# **RECAPP Facility Evaluation Report**



# Royal Alexandra Hospital Diagnostic Treatment Centre B1029B Edmonton

**Facility Details** 

Building Name: Royal Alexandra Hospital Dia

Address: 10240 Kingsway Avenue

Location: Edmonton

Building Id: B1029B

Gross Area (sq. m): 40,108.00

Replacement Cost: \$322,869,400

Construction Year: 0

## **Evaluation Details**

**Evaluation Company:** R. Saunder Architects

**Evaluation Date:** January 31 2011 **Evaluator Name:** Raghbir Jagdev

Total Maintenance Events Next 5 years: \$2,762,570 5 year Facility Condition Index (FCI): 0.86%

#### **General Summary:**

The Building was constructed in 1994. The building structure is in concrete with interstitial floors and curtain wall system. The building structure, envelope and interior finishes are in good condition. The building is new and very well maintained.

#### **Structural Summary:**

There are concrete piles grade beams, slab on grade, concrete columns and beams.

Steel columns, beams, OWSJ, steel decking in penthouse.

There are two large skylights over Atrium and main corridors, also four small ones over Conference room. The structural system is in good condition

#### **Envelope Summary:**

Basement, sub - basement and tunnel walls are poured in place concrete and painted.

Brick masonry exterior wall, aluminum windows, insulation vapour barrier, and drywall.

Membrane inverted roofing throughout. Building envelope through out is in good condition.

## **Interior Summary:**

Interior partitions are steel stud, plaster walls and drywalls.

There are aluminum frame / pressed steel frame and glass interior windows throughout the building.

Walls are painted. There are ceramic tiles in washrooms, showers, and painted above. Also, wall papers in some areas.

There are painted drywall and acoustic t-bar ceiling.

Floors are ceramic tile, sheet vinyl, carpet and suspended computer flooring. Interior elements are all in good condition and well maintained

#### **Mechanical Summary:**

Ventilation is provided by variety of air handling units located in Mechanical Rooms and Penthouses.

Air distribution system is via medium and low velocity single and dual ductwork to vav boxes, grilles and diffusers.

Air conditioning is provided via chilled water distributed from central chiller plant and designated circulation pumps.

Low pressure steam distribution from pressure reducing stations to heat exchangers located in mechanical rooms.

Plate steam to glycol heat exchangers are provided within a building to serve heating and domestic water systems.

Secondary circulation pumps are provided inside mechanical room to distribute hot water and glycol.

Hot water distribution to perimeter radiation, radiant panels, re-heat coils, unit heaters and force flow heaters. Hot water is circulated via base mounted pumps.

Steam grid humidification systems provided in air handling units.

Domestic hot water is generated by three horizontal water heaters complete with steam heating coils and circulation pumps.

Copper piping distribution to plumbing fixtures complete with domestic hot water recirculation systems.

Pneumatic controls and direct digital control system provided.

Fire protection system for the facility consists of wet sprinkler system, pre-action systems serving electrical rooms and held fire extinguishers.

Sanitary service to City mains.

Storm service to City mains.

Domestic water lines leak in some locations and will require repair in near future.

Majority the main mechanical equipment components are original and well maintained. Overall mechanical system is in acceptable condition.

#### **Electrical Summary:**

The facility was originally built in 1994 and there has been no major upgrading since then, but the there was some renovations for some units. The main electrical service fed from the RAH power plant room. There are two feeders to basement, and There are two feeders to penthouse to the building to backup each other for any power failure, and also emergency power feeding. The feeders come to three 13.8-347/6000V 2000 KVA transformers; the emergency transformer is 4.16-347/600V 1333 KVA for the emergency power system. The step down dry type transformers is installed in the basement and penthouse levels 377/600V, and120/208V panels are installed throughout entire facility for all the power distribution. Every second floor of this building Interstitial floor. All electrical panel, transformers are located in these floors.

The fluorescent fixtures are 90% T-12 with electromagnetic ballast, and 10% T-8 lamp fluorescent with electronics ballasts.

All fire alarm, intrusion, telephone and Public address systems meet current facility requirements. The nurse call systems were installed in each unit. The fire alarm system is scheduled to be replace in the near future.

There are no emergency battery pack system for emergency lighting. It is provided trough emergency power with selected fluorescent light fixture.

The overall rating for the facility shall be "Good"

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\*

Concrete grade beam and piles

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## A1030 Slab on Grade\*

Slab on grade at sub basement level and tunnels

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### A2020 Basement Walls (& Crawl Space)\*

Concrete basement, sub - basement and tunnel walls

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## B1010.01 Floor Structural Frame (Building Frame)\*

Concrete columns and beams

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

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

Interior concrete walls around elevator in sub-basement level.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## B1010.03 Floor Decks, Slabs, and Toppings\*

Concrete floor decks

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### **B1010.05 Mezzanine Construction\***

Interstitial floors - Concrete

#### B1010.07 Exterior Stairs\*

Concrete stair on West side connected with Active Treatment Centre

Installed Design Life Updated Rating 5 - Good 1994 0 FEB-12

## B1010.09 Floor Construction Fireproofing\*

Concrete construction provides fire proofing

Installed Design Life Updated Rating 5 - Good FEB-12 1994 0

## B1010.10 Floor Construction Firestopping\*

All mechanical and electrical penetrations through concrete floors are fire caulked

Installed Design Life Updated Rating 5 - Good 1994 0 FEB-12

#### B1020.01 Roof Structural Frame\*

Concrete columns and beams for the main building.

The mechanical penthouse roof steel deck on open web steel joists

Steel columns and beams

Rating Installed Design Life Updated 5 - Good 1994 0 FEB-12

## B1020.03 Roof Decks, Slabs, and Sheathing\*

Concrete deck for main building

The mechanical penthouse roof has steel deck on open web steel joists

Rating Installed Design Life Updated 5 - Good 1994 FEB-12

#### **B1020.04 Canopies\***

There is a canopy at the West side entrance of the Atrium

Rating Installed Design Life Updated 5 - Good 1994 0 FEB-12

#### B1020.06 Roof Construction Fireproofing\*

Concrete provides fireproofing.

Mechanical penthouse roof is non combustible material and has no fire proofing

## S2 ENVELOPE

#### B2010.01.02.01 Brick Masonry: Ext. Wall Skin\*

Brick exterior wall skin on South, West, North and East walls

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## B2010.01.09 Expansion Control: Ext. Wall\*

No expansion control outside. No cracks in exterior brick.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

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

Caulking on Curtain wall frame and wall junction Caulking on door frame and wall junction

RatingInstalledDesign LifeUpdated5 - Good199420FEB-12

#### Event: Replace caulking (3123 M)

TypeYearCostPriorityLifecycle Replacement2015\$88,942Unassigned

Updated: FEB-12

## B2010.01.13 Paints (& Stains): Ext. Wall\*\*

Metal railing, brick shelf angle

RatingInstalledDesign LifeUpdated4 - Acceptable199415FEB-12

## **Event:** Lifecycle Replacement (796 SM)

TypeYearCostPriorityLifecycle Replacement2012\$15,000Unassigned

**Updated:** FEB-12

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

Basement and sub basement levels are cast in place concrete.

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

Some brick masonry on exterior outside walls.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## B2010.02.04 Load-Bearing-Metal Studs: Ext. Wall\*

Mechanical penthouse has wind load bearing steel studs

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## B2010.03 Exterior Wall Vapour Retarders, Air Barriers, and Insulation\*

Basement and tunnel wall paint acts as vapor barrier. Walls above grade have rigid insulation and vapor barrier with concrete block backing and brick veneer.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### **B2010.05 Parapets\***

Parapets are constructed of concrete block with brick masonry.

## B2010.06 Exterior Louvers, Grilles, and Screens\*

Exterior metal louvers at mechanical penthouse

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### B2010.09 Exterior Soffits\*

Soffit at canopy on West entrance of Atrium

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## B2010.10 Other Exterior Walls\*

Prefinished metal siding with cement board dado on mechanical penthouse. Dynamic buffer zone installed on Southwest and North walls

RatingInstalledDesign LifeUpdated4 - Acceptable00FEB-12

#### B2020.03 Glazed Curtain Wall\*\*

Curtain wall windows and frame

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

Event: Replace Curtain Wall (9736 SM)

TypeYearCostPriorityLifecycle Replacement2034\$13,453,107Unassigned

Updated: FEB-12

## B2030.01.06 Automatic Entrance Doors\*\*

On west side vestibule has two sets of automatic double swinging doors.

Rating Installed Design Life Updated 5 - Good 1994 30 FEB-12

**Event: Replace Automatic Doors (2 sets of doors)** 

TypeYearCostPriorityLifecycle Replacement2024\$42,105Unassigned

Updated: FEB-12

## B2030.02 Exterior Utility Doors\*\*

In basement, there are four double and two single utility doors.

RatingInstalledDesign LifeUpdated5 - Good199440FEB-12

**Event:** Replace Exterior Utility Doors (4 double and two

single doors)

TypeYearCostPriorityLifecycle Replacement2034\$42,109Unassigned

Updated: FEB-12

## B2030.03 Large Exterior Special Doors (Overhead)\*

There is one overhead door on east side of the building.

#### B3010.01 Deck Vapour Retarder and Insulation\*

Rigid insulation and vapour retarder are provided.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

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

Membrane inverted roofing throughout.

Rating Installed Design Life Updated 5 - Good 1994 30 FEB-12

**Event: Replace Membrane Roofing (Inverted/Protected)** 

(4527m2)

TypeYearCostPriorityLifecycle Replacement2024\$965,450Unassigned

Updated: FEB-12

## B3020.01 Skylights\*\*

There are two large aluminum framed skylights over Atrium. Also, 4 small size adjacent to Atrium.

RatingInstalledDesign LifeUpdated5 - Good199425FEB-12

**Event:** Replace Skylights (1830 m2)

TypeYearCostPriorityLifecycle Replacement2019\$4,835,300Unassigned

Updated: FEB-12

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

There are mechanical roof openings.

## S3 INTERIOR

#### C1010.01 Interior Fixed Partitions\*

There are steel stud and drywall partitions.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1010.04 Interior Balustrades and Screens, Interior Railings\*

At Atrium area mezzanine floor, balustrade & railing is stainless steel and tempered glazed-screen.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C1010.05 Interior Windows\*

Interior windows are aluminum frame / pressed steel frame and glass.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1010.06 Interior Glazed Partitions and Storefronts\*

In main floor, Diagnostics Administration area, Conference Room has steel glazed partitions and storefronts.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1010.07 Interior Partition Firestopping\*

Floor and ceiling firestopping to drywall steel stud partitions.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1010.08 Other Partitions\*

Corridor and waiting room is glass block wall at 70" high.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1020.01 Interior Swinging Doors (& Hardware)\*

Interior doors are wood doors with plastic laminate finish both sides with steel frames. Hardware in good condition.

#### C1020.03 Interior Fire Doors\*

Corridor doors are fire rated.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

# C1020.04 Interior Sliding and Folding Doors\*

At 5th floor, Central Lab in room #5067-2 has accordion door.

At main floor, between Classroom #1006 and 1006-1, there is folding door.

Rating Installed Design Life Updated 1994 0 FEB-12

## C1020.07 Other Interior Doors\*

ICU and CCU rooms have large aluminum automatic sliding doors.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1030.01 Visual Display Boards\*\*

At Level 1, 2, 3, there are 30 whiteboards / tackboards and 10 smartboards for each level. At Sub-basement, 20 whiteboards / tackboards.

RatingInstalledDesign LifeUpdated5 - Good199420FEB-12

**Event:** Replace Visual Display Boards (110

whiteboards/tackboards)

TypeYearCostPriorityLifecycle Replacement2015\$72,028Unassigned

Updated: FEB-12

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

At level 5, 3 washroom stalls

At level 3, 7 washroom stalls, 1 shower stall

At level 1, 7 washroom stalls

At basement foodcourt area, 9 washroom stalls

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event:** Replace Fabricated Compartments

(Toilets/Showers) (27 units)

TypeYearCostPriorityLifecycle Replacement2024\$38,600Unassigned

**Updated:** FEB-12

#### C1030.05 Wall and Corner Guards\*

Corridors are stainless steel corners at 7'-0" high.

Sub-basement central service is stainless steel corners.

Decontiminated area is stainless steel corners at 7'-0" high.

At Level 5, NICU room has pvc corner guards at 7' high.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1030.05 Wall and Corner Guards\* - Tunnels

Bumper guards in tunnels adjacent to DTC need replacement

Rating Installed Design Life Updated 1994 0 FEB-12

## **Event:** Replace Bumper Guards ( 1600 M )

Concern:

Bumper guards in Tunnels are damaged

Recommendation:

Replace bumper guards with pvc guards

TypeYearCostPriorityFailure Replacement2012\$48,000Low

**Updated:** FEB-12

## C1030.06 Handrails\*

There is pvc handrail bumpers in corridors.

Also, wood handrails on corridors at Level 3 and Level 2 Atrium.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1030.08 Interior Identifying Devices\*

There is signage throughout the building.

#### C1030.10 Lockers\*\*

Basement, Sub-basement, Level 1, Level 3, Level 5 have lockers in change rooms.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event:** Replace Lockers (370 units)

TypeYearCostPriorityLifecycle Replacement2024\$243,000Unassigned

Updated: FEB-12

## C1030.12 Storage Shelving\*

There are storage shelving; metal moveable, also, wood built-in.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C1030.14 Toilet, Bath, and Laundry Accessories\*

There are washroom and housekeeping room accessories, also, stainless steel barrier free grab bars.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C2010 Stair Construction\*

Stair construction is concrete.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C2020.01 Tile Stair Finishes\*

In Atrium, main stairs treads are ceramic tile finish.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C2020.05 Resilient Stair Finishes\*\*

Exit stairs are sheet vinyl finish.

RatingInstalledDesign LifeUpdated5 - Good199420FEB-12

**Event:** Replace Resilient Stair Finishes (145 m2)

TypeYearCostPriorityLifecycle Replacement2015\$11,500Unassigned

Updated: FEB-12

#### C2020.08 Stair Railings and Balustrades\*

In Atrium, main stair railings & balustrade is stainless steel finish. Exit stairs have stainless steel handrails.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C3010.01 Concrete Wall Finishes (Unpainted)\*

Electrical room #7 is concrete floor unpainted.

In Atrium, round columns, some walls and main stair beams are sand-blasted finish.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C3010.02 Wall Paneling\*\*

In Atrium, part of the walls are wood veneer paneling.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

## **Event:** Replace Wall Paneling (85 m2)

TypeYearCostPriorityLifecycle Replacement2024\$8,355Unassigned

#### C3010.06 Tile Wall Finishes\*\*

Patient rooms showers are ceramic tile wall finish at 4' high.

Washrooms are ceramic tile wall finish.

At basement, food court area walls are full height ceramic tile finish.

RatingInstalledDesign LifeUpdated5 - Good199440FEB-12

**Event:** Replace Tile Wall Finishes (1200m2)

TypeYearCostPriorityLifecycle Replacement2034\$375,600Unassigned

**Updated:** FEB-12

## C3010.11 Interior Wall Painting\*

Gypsum board and concrete block walls are painted throughout the building.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C3010.12 Wall Coverings\*

At main floor administration office walls are wall paper finish. ICU and CCU units are wall paper.

Rating Installed Design Life Updated 5 - Good 1994 0 FEB-12

#### C3010.14 Other Wall Finishes\*

Brick veneer and sand-blasted concrete wall finishes in various areas of the building. Aquarell and kydex finish are used throughout the building at 3'- 5' high.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C3020.01.01 Epoxy Concrete Floor Finishes\*

Mechanical room #6001-1 is epoxy painted floor. Sub-basement room # S016-9 is epoxy finish.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### C3020.01.02 Painted Concrete Floor Finishes\*

Mechanical and electrical and other service rooms are concrete floor painted.

#### C3020.02 Tile Floor Finishes\*\*

At Level 2 on-call suites, lounge and corridors, also, Atrium are ceramic tile finish.

At Level 1, Atrium, elevator lobby and east side main corridor are ceramic tile finish.

At basement, food court seating area, elevator lobby and all CRU & storage areas are ceramic tile finish.

RatingInstalledDesign LifeUpdated5 - Good199450FEB-12

## **Event:** Replace Tile Floor Finishes (5050 m2)

TypeYearCostPriorityLifecycle Replacement2044\$1,124,130Unassigned

Updated: FEB-12

#### C3020.07 Resilient Flooring\*\*

At Level 5, most of the spaces, except Simulation rooms and washrooms & showers, are resilient floor finish.

At Level 3, most of the spaces, except washrooms & showers, are resilient floor finish.

At Level 1, most of the spaces, except washrooms & showers, special procedure viewing rooms, Control rooms, are resilient floor finish.

Sub-basement Level, most of the spaces, except service rooms, are resilient floor finish.

RatingInstalledDesign LifeUpdated4 - Acceptable199420FEB-12

## **Event:** Flooring Replacement - Phase 1 (7000m2)

#### Concern:

Worn out flooring is unsightly, unhealthy and poses a trip/fall hazard. New flooring is easier to maintain.

#### Recommendation:

Replace flooring in areas where required with new.

## **Consequences of Deferral:**

Slip, trip hazard, infection control

TypeYearCostPriorityFailure Replacement2012\$562,600Low

Updated: FEB-12

## **Event:** Replace Resilient Flooring -Phase 2 (7000 m2)

TypeYearCostPriorityLifecycle Replacement2015\$580,000Unassigned

#### C3020.08 Carpet Flooring\*\*

Carpet flooring locations:

At Level 1, special procedure viewing rooms

At Level 2, on-call suites-rooms

At Level 5, Simulation room area

RatingInstalledDesign LifeUpdated3 - Marginal199415FEB-12

**Event: Replace Carpet Flooring (1000 m2)** 

Concern:

Carpet in some areas showing signs of wear

Recommendation:
Replace carpet

TypeYearCostPriorityFailure Replacement2012\$64,500Low

Updated: FEB-12

## C3020.09 Access Flooring\*\*

At main floor, Cardiac Service-computer & control rooms and Scanner control rooms are suspended accessible floor with plastic finish.

RatingInstalledDesign LifeUpdated5 - Good199425FEB-12

**Event: Replace Access Flooring (115 m2)** 

TypeYearCostPriorityLifecycle Replacement2019\$65,100Unassigned

Updated: FEB-12

#### C3030.01 Concrete Ceiling Finishes (Unpainted)\*

Sand-blasted concrete ceilings in various locations.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## C3030.04 Gypsum Board Ceiling Finishes (Unpainted)\*

Drywall ceiling is painted throughout the building.

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

Acoustic T-bar ceiling throughout the building, except, interstitial levels, drywall and exposed ceiling areas, service rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable199425FEB-12

**Event:** Replace Acoustic Ceiling Treatment (Susp. T-Bar)

(14500 m2)

TypeYearCostPriorityLifecycle Replacement2019\$690,000Unassigned

Updated: FEB-12

#### C3030.07 Interior Ceiling Painting\*

Drywall ceiling is painted throughout the building.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## D1010.01.02 Hydraulic Passenger Elevators\*\*

There are three passenger elevators in atrium lobby and four in DTC area.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Refurbish Elevators (7 elevators)

TypeYearCostPriorityLifecycle Replacement2024\$642,094Unassigned

Updated: FEB-12

## D1010.01.04 Hydraulic Freight Elevators\*\*

There are two freight elevators on west side of the building.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Refurbish Elevators (2 elevators)

TypeYearCostPriorityLifecycle Replacement2024\$183,455Unassigned

## S4 MECHANICAL

#### D2010.04 Sinks\*\*

600X600 mop sinks, molded stone, floor mounted, SS strainer.

Single and double compartment stainless steel sinks complete with chrome plated swing spout, aerator, indexed lever handles.

Stainless steel commercial sinks serving Kitchen.

Wall hung vitreous china sinks with wall mounted faucet.

Single and double compartment scrub station with foot controls.

Stainless steel countertop sinks with marine ledge.

Stainless steel countertop sinks complete with eye wash station serving Labs.

Shampoo sink - terrazzo complete with hanger and hose holder.

Stainless steel counter top sinks complete with gooseneck faucets in patients suites.

Bed pan service sink in soil utility rooms.

Rating Installed Design Life Updated 4 - Acceptable 1994 30 FEB-12

Event: Replace 286 Sinks

TypeYearCostPriorityLifecycle Replacement2024\$9,100,000Unassigned

Updated: FEB-12

#### D2010.05 Showers\*\*

Handicap shower stalls, acrylic tub with chrome grab bars. Thermostatic mixing valve, pressure balanced. Ceramic tile surface and fiberglass cabin showers with mixing valve.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 26 Showers** 

TypeYearCostPriorityLifecycle Replacement2024\$104,000Unassigned

Updated: FEB-12

#### D2010.06 Bathtubs\*\*

Fiberglass bathtubs, holders, mixing valves and removable shower heads.

Arjo assisted bath tub Bowl complete with automatic disinfections system, locking door, thermoscopic mixing valve.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Replace 18 Bathtubs

TypeYearCostPriorityLifecycle Replacement2024\$140,000Unassigned

Updated: FEB-12

#### D2010.08 Drinking Fountains/Coolers\*\*

Stainless steel refrigerated wall hung drinking fountains with automatic stream regulator.

RatingInstalledDesign LifeUpdated4 - Acceptable199435FEB-12

**Event:** Replace 36 Drinking Fountains/Coolers

TypeYearCostPriorityLifecycle Replacement2029\$216,000Unassigned

Updated: FEB-12

## D2010.10 Washroom Fixtures (WC, Lav, UrnI)\*\*

WC - Wall mounted, vitreous china, open front seat, flush valve. Swing type stainless steel water closets serving some patient suites.

LV - Stainless steel and vitreous china countertop lavatories c/w two handle faucets. Wall hung barrier free, vitreous china lavatories with gooseneck faucets.

UR - wall mounted, vitreous china with flush valve.

RatingInstalledDesign LifeUpdated4 - Acceptable199435FEB-12

**Event:** Replace 486 Washroom Fixtures (WC, Lav, Urnl)

TypeYearCostPriorityLifecycle Replacement2029\$1,425,000Unassigned

Updated: FEB-12

D2020.01.01 Pipes and Tubes: Domestic Water\*

Copper piping distribution throughout.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D2020.01.02 Valves: Domestic Water\*\*

Plumbing fixtures complete with isolation valves. Main branches isolated. Ball and globe valves.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event: Replace 1300 Valves: Domestic Water** 

TypeYearCostPriorityLifecycle Replacement2034\$330,000Unassigned

Updated: FEB-12

#### D2020.01.03 Piping Specialties (Backflow Preventers)\*\*

Reduced pressure backflow preventors serving incoming domestic water line and fire lines.

Backflow prevention installed on heating water.

Double check valve arrangement serving chilled water system.

Vacuum breakers serving mop sinks and NFHB.

RatingInstalledDesign LifeUpdated4 - Acceptable199420FEB-12

## **Event: Replace Piping Specialties (Backflow Preventors)**

TypeYearCostPriorityLifecycle Replacement2015\$350,000Unassigned

Updated: FEB-12

## D2020.02.02 Plumbing Pumps: Domestic Water\*\*

Domestic water recirculation and pressure booster pumps.

RatingInstalledDesign LifeUpdated4 - Acceptable199420FEB-12

## **Event:** Replace Plumbing Pumps: Domestic Water

TypeYearCostPriorityLifecycle Replacement2015\$35,000Unassigned

Updated: FEB-12

## D2020.02.04 Domestic Water Conditioning Equipment\*\*

Packaged water softening equipment complete with resin tanks with automatic drain valves.

RatingInstalledDesign LifeUpdated4 - Acceptable199420FEB-12

#### **Event: Replace Domestic Water Conditioning Equipment**

TypeYearCostPriorityLifecycle Replacement2015\$35,000Unassigned

#### D2020.02.06 Domestic Water Heaters\*\*

Domestic hot water heating system consist of three horizontal hot water tanks complete with steam heating coils. Two tanks serving 65 deg.C and 40 deg.C systems and one tanks serving soft domestic hot water system.

RatingInstalledDesign LifeUpdated4 - Acceptable199420FEB-12

**Event: Replace 3 Domestic Water Heaters and** 

accessories.

TypeYearCostPriorityLifecycle Replacement2015\$300,000Unassigned

Updated: FEB-12

## D2020.03 Water Supply Insulation: Domestic\*

Water piping insulated throughout.

Rating Installed Design Life Updated 4 - Acceptable 1994 0 FEB-12

## D2030.01 Waste and Vent Piping\*

Cast iron, copper, plastic and glass. Sanitary stacks piped vertically down to the basement.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D2030.02.04 Floor Drains\*

Floor drains located throughout in service rooms and wet process areas.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D2030.03 Waste Piping Equipment\*

Grease traps serving Kitchen sinks.

Sump pits complete with duplex pumps and controllers serving weeping tile system.

Hair plaster and sediment interceptors.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D2040.01 Rain Water Drainage Piping Systems\*

Cast iron and PVC.

Rain water collection via roof drains to storm mains.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D2040.02.04 Roof Drains\*

Large dome, sump roof drains with flashing flange and integral gravel stop.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D2090.10 Nitrous Oxide Gas Systems\*\*

Nitrogen and nitrous oxide are supplied via high pressure cylinders to specialized areas of the hospital.

Unit consists of banks of high pressure cylinders, pressure relief valve, high pressure header valves and cylinder connection coils.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace Nitrous Oxide Gas Systems. BOE: 40,108** 

sq.m. GFA

TypeYearCostPriorityLifecycle Replacement2024\$850,000Unassigned

Updated: FEB-12

## D2090.11 Oxygen Gas Systems\*\*

Oxygen supplied from a bulk liquid oxygen tank in Emergency Building. Piping distribution to all levels of the hospital terminating at patient rooms outlets.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

Event: Replace Oxygen Gas Systems. BOE: 40,108 sq.m.

**GFA** 

TypeYearCostPriorityLifecycle Replacement2024\$850,000Unassigned

Updated: FEB-12

# D2090.13 Vacuum Systems (Medical and Lab)\*\*

Vacuum drawn from central vacuum pump located in Emergency Building. Pumps are equipped with guards, automatic water valves, strainer and regulating valves, vacuum gauge, water-air outlet separator, receiver and isolation valves. Piping distribution to all levels of the hospital terminating at patient outlets.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

Event: Replace Vacuum Systems (Medical). BOE: 40,108

sq.m. GFA

TypeYearCostPriorityLifecycle Replacement2024\$850,000Unassigned

**Updated:** FEB-12

#### D2090.14 Acid Waste Systems\*\*

Acid neutralization system serving Laboratories and OR complete with tanks, glass piping distribution, pH monitoring and alarms.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

Event: Replace acid neutralization system.

TypeYearCostPriorityLifecycle Replacement2024\$285,000Unassigned

**Updated:** FEB-12

# D2090.16 Medical Air System\*

Medical air provided from central compressor located in Emergency Centre. System consists of packaged compressor with low water pressure alarm sensor, fresh air intake filters, aftercooler, refrigerated air dryers, line pressure regulator and main shut-off valve. Piping distribution to all levels of the hospital terminating at DISS outlets.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D3040.01.01 Air Handling Units: Air Distribution\*\*

There are total of 12 central air handling units serving DTC building.

AHU-1: Indoor, draw-through, constant volume air handling unit serving stairwell pressurazation system, located in basement mechanical room. Supply air= 5663 lps.

AHU-2: Indoor, draw-through, constant volume air handling unit serving stairs and atrium pressurazation system, located in the ATC building penthouse. Supply air= 3300 lps.

AHU-3,4,5,6,7,8,9,10: Indoor, single supply air duct, variable volume air handling unit complete with summer pre-filter, heat recovery coil, pre-heat coil, winter pre-filter, final filter, heating coils, cooling coil, steam grid humidifier (for 103 kPa steam) and motorized dampers. Supply air= 24545 lps. Unit located in penthouse mechanical room.

AHU-11: Indoor, constant volume air handling unit serving DTC vestibule located in the Basement below Atrium. S/A 472 lps.

AHU-10: Indoor, constant volume air handling unit serving DTC penthouse electrical room. S/A 1700 lps.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 12 Air Handling Units** 

TypeYearCostPriorityLifecycle Replacement2024\$7,500,000Unassigned

## D3040.01.02 Fans: Air Distribution (Remote from AHU)\*

There are 11 S/A booster fans and 11 E/A fans complete with variable speed drives serving operating rooms ventilation system.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D3040.01.03 Air Cleaning Devices: Air Distribution\*

Media filters serving air handling units.

HEPA filters serving operating rooms and Lab areas.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D3040.01.04 Ducts: Air Distribution\*

Low and medium velocity ductwork distribution throughout the building. Single and dual ducts systems. Majority of ductwork concealed in ceiling space.

Operating rooms ventilation system complete with designated booster fans complete with VFDs, attenuators and zone air monitoring systems.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D3040.01.06 Air Terminal Units: Air Distribution (VAV/CV Box)\*\*

EH Price SDV series single duct and dual duct units complete with actuators, serving all areas. Units are located within Interstitial areas and ceiling spaces.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 750 Air Terminal Units: Air Distribution** 

(VAV/CV Box)

TypeYearCostPriorityLifecycle Replacement2024\$3,500,000Unassigned

Updated: FEB-12

# D3040.01.07 Air Outlets & Inlets: Air Distribution\*

Various type of supply air grilles and diffusers located throughout. Round and square diffusers, linear and louver face grilles. Grilles have been modify along with numerous renovations. Flush face radial flow and laminar flow specialty diffusers in operating rooms and lab areas complete with hepa filters.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

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

Steam piping distribution from central heating plant located in Glenrose Hospital.

Steam pressure reducing stations are provided to lower pressure from 870 kPa to 103 kPa, pressure sensors mounted on low pressure header modulate steam control valves.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event: Replace Steam Distribution Systems:** 

Piping/Pumps. BOE: 40,108 sq.m. GFA.

TypeYearCostPriorityLifecycle Replacement2034\$800,000Unassigned

Updated: FEB-12

#### D3040.03.01 Hot Water Distribution Systems\*\*

Steel and copper piping distribution from heat exchangers to heating loops.

Base mounted circulation pumps are provided to serve hot water and glycol systems.

Designated circulation pumps serving air handling units heating coils.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event:** Replace Hot Water Distribution Systems. BOE:

40,108 sq.m. GFA.

TypeYearCostPriorityLifecycle Replacement2034\$4,000,000Unassigned

Updated: FEB-12

## D3040.03.02 Chilled Water Distribution Systems\*\*

250mm diameter CWS and CWR lines from central chiller plant located in Materials Management Building. Chilled water loop to cooling coils serving air handling units.

Primary and secondary chilled water distribution and condenser water pump arrangement.

Copper and steel pipes.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event: Replace Chilled Water Distribution System. BOE:** 

40,108 sq.m. GFA

TypeYearCostPriorityLifecycle Replacement2034\$1,800,000Unassigned

#### D3040.03.03 Condenser Water Distribution Systems Pumps\*

Packaged condensate receiver complete with two pumps.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D3040.04.01 Fans: Exhaust\*\*

Variety of exhaust fans provided on roof and in penthouse mechanical room serving general exhaust system, O.R. Booster exhaust, labs exhaust systems (cytology, blood bank, hematology etc.), smoke exhaust system, storage exhaust and washrooms exhaust.

Zone exhaust fans complete with variable speed drives are provided for the Operating Rooms exhaust system. Designated exhaust fans serving laboratory fume hoods, isotopes exhaust hoods and biological safety cabinets. Designated exhaust fans serving kitchen hoods in Food Court area.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Replace 70 Exhaust Fans

TypeYearCostPriorityLifecycle Replacement2024\$700,000Unassigned

Updated: FEB-12

D3040.04.03 Ducts: Exhaust\*

Galvanized steel exhaust ducts up to SMACNA standards.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## **Event: HVAC Noise Attenuation**

Concern:

Noise levels within the Neonatal Intensive Care Unit are outside of design parameters.

**Recommendation:** 

Deploy proven engineered sound attenuation to reduce noise.

**Consequences of Deferral:** 

Quality of patient care

TypeYearCostPriorityProgram Functional Upgrade2011\$200,000High

**Updated:** APR-11

#### D3040.04.05 Air Outlets and Inlets: Exhaust\*

Metal exhaust grilles of various types and sizes are located throughout the ceiling areas of the facility.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D3040.05 Heat Exchangers\*\*

Steam to hot water and steam to glycol mix complete with designated circulation pumps.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 8 Heat Exchangers** 

TypeYearCostPriorityLifecycle Replacement2024\$140,000Unassigned

Updated: FEB-12

## D3050.01.04 Unit Air Conditioners\*\*

Packaged unitary air conditioners complete with water cooled condensers serving electrical rooms, mechanical rooms and computer rooms. Units have airflow capacities of 1230 lps (typ. Of 3), 1699 lps and 4250 lps.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Replace 5 Air Conditioning Units

TypeYearCostPriorityLifecycle Replacement2024\$400,000Unassigned

Updated: FEB-12

## D3050.03 Humidifiers\*\*

Steam grid humidifiers serving air handling units and operating rooms ventilation systems.

RatingInstalledDesign LifeUpdated4 - Acceptable199425FEB-12

**Event: Replace 36 Humidifiers** 

TypeYearCostPriorityLifecycle Replacement2019\$525,000Unassigned

#### D3050.05.02 Fan Coil Units\*\*

Vertical, horizontal and ceiling force flow heaters serving vestibules, complete with hot water heating coils.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Replace 24 FF Heaters

TypeYearCostPriorityLifecycle Replacement2024\$120,000Unassigned

Updated: FEB-12

## D3050.05.03 Finned Tube Radiation\*\*

Perimeter wall fin radiation complete with various type enclosure cabinets.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event:** Replace Finned Tube Radiation. BOE: 9000 sq.m.

TypeYearCostPriorityLifecycle Replacement2034\$450,000Unassigned

Updated: FEB-12

## D3050.05.06 Unit Heaters\*\*

Cabinet horizontal and vertical discharge, propeller, hot water unit heaters serving Mechanical Rooms and Maintenance areas.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 26 Unit Heaters** 

TypeYearCostPriorityLifecycle Replacement2024\$140,000Unassigned

## D3050.05.08 Radiant Heating (Ceiling & Floor)\*\* - Radiant Panels

Radiant ceiling panels, 610mm width aluminum linear type, mounted in the T-bar, or GWB ceiling along the perimeter wall

RatingInstalledDesign LifeUpdated4 - Acceptable199435FEB-12

Event: Replace 350 Clg. Radiant Panels.

TypeYearCostPriorityLifecycle Replacement2029\$350,000Unassigned

**Updated:** FEB-12

## D3050.05.08 Radiant Heating (Ceiling & Floor)\*\* - Snow Melt

Snow melt system serving main entrance and ramps.

RatingInstalledDesign LifeUpdated4 - Acceptable199435FEB-12

Event: Replace Radiant Heating (Floor). BOE: 800 sq.m.

TypeYearCostPriorityLifecycle Replacement2029\$175,000Unassigned

Updated: FEB-12

## D3050.06 Energy Recovery Units\*

Heat recovery coils energy system installed in the E/A and O/A ductwork serving air handling units, complete with three circulation pumps and expansion tank.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D3060.02.02 Pneumatic Controls\*\*

Duplex air compressors complete with refrigerated dryers.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event:** Replace Pneumatic Controls. BOE: 40,108 sq.m.

TypeYearCostPriorityLifecycle Replacement2034\$350,000Unassigned

Updated: FEB-12

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

Digital programmable BMCS - Siemens Apogge.

RatingInstalledDesign LifeUpdated4 - Acceptable200020FEB-12

**Event:** Replace Building Systems Controls - BMS. BOE:

40108 sq/m/ GFA.

TypeYearCostPriorityLifecycle Replacement2019\$1,450,000Unassigned

Updated: FEB-12

#### **D4010 Sprinklers: Fire Protection\***

Hospital building is sprinkled as per NFPA13. Automatic sprinkler system consists of wet pipes. Automatic wet pipe sprinkler alarm valve.

Fire department connection provided. Fire line to two sprinkler trees located in Mechanical Rooms.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D4030.01 Fire Extinguisher, Cabinets and Accessories\*

Fire extinguishers provided throughout:- carbon dioxide, multi-purpose dry chemical. All units complete with up-to-date certification tags.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

# D4090.04 Dry Chemical Fire Extinguishing Systems (Kitchen Hood)\*\*

Dry chemical fire suppression system provided for each of the kitchen area range hoods.

RatingInstalledDesign LifeUpdated4 - Acceptable199440FEB-12

**Event: eplace 4 Dry Chemical Fire Extinguishing Systems** 

(Kitchen Hood)

TypeYearCostPriorityLifecycle Replacement2034\$145,000Unassigned

**Updated:** FEB-12

## D4090.07 Fire Pumps & Water Storage Tanks\*

Fire water pressure pump and excess pressure pump serving DTC and ATC buildings.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## S5 ELECTRICAL

#### D5010.01.01 Main Electrical Transformers (Facility Owned)\*\*

There are two in the basement level, two in the penthouse level 13.8-347/600V 2000 KVA transformers for this building primary side.

RatingInstalledDesign LifeUpdated5 - Good199440FEB-12

**Event: Replace 4 Main Electrical Transformers (Facility** 

Owned)

TypeYearCostPriorityLifecycle Replacement2034\$1,000,000Unassigned

Updated: FEB-12

## D5010.02 Secondary Electrical Transformers (Interior)\*\*

There are 36 transformers. Transformer sizes varies on the load. The voltage mainly 347/600-120/208 V, 75KVA, 112.5KVA, 150KVA, 225KVA, 300KVA.

Rating Installed Design Life Updated 5 - Good 1994 40 FEB-12

**Event: Replace 36 Secondary Electrical Transformers** 

(Interior)

TypeYearCostPriorityLifecycle Replacement2034\$875,000Unassigned

Updated: FEB-12

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

There are four main distribution 347/600V, 3000A, 3-Phase 4-Wire located at sub basement level electrical room, and penthouse room.

RatingInstalledDesign LifeUpdated5 - Good199440FEB-12

**Event: Replace 4 Main Electrical Switchboards (Main** 

Distribution)

TypeYearCostPriorityLifecycle Replacement2034\$2,000,000Unassigned

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

All Electrical panels were installed in interstitial spaces. Panels are fairly new and have enough spaces for future improvement. There are 35 CDP panels, and 150 120/208 voltage panels.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event: Replace 185 Electrical Branch Circuit Panelboards** 

(Secondary Distribution)

TypeYearCostPriorityLifecycle Replacement2024\$2,250,000Unassigned

Updated: FEB-12

#### D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers\*\*

The MCC's were installed in the facility in few different locations; All together there are 50 sections.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event:** Replace 50 Switchboards, Panelboards, and

(Motor) Control Centers

TypeYearCostPriorityLifecycle Replacement2024\$375,000Unassigned

Updated: FEB-12

## D5010.07.02 Motor Starters and Accessories\*\*

The load switches and disconnect switches are installed for some mechanical small loads.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event:** Replace 500 Motor Starters and Accessories

TypeYearCostPriorityLifecycle Replacement2024\$500,000Unassigned

#### D5010.07.03 Variable Frequency Drives\*\*

10 units of mixed (siemens, ABB, mitsubushi) VFD were installed for air handling units.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event:** Replace 10 Variable Frequency Drives

TypeYearCostPriorityLifecycle Replacement2024\$450,000Unassigned

Updated: FEB-12

## D5020.01 Electrical Branch Wiring\*

Most of wiring are installed inside conduit with original building construction. BX is used from junction boxes to light fixtures. Cable trays were used in interstitial area.

RatingInstalledDesign LifeUpdated6 - Excellent19940FEB-12

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

The most of light fixtures are locally controlled, and corridor lights controlled by nurse stations.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## D5020.02.02.01 Interior Incandescent Fixtures\*

The incandescent pot lights were installed in the lounge areas, some waiting areas. Some of the light bulbs retrofit to compact fluorescent lamp.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D5020.02.02.02 Interior Fluorescent Fixtures\*\*

The light fixtures were originally T-12 completed with magnetic ballast. Some of them were retrofit with energy efficient T-8 fluorescent tubes completed with electronic ballast as replaced within maintenance budget.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event: Replace 18000 Interior Fluorescent Fixtures** 

TypeYearCostPriorityLifecycle Replacement2024\$3,600,000Unassigned

Updated: FEB-12

#### D5020.02.02.03 Interior Metal Halide Fixtures\*

Wall pack and pole mounted metal halide fixtures are installed in food court.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## D5020.02.02.04 Interior H.P. Sodium Fixtures\*

Ceiling mounted HPS fixtures were installed in the food court area.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5020.02.03.01 Emergency Lighting Built-in\*

The Hospital Campus has a power plan completed with generator. DTC building were fed from power generator for emergency power needs and lighting system. Some of the florescent lights are assigned as emergency lights with good coverage.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5020.02.03.03 Exit Signs\*

Exit signs located at required location and exits. Fixtures are originally incandescent type, some of them were retro fitted to energy efficient LED type lamps within maintenance budget as required.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5020.02.11 Operating Room Lighting\*

Halogen and quarts type lights were installed for the operating room lighting total 10.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### D5020.03.01.03 Exterior Metal Halide Fixtures\*

Wall pack outdoor lights provide sufficient coverage for partially of the site.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### D5020.03.01.04 Exterior H.P. Sodium Fixtures\*

Wall pack outdoor lights provide sufficient coverage for partially of the site.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

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

All outdoor lights are control by photo-cell.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

#### D5030.01 Detection and Fire Alarm\*\*

The Cerberus Pyrotronics panel was installed for fire alarm system. Entire system is hard wired system Class A loop. There are transponder panel on each interstitial space. This panel is old, it is hard to find spare part. There is new Siemens fire finder Fire alarm panel installation in progress. There are annunciator panel by each unit nurse stations. There are complain to not be able to find spare part.

RatingInstalledDesign LifeUpdated4 - Acceptable199425FEB-12

**Event: Replace Detection and Fire Alarm (40,000 m2)** 

TypeYearCostPriorityLifecycle Replacement2019\$1,100,000Unassigned

Updated: FEB-12

## D5030.02.01 Door Answering\*

There is stand alone Aiphones intercom access at some unit entrance after hours. Some of this Intercom panel completed with camera for high secure service.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5030.02.03 Security Access\*\*

HID swipe card access system were installed through entire facility, and it is integrated with LENEL security monitor panel. The signal goes to main RAH security office in the basement floor.

RatingInstalledDesign LifeUpdated5 - Good200025FEB-12

**Event:** Replace Security Access (40,000 m2)

TypeYearCostPriorityLifecycle Replacement2025\$300,000Unassigned

#### D5030.02.04 Video Surveillance\*\*

There are security cameras at required locations, The signals transfers to security office.

RatingInstalledDesign LifeUpdated5 - Good200025FEB-12

**Event:** Replace Video Surveillance (40,000 m2)

TypeYearCostPriorityLifecycle Replacement2025\$320,000Unassigned

Updated: FEB-12

#### D5030.03 Clock and Program Systems\*

Simplex hard wired clock systems were installed through out entire building. There are new wireless Primex system in progress to install.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5030.04.01 Telephone Systems\*

The Nortel Merdian switch board and telephone machines were installed for phone system.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5030.04.03 Call Systems\* - Nurse Call System

Total 10 Dukane, and Rauland Responder mixed Nurse call system are installed at nurse stations for each unit and provide communications between patients and nurses from the patient rooms to nurse desks.

RatingInstalledDesign LifeUpdated4 - Acceptable199425FEB-12

## D5030.04.03 Call Systems\*\*

The TOA EXES systems are used for Call system. The call stations are located in all units for paging.

RatingInstalledDesign LifeUpdated5 - Good199425FEB-12

Event: Replace Call Systems (40,000 m2)

TypeYearCostPriorityLifecycle Replacement2019\$200,000Unassigned

#### D5030.04.04 Data Systems\*

Data outlets are installed through offices; and Cat 5 cables are installed either conduit or free air.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## D5030.04.05 Local Area Network Systems\*

One server, and patch panels are installed on each floor the facility...

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5030.05 Public Address and Music Systems\*\*

Bogen DPA 160 PA system is installed for entire RAH. All buildings are connected together.

RatingInstalledDesign LifeUpdated5 - Good199420FEB-12

**Event: Replace Public Address and Music Systems** 

(40,000 m2)

TypeYearCostPriorityLifecycle Replacement2015\$600,000Unassigned

Updated: FEB-12

#### D5030.06 Television Systems\*

The TV outlets are available in all patient stations as per pay view. Serviced provided by a utility company.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## D5030.07 Other Communications and Security Systems\*

The Supernet is available for data system connected to Provincial health data system.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## D5090.01 Uninterruptible Power Supply Systems\*\*

40 KVA Liebert Un interupptible Power Supply Systems.

RatingInstalledDesign LifeUpdated4 - Acceptable199430FEB-12

**Event:** Replace Uninterruptible Power Supply System

TypeYearCostPriorityLifecycle Replacement2024\$500,000Unassigned

**Updated:** FEB-12

D5090.06 Lightning Protection Systems\*

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

# **S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION**

## E1020.02 Library Equipment\*

In main floor there is medical library room # 1046-5.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## E1020.07 Laboratory Equipment\*

In 5th floor, located on northeast end of the building, Core Laboratory is fully equipped.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## E1020.08 Medical Equipment\*

Throughout the building, various units are provided with medical equipment.

At Level 5, POD units, Isolation room, Bio-medical equipment room, Pharmacy.

At Level 3, ICU, CCU rooms, Theatre units-has special light fixture for operations, Sterile core.

At Level 1, Radiography, Fluoroscopy, Tomo, Vascular Procedures, Cardiac, Ultrasound rooms, Nuclear Medicine rooms have sufficient equipment.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### E1090.03 Food Service Equipment\*

In basement, at Atrium area various CRU 's provide their own food to serve.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## E1090.04 Residential Equipment\*

In Staff Lounge rooms, fridge, microwave, table and chairs provided. Also, in Atrium seating area has seating arrangement with furniture.

#### E2010.02 Fixed Casework\*\*

There is casework throughout the building.

RatingInstalledDesign LifeUpdated5 - Good199435FEB-12

**Event:** Replace Fixed Casework (435m2)

TypeYearCostPriorityLifecycle Replacement2029\$388,311Unassigned

Updated: FEB-12

## E2010.03.01 Blinds\*\*

Exterior and interior windows have horizontal blinds.

RatingInstalledDesign LifeUpdated5 - Good199430FEB-12

**Event: Replace Blinds (400 m2)** 

TypeYearCostPriorityLifecycle Replacement2024\$46,000Unassigned

**Updated:** FEB-12

## E2010.06 Fixed Interior Landscaping\*

Upper Atrium- level 2 has fixed interior landscaping with brick wall at 18" high.

## S8 SPECIAL ASSESSMENT

#### K4010.01 Barrier Free Route: Parking to Entrance\*

Barrier free route -parking to entrance is provided through the ATC main entrance.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## K4010.02 Barrier Free Entrances\*

Main entrance has two sets of double automatic swinging doors.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

#### K4010.03 Barrier Free Interior Circulation\*

All main corridor widths, door sizes are meeting the barrier free circulation requirements.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## K4010.04 Barrier Free Washrooms\*

There are barrier free washrooms throughout the building.

RatingInstalledDesign LifeUpdated5 - Good19940FEB-12

## K4030.01 Asbestos\*

No asbestos was identified or reported during the site visit.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## K4030.04 Mould\*

No mould was identified or reported during the site visit.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## K4030.06 Radioactive Compounds\*

No radioactive compounds in the building observed during site visit.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## K4030.07 Ozone Depleting Substances (CFC's, HCFC's, Halon)\*

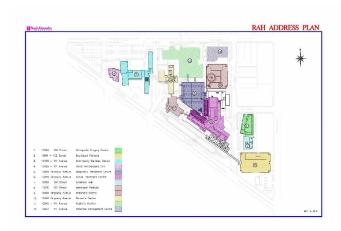
No ozone depleting substances was identified or reported during the site visit.

RatingInstalledDesign LifeUpdated4 - Acceptable19940FEB-12

## K5010.01 Site Documentation\*

Site visited by R Saunder Architect team on January 31, 2011.

Rating	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	0	0	FEB-12



Site Plan.

# K5010.02 Building Documentation\*

Site visited by R Saunder Architect team on January 31, 2011.

RatingInstalledDesign LifeUpdated4 - Acceptable20110FEB-12