BUILDING CONDITION ASSESSMENT

1/29/2025

95 Sunset Drive, Fredericton NB

[Non-invasive visual inspections and investigations only]

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DAYTON ENGINEERING Ltd.

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24013 – 95 SUNSET DRIVE, FREDERICTON

GENERAL DESCRIPTION

The property is located at 95 Sunset Drive, Fredericton NB. The lands are of fairly level elevation safely above the posted flood elevations for the area. The lands are further improved with a three story wood framed Residential (Part 9) multi-unit residence of senior citizen occupancy.

The building is comprised of 2 exit stairwells, 23 apartment units (10 – one bedroom and 13 – two bedroom), and laundry facilities on each level. The building is situated on conventional concrete frost-wall foundations with a ½ basement and appropriately sized egress windows elevated on the basement level.

This building is clad with shingle roofing (Mansard roof style) and a combination of Brick & Mortar and vinyl siding.

The building is non-sprinklered, reported as 488 m^2 (5,250 ft^2) in footprint and 8 M (26ft) in height.

The building has basic Mechanical and Electrical systems with in-unit NB Power rental hot water heaters and electric baseboard heating. There is a central corridor Air-Conditioning unit located on the roof which services all level corridors, but no air-conditioning or fresh-air systems are present within rental suites.

The building is situated within the City of Fredericton's zoning By-Laws and is currently classified as MR-2 (Multi-residential). The subject property is found to be in conformity with the current zoning with adequate set-backs, green space, and parking present.

CONVENTIONS USED IN THIS REPORT

The following conventions have been used in this report:

Non-Code conforming: denotes current conditions present which are in violation of the presently adopted National Building Code of Canada 2015 Edition and current amendments and applicable local codes & standards.

Minor Concern: denotes a system or component which does not meet present day standards and should be considered for upgrade or replacement. Minor concerns do not lend to degradation of structure or pose a serious risk to the building or its tenants in the immediate future but may eventually be required.

Major Concern: a system or component which is considered significantly deficient, may lead to structural damage over time, or is unsafe. Significant deficiencies need to be corrected and may involve significant expense

Life & Safety: denotes a condition that is unsafe, is non-compliant for Barrier Free standards, or is a fire code violation and in need of prompt attention.

Improve: denotes improvements which are recommended but not required to meet the intended use and occupancy standards.

Monitor: denotes a system or component needing further investigation and/or monitoring to determine if at risk or if repairs are necessary.

Recommended Testing: denotes an area of concern which needs verification due to materials discovered or based on age of construction which can only be verified by scientific testing methods.

CONDITION REPORT ITEM SUMMARY

The following is a synopsis of the potentially significant concerns, non-conformances, and improvements that should be budgeted for. Other significant improvement, outside the scope of this inspection, may also be necessary. Please refer to the body of this report for further details on these and other recommendations.

INSPECTION CRITERIA

It is the goal of this inspection is to provide a complete synopsis of the operations, conditions, and general function of the facility and to identify issues of safety, code related non-compliance, structural concerns, issues with building enclosure, and identify remedies necessary to provide a code compliant facility to a commercial level standard for quality and performance.

Purpose

The purpose of this study was to provide observation and report on the physical condition, areas of concern, code and safety non-conformances, and overall condition and maintenance of the aforementioned property. This report addresses items that are believed to be significant for the continued operation and life-span of the facilities in its current usage and occupancy classification.

Scope of Investigations

The Scope of investigation was limited to a visual non-invasive inspection of all accessible areas of the facility. The investigation was thorough and encompassed tenancy spaces, common areas, mechanical and electrical systems, and exterior components. The structural bearing systems were identified, structural components were inspected where accessible, and code conformance was investigated. Environment was investigated for areas of moisture, humidity, and temperature concerns as well as any signs of contamination or infestation. Where concerns were identified, potential causes and recommended solutions are provided. RF and IR Equipment was utilized to measure humidity in air and walls as well as dewpoints and temperature variance to help identify areas of risk that may affect air quality and building condition.

Dayton Engineering Ltd. has prepared a single comprehensive Building Condition Report for the structure located on the aforementioned property. Along with identifying present building conditions, suggestions for repairs and upgrades of selected items that are not non-compliant or items that relate to occupancy and use standards are also included. Suggestions made typically add to the life span of the structure, improve the safety of operations, or improve occupancy standards.

No physical testing has been performed on any materials and the scope of this investigation was strictly non-invasive unless noted otherwise.

REPORT OVERVIEW

A complete and comprehensive investigation of the building located at 95 Sunset Drive, Fredericton, was carried out for the purpose of providing insight into quality, condition, and code conformance of the structure.

The facility was constructed circa 1978 as a multi-residential unit facility. The current occupancy is classified as a senior citizen occupancy and should be given close scrutiny in areas of lift safety due to the nature of the occupancy. The building is not sprinklered and falls under Part 9 of the 2015 NBCC due to its number of floors and building footprint.

A partial code review was performed based on the presently adopted 2015 code for this region. Some minor contraventions were noted that could impact on the use and operation of this facility in its present configuration in the event of any major renovations or repairs.

PROJECT SUMMARY

Property Identification	**York Care Center Apartments**
Street Address	**95 Sunset Drive**
City, Province	**Fredericton, New Brunswick**
Primary Use:	**Senior Citizen Apartments**
Year Built & Age	**1978, 47 years old**
Number of Stories	**Three**
Building Footprint	**488 m^2 (5250 ft^2)**
Number of Units	**23 (10 - 1 Bedroom, 13 - 2 Bedroom)**
Reported Occupancy	**96%**
Reported Site Area	**3258 m^2 (35136 ft^2)**
Flood Zone	**No**
Seismic Zone	**No**
Parking	**Adequate**
Out-buildings	**NA**
Superstructure	**Wood Frame**
Basement	**Conventional Concrete Frost Wall**
Exterior Façade(s)	**Brick, Vinyl Siding**
Roof(s)	**Asphalt Shingle**
Heating	**Electric Baseboard**
Air-Conditioning	**Common area rooftop AHU**
Hot Water	**Electric (NB Power Rentals)**
Electrical Wiring	**Copper**
Fire - Sprinkler	**None**
Fire Alarm System	**Addressable**

INSPECTION OVERVIEW

ITEM	Excellent	Good	Fair	Poor	ACTION	IMMEDIATE NEEDS	CAPITAL RESERVES
SITE IMPROVEMENTS							
Topography		X			NM		
Storm Drain System		X			NM		
Parking Pavement, Curbs & Gutters				X	RR		$ 44,000.00
Sidewalks				X	RR		$ 7,800.00
Utilities		X			NM		
Landscaping			X		NM		
Site Lighting		X			NM		
Site & Building Signage		X			NM		
STRUCTURAL SYSTEMS & BUILDING ENVELOPE							
Foundations		X			IR	$ 6,500.00	
Structural Systems		X			FI		
Exterior Walls / Envelope			X		FI		
Windows & Frames				X	RR	$ 3,500.00	$ 92,000.00
Exterior Doors & Frames		X			NM		
Stairs (Interior & Exterior)		X			NC		
Ancillary Decks / Roof Canopies		X			NM		
Roof Coverings		X			NM		
Roof Drainage		X			NM		
MECH, ELEC, PLUMBING SYSTEMS							
Heating & Ventilation		X			NM		
Air Conditioning				X	RR	$ 23,000.00	
Electrical System			X		RR		$ 32,000.00
Potable Water Distribution System		X			NM		
Water Heaters		X			NM		
Faucets & Fixtures			X		RR		$ 56,000.00
Gas Distribution System					NA		
VERTICAL TRANSPORT CONVEYING SYSTEMS							
Elevators / Escalators					NA		
INTERIOR ELEMENTS							
Interior Finishes			X		NM		
Floor Coverings			X		RR		$ 55,000.00
LIFE SAFETY & BARRIER FREE							
Parking, Signage & Ramps		X			NM		

Unit Accessibility				X	NA		
Code Compliance				X	IR	$ 6,500.00	
Emergency & Fire Protection		X			NM		
BASE COST ESTIMATES						$ 39,500.00	$ 286,800.00

***Action: NC = Non-Conforming, NM = Normal Maintenance, IR = Immediate Repair, RR = Replacement Reserves, NA = Not-Applicable, FI = Further Investigation, NI = Needs Improvement**

REPORT SUMMARY

NBCC 2015 CODE RELATED ITEMS

Non- Code conforming and Life Safety Concerns:

- Install appropriate fire barriers to all penetrations of rated rooms service.
- Replace stair-well door with new properly rated doors and frames with self-closing hardware.
- Replace Unit Entry doors with ULC Rated Entries (Recommend Safe-n-Sound doors)

- Fresh air HRV system is recommended in each unit and common areas (See mechanical commentary)
- R-values are non-conforming to present NBCC 2015 building code. R-Value Improvement is recommended
- Entrance doors and Frames not ULC rated, recommend changing to “Safe-n-Sound” doors
- Stair railing clearance non-conforming
- Stair headroom clearance non-conforming
- Common area air conditioning does not conform to minimum standards for fire safety.

Minor Concern:

- Further investigation of South-East corner cracking and movement is recommended to ensure that the exterior wall assembly is not structurally compromised.
- Windows should be budgeted for replacement
- Vinyl Siding should be cleaned and treated for UV protection and inspected annually for sealants and degradation. Replacement should be scheduled for the 5 year capital budget.
- Upgrade worn receptacles

Major Concern:

- Investigate walls beneath window for signs of rot or water infiltration
- Investigate observed wall cracking for possible structural movement
- Excavate and seal foundation leaks at electrical entrance
- Exterior windows require immediate maintenance with added sealants
- Mansard roof facing shingles due for replacement

Improve:

- Upgrade flooring in non-renovated units
- Common area air-conditioning unit needs replacement with compliant equipment and installation
- Pipe insulation should be installed over exposed hot and cold-water lines for efficiency and to prevent condensation.
- Fixture upgrades should be budgeted for ~ 25% of the facility.
- Panel upgrades may be required as breakers become more difficult to obtain for older systems.
- Parking surfaces are due for replacement or topping
- Soffits and fasciae are recommended to be covered with metal to prolong lifespan
- Cover painted plywood Mansard soffits with metal or similar facing to protect and extend life

Monitor:

- Investigate wall to ceiling separations visible in various units primarily along living room to kitchen walls.
- Investigate for water infiltration in areas of higher moisture content

1.1 DESCRIPTION OF STRUCTURE

Foundations:	Conventional Concrete Frost Wall
Structural Framing	Wood Frame
Floor Structures:	Wood Frame
Wall Structures:	Wood Frame
Roof Structures:	Engineered Wood Truss

STRUCTURE OBSERVATIONS

General Comments

The Building Structure is constructed as a Part 9 (residential), 3 Storey, non-sprinklered wood frame structure and was constructed circa 1978. The foundations are constructed as conventional concrete frost-walls with insulated wood stud knee-walls (See FIG 1.1). The foundation walls have very limited visibility (~6" Exposure) but showed no signs of differential movement and the paved surfaces are keeping potential infiltration away from the structure. Foundation cracking was noted at consistent intervals with no visible differential movement which is common with un-reinforced concrete walls (See Fig 1.2). The roof system is a conventional engineered wood truss clear span with ¾" board sheathing (see FIG 1.3). The attic space is properly separated above each occupancy (See FIG 1.4).

There were some signs of movement with significant cracking identified in the South-east corner of the facility (See Fig 1.5, 1.6) which may have some structural significance. Further invasive investigation is warranted to verify condition of structural components in these areas as they could not be verified due to concealment. There is also separation of ceilings from partition walls (See Fig 1.7). This appears to be resulting from truss-uplift and is not deemed to be a serious structural concern. Cracking is also evident on the stair landing underside. There was no visible evidence of movement and this is assumed to have resulted from an impact.

There were no further significant structural concerns noted beyond those mentioned above.

LIMITATIONS OF STRUCTURE INSPECTION

As per the identified scope of this inspection, this is a visual inspection limited in scope by (but not restricted to) the following conditions:

- Structural components concealed behind finished surfaces could not be inspected
- Only a representative sampling of visible structural components were inspected
- Engineering or architectural services such as calculation of structural capacities, adequacy, or integrity are not part of a BCR (Building Condition Report).

Structural Observations & Recommendations

- Further investigation of South-East corner cracking and movement is recommended to ensure that the exterior wall assembly is not structurally compromised.

Fig 1.1

Fig 1.2

Fig 1.3

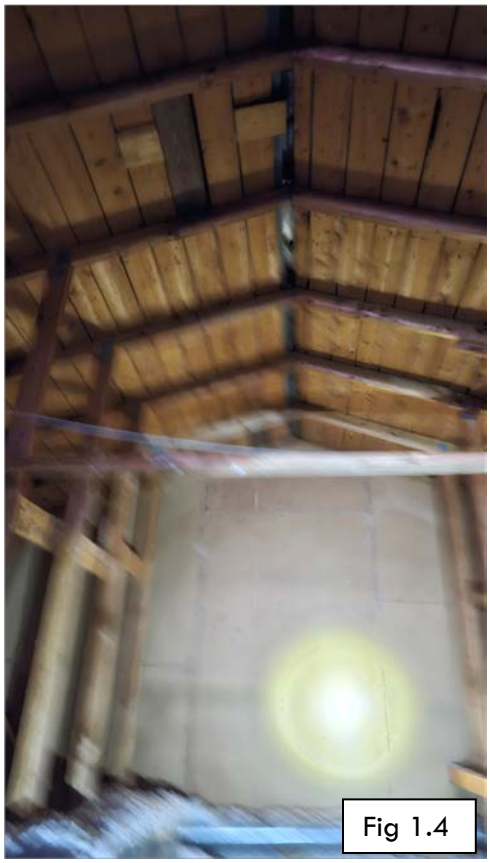

Fig 1.4

Fig 1.5

Fig 1.6

Fig 1.7

Fig 1.8

1.2 DESCRIPTION OF ROOFING

Roof Covering: Asphalt Shingle

Roof Flashings: Aluminum flashing & Drips

Jacks and Boots: Rubber

Method of Inspection: Visual & Thermal

ROOFING OBSERVATIONS

General Comments

The roof structure was identified as a ¾" boarded sheathing over engineered "Mansard" style wooden trusses with a 3-Tab shingle roofing membrane. The facing of the Mansard roof is due for replacement with many broken and missing tabs with very visible curling signaling breakdown of the asphalt membrane (See FIG 2.1 – 2.3). The roof membrane has a 25-year manufacturers projected life span when installed and maintained in accordance with the manufacturers recommendations. The roof was not accessible for close observation, however maintenance personnel advised the upper portion of the roof was just recently replaced in 2024. The roof should not require any significant maintenance until around 2036 based on manufacturer data, however there were missing shingles noted on the North-West low roof section which should not happen if shingles are correctly installed and without defect (See FIG 2.2, 2.3 & 2.4). There was no evidence of any leaks when investigated from within the attic. The roof is properly vented with soffit vents (true-vents present) and ridge venting and there was no evidence of condensation within the attic.

Upper soffits appear metal with venting strip (See Fig 2.1). Mansard soffits are painted plywood (See Fig 2.1) and are in poor condition. Covering of painted plywood with more durable product (ie metal flashing) is recommended before plywood degradation is beyond reasonable repair.

Roofing Observations & Recommendations

- Mansard roof facing shingles due for replacement
- Cover painted plywood Mansard soffits with metal or similar facing to protect and extend life

Fig2.1

Fig2.2

Fig2.3

Fig2.4

1.3 DESCRIPTION OF EXTERIOR

Wall Covering:	Combination of vinyl siding, Brick Masonry, and asphalt shingles
Eaves, Soffits, and Fascia's:	Painted plywood soffits and eaves
Window/Door Frames and Trim:	Vinyl windows, aluminum entrances
Parking & Drives surfaces:	Concrete parking surface
Surface Drainage:	Sloped to Catch-basins

EXTERIOR OBSERVATIONS

General Comments

The exterior façade is comprised of primarily vinyl siding with large corner accents of colored brick masonry. The vinyl siding shows evidence of UV damage which is breaking down the material and causes the material to become brittle and chalky (See FIG 3.1). Maintenance advised that the vinyl siding and windows have been recently sealed with elastomeric sealant but there remains evidence of areas of separation (See Fig 3.2, 3.3).

There is brick masonry accenting each corner. Masonry was found to be in good repair with proper weeping (See Fig 3.4).

Soffits and fasciae are painted plywood. The upper soffits appeared to be recently painted. Lower Mansard soffits and fasciae appear badly weathered and in need of maintenance (See Fig 2.1 & 3.5). Covering of the exposed plywood with metal flashings or similar is recommended to extend their life and prevent further decay.

Exterior entrances are double commercial aluminum and were found to be operating as intended. (See FIG 3.6-3.7).

Windows are residential style Vinyl slider windows (See FIG 3.8). The windows are at their projected life span but are not showing any signs of failure. There are signs of condensation on some sills (See 1.7 Interior Commentary)

The frost-wall foundations were found to protrude above grade the required 150 mm. Grading was found to be minimal with water infiltration noted at Electrical room area. Maintenance personnel advised this has been an ongoing issue. Excavation and waterproofing of the area of leakage is recommended. Further investigation may also be warranted to ensure proper foundation drainage.

Parking surfaces are constructed of reinforced-concrete slabs. The concrete is showing signs of degradation with some significant cracking and differential settlement. Surfacing should be scheduled for replacement or application of an asphalt topping if grades permit (See Fig 3.9, 3.10).

Sidewalks were found to be in poor condition with significant settlement and raised edges. Some repairs have been attempted to improve safety, but edges are too abrupt and non-conforming (See Fig 3.11 & 3.12).

Exterior Recommendations

- Exterior windows require immediate maintenance with added sealants
- Windows should be budgeted for replacement
- Vinyl Siding should be cleaned and treated for UV protection and inspected annually for sealants and degradation. Replacement should be scheduled in the 5-year capital budget.
- Soffits and fasciae are recommended to be covered with metal to prolong lifespan
- Parking surfaces are due for replacement or topping
- Excavate and seal foundation leaks at electrical entrance

Fig 3.1

Fig 3.2

Fig 3.3

Fig 3.4

Fig 3.5

Fig 3.6

Fig 3.7

Fig 3.8

Fig 3.9

Fig 3.10

Fig 3.11

Fig 3.12

1.4 DESCRIPTION OF ELECTRICAL

Size of Electrical Services: **240 V 600A 3PH**

Service Conductors: **Nu-Al**

Service Grounding: **U.G. Plates/Rods**

ELECTRICAL OBSERVATIONS

The building electrical system is supplied from a pole mount transformer to the rear of the building (See Fig 4.1). The main service is a 120/240V 600 Amp 3Ø service (See FIG 4.2). The building contains 24 meters (See FIG 4.2, 4.3) which serve the individual units and 1 for the common areas. The main entrance is located on the North side of the facility in an electrical room serviceable only from the interior of the first tenancy space. With multiple tenants this room should be directly accessible from the exterior without entering a tenant space.

Each tenancy is serviced through a sub-panel fed from the electrical room

The wiring is modern properly rated material where visible and appears to be well managed throughout with labels, protected and concealed wire, and secured junctions.

The service panels and sub-panels were randomly inspected and verified for proper wiring (See FIG 4.4, 4.5) and no non-conformances were identified.

Devices were checked at random, GFI's were present in washrooms. Various randomly checked plugs were found to be poorly secured with worn and loose plug inserts.

The electrical room penetrations do not have conforming fire protection at penetrations (See FIG 4.6, 4.7) which is required for code conformance (See 1.9 Life Safety).

Electrical Observations &Recommendations

- Panel upgrades may be required as breakers become more difficult to obtain for older systems.
- Upgrade worn receptacles

Fig 4.1

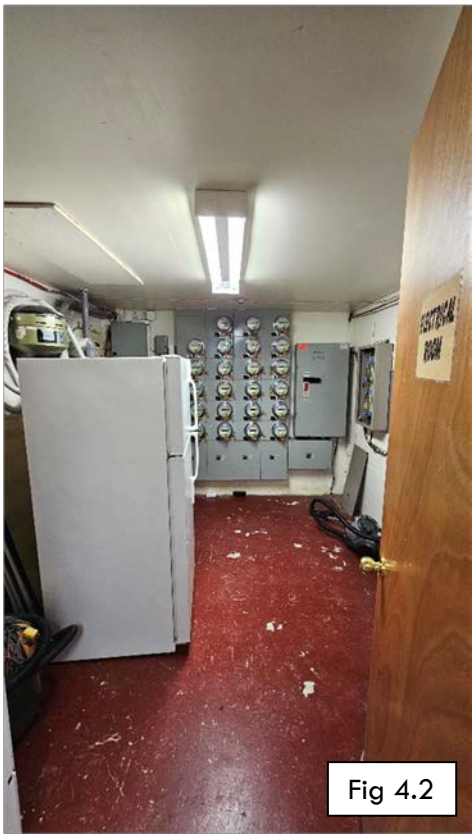

Fig 4.2

Fig 4.3

Fig 4.4

Fig 4.5

Fig 4.6

Fig 4.7

1.5 DESCRIPTION OF PLUMBING

Water supply source:	**City of Fredericton Serviced**
Service Pipe:	**Copper**
Service Entrance size:	**3/4" main supply**
Waste system:	**City of Fredericton Serviced**
Hot Water:	**Electric (NB Power Rentals)**
Water entrance location:	**Service Room beneath stairs**

PLUMBING OBSERVATIONS

General Comments

The domestic water supply and waste service for the overall complex is provided via City of Fredericton Servicing (See Fig 5.1). The scope of this investigation was limited to visual observation only. Water service is supplied through domestic copper piping where visible (See Fig 5.2). Waste-water piping was identified as Cast Iron below grade (See Fig 5.3). Portions of unit drainage and venting were identified as converted to ABS Piping (See Fig 5.4). The waste system venting is copper piping (See Fig 5.5).

Plumbing fixtures were identified as a mixture of newer replacements (See Fig 5.6) and original equipment of poor aesthetic condition (See Fig 5.7) but remain in good functional repair.

The domestic hot water is fed from individual 220V 40 Gal NB Power rental hot water heaters (See FIG 5.8) located in hallway closets in each unit.

There was no insulation present on hot or cold-water lines and evidence of sweating was present on adjacent wooden structure.

Plumbing System Recommendations

- Fixture upgrades should be budgeted for ~ 25% of the facility.
- Pipe insulation should be installed over exposed hot and cold-water lines for efficiency and to prevent condensation.

Fig 5.1

Fig 5.2

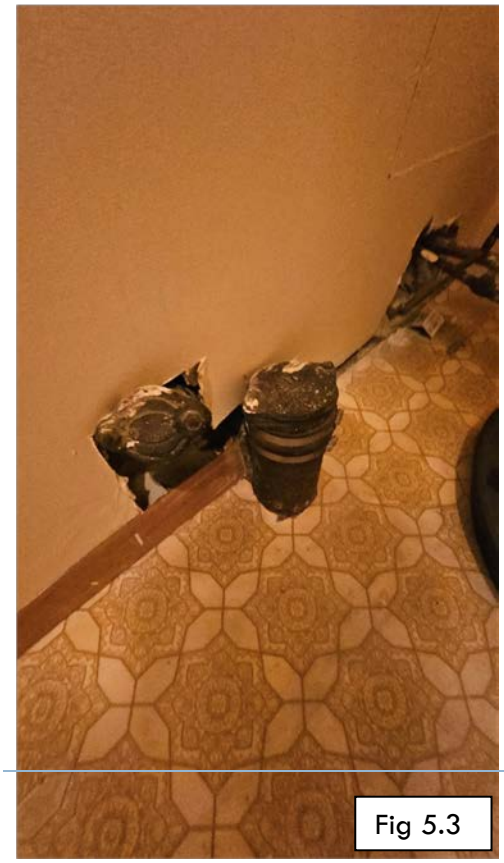

Fig 5.3

Fig 5.4

Fig 5.5

Fig 5.6

Fig 5.7

Fig 5.8

1.6 DESCRIPTION OF HEATING & VENTILATION

Heating:	**Electric Baseboard Heaters**
Cooling:	**Single roof-top AHU for common corridors, None in residential suites**
Fresh Air/Exhaust:	**There are no (HRV) fresh air supplies present, Bath-fans are present**

HEATING AND VENTILATION SYSTEMS OBSERVATIONS

General Comments

The heating source for this facility is provided by Electric Radiant Baseboard & Electric forced air heaters (See Fig 6.1, 6.2).

The common corridors are provided with mechanical cooling from a 5-ton rooftop AHU (Air Handling Unit) located on the roof over the rear building entry/stair (See FIG 6.2). This unit was manufactured in 1989 and has surpassed the recommended life expectancy. As the installation does not conform to present code requirements, an alternate solution may be required.

The facility does not have proper fresh-air intake with the use of a compliant mechanical system such as an HRV (Heat Recovery Ventilator) system. HRV's provide fresh air, exhaust, and heat recovery by using exhaust air to heat incoming cold air. HRV's are industry standard in current building codes.

Units are required to contain exhaust to washrooms and kitchens and fresh supply to living rooms and bedrooms. This is typically provided by individual unit HRV's in modern construction. Minimum code allows for the use of exhaust fans and operable windows to provide fresh air and exhaust, each unit is equipped with a washroom exhaust (See Fig 6.6) and kitchen exhaust (See Fig 6.7) paired with operable windows. There is a central exhaust unit that connects to several exhaust lines with its own high-speed fan unit. This appears to be exhausting several connections (See Fig 6.4, 6.5).

Overall, this facility has minimal mechanical systems with very little AC, poor circulation, and no conforming mechanical fresh-air supply systems.

Heating & Ventilation Observations & Recommendations

- Common area air conditioning does not conform to minimum standards for fire safety.
- HRV fresh air systems are recommended for common areas
- Common area air-conditioning unit needs replacement with compliant equipment and installation

Fig 6.1

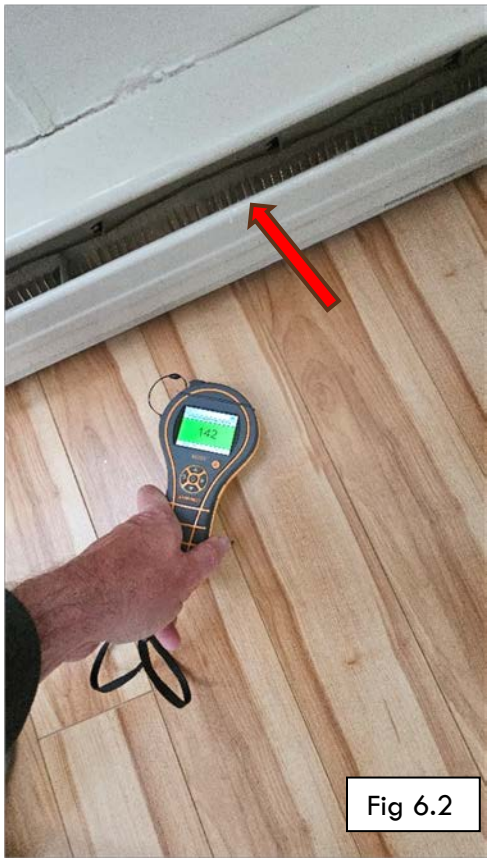

Fig 6.2

Fig 6.3

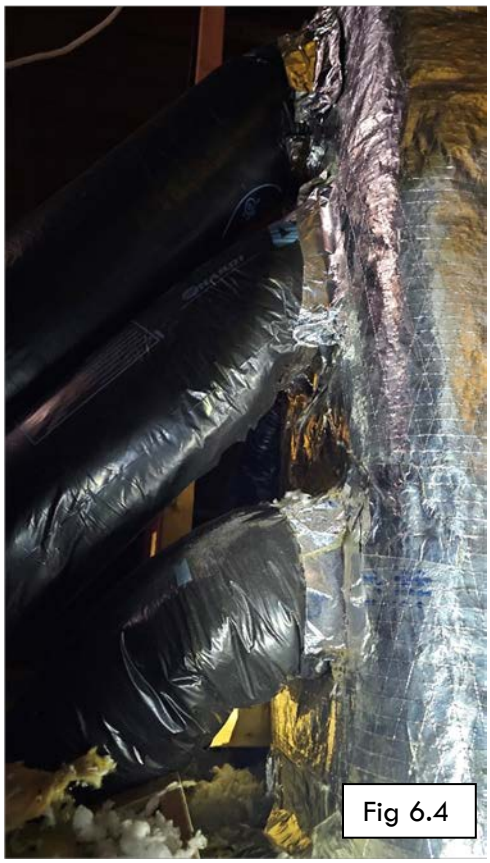

Fig 6.4

Fig 6.5

Fig 6.6

Fig 6.7

1.7 DESCRIPTION OF INTERIOR

Walls and Ceilings:	**Painted Gyprock**
Floor Surfaces:	**Common Area Carpeting**
	Carpet Stair Treads
	Laminate and vinyl to unit floors
Doors:	**Aluminum Entrances to lobby's**
	Wood interior doors & Frames

INTERIOR OBSERVATIONS

Finishes:

Flooring – Several units have upgrades which include newer laminate flooring installations (See FIG 7.1). Based on interviews with maintenance personnel, approximately 35% of the units are estimated to require upgrades which include new flooring installation (See FIG 7.2). These non-renovated units contain older products which have a very dated appearance and show signs of wear. Unit 10 flooring had separating joints. Investigation showed higher than normal moisture readings (See FIG 7.3). It is suspected that the tenant is using excessive water to mop the floors causing swelling of the floor planks which led to its damage.

Walls - The walls throughout are painted gyprock and are generally kept in reasonably good repair. A few units were under renovation at the time of inspection. Of primary concern are areas of wall cracking (See Unit 23 FIG 7.4) and wall to ceiling connections where cracking and separation was identified (See Unit FIG 7.5 & Structural commentary). Moisture reading along visible cracks did not read "Wet" but were of significantly higher moisture content than surrounding wall surfaces (See FIG 7.6). The tape is also delaminating around the wall cracking (See FIG 7.7) which is often a result of moisture.

Ceilings - Ceilings are painted gyprock with textured spray finish (See FIG 7.5). The applied finish is difficult to match and therefore any areas of required repair tend to remain very noticeable.

Stairs – Stairs are wood frame and are located on each end of the facility for exiting. The stairs do not conform to present day code requirements with excessive rise >7" and insufficient run (<11") (See FIG 7.8, 7.9). Stairways are required to maintain a minimum headroom clearance of 2.08 m. Landing bulkheads restrict headroom to a non-conforming 1.93 m (See FIG 7.10). Stair railings are required to maintain continuous holding with wall clearances of 30 mm but railings are restricted to 12.7 mm at landing crossings (See FIG 7.11).

Doors – The main entrances are double aluminum commercial doors (See FIG 7.12). The entry doors are in good condition and operating as intended. Entrances are in conformance with the present use exiting requirements.

The interior doors are primarily wood veneer hollow core residential doors (See FIG 7.13) and remain functional but very dated in appearance. Door hardware appears to be original hardware of brass 1970's styling. Unit entry doors are of poor sound quality and do not meet current fire rating requirements (See FIG 7.14). There were no UL ratings identified during inspections.

Recommendations/Observations

- Investigate observed wall cracking for possible structural movement
- Investigate for water infiltration in areas of higher moisture content
- Investigate wall to ceiling separations visible in various units primarily along living room to kitchen walls.

Non-conformances

- Stair headroom clearance non-conforming
- Stair railing clearance non-conforming
- Entrance doors and Frames not ULC rated, recommend changing to “Safe-n-Sound” doors

Recommended Improvements

- Upgrade flooring in non-renovated units

Fig 7.1

Fig 7.2

Fig 7.3

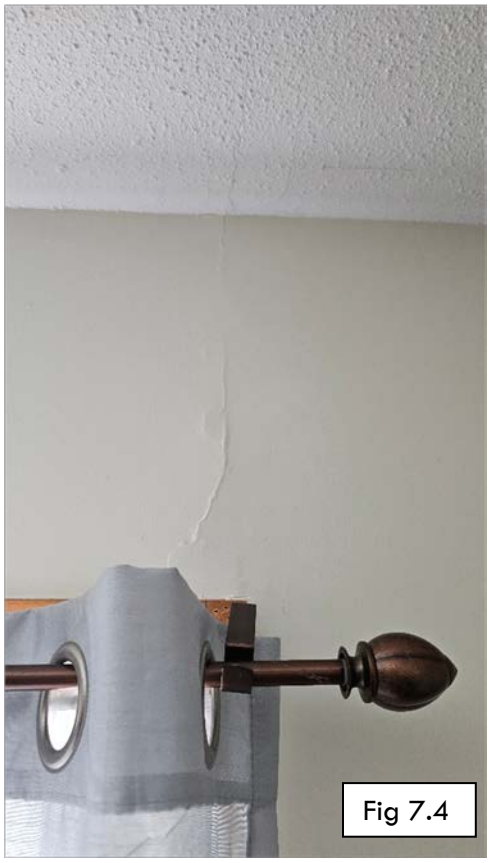

Fig 7.4

Fig 7.5

Fig 7.6

Fig 7.7

Fig 7.8

Fig 7.9

Fig 7.10

Fig 7.11

Fig 7.12

Fig 7.13

Fig 7.14

1.8 DESCRIPTION OF ENVIRONMENT

General Comments

A buildings environment is perhaps the most important component of a building's overall health and is also one of the most difficult to evaluate. To identify concerns, consideration of personal senses is the most effective way to investigate. As such, careful attention is paid to odors, humidity, freshness of air, comfort of breathing, as well as quantitative measurable aspects utilizing IR cameras, Protometers to determine relative humidity, dew point, condensation issues, etc. During inspection spaces are checked for odor, humidity, signs of mold, temperature variations, and any evidence of infestations.

A critical component for a healthy environment is insulation and vapor barrier components. The wall assembly is inspected using moisture sensors and an IR Camera. The walls revealed several small cold zones at structural components and connections (See Example FIG 8.1). The wall system is non-compliant in its thermal transmissivity which is very noticeable with the IR Camera (See FIG 8.2). Attic insulation R-values are also non-conforming with <R20 values and areas of wet/missing insulation were noted (insulation which was or is wet will also lose R-value and show as cold zone) (See FIG 8.3).

Windows show signs of cold infiltration around perimeters and trims. Air movement could also be felt in these zones (See FIG 8.4). Windows are expected to be "chinked" (stuffed with FG Batt insulation) based on age of construction which allows infiltration and air movement. An attempt has been made to seal the windows from the exterior with caulking which helps but this does not stop wind pressure from causing infiltration. Low expansion PU foam insulation is recommended around windows. Given the age of windows and building construction, a closer invasive investigation of a random selection of wall assemblies around and beneath windows is recommended to ensure no structural rot is present. The unit identified with cracked drywall would definitely be on the list for closer investigation.

Fresh air is also a critical component to maintaining a healthy building. For the present use, minimum code considers operable windows and mechanical exhaust fans as an acceptable alternative to mechanical ventilation. This does not hold true unless the openings allow fresh air to enter. Although it is possible to open the windows to allow fresh air in, this does not provide equivalent air changes to mechanical systems. A mechanical HRV system is recommended in each unit for overall building health and present code compliance.

Environmental Recommendations/Observations

- R-values are non-conforming to present NBCC 2015 building code. R-Value Improvement is recommended
- Fresh air HRV system is recommended in each unit and common areas (See mechanical commentary)
- Investigate walls beneath window for signs of rot or water infiltration

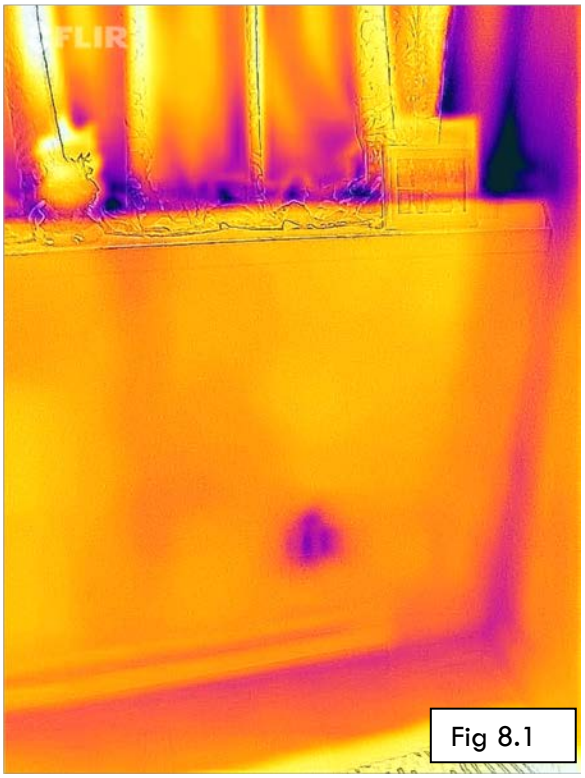

Fig 8.1

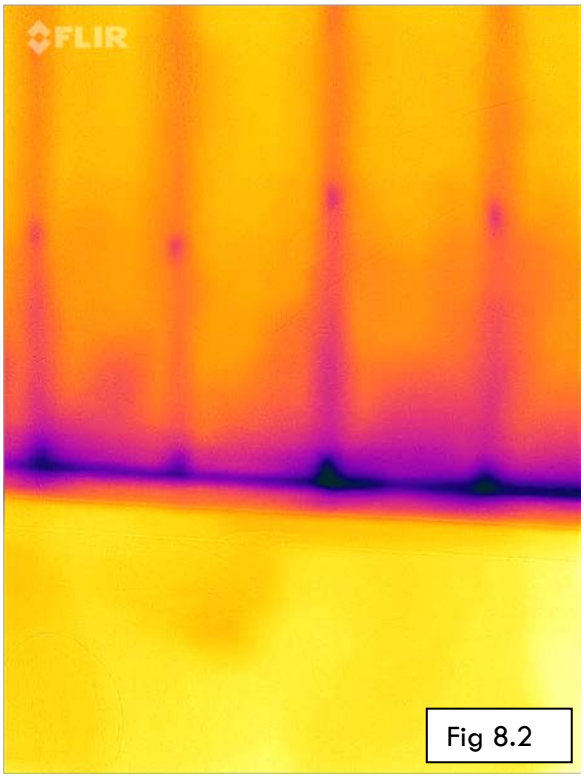

Fig 8.2

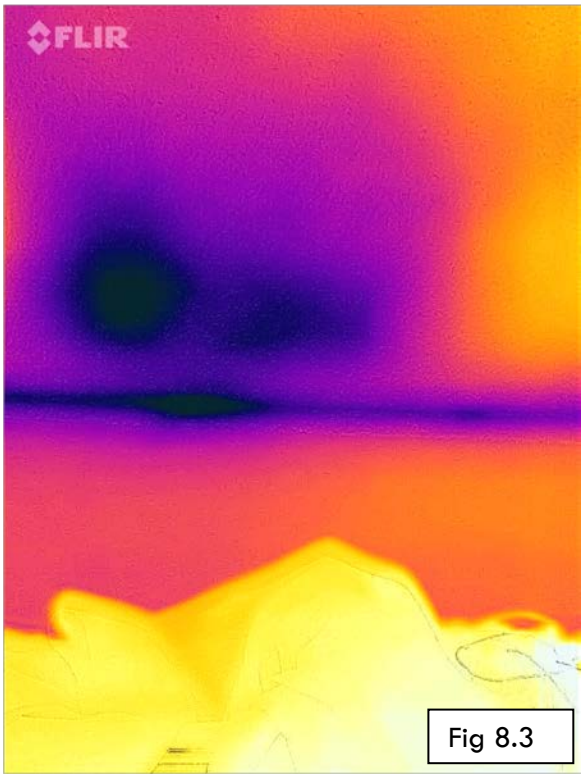

Fig 8.3

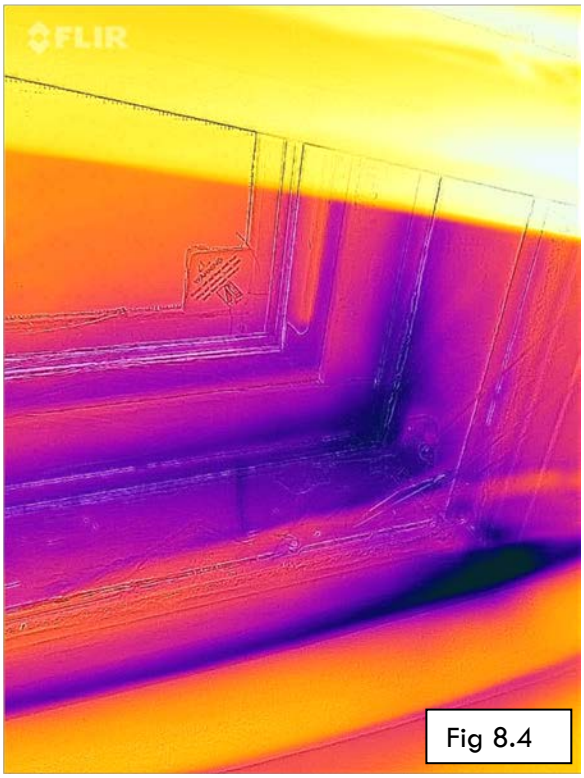

Fig 8.4

1.9 DESCRIPTION OF LIFE SAFETY AND ACCESSIBILITY

Installed Components: **No fire alarm system present**

Minimum code compliant line-voltage detectors each unit

LIFE SAFETY & ACCESSIBILITY OBSERVATIONS

General Comments

This structure contains NBCC Part 9 (Or Part 3 Group C equivalent) use and classifications for multi-residential occupancy. The facility is required to be constructed to a NBCC 2015 Part 9 residential standards to be conforming based on code criteria.

NBCC 2015 does not require a sprinkler system, however an addressable FA system is required. There is a certified and operational FA System in place (See FIG 9.1).

ULC Labelling was not present on entry doors or on stairwell doors or frames and are therefore non-conforming (See FIG 9.2).

Exit Doors into stairwells are required to self-close and provide fire rated separation and smoke seal. Doors were found to not latch properly or completely seal off openings (See FIG 9.3).

Emergency exits were clearly labelled (See FIG 9.4). Emergency lighting was tested and passed test circuit testing (See FIG 9.5).

Fire hydrants were present as required and testing is current (See FIG 9.6).

Service areas require fire separations of 1 hour rating. Several penetrations were identified which require patch and repair and application of approved fire sealants or collars (See FIG 9.7-9.8)

Fire & Safety Recommendations/Observations

- Replace Unit Entry doors with ULC Rated Entries (Recommend Safe-n-Sound doors)
- Replace stair-well door with new properly rated doors and frames with self-closing hardware.
- Install appropriate fire barriers to all penetrations of rated rooms service.

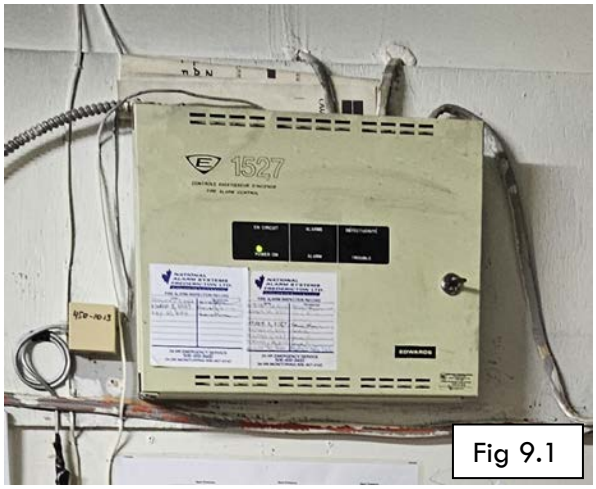

Fig 9.1

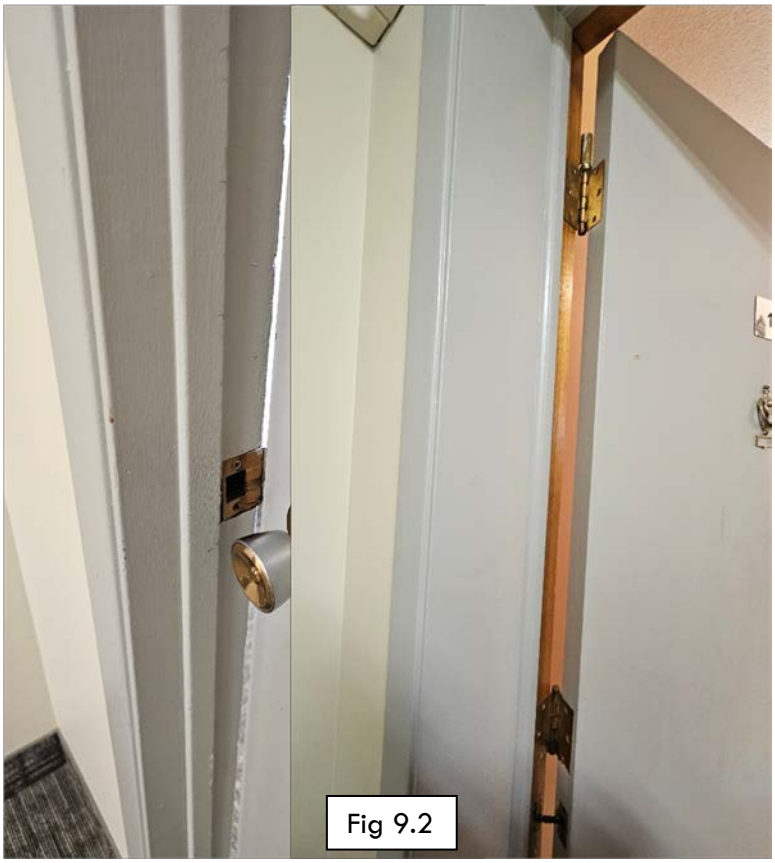
Fig 9.2


Fig 9.3

Fig 9.4


Fig 9.5

Fig 9.6

Fig 9.7

Fig 9.8