RECAPP Facility Evaluation Report

Edmonton School Dist #7

Grandview Heights Elementary / Junior High School

B3136A

Edmonton

Report run on: January 26, 2005 3:30 PM

Facility Details

Building Name: Grandview Heights Element
Address: 6225 - 127 Street
Location: Edmonton

Building Id: B3136A
Gross Area (sq. m): 2,724.99
Replacement Cost: $3,897,628
Construction Year: 0

Evaluation Details

Evaluation Company: Alberta Infrastructure
Evaluation Date: May 1 2004
Evaluator Name: Mr. John Grassick
Evaluator Phone: (780) 422-7149

Total Maintenance Events Next 5 years: **$398,700**
5 year Facility Condition Index (FCI): **10.23%**

General Summary:

This school was originally built in 1959 as an elementary school. In 2002 a 484.5 sq.m. addition was built onto the school revising the total gross area to 2,640.3 sq.m. The school also was reprogramed to a elementary/junior high school with a total student capacity of 275 students.

In 2002 the staff parking and recreation areas were paved, new parking receptacles, site lighting and signage were upgraded. Overall the site is in good condition.

Structural Summary:

The original building is a perimeter pile/gradebeam foundation and concrete slab-on-grade. There is a structural slab over the corridor crawl space. The 2002 addition is also perimeter piles/grade beam and interior slab-on-grade. Exterior wall construction is concrete masonry for both original and addition. Roof structure is precast concrete deck on original building, and metal deck on 2002 addition. The structure is overall in good condition.

Envelope Summary:

In conjunction with the 2002 addition the original building envelope was upgraded with new windows, exterior air barrier, insulation, and exterior brick/stucco finishes. A new SBS roofing system was installed.

Interior Summary:

Interior finishes are generally well maintained and the interior is in goog condition. The interior paint finishes in original building are becoming dated and will require repainting within the next 5 years. Also recommended the gym flooring be upgraded to a new sports floor.

Mechanical Summary:

Plumbing and drainage systems are a combination of new (2002) and old (1959). Select piping, trim and fixtures were upgraded in 2002. Due to their condition, janitor room sinks and trim will require replacing in the near future. Further evaluation of the boiler room sanitary sump is recommended.

Low-pressure steam for heating is generated by two boilers installed in 1959. Steam is distributed throughout the original school for space heating by unit ventilators. Hot water for perimeter heating of the 2002 addition is generated by a steam to water heat exchanger. The steam boilers have a very low efficiency, are obsolete, may fail at any time and, it's recommended that they be replaced with hot water boilers. Similarly, steam and condensate piping distribution systems are requiring increasing levels of repair/replacement and, it's recommended that they be replaced as part of the change to a hot water heating system.

A constant volume rooftop air-handling unit ventilates the 2002 addition. A make-up air unit was installed in 2002 for the science room fume hood. The gymnasium is ventilated using a constant volume air system (1959) with a steam heating coil. Unit ventilators (1959) are installed in the remainder of the school with the office area having no ventilation systems. For reasons such as poor indoor air quality, inadequate outside air and poor temperature control, it's recommended that the unit ventilators be replaced with a central ventilation system. In addition, exhaust systems for storage rooms, janitor rooms and the staff work room are also recommended.

Humidification systems, computer room cooling and a central BMCS are not presently installed and, are recommended.

Electrical Summary:

The building is serviced by a 1200-amp 120/208-volt service c/w surge protection system. Distribution panels are located in various parts of the school. Lighting is mainly recessed fluorescent using T8 lamps and electronic ballasts. Emergency lighting is via battery packs with exit signs using LED lamps. Fire alarm is an Edwards 6616 hard-wired system. Security is a Magna Alert system. Public address uses a Bogen multicom + system with telephone and intercom provided by a Meridian system. Data cable is Cat 5. Cable TV is run to each classroom. Overall, the electrical system is in good condition. No major recommendations.

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*

1959 -grade beam on piles.
2002 addition - grade beam on piles.

Rating	Installed	Design Life	Updated
5	0	100	October 2004

A1030 Slab on Grade*

1959 - Minor floor filler carried out in 2002.
2002 addition - New slab on grade.

Rating	Installed	Design Life	Updated
5	0	100	October 2004

A2020 Basement Walls*

1959 - Concrete walls around perimeter of basement mechanical room.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

B1010.01 Floor Structural Frame*(Building Frame)

1959 - Corridors structural concrete slab over crawl space; remainder concrete slab on grade.

Rating	Installed	Design Life	Updated
5	0	100	October 2004

B1020.01 Roof Structural Frame*

1959 Steel trusses supporting precast concrete deck.
2002 Steel trusses supporting metal deck.

Rating	Installed	Design Life	Updated
5	0	100	October 2004

B1020.01.01.05 Structural Steel: Roof Column

1959

Rating	Installed	Design Life	Updated
5	0	0	October 2004

B1020.01.03.02 Structural Steel:Roof Trusses

1959

Rating	Installed	Design Life	Updated
5	0	0	October 2004

B1020.02.03.02 Concrete Masonry Units: Struct. Wal

1959 - Steel columns, concrete block walls with occasional hairline cracks noted. Cracks at stage entrance doors both sides. Monitor for any change.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

2002 Exterior wall is 30% brick.

Rating	Installed	Design Life	Updated
5	0	75	October 2004

B2010.01.08 Portland Cement Plaster: Ext. Wall*

2002 Exterior wall is 70% Stucco. Stucco top coat is spalling in two areas.

Rating	Installed	Design Life	Updated
3	0	75	October 2004

Event: Investigate why stucco is spalling.

Concern:
Stucco is 2 years old and isolated spalling noted in two areas. Each area approximately 1/2 sq. m.

Recommendation:
Conduct further investigation to determine cause of this spalling.

Type	Year	Cost	Priority
Study	2004	$1,000	Medium

Updated: October 1 2004

B2010.01.09 Expansion Control: Exterior Wall Skin*

2002 Metal expansion joint. Metal flashings at transitions.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

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

2002

Rating	Installed	Design Life	Updated
5	0	20	October 2004

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

Rating	Installed	Design Life	Updated
5	0	0	October 2004

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

2002- Torch on air barrier, 50 mm rigid styrofoam insulation applied to all new and existing walls.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

B2010.06 Exterior Louvers, Grilles, and Screens*

2002

Rating	Installed	Design Life	Updated
5	0	30	October 2004

B2010.09 Exterior Soffits*

2002 Pre finished metal.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

B2020.01.01.06 Vinyl, Fibreglass &Plastic Windows*

2002 - PVC windows REHAU 699 profile c/w 6mm double glazed units.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

B2030.01.02 Steel-Framed Storefronts*

2002 Metal Jambs, glazed steel doors and glass sidelights.

Rating	Installed	Design Life	Updated
5	0	15	October 2004

B2030.01.06 Automatic Entrance Doors*

2002 Front entrance has automatic operators.

Rating	Installed	Design Life	Updated
5	0	15	October 2004

B2030.02 Exterior Utility Doors*

2002 Steel doors and frames.

Rating	Installed	Design Life	Updated
5	0	15	October 2004

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)*

2002 Roofing completely replaced.

Rating	Installed	Design Life	Updated
5	0	25	October 2004

B3010.08.02 Metal Gutters and Downspouts*

2002.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

B3010.09 Roof Specialties and Accessories*

1959 Roof access hatch.

Rating	Installed	Design Life	Updated
4	0	25	October 2004

B3020.02 Other Roofing Openings*

2002 Gum boxs, and curbs.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

S3 INTERIOR

C1010.05 Interior Windows*

1959 6mm clear GW glass metal frames.

Rating	Installed	Design Life	Updated
4	0	40	October 2004

C1020.02 Interior Entrance Doors (1959)*

SC wood doors in HM frames.

Rating	Installed	Design Life	Updated
4	0	50	October 2004

C1020.02 Interior Entrance Doors (2002)*

HM doors and HM frames

Rating	Installed	Design Life	Updated
5	0	50	November 2004

C1020.03 Interior Fire Doors (1959)*

HM doors in PS frames. Original hardware. No labels.

Rating	Installed	Design Life	Updated
4	0	50	November 2004

C1020.03 Interior Fire Doors (2002)*

Hollow metal doors in pressed steel frames.

Rating	Installed	Design Life	Updated
5	0	50	November 2004

C1030.01 Visual Display Boards*

2002

Rating	Installed	Design Life	Updated
5	0	10	October 2004

C1030.08 Interior Identifying Devices*

Combination of lamicoid and painted numbers.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

C1030.10 Lockers*

2002

Rating	Installed	Design Life	Updated
4	0	30	October 2004

C1030.12 Storage Shelving*

1959 wood shelving.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

C2010 Stair Construction*

1959 concrete

Rating	Installed	Design Life	Updated
5	0	100	October 2004

C2020.08 Stair Railings and Balustrades*

1959 Combination metal and wood railings.

Rating	Installed	Design Life	Updated
4	0	50	October 2004

C3010.06 Tile Wall Finishes*

1959 Bathrooms only 150 X 150.

Rating	Installed	Design Life	Updated
4	0	50	October 2004

C3010.11 Interior Wall Painting*

Interior walls 1959 section last painted in 1995. Finishes are becoming dated.

Rating	Installed	Design Life	Updated
3	0	5	October 2004

Event: Repaint interior walls

Recommendation:
1959 section of the building was last painted 1994 required again in 2007.

Type	Year	Cost	Priority
Lifecycle Replacement	2007	$26,000	Medium

Updated: October 1 2004

C3020.01 Concrete Floor Finishes*

Mechanical room only.

Rating	Installed	Design Life	Updated
5	0	20	October 2004

C3020.03 Terrazzo Floor Finishes*

1959 Washrooms, change rooms.

Rating	Installed	Design Life	Updated
5	0	75	October 2004

C3020.04 Wood Flooring*

1959 Granwood flooring in Gymnasium.

Rating	Installed	Design Life	Updated
3	0	10	October 2004

Event: Replace granwood floor

Concern:
Cracks in existing flooring could create sharp edges which may be a safety risk.

Recommendation:
Replace existing gym floor with new sports floor.

Type	Year	Cost	Priority
Lifecycle Replacement	2004	$42,000	Medium

Updated: October 1 2004

C3020.07 Resilient Flooring*

2002 some open seams where welds failed.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

Event: Repair lino seams

Recommendation:
1959 section flooring was installed in 1998. Repair areas affected where seams are bad and lino is lifted.

Type	Year	Cost	Priority
Repair	2004	$1,500	Medium

Updated: October 1 2004

C3020.08 Carpet Flooring*

2002 - Admin area, library and staff room.
Classroom carpets starting to wear in travel areas.

Rating	Installed	Design Life	Updated
3	0	10	October 2004

Event: Replace carpet in classrooms approximatly 3600 M sq.

Recommendation:
Carpet in 4 classrooms should be replaced with resilient flooring

Type	Year	Cost	Priority
Lifecycle Replacement	2007	$13,000	Medium

Updated: October 1 2004

C3030.02 Ceiling Paneling (Wood)*

1959 corridor ceilings to be replaced when mechanical system ventilation is addressed.

Rating	Installed	Design Life	Updated
3	0	25	October 2004

Event: Corridor ceiling upgrade.

Concern:
Corridor ceiling upgrade.

Recommendation:
Recommend corridor ceilings be replaced when heating and ventilation systems are upgraded.

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2004	$12,000	Medium

Updated: October 1 2004

C3030.04 Gypsum Board Ceiling Finishes*

1959 Service and administration areas.

Rating	Installed	Design Life	Updated
5	0	50	October 2004

C3030.07 Interior Ceiling Painting*

2002 all ceilings (new exposed metal decking and existing precast concrete panels) painted.

Rating	Installed	Design Life	Updated
5	0	10	October 2004

S4 MECHANICAL

D2010.01 Water Closets (1959)*

(1959) Floor mounted fixtures with new flush valves (2002) are installed through most of the school.

Rating	Installed	Design Life	Updated
4	0	30	November 2004

D2010.01 Water Closets (2002)*

(2002) A handicap accessable water closet is installed in the new addition.

Rating	Installed	Design Life	Updated
5	0	30	November 2004

D2010.02 Urinals*

(1959) Floor-mounted urinals are installed in the major washroom groups. Flush tanks continue to be utilized with controls added to flush based on occupancy sensors.

Rating	Installed	Design Life	Updated
4	0	30	October 2004

D2010.03 Lavatories (1959)*

(1959) Stainless steel fixtures with metering faucets in student washrooms.

Rating	Installed	Design Life	Updated
4	0	30	November 2004

D2010.03 Lavatories (2002)*

(2002) New fixtures and trim are installed in staff washrooms.

Rating	Installed	Design Life	Updated
5	0	30	November 2004

D2010.04 Sinks (1959)*

(1959) Original sinks and trim are located in staff areas.

Rating	Installed	Design Life	Updated
4	0	30	November 2004

D2010.04 Sinks (2002)*

(2002) Sinks and trim installed in renovated science classrooms are new.

Rating	Installed	Design Life	Updated
4	0	30	November 2004

D2010.08 Drinking Fountains / Coolers*

(1959) Several non-refrigerated drinking fountains are installed in the school. As required, the trim was replaced in the recent (2002) upgrading.

Rating	Installed	Design Life	Updated
4	0	30	October 2004

D2010.09 Other Plumbing Fixtures*

(1959) Janitor sinks with original trim are installed in the janitor rooms.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Replace janitor sinks.

Concern:
Sinks and trim are generally in poor condition - stained, chipped, etc..

Recommendation:
Replace sinks and trim within the next 5 years.

Type	Year	Cost	Priority
Lifecycle Replacement	2007	$3,000	Low

Updated: October 1 2004

D2020.01.01 Pipes and Tubes: Domestic Water*

Rating	Installed	Design Life	Updated
4	0	40	October 2004

D2020.01.02 Valves: Domestic Water

Rating	Installed	Design Life	Updated
4	0	40	October 2004

D2020.01.03 Piping Specialties (Backflow Preventors)*

(2002) Installed on domestic water serving chemical feed systems.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D2020.02.02 Plumbing Pumps: Domestic Water*

(2002) One domestic hot water circulating pump.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

D2020.02.06 Domestic Water Heaters*

(2002) 75 gallon Bradford White domestic hot water tank.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

D2030.01 Waste and Vent Piping*

Rating	Installed	Design Life	Updated
4	0	50	October 2004

D2030.03 Waste Piping Equipment*

(1959) Sanitary sump with pump is located in the boiler room.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Mechanical room sump and pumps evaluation.

Concern:
The waste/drainage entering the sump may not be suitable. Condition of sump and pump is unknown.

Recommendation:
Evaluate the condition and venting of the sump. Determine the suitablility of the waste entering the sump. Evaluate the condition of the pump, consider if two pumps should be provided.

Type	Year	Cost	Priority
Study	2004	$3,000	Medium

Updated: October 1 2004

D2040.02 Rain Water Drainage Specialties*

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D2040.02.04 Roof Drains*

Rating	Installed	Design Life	Updated
4	0	40	October 2004

D2090.14 Acid Waste Systems*

(2002) Acid neutralizing bottle traps are installed in the science classrooms.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D3010.02.01 Natural Gas Supply Systems

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D3020.01 Steam Boilers

(1959) Two Reliance Welding Works low pressure, low efficiency, steam boilers remain in service.

Rating	Installed	Design Life	Updated
3	0	35	October 2004

Event: Replace steam boilers.

Concern:
Steam boilers were originally installed in 1959 and are now obsolete. These boilers have very low efficiency. Due to their age, these boilers may fail at any time.

Recommendation:
Have the boilers inspected a minimum of once a year. Consider possible pay-back from installing new hot water boilers immediately.

Type	Year	Cost	Priority
Lifecycle Replacement	2004	$50,000	Medium

Updated: October 1 2004

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

(1959) Breeching and venting reportedly contains encapsulated asbestos insulation.

Rating	Installed	Design Life	Updated
4	0	35	October 2004

D3020.01.04 Water Treatment: Steam Boilers*

Rating	Installed	Design Life	Updated
4	0	35	October 2004

D3020.05 Auxiliary Equipment: Heat Generation*

(2002) A plate and frame heat exchanger with pumps, expansion tank, etc. was installed to produce and distribute heating water for perimeter heating in the new addition.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D3040.01 Air Distribution Systems 1959

(1959) The school is primarily heated and ventilated using unit ventilators - majority of areas do not have air distribution systems.

Rating	Installed	Design Life	Updated
2	0	30	October 2004

D3040.01 Air Distribution Systems 2002

(2002) The renovated science room and the new additon have air supply air distribution ducting.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

D3040.01 Air Distribution Systems Admin Area

(1959) The office area, which includes the principals and vice-principals offices, is not ventilated.

Rating	Installed	Design Life	Updated
2	0	30	October 2004

Event: Install office ventilation.

Concern:
Ventilation is not provided for the general office, the principals office or the vice-principals office.

Recommendation:
Provide a ventilation system to meet building code requirements.

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2004	$20,000	Medium

Updated: October 1 2004

D3040.01.01 Air Handling Units: Air Distribution 2002*

(2002) The addition is served by a roof-top air handling unit. The renovated science room is served by a roof-top make-up air unit interlocked with the fumehood.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

D3040.01.01 Air Handling Units: Air Distribution GYM*

(1959) The gymnasium is served by a constant volume air system with a steam heating coil.

Rating	Installed	Design Life	Updated
3	0	30	October 2004

D3040.01.03 Air Cleaning Devices:Air Distribution*

Because most of the school is ventilated through pad filters in the unit ventilators, air filtering is generally considered to be poor.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

D3040.01.04 Ducts: Air Distribution*

Rating	Installed	Design Life	Updated
4	0	50	October 2004

D3040.01.05 Duct Accessories: Air Distribution*

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D3040.01.07 Air Outlets & Inlets:Air Distribution*

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D3040.02 Steam Distribution Systems: Piping/Pumps*

Rating	Installed	Design Life	Updated
3	0	30	October 2004

D3040.02.01 Steam and Condensate Piping

(1959) Reportedly steam and condensate piping requires increasing and on-going repairs.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Replace steam and condensate piping and terminal units.

Concern:

Existing piping and equipment was installed in 1959 and is requiring increasing efforts to maintain and repair. Temperature control and comfort in the spaces served by the steam units is generally poor.

Recommendation:

Replace steam heating system with perimeter hot water heating.

Type	Year	Cost	Priority
Lifecycle Replacement	2004	$145,000	Medium

Updated: October 1 2004

D3040.02.02 Steam Condensate Pumps

Rating	Installed	Design Life	Updated
3	0	0	October 2004

D3040.03 Hydronic Distribution Systems

Rating	Installed	Design Life	Updated
5	0	0	October 2004

D3040.03.01 Hot Water Distribution Systems*

Rating	Installed	Design Life	Updated
5	0	0	October 2004

D3040.04 Special Exhaust Systems 1959

(1959) Washrooms appear to have the original exhaust systems installed. Storage rooms and janitor rooms do not have exhaust fans installed. Exhaust system is not installed for the staff workroom where the school photocopier and laminator are located.

Rating	Installed	Design Life	Updated
3	0	30	October 2004

Event: Install exhaust systems.

Concern:
Exhaust systems are not installed for the janitor rooms and the storage rooms. An exhaust system is not installed in the staff workroom where a photocopier and laminator are in operation.

Recommendation:
Install exhaust systems to meet current code requirements.

Type	Year	Cost	Priority
Code Upgrade	2004	$20,000	Medium

Updated: October 1 2004

D3040.04 Special Exhaust Systems 2002

(2002) Exhaust systems were installed consisting of fumehood exhaust in the science room and exhausting of chemical storage cabinets.

Rating	Installed	Design Life	Updated
5	0	30	October 2004

D3050.01.01 Computer Room Air Conditioning Units*

(2002) The computer room does not have mechanical cooling. Associated server room includes a temperature activated transfer fan.

Rating	Installed	Design Life	Updated
3	0	30	October 2004

Event: Install computer room mechanical cooling.

Concern:
High space temperatures in both the classroom and the associated server room.

Recommendation:
Install a computer room cooling system.

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2004	$15,000	Medium

Updated: October 1 2004

D3050.03 Humidifiers*

(1959) Humidification is not installed in the school.

Rating	Installed	Design Life	Updated
2	0	25	October 2004

Event: Install humidification systems.

Concern:
Low space relative humidity can have comfort and health effects leading to negative performance consequences for students and staff.

Recommendation:
In conjunction with new ventilation systems install steam humidification.

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2004	$35,000	Medium

Updated: October 1 2004

D3050.05.02 Fan Coil Units*

Rating	Installed	Design Life	Updated
3	0	30	October 2004

Event: Replace entrance heaters.

Concern:
Existing steam entrance heaters were installed in 1959 and are now obsolete.

Recommendation:
Replace these heaters in conjunction with changing the heating system to hot water.

Type	Year	Cost	Priority
Lifecycle Replacement	2004	$8,000	Medium

Updated: October 1 2004

D3050.05.03 Finned Tube Radiation*

(2002) Hot water perimeter heating installed in the addition.

Rating	Installed	Design Life	Updated
5	0	35	October 2004

D3050.05.07 Unit Ventilators*

(1959) Unit ventilators from the original construction remain in service through most of the school. These units, have steam heating coils and likely do not provide sufficient outside air volumes to meet current code requirements.

Rating	Installed	Design Life	Updated
2	0	30	October 2004

Event: Install a central ventilation system.

Concern:
The majority of the classrooms are ventilated and heated with steam unit ventilators installed in 1959. Ventilation is not provided for the corridors or other common areas. The ventilators are obsolete and do not provide good heating or ventilation distribution, nor do they provide outside air volumes, air filtering or humidification to meet todays minimum requirements of codes and standards.

Recommendation:
Install ventilation systems with distribution ducting for the classrooms and gymnasium to meet todays codes and standards requirements for outside air, humidification, air filtering and air change rates.

Type	Year	Cost	Priority
Code Upgrade	2004	$175,000	Medium

Updated: October 1 2004

D3060 HVAC Instrumentation and Controls

Mechanical controls are a combination of pneumatics, electrics and electronics installed at various times. Other than time clock control, few energy management stratedgies can be implemented.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Install central BMS.

Concern:
Existing controls are obsolete, contributing to operating and maintenance challenges.

Recommendation:
Install a new central DDC building management system.

Type	Year	Cost	Priority
Lifecycle Replacement	2004	$80,000	Medium

Updated: October 1 2004

D4030.01 Fire Extinguisher, Cabinets and Accessories*

(1959) Fire extinguishers have been installed throughout the school.

Rating	Installed	Design Life	Updated
4	0	30	October 2004

S5 ELECTRICAL

D5010.01 Main Electrical Transformers*

2002 - Padmount transformer is located on paved area adjacent parking lot. Access by wheeled equipment should be maintianed.

Rating	Installed	Design Life	Updated
5	0	40	October 2004

D5010.03.03 Voltage Regulators

2002 - Surge supression installed on main panel

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D5010.03.04 Electrical Utility Services

120/208, 3 phase, 4 wire, 800 AMP underground power service from padmount transformer to FPE main panel.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

D5010.03.05 Switchboards, Panelboards and Control Centers

2002 - Main panel is an FPE 1200 amp 120/208 CDP c/w 800amp main breaker Meter reads peak demand at 488VA wth 120 multiplier for 59kva. Main panel gound is grounded to water service.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

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

2002 - Some new panels installed. Most panels have some spare breaker spaces. Some panels are missing filler plates for blank breaker spaces

Rating	Installed	Design Life	Updated
4	0	30	October 2004

Event: Replace blank filler plates in panels

Concern:
Some panels are missing filler plates for blank breakers

Recommendation:
Replace blank filler plates

Type	Year	Cost	Priority
Repair	2004	$200	Low

Updated: October 1 2004

D5010.07.02 Motor Starters and Accessories*

Motor control is via loose starters of various vintage.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D5020.01 Electrical Branch Wiring*

2002 - Some new wiring for computer loads.

Rating	Installed	Design Life	Updated
4	0	50	October 2004

D5020.02.01 Lighting Accessories (Lighting Controls)*

Lighting control is via line voltage switches, key operated in common areas. Some exterior lighting is on time clock and photocell control. Exterior enterance lighting only has local key switch control

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Improve entrance exterior lighting control

Concern:
Entrance way lighting only has keyswtich control

Recommendation:
Add entrance lighting to existing photocell control

Type	Year	Cost	Priority
Energy Efficiency Upgrade	2005	$500	Low

Updated: October 1 2004

D5020.02.02.01 Interior Incandescent Fixtures*

There are a small number of interior incandescent luminaires in corridors

Rating	Installed	Design Life	Updated
4	0	0	October 2004

Event: Investigate payback on replacing incandescent luminaires

Concern:
Some corridor lighting uses incandescent lamps

Recommendation:
Investigate payback on replacing incandescent luminaires

Type	Year	Cost	Priority
Study	2009	$1,000	Low

Updated: October 1 2004

D5020.02.02.02 Interior Florescent Fixtures*

Lighting upgrade done in 2002.
Fluorescent lighting is via T8 with elecronic ballasts
Classroom lighting in additioin is direct/indirect
Computer rooom lighting is direct/indirect
Music Room lighting is direct/indirect
Remander of lighting is 2 lamp wraparound
Current lighting levels not measured
Previous lighting levels were as follows:

	PREFERRED	ACHIEVED
CLASSROOMS:	550-600	150-200
LIBRARY READING	350-600	200-300
LIBRARY STACKS	400	200
OFFICES	550-600	300-400
COMPUTERS	500	150-200
GYMNASIUM (EM&JR)	350-500	300
WASHROOMS	300	100-500
CORRIDORS	300	50-150
MECHANICAL	350	100
STORAGE	100	100
STAFF	500	150-300

Rating	Installed	Design Life	Updated
5	0	0	October 2004

Event: General luminaire replacement and repair

Concern:
Wraparound difusers degrade over time and some luminaires are subject to more wear and tear

Recommendation:
Replace degraded luminaires when repairs no longer economic

Type	Year	Cost	Priority
Lifecycle Replacement	2020	$10,000	N/A

Updated: October 1 2004

Event: Review lighting system performance

Concern:
Lighting system upgrde to T8 lamps done in 2002 may not meet needs or performance may degrade

Recommendation:
Review performance of lighting system to determine if performance is maintained.

Type	Year	Cost	Priority
Study	2004	$0	Low

Updated: October 1 2004

D5020.02.02.02 Interior Florescent Fixtures*

2002 - Electronic ballusts installed

Rating	Installed	Design Life	Updated
5	0	0	October 2004

Event: Group ballust replacement.

Concern:
Life of electronic ballasts may be only 15 years

Recommendation:
Monitor ballast failures to determine when group replacement required.

Type	Year	Cost	Priority
All Events	2014	$2,000	Low

Updated: October 1 2004

D5020.02.03 Emergency Lighting*

2002 - battery packs and heads installed

Rating	Installed	Design Life	Updated
5	0	0	November 2004

Event: Emergency Lighting Battery Replacement

Concern:
Battery life expected to be 15 years

Recommendation:
Replace emergency light batteries

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$2,000	Low

Updated: November 9 2004

D5020.02.03 Emergency Lighting*

2002 - LED lamps installed

Rating	Installed	Design Life	Updated
4	0	0	October 2004

Event: Review exit lamp performance

Concern:
LED lamp life unknown

Recommendation:
Review lamp performance

Type	Year	Cost	Priority
Study	2014	$200	Low

Updated: October 1 2004

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Exterior wall packs at entrances and around building perimiter. Parking area flood light added in 2002

Rating	Installed	Design Life	Updated
4	0	0	October 2004

Event: Replace exterior luminaires

Concern:
Some exterior luminaresa re not cutoff style

Recommendation:
Repalce luminaires with cutoff style at end of life

Type	Year	Cost	Priority
Lifecycle Replacement	2027	$2,000	Low

Updated: October 1 2004

D5030.01 Detection and Alarm Fire Alarm*

2002 Visual signals installed EDWARD MODEL 6616 SYSTEM IS INSTALLED (5 OF 6 ZONES USED) WITH AN ANNUNCIATOR AND MAP AT THE MAIN ENTRY

Rating	Installed	Design Life	Updated
4	0	25	October 2004

Event: Replace existing fire alarm system

Concern:
Hard wired systems of this type are becoming obsolete.
System may become difficult to service and repair

Recommendation:
Repalce system when parts become scarce

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$8,000	Low

Updated: October 1 2004

D5030.02.01 Door Answering*

There is a simple door bell system interfaced with paging for tone in school

Rating	Installed	Design Life	Updated
4	0	25	October 2004

D5030.02.02 Intrusion Detection*

2002 upgrade to Magna Alert System . Motion sensors in corridors with entry keypad to alarm and disarm.

Rating	Installed	Design Life	Updated
4	0	25	October 2004

D5030.03 Clock and Program Systems*

System clock interfaced to Bogen PA system for classroom signals. General clocks are battery powered and of mixed manufacture.

Rating	Installed	Design Life	Updated
4	0	20	October 2004

D5030.04.01 Telephone Systems*

Existing meridian local system.

Rating	Installed	Design Life	Updated
4	0	15	October 2004

D5030.04.02 Paging Systems*

2002 - Public address system changed to Bogen multicom. Each classroom has paging speaker with corridor speakers throughout. Class change and doorbell interface.

Rating	Installed	Design Life	Updated
4	0	15	October 2004

D5030.04.04 Data Systems*

School has a structured Category 5 data cable system. Cables run in a mix of conduit and open wiring methods

Rating	Installed	Design Life	Updated
4	0	15	October 2004

Event: Upgrade Data Cable System

Concern:
Category 5 cable may have limited bandwidth for future Supernet applications

Recommendation:
Replace data cabel system when bandwidth becomes too low.

Type	Year	Cost	Priority
Program Functional Upgrade	2017	$5,000	N/A

Updated: October 1 2004

D5030.06 Television Systems*

Cable TV run to each classroom. TV in each classroom with
VRC with two inputs, one from cable system and one from computer. Cable connection from computer to monitor is surface run.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

D5090.01 Uninterruptible Power Supply Systems*

BMCS System has UPS as does data file server

Rating	Installed	Design Life	Updated
4	0	20	October 2004

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.02 Library Equipment*

1998 tables, chairs and mobile book displays.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

E1020.07 Laboratory Equipment*

2002 fume hood

Rating	Installed	Design Life	Updated
5	0	0	October 2004

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

1959 ping pong table, matts, nets and basket hoops. No theraputic equipment.

Rating	Installed	Design Life	Updated
4	0	15	October 2004

E2010.02.08 Laboratory Casework*

1959 - partial replacement in 2002.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

E2010.02.09 Library Casework*

1959

Rating	Installed	Design Life	Updated
4	0	0	October 2004

E2010.02.99 Other Casework*

1959 Casework in photocopy/stationary room warrants replacemeent and/or refurbishment.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Replace and refurbish casework

Concern:
Existing casework hardware not functioning, countertops not servicable, capacity is inadequate.

Recommendation:
Existing casework needs to be replaced and/or refurbished as warranted.

Type	Year	Cost	Priority
Lifecycle Replacement	2005	$6,000	Medium

Updated: October 1 2004

E2010.03.01 Blinds*

2002 roller blinds

Rating	Installed	Design Life	Updated
5	0	10	October 2004

E2020 Moveable Furnishings*

1959 Stage curtain panels

Rating	Installed	Design Life	Updated
3	0	20	October 2004

Event: Replace stage curtain.

Concern:
Movable stage curtain not functioning properly. Track components obselete.

Recommendation:
Repace folding curtain with new.

Type	Year	Cost	Priority
Lifecycle Replacement	2006	$4,000	Low

Updated: October 1 2004

F1010.02.04 Portable and Mobile Buildings

Rating	Installed	Design Life	Updated
	0	0	October 2004

Event: Provide HCV Ramp

Concern:
No bf

Recommendation:
provide ramp

Type	Year	Cost	Priority
Code Upgrade	2004	$800	Medium

Updated: October 1 2004

Event: Replace roof

Concern:
Roof leaks

Recommendation:
Provide new built-up roof

Type	Year	Cost	Priority
Repair	2004	$20,000	High

Updated: October 1 2004

S8 FUNCTIONAL ASSESSMENT

K40 Current Code Issues

Existing fire doors do not have labels.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

K4010.01 Barrier Free Route: Parking to Entrance

2002

Rating	Installed	Design Life	Updated
5	0	0	October 2004

K4010.02 Barrier Free Entrances

2002 - Power assisted doors

Rating	Installed	Design Life	Updated
5	0	0	October 2004

K4010.03 Barrier Free Interior Circulation

Current barrier free access to gym via drop down ramp which does not conform to barrier free requirements.

Rating	Installed	Design Life	Updated
3	0	0	October 2004

Event: Upgrade Gym Access to Barrier Free

Concern:
Barrier free access to gymnasium does not meet current standards

Recommendation:
Upgrade access with platform or stair lift.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2004	$15,000	Low

Updated: October 1 2004

K4010.04 Barrier Free Washrooms

2002 - H/C washroom added

Rating	Installed	Design Life	Updated
5	0	0	October 2004

Facility Details

Building Name: Grandview Heights Element
Address:
Location: Edmonton

Building Id: S3136
Gross Area (sq. m): 0.00
Replacement Cost: $0
Construction Year: 0

Evaluation Details

Evaluation Company: Alberta Infrastructure
Evaluation Date: May 1 2004
Evaluator Name: Mr. John Grassick
Evaluator Phone: (780) 422-7149

Total Maintenance Events Next 5 years:
5 year Facility Condition Index (FCI): **0%**

General Summary:

In 2002 the staff parking and recreation areas were paved, new parking receptacles site lighting and signage were upgraded. Overall the site is in good 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

G2010.02.02 Flexible Pavement Roadway (Asphalt)*

2002 - Staff parking lot, roadway access, firelane access and basketball courts paved.

Rating	Installed	Design Life	Updated
5	0	0	January 2004

G2010.05 Roadway Curbs and Gutters*

2002 - New concrete commercial crossing for staff parking lot.

Rating	Installed	Design Life	Updated
5	0	0	January 2004

G2020.06.03 Parking Lot Signs*

2002 Metal signage on steel posts

Rating	Installed	Design Life	Updated
5	0	0	October 2004

G2030.04 Rigid Pedestrian Pavement (Concrete)*

1959 - Minor spalling and occasional cracking.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

G2040.02 Fences and Gates*

2002 - New chainlink fence around garbage enclosure .
Existing chainlink fence east of staff parking lot.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

G2040.03 Athletic and Recreational Surfaces*

2002 - Athletic paved surface.

Rating	Installed	Design Life	Updated
5	0	0	January 2004

G2040.05 Site and Street Furnishings*

1959 Bike racks repainted in 2002.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

G2040.06 Exterior Signs*

2002 - Metal letter sign on building.

Rating	Installed	Design Life	Updated
5	0	0	October 2004

G2040.08 Flagpoles*

1959 located on roof.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

G2050.04 Lawns and Grasses*

Mature trees on site. Shrubs against building in good condition.

Rating	Installed	Design Life	Updated
4	0	30	October 2004

G3010.03 Site Fire Protection Water Distribution*

One fire hydrant is located within 90m of the main entry.

Rating	Installed	Design Life	Updated
4	0	0	October 2004

G3060.01 Gas Distribution*

1959

Rating	Installed	Design Life	Updated
5	0	0	October 2004

G4010.04 Car Plugs-ins*

2002 - 24 plug-ins on steel railings

Rating	Installed	Design Life	Updated
5	0	0	October 2004

G4020 Site Lighting

2002

Rating	Installed	Design Life	Updated
5	0	0	January 2004