

RECAPP Facility Evaluation Report

Sturgeon School Div #24



Sturgeon Composite High School

B3816A

Namao

Facility Details

Building Name: Sturgeon Composite High S
Address: P. O. Box 100
Location: Namao

Building Id: B3816A
Gross Area (sq. m): 0.00
Replacement Cost: \$23,429,912
Construction Year: 0

Evaluation Details

Evaluation Company: Wilson Architects Ltd.
Evaluation Date: May 6 2006
Evaluator Name: J. R. Irlam

Total Maintenance Events Next 5 years: **\$2,044,400**
5 year Facility Condition Index (FCI): **8.73%**

General Summary:

The Sturgeon Composite High School was constructed in several phases. The original school was built in 1977 primarily as a single storey building with a small section of two storey at the mezzanine level in the gym. In 1980 there were five separate additions and infill developments for classrooms and vocational classes. This development also included 4 portable classrooms attached to the north side of the school. In 1993 an additional gym was constructed on the north west corner of the school where the portables were located. Two additional portables were added to the site. The cafeteria was also expanded and the kitchen renovated and two science class rooms added at the south west corner of the school.

The school buildings have brick cladding with a flush pre-cast concrete fascia. The parking area at the side of the school is extensive to accommodate student vehicles. The school has facilities for industrial arts and automotive shop and other vocational pursuits.

There is a derelict hockey rink and tennis courts which are still in use. The school shares a sewage lagoon with two other adjacent facilities.

The student enrolment at the time of writing is 884 in grades 10, 11 and 12.

Structural Summary:

The structure of the original school consists of precast concrete double tees spanning between reinforced concrete block walls. The long spans over both the original gym and the new gym are achieved with open web steel trusses spanning reinforced concrete block walls. The only two storey section of the facility is at the mezzanine level which is part of the original gym building. The precast concrete double tees form the floor of the two storey section where the roof structure is open web steel joists.

The structural condition of the school is good.

Envelope Summary:

The exterior brick walls and pre-cast concrete cladding are in good condition. Approximately half of the school needs re-roofing. There are few windows in the facility many of which need the sealed units replacing. The skylights are a continual problem with leaks. Re-caulking has been carried out and provides a temporary fix for a year or two.

Despite the deficiencies noted above, the overall condition of the building envelop of the school is acceptable.

Interior Summary:

Generally the interior of the school is in good condition. The original terrazzo floors have provided a durable surface in heavy use corridor areas. There are some sections of wall and floor finishes which require repair or replacement. Carpet in the staff room and library should be replaced. There are some splits in the sheet vinyl floors which require repair.

The original painted concrete block interior partitions have also survived the rigors of high school usage. Painted concrete block has also been used for toilet partitions resulting in little or no damage to this component.

There are some unique features in the school. One of the enclosed courtyards has been developed as a tropical garden. There is also a sunken lounge area for students in the 1980 additions. The use of skylights and internal courtyards brings natural light into the interiors.

The overall condition of the school interior is acceptable.

Mechanical Summary:

Flush tank water closets and urinal throughout the school are in poor condition. Lavatories are porcelain enameled steel and are chipped and rusting. Replacement of the plumbing fixtures is recommended.

Hydronic heating system with two pairs of gas fired boilers and circulating pumps that serve perimeter radiation, ventilation units, reheat coils, and force flow unit heaters. One set of boilers, installed in 1993, is in fair condition. The other two boilers, installed in 1976, are in poor condition and should be replaced.

The ventilation units provided for the original school are of light commercial construction and are in poor condition. Replacement within the next five years is recommended. The air systems for the 1993 construction are institutional quality, and are operating effectively. Some re-balancing of the supply system is required to improve circulation to a few of the classrooms.

A number of the portable furnaces have been replaced within the last few years with furnaces that were not designed for the high volumes of outside air required for classrooms. These units are corroding badly and should be replaced with appropriate systems.

An upgrade to the control system is also recommended.

The overall condition of the mechanical systems of the school is marginal.

Electrical Summary:

The school has a 1600A, 600V 3 phase 4 wire underground service supplies by an on-site pad mounted transformer. The main switchboard is by FPE and has spare capacity for the addition of future breakers. Dry type transformers step the voltage down to 120/208 Volts. Lighting is provided by fluorescent fixtures utilizing T8 lamps and electronic ballasts. Overall, the electrical systems are in good 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*

All three phases of construction have 400 mm concrete piles carrying a concrete grade beam: original 1976 school, 1980 additions and the 1993 gym. The original school drawings show some bell piles to a depth of 6 metres.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	NOV-06

A1030 Slab on Grade*

The original 1977 school and the 1980 additions have 100 mm concrete slab on grade with steel wire mesh reinforcing, poly vapour barrier on compacted granular fill.

The 1993 gym has 125 mm concrete slab with reinforcing at 300 mm o/c each way.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	100	NOV-06

B1010.01 Floor Structural Frame*(Building Frame)

1977 original school building has a precast concrete double tee roof system throughout the school carried on reinforced concrete block and notched precast concrete beams over openings in the walls. The original gym has an open web steel joist roof carried on reinforced concrete block walls.

The 1980 additions are constructed of open web steel joists carried on a bond beam on reinforced concrete block walls.

The 1993 gym has an open web steel joist roof system carried on a reinforced concrete block walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	100	NOV-06

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

The original school building has structural interior walls constructed of reinforced concrete block supporting the precast concrete tee roof structure.

There are no structural interior walls in the 1980 additions.

There is a double interior reinforced concrete block wall carried on a poured reinforced concrete beam which separates the 1993 gym from the mezzanine and change room area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	100	NOV-06

B1010.03 Floor Decks, Slabs, and Toppings*

Most of the 1977 school building has a roof deck formed by the concrete double tees which provides a base for the built up roof. There is also metal roof decking over the former gym area which provides a base for the built up roof.

The roof decks of the 1980 additions are provided by 38 mm metal decks.

The metal deck in the 1993 building provides a base for the rigid insulation under the built up roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	100	NOV-06

B1010.05 Mezzanine Construction*

The mezzanine in the old gym where the bleachers are located is constructed from the precast concrete double tees which are cantilevered 900 mm beyond the interior concrete block bearing wall underneath.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	80	NOV-06

B1010.07 Exterior Stairs**

There is a flight of concrete exterior stairs on the north west corner of the 1993 gym with 8 treads.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	40	NOV-06

B1010.09 Floor Construction Fireproofing*

The 1993 gym has a two storey section along the west side which accommodates a mechanical room on the upper floor and change and shower area on the main floor. The second floor in this section is supported on open web steel joists which are coated with a sprayed on one hour fire proofing.

Fire proofing to the floors two storey sections of the 1980 additions is provided by 16 mm fire guard gypsum board on suspended metal ceiling system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

B1010.10 Floor Construction Firestopping*

There is fire stopping where floors are penetrated by pipes and other services.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	50	NOV-06

Event: Install fire stopping

Concern:

There are some rooms where fire stopping is missing which does not comply with Code particularly where data and other communications systems have been installed subsequent to the original construction in the emergency generator room and janitor's room for example.

Recommendation:

Installation of fire stopping in the janitor's room and emergency generator room is recommended.

Consequences of Deferral:

The school building will continue to be non-compliant with the Code.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2007	\$2,000	High

Updated: NOV-06

B1010.11 Other Floor Construction*

The proscenium arch consists of a 300 x 900 mm precast concrete beam spanning between two 300 x 400 mm precast concrete columns

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	50	NOV-06

B1020.01 Roof Structural Frame*

The structural frame for the roof in the original school building consists of precast concrete double tees carried on reinforced concrete block walls. The gym roof in this section consists of open web steel joists supported on reinforced concrete block walls.

The roof structural frame in the 1980 additions consists of 500 mm deep open web steel joists at 2.2 metres o/c carried on reinforced concrete block walls.

The roof structural frame of the 1993 gym also consists of 1050 mm deep open web steel joists at 2 metres o/c carried on reinforced concrete block walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	100	NOV-06

B1020.04 Canopies*

There is a canopy over the main entrance to the school on the south face. The canopy roof is formed from pre-cast concrete double tees carried on the out side by a notched precast concrete beam. The roof is built up bitumen felt.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

B1020.06 Roof Construction Fireproofing*

The two storey sections of the gym have a one hour rated drywall assembly to the underside of the steel joists.

The open web steel joist roof structure of the 1980 additions has one hour ULC rated mineral fibre sprayed to the underside of the metal roof deck and on the open web steel joists.

The roof of the 1993 gym is a non-combustible steel structure and has no fire proofing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	50	NOV-06

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin*

The original school building has a continuous 100 mm thick by 1600 mm deep precast concrete flush fascia carried on a steel angle bolted to the reinforced concrete block exterior walls and bolted at the top to the precast concrete double tees.

The 1980 additions also have a 100 mm thick by 1600 deep precast concrete fascia carried on a steel angle bolted to the exterior reinforced concrete block walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	75	NOV-06

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

All three phases of building have giant brick exterior cladding.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	75	NOV-06

B2010.01.05 Exterior Insulation and Finish Systems (EIFS)*

The 1993 gym has a mix of insulation types which includes a 75 mm exterior rigid insulation system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	75	NOV-06

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

The 1993 gym has exterior stucco fascia band along the upper part of the exterior walls with a stone dash finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1993	75	NOV-06

B2010.01.09 Expansion Control: Exterior Wall Skin*

The 1993 gym exterior has stucco vertical expansion joints designed into the building elevations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1993	75	NOV-06

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

The 1993 gym has caulking details where the stucco exterior finish meets the brick cladding.

All three phases of construction have caulking where the window and door frames meet the exterior walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1993	20	NOV-06

Event: Recaulk window, grille and door frames.

Concern:

Caulking to exterior window, door and grille frames is failing.

Recommendation:

Re-caulking is recommended to prevent water damage to the exterior wall.

Consequences of Deferral:

Further deterioration of the caulking will result in water damage to the exterior wall.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2007	\$2,000	Medium

Updated: NOV-06

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

The drawings of the original school indicate rigid wall insulation with no thickness specified and no vapour barrier indicated.

The drawings of the 1980 additions call for 50 mm rigid wall insulation and have no indication of a vapour barrier.

The 1993 gym has a mix of insulation types which include 50 mm and 75 mm rigid as well as an exterior insulation system. Batt insulation is also called for on the drawings where rigid insulation would be difficult to install. There is an air/vapour barrier in all exterior walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

B2010.06 Exterior Louvers, Grilles, and Screens*

There are exterior louvers associated with air intakes and exhausts for the air handling system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	30	NOV-06

Event: Replace exterior grilles

Concern:

There are several louvers with blades missing. Failure to replace the blades may lead to damage to the filters and associated machinery.

Recommendation:

Replacement of the louvers is recommended to prevent internal damage to air handling equipment.

The estimate is based on replacing 5 grilles.

Consequences of Deferral:

Damage to air handling equipment may result if louvers are not replaced.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$5,000	Medium

Updated: NOV-06

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

There are exterior aluminum windows in the 1977 building and the 1980 additions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	40	NOV-06

B2030.01.01 Aluminum-Framed Storefronts**

There are aluminum store front units in the open courtyards in the 1977 school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	30	NOV-06

Event: Replace store fronts

Concern:

The store fronts leak water into the school corridors which could be a slipping hazard for students and staff.

Recommendation:

Replacement of the store front units is recommended.

The estimate is based on replacing 63 linear metres of store front 2400 mm high.

Consequences of Deferral:

The slipping hazard will persist in the school.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$40,000	High

Updated: NOV-06

B2030.03 Large Exterior Special Doors (Overhead)*

There are 6 overhead doors in the 1977 building and a further 4 in the 1980 additions leading to automotive service bays. There is one overhead door in the fabrication area and one in the industrial arts room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	30	NOV-06

Event: Replace over head doors

Concern:

The wood panels in the overhead doors are damaged at the base and sides where the runners are attached and require replacement. The doors are difficult to operate.

Recommendation:

The replacement of the overhead doors is recommended.

The estimate is based on replacing 12 overhead doors with insulated metal doors at \$1500 each.

Consequences of Deferral:

The doors will continue to deteriorate and their operation will become increasingly difficult.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$20,000	High

Updated: NOV-06

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

The roofing over the original school and the 1993 gym is built up roofing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	25	NOV-06

Event: Replace roof

Concern:

The roof is failing and leaking onto roofing tiles.

Recommendation:

The School Division staff that 50% of the roof has been installed in the last 5 to 10 years and that the balance should be replaced.

It is recommended that 50% of the built up roof be replaced.

The estimate is based on replacing 6000 m2 of built up roofing with an SBS roofing system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$300,000	Unassigned

Updated: NOV-06

B3010.04.08 Membrane Roofing (Inverted/ Protected)**

The 1980 additions have inverted roofs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	NOV-06

Event: Lifecycle Replacement

Concern:

The roofs will reach their design life in 2010.

Recommendation:

It is recommended to include replacement of these roofs in the Strategic Plan Window.

The estimate is based on replacing 1700 m2 with a built up roof at 2006 costs.

Consequences of Deferral:

The roofs will continue to deteriorate after the year 2010.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$90,000	Low

Updated: NOV-06

B3020.01 Skylights**

Skylights form an important design feature in the interior of the original 1977 school. There are four sloped glazed sky lights over the intersection of the corridors to the general office and the entrance hallway. These skylights consist of glass in an aluminum frame.

There are also skylights over the enclosed court yard with a similar construction in the 1977 building.

There is also a barrel vault over the main entrance corridor in the 1977 building.

The north east 1980 classroom addition has one piece plastic skylight over the sunken lounge.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	20	NOV-06

Event: Replace sky lights

Concern:

The skylights over the corridor intersections leak onto the terrazzo floor and crate a slipping hazard for the school users.

Recommendation:

Replacement of the skylights over the corridor intersection is recommended.

The estimate is based on replacing all four sky lights in this location for \$25,000 each.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$100,000	High

Updated: NOV-06

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

There are other roof openings over all roofs including a door from a mechanical room onto roof stairs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	25	NOV-06

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior partitions throughout the school are primarily reinforced concrete block. There are some steel stud and drywall partitions enclosing the rooms above the stage and other areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

C1010.04 Interior Balustrades and Screens, Interior Railings*

There is a painted steel guard rail for the spectator's galleries in the original gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	40	NOV-06

Event: Increase height of guard rail

Concern:

The height of the guard rail for the gallery in the gym does not comply with Code which requires a height of 1200 mm.

Recommendation:

Add additional horizontal rail to increase height of guard rail.

The estimate is based on adding a rail 30 metres long.

Consequences of Deferral:

The gallery will continue to be in breach of the Code.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2007	\$3,000	High

Updated: NOV-06

C1010.06 Interior Glazed Partitions and Storefronts*

There are aluminum store fronts enclosing the interior courtyard in the 1977 school building and computer room adjacent to the library.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

C1010.07 Interior Partition Firestopping*

The interior partitions have fire stopping.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	50	NOV-06

Event: Install fire stopping

Concern:

There are several locations where fire stopping is missing in the interior partitions where services such as data cabling have been installed.

Recommendation:

Installation of interior partition fire stopping is recommended.

The estimate is based on installing fire stopping in 10 locations.

Consequences of Deferral:

The Fire Code will continue to be contravened.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2007	\$1,500	High

Updated: NOV-06

C1020.03 Interior Fire Doors*

There are double interior corridor fire doors with hold open devices tied into the fire alarm system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

C1020.07 Other Interior Doors*

The typical classroom doors are solid core birch veneer in pressed steel frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	15	NOV-06

C1030.01 Visual Display Boards**

There are white boards in all classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1991	20	NOV-06

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

There are steel toilet partitions in the staff wash rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

Event: Replace steel toilet partitions

Concern:

These pre-fabricated toilet partitions are currently in an acceptable condition, however they may require replacement in the year 2010.

Recommendation:

It is recommended that the costs of replacing these partitions be assigned to the strategic plan window.

The cost is based on replacing 12 steel toilet cubicles at 2006 prices.

Consequences of Deferral:

The steel pre-fabricated steel toilet partitions will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$12,500	Low

Updated: NOV-06

C1030.08 Interior Identifying Devices*

The metal name plates on doors to indicate room functions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	20	NOV-06

C1030.10 Lockers**

There are locker rooms associated with showers as well as lockers in corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	30	NOV-06

C1030.12 Storage Shelving*

There is birch veneer storage shelving in classrooms and painted wood shelving in storage rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	20	NOV-06

C1030.14 Toilet, Bath, and Laundry Accessories*

There are paper towel dispensers, hand blow dryers, toilet roll dispensers and mirrors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	20	NOV-06

C2010 Stair Construction*

There are poured concrete stairs from the main floor to the mezzanine bleachers and from the mezzanine up to the upper stage area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	100	NOV-06

C2020.05 Resilient Stair Finishes**

There are rubber treads and risers on the concrete stairs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	20	NOV-06

Event: Replace resilient stair finish

Concern:

The concern is that the design life of the stair finishes was reached in 1997.

Recommendation:

Replacement of the resilient floor finishes is recommended in the year 2010.

The estimate is based on replacing 100 m2 of resilient flooring.

Consequences of Deferral:

The resilient stair finishes will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$7,000	Low

Updated: NOV-06

C2020.08 Stair Railings and Balustrades*

There are wood handrails on the stairs to the stage office and the stairs to the gym galleries. There are also painted steel pipe hand rails on the steel stairs to the roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1977	50	NOV-06

C3010.01 Concrete Wall Finishes*

There are painted concrete block walls in the classrooms. The corridors have concrete block walls with a textured glazed finish (desco). The gymnasias also have painted block walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	100	NOV-06

C3010.09 Acoustical Wall Treatment**

There are acoustic fabric panels on the walls in the music room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	20	NOV-06

Event: Replace fabric panels

Concern:

The fabric acoustic panels in the music room may require replacing in the year 2015.

Recommendation:

Budgeting for replacement in the Strategic Plan Window is recommended.

The estimate is based on replacing 20 m2 of acoustic fabric panel in the music room.

Consequences of Deferral:

The fabric panels will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$3,000	Low

Updated: NOV-06

C3010.11 Interior Wall Painting**

All interior wall surfaces are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	10	NOV-06

Event: Interior painting

Concern:

The interior painting will be required in the year 2010.

Recommendation:

Repainting the interior is recommend in the year 2010.

The estimate is based on repainting 700 m2 of wall.

Consequences of Deferral:

The interior painting will deteriorate significantly after the year 2010.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$9,000	Low

Updated: NOV-06

C3020.02 Tile Floor Finishes**

There are ceramic mosaic tiles in student wash rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

C3020.03 Terrazzo Floor Finishes*

The corridors and vestibules have a terrazzo finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	75	NOV-06

C3020.04 Wood Flooring**

The 1977 gym has a "Perma Cushion" wood floor.

The 1993 gym has a 26 mm thick 44 mm wide hard wood floor on 38 mm x 64 mm wood sleepers on resilient pads.

The carpentry shop in the 1977 school has a hard wood floor consisting of small wood blocks on edge.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

Event: Replace wood floor

Concern:

The wood floors in the 1977 school gym and carpentry shop reach their design life in 2007.

Recommendation:

Replacement is recommended.

The estimate is based on the replacement of 1000 m2 of hardwood floor (reusing the existing energy absorbing under structure).

Consequences of Deferral:

The floors will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$200,000	Low

Updated: NOV-06

C3020.07 Resilient Flooring**

There is resilient sheet vinyl flooring in various rooms and corridors throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	20	NOV-06

Event: Replace resilient flooring

Concern:

There is damaged and deteriorated resilient flooring throughout the school.

Recommendation:

Replacement of the damaged or deteriorated resilient flooring is recommended.

The estimate is based on replacing 1000 m2 of resilient flooring.

Consequences of Deferral:

The resilient flooring will continue to deteriorate further.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$100,000	High

Updated: NOV-06

C3020.08 Carpet Flooring**

There is carpet in the library, administration suite, music and practice rooms and some classrooms and other rooms throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1990	15	NOV-06

Event: Replace carpet

Concern:

There is carpet throughout the school which has deteriorated, is damaged and requires replacement.

Recommendation:

Replacement of worn or damaged carpet is recommended.

The estimate is based on replacing 1000 m2 of carpet,

Consequences of Deferral:

The carpet will continue to deteriorate.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$65,000	High

Updated: NOV-06

C3030.02 Ceiling Paneling (Wood)*

There are wood strip ceilings in the library and corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	60	NOV-06

C3030.04 Gypsum Board Ceiling Finishes*

There are some areas of gypsum board ceilings such as the stairs to the mezzanine and under the mezzanine overhang into the gym. Some teaching areas also have gypsum board ceilings such as the original ceramics room in the 1977 school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

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

There are T-bar acoustic ceilings throughout the school in classrooms and corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	25	NOV-06

Event: Replace ceiling tiles

Concern:

There are areas of damaged T-bar ceiling tiles throughout the school which require replacement.

Recommendation:

It is recommended that the damaged ceiling tiles be replaced.

The estimate is based on replacing 100 m2 of acoustic ceiling tiles.

Consequences of Deferral:

Deferral of this recommendation will result in the continued unsightliness of the ceiling finishes and further deterioration.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$3,500	Medium

Updated: NOV-06

C3030.07 Interior Ceiling Painting**

The underside of the precast concrete double tees is painted where it forms a ceiling often in conjunction with acoustic tiles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	20	NOV-06

Event: Repaint ceilings

Concern:

The painted concrete ceilings will require painting in the year 2010.

Recommendation:

It is recommended that the ceilings be repainted.

The estimate is based on repainting 300 m2 ceiling.

Consequences of Deferral:

The ceiling painting will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$1,500	Low

Updated: NOV-06

S4 MECHANICAL

D2010.01 Water Closets**

Floor mounted flush tank water closets are used in the student washrooms. Seating configurations are generally round bowls with open fronts in all washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	35	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	28	number	

Event: Replace Water Closets

Concern:

Water closets are old 5 gpf and in poor condition. The seating configuration does not meet code. The toilet tank covers have steel straps and locks to prevent vandalism.

Recommendation:

Provide new floor mounted, flush valve water closets with elongated bowls and open seats. New domestic water piping and pressure pump system will be required.

The estimate is based on replacing 28 WCs and associated piping.

Consequences of Deferral:

The WCs will continue to deteriorate.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2008	\$32,800	High

Updated: NOV-06

D2010.02 Urinals**

Floor mounted urinals with flush valves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	35	NOV-06

D2010.03 Lavatories**

The lavatories are vanity mounted. Most are enameled steel with ribbed handled faucets. Many are chipped and in poor condition..

Wall mounted vitreous china lavatories used in handicapped and private washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1976	35	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	24	number	

Event: Replace Lavatories

Concern:

Many chipped and rusting lavatories.

Recommendation:

Provide new stainless steel vanity mounted lavatories with hands free meting faucets.

Consequences of Deferral:

The lavatories will deteriorate further.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2010	\$24,000	High

Updated: NOV-06

D2010.04 Sinks**

There are single and double compartment stainless steel sinks in staff rooms, science labs, custodial office, and in some classrooms.

Science labs have single compartment stainless steel sinks with gooseneck faucet, and bottle traps (37 in total).

The food science room has six double compartment stainless steel sinks with swing spouts and levered handles and a stainless steel hand sink.

The art sinks have plaster traps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	38	number	

Event: Replace Sinks

Concern:

The sinks reach their design life by 2010.

Recommendation:

Replacing sinks is recommended.

The estimate is based on replacing 38 sinks and associated piping.

Consequences of Deferral:

The sinks will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$38,000	Low

Updated: NOV-06

D2010.05 Showers**

Low flow shower heads with metering push-button faucet.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	16	number	

Event: Replace Shower Heads

Concern:

The shower heads reach their design life in 2010.

Recommendation:

Replacement is recommended.

The estimate is based on replacing 16 shower heads and associated piping.

Consequences of Deferral:

The shower heads will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$14,000	Low

Updated: NOV-06

D2020.01.01 Pipes and Tubes: Domestic Water*

Copper piping is used for the domestic water service throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	40	NOV-06

D2020.01.03 Piping Specialties (Backflow Preventors)**

Backflow prevention devices have been provided on the water service, fire protection system, chemical feed systems, and make-up water.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	20	NOV-06

D2020.02.02 Plumbing Pumps: Domestic Water**

Grundfos UP26-64F in-line circulator is used for domestic hot water recirculation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	2002	20	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	.75	L/s	

Event: Replace Domestic Hot Water Recirc Pump.

Concern:

The pump has a steel body and is not appropriate for domestic water applications.

Recommendation:

Replace pump with a bronze or stainless steel model.

Consequences of Deferral:

The pump will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2007	\$1,000	Medium

Updated: NOV-06

D2020.02.04 Domestic Water Conditioning Equipment**

Water softening equipment provided for the steam humidification boiler.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	20	NOV-06

D2020.02.06 Domestic Water Heaters**

A single State Sandblaster SBT80-725NE tank type natural gas water heater with standing pilot light and draft inducing fan is used to produce domestic hot water for the main school.

An electric domestic water booster has been provided in the kitchen for the dishwasher.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	20	NOV-06

D2020.02.06 Domestic Water Heaters - Gymnasium**

A single State Sandblaster SBT75-140 tank type natural gas water heater is used to produce domestic hot water for the gymnasium locker rooms. An ASME vertical 3000 litre storage tank is provided in the mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	20	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	3000	litre	

Event: Replace Domestic Water Storage Tank

Concern:

The design life of the water heater was reached in 1990.

Recommendation:

Replacement is recommended.

Consequences of Deferral:

The water heater will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$30,000	Low

Updated: NOV-06

D2020.03 Water Supply Insulation: Domestic*

Domestic water piping is insulated throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	NOV-06

D2030.01 Waste and Vent Piping*

There is cast iron and copper DWV. Where visible it is supported.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

D2030.02 Waste Piping Specialties*

There are floor drains in home economics and kitchen which include trap primers. Trench drains and oil interceptors are provided in the automotives shop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

D2030.03 Waste Piping Equipment*

There are two grease interceptors in the kitchen which are cleaned every July.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

D2040.01 Rain Water Drainage Piping Systems*

Rain water is collected from roof drains through bell and spigot cast iron piping and is directed below grade to the municipal storm water system. Some ABS piping has been used in the mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

D2040.02.04 Roof Drains**

Deep sump open flow roof drains with cast aluminum strainers. All roof drains are regularly cleaned and maintained. No standing water was noted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	40	NOV-06

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

A Binks Simplex tank mounted two stage compressor with steel distribution piping is located in the main boiler room. This was originally used for the Industrial Arts area, then for the science lab areas. It is now used only occasionally when required in the labs. Compressed air is supplied to the science labs by steel piping with screwed connections. A 15 HP two cylinder tank-mounted compound compressor is used for compressed air in the shop areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

Event: Replace Compressed Air Systems

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$35,000	Low

Updated: NOV-06

D3010.02 Gas Supply Systems*

The gas meter is located outside the north side of the building in a separate meter shed. Gas is regulated from 60# down to 2# then rises to the roof for distribution. An 80mm gas line in the boiler room is regulated to 7" to serve the mechanical equipment in that room. All gas piping is steel with welded or screwed fittings. A 5# gas line runs on the roof to the mechanical room of the addition, roof top equipment, and to the portables.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	60	NOV-06

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

Main heating boilers are two Superhot model E4001 WTD-N-2P natural gas fired hot water heating boilers provide heating for the main building. These are atmospheric boilers that operate at a rated efficiency of about 78%. Two stage burners are sequenced to meet load demands.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	35	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	1690	kW	

Event: Replace Heating Boilers

Concern:

Boilers are in poor condition and show signs of overheating, flame roll-out , and poor combustion. Refractory and insulation repairs were made in 2005 but boilers are operating poorly and are inefficient.

Recommendation:

Provide new modulating induced draft, vertical copper-tube boilers.

Consequences of Deferral:

The boilers will deteriorate further.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2008	\$110,000	High

Updated: NOV-06

D3020.02.01 Heating Boilers and Accessories: H.W. - 1993 Addition**

Two Superhot model 1826 WTB natural gas fired hot water heating boilers provide heating for the 1993 addition. These are atmospheric boilers that operate at a rated efficiency of about 80%. The single stage burners are sequenced to meet load demands.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	35	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	770	kW	

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

Venting from the boilers is insulated and re-covered. Combustion air sizing is appropriate.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

Event: Replace Chimneys

Concern:

The design life of the boiler venting reached its design life in 2006.

Recommendation:

Replacing the boiler flue is recommended.

Consequences of Deferral:

The venting will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$4,000	Low

Updated: NOV-06

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

Chemical treatment is provided for the heating system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

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

B-vent to roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	2002	30	NOV-06

Event: Replace Chimneys

Concern:

Chimneys are corroding due to condensation in the flue gases.

Recommendation:

Replace furnace venting.

Consequences of Deferral:

The B vent will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$3,600	High

Updated: NOV-06

D3030.06.02 Refrigerant Condensing Units**

Two Carrier Condensing Unit 38AE064100 are located on grade adjacent to the main mechanical room and serve AS-1 and AS-2.

The Carrier Condensing Unit 38AD01400 is located on the roof adjacent to the gymnasium and serves AS-3.

The Carrier Condensing Unit 38AD03400 located on the roof adjacent to the gymnasium serves AS-4.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	25	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	380	kW	

Event: Replace condensing units

Concern:

Units are well beyond their expected life. They are in poor condition and are inefficient.

Recommendation:

Provide new condensing units.

Consequences of Deferral:

The condensing units will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$60,000	High

Updated: NOV-06

D3040.01.01 Air Handling Units: Air Distribution**

There are two low velocity air systems in the main mechanical room. These units serve the classroom in the original 1976 building as follows:

AS-1: MarkHot custom air handling unit includes mixing section, filters, DX cooling coils, pumped heating coil, humidifier, and supply fan.

AS-2: MarkHot custom air handling unit includes mixing section, filters, DX cooling coils, pumped heating coil, humidifier, and supply fan.

The other air systems are located throughout the school:

AS-3: MarkHot custom air handling unit serves the mezzanine classrooms including mixing section, filters, DX cooling coils, pumped heating coil, humidifier, and supply fan. (2490l/so)

AS-4: Engineered Air custom air handling unit serves the south gymnasium. Includes mixing section, filters, DX cooling coils, pumped heating coil, humidifier, and supply fan. Includes MarkHot cabinet return fan. (5470 l/s)

AS-5: Engineered Air custom air handling unit serves the Shop wing. Includes mixing section, filters, heating section, and supply fan. There is an external engineered air return fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	44000	L/s	

Event: Replace Air Handling Units

Concern:

Units are in poor condition, require significant ongoing maintenance and there are portions of the school that are not adequately served.

Recommendation:

Replace existing air handling units. Provide redesigned systems to meet current functional requirements.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$352,000	High

Updated: NOV-06

D3040.01.01 Air Handling Units: Air Distribution - 1980 Addition**

There is a MarkHot custom air handling unit in mechanical room 184 with filters, DX cooling coils, pumped heating coil, humidifier and supply fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	5500	L/s	

Event: Replace Air Handling Unit

Concern:

The units reach their design life in 2010.

Recommendation:

Replace units

Consequences of Deferral:

The units will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$44,000	Low

Updated: NOV-06

D3040.01.01 Air Handling Units: Air Distribution - 1993 Addition**

A Trane custom air handling unit TC-19 serves the new portion of the cafeteria with return fan, filters, DX cooling coils, glycol heating coil, humidifier, and supply fan.(4342 l/s).

A Trane custom air handling unit TC-28 serves the north gymnasium and has a return fan, filters, DX cooling coils, glycol heating coil, and supply fan.(6984 l/s).

A Trane custom air handling unit TC-15 serves the 800 wing classrooms. Includes return fan, filters, evaporative humidifier, DX cooling coils, glycol heating coil, and supply fan.(2879 l/s).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1993	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	14205	L/s	

Event: Balance 800 wing AHU

Concern:

System appears to have been designed with future capacity in mind and is over-supplying the two classrooms that it currently serves.

Recommendation:

Balance the system to reduce the overall air flow and allow scheduling of the supply air temperature based on load conditions.

Consequences of Deferral:

The units will continue to over supply air to classrooms.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2007	\$3,000	Medium

Updated: NOV-06

D3040.01.02 Fans: Air Distribution*

Buffalo axial return fans serve AH-1 and AH-2

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	8000	L/s	

D3040.01.02.01 Centrifugal Fans: Air Distribution

Engineered Air LMD cabinet return fan serves 1980 north addition.
Engineered Air LM cabinet fan is used for heat extraction from the solarium

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	0	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	4000	L/s	

D3040.01.03 Air Cleaning Devices:Air Distribution*

There is a Murphy dust collection unit in the woodwork shop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

D3040.01.04 Ducts: Air Distribution*

Low pressure distribution ductwork is run in the ceiling space.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

D3040.01.07 Air Outlets & Inlets:Air Distribution*

There are square ceiling diffusers and rectangular wall grilles used throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

D3040.03.01 Hot Water Distribution Systems**

Two Bell & Gossett 1510 base mounted, end suction pumps circulate heating water from the boilers through finned tube radiation, cabinet unit heaters, glycol heat exchangers, heating coils and reheat coils. Piping is Schedule 40 steel with welded and flanged connection on the piping mains. Smaller piping uses screwed fittings and copper piping. Reverse return piping system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	40	NOV-06

D3040.03.01 Hot Water Distribution Systems - 1993 Addition**

Four Grundfos UPC65-160 vertical in-line, wetted rotor pumps are used for heating in the 1993 addition. Two pumps circulate heating water from the boilers through finned tube radiation, cabinet unit heaters and a glycol heat exchanger. The other pumps circulate heated glycol from the heat exchanger through heating coils in the two Trane air handling units. Piping is Schedule 40 steel with welded and flanged connection on the piping mains. Smaller piping uses screwed fittings and copper piping. Reverse return piping system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	40	NOV-06

D3040.04.01 Fans: Exhaust**

The 1976 portion: There are two belted vent sets for welding booth exhaust. There are separate exhaust fans in the automotive shop for general CO exhaust and a tailpipe exhaust system. Six roof mounted exhaust fans serve the washrooms. There is a silk-screen exhaust fan, a Kiln exhaust and photo room exhaust. There are also separate systems for Home Ec. range exhaust, beauty culture and a general exhaust fan.

There are roof mounted spun aluminum fans for general exhaust in 1993 addition. Cabinet exhaust fans are provided in portables for summer ventilation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	30	NOV-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
11	number

Event: Replace shop exhaust systems

Concern:

The fans in the 1976 portion of the building has reached their design life in 2006.

Recommendation:

Replacement is recommended.

Consequences of Deferral:

The fan swill continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$22,000	Low

Updated: NOV-06

D3040.04.01.01 Centrifugal Fans: Exhaust - Heat Extraction

An Engineered Air LM cabinet fan is used for heat extraction from the solarium

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	0	NOV-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
2200	L/s

D3040.04.03 Ducts: Exhaust*

The low pressure exhaust ductwork in ceiling space exhausts through roof mounted exhaust fans.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

D3040.04.05 Air Outlets and Inlets: Exhaust*

There are ceiling mounted exhaust grilles in washrooms and locker rooms.
There are wall and ceiling mounted grilles in the portable classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

D3040.05 Heat Exchangers - 1993 Addition**

A plate and frame heat exchanger provides heated glycol for heating coils in two Trane air handling units located in South Gymnasium Mechanical Room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

D3040.06 Other HVAC Distribution Systems* - MAU's

Engineered Air HE-40 direct-fired make up air unit for the solarium area.
Engineered Air HE-40 direct-fired make up air unit for the automotive shops
Engineered Air HE-70 direct-fired make up air unit for the automotive tailpipe exhaust system.
Engineered Air HE-70 direct-fired make up air unit for the paint booth in the wood shop.
Engineered Air HE-70 direct-fired make up air unit for the wood shop area.
Engineered Air HE-70 direct-fired make up air unit for the welding exhaust.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	50	NOV-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
9200	L/s

D3050.01.01 Computer Room Air Conditioning Units**

Two spit systems have been provided for computer room cooling. These include ceiling mounted evaporator units and roof mounted condensers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

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

A Carrier Weathermaker 48LJ0014 is providing ventilation and air-conditioning to the teachers workroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
49	kW

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

Lennox packaged roof top unit above the pyramid provides heating cooling and ventilation to the pyramid and central circulation area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1976	30	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	42	kW	

Event: Replace rooftop unit.

Concern:

Unit is in very poor condition. Its location and access makes servicing of the unit hazardous. Repairs and maintenance appears to have been sporadic.

Recommendation:

Replace roof top unit with a roof mounted air handing unit mounted on the main roof and ducted into the pyramid structure.

Consequences of Deferral:

The unit will continue to deteriorate.



<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$26,000	Unassigned

Updated: NOV-06

D3050.03 Humidifiers**

Low pressure steam for humidification is generated by a Bryan flextube boiler. New Honeywell control was provided in 2002. The system serves steam grid humidifiers in the air systems in the original building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	25	NOV-06

Event: Replace Humidification System

Concern:

The humidifiers reached their design life in 2001.

Recommendation:

Replace humidification system.

The estimate is based on replacing the system to humidify the 4,000 m2 school.

Consequences of Deferral:

The humidification system will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$35,000	Low

Updated: NOV-06

D3050.05.03 Finned Tube Radiation**

Perimeter finned tube radiation cabinets are used throughout the building for perimeter heating. Bare fin radiation is used in the ceiling space, behind perimeter millwork, and in architectural features. Inverted cabinets are used at high level in the woodwork shop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	40	NOV-06

D3050.05.06 Unit Heaters**

Horizontal and vertical hydronic unit heaters are used in the mechanical rooms. Cabinet unit heaters are used in the entrance vestibules. There are horizontal and vertical hydronic unit heaters in the automotive and welding shops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

<u>Capacity Size</u>	<u>Capacity Unit</u>
28	number

Event: Replace Unit Heaters

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$28,000	Low

Updated: NOV-06

D3050.05.08 Radiant Heating (Ceiling & Floor)**

Ceiling mounted radiant panels have been provided in the 1993 addition classrooms and in the staff work room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	35	NOV-06

D3060.02.01 Electric and Electronic Controls**

Programmable electronic thermostats are used for portable furnaces and the roof top units serving the teacher's work room and pyramid.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2002	30	NOV-06

D3060.02.03 Pneumatic and Electric Controls

Control actuators throughout are pneumatic. Pilot positioners are used on large valve and damper actuators. Zone control is provide by proportional pneumatic thermostats and normally open heating valves and day night setback is accomplished through a dual pressure system. Control air is produced by a Johnson Controls tank mounted duplex compressor with a DeVilbiss-Hankison refrigerated air dryer. Line voltage thermostats are used on entrance heaters and unit heaters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	40	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	220	points	

Event: Upgrade Control System

Concern:

Pneumatic control system is dated and provides limited operator feedback or energy management control. There are numerous comfort complaints and air system upgrades are required.

Recommendation:

Provide integrated digital building management and control system.

Consequences of Deferral:

Building controls will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2008	\$176,000	High

Updated: NOV-06

D4020 Standpipes*

Fire hose cabinets are located throughout the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	60	NOV-06

D4030.01 Fire Extinguisher, Cabinets and Accessories**

There are handheld dry chemical fire extinguishers throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

D4090 Other Fire Protection Systems*

Fire blankets are provided in the home ec. and science labs. A fire suppression system is provided for kitchen hoods.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	30	NOV-06

D4090.07 Fire Pumps & Water Storage Tanks**

Underground storage is provided for fire fighting water below the gymnasium area. Fire pumps are provided for the standpipe system feeding the fire hose cabinets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1976	50	NOV-06
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	760	m3	

Event: Upgrade Fire Pump

Concern:

Existing pump is not ULC listed and does not meet the pressure or volume requirements of the code.

Recommendation:

Provide new ULC listed fire pump in conformance to NFPA 20.

Consequences of Deferral:

The school will continue to be in non-compliance with the current Code.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2008	\$40,000	Unassigned

Updated: NOV-06

S5 ELECTRICAL

D5010.02 Secondary Electrical Transformers (Interior)**

There are dry type transformers throughout the school to step the voltage down to 120/208 Volts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	40	NOV-06

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

The FPE main switchboard is located in the main electrical room. It is fed from an on-site pad mounted transformer located in the north-east corner of the property. The switchboard is rated at 2000A, 600V, 3 phase, 4 wire, and is complete with a 1600A main breaker and a feeder breaker distribution section with feeder breakers. There is spare capacity in the distribution section and all feeder breakers are well identified.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	40	NOV-06

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

Branch circuit panel boards have been provided throughout the school and are located in service rooms in the class room wings. The panel boards are approximately 75% full.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

Event: Replace panelboards

Concern:

The design life of the branch circuit panel boards is reached in 2006.

Recommendation:

Replacement is recommended.

Consequences of Deferral:

The panel boards will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$20,000	Low

Updated: NOV-06

D5010.07.02 Motor Starters and Accessories**

Motor control is provided by individual wall mounted magnetic motor starters. Starters are complete with pilot lights and hand-off -auto selector switches. The starters are adjacent to the equipment being controlled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	30	NOV-06

Event: Replace motor starters

Concern:

The motor starters reach their design life in 2006.

Recommendation:

Replace motor starters.

Consequences of Deferral:

The motor starters will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$25,000	Low

Updated: NOV-06

D5020.01 Electrical Branch Wiring*

All branch wiring is copper in conduit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	50	NOV-06

D5020.02.01 Lighting Accessories (Lighting Controls)*

Interior lighting control is provided by a low voltage switching system and is the product of GE. Relay cabinets are located adjacent to the lighting panels..

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	30	NOV-06

D5020.02.02 Interior Florescent Fixtures**

There are florescent fixtures throughout the school complete with T8 lamps and electronic ballasts. The fixtures are recessed and surface mounted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1998	30	NOV-06

D5020.02.02.03 Interior Metal Halide Fixture*

There are metal halide fixtures in the gymnasium with 400 Watt lamps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1999	30	NOV-06

D5020.02.03.01 Emergency Lighting Built-in*

Selected lighting fixtures throughout the school are connected to the emergency generator. All corridors and points of egress are illuminated.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	35	NOV-06

D5020.02.03.03 Exit Signs*

There are LED exit signs at each exit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	30	NOV-06

D5020.02.05 Special Purpose Lighting*

Theatre lighting has been provided for the stage. Lighting heads are mounted on bars and are dimmer controlled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

There are wall mounted fixtures around the building and at each entrance.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	30	NOV-06

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

Exterior lighting is controlled by photo cell and time clock.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	30	NOV-06

D5030.01 Detection and Fire Alarm**

A Simplex 4002 hard wired, zoned fire alarm system has been provided. It is complete with heat and smoke detectors, pull stations, and bells. The main control panel is located in the main electrical room with a remote annunciator in the main entrance vestibule. The system has ample spare zones available. System is externally monitored and tested annually.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	25	NOV-06

D5030.02.02 Intrusion Detection**

The school has a DSC MaxSys intrusion alarm complete with motion sensors, door contacts and key pads. The system is monitored externally.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	25	NOV-06

D5030.02.04 Video Surveillance**

The school has a video surveillance system consisting of cameras, monitors and recording equipment. Cameras are located the hallways, and the parking lot. The monitor recording equipment is located in the general office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	25	NOV-06

D5030.04.01 Telephone Systems**

Telephone service is underground with the main terminal board located in the main electrical room. A Cisco MCS 7800 Series telephone system has been provided. Telephone system uses voice over internet protocol (VOIP) technology. Telephone sets have been provided in each office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	25	NOV-06

D5030.04.03 Call Systems**

The school has a Bogen call system. Class rooms have been provided with return call switches. Speakers have been provided throughout the school. Head end equipment is located in the office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	25	NOV-06

Event: Replace call system

Concern:

The call systems reached their design life in 2001.

Recommendation:

Replace call systems.

Consequences of Deferral:

The call systems will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$75,000	Low

Updated: NOV-06

D5030.04.04 Data Systems**

Cat 5 data cabling has been provided throughout the school. Data outlets have been provided in each class room and in the administration area. The network is located in the main electrical room and consists of a data rack complete with patch panels, hubs, and switches.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	25	NOV-06

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

A Lima emergency engine generator set has been provided. It is rated at 50 Kw, 600V, 3 phase, 4 wire and is natural gas fired. It is complete with a transfer switch, and a battery charger. There is also an emergency power distribution centre. Selected lights and some mechanical equipment is supplied with power from the generator set in the event of a power failure.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1976	35	NOV-06

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theater and Stage Equipment*

There is a stage in the 1977 school with spot lights on lighting bars.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	25	NOV-06

E1020.07 Laboratory Equipment*

The science classrooms are equipped with chemical resistant laminated benches with stainless steel sinks and electrical and gas outlets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	25	NOV-06

Event: Replace acid resistant plastic laminate

Concern:

There is acid resistant plastic laminate finish on the work tables and benches in the science classrooms which has chipped, delaminated, looks unsightly and requires replacement.

Recommendation:

Replacement of the chipped and delaminated finish to the laboratory casework is recommended.

The estimate is based on refinishing 100 m2 of counter top.

Consequences of Deferral:

Plastic laminate finish to the laboratory casework will continue to deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2007	\$50,000	High

Updated: NOV-06

E1030.01 Vehicle Service Equipment*

The automotive shop is equipped with car lifts, engine lifts and metal topped work benches with peg boards on walls for tool storage..

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	25	NOV-06

E1090.03 Food Service Equipment*

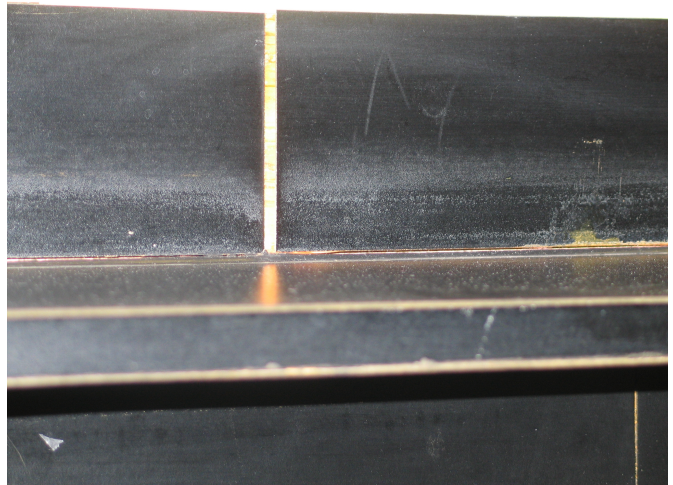
Much of the kitchen equipment is original and consists of: stainless steel griddle, deep fat fryer, soup kettles, electric steamer, freezer, cooler, pot and dish washing counters with spray washers and dish washer. The griddle and other open cooking equipment is protected by an extract hood with fire extinguisher.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	25	NOV-06

E2010.02 Fixed Casework**

The fixed casework consists of study carrels in the library, book shelves in the classrooms and library as well as lab benches in the science rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	35	NOV-06



E2010.03.01 Blinds**

There are blinds inside the double glazing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	30	NOV-06

Event: Replace blinds

Concern:

The concern is that the blinds do not function properly and require replacement.

Recommendation:

It is recommended to replace non-functional blinds.

The estimate is based on replacing 20 blinds.

Consequences of Deferral:

If this recommendation is not executed, the blinds will continue to malfunction.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$4,000	Medium

Updated: NOV-06

E2010.05 Fixed Multiple Seating**

There is fixed multiple tiered seating on the mezzanine overlooking the 1977 gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	35	NOV-06

Event: Replace wood seating

Concern:

The original wood seating is damaged, worn and unsightly.

Recommendation:

Replacement of the wood seating is recommended.

The estimate is based on replacing 50 linear metres of hard wood seating 500 mm wide and 38 mm thick.

Consequences of Deferral:

The damaged wood seating will continue to be unsightly.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2010	\$5,000	Medium

Updated: NOV-06

E2020 Moveable Furnishings*

The student chairs have polypropylene seats on steel leg frames. The student tables have plastic laminate tops on steel leg frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	20	NOV-06

F1010.02.04 Portable and Mobile Buildings*

Portable classrooms were added to the school in 1977 and 1991. The roof structure consists of glulam beams spanning batt insulated wood stud walls with roof joists supporting plywood decking with a built-up roof.

The exterior walls are stucco on building paper on mesh on plywood. The stucco is in acceptable condition. The interior walls are finished with painted gypsum board.

The ceilings are a mix of acoustic tiles in a tee bar grid and gypsum board between the glulam beams. The floor finish is sheet vinyl.

There are counters along the side of the classrooms with plastic laminate finish and wood cupboards underneath. The walls above the counters are painted gypsum board.

There are tack boards and white boards on classroom walls.

Carrier 58RAV furnaces are used for heating and ventilation of the portable classrooms. These furnaces replaced the original Palm Air units between 2002 and 2004.

Lennox 80MGF3-75 furnaces are used for heating and ventilation of the portable classrooms in the 800 wing at the southeast corner of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1980	25	NOV-06

Event: Failure Replacement - Ceiling Tile

Concern:

The ceiling tile is damaged and requires replacement.

Recommendation:

Replace 300m2 of ceiling tile.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$3,000	High

Updated: NOV-06

Event: Failure Replacement - Furnaces

Concern:

The furnaces were not designed for the high amounts of outside air required for classroom applications. There are signs of advanced corrosion in the heat exchangers and flues of the furnace. Failure is likely within a few years.

Recommendation:

Replace furnaces with units that include modulating high capacity burners and stainless steel heat exchangers. System should be complete with a return fan and mixing dampers operating to maintain indoor air quality.

Consequences of Deferral:

The furnaces will deteriorate further.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$36,000	Unassigned

Updated: NOV-06

Event: Failure Replacement - Paint

Concern:

The interior gypsum board walls are marked.

Recommendation:

Repaint all the portable walls.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$4,000	Medium

Updated: NOV-06

Event: Repair - Sheet Vinyl

Concern:

The seams have split in corridor link to the school.

Recommendation:

Re-weld seams.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2008	\$2,000	High

Updated: NOV-06

F1010.02.05 Grandstands and Bleachers**

There is an electrically operated bleachers in the 1977 gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1970	50	NOV-06

F1020.02.13 Paint Booths*

There is a paint booth in the industrial arts class room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	50	NOV-06

F1030.05 Other Special Construction Systems*

There are welding booths with curtains in the industrial arts shop.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	50	NOV-06

F1040.02 Ice Rinks*

The open air ice rink is unused and in a state of disrepair. There is no desire on the part of the School Division to use this rink at this time.

The school division will need to determine whether the ice rink will be used in the future or whether they will demolish the rink.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1977	40	NOV-06

F2020.01 Asbestos*

There are vinyl asbestos tiles in store rooms and electrical rooms throughout the school. The tiles have been encapsulated with numerous coats of wax as part of the routine upkeep of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	0	NOV-06

F2020.04 Mould*

There was no mould observed or reported during the audit inspection.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	NOV-06

F2020.09 Other Hazardous Materials*

There were no other hazardous material observed or reported to the audit team during the inspection.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	NOV-06

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance

The route from the parking lot to the main school entrance is barrier free. There is also a ramp from the parking lot to the entrance on the west side of the school which leads to the school entrance on this side and to the 1993 gym entrance.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	0	NOV-06

K4010.03 Barrier Free Interior Circulation

There is barrier free internal circulation. One flight of stairs to the rooms over the 1977 and 1993 gym has an electric person stair lift.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	0	NOV-06

K4010.04 Barrier Free Washrooms

All phases of building have barrier free wash rooms for students with extra large toilet cubicles. The wash room cubicles in the 1980 additions and the 1993 gym are equipped with grab bars.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	0	NOV-06

RECAPP Facility Evaluation Report



Sturgeon Composite High School

S3816

Namao

Facility Details

Building Name: Sturgeon Composite High S
Address:
Location: Namao

Building Id: S3816
Gross Area (sq. m): 0.00
Replacement Cost: \$0
Construction Year: 0

Evaluation Details

Evaluation Company: Wilson Architects Ltd.
Evaluation Date: May 19 2006
Evaluator Name: J. R. Irlam

Total Maintenance Events Next 5 years: \$76,500
5 year Facility Condition Index (FCI): 0%

General Summary:

This rural school site has amenities which now seem somewhat unusual. There are four tennis courts complete with nets with a reasonably good surface which only needs minor repairs. There is also a ice hockey rink which is currently in a state of disrepair and appears not to have been used for several years. The playing fields are equipped with soccer goal posts. There is also a baseball diamond with chain link batters cage. The grassed areas of the site are well groomed. There are however few trees. The student parking on the west side of the school is extensive with the parking rows separated by steel pipe fencing to prevent racing. There is a small concrete block grounds storage building with a wood roof at the rear of the school. There is a sewage lagoon which is shared by several other adjacent buildings. The asphalt roadways are level with the concrete pedestrian walkway which makes for a barrier free entrance to the school. There are precast concrete benches and waste receptacles close to the school buildings. Overall the site appears to be in a reasonably acceptable condition.

Structural Summary:

Envelope Summary:

Interior Summary:

Mechanical Summary:

Electrical Summary:

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.

S7 SITE

G1030 Site Earthwork (Site Grading)*

The site grading is designed to allow barrier free access into the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	50	NOV-06

G2010.02.02 Flexible Pavement Roadway (Asphalt)**

There are asphalt roadways at the front and west side of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	25	NOV-06

Event: Repair roadway

Concern:

There are areas of the asphalt roadway which are damaged and require replacement.

Recommendation:

Replacement of the asphalt roadway is recommended.

The estimate is based on replacing 300 m2 of asphalt road.

Consequences of Deferral:

The roadway will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$30,000	Medium

Updated: NOV-06

G2010.05 Roadway Curbs and Gutters*

There are concrete curbs associated with the asphalt roadway.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	25	NOV-06

G2020.02 Flexible Paving Parking Lots(Asphalt)**

There are large areas of asphalt parking for students as well as staff parking.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1977	10	NOV-06

Event: Repair Parking Lot

Concern:

There are areas of the asphalt parking lot which require repair and other areas which require replacement.

Recommendation:

Repair of some areas and replacement of the most deteriorated areas is recommended.

The cost is based on replacing 200 m2 and repairing 300 m2 of asphalt parking lot.

Consequences of Deferral:

The asphalt parking lot will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$30,000	Unassigned

Updated: NOV-06

G2020.05 Parking Lot Curbs and Gutters*

There are concrete curbs associated with the asphalt parking lot.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	25	NOV-06

G2020.06.02 Parking Bumpers*

There are precast concrete parking bumpers in front of steel pipe rails which define the parking rows.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	25	NOV-06

G2020.06.03 Parking Lot Signs*

There are parking lot signs to indicate parking areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	25	NOV-06

G2020.06.04 Pavement Markings*

There are pavement markings at the front of the school to indicate parking for school buses.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	25	NOV-06

G2030.04 Rigid Pedestrian Pavement (Concrete)**

There are concrete pedestrian surfaces at the main entrance to the school and along the west side to provide access to the 1993 gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1983	15	NOV-06

Event: Replace side walk

Concern:

There are sections of concrete side walk which are damaged and require repair.

Recommendation:

Replacement is recommended.

The estimate is based on replacing 100 m2 of concrete side walk.

Consequences of Deferral:

The side walk will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$15,000	High

Updated: NOV-06

G2030.06 Exterior Steps and Ramps*

There is a poured concrete exterior ramp to the south west entrance to the 1993 gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1993	15	NOV-06

G2040.02 Fences and Gates**

There is a chain link fence around the tennis court at the rear of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	30	NOV-06

G2040.03 Athletic and Recreational Surfaces**

There is an epoxy surface on the tennis courts.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1990	25	NOV-06

Event: Repair Tennis Court

Concern:

There are splits in the tennis court surface. There are also bolts protruding through the surface remaining from previous flood light fixtures.

Recommendation:

Repairs to the tennis court surface and removal of the protrusions are recommended.

The estimate is based on repairing 10 m2 of epoxy surface and removing 10 bolts.

Consequences of Deferral:

The tennis court surface will continue to deteriorate.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2009	\$1,500	High

Updated: NOV-06

G2040.05 Site and Street Furnishings*

There are precast concrete waste receptacles and precast concrete benches close to the school buildings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	15	NOV-06

G2040.06 Exterior Signs*

The school sign is affixed to the face of the original school building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	25	NOV-06

G2040.08 Flagpoles*

There are three flag poles at the front of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	30	NOV-06

G2050.04 Lawns and Grasses*

There is a grassed area at the front and either side of the school. There are also playing fields with soccer goal posts at the rear of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1977	15	NOV-06

G2050.05 Trees, Plants and Ground Covers*

There are some immature trees along the front of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	10	NOV-06

G3010.02 Site Domestic Water Distribution*

Domestic water from the municipal service enters the building at the west end. This system serves the domestic water and fire fighting requirements.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2002	50	NOV-06

G3010.03 Site Fire Protection Water Distribution*

There is a fire fighting reservoir beneath the gymnasium. This acts as part of the municipal fire protection system. A fire department connection is located at the east end of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	NOV-06

G3020.01 Sanitary Sewage Collection*

Waste water is drained to the east end of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	50	NOV-06

G3020.02 Septic Systems*

A septic system below grade at the north of the building drains to sewage lagoon north of the property. The lagoon has been expanded to meet the needs of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	NOV-06

G3020.03 Sanitary Sewage Equipment*

An oil separator is located east of the automotive shops and collects waste water from the trench drains in the shop. This equipment is serviced annually.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	NOV-06

G3030.03 Storm Water Ponds and Reservoirs*

The storm water on the site is directed to the sports fields to the north. Excess water drains to the north property line.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	NOV-06

G3060.01 Gas Distribution*

Natural gas from the intermediate pressure utility main is metered at the north side of the school. It is regulated to 5# and distributed across the roof to the various mechanical systems.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	50	NOV-06

G4010.04 Car Plugs-ins*

Pedestal mounted car plug-ins have been provided for staff use. Car plug-ins are time and temperature controlled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	25	NOV-06

G4020.01 Area Lighting*

Site lighting is provided by 6 pole mounted fixtures each utilizing 250 Watt H.P. Sodium fixtures. Poles are approximately 15 ft high. Site lighting is controlled by photo cell and time clock.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1976	25	NOV-06