AVS

Asset Assessment Report

Southern Alberta Forensic Psychiatry Centre B0068S

Details	Values
Asset ID	B0068S
Asset Name	Southern Alberta Forensic Psychiatry Centre
Location	Calgary
Address	11333 - 85 Street N. W.
Verification Audit Maintenance Costs	$1,548,149.00
Replacement Cost	$40,625,844.00
Gross Area (All Sections)	4,665
Measurement Unit	Sq. M.
Construction Year (Original Section A)	1981
Verification Audit Date	10/10/2012
Verification Prime Audit Firm	Norr Architects Planners
Verification Auditor Name	Adam Knight
Verification Audit Replacement Costs	$40,625,844.00
Verification Audit Mech Sub-consultant	Williams Engineering
Verification Audit Elect Sub-consultant	Williams Engineering
Verification Specialist Sub-consultant	
Historical Designation	None
Verification Auditor Phone Number	
Verification Audit FCR	3.81%

Narratives

General Summary

The Southern Alberta Forensic Psychiatry Center is located at 11333 85 Street NW Calgary, Alberta.

The 3,279m2 Southern Alberta Forensic Psychiatric Center was built in 1981 and was used as a young offenders detention center until 2005. In 2005 the building was converted to the Southern Alberta Forensic Psychiatry Center when a majority of the buildings interior was renovated to house individuals who are considered mentally ill criminal offenders.The 380m2 SE and 400 m2 SW wings were not renovated and left with minimum heat and electricity, the interiors of both wings will need to be fully renovated to be considered usable again. Both wings have mezzanines that are designed to be living quarters for patients.

The North end of the building which was renovated in 2005 and houses a cafeteria, pharmacy, patient in take and out take quarters, two more residential wings, as well as activity rooms, medical rooms and office space. The main security room is located at the center of the building where security guards are able to monitor and control all movement through out the building. This movement is monitored by way of cameras and the ability to lock and unlock security doors with the use of compressed air lines that control door locking mechanisms.

Structural Summary

The building has reinforced poured in place foundation walls and footings, complete with slab on grade.

Steel studs and concrete block walls are supporting the steel joist structure of the roof.

Overall structure is in good condition

Envelope Summary

Roof: Replaced in 2009 with conventional SPS (torch on roofing).

Skylights: All 18 2100 x 2100 skylights were replaced in 2009.

Exterior Walls: brick cavity wall with metal stud or concrete block backup.

Doors: Aluminum storefront framed with glass and insulated metal in pressed steel frame.

All 134 1200x1200 aluminum double glazed, fixed and operable window units were installed in 1981 and are starting to show signs of failure with condensation and moisture build up. Recommend replacing windows within the next 5 years.

Overall, the building envelope is in acceptable condition, with the exception of the windows.

Interior Summary

Renovated portion of building consists of typical good quality interior including painted drywall, painted block walls, T-bar suspended ceiling and resilient flooring throughout.

The unoccupied SE Wing (380 sq m) and SW Wing (400 sq m) have a similar interior layout as the renovated NW Wing. The two unoccupied wings are supplied with minimum electricity and heat. Portions of drywall, T-bar ceiling and millwork was removed during 2005 renovation. The interior of both unoccupied wings will need to be fully renovated before being considered usable.

Overall, the interior of the occupied and operational areas is in good condition.

Electrical Summary

The main electrical service is a Cutler-Hammer 2000 amp, 120/208 volt, 3 phase, 4 wire panel. There are 12 sub-panels installed in the electrical and mechanical rooms and corridors to provide power for lighting and equipment. The interior of the building is lit with a combination of T8 fluorescent and incandescent fixtures with compact fluorescent lamp. The exterior is lit with wall and pole mounted HID fixtures. The building has 17 exit signs throughout. The building has an EDWARDS Quick start fire alarm control panel and heat detectors, smoke detectors, pull-stations and horn/strobes throughout. The building is equipped with a security, super net, public address, TV and telephone systems.

Overall, the electrical systems are in acceptable condition.

Mechanical Summary

The presently occupied sections of the building were renovated in 2005. This contains administration, therapy and programs, patient kitchen and cafeteria , and two patient cell blocks. The main air handling unit serves the administration, therapy and cafeteria. There is one roof top unit for the patient cells and one small RTU for the security booth. Two boiler provide hot water heating to radiant panels, and unit heaters located throughout occupied areas. Plus a heat exchanger to glycol heating for heating coil in main air handling unit.
There are three commercial domestic hot tanks which provide hot water at 190 degree for dishwashing and 160 degree for showers.
There are two steam boilers to provide humidifiers in the main air handling unit and the larger roof top unit.

Overall the the building mechanical equipment for the occupied areas is in good to acceptable condition.

There are two abandoned sections located in the back area left from the buildings previous usage as a young offender facility. There is active perimeter fin radiation from the main hot water system but the original two air handing units and two domestic hot water heaters for these area have been abandoned. All the abandoned equipment would not be salvageable.

Alberta Infrastructure should be aware that the Forensic Psychiatry facility has two patient sections. One is where patients are held for 30 day to determine whether they are fit to stand trial. The other is where patients found to be unfit to stand trail are kept until arrangement are met for there future accommodations. All patients should be considered potentially dangerous. This is why the security rating for this facility is ranked higher than a maximum security prison.
Prior notice must be given to security before any access can be granted and all contractors acting on behalf on A.I. should be given clear instruction as to what building and areas within require there attention. All unnecessary entry into secured areas should be avoided.

S1 STRUCTURAL

A1010.01 Wall Foundations (Continuous Footing)

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

The building has reinforced poured in place foundation walls and footings.

A1030 Slab on Grade*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 2 - Check List

Narratives

Description

Reinforced concrete slab throughout.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Water leakage (ask operator)	
Existence	No
Significant cracking	
Existence	No

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

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

200mm concrete block walls.

B1020.01 Roof Structural Frame*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Open web metal joists.

B1020.03 Roof Decks, Slabs, and Sheathing*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Metal roof deck.

B1020.06 Roof Construction Fireproofing*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Visual verification of fireproofing was not possible. No issues noted by building manager.

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 2 - Check List

Narratives

Description

Exterior walls have exterior brick cladding.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Corrosion or rot	
Existence	No
Inconsistent surface finish	
Existence	No
Visible deformation/ loose sections	
Existence	No
Significant staining	
Existence	No

B2010.01.09 Expansion Control: Ext. Wall*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Expansion joints provided at appropriate intervals.

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	20
ACL	ACL 1

Narratives

Description

Typical exterior caulking around windows and doors.

Repair (classified as Repair)

Details	Values
Short Title	Repair deteriorated section of caulking (80m)
Cost	$2,500.00
Start Year	2014
Impact	Minor
Probability	Likely
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

Narratives

Concern

Exterior caulking could use some repairs due to typical minor deterioration.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace caulking (approx. 700m)
Cost	$21,400.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 2 - Check List

Narratives

Description

Exterior walls are assumed to include 1" air space, building paper, exterior sheathing, batt insulation with 6mil vapour barrier on steel studs.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Evidence of significant air leakage	
Existence	No

B2010.05 Parapets*

Details	Values
Condition Rating	5 - Good
Year Installed	2009
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Standard steel stud parapet construction with brick veneer completed with metal parapet flashing cap.

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

Details	Values
Condition Rating	3 - Marginal
Year Installed	1981
Theoretical Design Life	40
ACL	ACL 1

Narratives

Description

134 1200 x 1200 aluminum double glazed windows throughout facility.

Failure Replacement (classified as Failure Replacement)

Details	Values
Short Title	Replace 134 - 1.2m x 1.2m windows

Cost	$202,000.00
Start Year	2016
Impact	Moderate
Probability	Likely
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

Narratives

Concern

Windows are starting to show signs of failure with condensation and moisture build up.

Recommendation

Replace windows.

B2030.01.01 Aluminum-Framed Storefronts: Doors**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
ACL	ACL 2 - Check List

Narratives

Description

Fully glazed double man doors.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Closer not working	
Existence	No
Poor air seal	
Existence	No
Hardware in poor condition	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 1 double storefront door
Cost	$9,449.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned

Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

B2030.02 Exterior Utility Doors**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	40
ACL	ACL 1

Narratives

Description

There are total of 9 steel framed hallow metal insulated exterior doors.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace (9) utility doors
Cost	$9,212.00
Start Year	2021
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	2009
Theoretical Design Life	25
ACL	ACL 2 - Check List

Narratives

Description

Roof is SBS (torch on roofing) throughout.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Problems with leakage (ask operator)	
Existence	No
Debris or insufficient gravel cover	
Existence	No
Bubbles / soft spots	
Existence	No
Evidence of significant ponding	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace SBS roofing (4665 sq.m)
Cost	$891,500.00
Start Year	2034
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

B3020.01 Skylights**

Details	Values
Condition Rating	5 - Good
Year Installed	2009
Theoretical Design Life	25
ACL	ACL 1

Narratives

Description

18 PVC 2mx2m dome style skylights.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace skylights (18)
Cost	$44,000.00
Start Year	2034
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Standard lockable roof hatch

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Gypsum board on metal studs, 190 mm concrete block where required for fire separations or for security (around segregation units).

C1010.04 Interior Balustrades and Screens, Interior Railings*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Metal tube railings with glass inserts or metal pickets are located in residential units.

C1010.05 Interior Windows*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

There are multiple interior windows through out the building.

C1010.07 Interior Partition Firestopping*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Observable rated wall penetrations are firestopped.

C1020.01 Interior Swinging Doors (& Hardware)*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Aluminum framed entry screens with safety glass panels, pressed steel frames with hollow metal door (where required for security) or wood doors (resident areas).

C1020.03 Interior Fire Doors*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Interior fire rated doors installed throughout building as required.

C1030.01 Visual Display Boards**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	20
ACL	ACL 1

Narratives

Description

5 large to small white boards were accounted for at time of visit

4 unused aluminum framed cork boards located in cafeteria area.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace (5) Whiteboards and (4) corkboards
Cost	$3,500.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C1030.08 Interior Identifying Devices*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

All rooms are labeled by metal number plates

C1030.10 Lockers**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	30
ACL	ACL 1

Narratives

Description

Staff are provided with stacked metal lockers (18"x18" x3') 40 in total. Majority of staff lockers are unused.

Residents belongings are locked in full height lockers upon arrival to facility. (18"x18"x6') 44 in total

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 40 stacked and 44 full height lockers
Cost	$35,000.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C1030.12 Storage Shelving*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Typical wood shelving with metal frames,

C2010 Stair Construction*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Pre-fabricated metal painted stairs provide access to mezzanines that are located in each wing.

C2020.05 Resilient Stair Finishes**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	20
ACL	ACL 1

Narratives

Description

Resilient flooring with rubber nosings

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace resilient stair finish (54m2)
Cost	$4,950.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C2020.08 Stair Railings and Balustrades*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Steel railings with glass inserts and or metal pickets

C30 Interior Finishes - Unoccupied SE and SW Wings

Details	Values
Condition Rating	2 - Poor
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

SE (380 m2) and SW (400 m2) wings of the building are currently unoccupied and not in useable condition.

Failure Replacement (classified as Failure Replacement)

Details	Values
Short Title	Renovate interiors of SE and SW wings to useable condition (780 m2)
Cost	$900,000.00
Start Year	2017
Impact	Significant
Probability	Unlikely
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C3010.06.01 Ceramic Tile

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Barrier free bathrooms and janitor closets have wall tiles installed 5' up the wall, remainder of wall in painted drywall.

C3010.11 Interior Wall Painting*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Interior walls have a paint finish.

C3020.02.01 Ceramic Tile

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Portion of the cafeteria have original floor tiles that have been repaired multiple times. No trip hazards present. To replace all kitchen appliances would need to be removed.

Recommend leaving as is.

C3020.07 Resilient Flooring** - Sheet

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	20
ACL	ACL 1

Narratives

Description

Commercial sheet linoleum in all public and resident areas.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace resilient sheet flooring (2100m2)
Cost	$176,400.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C3020.07 Resilient Flooring** - Tile

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	20
ACL	ACL 1

Narratives

Description

Resilient tile is used in the cafeteria. Some of the original floor tiles have been repair multiple times. To replace, kitchen appliances would need to be removed. No trip hazards present.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace resilient tile in cafeteria (200m2)
Cost	$10,700.00
Start Year	2025
Impact	Unassigned

Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C3020.08 Carpet Flooring**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	15
ACL	ACL 1

Narratives

Description

Standard commercial carpet is installed in staff office area and lunch room.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace carpet (800m2)
Cost	$42,800.00
Start Year	2020
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	25
ACL	ACL 1

Narratives

Description

Typical suspended T- bar ceiling throughout.
Some minor staining on tiles through out building. Confirmed with building manager that causes of stains have been repaired.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values

Short Title	Replace T-Bar ceiling tiles (1800m2)
Cost	$88,000.00
Start Year	2030
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

C3030.07 Interior Ceiling Painting*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Portions of buildings t-bar ceilings are painted to match room color.

D1010.02 Lifts**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	25
ACL	ACL 1

Narratives

Description

There are two single seat wheel chair lifts within in the building that are relatively un-used. Regular maintenance is performed at building managers request.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace (2) wheelchair lifts
Cost	$51,900.00
Start Year	2030
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

RAP Project ID

S4 MECHANICAL

D2010.04 Sinks**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Stainless steel single and double compartment sinks throughout. Janitors mop sinks in janitor room in kitchen and laundry tub sink.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace sinks (10)
Cost	$17,900.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2010.05 Showers**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

2- staff showers and 4-patient showers

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace showers (6)
Cost	$13,200.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2010.06 Bathtubs**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Typical domestic style bathtub in abandoned section.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace bathtub (1)
Cost	$2,000.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Penal stainless steel, 8- Wcs and 8-Lavs.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace washroom fixtures (Penal stainless steel - 8 WCs and 8 Lavs)
Cost	$70,000.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Public wash room fixtures, 17 WCs, 17 Lavs and 2 Urinals.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace washroom fixtures (17 WCs, 17

	Lav, 2 Ur)
Cost	$69,800.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2020.01.01 Pipes and Tubes: Domestic Water*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Soldered copper

D2020.01.02 Valves: Domestic Water**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	40
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Soldered copper ball valves

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace DW valves (16- 1 1/2" ball valves)
Cost	$12,000.00
Start Year	2045
Impact	Unassigned

Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2020.01.03 Piping Specialties (Backflow Preventers)**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	20
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are back flow preventers for domestic water, water to sprinklers and boiler feedwater.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Missing on main water feed to building (if required by local authorities)	
Existence	No
Missing at heating and cooling system feed	
Existence	No
Missing at fire system connection	
Existence	No
Missing at equipment or other system connections	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace backflow preventers (3)
Cost	$12,300.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified

Event Status	Not Approved
RAP Project ID	

D2020.02.02 Plumbing Pumps: Domestic Water**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	20
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

4-circulation pumps on 4 circulation loops and 1 recirculation pump @ 0.08 HP each.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace Recirculation pumps (5 @ .08 HP)
Cost	$7,000.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2020.02.06 Domestic Water Heaters**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	20
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

3- A.O. Smith, Cyclone XHE @ 250 MBH, 100 gal
There are 2 abandoned Rheem Ruud commercial water heater in the abandoned building section. The building operator believed they would never be brought back into operation.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Water supply temperature too hot or cold	
Existence	No

Preventative Maintenance (classified as Preventative Maintenance)

Details	Values
Short Title	Remove two abandondoned water heaters
Cost	$3,000.00
Start Year	2014
Impact	Minor
Probability	Unlikely
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

Narratives

Concern

There are 2 abandoned water heaters in the abandoned section of the building.

Recommendation

If there is no longer any need for these they should be removed.
Assure all water and gas lines have been disconnected.
Seal flue vent from outside building penetration.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values

Short Title	Replace domestic water heaters (3)
Cost	$10,000.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D2020.03 Water Supply Insulation: Domestic*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Fiberglas thermal insulation

D2030.01 Waste and Vent Piping*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

ABS and cast iron drainage piping with ABS and copper venting.

D2030.02.04 Floor Drains*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Located in boiler room and kitchen.

D2030.03 Waste Piping Equipment*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

There is a sanitary lift station outside the loading dock gate.

D2040.01 Rain Water Drainage Piping Systems*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Rain water from roof is drained through roof drains to rain water leaders connected to building storm drainage system which connects to municipal storm sewer.

D2040.02.04 Roof Drains*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

General purpose roof drain with extended dome grate.

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Compressed air system for pneumatically operated, automated security door locks.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace pneumatic system for door locks (1 compressor and dryer)
Cost	$14,900.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3020.01.01 Heating Boilers & Accessories: Steam**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

2 - Dristeem boilers @ 200 MBH for steam humidifiers.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Dirty or corroded	
Existence	No
Unreliable (ask operator)	
Existence	No
Insufficient capacity (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace steam boilers (2)
Cost	$30,000.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3020.01.04 Water Treatment: Steam Boilers*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

2-water softeners, one for each steam humidity boiler.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Treatment program not followed (ask operator)	
Existence	No

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

2-265 kw, A.O. Smith Legend 2000/LW1000

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Dirty or corroded	
Existence	No
Unreliable (ask operator)	
Existence	No
Insufficient capacity (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace H.W. Heating Boilers (2)
Cost	$62,600.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Air inlet and vent typical for condensing boiler.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Signs of back draft	
Existence	No
Combustion air not provided	
Existence	No
Penetrations or gaps	
Existence	No
Dirty or corroded	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace air inlet and vent (2 condensing boilers)
Cost	$3,000.00
Start Year	2040

Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Chemical pot feeder

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Treatment program not followed (ask operator)	
Existence	No

D3030.06.02 Refrigerant Condensing Units**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	25
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

CU-1 for AHU-1 - Eng Air CUB302 @ 95 KW
CU-2 for AC-1 -Misubishi PU12EK
CU-3 for AC-2 -Misubishi Pu12FK3

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values

Short Title	Replace condensing units (1-27.5 ton and 2-1 ton)
Cost	$43,800.00
Start Year	2030
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3040.01.01 Air Handling Units: Air Distribution**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There is a main air handling unit supplying the administration, therapy and programs sections of the building. Eng. Air model LM-18 @ 7567 L/s

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Occupants dissatisfied with ventilation (ask operator)	
Existence	No
Inside of unit and coils dirty or corroded	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace air handling unit (1)
Cost	$32,000.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

RAP Project ID

D3040.01.03 Air Cleaning Devices: Air Distribution*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Filters on AHU

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Filters dirty, not changed as required	
Existence	No
Inappropriate filtration provided in air handling units	
Existence	No

D3040.01.04 Ducts: Air Distribution*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Sheet metal ductwork

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

25-VAV Boxes with heating coils- Nailor 12" to 6" diameter inlet ducts

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operators and controls unsatisfactorily (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace VAV boxes (25 @ @236 L/s)
Cost	$32,100.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Supply air square cone diffusers and rectangular grated return grills

D3040.03.01 Hot Water Distribution Systems**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	40
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Hot water from boilers to glycol heat exchanger and hot water heating distribution piping system.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Leaks or corrosion (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace hot water distribution system (for 4665 M2 gfa)
Cost	$498,800.00
Start Year	2045
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

RAP Project ID

D3040.04.01 Fans: Exhaust**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

EF-1 @ 271 L/s-washroom
EF-2 @ 42 L/s-washroom
EF-3 @ 92 L/s-boardroom
EF-4 @ 546 L/s-washroom
EF-5 @ 175 L/s-washroom
EF-6 @ 92 L/s-boardroom
EF-7 @ 92 L/s-boardroom
EF-8 @ 50 L/s-range hood
EF-9 @ 1560 L/s-acute emergency exhaust
EF-10 @ 1560 L/s-remand emergency exhaust
EF-11-kitchen hood
EF-12-dishwasher

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace exhaust fans (12)
Cost	$11,800.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3040.04.03 Ducts: Exhaust*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Sheet metal ductwork

D3040.04.05 Air Outlets and Inlets: Exhaust*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Rectangular exhaust grilles. Security grills in remand areas. Outside exhaust louvers

D3040.05 Heat Exchangers**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

HX-1 plate and frame, Armstrong S-X13-350L-12, Hot water to Glycol @210.2 kw. Located in boiler room.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace heat exchanger (1)

Cost	$16,000.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	3 - Marginal
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

RTU-1, ICE roof top unit with 2 rating plates found on unit (7200 cfm and 3000cfm). Service-HVAC for acute remand.

RTU-2, Carrier 48GSO18-042 (info from dwg schedule 2005 renovation) 283 L/s, 1.5 ton cooling. Service-Control Room.

ACL Level: ACL 2 - Check List

Element Condition: 3 - Marginal

Assessment Criteria	Existence
Inappropriate filtration	
Existence	No
Dirty or corroded	
Existence	No
Unreliable (ask operator)	
Existence	No
Insufficient capacity (ask operator)	
Existence	No

Indoor Air Quality Upgrade (classified as Indoor Air Quality Upgrade)

Details	Values
Short Title	Upgrade RTU if found to be undersized
Cost	$54,200.00
Start Year	2014

Impact	Moderate
Probability	Likely
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

Narratives

Concern

It is questionable whether the RTU presently in service has the correct capacity that was specified from the 2005 renovation schedule or whether it is undersized. There is only the minimum required ventilation in the acute remand areas which it serves and the pulley on the units fan had to be changed to a larger size to run the fan at maximum speed to achieve this. This is not energy efficient and the unit may not achieve it's theoretical design life under these conditions.
Two conflicting rating plates found on the unit would indicate the possibility that the unit is seriously undersized.
One rating plate for 7200 cfm would meet the 3398 L/s stated on the schedule.
The second rating for 3000 cfm does not.
The building operator and our evaluation would suspect the second rating plate listed would be the actuate one for this unit.

Recommendation

Conduct a independent review of the unit to determine its actual capacity and assure it meets the requirements as shown on the 2005 construction drawing schedule. If it does not then upgrade the unit.

Consequences of Deferral

Only minimum air quality achieved in the acute remand area possibly not meeting code or ashrae requirements. Present mode of operation is not energy efficient and will probably lead to premature RTU fan failure.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace RTUs (RTU-1 and 2)
Cost	$72,700.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3050.01.03 Packaged Terminal Air Conditioning Units*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

AC-1 with CU-2 - Mitsubishi PU12EK and Mitsubishi PU12EK for data room
AC-2 with CU-3 - Mitsubishi PU12EK and Mitsubishi PU12EK for data room

D3050.02 Air Coils**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

AHU-1 cooling @ 27.5 tons
RTU-1 cooling @ 15 tons
RTU-2 cooling @ 1.5 tons

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace cooling coils(1-27.5 ton, 1- 15 ton, 1-1.5 ton)
Cost	$34,600.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3050.03 Humidifiers**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2005
Theoretical Design Life	25
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Two humidifiers attached to air handling system
HU-1 attached to AHU-1, Eng Air SH-120
HU-2 attached to RTU-1, Eng Air SH-90

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace humidifiers (2)
Cost	$23,800.00
Start Year	2030
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3050.05.03 Finned Tube Radiation**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	40
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Active for heating around perimeter of abandoned building section.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values

Short Title	Replace fin tube radiation (100 m)
Cost	$48,000.00
Start Year	2021
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3050.05.06 Unit Heaters**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Hydronic unit heaters in isolated areas

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace unit heaters (4)
Cost	$13,900.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

In ceiling radiant panels in perimeter rooms. Approximately 35 panels.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace radiant heating panels (35)
Cost	$32,900.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D3060.02.01 Electric and Electronic Controls**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

All electronic controls

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace electronic controls (for 2500 M2 gfa estimated)

Cost	$7,700.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

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

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	20
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

BMCS on system controls

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Parts and service unavailable	
Existence	No
Insufficient control provided (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace BMCS (for 2500 M2 gfa)
Cost	$68,800.00
Start Year	2025
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

D4010 Sprinklers: Fire Protection*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Sprinkler system covering entire building

D4020 Standpipes*

Details	Values
Condition Rating	5 - Good
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Siamese connection to sprinkler tree.

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Fire extinguishers located throughout as required.

D4090.07 Fire Pumps & Water Storage Tanks*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Armstrong fire pump with jockey pump. 10 to 15 HP fire and 3/4 HP jockey.

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Pad mount transformer is located in north side of the building.

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

Details	Values
Condition Rating	5 - Good
Year Installed	2006
Theoretical Design Life	40
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

The main electrical service is a Cutler-Hammer 2000 amp, 120/208 volt, 3 phase, 4 wire panel.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Breaker tripping (ask operator)	
Existence	No
Cleaning/maintenance by a testing firm not performed (ask operator)	
Existence	No
Lack of space for addition of breakers	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace Main Electrical Switchboard (1)
Cost	$35,000.00
Start Year	2046
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1981

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are 10 sub-panels installed in the electrical and mechanical rooms and corridors to provide power for lighting and equipment.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Lack space for addition of breakers	
Existence	No
Missing filler plates	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace Electrical Branch Circuit Panelboards (10)
Cost	$50,000.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 2006

Details	Values
Condition Rating	5 - Good
Year Installed	2006
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are 2 Cutler-Hammer sub-panels installed in the main electrical room to provide power for lighting and equipment.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Lack space for addition of breakers	
Existence	No
Missing filler plates	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace Electrical Branch Circuit Panelboards (2)
Cost	$10,000.00
Start Year	2036
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

There is a three section Motor Control Center in the mechanical room.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 3 section MCC
Cost	$21,000.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5010.07.02 Motor Starters and Accessories**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are 11 motor starters in the mechanical room to control pumps and fans.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Tripping of overloads (ask operator)	
Existence	No
Pilot lights not operational	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 11 motor starters
Cost	$16,500.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5010.07.03 Variable Frequency Drives**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2000
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are 4 Variable Frequency Drive in the mechanical room to control pump, fan and air handling unit.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 4 VFD
Cost	$20,000.00
Start Year	2030
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5020.01 Electrical Branch Wiring*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

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

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Low voltage relays, low and line voltage switches have been provided for the lighting.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

D5020.02.02.01 Interior Incandescent Fixtures*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Incandescent lights in northeast and southeast resident areas use incandescent bulbs. Incandescent fixtures in remaining facility were switched to compact fluorescent bulbs.

D5020.02.02.02 Interior Fluorescent Fixtures**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

All fluorescent fixtures have recently been converted to electronic ballasts and T8 lamps except northeast and southeast resident areas, which are still T12.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Significant blackening of lamp ends	
Existence	No
Inappropriate relamping strategy	
Existence	No

Energy Efficiency Upgrade (classified as Energy Efficiency Upgrade)

Details	Values
Short Title	Upgrade fluorescent lamps and ballasts in NE & SE resident areas to T8 (200 fixtures)
Cost	$20,000.00

Start Year	2014
Impact	Moderate
Probability	Likely
Budget Type	Unspecified
Event Status	Not Approved

Narratives

Concern

T12 lamps are inefficient and no longer be produced after 2011. Lamp burnouts and ballast failures may be more frequent.

Recommendation

Keep existing fixtures and replace with new T8 lamps, ballasts and high efficiency reflectors to reduce energy consumption and maintenance.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace 570 Interior Fluorescent Fixtures
Cost	$239,400.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5020.02.03.01 Emergency Lighting Built-in*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Selected lighting fixtures are on emergency power by UPS system and generator.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Yearly audits not performed (ask operator)	
Existence	No

D5020.02.03.03 Exit Signs*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

17 exit signs are connected to emergency power and located throughout the building.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

D5020.03.01.01 Exterior Incandescent Fixtures*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

Two pot lights are at the main entrance.

D5020.03.01.03 Exterior Metal Halide Fixtures*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

There are 16 wall and pole mounted HID lights around the building, and 4 pole mounted HID lights for parking area.

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

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Exterior lighting controlled by photo cell.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Photcell and/or time clock not operational	
Existence	No

D5030.01 Detection and Fire Alarm**

Details	Values
Condition Rating	5 - Good
Year Installed	2006
Theoretical Design Life	25
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Fire alarm system consists of an EDWARDS Quick start control panel, two annunciators, heat detectors, smoke detectors, duct smoke detectors, horn/strobes and pull stations throughout. The system was upgraded in 2006.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Trouble or ground lights lit on main panel	
Existence	No
Yearly audit not performed	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace fire alarm system (Based on GFA)
Cost	$178,200.00
Start Year	2031
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5030.02.02 Intrusion Detection**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	25
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Exit doors are alarmed. Alarms are monitored on site at the main security station.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace intrusion detection system (panel and 10 entrances/doors)
Cost	$10,000.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5030.02.04 Video Surveillance**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	25
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There are video cameras in corridors, assembly areas and around the building. Video is monitored on site at the main security station. The system is controlled by a programmable logic controller (PLC).

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace video surveillance system (based on GFA)
Cost	$38,000.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5030.04.01 Telephone Systems*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

The staff telephone system is a NT Meridian System facility owned. The inmate system is via Telus calling card payphones, one in each wing.

D5030.04.04 Data Systems*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2000
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Facility computers fall into several groups. Administrative computers are networked with co-ax cable and have access to the justice system database. Several computers are standalone and only the Purchasing Department computer has internet connection capabilities.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

D5030.05 Public Address and Music Systems**

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	20
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

There is a Rauland 3535 PA system from the control station to all areas of building. In addition, there is an intercom system with call feature in each inmate room to allow communication with staff. Staff also have handheld radios to communicate with security.

ACL Level: ACL 2 - Check List

Element Condition: 4 - Acceptable

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace PA and intercom system (based on GFA)
Cost	$15,500.00
Start Year	2017
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

D5030.06 Television Systems*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 1

Narratives

Description

The facility has a roof mounted antenna system that feeds a signal to the common areas in each wing where the inmates have a B&W TV. The building also has TV signal from SHAW.

D5090.01 Uninterruptible Power Supply Systems**

Details	Values
Condition Rating	5 - Good
Year Installed	2006
Theoretical Design Life	30
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

Uninterruptible Power Supply System is installed in the facility to provide continuous power for electrical systems.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Operational issues (ask operator)	
Existence	No
Batteries in poor condition	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace UPS system (1)
Cost	$50,000.00
Start Year	2036
Impact	Unassigned

Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

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

Details	Values
Condition Rating	5 - Good
Year Installed	2006
Theoretical Design Life	35
Capacity / Size	
Capacity / Size Unit	N/A
ACL	ACL 2 - Check List

Narratives

Description

150KW KOHLER emergency generator is located at the north side of the building.

ACL Level: ACL 2 - Check List

Element Condition: 5 - Good

Assessment Criteria	Existence
Regular load tests not completed	
Existence	No
Insufficient capacity (ask operator)	
Existence	No

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace one emergency power generator
Cost	$93,000.00
Start Year	2041
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.08 Medical Equipment*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Small medical office equipped with medical bed and minor medical equipment so a doctor can exam patients onsite.

E1030.03 Loading Dock Equipment*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Stand alone bolted down hydraulic lift is located on east side of building. Lift is rarely used to unload and load supplies.

E1090.02.03 Bins*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Garbage is stored in dumpsters and removed from site by a waste management company

E1090.04 Residential Equipment*

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Cafeteria is equipped with standard kitchen appliances. Typically food is brought in from off site and reheated.

E2010.02 Fixed Casework**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	35
ACL	ACL 1

Narratives

Description

Assorted sizes of wood stained casework is located through out building.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace fixed casework (150m)
Cost	$126,000.00
Start Year	2040
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

E2010.03.01 Blinds**

Details	Values
Condition Rating	5 - Good
Year Installed	2005
Theoretical Design Life	30
ACL	ACL 1

Narratives

Description

Standard white aluminum blinds are located in office area and staff lunch room.

Lifecycle Replacement (classified as Lifecycle Replacement)

Details	Values
Short Title	Replace Blinds (30m2)
Cost	$3,384.00
Start Year	2035
Impact	Unassigned
Probability	Unassigned
Budget Type	Unspecified
Event Status	Not Approved
RAP Project ID	

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Concrete sidewalk connects parking lot to building entrance.

K4010.02 Barrier Free Entrances*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Main entrance doors have handicap operators

K4010.03 Barrier Free Interior Circulation*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Wheel chair access to entire building. No access to mezzanines that are located in residential units.

K4010.04 Barrier Free Washrooms*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	1981
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Barrier free washrooms are that are located near the front entrance are equipped with barrier free showers.

K4030.01 Asbestos*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	0
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Asbestos was neither observed nor reported during this assessment.

K4030.04 Mould*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	0
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Mould was neither observed or reported during this assessment.

K4030.09 Other Hazardous Materials*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	0
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Other hazardous materials were neither observed or reported during this assessment.

K5010.01 Site Documentation*

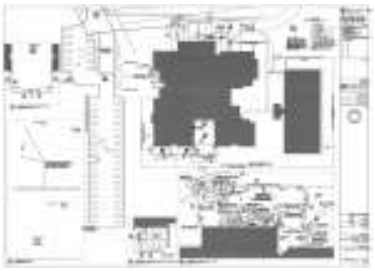
Details	Values
Condition Rating	4 - Acceptable
Year Installed	2012
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Site plan.

Prime Assessor: Adam Knight, NORR Architects Engineers Planners.
Evaluation Date: October 10, 2012.



K5010.02 Building Documentation*

Details	Values
Condition Rating	4 - Acceptable
Year Installed	2012
Theoretical Design Life	0
ACL	ACL 1

Narratives

Description

Floor plans.

Due to the SE wing (380m2) and SW wing (400m2) being unoccupied and not in useable condition, these two wings were not included in the 2012 evaluation. However, an estimate to renovate these wings to an acceptable condition is provided under C30 Interior Finishes.

Prime Assessor: Adam Knight, NORR Architects Engineers Planners.
Evaluation Date: October 10, 2012.