR-11

D2020.02.06 Domestic Water Heaters**

Two John Wood 50 gallon natural gas fired water heaters.

RatingInstalledDesign LifeUpdated4 - Acceptable200420APR-11

Event: Replace Water Heaters (2 units)

TypeYearCostPriorityLifecycle Replacement2024\$4,100Unassigned

Updated: APR-11

D2020.03 Water Supply Insulation: Domestic*

Domestic distribution lines are mostly uninsulated where observed.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D2030.01 Waste and Vent Piping*

Cast iron waste water (storm and sanitary) piping is connected to the collection sewers. ABS soil vents extend above the roof surfaces.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

D2030.02.04 Floor Drains*

A floor drain is present in the basement level, adjacent to the boiler room.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

D2030.03 Waste Piping Equipment*

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

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D2040.01 Rain Water Drainage Piping Systems*

Roof drains convey water to exterior rainwater leaders (RWLs) which drain to grade.

RatingInstalledDesign LifeUpdated3 - Marginal19860APR-11

Event: Repair Rain Water Leaders

Concern:

RWLs discharge at grade at the building footprint and flow into crawl spaces.

Recommendation:

Extend RWLs to discharge away from the building footprint.

TypeYearCostPriorityRepair2011\$1,100High

Updated: APR-11

D2040.02.04 Roof Drains*

Roof drains with cast aluminum strainers and external rainwater leaders.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D3010.02 Gas Supply Systems*

Natural gas line to boiler and hot water tank.

RatingInstalledDesign LifeUpdated4 - Acceptable19550APR-11

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

The boiler plant consists of three Weil-McLain hot water boilers equipped with natural gas burners. The boilers provide hot water to original perimeter finned tub radiation throughout and convector units at entrances.

RatingInstalledDesign LifeUpdated4 - Acceptable200035APR-11

Event: Replace Boilers and Accessories (3 units)

TypeYearCostPriorityLifecycle Replacement2035\$159,000Unassigned

Updated: APR-11

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

Boiler breaching is connected to the insulated chimney. Uninsulated combustion air ducting provided complete with baffle trap.

RatingInstalledDesign LifeUpdated4 - Acceptable200035APR-11

Event: Replace Chimneys & Combustion Air (~15 m)

TypeYearCostPriorityLifecycle Replacement2035\$10,800Unassigned

Updated: APR-11

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

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

RatingInstalledDesign LifeUpdated4 - Acceptable20000APR-11

D3040.01.04 Ducts: Air Distribution*

Non-insulated low volume sheet metal ducting throughout the basement.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Grilled diffusers at fresh air intake and exhaust for basement heat recovery ventilator.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

D3040.03.01 Hot Water Distribution Systems**

Insulated hot water pipes located at ceiling of basement-level rooms and throughout crawl space tunnel. Remainder of pipes are concealed.

RatingInstalledDesign LifeUpdated4 - Acceptable198640APR-11

Event: Replace Hot Water Distribution Pipes (~400 m)

TypeYearCostPriorityLifecycle Replacement2026\$33,500Unassigned

Updated: APR-11

D3040.04.01 Fans: Exhaust**

5 Axial and 2 centrifugal type rooftop exhaust fans provided. 3 wall mounted centrifugal fans provided for ventilation of crawl space areas.

RatingInstalledDesign LifeUpdated4 - Acceptable199430APR-11

Event: Replace Exhaust Fans (2048 m2/gfa) & 3 Wall Fans

TypeYearCostPriorityLifecycle Replacement2024\$79,000Unassigned

D3050.05.01 Convectors**

Original convector cabinets at building entrances and stairwells.

RatingInstalledDesign LifeUpdated4 - Acceptable198640APR-11

Event: Replace Convectors (6 units)

TypeYearCostPriorityLifecycle Replacement2026\$4,900Unassigned

Updated: APR-11

D3050.05.03 Finned Tube Radiation**

Hot water finned-tube radiation provided throughout the school.

RatingInstalledDesign LifeUpdated4 - Acceptable198640APR-11

Event: Replace Finned Tube Radiators (~2048 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2026\$95,400Unassigned

Updated: APR-11

D3050.06 Energy Recovery Units*

A heat recovery ventilator has been installed in the basement to improve air quality and reduce ambient air moisture.

RatingInstalledDesign LifeUpdated5 - Good20090APR-11

D3060.02.02 Pneumatic Controls**

Pneumatic control system with Barber Colman compressor and dryer in the boiler room.

RatingInstalledDesign LifeUpdated4 - Acceptable198640APR-11

Event: Replace Pneumatic Controls (~2048 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2026\$12,000Unassigned

Updated: APR-11

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

A CSI BMCS is installed in the boiler room of the 1949 Section.

RatingInstalledDesign LifeUpdated4 - Acceptable200020APR-11

Event: Replace Building Control Systems (~2048 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2020\$46,700Unassigned

Updated: APR-11

D4020 Standpipes*

Original standpipe system is installed in the building.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

D4030.01 Fire Extinguisher, Cabinets and Accessories*

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

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

S5 ELECTRICAL

D5010.01 Main Electrical Transformers**

Power to the school is fed underground from pole-mounted utility-owned transformers.

RatingInstalledDesign LifeUpdated4 - Acceptable195540APR-11

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

Main electrical switchboard and central distribution panel are a product of Amalgamated Electric rated at 115/230 Volts, 400 Amps, single-phase, 3-wire service.

RatingInstalledDesign LifeUpdated4 - Acceptable195540APR-11

Event: Replace Main Electrical Switchboards (1 unit)

TypeYearCostPriorityLifecycle Replacement2014\$49,900Unassigned

Updated: APR-11

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1949 Section

Original 14-18-32 circuit panelboards throughout the school.

RatingInstalledDesign LifeUpdated3 - Marginal194930APR-11

Event: Upgrade and Add Panelboards (~5 units)

Concern:

The panelboards have surpassed their expected service life, are obsolete and are at or near capacity with little room for additional circuits.

Recommendation:

Replace panelboards with current technology using 42 cct. panelboards to allow for future expansion.

TypeYearCostPriorityFailure Replacement2012\$21,400Low

D5010.07.02 Motor Starters and Accessories**

Original stand alone magnetic starters throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable194930APR-11

Event: Replace Motor Starters (12 units)

TypeYearCostPriorityLifecycle Replacement2014\$20,700Unassigned

Updated: APR-11

D5020.01 Electrical Branch Wiring*

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

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

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

Simple line voltage switches throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent fixtures are located in the foyers of the school.

RatingInstalledDesign LifeUpdated4 - Acceptable19550APR-11

D5020.02.02.02 Interior Fluorescent Fixtures**

The school has a combination of hanging and flush-mounted T-8 lights with electronic ballasts throughout the school.

Rating Installed Design Life Updated 5 - Good 2007 30 APR-11

Event: Replace T-8 ballasts and lights (~2048 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2037\$178,800Unassigned

Updated: APR-11

D5020.02.03.02 Emergency Lighting Battery Packs**

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

RatingInstalledDesign LifeUpdated5 - Good200720APR-11

Event: Replace Emergency Lighting Battery Packs (6)

<u>units)</u>

TypeYearCostPriorityLifecycle Replacement2027\$7,700Unassigned

Updated: APR-11

D5020.02.03.03 Exit Signs*

Exit signs are newer aluminum-framed, LED fixtures and are often mounted with emergency lights.

RatingInstalledDesign LifeUpdated5 - Good20070APR-11

D5020.02.05 Special Purpose Lighting*

Theatre lights are present on the stage.

RatingInstalledDesign LifeUpdated4 - Acceptable19550APR-11

D5020.03.01.01 Exterior Incandescent Fixtures*

Incandescent lights are installed at the canopies above exits around the school.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

High pressure sodium lights are installed at various locations around the perimeter of the school.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

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

Exterior lighting controlled by photo cells.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D5030.01 Detection and Fire Alarm**

The fire alarm protection system is a Mircom alarm system. Terminal devices include manual pull stations, modular bells with strobes, rate of rise detectors and smoke alarms.

Rating Installed Design Life Updated 2007 25 APR-11

Event: Replace Detection and Fire Alarm (~2048 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2032\$61,700Unassigned

Updated: APR-11

D5030.02.01 Door Answering*

Push button door bell at main entrance.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D5030.02.02 Intrusion Detection**

The intrusion detection system consists of a DSC system with motion detectors located throughout the school.

RatingInstalledDesign LifeUpdated5 - Good200725APR-11

Event: Replace Panel and 6 Sensors

TypeYearCostPriorityLifecycle Replacement2032\$9,800Unassigned

Updated: APR-11

D5030.03 Clock and Program Systems*

Tork master clock integrated with communication system in the main office.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

D5030.04.01 Telephone Systems*

Phone system replaced in 2008. Handsets are located in each classroom. Telephone provides internal/external calling, paging and intercom functions.

RatingInstalledDesign LifeUpdated5 - Good20080APR-11

D5030.04.04 Data Systems*

Fibre optic service and Alberta Supernet installed. Cat 5 cable throughout.

RatingInstalledDesign LifeUpdated5 - Good20030APR-11

D5030.04.05 Local Area Network Systems*

LAN system is installed throughout the school. Cat 5 cable throughout.

D5030.05 Public Address and Music Systems**

Peavey sound system is located on stage.

RatingInstalledDesign LifeUpdated4 - Acceptable199520APR-11

Event: Replace Sound System (1 unit)

TypeYearCostPriorityLifecycle Replacement2015\$5,900Unassigned

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.02 Library Equipment*

Library check out counter, tables, chairs, book shelves on library floor, computers, racks, tables.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

E1020.03 Theater and Stage Equipment*

Curtain and stage lighting at the stage.

RatingInstalledDesign LifeUpdated4 - Acceptable19860APR-11

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Basketball backboards, digital scoreboards and miscellaneous sports gear and equipment.

RatingInstalledDesign LifeUpdated5 - Good19860APR-11

E2010.02 Fixed Casework** - Educational

Assorted fixed casework throughout the school in classrooms, administration and service spaces.

RatingInstalledDesign LifeUpdated4 - Acceptable198635APR-11

Event: Replace Fixed Casework (~1290 m2/gfa)

TypeYearCostPriorityLifecycle Replacement2021\$129,500Unassigned

Updated: APR-11

E2010.02 Fixed Casework** - Staff Room

Clear finish kitchen casework with laminate tops.

RatingInstalledDesign LifeUpdated5 - Good200935APR-11

Event: Replace Fixed Casework (~24 m)

TypeYearCostPriorityLifecycle Replacement2044\$20,900Unassigned

E2010.03.01 Blinds**

Blinds on all windows throughout the school.

RatingInstalledDesign LifeUpdated4 - Acceptable198630APR-11

Event: Replace Blinds (~120 m2)

TypeYearCostPriorityLifecycle Replacement2016\$14,100Unassigned

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

A CIP concrete sidewalk is provided flush with the main entrance to the building along the south, east and north sides of the building. The sidewalk also extends along most of the north side of the bus lane on the south side of the site.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

K4010.02 Barrier Free Entrances*

The main entrance is flush with grade (interior/exterior) and the door widths are sufficient to allow wheel chair entry.

RatingInstalledDesign LifeUpdated3 - Marginal19490APR-11

Event: Install a Power Door Operator at the Main Entry (1)

<u>ea.)</u>

Concern:

No power operated entrance door provided.

Recommendation:

Install a power door operator at the main entry of the school to accomadate barrier free access.

TypeYearCostPriorityBarrier Free Access Upgrade2012\$7,500Low

Updated: APR-11

K4010.03 Barrier Free Interior Circulation*

Barrier free access provided throughout the main floor. Horizontal pathways are structurally sound and of sufficient width to accomodate wheelchair passage.

RatingInstalledDesign LifeUpdated3 - Marginal19490APR-11

Event: Install One Wheel Chair Lift

Concern:

There is no barrier free access to the stage.

Recommendation: Install a wheel chair lift.

Type Year Cost Priority
Barrier Free Access Upgrade 2012 \$28,400 Low

Updated: APR-11

K4010.04 Barrier Free Washrooms*

Barrier free washroom is provided.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

K4030.01 Asbestos*

Based on the age of the building, there is likely to be asbestos containing building materials present in portions of the building. No known or reported asbestos.

RatingInstalledDesign LifeUpdated4 - Acceptable19490APR-11

Event: Conduct Asbestos Survey

Concern:

It was reported that an asbestos survey has not been done for this school. Suspected friable asbestos building materials were identified. No exposed or damaged building materials were identified.

Recommendation:

Conduct an asbestos survey.

 Type
 Year
 Cost
 Priority

 Study
 2011
 \$6,500
 Low

Updated: APR-11

Event: Develop an Asbestos Management Plan

Concern:

It was reported that an asbestos survey has not been done for this school. Suspected friable asbestos building materials were identified. No exposed or damaged building materials were identified.

Recommendation:

Based on the results of the survey, if asbestos containing materials are identified, develop an asbestos management plan.

TypeYearCostPriorityPreventative Maintenance2011\$3,500Low

Updated: APR-11

K4030.02 PCBs*

No known or reported PCB's were identified.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

K4030.03 Mercury*

Mercury may be present in thermostats. No other known or reported mercury was identified.

RatingInstalledDesign LifeUpdated4 - Acceptable00APR-11

K4030.04 Mould*

Mould is likely to be present in portions of the basement and crawl space walls and floor. Refer to A1010 and A2020 regarding Survey and Repair.

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

K4030.09 Other Hazardous Materials*

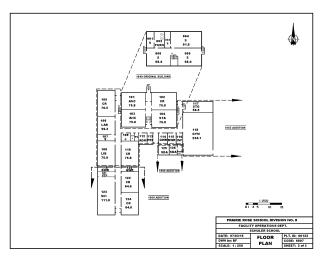
No other hazardous materials observed or reported.

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

K5010 Reports and Studies*

A facility condition evaluation was conducted by Golder Associated Ltd. On September 16, 2010.

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



Schuler School, Floor Plans (1985, Rev. 1986)