RECAPP Facility Evaluation Report

Edmonton School District No. 7

Clara Tyner Elementary School

B3075A
Edmonton

Report run on: January 22, 2007 11:31 AM

Facility Details

Building Name: Clara Tyner Elementary Sch
Address: 9420 Ottewell Road
Location: Edmonton

Building Id: B3075A
Gross Area (sq. m): 0.00
Replacement Cost: $3,479,708
Construction Year: 0

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 8 2006
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$1,345,000**
5 year Facility Condition Index (FCI): **38.65%**

General Summary:

Clara Tyner Elementary School is a one-storey school built in 1966 with a total building area is 1921.00m2.

No Portables are located on site.

The one storey school comprised of 8 classrooms, a gymnasium, a library, and an ancillary room.

The 2006 student enrollment is 146 children.

The student capacity is 660 (enrollment 2005)

Structural Summary:

The foundations consist of cast-in-place concrete grade beams and spread footings. The original building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement. Glulam beams with a painted wood deck supported by exterior & interior walls.

Overall, where visible the structure of the building is in acceptable condition.

Envelope Summary:

The exterior cladding consists primarily of brick with wood siding around the perimeter of the school. The exterior walls on the upper gym area are clad with prefinished metal siding.
The exterior window units are aluminum frame with a combination of an upper fixed panel and lower operable awning unit. Metal screens have been fastened to several of the windows for safety concerns. The majority of the exterior doors are original.
The roof was replaced in 1992 with a two-ply SBS assembly.

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

Interior Summary:

Sheet Vinyl flooring is located throughout the corridors & in several of the classrooms. The remaining classrooms, library and administration area has carpeting. The washrooms and entrance vestibules have a ceramic tile floor finish. The gymnasium has a hardwood floor finish. The majority of the utility areas and mechanical rooms in the basement have a paint finish on the concrete slab.

The majority of the interior walls are painted masonry block walls & plaster walls. Interior brick walls are located at the main school entrance vestibule. Ceramic tile walls are located in the washroom areas.

The corridors & washroom areas have an acoustical 12"x12" ceiling tile or a 2'x4' suspended ceiling tile assembly . The wood structure is exposed in the majority of the classrooms and in the gymnasium.

Overall, the interior finishes are in acceptable condition.

Mechanical Summary:

Space heating for the 1966 building is provided by two gas-fired Peerless copper tube hot water boilers. Hot water is supplied to the perimeter unit ventilators, air handling unit, unit heaters, forced flow heaters and baseboard heaters. Space heating in Gymnasium is provided by a constant air volume Air Handling Unit (AHU). This AHU equips with a hot water heating coil.

Ventilation for the building is provided by the fresh air inlets in unit ventilators. The fresh air will be mixed with the return air inside the unit ventilators and supplied to the spaces. The general exhaust fans and the washroom exhaust fans extract the excessive supply air from the classrooms and offices to outdoor. Ventilation for the Gymnasium is provided by the Air Handling Unit. Fresh air taken from the intake louvre on roof will mix with the return air and supplied to the Gymnasium.

The pneumatic HVAC control system consists of air compressor, thermostats, control valves for unit ventilators and forced flow heaters. A Barbar Coleman Network Control system provides remote monitoring and controls of the heating system.

The plumbing fixtures include stainless steel sinks, wall mounted and counter mounted vitreous china lavatories, flush valve floor mounted water closets, flush tank floor mounted water closets, flush valve floor mounted urinals, janitor sinks, floor drains and wall mounted porcelain drinking fountains. Most of the plumbing fixtures are original. Both water and gas meters are located in Boiler Room.

Fire protection system includes standpipe system and duct smoke detectors. This building is not sprinkler protected. Two fire hose cabinets are located in Gymnasium. The Gymnasium air handling unit is monitored by the duct smoke detector.

Based on the age and condition of the mechanical systems, the following components are recommended for repair and replacement within the years 2006 to 2010.

- Replace original lavatories.
- Install missing insulation for domestic water pipes

Overall the mechanical systems are in acceptable condition.

Electrical Summary:

Clara Tyner Elementary School is fed from an EPCOR padmounted transformer located on the school grounds. The main switchboard is rated at 400A, 120/208V. New branch circuit panelboards were installed in 1990 but many of the panels within the school appear to be from the original 1966 construction. There are individual motor starters for the major mechanical equipment.

The wiring in the building is typically standard wiring in conduit.
The interior fluorescent lighting fixtures have been retrofitted with high efficiency T-8 lamps and electronic ballasts. The exit lighting in the building consists of metal units that have been retrofitted with LED lamps. The emergency lighting consists of dual head battery operated units and remote lamps. The exterior lighting consists of wall mounted H.I.D fixtures and recessed incandescent fixtures in the canopies.

The building is equipped with an Edwards 6616 system. Detection and end devices include, smoke and heat detectors, bells and pull stations.
The various communications and security systems within the school include; a Magnum Alert security system that monitors motion detectors, a Bogen Multicom 2000 P.A. system and a Norstar/Meridian telephone system. Cable TV and data systems are installed within the school.

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

Based on the condition of the electrical systems the following replacements are scheduled for replacement during the years 2006 to 2010.

- Replace aged panelboards and main switchboard.
- Replace exterior incandescent lighting fixtures.

Overall the electrical components for Clara Tyner Elementary School are in acceptable condition.

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

S1 STRUCTURAL

A1010 Standard Foundations*

The foundations consist of cast-in-place concrete grade beams and spread footings.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

A1030 Slab on Grade*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

B1010.01 Floor Structural Frame*(Building Frame)

Exposed wood structure supported by concrete block columns & walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

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

The majority of the structural interior walls comprise of concrete block masonry walls and concrete columns & beams.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

B1010.09 Floor Construction Fireproofing*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

B1010.10 Floor Construction Firestopping*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

B1020.01 Roof Structural Frame*

Glulam beams with a sealed/painted wood deck supported by exterior & interior walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

B1020.06 Roof Construction Fireproofing*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The exterior cladding consists primarily of exterior brick.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	75	AUG-06

B2010.01.06.03 Metal Siding**

Metal siding is located along the upper portion of the exterior walls around the gymnaisium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace metal siding

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

B2010.01.06.04 Wood Siding**

Wood siding is located along the upper portion of the exterior walls around the perimeter of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace wood siding

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$25,000	Low

Updated: AUG-06

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

Sealant is located around all windows, doors and brick cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

Event: Replace building sealant

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$15,000	Low

Updated: AUG-06

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

The exterior wood siding has a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	15	AUG-06

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

Masonry construction on the inside face of exterior wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	AUG-06

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

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

B2010.09 Exterior Soffits*

An exterior painted wood soffit is located around the perimeter of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

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

The windows throughout the school have an aluminum frame assembly with a combined fixed glazed portion, metal louvre and an operable awning unit.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace exterior windows

Concern:
The awning windows are not operable in all locations and the metal screens are deteriorating. Typical cost $2,500/unit.

Recommendation:
Replace all windows throughout the school. Lifecycle Replacement.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$50,000	Medium

Updated: AUG-06

B2030.01.02 Steel-Framed Storefronts**

Painted hollow metal doors with pressed steel frames at main building entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace steel frame storefront

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

B3010.01 Deck Vapor Retarder and Insulation*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	AUG-06

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

(1992) The original building has a modified bituminous membrane roofing (SBS) assembly.

Rating	Installed	Design Life	Updated
5 - Good	1992	25	AUG-06

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

The roof hatch and hardware has deteriorated beyond repair.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	AUG-06

Event: Replace roof hatch

Concern:
A roof hatch is located in the original roof area.
Recommendation:
Replace roof hatch.

Type	Year	Cost	Priority
Failure Replacement	2006	$1,500	Medium

Updated: AUG-06

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior partitions typically consist of painted masonry block walls, painted plaster partitions and interior brick walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

C1010.03 Interior Operable Folding Panel Partitions**

A folding partition is located between classroom 2 and 4. The partition is generally open.

Rating	Installed	Design Life	Updated
4 - Acceptable	1980	30	AUG-06

C1010.07 Interior Partition Firestopping*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

C1020.01 Interior Swinging Doors**

The interior swing doors generally consist of solid core painted wood doors in painted metal frames.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace interior doors

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

C1020.03 Interior Fire Doors*

Vestibule doors at the main entrance to the building consist of paint finished metal doors & frames. The majority of the doors are rated and labeled.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

C1030.01 Visual Display Boards**

Tackboards, sliding chalkboards and whiteboards are located in each classroom area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

Event: Replace Visual Display Boards

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$60,000	Low

Updated: AUG-06

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

Prefinished metal washroom partitions are located in each boy's & girls washroom.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace washroom partitions

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$14,000	Low

Updated: AUG-06

C1030.08 Interior Identifying Devices*

The room number or room name is painted on the interior doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

C1030.12 Storage Shelving*

Clear finish plywood storage shelving throughout.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

C1030.14 Toilet, Bath, and Laundry Accessories*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

C3010.03 Plaster Wall Finishes*

The majority of the demising walls in the building consist of painted plaster walls. It was noted that asbestos may be contained in the plaster walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	60	AUG-06

C3010.06 Tile Wall Finishes**

The interior walls in the washrooms have a ceramic tile wall finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace ceramic wall tile

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

C3010.09 Acoustical Wall Treatment**

Acoustical wall panels are located throughout the gymnasium & in the music room

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

Event: Replace Acoustical Wall Treatment

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$28,000	Low

Updated: AUG-06

C3010.11 Interior Wall Painting**

The interior partitions throughout the school have a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1996	10	AUG-06

Event: Repaint interior walls

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$35,000	Low

Updated: AUG-06

C3020.01.02 Paint Concrete Floor Finishes**

Painted/sealed concrete floors are located in the boiler room and custodial rooms.

Rating	Installed	Design Life	Updated
2 - Poor	1966	10	AUG-06

Event: Repaint concrete floors

Concern:
The paint finish is worn and deteriorated in the boiler room and utility closets.

Recommendation:
Repaint all concrete floors throughout the utility rooms.

Type	Year	Cost	Priority
Failure Replacement	2006	$5,000	Medium

Updated: AUG-06

C3020.02 Tile Floor Finishes**

Ceramic tile floors are located in the washroom areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

C3020.04 Wood Flooring**

Hardwood flooring is located in the gymnasium.

Rating	Installed	Design Life	Updated
5 - Good	1966	30	AUG-06

Event: Replace wood flooring

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$35,000	Low

Updated: AUG-06

C3020.07 Resilient Flooring**- Sheet Vinyl

Sheet Vinyl is located throughout the majority of the corridors and in some classrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

Event: Replace sheet vinyl

Concern:
Overall the sheet vinyl is in fair condition, however some repairs have been made throughout the years.

Recommendation:
Replace sheet vinyl in the corridors & classrooms

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$75,000	Medium

Updated: AUG-06

C3020.08 Carpet Flooring**

Carpeting is located in several classrooms, office area, music room and library.

Rating	Installed	Design Life	Updated
3 - Marginal	1988	15	AUG-06

Event: Replace carpeting

Concern:
Overall the carpet is aged and worn throughout the school. Potential tripping hazard in several areas,

Recommendation:
Replace all carpeting throughout the school

Type	Year	Cost	Priority
Failure Replacement	2007	$40,000	Medium

Updated: AUG-06

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

A main corridor to the gym has a 2'x4' suspended acoustical tile ceiling.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	AUG-06

C3030.07 Interior Ceiling Painting**

The structural wood deck is painted and exposed in the majority of the classrooms. The wood beams are exposed with a stained finish in the main entrance area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1992	20	AUG-06

C3030.09 Other Ceiling Finishes*

Acoustical tiles (12"x12") are located in the washrooms and in several corridors.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	50	AUG-06

Event: Replace 12"x12" acoustical ceiling tiles.

Concern:
Overall, several of the tiles have been replaced. Some of the tiles are stained and broken. Asbestos may be contained in the ceiling tiles, therefore the cost is included in the removal.

Recommendation:
Replace acoustical tile ceiling in the corridors

Type	Year	Cost	Priority
Failure Replacement	2008	$15,000	Medium

Updated: AUG-06

S4 MECHANICAL

D2010.01 Water Closets**

Original floor mounted water closets with flushometers in the Boys and Girls Washrooms; flush tanks units in the Staff Washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	AUG-06

Event: Replace original water closets

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: OCT-06

D2010.02 Urinals**

Original flush valve floor mounted urinals in Boy's Washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	AUG-06

Event: Replace original urinals

Type	Year	Cost	Priority
Failure Replacement	2010	$11,000	Low

Updated: OCT-06

D2010.03 Lavatories**

Original counter mounted lavatories in Staff washrooms and original wall mounted lavatories in Boy's and Girl's Washrooms. All lavatories are vitreous china type.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	35	AUG-06

Event: Replace original lavatories with new

Concern:
Original lavatories have exceeded their life expectancy. Some of the lavatories have show sign of rust.
Recommendation:
Replace all lavatories with new stainless type lavatories.
Consequences of Deferral:
Rusting parts may impose health issue to the users.

Type	Year	Cost	Priority
Failure Replacement	2007	$25,000	High

Updated: AUG-06

D2010.04 Sinks**

Sinks includes enamel cast iron janitor sink in Janitor Room, double compartment kitchen sink in Staff Room, double compartment sink in Kitchen and single compartment hand sinks in classrooms. Kitchen sink and hand sinks are all stainless steel type with isolating valves.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original sinks

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$35,000	Low

Updated: NOV-06

D2010.08 Drinking Fountains / Coolers**

Original vitreous wall mounted percelain drinking fountains are located in the corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	AUG-06

Event: Replace original drinking fountains

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$8,500	Low

Updated: OCT-06

D2020.01.01 Pipes and Tubes: Domestic Water*

Incoming water meter is located in Boiler Room. Original 75mm diameter underground watermain has been replaced with PVC pipe in 1999. Water main is splitted into one 50mm diameter cold water main and one 50mm diameter standpipe main to serve the whole building. Generally, the water pipes are original copper pipes.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

D2020.01.02 Valves: Domestic Water**

Sinks, lavatories, water closets and drinking fountains are equipped with isolating valves. An anti-scalding mixing valve in boiler room is serving the shower.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace original domestic water valves

Type	Year	Cost	Priority
Failure Replacement	2010	$25,000	High

Updated: OCT-06

D2020.01.03 Piping Specialties (Backflow Preventors)**

Original backflow preventor in Boiler Room to serve the standpipe system. A fill assembly equips with backflow preventor and pressure reducing valve is serving the hot water boiler system. This device was installed in 1997.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	20	AUG-06

D2020.02.02 Plumbing Pumps: Domestic Water**

Original domestic hot water recirculating pump located in boiler room to serve the domestic hot water system in the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	AUG-06

Event: Replace original domestic hot water recirculating pump

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$5,000	High

Updated: OCT-06

D2020.02.06 Domestic Water Heaters**

One gas-fired domestic hot water heater located in Boiler Room. The heater is State Turbo Stand Blaster model SBT50 65 NE6 DFCGA. Storage capacity=50 US Gallon, Gas input = 58MBH, Recovery capacity = 49.1 US Gallon/Hr.

Rating	Installed	Design Life	Updated
4 - Acceptable	1977	20	AUG-06

Capacity Size	Capacity Unit
189	litre

Event: Replace domestic water heater

Type	Year	Cost	Priority
Failure Replacement	2010	$15,000	High

Updated: OCT-06

D2020.03 Water Supply Insulation: Domestic*

Original domestic water pipe insulation in the building. Asbestos is suspected to be part of insulation in pipe elbow. Part of the pipe connecting the domestic hot water tanks and the fill assembly is not insulated.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	30	AUG-06

Event: Install missing pipe insulation

Concern:
Part of the pipe connecting the domestic hot water tanks and the fill assembly is not insulated.

Recommendation:
Install missing pipe insulation.

Consequences of Deferral:
Heat loss or condensation occurs at the uninsulated pipes.

Type	Year	Cost	Priority
Repair	2006	$3,000	Medium

Updated: AUG-06

D2030.01 Waste and Vent Piping*

The sanitary system consists of black steel pipes and connects to the combined municipal sewage pipe. The 150mm diameter sewage main connection is located on east side of the building. The vent pipes are through the roof type.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

D2040.01 Rain Water Drainage Piping Systems*

The rain water drainage system consists of roof drains, rain water leaders, internal pipes and storm sump pit and pump connected to the combined municipal sewage pipe. The 150mm diameter underground sewage main connection is located on east side of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

D2040.02.04 Roof Drains**

The roof drains are control flow type.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace original roof drains

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$15,000	Low

Updated: AUG-06

D3010.02 Gas Supply Systems*

The underground 75mm diameter gas service located at the west side of the Boiler Room. The gas pipe is serving the gas steam boilers and domestic hot water tank.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	60	AUG-06

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

(1966) Heating boiler system consists of two gas-fired hot water boilers, gas burners and high pressure relief valves. Boiler is Peerless model 210-5-W; gas input=840MBH; heating surface=115 square feet. These boilers are the source to serve the space heating in the whole building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	AUG-06

Capacity Size	Capacity Unit
246	kW

Event: Replace original hot water boilers

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$120,000	Low

Updated: AUG-06

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

Original B-Vent with rain cap and combustion air intake with motorized damper are serving both hot water boilers. The flue vents inside the mechanical room is insulated.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original chimneys for boilers

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$15,000	Low

Updated: AUG-06

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

Original water treatment system includes chemical pot feeder to serve hot water distribution system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

D3040.01.01 Air Handling Units: Air Distribution**

An original Constant Air Volume Air Handling Unit (AHU) equips with hot water heating coil is serving the Gymnasium. Fresh air is introduced through a fresh air duct from the roof to provide ventilation to the Gymnasium. The AHU is Trane Torrivent model 514-HF-T-D.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original air handling unit

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$75,000	Low

Updated: AUG-06

D3040.01.04 Ducts: Air Distribution*

The only air distribution ducts in this building are the original rectangular duct from the Air Handling Unit to serve Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

D3040.01.07 Air Outlets & Inlets:Air Distribution*

Original round diffusers and open end return air duct in Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

D3040.03.01 Hot Water Distribution Systems**

Hot water distribution system includes hot water supply and return pipes, pipe insulation, shut off valves, regulating valves, mixing valves, motorized control valves, horizontal expansion tank and circulating pumps. There are three circulating pumps locate in Boiler Room. Two hot water pumps are Armstrong model S57, 3/4hp, 1725RPM.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace original hot water distribution system

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$150,000	Low

Updated: AUG-06

D3040.04.01 Fans: Exhaust**

Original exhaust fans include mushroom fans on roof. They are the general and sanitary exhaust fans to serve the washrooms, kitchen and corridor.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original exhaust fans

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

D3040.04.03 Ducts: Exhaust*

Exhaust ducts are connected to roof exhaust fans or ceiling exhaust fans for general and sanitary exhaust purposes.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

D3040.04.05 Air Outlets and Inlets: Exhaust*

Wall mounted transfer air grilles were installed in each classroom at either low or high level. Ventilated air will be transferred from the classrooms or offices through the grilles to the corridor. The air will be exhausted to outdoor via ceiling exhaust grilles in corridor or door grille in the washroom door.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

D3050.05.03 Finned Tube Radiation**

Perimeter finned tube radiators are located in washrooms and interior rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

Event: Replace original hot water radiators

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$30,000	Low

Updated: AUG-06

D3050.05.06 Unit Heaters**

A hot water unit heater is located in mechanical penthouse.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original unit heaters

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$5,000	Low

Updated: AUG-06

D3050.05.07 Unit Ventilators**

Original Durham-Bush Unit Ventilators at the perimeter wall provide heat in the building. Each unit ventilator equips with hot water coil and fan. It also introduced fresh air into the space via outdoor louver. Ceiling mounted hot water forced flow heaters are located at each exit. They are controlled by a thermostat with fan speed control.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace original unit ventilators

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$100,000	Low

Updated: AUG-06

D3060.02.02 Pneumatic Controls**

The pneumatic control system consists of air compressor and thermostats to control the control valves, 3-way valves and actuators for motorized dampers. The compressor is Honeywell model PLCJ-5030. This compressor was replaced in 2000.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	40	AUG-06

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

Electronic Barbar Coleman Network 8000 system provides remote monitoring and control functions to the boiler system. Status of the boiler system can be monitored in the main School Board office via internet. Boiler on/off can be controlled via this system too.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	25	AUG-06

D4020 Standpipes*

Standpipe system includes fire hose and cabinet to serve the whole building. Separate fire main is serving this system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	60	AUG-06

D4030.01 Fire Extinguisher, Cabinets and Accessories**

ABC type Fire Extinguishers are located in different locations of the building. The tags showing the regular inspection of the units are attached to the fire extinguishers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace fire extinguishers

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$5,000	Low

Updated: AUG-06

S5 ELECTRICAL

D5010.01 Main Electrical Transformers**

The incoming hydro service to Clara Tyner Elementary School is a 120/208V, 3-phase, 4-wire service from an exterior padmounted transformer located on the North side of the school property. The padmounted transformer is owned and maintained by EPCOR. The EPCOR meter is located in a section of the main switchboard.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	AUG-06

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

The main electrical switchboard is a Canadian Westinghouse switchboard rated at 400A, 120/208V, 3-phase, 4-wire. The switchboard has a main breaker and a distribution section with moulded case breakers feeding the fire alarm panel and branch circuit panels within the school. The main electrical switchboard, located in the boiler room, is original equipment that was installed when the school was constructed.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	40	AUG-06

Event: Replace main switchboard

Concern:

The main switchboard is original equipment installed in 1966. Replacement breakers are no longer available for the switchboard. Infra-red scanning should be undertaken annually to ensure that there are no problems with the connections or contacts.

Recommendation:

Replace the main switchboard with a new 400A, 120/208V switchboard c/w moulded case branch circuit breakers.

Consequences of Deferral:

A failure of the main breaker or main bussing would shut down power for the entire school. A replacement for the main switchboard would typically be a minimum of 6 to 8 weeks for manufacture and delivery.

Type	Year	Cost	Priority
Failure Replacement	2009	$18,000	High

Updated: AUG-06

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1990 Panels

Additional electrical branch circuit panelboards, of various manufacture, were installed to accommodate additional equipment loads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	30	AUG-06

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - Original 1966 Panels

The majority of the electrical branch circuit panelboards are Westinghouse panels that appear to have been installed when the building was originally constructed. There are approximately five original Westinghouse panels.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	30	AUG-06

Event: Replace 1966 panels

Concern:
The majority of the branch circuit electrical panels in the original building (1966) are nearing the end of their life expectancy. Over the life of the panel, breaker contacts become worn and the breakers will no longer operate correctly and may trip unnecessarily. Older panels do not readily accept newer style breakers.

Recommendation:
Replace aged panelboards and reconnect branch circuit wiring.

Consequences of Deferral:
Deferring replacement could lead to partial power outages and intermittent tripping of breakers as well as potential difficulties obtaining replacement components.

Type	Year	Cost	Priority
Failure Replacement	2009	$30,000	Medium

Updated: AUG-06

D5010.07.02 Motor Starters and Accessories**

The motor starters within the school are individual motor starters (Westinghouse) or motor rated starter switches (typically Westinghouse or Allen Bradley)

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	30	AUG-06

D5020.01 Electrical Branch Wiring*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent downlights have been installed in the General Office.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	30	AUG-06

D5020.02.02.02 Interior Florescent Fixtures**

The fluorescent lighting fixtures within the school were upgraded in 2005. The typical classroom lighting consists of continuous wrap-around, two lamp fluorescent fixtures, surface mounted on the ceiling. Two lamp fluorescent fixtures with wire guards have been provided in the gymnasium. T8 lamps and electronic ballasts have been installed in the fluorescent lighting fixtures.

Rating	Installed	Design Life	Updated
4 - Acceptable	2005	30	AUG-06

D5020.02.03.02 Emergency Lighting Battery Packs**

The emergency lighting in the building is provided by battery powered emergency lighting units and remote emergency lighting heads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	20	AUG-06

D5020.02.03.03 Exit Signs*

The majority of the exit signs are metal, stencil faced exit signs that have been retrofitted with LED lamps.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	30	AUG-06

D5020.03.01.01 Exterior Incandescent Fixtures*

Incandescent recessed lighting fixtures are installed in some entrance canopies.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	AUG-06

Event: Replace Exterior Incandescent Fixtures

Concern:
The incandescent exterior fixtures have exceeded their theoretical life expectancy.

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$1,000	Low

Updated: AUG-06

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

The exterior lighting consists of H.P.S wallpack fixtures on the exterior walls along with some surface mounted fixtures that have been installed at exterior door locations.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	30	AUG-06

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

Timers have been provided for exterior lighting control.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	30	AUG-06

D5030.01 Detection and Fire Alarm**

The fire alarm system control panel is an Edwards 6616 panel with 6 active zones and 10 spare zones. The control panel is located in the general office and there is a remote annunciator at the North entrance. The audible devices within the school are 10" dia. Bells. Strobes have not been installed. A duct mounted smoke detector has been provided in the return air ductwork of the gymnasium air handling unit.

Rating	Installed	Design Life	Updated
4 - Acceptable	1988	25	AUG-06

D5030.02.02 Intrusion Detection**

The Magnum Alert 3000 security system panel is located in the general office storage room. A security system keypad has been located in the custodian room. PIR smoke detectors have been provided throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	25	AUG-06

D5030.03 Clock and Program Systems**

The majority of the clocks within the school are controlled by the Edwards master clock system. There are some battery powered clocks installed in the school. The Edwards master clock system control panel is located in the custodian room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	AUG-06

D5030.04.01 Telephone Systems**

The telephone system is a Norstar Meridian system. Nortel handsets are located in the classrooms and selected areas such as the general office. The main telephone equipment is located in the general office storage room.

Rating	Installed	Design Life	Updated
5 - Good	2001	25	AUG-06

D5030.04.04 Data Systems**

The data system server is located in the general office storage room. Cat. 5 cables are used for the network wiring within the school. Supernet has been installed in the school.

Rating	Installed	Design Life	Updated
5 - Good	2001	25	AUG-06

D5030.05 Public Address and Music Systems**

The public address system is a Bogen Multicom 2000 system. Existing speaker enclosures were reused with the new P.A. system. The Bogen unit is located in the general office storage room. A separate sound system has been provided for the gymnasium with wall mounted speakers on both sides of the stage. The program bells are initiated from the Bogen P.A. system.

Rating	Installed	Design Life	Updated
5 - Good	2001	20	AUG-06

D5030.07 Other Communications and Security Systems*

FM transmitters and associated speakers have been provided in the classrooms for the voice amplification systems used by the teachers.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	20	AUG-06

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Basketball hoops are located in the gymnasium. A climbing apparatus is also located in the gym area.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	15	AUG-06

E2010.02 Fixed Casework**

Each classroom is equipped with custom wood open faced and/or painted cabinet units. The library has fixed and moveable wood shelving casework.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	AUG-06

Event: Replace classroom millwork

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$75,000	Low

Updated: AUG-06

E2010.03.01 Blinds**

A variety of metal blinds are located in most classrooms & in the administration office areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	30	AUG-06

E2020 Moveable Furnishings*

Chairs, desks and tables are located in all the classrooms, library and administration areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	20	AUG-06

F2020.01 Asbestos*

Suspected asbestos-containing materials observed in the building include vinyl tile flooring in the school corridors, classrooms, texture coated ceilings, gymnasium wallboard and piping insulation. All presently encapsulated.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	AUG-06

F2020.04 Mould*

No mould known or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	AUG-06

F2020.09 Other Hazardous Materials*

No other hazardous material known or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	AUG-06

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance

Barrier free access from the west parking area to the building entrance is available on the west elevation (rear entrance.). A designated handicap area is not allocated.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	AUG-06

K4010.02 Barrier Free Entrances

No automatic door entrances are provided.

Rating	Installed	Design Life	Updated
3 - Marginal	0	0	AUG-06

Event: Provided power operators for barrier free access at two entrances

Concern:

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

Recommendation:

Provided power operators for barrier free access at two west entrances

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2006	$7,000	Medium

Updated: AUG-06

K4010.03 Barrier Free Interior Circulation

Access is provided to most areas.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	AUG-06

K4010.04 Barrier Free Washrooms

The current washroom areas do not provide a barrier free accessible compartment.

Rating	Installed	Design Life	Updated
3 - Marginal	0	0	AUG-06

Event: Provide barrier free unisex washroom

Concern:
No barrier free washroom is provided.
Recommendation:
Provide barrier free unisex washroom

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2006	$25,000	Medium

Updated: AUG-06

RECAPP Facility Evaluation Report

Clara Tyner Elementary School

S3075
Edmonton

Report run on: January 22, 2007 3:23 PM

Facility Details

Building Name: Clara Tyner Elementary Sch
Address:
Location: Edmonton

Building Id: S3075
Gross Area (sq. m): 0.00
Replacement Cost: $0
Construction Year: 0

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 8 2006
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$205,000**
5 year Facility Condition Index (FCI): **0%**

General Summary:

Clara Tyner site includes an asphalt paved parking area accessible from 94th Avenue. A sodded playing field is located at the north-west end of the property. Grass, shrubs and trees are located around the perimeter of the building. A asphalt paved playground is located north-west of the school. Pedestrian concrete ramps & walkways are located at the main entrances. The site surface drainage typically slopes away from the building with no reported problems observed or noted.

There are no portables on site.

Overall the site is in 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

G2010.02.02 Flexible Pavement Roadway (Asphalt)**

The main roadway to the parking area and bus drop off area is paved in asphalt.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	AUG-06

Event: Repave roadway

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$15,000	Low

Updated: AUG-06

G2020.02.02 Flexible Paving Parking Lots(Asphalt)**

Asphalt paved parking lot located at the south-west corner of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	10	AUG-06

Event: Repave parking lot

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$45,000	Low

Updated: AUG-06

G2020.06.03 Parking Lot Signs*

Metal parking lot signage on steel posts.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	AUG-06

G2030.04 Rigid Pedestrian Pavement (Concrete)**

Concrete sidewalks are located at each entrances

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	15	AUG-06

Event: Repair cracks on concrete walkways

Concern:
Excessive cracks were observed in isolated areas. Potential tripping hazard.
Recommendation:
Repair all cracked concrete walkways.

Type	Year	Cost	Priority
Repair	2006	$5,000	Medium

Updated: AUG-06

Event: Replace concrete walkways

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$100,000	Low

Updated: AUG-06

G2040.02 Fences and Gates**

Chain-link fencing is located around most of the property boundary.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	30	AUG-06

G2040.03 Athletic and Recreational Surfaces**

Asphalt paved surfaces are located along the west end of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	AUG-06

Event: Replace playground

Type	Year	Cost	Priority
Lifecycle Replacement	2010	$40,000	Low

Updated: AUG-06

G2040.05 Site and Street Furnishings*

Bicycle racks are located on the north east end of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	15	AUG-06

G2040.06 Exterior Signs*

Exterior wall-mounted signage is provided at the building's main entrance, along the east side of the building. A free-standing signage panels is also located at the east end of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	25	AUG-06

G2040.08 Flagpoles*

A flagpole is located on the east side of the property adjacent to the main entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	30	AUG-06

G2050.04 Lawns and Grasses*

Grassed areas are located along the south, west and north sides of the property.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	15	AUG-06

G2050.05 Trees, Plants and Ground Covers*

Trees and shrubs are located along the eastside (Ottewell Road) & South (94th Avenue) of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	10	AUG-06

G3010.02 Site Domestic Water Distribution*

75mm diameter domestic water main runs from Ottewell Road westward to the Boiler room at the north side of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G3010.03 Site Fire Protection Water Distribution*

The standard pipe system shares the same 75mm water line with domestic water system. This pipe runs from Ottewell Road westward to the Boiler room at the north side of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G3020.01 Sanitary Sewage Collection*

A 150mm diameter combined sewer main runs from east side of the building and connects to the municipal main in Ottewell Road.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G3030.02 Storm Water Equipment*

A 150mm diameter combined sewer main runs from east side of the building and connects to the municipal main in Ottewell Road. Another storm drain collect rain water from the two area drains on west side parking area and connects to municipal main in 94th Avenue. Most of the storm water goes to sod area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G3060.01 Gas Distribution*

A 75mm diameter gas main runs from 76th Avenue to the exterior storage room at north side of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G4010.03 Electrical Power Distribution Equipment*

An EPCOR padmounted transformer is located on the North side of the site. The transformer is owned and maintained by EPCOR.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	AUG-06

G4010.04 Car Plugs-ins*

There are 14 energized parking stalls. Plug-in receptacles for block heaters are mounted on a metal railing. An adequate number of car plug-ins have been provided.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	25	AUG-06