

# RECAPP Facility Evaluation Report

Alberta Health Services-North



**Queen Elizabeth II Hospital - Acute Care**

B1064A

Grande Prairie

<b>Facility Details</b>	
<b>Building Name:</b>	Queen Elizabeth II Hospital
<b>Address:</b>	10409 - 98 Street
<b>Location:</b>	Grande Prairie
<b>Building Id:</b>	B1064A
<b>Gross Area (sq. m):</b>	23,561.00
<b>Replacement Cost:</b>	\$304,807,913
<b>Construction Year:</b>	1981

<b>Most Recent Consultant Evaluation</b>	
<b>Evaluation Company:</b>	Golder Associates Ltd.
<b>Evaluation Date:</b>	January 14 2014
<b>Evaluator Name:</b>	Karel Derkzen van Angeren, Jamie Turner
<b>Evaluation FCR:</b>	4.83%

**Total Maintenance Events Next 5 years:                   \$14,733,606**  
**Current 5 year Facility Condition Index (FCI):               4.83%**

**General Summary:**

The Acute Care facility located at 98 Street, Grande Prairie, AB, is a full service hospital reportedly constructed in 1984 which includes an Emergency Room, an Intensive Care Unit, Operating Rooms, patient rooms, several clinics, several therapy areas, several laboratories, administrative areas, a cafeteria, a gift shop, etc. The building is a cast-in-place (CIP) concrete and concrete masonry unit (CMU) 5 storey structure with a 6th storey mechanical penthouse and a basement level which connects to service tunnels to the other facilities on Site.

The building has a gross floor area of approximately 23,561m<sup>2</sup>.

**Structural Summary:**

Structural drawings were not provided, however, it is believed that the foundations for the building consists of a combination of CIP concrete piles and grade beams supporting CIP concrete foundation walls and interior concrete or steel columns. The basement floors are comprised of CIP concrete slabs-on-grade. The above grade structure of the Acute Care facility consists of CIP concrete columns, beams, and load-bearing concrete masonry unit (CMU) walls supporting CIP suspended concrete floor slabs, including the roof slab. The roof of the mechanical penthouse of the Acute Care facility consists of metal decking supported by open web steel joists (OWSJ).

Capital expenses are not anticipated within the next five years.

Structural elements are generally in acceptable overall condition.

**Envelope Summary:**

Exterior cladding for the building mainly consists of clay brick veneer with several areas of insulated aluminum panels and pre-finished metal siding. Exterior windows consist of fixed, insulating glazing units (IGUs) set in aluminum frames. The main entrances consist of storefront doors and windows consisting of IGUs set in aluminum frames. The west exterior walls of the cafeteria area and the gift shop area are curtain walls consisting of IGUs set in aluminum frames. An inverted, built up asphaltic membrane roofing (BUR) assembly is provided for the majority of the buildings roofs with the balance being standing seam prefinished metal roofing and a portion of SBS membrane over the mechanical rooms.

Capital expenditures with respect to the joint sealers, windows, doors, roofing, and skylights.

The envelope elements are generally in acceptable overall condition.

**Interior Summary:**

The majority of the interior partitions in the facility consist of painted gypsum board and CMUs. The patient room shower areas, bathing rooms, janitor's rooms, and the cafeteria are finished with ceramic wall tiles. Flooring in the facility consists mainly of resilient sheet flooring with some areas of carpet in administrative areas and quarry tile in the main reception and the cafeteria areas. Painted concrete floors are located in the utility rooms. The ceilings for approximately 60% of the facility consist of a suspended T-bar assembly with acoustic tiles. The remainder of the ceilings consist of painted, exposed structure and painted gypsum board. Three passenger elevators and four staff/freight elevators service all floors in the facility. Laminate base and upper cabinets with laminate countertops are provided throughout the building at the washrooms, reception, nurse stations, and labs.

Capital expenditures with respect to fabricated compartments, lockers, wall paneling, gypsum wall board, acoustical wall

treatments, interior wall painting, resilient flooring, carpet, acoustic ceiling tiles, hydraulic elevators, fixed casework, and blinds are anticipated within the next five years.

The interior elements are generally in acceptable overall condition.

**Mechanical Summary:**

The majority of mechanical systems in the building are original to the year of construction with some updates to the showers (2003) , air handling units (2000 and 2009), heat exchangers (2000), air conditioning units (2007), and the building management system (2000).

Plumbing fixtures include stainless steel sinks, special medical scrub sinks, stainless steel refrigerated water fountains, tiled and fiberglass showers with valves, enameled steel bathtubs, vitreous china lavatories, and vitreous china tank and flush valve type water closets, and flush valve vitreous china lavatories. Backflow preventers are provided for the irrigation and sprinkler systems. Low pressure steam water heaters are provided in the basement of the building. Water distribution is by cast iron or copper type 'L' piping. A lift station and cafeteria grease trap are provided for the waste system.

The Acute Care Center is heated by steam boilers which are located in the Services Building. Steam is routed to the wet mechanical room of the hospital where it is connected to heat exchangers which provide heating for the hot water and glycol distribution systems. Chilled water is also provided by the Services building. The hot glycol and chilled water is distributed to eleven air handling units which provide heated and cooled air to low pressure galvanized steel ducting throughout the building. Hot water is distributed through insulated copper piping to finned tube radiation, unit heaters, fan coil units, and radiant ceiling panels throughout. Packaged air conditioners are provided for the Server room and the MRI room.

Medical air, nitrous oxide, and oxygen systems are provided in patient and surgical areas throughout the building. A medical vacuum system and a biohazardous refrigeration system are also provided.

Building exhaust is provided by various interior and roof mounted fans. A central building management control system (BMCS) is used to control some of the mechanical equipment throughout. Pneumatic controls serve the majority of the mechanical equipment.

Work is anticipated to be required to the sinks, bathtubs, domestic water piping, domestic water valves, backflow preventors, pumps, water heaters, nitrous oxide gas system, oxygen gas system, vacuum system, AHUs, VAV boxes, exhaust fans, heat exchangers, computer room air conditioning, and fan coil unit heaters within 5 years of writing this report.

Overall the mechanical systems in the building are in acceptable condition.

**Electrical Summary:**

The electrical systems in the building are generally original to the year of construction (1984) with some updates to the communication systems in 1998 as well as updates to the major electrical equipment which serve the heating, ventilation and air conditioning (HVAC) equipment. The uninterruptible power supply (UPS) was updated in 2011.

4160 Volt power is supplied to two 4160 Volt main switchgears. Power is then fed to two utility-owned 2000 kVA 4160 to 600 Volt step down transformers located in the main electrical room of the building. Main power distribution is through two 3000 Amp, 600 Volt main distribution panels which distribute power to major mechanical equipment, various interior transformers, and 600 Volt secondary panelboards throughout. The interior transformers provide stepped down power to various medical equipment as well as 120/208 Volt secondary panelboards throughout. Various 600 A motor control centers are provided for the majority of major mechanical equipment with some separate motor starters provided for some of the HVAC supply and return fans. Variable frequency drives are also provided for the air handling units. Electrical wiring is copper in armoured cable or in conduit.

Interior lighting is generally by fluorescent T12 and T-8 fixtures with some incandescent pot lighting in lobby areas and patient rooms throughout. Exterior lighting is provided by incandescent pot lighting, high pressure sodium wall packs. Emergency battery packs with integral incandescent heads are provided in the mechanical rooms throughout. The

remainder of lighting in an emergency situation is operated by an emergency generator provided in the Services Building. Incandescent or light emitting diode (LED) exit signs are provided throughout.

A Siemens System 3 fire alarm panel monitors manual pull stations and heat and smoke detectors throughout. Visual and audible signals are by strobe lights and fire bells throughout. A door answering and motion detection security system are provided for the Pharmacy area of the building. A security access card system along with a video surveillance system is provided throughout the building. Digital clocks are connected to the master clock system located in the Services building. A paging system, nurses call system, and radio system, and television systems are provided for the building. Category 5 cabling as well as point to point wireless bridges provide a data system for the Acute Care building as well as all other Queen Elizabeth buildings. The building is connected to the Alberta "Supernet" and a Cisco local area network (LAN) is provided.

An Mitsubishi UPS provides emergency power to critical care services throughout the building. Lighting protection in the form of lightning rods and grounding cable are provided on the roof of the building.

Work is anticipated to be required to the secondary panelboards, MCCs, motor starters, GFCI upgrades, interior fluorescent lighting, and emergency lighting battery packs within 5 years of writing this report.

Overall the electrical systems in the building 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\***

Structural drawings were not provided; however, the foundation for the building reportedly consists of a combination of cast-in-place (CIP) concrete piles and grade beams and CIP concrete foundation walls.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**A1030 Slab on Grade\***

The basement floors of the building consist of CIP concrete slabs-on-grade.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

A CIP concrete crawl space is located on Level (-1) and covers the eastern half of the Acute Care facility.

The basement wall consist of CIP concrete foundation walls.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Structural drawings were not provided during the assessment, however, the structural frame is believed to consist of CIP concrete columns/beams and some load-bearing CMU walls supporting suspended roof and floor structures. The structural frame of the mechanical penthouse is a combination of structural steel columns/beams and concrete columns.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Structural drawings were not provided, however, load-bearing interior walls throughout the above-grade levels of the building are assumed to be comprised of CMUs.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Structural drawings were not provided, however, the above grade floors of the building are believed to be constructed of CIP suspended concrete slabs supported by concrete beams.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**B1010.06 Ramps: Exterior\***

An exterior CIP concrete ramp is located at the south end of the building

Site was snow covered at the time of the assessment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B1010.07 Exterior Stairs\***

Several CIP concrete stairs are located at building entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B1010.09 Floor Construction Fireproofing\***

The floors consist of primarily non-combustible materials.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B1010.10 Floor Construction Firestopping\***

Mostly concealed, where visible, penetrations through floors are generally sealed with fire caulking throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The main roof area of the building is comprised of a CIP suspended concrete slab supported by CIP concrete beams and columns. The mechanical penthouse roof and entrance canopy consists of metal decking supported by open web steel joists and structural steel.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B1020.02 Structural Interior Walls Supporting Roofs\***

Structural drawings were not provided, however, load-bearing interior walls supporting roofs in the building are assumed to consist of CMUs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The building has a CIP concrete slab. The mechanical penthouse has a metal deck.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**B1020.04 Canopies\***

Canopies are primarily steel-framed throughout the building exterior.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

CIP concrete. Mechanical penthouse is concealed.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**B1020.07 Roof Construction Firestopping\***

The roof penetrations are fire caulked throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

## S2 ENVELOPE

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

The exterior cladding of the building consists primarily of clay brick veneer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### B2010.01.06.03 Metal Siding\*\*

The exterior cladding of mechanical penthouses/enclosures and a portion of the building located at the northwest corner consists of prefinished metal siding with a horizontal profile.

Anodized aluminum insulated panels are provided for portions of the building exterior cladding.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

#### Event: Replace aluminum panels (~375m<sup>2</sup>)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$89,600	Unassigned

**Updated:** APR-14

#### Event: Replace metal siding (~780m<sup>2</sup>)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$297,900	Unassigned

**Updated:** APR-14

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

Expansion control joints are installed in the exterior brick veneer at regular intervals.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14



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

Sealant/caulking is installed in the control joints of the exterior brick veneer, around doors/windows, and at material transitions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1984	20	APR-14

**Event: Replace joint sealer (~10,000m)**

**Concern:**

The exterior sealants/caulking have failed (hardened, loss of cohesion/adhesion, cracked, gaps, etc.).

**Recommendation:**

Replace exterior sealants/caulking.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$363,700	High

**Updated:** APR-14

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

CMU exterior walls are provided throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B2010.02.99 Other Exterior Wall Construction\***

Architectural drawings were not reviewed as part of the assessment, however, the majority of the exterior walls of the building reportedly incorporate non-loadbearing steel stud framing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Architectural drawings were not reviewed as part of the assessment; however, it is believed that the exterior walls of the building are provided with a vapour barrier, and fibreglass batt insulation or rigid board insulation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B2010.04 Exterior Wall Interior Skin\***

The majority of the building is provided with GWB with small areas consisting of painted CMUs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B2010.05 Parapets\***

Parapets are located along the perimeter of the roof and internally along building construction joints. Architectural drawings were not reviewed as part of the assessment, however, it is believed that the parapets are constructed of steel stud framing. The parapets range in height and are covered with flashing and prefinished metal coping.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Several prefinished metal louvers, vents, and grilles of various sizes are situated in the exterior walls in various locations around the facility.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B2010.09 Exterior Soffits\***

Exterior soffits for the facility consist of prefinished vented metal panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**B2020.02 Storefronts: Windows\*\***

Storefront windows are comprised of insulating glazing units (IGU's) set in anodized aluminum frames and are located throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace damaged windows (~50m<sup>2</sup>)**

**Concern:**

Multiple windows were observed to have damaged glazing/seals.

**Recommendation:**

Replace damaged/failed windows.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$59,600	Medium

**Updated:** APR-14

**Event: Replace storefront windows (~1,540m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$1,834,300	Unassigned

**Updated:** APR-14

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

Areas of anodized aluminum framed glazed curtain wall, comprised of insulating glazing units (IGU's) and some aluminum spandrel panels, are located on the north elevation (at Level 2 in the Emergency Entrance area), on the south elevation (between Levels 1 and 2), and on the west elevation (between Levels 0 and 1 in the vicinity of the main entrance).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace curtain wall (~700m²)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$999,300	Unassigned

**Updated:** APR-14

**B2030.01.01 Aluminum-Framed Storefronts: Doors\*\***

A set of anodized aluminum framed storefront doors are located near the emergency wing of the building and a double set is located on the south side of the building.

Single anodized aluminum framed storefront doors are provided throughout the building perimeter.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace double doors (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$22,900	Unassigned

**Updated:** APR-14

**Event: Replace single doors (~10 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$42,000	Unassigned

**Updated:** APR-14

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

Automatic entrance doors (consisting of single glazed panes set in anodized aluminum frames) are located at the south entrance (a double door set) and the main entrance on the west side of the building (two sets of double doors). The emergency room entrance is provided with automatic sliding doors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	30	APR-14

**Event: Replace automatic entrance doors (4 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$103,200	Unassigned

**Updated:** APR-14

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

Painted metal utility doors set in painted metal frames are located at various points along the perimeter of the building and access to roof areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace utility doors (~15 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$18,600	Unassigned

**Updated:** APR-14

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

Two prefinished metal sectional overhead doors provide ingress and egress to the emergency ambulance garage on the north side of the Acute Care building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Architectural drawings were not provided as part of the assessment, however, it is believed that the roofs of the Acute Care building incorporate a vapor retarder and rigid board insulation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The roofing sections over the two mechanical air handling unit enclosures on the roof of the Acute Care building consists of a modified bituminous membrane assembly (SBS).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	25	APR-14

**Event: Replace roofing (~270m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2023	\$59,000	Unassigned

**Updated:** APR-14

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

The roofing consists primarily of an inverted, built-up asphaltic membrane assembly (BUR) with gravel UV protection.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace inverted BUR (~5,500m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$1,350,200	Unassigned

**Updated:** APR-14

**B3010.07 Sheet Metal Roofing\*\***

Several areas of sloped roofing on the Acute Care building consist of prefinished standing seam metal roofing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace metal roofing (~550m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$165,100	Unassigned

**Updated:** APR-14

**B3020.01 Skylights\*\***

The main entrance canopy contains 24 metal framed acrylic bubble skylights.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	25	APR-14

**Event: Replace skylights (24 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$34,300	Unassigned

**Updated:** APR-14

**S3 INTERIOR****C1010.01 Interior Fixed Partitions\***

Interior fixed partitions within the building consist of painted CMUs and gypsum board walls. The gypsum board walls of the X-ray rooms on Level 1 of the Acute Care building are reportedly lined with lead. Small sections of glass block walls are provided in areas of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C1010.02 Interior Demountable Partitions\***

The emergency ward is provided with demountable aluminum framed partitions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2011	0	APR-14

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

Painted steel pipe handrails are fixed to concrete pony walls around the perimeter of the atrium area on Level 1 near the main entrance of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C1010.05 Interior Windows\***

Interior windows within the building generally consist of single pane glazing units set in painted metal frames. The windows for the reception area in the building are sliding and fixed windows in aluminum frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Several interior glazed partitions and storefronts are located throughout the building. They are typically located at the entrances to major wards and consist of single pane glazing units set in aluminum frames. Similar storefronts are located at entrances to the TV/Lounge Rooms and several other rooms in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	APR-14

**C1010.07 Interior Partition Firestopping\***

Interior partitions that are fire walls or fire separations are generally constructed with masonry block or are gypsum board assemblies. Penetrations are sealed with fire caulking.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The majority of the interior swinging doors within the building consist of stained or clear finish wood units set in painted metal frames and are protected with steel plate kick guards. The doors are all provided with commercial lever style hardware.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**C1020.02 Interior Entrance Doors\***

Automatic sliding aluminum framed storefront entry doors are located at the main west entrance and the entrance to the Emergency ward.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2000	0	APR-14

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

Interior fire doors located in corridors, stairwells, mechanical/electrical rooms, and throughout the building consist of painted metal units (some with wired glass inserts) set in painted metal frames with automatic closers.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**C1020.04 Interior Sliding and Folding Doors\***

Several sliding doors consisting of single glazing units set in anodized aluminum frames are located throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**C1020.05 Interior Large Doors\***

A roll-up corrugated prefinished metal window is located in the Uniform Room on Level 0 of the building and the Surgeon's Lounge.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Whiteboards and tackboards are located in Nursing Stations, meeting rooms, and administrative areas of the building. Many of the patient rooms are also equipped with tackboards.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1998	20	APR-14

**Event: Replace tack boards (~200 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2018	\$50,000	Unassigned

**Updated:** APR-14

**Event: Replace white boards (~50 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2018	\$20,800	Unassigned

**Updated:** APR-14

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

Pre-finished metal partitions separate the toilet stalls in several washrooms throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	30	APR-14

**Event: Replace fabricated compartments (~22 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2017	\$32,300	Unassigned

**Updated:** APR-14

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

Walls and corners are generally protected by upper and lower plastic rails along the walls and plastic corner guards throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**C1030.06 Handrails\***

The plastic rails forming the upper wall protection noted in Section C1030.05 also act as handrails in corridors throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14



**C1030.08 Interior Identifying Devices\***

The signage system throughout the majority of the building consists of door and wall-mounted plastic and brushed metal signage and building floor directions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	0	APR-14

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

Prefinished metal lockers are located in the men's and women's locker rooms on Level 0 of the building and in various diagnostic areas throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace lockers (~600 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$360,100	Unassigned

**Updated:** APR-14

**C1030.12 Storage Shelving\***

Painted metal and wooden storage shelving are located in various storage/equipment/utility rooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Patient washrooms and public washrooms are provided with grab bars, mirrors, toilet tissue, garbage receptacles, paper towel, soap, and sanitizer dispensers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C2010 Stair Construction\***

Stair construction throughout the building generally consists of CIP concrete except for several steel framed stairs to mezzanine levels in mechanical rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C2020.01 Tile Stair Finishes\***

The spiral stairs from Level 1 to Level 0 in the cafeteria/public waiting areas of the acute care facility are finished with quarry tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Stair railings throughout the building generally consists of wall mounted and floor mounted painted steel pipe.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C2020.10 Stair Painting\***

The CIP concrete stairs throughout the building are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C2030 Interior Ramps\***

A CIP concrete ramp provides access from the reception area to the waiting area of Level 1 and a CIP concrete ramp provides access to the upper seating area of the cafeteria on Level 0 of the building and are equipped with painted steel pipe handrails.

The ramps providing access to the upper seating area of the cafeteria on Level 0 and the waiting area on Level 1 of the Acute care facility are finished with quarry tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	100	APR-14

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

Level 0 is primarily provided with CIP concrete walls and CMU walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Portions of the walls in the chapel on Level 0 are clad with stained wood wall paneling.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace wall paneling. (~30m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$10,000	Unassigned

**Updated:** APR-14

**C3010.04 Gypsum Board Wall Finishes (Unpainted)\***

The majority of the interior partitions are provided with GWB.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1984	0	APR-14

**Event: Repair GWB (Allowance)**

**Concern:**

There was damage to the GWB throughout the building due to impacts and wear.

**Recommendation:**

Repair damaged portions of the buildings walls.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2014	\$95,000	Low

**Updated:** APR-14

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

The patient shower areas, bathing rooms, janitor's rooms, and the cafeteria in the building are finished with ceramic wall tiles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace wall tile (~2,500m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$772,900	Unassigned

**Updated:** APR-14

**C3010.09 Acoustical Wall Treatment\*\***

The auditorium is provided with wall mounted fibreboard acoustic panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	20	APR-14

**Event: Replace acoustic panels (~225m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$63,500	Unassigned

**Updated:** APR-14

**C3010.11 Interior Wall Painting\***

The majority of the gypsum board partitions and CMU walls are painted throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
3 - Marginal	1984	0	APR-14

**Event: Repaint interior walls - Phase 1 (~7,853m<sup>2</sup>/gfa)**

**Concern:**

The majority of the interior walls of the building have not been painted in the past 15-20 years. Paint chipping, fading, and deterioration is visible throughout the building.

**Recommendation:**

Repaint the interior walls after repairs have been made to the GWB.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Failure Replacement	2016	\$222,400	Low

**Updated:** APR-14

**Event: Repaint interior walls - Phase 2 (~7,853m<sup>2</sup>/gfa)**

**Concern:**

The majority of the interior walls of the building have not been painted in the past 15-20 years. Paint chipping, fading, and deterioration is visible throughout the building.

**Recommendation:**

Repaint the interior walls after repairs have been made to the GWB.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Failure Replacement	2015	\$222,400	Low

**Updated:** APR-14

**Event: Repaint interior walls - Phase 3 (~7,853m<sup>2</sup>/gfa)**

**Concern:**

The majority of the interior walls of the building have not been painted in the past 15-20 years. Paint chipping, fading, and deterioration is visible throughout the building.

**Recommendation:**

Repaint the interior walls after repairs have been made to the GWB.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Failure Replacement	2014	\$222,400	Low

**Updated:** APR-14

**C3010.12 Wall Coverings\***

Various areas throughout the building are provided with vinyl wall coverings (in rooms such as offices, meeting rooms, lounges, etc.).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The walls in the eight operating rooms on Level 2 of the building are finished with FRP wall covering.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C3020.01.01 Epoxy Concrete Floor Finishes\***

The observation/interview rooms on Level 5 are provided with epoxy flooring.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Floors in mechanical, electrical, and some storage rooms in the building are painted concrete.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	4	0	APR-14

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

Floors in the shower stalls of patient washrooms, the floors of the assisted bath rooms, and a portion of the floors in the housekeeping/janitor rooms are finished with ceramic floor tile.

The floors of the reception area (including the corridor), the gift shop, and the hydrotherapy room on Level 1 and the floors of the main corridor, the Kitchen area, the cafeteria (lower seating area), and the emergency room entrance on Level 0 are finished with quarry tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	50	APR-14

**Event: Replace ceramic tile (~400m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2034	\$83,700	Unassigned

**Updated:** APR-14

**Event: Replace quarry tile (~1,000m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2034	\$336,500	Unassigned

**Updated:** APR-14

**C3020.07 Resilient Flooring\*\* - 1984**

The majority of the building is provided with original resilient sheet flooring.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1984	20	APR-14

**Event: Replace resilient sheet flooring - Phase 1**  
**(~7,050m<sup>2</sup>)**

**Concern:**

It was observed that the seams of the resilient flooring are beginning to delaminate in the majority of the areas viewed (especially the corridors) and the flooring is worn/faded . The resilient cove molding that is located at the floor wall interface is no longer manufactured and no suitable alternative is available.

**Recommendation:**

Replace flooring and cove base throughout the building.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$705,100	Low

**Updated:** APR-14

**Event: Replace resilient sheet flooring - Phase 2**  
**(~7,050m<sup>2</sup>)**

**Concern:**

It was observed that the seams of the resilient flooring are beginning to delaminate in the majority of the areas viewed (especially the corridors) and the flooring is worn/faded . The resilient cove molding that is located at the floor wall interface is no longer manufactured and no suitable alternative is available.

**Recommendation:**

Replace flooring and cove base throughout the building.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2015	\$705,100	Low

**Updated:** APR-14

**C3020.07 Resilient Flooring\*\* - 2004**

Resilient sheet vinyl flooring is provided in offices and other areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2004	20	APR-14

**Event: Replace resilient flooring (~3,700m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$370,100	Unassigned

**Updated:** APR-14

**C3020.07 Resilient Flooring\*\* - 2012**

The emergency room was renovated in 2012 with resilient vinyl sheet flooring.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2012	20	APR-14

**Event: Replace rsilient flooring. (~1,000m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2032	\$100,100	Unassigned

**Updated:** APR-14

**C3020.08 Carpet Flooring\*\* - 1984**

The floors of approximately 10% of the building are provided with carpet (mainly office/waiting rooms/chapel/administrative areas)

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1984	15	APR-14

**Event: Replace carpeting (~2,200m<sup>2</sup>)**

**Concern:**

The seams of the carpet flooring are beginning to de-thread and lift in the majority of the areas viewed and the carpet, in general, is worn/faded/stained .

**Recommendation:**

Replace the carpet and underlay.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$200,100	Low

**Updated:** APR-14

**C3020.08 Carpet Flooring\*\* - 2004**

The floors of approximately 10% of the Acute Care building are finished with carpet (mainly office/administrative areas) and approximately 5% of this area was installed in 2004.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2004	15	APR-14

**Event: Replace carpet (~155m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$14,100	Unassigned

**Updated:** APR-14

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

Mechanical and electrical rooms are provided with CIP concrete ceilings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Acoustic tiles set in suspended metal T-bar ceiling grid is provided for approximately 60% of the buildings ceiling.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	25	APR-14

**Event: Repair damaged tiles (Allowance)**

**Concern:**

Several areas of the building had stained/damaged tiles.

**Recommendation:**

Replace tiles as needed.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2014	\$2,500	Low

**Updated:** APR-14

**Event: Replace acoustic ceiling tiles - Phase 1 (~7,100m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$413,200	Unassigned

**Updated:** APR-14

**Event: Replace acoustic ceiling tiles - Phase 2 (~7,100m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$413,200	Unassigned

**Updated:** APR-14



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

The gypsum board ceilings and exposed structure throughout the building are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**C3030.09 Other Ceiling Finishes\***

The ceiling of the kitchen area and the auditorium are finished with prefinished metal panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D1010.01.01 Electric Traction Passenger Elevators\*\***

Two Otis brand electric traction passenger elevators are located in the Acute Care building. The facility operators reported that they were both totally refurbished in 2006. Major work included replacement of cab finishes, motor generator sets with variable frequency drives (VFD's), upgrading of relay logic to digital, and cars were upgraded to latest Elevator Code. The elevators travel between Level 0 and Level 5.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	30	APR-14

**Event: Replace elevators (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$341,900	Unassigned

**Updated:** APR-14

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

An Otis brand hydraulic passenger elevator is located on the west side of the building to service the Level 0 parking area. It travels from Level 0 to Level 1. The facility operators reported that the hydraulic cylinder was replaced in 2006 due to corrosion.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace hydraulic elevator (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$94,600	Unassigned

**Updated:** APR-14

**D1010.01.03 Electric Traction Freight Elevators\*\***

Four Otis brand electric traction staff/freight elevators are located in the building. The facility operators reported that they were all totally refurbished in 2006. Major work included replacement of cab finishes, motor generator sets with variable frequency drives (VFD's), upgrading of relay logic to digital, and cars were upgraded to latest Elevator Code. The elevators travel between Level 0 and Level 5.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	30	APR-14

**Event: Replace freight elevators (4 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$854,800	Unassigned

**Updated:** APR-14

**D1090 Other Conveying Systems\***

A Mosler telilift is located in the Acute Care facility which provides transport of X-ray's, lab tests, and other related items via a transport rail system running in walls and ceilings throughout the majority of the hospital.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

## S4 MECHANICAL

### D2010.04 Sinks\*\*

Stainless steel single and double basin sinks with kitchen or gooseneck style two handle faucets are provided in kitchen areas, staff areas, laboratory areas, and some patient rooms throughout.

Single basin stainless steel sinks with automatic sensor faucets or foot pedal operated faucets and special scrub sinks are provided in exam and surgery rooms throughout the building.

Stainless steel floor mounted utility sinks with wall mounted faucets complete with a vacuum breaker are provided in the housekeeping and janitors rooms throughout.

All sinks appear original, but some may have been replaced as required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Special Sinks and Valve Sets (~12 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$36,000	Unassigned

**Updated:** APR-14

**Event: Replace Stainless Steel Sinks and Valve Sets (~180 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$381,400	Unassigned

**Updated:** APR-14

**Event: Replace Utility Sinks and Valve Sets (~16 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$48,000	Unassigned

**Updated:** APR-14

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

Tiled showers with a floor drain, stainless steel controls, and stainless steel shower head are provided throughout the building in some of the patient rooms, washrooms, and change rooms throughout Level 1, 2, 3, and 4 of the Acute Care Building.

Fiberglass type corner shower units with glass and tiled walls, stainless steel shower heads and controls are provided in the patient washrooms on Levels 2, 3, 4, and 5 of the building.

All showers were reportedly updated in 2003 and are outfitted with barrier free accessibility grab bars.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2003	30	APR-14

**Event: Replace Fiberglass Shower and Valve Sets (~95 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2033	\$310,700	Unassigned

**Updated:** APR-14

**Event: Replace Tiled Shower Valve Set (~30 Units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2033	\$18,500	Unassigned

**Updated:** APR-14

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

Iron enamel bathtub/shower units with stainless steel faucets, shower heads, and controls are provided in patient washrooms on Levels 2, 3, and 5 of the building.

One Therapy Pool is provided on Level 1 of the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	30	APR-14

**Event: Replace Bathtub/Shower Units (~25 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2017	\$66,200	Unassigned

**Updated:** APR-14

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

Wall mounted stainless steel, refrigerated drinking fountains are located in the public spaces of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	35	APR-14

**Event: Replace Water Fountains (~10 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$43,200	Unassigned

**Updated:** APR-14

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

Vitreous china water closets with manual flush valves are provided in patient and public washrooms throughout the building. Most water closets are outfitted with raised flush valves for staff accessibility.

Vitreous china, tank type water closets with manual flush valves are provided in the washrooms on Level 3 of the building.

Vitreous china counter mounted lavatories with stainless steel, gooseneck, double levered faucets are provided in patient, staff, and public washrooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	35	APR-14

**Event: Replace Vitreous China Lavatories and Valve Sets (~300 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$556,600	Unassigned

**Updated:** APR-14

**Event: Replace Water Closets and Flush Valves (~240 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$552,000	Unassigned

**Updated:** APR-14

**D2020.01.01 Pipes and Tubes: Domestic Water\***

Domestic water is transported by copper type 'L' or cast iron piping throughout. A series of pipe leaks was reported.

Copper piping also transports purified water from the Services Building throughout the Acute Care Building to the laboratory and patient areas. Costing for the purified water system is included in the Services Building Report.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1984	0	APR-14

**Event: Determine the Cause of Leaking Pipes (Allowance)**

**Concern:**

The site representative indicated that some of the cast iron piping throughout the Acute Care building is cracked and leaking.

**Recommendation:**

It is recommended that a study be conducted to determine the cause of the leaking.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2014	\$8,000	High

**Updated:** APR-14

**Event: Repair Cast Iron Piping (Allowance)**

**Concern:**

The site representative indicated that some of the cast iron piping throughout the Acute Care building is cracked and leaking.

**Recommendation:**

It is recommended that the cast iron piping be repaired according to the results of the study. An allowance has been provided, but this value may change depending on the results of the study.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2014	\$25,000	High

**Updated:** APR-14

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

Shut off and isolation valves are provided Domestic water valves are used for shut-off and service isolation, and are located on fixtures and in the mechanical penthouse of the building. Some leaking valves were reported.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1984	40	APR-14

**Event: Replace Broken Valves (~30 units)**

**Concern:**

The site representative indicated that many of the domestic water valves are broken and leak.

**Recommendation:**

It is recommended that any broken or damaged valves be replaced. It is unknown how many valves are broken but an estimation has been provided.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2013	\$42,900	Medium

**Updated:** APR-14

**Event: Replace Valves (~300 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$428,300	Unassigned

**Updated:** APR-14

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

The site representative has indicated that backflow prevention has been provided on the irrigation and sprinkler systems in the acute care building.

The building is provided with main domestic water and heating from the Services Building and therefore no backflow prevention is provided for these systems in the Acute Care Building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	20	APR-14

**Event: Replace Backflow Preventers (~4 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$27,400	Unassigned

**Updated:** APR-14

**D2020.02.02 Plumbing Pumps: Domestic Water\*\* - 1984**

Domestic hot and chilled water to the building is boosted and controlled by a variety of inline circulation pumps.

Two Leroy-Somer Powerbloc 1.5 HP pumps are labeled "Water Spray Pump" are located in the mechanical penthouse.

An inline Leroy-Somer Powerloc 7.5 HP pump, model TE 132, is provided in the mechanical penthouse of the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	20	APR-14

**Event: Replace 1.5 HP Pumps (2 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2017	\$18,700	Unassigned

**Updated:** APR-14

**Event: Replace 7.5 HP Pump (1 unit)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2017	\$9,600	Unassigned

**Updated:** APR-14

**D2020.02.02 Plumbing Pumps: Domestic Water\*\* - 2012**

Three WEG 3 HP inline recirculation pumps are provided in the Level 3 mechanical room.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2012	20	APR-14

**Event: Replace Recirculation Pumps (3 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2032	\$31,100	Unassigned

**Updated:** APR-14



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

Three instantaneous low pressure steam heated domestic water heaters are located in the basement level wet mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	20	APR-14

**Event: Replace Water Heaters (3 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$15,000	Unassigned

**Updated:** APR-14

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

Domestic piping is insulated and canvas covered where exposed. Some damage to the insulation was seen in the mechanical penthouse, but the cost of the repairs are likely less that the minimum amount (\$1000) for a repair event.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D2030.01 Waste and Vent Piping\***

Waste and vent piping is a a combination of cast iron and PVC piping throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D2030.02.04 Floor Drains\***

Floor drains with metal grated covers are located in washrooms, housekeeping/custodial rooms, and mechanical rooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Sanitary and weeping tile lift stations are located in basement wet mechanical room of the building to collect waster water from the mechanical rooms and perimeter weeping tile. The lift stations pump collected liquid into the gravity drained sanitary system.

A grease trap is used to collect grease from the kitchen dishwashing equipment and sinks and is located in the cafeteria of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Rain water drainage piping was concealed, but is likely cast iron piping and is connected to the city storm water sewer system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D2040.02.04 Roof Drains\***

The roof was unable to be assessed, but roof drains are reportedly provided throughout. Drains are likely equipped with basket style debris/gravel strainers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Nitrous Oxide outlets are provided throughout Level 1 and 2 of the building for patient use in the surgical areas. Nitrous oxide is supplied and distributed from the Services Building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Nitrous Gas Outlets (~30 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$12,300	Unassigned

**Updated:** APR-14

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

Medical oxygen is provided in patient areas and surgical rooms throughout the building. The main oxygen supply is provided by the Services Building.

An Ohio Line pressure alarm is provided for the oxygen, medical air, and vacuum systems.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Oxygen Gas System (~2000 m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$211,000	Unassigned

**Updated:** APR-14

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

Medical vacuum piping is distributed to patient areas and piped back to the medical vacuum pumping system located in the Level 0 wet mechanical room.

Quick connector couplings are provided in patient areas and are being replaced with more reliable DISS type connectors over time.

An Ohio Line pressure alarm is provided for the oxygen, medical air, and vacuum systems.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Medical Vacuum System (~3,200m<sup>2</sup>/GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$497,000	Unassigned

**Updated:** APR-14

**D2090.16 Medical Air System\***

Medical air is provided throughout the building. Pneumatic compressors, an air dryer, and a distribution header is provided in the basement Wet Mechanical Room.

A Ohio Line pressure alarm is provided for the oxygen, medical air, and vacuum systems

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	0	APR-14

**D3010.02 Gas Supply Systems\***

Natural gas is provided through welded and threaded steel piping throughout. The main natural gas supply is located in the meter room of the Services Building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	0	APR-14

**D3030.08 Other Refrigeration Systems\***

A large Mckinley and Taylor refrigeration unit is provided on the roof of the building and is used to store biohazardous material.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 1984**

Nine AAF Ltee Roll-o-matic, model J air handling units complete with Trane fan sections provide heated and cooled air to the building. Steam is provided by the boiler system located in the Services building and is coupled to a hot glycol system which is used by the air handlers. Chilled water is provided by the chillers located in the Services building.

Four of these units are located in the mechanical penthouse on Level 6 of the building and have capacities of 18,670 cfm (2 units) and 41,655 cfm (2 units) .

Five of these units are located in Level 3 mechanical room of the building and have capacities of 6,455 cfm (1 unit), 18,670 cfm (2 units), and 31,665 cfm (2 units).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace 18,670 cfm Air Handling Unit (4 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$165,200	Unassigned

**Updated:** APR-14

**Event: Replace 31,655 cfm Air Handling Unit (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$150,600	Unassigned

**Updated:** APR-14

**Event: Replace 41,665 cfm Air Handling Unit (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$228,400	Unassigned

**Updated:** APR-14

**Event: Replace 6,455 cfm Air Handling Unit (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$17,700	Unassigned

**Updated:** APR-14

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 2000**

This unit was not accessed, but a previous report indicates that a constant volume built-up air handling unit provides the MRI with ventilation and cooling. The air handling unit is located in the basement fan room and has an estimated capacity of 50,000 cfm. It contains a centrifugal style return fan, mixing box, relief air section, pre-filter and high efficiency filter sections, glycol reclaim coil (heat from exhaust air), glycol heating coil, chilled water cooling coil, steam grid, and a centrifugal supply fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	30	APR-14

**Event: Replace Air Handling Unit (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$110,300	Unassigned

**Updated:** APR-14

**D3040.01.01 Air Handling Units: Air Distribution\*\* - 2009**

One Silent Aire air handling unit, model SA-466AF-IHCM-EF is located in the Level 3 mechanical room and has a capacity of 10,700 cfm. This unit includes a heating coil and a humidifier cooling coil.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2009	30	APR-14

**Event: Replace Air Handling Unit (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2039	\$25,400	Unassigned

**Updated:** APR-14

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

Magic Aire and Twin City remote fan units which serve the air handlers and are provided in the Level 3 mechanical room. The majority of units appear original, but one Twin City unit may have been installed more recently.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D3040.01.04 Ducts: Air Distribution\***

Exposed ductwork is low pressure galvanized steel ducting.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Constant volume boxes are provided throughout the building and are reportedly equipped with reheat coils.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Constant Volume Boxes (~22,609m<sup>2</sup>/gfa)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$362,110	Unassigned

**Updated:** APR-14

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

Prefinished ceiling mounted square, in-lay diffusers, outlet grilles, and eggcrate style returns are provided throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Steam distribution is by insulated steel piping with welded or flanged connections, control valves, condensate pumps, traps, and receivers. Steam is distributed to the wet mechanical room from central steam boilers, located in the Services building. Medium pressure steam feeds process facilities in the building while low pressure steam feeds heating equipment.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Steam Distribution System (~800 m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$80,800	Unassigned

**Updated:** APR-14

**D3040.03.01 Hot Water Distribution Systems\*\* - 1984**

Hot water distribution is through insulated copper piping.

The hot water system is fed from the steam-to-water heat exchangers located in the Level 0 wet mechanical room, and is distributed to radiation heaters, unit heaters, forced flow units and reheat coils.

Hot water distribution is by various in-line hot water recirculation pumps as described in 'Plumbing Pumps: Domestic Water\*\*'.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Hot Water Distribution System (~22,609 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$2,672,400	Unassigned

**Updated:** APR-14

**D3040.03.01 Hot Water Distribution Systems\*\* - 2012**

Hot water expansion tanks with an estimated capacity of 30 gallons are provided in the Level 3 mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2012	40	APR-14

**Event: Replace Expansion Tanks (~2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2052	\$3,400	Unassigned

**Updated:** APR-14

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

Chilled water is distributed by insulated copper piping from the central chiller plant, located in the Services building, to the mechanical rooms throughout the building where the chilled water is coupled with HVAC equipment throughout.

Chilled water is distributed by inline recirculation pumps as described by 'Plumbing Pumps: Domestic Water\*\*'.

An expansion tank is provided in the Level 0 wet mechanical room of the school.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	40	APR-14

**Event: Replace Chilled Water Distribution (~4,000m<sup>2</sup>/GFA)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2024	\$254,600	Unassigned

**Updated:** APR-14

**Event: Replace Expansion Tank (1 unit)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2024	\$2,300	Unassigned

**Updated:** APR-14



**D3040.03.04 Glycol Distribution Systems\*\***

Glycol distribution is through insulated copper piping and is provided in the Level 0, Level 3 and Level 6 mechanical rooms for use by the air handling units

Heating glycol is fed from the steam-to-glycol heat exchangers located in the Level 0 wet mechanical room, and is distributed to air handling coils in the Level 3, and Level 6 mechanical rooms

A Leroy-Somer Powerbloc heating glycol recovery pump with a power rating of 7.5 HP is provided in the Level 6 mechanical penthouse.

Heat exchangers with an estimated capacity of 250 gallons are provided in the Level 3 and Level 6 mechanical rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Expansion Tanks (~2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$15,400	Unassigned

**Updated:** APR-14

**Event: Replace Glycol Circulation Pump (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$12,000	Unassigned

**Updated:** APR-14

**Event: Replace Glycol Distribution System (~4,000 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$496,600	Unassigned

**Updated:** APR-14

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

Exhaust fans are provided throughout the building and include washroom exhaust fans, a dishwasher exhaust fan, a kitchen hood exhaust fan, and nuclear medicine exhaust fan. Roof mounted exhaust fans are also provided throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Exhaust Fans (~22,609 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$493,400	Unassigned

**Updated:** APR-14

**D3040.04.03 Ducts: Exhaust\***

Exhaust ducting is low pressure galvanized steel ductwork.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Prefinished sidewall and ceiling mounted grilles are provided throughout. Exhaust vents are likely provided on the roof of the building throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D3040.05 Heat Exchangers\*\* - 1984**

Steam-to-water and steam-to-glycol heat exchangers are provided in the Level 0 wet mechanical room of the building.

One shell-and-tube steam-to-glycol heat exchanger provides heat to the glycol distribution system.

Two shell-and-tube steam-to-water heat exchangers provide hot water to the hot water distributions system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Heat Exchangers (3 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$57,100	Unassigned

**Updated:** APR-14

**D3040.05 Heat Exchangers\*\* - 2000**

A plate type steam-to-glycol heat exchanger is located in the Level 0 MRI mechanical room and is used to provide hot glycol to the adjacent air handling unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	30	APR-14

**Event: Replace Heat Exchanger (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$19,100	Unassigned

**Updated:** APR-14

**D3050.01.01 Computer Room Air Conditioning Units\*\* - 1984**

An outdated air conditioning system is provided for the server room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1984	30	APR-14

**Event: Replace Server Room Air Conditioner (1 unit)**

**Concern:**

The existing system has outlived its life expectancy and has significant repair issues. In addition, due to the heat load, the system is undersized. Project was put on hold due to funding shortfall.

**Recommendation:**

Replace air conditioning unit for the computer server room

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$22,000	High

**Updated:** APR-14

**D3050.01.03 Packaged Terminal Air Conditioning Units\* - 2007**

A Liebert packaged air conditioning unit is installed in the MRI mechanical room and serves the MRI and Ultrasound rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2007	0	APR-14

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

Fan coil heating units are coupled with the hot water distribution system and are provided in the vestibules and at the entrance of mechanical rooms in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Fan Coil Units (~10 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$66,000	Unassigned

**Updated:** APR-14

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

Finned tube radiation in sloped top baseboard mounted fixtures are provided along the perimeter of Level 3, 4, 5, and part of Level 2 of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Finned Tube Radiation (~14,200 m<sup>2</sup>/GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$826,400	Unassigned

**Updated:** APR-14

**D3050.05.06 Unit Heaters\*\***

Suspended hot water unit heaters are provided in the mechanical rooms of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Unit Heaters (~10 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$70,200	Unassigned

**Updated:** APR-14

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

Radiant ceiling tiles are provided around the perimeter of Level 0, 1, and part of Level 2 of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	35	APR-14

**Event: Replace Radiant Heating (~650 m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$715,200	Unassigned

**Updated:** APR-14

**D3060.02.01 Electric and Electronic Controls\*\***

Electronic thermostats are used to control some unit heaters throughout the building

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Electric Thermostats (~30 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$15,000	Unassigned

**Updated:** APR-14

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

Pneumatic controls are provided throughout the building and serve the steam, glycol, chilled water, and heating equipment throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Pneumatic Controls (~22,609 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$740,100	Unassigned

**Updated:** APR-14

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

A Reliable modular control system was installed in approximately 2000 and is used to control some of the mechanical equipment throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	20	APR-14

**Event: Replace BMCS (~22,609 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2020	\$740,100	Unassigned

**Updated:** APR-14

**D4010 Sprinklers: Fire Protection\***

The building is fully protected by a wet type pre-action sprinkler system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D4020 Standpipes\***

Standpipes are provided in recessed fire cabinets throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Portable dry type ABC fire extinguishers are wall mounted or provided in wall recessed cabinets throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1981	0	APR-14

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

A packaged Fire pump assembly is provided for the sprinkler system.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1981	0	APR-14

## S5 ELECTRICAL

### D5010.01.02 Main Electrical Transformers (Utility Owned)\*

Two dry type, 2000 kVA, 4160 to 600 Volt step down Hammond transformers are located in the Acute Care main electrical room and are used to feed the main distribution panels throughout the Acute Care and MacKenzie buildings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### D5010.02 Secondary Electrical Transformers (Interior)\*\* - 1984

A variety of 10-30 kVA, 600 or 120/208 V dry type transformers are located throughout the electrical and mechanical rooms in the building and serve various mechanical equipment. They typically are Federal Pioneer or Hammond Manufacture brand units.

A 450 kVA transformer is provided in the X-ray electrical room and serves the X-ray machine.

Electrical transformers are also provided for the elevator system, but costing for this is included in the architectural file.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

#### Event: Replace 10 kVA transformers (1 unit)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$2,600	Unassigned

**Updated:** APR-14

#### Event: Replace 15 kVA Transformers (~5 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$15,100	Unassigned

**Updated:** APR-14

#### Event: Replace 30 kVA Transformer (~2 units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$12,100	Unassigned

**Updated:** APR-14

#### Event: Replace 450 kVA Transformer (1 unit)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$54,400	Unassigned

**Updated:** APR-14

**D5010.02 Secondary Electrical Transformers (Interior)\*\* - 1998**

A 75 kVA transformer is located in the X-ray electrical room and serves the MRI unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	40	APR-14

**Event: Replace Transformer (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2038	\$12,600	Unassigned

**Updated:** APR-14

**D5010.02 Secondary Electrical Transformers (Interior)\*\* - 2012**

A Beaver 3 phase, 150 kVA, 600 Volt to 480 Volt step down transformer is provided for the emergency UPS system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2012	40	APR-14

**Event: Replace Transformer (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2052	\$18,200	Unassigned

**Updated:** APR-14

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

Utility power is fed to two 4160 Volt, 1200 Amp main switchgears. The power is then stepped down through the utility owned transformers and fed to 600 Volt, 3000 Amp main distribution panels are located in the Level 0 main electrical room. These units distribute power to various transformers and secondary panelboards throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	40	APR-14

**Event: Replace Main Switchgear and Main Distribution Panel (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2024	\$110,800	Unassigned

**Updated:** APR-14



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

Secondary electrical panelboards distribute power to lighting and equipment throughout the building.

The majority of the panelboards are Federal Pioneer 100 to 400 Amp, 120/208 Volts units.

Federal pioneer 225 Amp, 600 Volt Units are also provided.

The majority of panelboards appear to be original with some updates are required. Approximately one third of these panelboards have less than 20% remaining capacity.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Intsall Panelboards (5 units)**

**Concern:**

Approximately one third of the secondary panelboards have less than 20% remaining capacity.

**Recommendation:**

It is recommended that additional 120/208 Volt panelboards be installed throughout to increase the available electrical capacity.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2014	\$29,500	High

**Updated:** APR-14

**Event: Replace Panelboards (~170 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$1,004,700	Unassigned

**Updated:** APR-14

**D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers\*\* - 1984**

Two Allen Bradley 6-section, 600 Amp motor control centers (MCC) are located in both the north and south Level 6 mechanical penthouses of the building.

An Allen Bradley 8-section, 600 Amp MCC (partial on emergency power) is located on the Level 3 mechanical room and partially serves the UPS system.

Allen Bradley 4-section and 3-section, 600 Amp MCCs are located in the Level 0 wet mechanical room of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace MCCs (5 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$219,000	Unassigned

**Updated:** APR-14

**D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers\*\* - 2011**

A single section Allen Bradley 600 Amp motor control center (MCC) is provided in the Level 3 mechanical room and was reportedly installed in 2011.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2011	30	APR-14

**Event: Replace MCC (1 unit)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2041	\$8,200	Unassigned

**Updated:** APR-14

**D5010.07.02 Motor Starters and Accessories\*\* - 1984**

Various individual motor starters and equipment disconnects are provided in the mechanical and electrical rooms throughout the building and serve some of the smaller pump and fan motors as well as the elevators.

The majority of motor starters are Federal Pioneer, Allen Bradley, or Square D.

Some of the Square D motor starters and motor starters for the mechanical equipment in the MRI unit may appear to have been updated, but the year of installation was not confirmed.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
3 - Marginal	1984	30	APR-14

**Event: Replace Motor Starters (~5 units)**

**Concern:**

The fire pump and booster pump controllers in the wet mechanical room of Acute Care are showing water damage and rust.

**Recommendation:**

Replace motor starters.

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Failure Replacement	2014	\$6,000	Medium

**Updated:** APR-14

**Event: Replace Motor Starters (~25 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2017	\$30,000	Unassigned

**Updated:** APR-14

**D5010.07.02 Motor Starters and Accessories\*\* - 2012**

Danfoss motor starters are located in the Level 3 mechanical room and are coupled to HVAC variable frequency drives (VFDs).

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2012	30	APR-14

**Event: Replace Motor Starters (2 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2042	\$2,400	Unassigned

**Updated:** APR-14

**D5010.07.03 Variable Frequency Drives\*\* - 2005**

Danfoss VLT 6000 HVAC variable frequency drives serve the supply and return air fans and are located throughout the mechanical rooms.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2005	30	APR-14

**Event: Replace Variable Frequency Drives (~30 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2035	\$315,100	Unassigned

**Updated:** APR-14

**D5010.07.03 Variable Frequency Drives\*\* - 2012**

Danfoss VLT HVAC Drive variable frequency drives are provided in the Level 3 mechanical room and likely serve the 2009 air handling unit supply and return fans.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
5 - Good	2012	30	APR-14

**Event: Replace Variable Frequency Drives (3 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2042	\$31,600	Unassigned

**Updated:** APR-14

**D5020.01 Electrical Branch Wiring\***

Wiring is generally copper in conduit or in armoured cable throughout.

Not all duplex receptacles within one meter of a sink are provided with ground fault circuit interrupter (GFCI) protection.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	0	APR-14

**Event: Install GFCI Outlets (~50 units)**

**Concern:**

Some of the duplex receptacles which are within one meter of a water source are not equipped with GFCI protection. This is a safety hazard and may lead to electrocution.

**Recommendation:**

It is recommended that GFCI protection be installed on all duplex receptacles within one meter of a water source.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2014	\$25,000	Medium

**Updated:** APR-14

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

Interior lighting is controlled by low voltage line switches.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D5020.02.02.01 Interior Incandescent Fixtures\***

Patient incandescent pot lighting fixtures are located in the lobbies, nurse stations, and some of the rooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

The majority of interior lighting is by original fluorescent fixtures with T12 lamps throughout the building. The majority of these fixtures are in-lay ceiling mounted fixtures, but suspended, surface mounted, and wall mounted fixtures are also provided. Some of the lamps have been upgraded to T8s with electronic ballasts. It is recommended that the T12 lamps continue to be upgraded to T8 lamps as required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	30	APR-14

**Event: Replace Fluorescent Fixtures (~22,609 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$2,384,600	Unassigned

**Updated:** APR-14

**D5020.02.03.02 Emergency Lighting Battery Packs\*\***

Emergency battery packs with integral incandescent heads are provided in the mechanical and electrical rooms throughout the building.

The majority of the building provided with emergency lighting using the emergency generator provided in the Services Building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	20	APR-14

**Event: Replace Battery Packs (~10 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$14,500	Unassigned

**Updated:** APR-14

**D5020.02.03.03 Exit Signs\***

Suspended exit signs with incandescent or LED lamps are provided throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D5020.02.05 Special Purpose Lighting\***

Movable HID light fixtures are located in the Morgue in Level 0 of the building.

Special focus light fixtures have been installed in the Gyneacology exam rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**D5020.02.11 Operating Room Lighting\***

Low voltage halogen light fixtures have been installed in the operating rooms of the building

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2007	0	APR-14

**D5020.03.01.01 Exterior Incandescent Fixtures\***

Exterior incandescent pot lighting is provided under the canopies of the entrances to the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Pendant style metal halide lighting is provided under the canopy of the main entrance to the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

High pressure sodium (HPS) lighting in wall pack or ceiling mounted fixtures are provided around the perimeter walls and under some of the canopies of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Exterior lighting is controlled by photo cells and timers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

A Siemens System 3 Pyrotronics Fire Panel is provided in the Level 6 mechanical penthouse of the building. The panel monitors manual pull stations, heat and smoke detectors, and fire fighter's telephones throughout the building. The fire alarm panel triggers the use of fire bells and strobe lights throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	25	APR-14

**Event:** Replace Fire Detection and Alarm System (~22,609 m<sup>2</sup> GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2020	\$904,500	Unassigned

**Updated:** APR-14

**D5030.02.01 Door Answering\***

A door answering system is located at the Pharmacy entrance in Level 0 of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	0	APR-14

**D5030.02.02 Intrusion Detection\*\***

A security alarm system with motion sensors serves the Pharmacy in Level 0 of the building

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	25	APR-14

**Event: Replace Pharmacy Intrusion Detection (~100 m<sup>2</sup> GFA)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2023	\$3,700	Unassigned

**Updated:** APR-14

**D5030.02.03 Security Access\*\***

A security card access system serves some of the entrances to the building and different areas throughout the building. Card readers have been gradually updated over the last 5 years.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	25	APR-14

**Event: Replace Security Access Card Readers (~200 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2023	\$80,000	Unassigned

**Updated:** APR-14

**Event: Replace Security Access System Panel (1 unit)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2023	\$7,700	Unassigned

**Updated:** APR-14

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

A CCTV surveillance system monitors the main entries to the building as well as areas such as Maternity, the Pharmacy, and Psychiatry. The system is composed of a central monitoring console with a DVD recording system installed in approximately 2007. Cameras are mounted throughout the building's interior and exterior.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2007	25	APR-14

**Event: Replace Video Surveillance Cameras (~30 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2032	\$12,000	Unassigned

**Updated:** APR-14

**Event: Replace Video Surveillance System (~30 unit)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2032	\$240,100	Unassigned

**Updated:** APR-14

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

Digital clocks are provided throughout the building and are controlled by the master clock system.

A Simplex master clock system is located in the plant control room in the Services Building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1990	0	APR-14

**D5030.04.01 Telephone Systems\***

A Nortel Meridian PBX telephone system is fed by a Telus fiber loop located in the telephone room located in Level 0 of the building. This telephone system serves all Queen Elizabeth II Buildings.

A Cisco network rack is located in the telephone room in Level 0 of the building and serves all Queen Elizabeth buildings.

In 2006 the system, distribution and telephone units began to be upgraded to voice over internet protocol (VOIP) over time. These upgrades are still in progress.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1998	0	APR-14

**D5030.04.02 Paging Systems\***

A Ring Master paging system is provided for the building.

Raytheon NXU-2A network extension units are located in the Level 6 mechanical penthouse.

Ceiling mounted paging speakers are provided throughout the administration, nurse, and doctor areas.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14



**D5030.04.03 Call Systems\*\***

A nurse call system is provided throughout the building. Control panels are located in floor electrical closets and nurse call units are located at nurse stations. Staff and patient call units are located throughout the patient care areas.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2004	25	APR-14

**Event: Replace Bedside Call Stations (~185 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2029	\$70,600	Unassigned

**Updated:** APR-14

**Event: Replace Call Station Light Indicator (~185 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2029	\$29,600	Unassigned

**Updated:** APR-14

**Event: Replace Emergency Call Station (~185 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2029	\$35,200	Unassigned

**Updated:** APR-14

**Event: Replace Nurse Master Control Station (~10 units)**

<b><u>Type</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>	<b><u>Priority</u></b>
Lifecycle Replacement	2029	\$77,500	Unassigned

**Updated:** APR-14

**D5030.04.04 Data Systems\***

A data communication system is provided in the telephone room on Level 0 of the building.

Category 5 cabling is provided throughout the building

Motorolla PIDU PTP 400 Series point to point wireless bridges are provided in the Level 6 mechanical penthouse and are used to connect the other Queen Elizabeth buildings to the network.

The data systems are reportedly continuously updated and connected by fibre to Alberta's "Supernet" that allows easy access to all networks from any site.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2005	0	APR-14

**D5030.04.05 Local Area Network Systems\***

A Cisco local area network (LAN) is provided for the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2005	0	APR-14

**D5030.06 Television Systems\***

Low voltage cable television system panels are located in the floor electrical closets.

TV units are provided in patient rooms and waiting areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	0	APR-14

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

A Motorola radio paging system complete with Kenwood two way radios, Vertex and Motorola repeaters and base stations, and Raytheon network extension units are provided in the Level 6 mechanical penthouse.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Two Mitsubishi 9800A Series uninterruptible power supply (UPS) systems provide emergency backup power to critical care services in the building and are located in the Level 3 mechanical room.

Square D electrical systems are provided for the UPS

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2011	30	APR-14

**Event: Replace UPS System (2 units)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2041	\$682,100	Unassigned

**Updated:** APR-14

**D5090.06 Lightning Protection Systems\***

A lightning protection system consisting of lightning rods and fastened grounding cable is provided along the perimeter of the roof and penthouse roof of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	0	APR-14

**Event: Test the System - Acute Care**

**Concern:**

The system has never been tested for integrity since original construction.

**Recommendation:**

Employ certified technician to test system for integrity.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2013	\$5,096	Low

**Updated:** APR-14

**S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION****E1010.05.01 Barber and Beauty Shop Equipment\***

A hairdressing facility is located in the Acute Care building and is equipped with hair dryers and other typical hairdressing equipment.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**E1020.01 Ecclesiastical Equipment\***

A chapel area is provided with an altar, stained glass, seating areas, and other religious items.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	0	0	APR-14

**E1020.07 Laboratory Equipment\***

There are several laboratories located mainly on Levels 0, 1, and 2 in the Acute Care building with various laboratory equipment.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**E1020.08 Medical Equipment\***

Full service medical equipment is provided throughout the building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	0	0	APR-14

**E1090.01.01 Vacuum Cleaning Systems\***

A central vacuum system is provided for the building, the dust bin and central vacuum pump are located in the Services Building.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**E1090.01.02 Window Washing Equipment\***

The roof of the building is reportedly equipped with steel roof anchors.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

A full service Cafeteria is located on Level 0 of the building and contains commercial quality, ovens, stove tops, refrigerators, walk-in coolers/freezers, deep fryers, exhaust hoods, serving area, etc.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**E1090.04 Residential Equipment\***

The staff lounges throughout the building contain residential refrigerators, stoves, and microwave ovens. Laundry rooms contain residential style washers and dryers.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

**E1090.07 Athletic, Recreational, and Therapeutic Equipment\***

The building contains a physiotherapy wing and it is equipped with standard commercial quality exercising equipment as well as specialty physiotherapy equipment.

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	1984	0	APR-14

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

Fixed casework, generally consisting of laminated wood base and upper cabinets with plam countertops, are provided at reception areas, nursing stations, labs, and some general purpose rooms (such as clean and soiled laundry rooms, lunch rooms, staff rooms, etc.) throughout the building. Closets in patient rooms and counters in washrooms (patient and public washrooms) are of a similar construction and finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1984	35	APR-14

**Event: Replace casework (~17,700m<sup>2</sup>/gfa)**

**Concern:**

The laminate for approximately 75% of the fixed casework observed was delaminating and loose with multiple dents, cracks, scratches, etc. The delaminations have created jagged edges and jagged protruding laminate.

**Recommendation:**

Replace 75% of the fixed casework.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2014	\$2,092,200	High

**Updated:** APR-14

**Event: Replace casework (~5,900m<sup>2</sup>/gfa)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2019	\$697,400	Unassigned

**Updated:** APR-14

**E2010.03.01 Blinds\*\***

Exterior and interior windows of the building are generally equipped with blinds (both fabric and metal and both horizontal and vertical slats) throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	30	APR-14

**Event: Replace blinds (~2,240m<sup>2</sup>)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$304,700	Unassigned

**Updated:** APR-14

## S8 SPECIAL ASSESSMENT

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

Barrier-free routes from the parking lots to the all the major entrances of the building are provided. Curb-cuts, signage, parking stalls, and ramps are provided throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### K4010.02 Barrier Free Entrances\*

Main entrances into the building have one or more automated doors (the main entrance on the west side has four automated entrances).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

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

Barrier-free access to all the public, staff, and patient areas on all floors in all buildings is available via passenger elevators. Doors are of appropriate width with barrier free commercial lever-style hardware.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### K4010.04 Barrier Free Washrooms\*

Generally, one washroom on each floor of the building meets the barrier-free requirements of the building code including grab bars and a lavatory at the appropriate height.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### K4030.01 Asbestos\*

No concerns observed or reported.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

### K4030.04 Mould\*

No visible evidence of mould was observed or reported during the site visit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**K4030.06 Radioactive Compounds\***

The building contains several departments that utilize radioactive materials (such as X-ray equipment and equipment associated with the Nuclear Medicine department on Level 1).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**K4030.08 Biohazardous Materials\***

The facility operators reported that biohazardous materials are collected in standard holding equipment and are then sent off-site for disposal by a third party.

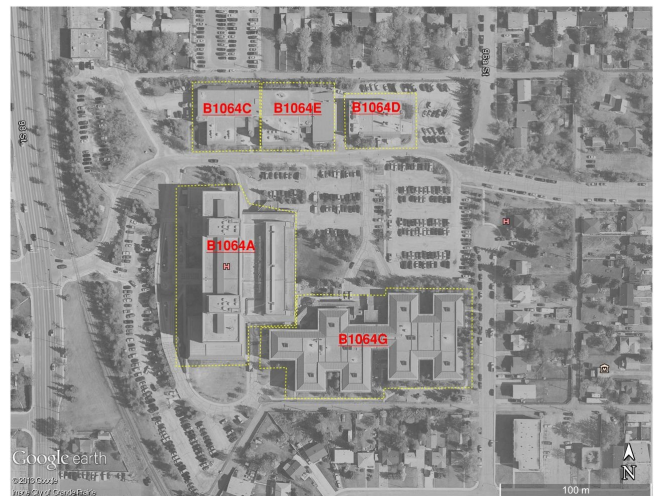
<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1984	0	APR-14

**K5010.01 Site Documentation\***

The prime consultant was Golder Associates Ltd. The evaluation date was 04/01/2014.

Site Description: Queen Elizabeth II Acute Care Building is a five storey general hospital located at 10409 98th Street in the City of Grande Prairie, Alberta.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2014	0	APR-14



Site and Site buildings.



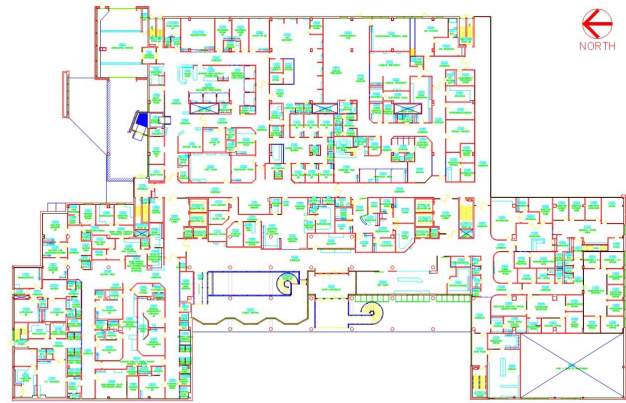
**K5010.02 Building Documentation\***

Karel Derkzen van Angeren, Golder Associates Ltd.

Date Assessed: 01/04/2014

B1064A

<b><u>Rating</u></b>	<b><u>Installed</u></b>	<b><u>Design Life</u></b>	<b><u>Updated</u></b>
4 - Acceptable	2014	0	APR-14



5055A - Queen Elizabeth II Hospital, - Acute Care  
10409 - 98 St, Grande Prairie, AB

LEVEL 1 - FLOOR PLAN - FP01  
SCALE: N.T.S. DATE: 2012-OCT-12

Floor 1