22034

APRIL 2023

Building Condition Assessment

Corbeil Park Hall

Corbeil, Ontario

LEA LAROCQUE ELDER ARCHITECTS, ARCHITECTES INC.

Corbeil Park Hall
Architectural Building Condition Assessment
Corbeil, Ontario

LEA Project No.: 22034

TABLE OF CONTENTS **PAGE**

CONSULTANT TEAM

Architectural

LAROCQUE ELDER ARCHITECTS, ARCHITECTES INC.
188 Fifth Avenue East,
North Bay, ON P1B 1N6

Contact: Jean Larocque, OAA, OAQ, MRAIC,LEED AP BD+C
E-mail: jlarocque@leaainc.com
Phone: (705) 497-9191 ext. 222

Contact: Jeff De Decker, Lic.Tech.OAA, BCIN
E-mail: jdedecker@leaainc.com
Phone: (705) 497-9191 ext. 229

Structural

SUPPA ENGINEERING
592 Cassells Street
North Bay, ON P1B 3Z7

Contact: Patrick Rochefort, P.Eng.
E-mail: prochefort@suppaengineering.ca
Phone: (705) 707-2121

Mechanical / Electrical

SUPPA ENGINEERING
592 Cassells Street
North Bay, ON P1B 3Z7

Contact: Brenden Wendover, P.Eng.
E-mail: bwendover@suppaengineering.ca
Phone: (705) 358-6264

2.1 PROJECT DESCRIPTION

Larocque Elder Architects, Architectes Inc. (LEA) has been retained by the Club Action 50+ East Ferris (the Client), to provide Building Condition Assessment (BCA) services for the Corbeil Park Hall, located at 392 Highway #94, Corbeil, Ontario.

The purpose of this BCA is to assist the Client to understand the current physical condition and life expectancy of the building portfolio (architectural, structural, mechanical and electrical), in order to assist with planning for future capital investments over the next ten (10) year period. This architectural report, and the Mechanical, Electrical and Structural Building Condition Assessment included in Appendix A, are not intended to provide the Client with a descriptive inventory of existing building elements (including assemblies, systems, equipment and components). Building Condition Assessment documentation as prepared by the Consultant Team will bring apparent or potential building, life and fire safety concerns to the Client's attention however should not be considered a comprehensive review for compliance with codes, regulations and accessibility standards (including the Accessibility for Ontarians with Disabilities Act) in effect now or at the time of construction.

2.1 PROJECT TASKS AND DELIVERABLES

.1 Documenting Existing Condition: In accordance with the agreement for services for this project, LEA conducted initial site visits on January 10th and 17th, 2023, to field measure the existing building and notable appliances and equipment and collect a digital, photographic record to document existing conditions. Information as gathered during these initial investigatory site visits was then used to prepare current, 'as-built', site, main floor plan and reflected ceiling plan drawings as included in Part 3.0 of this report.

.2 Building Condition Assessment: Further to completing the initial field verification and as-built drawing deliverables, LEA returned to site on January 25th to undertake a general assessment of existing architectural components of the building (interior and exterior) while representatives from Suppa Engineering were also in attendance to complete the same scope of services for the building structure and mechanical and electrical equipment and installations. Observations made during this assessment were visual and non-destructive in nature. Snow accumulation at the time of this visit did not allow for review of the site and roof conditions and a second visit was therefore completed by LEA on March 29th.

.3 Building Condition Assessment Reporting: Information obtained from the following sources was reviewed and considered in the preparation of this Architectural Building Condition Assessment Report:

- Non-destructive, visual observations made by the Consultant Team during the January 25th site assessment.
- General information on building operation, maintenance, servicing and items of concern as offered by two (2) representatives from the Township of East Ferris (Mr. Adam Davis and Mr. Greg Kirton) in attendance at the January 25th site assessment.
- The following documentation as provided by the Client:
    - Interior & Exterior Alterations 'Issued for Tender' drawings, dated February 14, 2013 as follows:

- *A1 – Demolition Plan, Arch. Floor Plan Notes, Legend*, 1 page, as prepared by Michell Architects.
- *A2 – Partial Floor Plan, Section Detail, RCP*, 1 page, as prepared by Mitchell Architects.
- *A3 – Schedules*, 1 page, as prepared by Mitchell Architects.
- *M1 – Mechanical Floor Plans, Details and Schedules*, 1 page, as prepared by Anrep Krieg Desilets Gravelle Consulting Engineers Ltd.

- *Building Condition Summary – Corbeil Park Hall* (as included as part of the 2014 Facility Review – Township of East Ferris), 2 pages, as prepared by Mitchell Architects.
- *Corbeil Park Hall Report* (as included as part of the 2014 Facility Review – Township of East Ferris), 9 pages, as prepared by Mitchell Architects.
- *Corbeil Park Hall Mechanical and Electrical Report* (as included as part of the 2014 Facility Review – Township of East Ferris), 5 pages, as prepared by Anrep Krieg Desilets Gravelle Consulting Engineers Ltd.
- Make-up Air Unit shop drawing submission, dated June 24, 2015, 6 pages, as prepared by EngA (Engineered Air).

In consideration of information derived from sources as noted above, this report provides the Client with a general building description and overview of the architectural elements, while the Building Condition Assessment & Costing Chart included in this report offers additional information to assist the Client with planning for future capital investments over the next ten (10) year period. This chart is structured and includes information as follows:

- Only elements (including assemblies, systems, equipment and components) determined through review services to require replacement within the next ten (10) years have been included.
- General location, material descriptions and observations have been provided for elements as listed.
- Where available, photo numbers referencing the BCA photos in Part 6.0 of this document have been included.
- Recommended replacement timelines have been provided as follows:
  - **Immediate:** Indicative of an element hazardous to life safety, deemed to be in violation of a governing legislative requirement, detrimental to the long-term sustainability of other building components or observed to be in very poor condition.
  - **5 Years:** Associated with elements considered to be in fair condition at present though expected to deteriorate to poor condition, or to have reached their useful operational life, within the next 5 years.
  - **10 Years:** Representing elements that are presently in reasonable condition however should be assumed to have reached their useful operational life within the next 10 years.
- Order of magnitude costing has been included for replacement of items within the timelines as indicated (immediate, 5 years or 10 years). Costs as provided are based on current, industry standard, order of magnitude pricing and do not include any escalation/inflation premiums related to the recommended timeline

for replacement. It is strongly recommended that the Client's capital budget planning allow for a 5% annual construction cost increase.

3.1 BUILDING DESCRIPTION

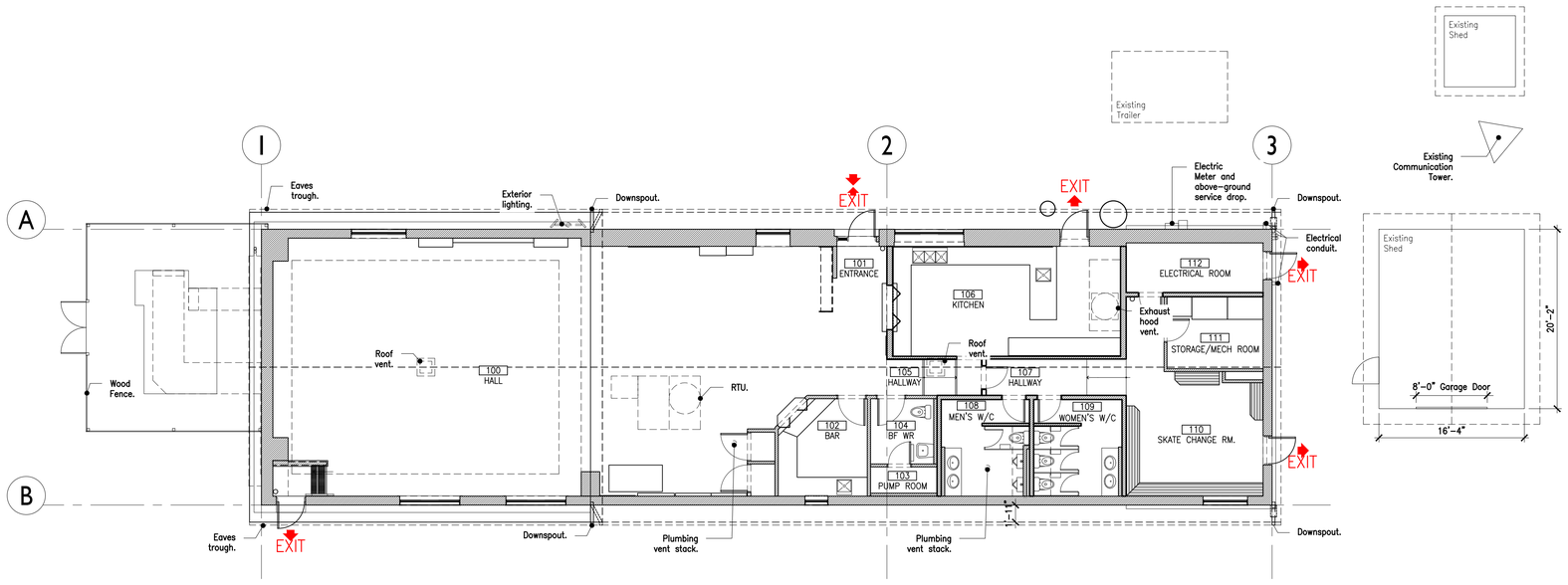
The Corbeil Park Hall is a single-storey building constructed of concrete masonry block and wood-framing with a gross floor area of approximately 3,519s.f. As shown on the drawings included in this report, the building floor plan includes a large open public space (hall), main entrance, kitchen, bar, men's, women's and barrier-free washrooms, skate change room and mechanical and electrical service rooms. Based on information derived from prior building reports, the building is assumed to have been constructed in multiple phases during the 1970's, with a major exterior retrofit and renovation of the washrooms and skate change room completed in 2013.

The hall portion of the building is understood to be used primarily for public gatherings by the Club Action 50+, Township of East Ferris, and other public and private groups, while the skate change room and washrooms are accessible to the public through a separate entrance/exit door. Under the Ontario Building Code (O.B.C.), the major occupancy classification of the building is Group A, Division 2, Assembly Occupancy.

3.1 AS-BUILT DRAWINGS

For general information and reference purposes, refer to the following as-built drawings as have been prepared based on field measurements, observations and photographic inventory obtained during LEA's initial site visits on January 10th and 17th:

- A300 – Existing Site Plan
- A301 – Existing Main Floor Plan
- A302 – Existing Main Floor Reflected Ceiling Plan

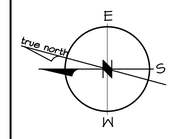


REVISIONS

No.	Date	Description
-	-	-

PRELIMINARY ONLY

Not for Construction



LAROCQUE ELDER ARCHITECTS, ARCHITECTES INC.
WWW.LEAINC.COM
LEA
188 5TH AVENUE E., NORTH BAY, ON, CANADA, P1B 1N6
T 705 497 9191

PROJECT

Corbeil Park Hall
BCA

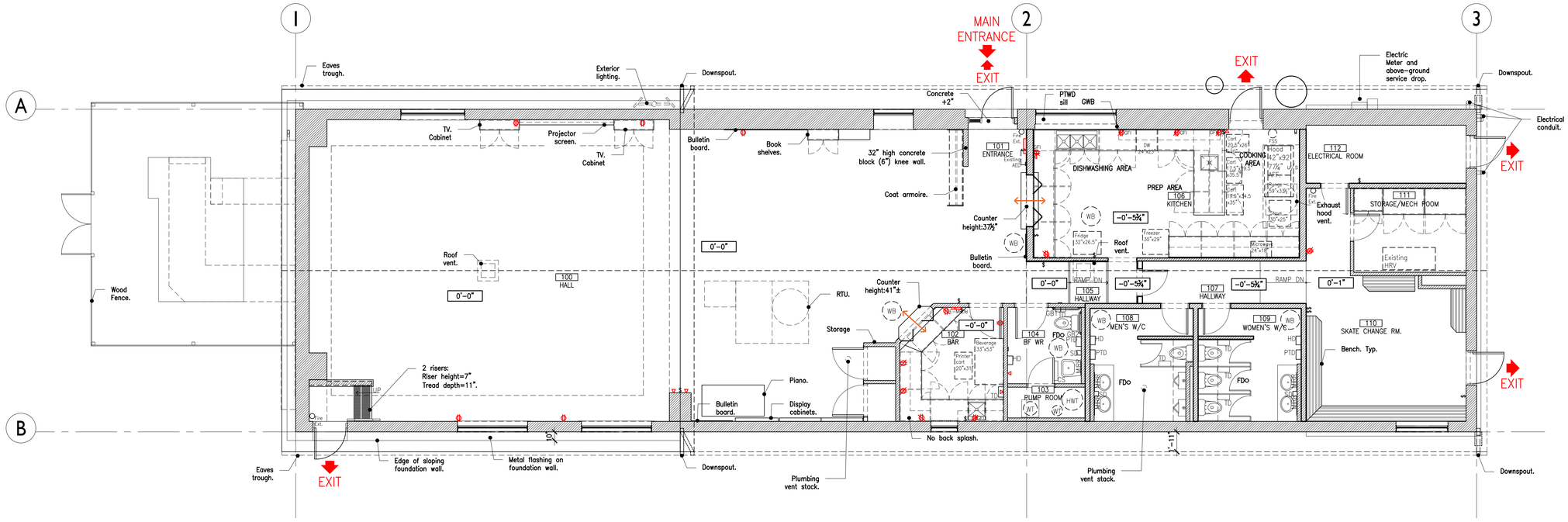
Corbeil, ON

SCALE: not to scale
DRAWN: LEA

DATE: Winter 2023

TITLE: Existing Site Plan

DRAWING: A100
PROJECT: 22034



REVISIONS

No.	Date	Description
-	-	-

PRELIMINARY ONLY

Not for Construction

LAROCQUE ELDER ARCHITECTS, ARCHITECTES INC.
WWW.LEAINC.COM
LEA
188 5TH AVENUE E . NORTH BAY . ON . CANADA . P1B 1N6
T 705 497 9191

PROJECT

Corbeil Park Hall
BCA

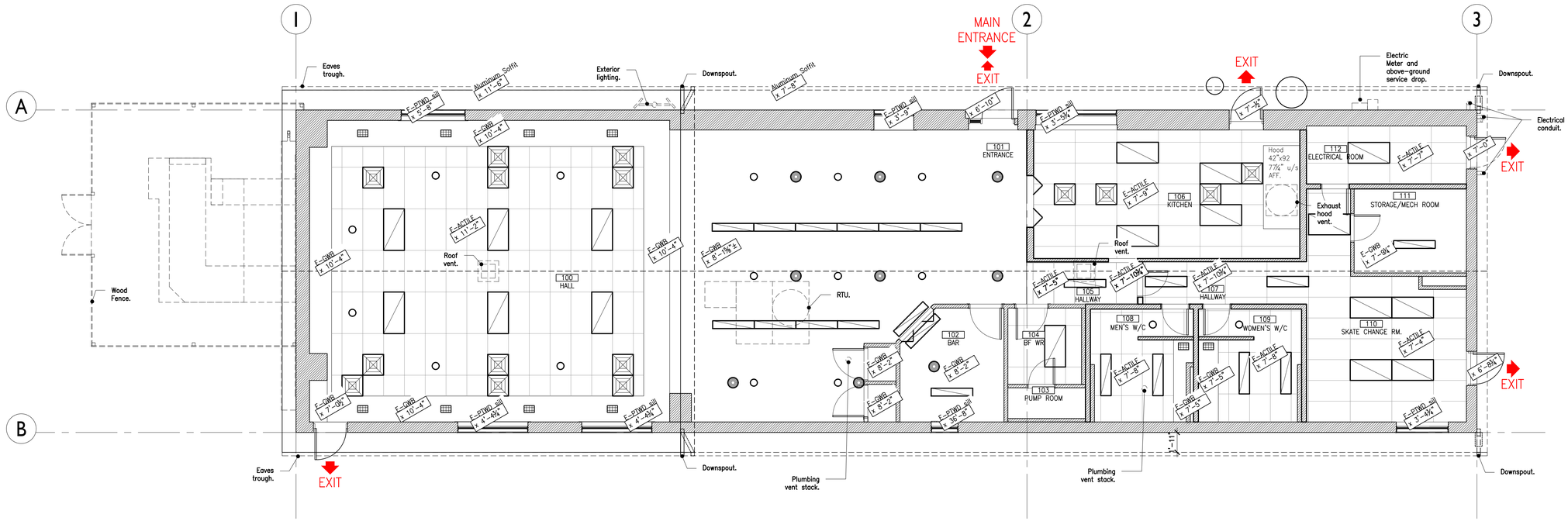
Corbeil, ON

SCALE: not to scale
DRAWN: LEA

DATE: Winter 2023

TITLE: Existing Main Floor plan

DRAWING: A101
PROJECT: 22034



REVISIONS

No.	Date	Description
-	-	-

PRELIMINARY ONLY

Not for Construction

LAROCQUE ELDER ARCHITECTS, ARCHITECTES INC.
WWW.LEAINC.COM
LEA
188 5TH AVENUE E. · NORTH BAY, ON, CANADA, P1B 1N6
T 705 497 9191

PROJECT

Corbeil Park Hall

BCA

Corbeil, ON

SCALE: not to scale

DRAWN: LEA

DATE: Winter 2023

TITLE: Existing Main Floor Reflected Ceiling Plan

DRAWING: A102

PROJECT: 22034

4.1 SITE

The site generally consists of a large gravel area providing access and parking for the Corbeil Park Hall, former municipal building and municipal park, as well as a small asphalt area offering limited parking and access to the Corbeil Park Hall main entrance. Two (2) storage sheds are located to the south of the main building while a fenced enclosure abutting the north end of the building encloses the exterior pad-mounted HVAC unit.

In discussions with representatives from the Township of East Ferris, poor grading, inadequate storm water management and current snow removal and stockpiling practices typically result in issues with water ponding around the building perimeter. It is also understood that during the spring melting season, water migrates into the building through grade-related door openings. In an effort to mitigate site water issues, a covered pumping chamber, complete with submersible pump was observed to have been installed outside of the Kitchen exterior door where grade appears to be at its lowest.

.1 Based on LEA's site reviews, the Client should be aware of the following site-related concerns:

- .1 The building does not have proper, O.B.C. compliant, hard-surfaced barrier-free parking (complete with signage) and a hard-surfaced barrier-free path of travel to the main entrance of the building.
- .2 The current pumping chamber and pump installation represents a public and electrical safety concern. As installed, the pump is powered by an extension cord plugged into an exterior outlet on the largest shed to the south of the building, with the extension cord wrapped around wall-mounted propane piping to keep the connection to the pump cord off the ground. The pumping chamber extends approximately 12" above adjacent grade and, when covered in snow, is not visible and should be considered a safety/tripping hazard for anyone entering or leaving the building through the immediately adjacent Kitchen door. Similarly, plastic discharge piping is surface run on the ground and could represent a potential tripping concern.
- .3 The two (2) precast concrete slabs placed at the exterior door at the Kitchen are not level and will not move uniformly in freeze/thaw cycles and represent a tripping hazard.
- .4 As also addressed in the Building Exterior overview below, there do not appear to be enough aluminum downpipes to efficiently discharge all the roof rainwater and snow melt collected in aluminum eavestroughs installed along the west and east sides of the building. Furthermore, downpipes do not extend away from the building, or rest on concrete splash pads, leading to erosion at all downpipe discharge locations. Snow piling at downpipe openings during winter months, and the absence of proper drainage swales, further prevents collected roof rainwater and snow melt from moving away from the building.
- .5 The fenced enclosure around the exterior pad-mounted HVAC unit at the north end of the building has heaved, likely as a result of concrete post foundations that were not installed below the frost line or provided with frost-protection installation. Further heaving could hinder winter and spring operation of the large gate providing access to the enclosure.

4.2 BUILDING EXTERIOR

Further to extensive roofing, cladding and window and door replacement work in 2012 and 2013, the building generally appeared to be in good to fair condition.

.1 General exterior finish observations and comments are as follows:

- .1 As observed from the ground, fiberglass asphalt shingles (over the entire roof area), aluminum fascia and vented aluminum soffit materials generally appear to be in good condition.
- .2 With the exception of localized damage, seamless aluminum eavestroughs and downpipes generally appear to be in good condition.
- .3 The entire building is clad with vertical hardboard siding, complete with aluminum and vinyl flashings and trims. The cladding appears to be in reasonably good condition with only a few cracked boards observed.
- .4 With the exception of the exterior door at the Kitchen, commercial-grade metal door and frame systems at all building entrances/exits are in fair condition. The exterior door at the Kitchen is a residential-grade, insulated metal door complete with vinyl-clad frame that appears to be reaching its useful life.
- .5 Building windows are a combination of fixed, horizontal slider and single-hung vinyl units with double-glazed insulating glass units. Windows appeared in good condition though a few screens were observed to have small holes.

.2 Based on LEA's site reviews, the Client should be aware of the following building exterior concerns:

- .1 A number of small exterior openings were observed around the perimeter of the building. These openings, in cladding and soffit materials and at door openings, provide opportunity for small rodents, birds, batts and insects, to enter into the building and cause damage or create unhealthy environments. In particular, the Electrical Room was heavily littered with mouse droppings, both on the concrete floor slab and in the attic space as evidenced by droppings visually observed on the top-side of the plastic roof system vapour barrier.
- .2 As noted by one of the representatives from Township of East Ferris, an ongoing, periodic roof leak (in the Hall) is understood to have been experienced for quite some time, with the water ingress source believed to relate to one of the existing roof-mounted mechanical units. Based on observations from the ground, best-practice roofing techniques to direct water away from roof-top mechanical equipment (such as crickets and flashings) has not been incorporated into the roofing work and there are penetrations through the roof that do not appear to be properly flashed or sealed.
- .3 As described in the Site overview above, there do not appear to be enough aluminum downpipes to effectively discharge all the roof rainwater and snow melt collected in aluminum eavestroughs installed along the west and east sides of the building. Furthermore, downpipes do not extend away from the building, or rest on concrete splash pads, leading to erosion at all downpipe discharge locations. Snow piling at downpipe openings during winter months, and the absence of proper drainage swales, further prevents collected roof rainwater and snow melt from moving away from the building.
- .4 Notable ice damming was observed during the January 25th visual assessment. Ice damming is typically indicative of a lack of attic insulation or inadequate roof ventilation. As noted in the Building Interior overview below, interior investigation

work appears to substantiate inadequate attic insulation or insulation materials that are not continuous and uniform.

Effective attic ventilation must be a balanced combination of venting at the low and high roof levels. Vented aluminum soffit was commonly observed around the perimeter of the building however insulation or other construction methods or materials could be restricting this low-level ventilating means. At the high level, the existing small gable end vents, in combination with two (2) louvered, penthouse-style roof vents, is not believed to be adequate based on the insulated ceiling area of the building.

.5 The main entrance/exit door into the Hall portion of the building does not meet the minimum head clearance requirements of the Ontario Building Code (O.B.C.).

4.3 BUILDING INTERIOR

The building interior appears to be generally well maintained. The Skate Change Room and Washrooms (men's, women's and barrier-free) were renovated in 2013 and are in relatively good condition while the Hall, Kitchen and Bar are also in reasonable condition with certain components nearing their life expectancy.

.1 General interior finish observations and comments are as follows:

.1 Drywall wall finishes are typical in the Hall and Bar while drywall has been used in combination with painted concrete block in the Kitchen. Exposed concrete block provides a durable wall finish in the Skate Change Room and Electrical Room. Painted concrete block and wall tile finishes are present in the Men's and Women's Washrooms with drywall and wall tile finishes provided in the Barrier-free Washroom. Isolated drywall cracks were observed, most notably at the mechanical enclosures in the northwest and northeast corners of the Hall. Drywall cracks are believed to be cosmetic however, as recommended in the Structural Building Condition Assessment, further investigation should be completed to verify there is no underlying structural concern.

.2 Drywall and acoustic ceiling tiles of various types/patterns are common in all spaces except for storage and mechanical/electrical service rooms. Extensive drywall cracking was apparent at the ceiling bulkhead in the Hall. These drywall cracks are believed to be cosmetic however, as recommended in the Structural Building Condition Assessment, further investigation should be completed to verify there is no underlying structural concern.

.3 Sheet flooring and rubber floor tile, of various vintages, are prevalent throughout the building, with the concrete floor slab exposed in the Electrical Room.

With the exception of the small ramp in Hall 105 (outside of the Kitchen), sheet flooring appeared to be in fair condition with isolated minor cuts, staining and surface damage observed. Flooring seams were observed to be welded in the Kitchen to provide a water-tight finished condition however flooring seams were not observed to be welded in any other location. Sheet flooring at the ramp in Hall 105 is in poor condition.

Rubber floor tile flooring in the Skate Change Room was generally observed to be in good condition though isolated rubber floor tiles were observed to be lifting at tile interfaces/seams.

4" high coved rubber floor base, in good condition, typically complemented sheet flooring and rubber floor tile installations.

.4 With the exception of the commercial-grade metal door and frame system at the Barrier-Free washroom, the balance of interior doors are residential-grade hollow-core wood doors in wood framing systems of varying conditions and qualities.

.5 Door hardware consisted of a mix of commercial and residential-grade components.

.6 Extensive millwork in the Kitchen and Bar, including residential-grade melamine and plywood cabinetry and plastic laminate countertops, has all appeared to have reached its useful life.

Vanity millwork and hard-surface countertops in the Men's and Women's Washrooms were observed to be in good condition.

.7 Interior sealant work was typically observed to either be absent, or require sealant renewal work at all plumbing fixtures, millwork countertops, around interior perimeter of windows and at all interior trim work.

.2 Based on LEA's site investigation, and further review work, the Client should be aware of the following building, life and fire safety concerns:

.1 In consideration of the original (assumed) 1970's construction, hazardous materials including, but not necessarily limited to, asbestos, lead lead-based paint and mold should be assumed to be present to some extent. The Client should arrange to have a Designated Substances Survey completed for the building. In accordance with governing legislation, including O.Reg. 278/05: Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations, a Designated Substance survey must be completed, and made available to any Contractors undertaking any renovation, servicing and / or maintenance work in the building.

.2 The building does not have a continuous and integral vapour barrier installed at the underside (warm side) of the roof trusses. Through removal of isolated ceiling tiles, (approximately 8 locations throughout the building), a number of locations were observed where the plastic vapour barrier has been torn, cut or damaged, or has not been properly sealed at seams. In its present state, this current condition will allow warm air from within the building to migrate into the cooler attic space resulting in condensation that could propagate mold and / or material rot within the attic space.

.3 As observed through larger holes in the roof system vapour barrier, it appears as though the roof system insulation, installed at the bottom cord of the roof trusses/framing, is inadequate and/or not continuous and uniform, resulting in excessive heat loss, increased heating requirements, higher operating costs and occupant discomfort.

.4 Building exiting should be reviewed relative to dead-end corridor situations in Hallway 107 (accessing the washrooms) and the hallway leading to the Storage/Mechanical Room and Electrical Room. Existing dead-end corridors are further concerning based on the current locking hardware installed on the door in Hallway 107 separating the gathering Hall proper from the Skate Change Room. These dead-end corridor and door hardware installations represent a safety concern in an emergency exiting scenario.

.5 As noted in item 4.3.1.3 above, the resilient sheet flooring on the small ramp in Hall 105 is in very poor condition and cracking represents a safety/trip hazard. The slope of this ramp also exceeds the requirements of the O.B.C. however, increasing the length of the ramp (to reduce the slope) does not appear to be viable within the limitations of the current floor plan layout.

.6 The handrail bracket at the bottom of the 3-riser exit stair in the northwest corner of the Hall is loose or damaged and may not be capable of supporting weight-bearing loads as required by the O.B.C. Furthermore, the construction of the handrail does not conform with current O.B.C. requirements as the cross-sectional dimension of handrail exceeds the maximum permitted by the O.B.C. and the handrail does not return back to the wall at either the top or bottom of the stair.

.7 As noted in item 3.1.3 above, isolated rubber floor tiles were observed to be lifting at tile interfaces/seams in the Skate Change Room. Lifting floor tiles could be a direct result of water/moisture getting trapped between the underside of the rubber floor tiles and the underlying concrete floor slab. Any water/moisture below the rubber floor tile finish could potentially be caused by surface water (from melting snow), migrating between the floor tile seams.

Furthermore, if a proper and continuous underslab vapour barrier is not present, water vapour from the underlying soils may be migrating through the concrete floor slab towards the building interior. Given the thick, non-porous makeup of the rubber floor tiles, in conjunction with tightly butt seams, the rubber floor tile finish could be acting as a vapour barrier and therefore trapping this migrating water vapour below the rubber floor tile finish.

.8 With the exception of lever hardware installed on the storage closet doors in the Hall, the balance of interior door hardware generally does not allow for operation with a closed fist (i.e. knobs and pull handles) as per current O.B.C. requirements. Additionally, pull handles and dead-bolt thumb-turn locks are typically installed higher than permitted by the O.B.C.

.9 Wall-mounted hooks in the Skate Change Room are not safety hooks that will collapse when subjected to a maximum weight.

P001 - Aerial View

P002 - East Elevation

P003 - East Elevation

P004 - Southwest Corner

P005 - West Elevation

P006 - West Elevation

P007 - Northeast Corner

P008 - Northeast Corner

P009

P010

P011

P012

P013

P014

P015

P016

P017

P018

P019

P020

P021

P022

P023

P024

P025

P026

P027

P028

P029 - Hall 100

P030 - Hall 100

P031 - Hall 100

P032 - Hall 100

P033 - Hall 100

P034 - Hall 100

P035 - Hall 100

P036 - Hall 100

P037 - Hall 100

P038 - Hall 100

P039 - Hall 100

P040 - Entrance 101

P041 - Entrance 101

P042 - Entrance 101

P043 - Bar 102

P044 - BF WR 104

P045 - BF WR 104

P046 - BF WR 104

P047 - BF WR 104

P048 - Hallway 105

P049 - Hallway 105


P050 - Hallway 105


P051 - Hallway 105


P052 - Hallway 105

P053 - Hallway 105

P054 - Kitchen 106

P055 - Kitchen 107

P056 - Kitchen 108

P057 - Kitchen 108

P058 - Kitchen 106

P059 - Kitchen 106

P060 - Kitchen 106

P061 - Kitchen 106

P062 - Hallway 107

P063 - Hallway 107

P064 - Men's WC 108

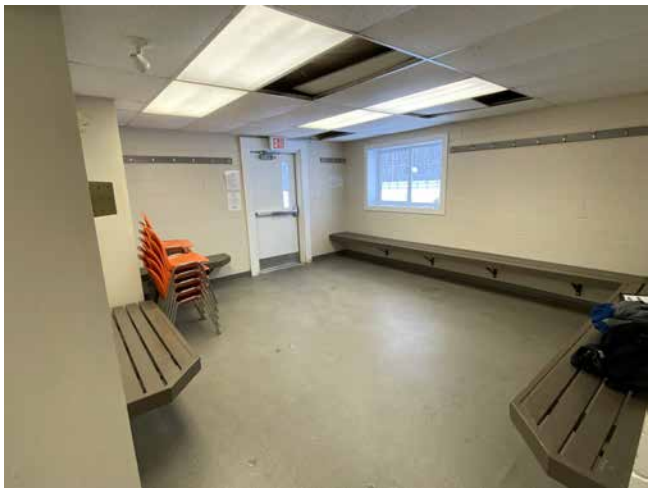
P065 Men's WC 108

P066 Men's WC 108

P067 - Men's WC 108

P068 - Women's WC 109

P069 - Women's WC 109



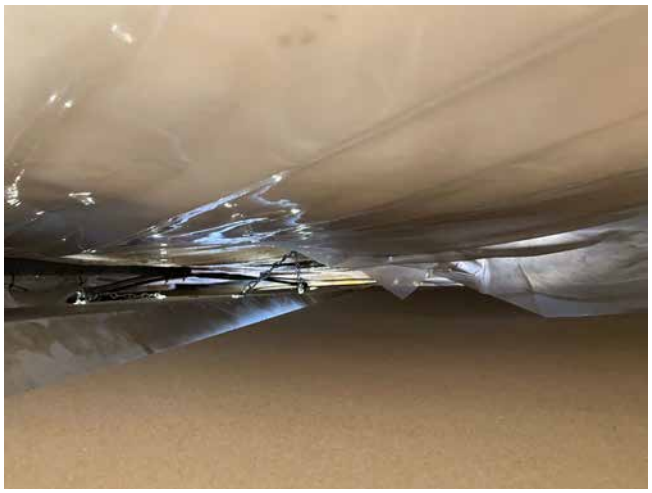
P070 - Skate Change Rm. 110

P071 - Skate Change Rm. 110

P072 - Skate Change Rm

P073 - Skate Change Rm.

P074 - Skate Change Rm. 110



P075 - Skate Change Rm. 110

P076 - Skate Change Rm. 110

P077 - Skate Change Rm. 110

P078 - Skate Change Rm. 110

P079 - Skate Change Rm. 110

P080 -Skate Change Rm. 110

P081 - Skate Change Rm. 110

P082 - Skate Change Rm. 110

P083 - Skate Change Rm. 110

P084 - Skate Change Rm. 110

P085 - Skate Change Rm. 110

P086 - Skate Change Rm. 110

P087 - Skate Change Rm. 110

P088 - Skate Change Rm. 110

P089 - Storage & Mech. Room 111

P090 - Electrical Room 112

P091 - Electrical Room 112

P092

P093

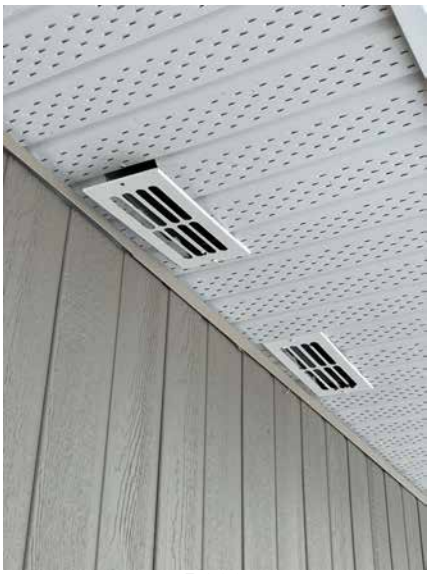
P094

P095


P096


P097


P098


P099

P100

Item	Building Element / Concern	Location	Material Description	Photo(s)	Recommended Replacement Timeline	Order of Magnitude 2023 Replacement Cost	Comments
	Architectural						
1.1	Pumping Chamber and Discharge Hose	Site, outside of Kitchen Exterior door	Existing plastic pumping chamber c/w surface run discharge hose, electric pump and electrical extension cord.	P095, P096, P097	**IMMEDIATE**	$5,000	*Current electrical extension cord connection, pump chamber position above finished grade and surface run discharge hose are all considered to be electrical and public safety hazards.* *Pump chamber should be made flush with existing grade and fitted with a proper cover. New buried electrical to a post-mounted, exterior grade GFCI receptacle should be provided and discharge hose should be buried or covered to eliminate any potential tripping concern.*
1.2	Site Grading	Immediate perimeter of building	Existing and new granular material.	P092, P093, P096, P097	**IMMEDIATE** ***(complete in conjunction with item 2.1)***	$25,000	*Regrade existing granular material around the perimeter of the building and introduce drainage swales and/or new weeping tile (subdrains) complete with additional granular material as required to direct water away from the builidng and eliminate ponding.*
1.3	Hardsurface Parking and Barrier-free Path of Travel	Near building main entrance	New Asphalt.	P093	**IMMEDIATE**	$20,000	*New, O.B.C. compliant asphalt barrier-free parking, complete with signage as required, and asphalt barrier-free path of travel to the builidng main entrance.*
1.4	Fenced Enclosure at HVAC Unit	Abutting north end of the building	Existing wood fencing panels and gate c/w new concrete pier foundations.	P008, P009, P010, P028	5 years	$15,000	*Remove and salvage existing fence panels and gate construction and replace exisitng concrete foundations with new concrete piers to below the frost line or provide insulation protection as required.* *Re-stain fence panels and gate.*
2.1	Roof-water Collection and Discharge	Entire building	Existing and new aluminum eavestrough and downpipe work complete with new concrete splash pads or rip-rap.	P009, P022, P024, P028, P098	**IMMEDIATE** ***(complete in conjunction with item 1.2)***	$5,000	*Replace damaged portions of existing aluminum eavestrough.* *Introduce additional aluminum downpipes to allow for uniform discharge of collected rainwater.* *Provide aluminum downpipe extensions at discharge location of all aluminum downpipes (new and existing) and terminate downpipes at concrete splash pads or rip-rap to mitigate erosion.*
2.2	Roof System Leaks	At roof-top mechanical units and penetrations through the roof	Asphalt shingles, new metal flashings and exterior-grade sealant materials.	P031, P092, P093, P100	**IMMEDIATE**	$5,000	*Identify and patch current roof leak.* *Introduce crickets and flashings at roof-top mechanical units to direct water away from the units.* *Seal all penetrations through the roof.* *Patch and paint drywalled ceiling in Hall.*
2.3	Roof Venting	Entire building	New and exisitng roof vents	P001, P002, P011, P012, P013, P027	**IMMEDIATE** ***(complete in conjunction with item 3.2)***	$5,000	*Introduce a three (3) additional penthouse style roof vents, to match existing, near the roof ridge.* *Verify vented aluminum soffit is not blocked and allows for airflow to penthouse style roof vents at the roof ridge.* ***Note: In the best interest of eliminating ice damming at the roof eaves, this work must be completed in conjunction with item 3.2 - Roof System Vapour Barrier and Insulation.***
2.4	Exterior Main Entrance / Exit Door	Buildng main entrance	New commercial-grade metal door and frame system c/w hardware.	P019, P041	**IMMEDIATE**	$10,000	*Construction alterations at main entrance / exit as required to accommodate a higher exterior door system that meets the Ontario Building Code (O.B.C.) requirements for headroom.* *Provide new commercial-grade insulated metal door and thermally-broken pressed steel frame c/w threshold, perimeter weatherstripping, new entrance hardware and interior exit device (panic bar).* *Reuse existing power door operator and actuator buttons.*
2.5	Sealing at Exterior Façade	Exterior of builidng	Existing hardboard siding, vented aluminum soffit and metal door and frame systems.	P014, P015, P021, P023, P026, P099	**IMMEDIATE**	$13,000	*Replace broken hardboard siding and seal any holes or openings in the cladding.* *Adjust fit of vented aluminum soffit panels and secure as required.* *Provide new weatherstripping, door sweeps and thresholds at exterior door and frame systems.* *Complete exterior joint sealant renewal work at all door and window openings and any other material interfaces.*
2.6	Window Screens	All window units	New fiberglass mesh insect screens in existing vinyl window openings.	P017, P085	**IMMEDIATE**	$500	*Rescreen all damaged window screens.*
2.7	Remaining Exterior Entrance / Exit Doors	All exterior doors except the main entrance / exit, as addressed in item 2.4.	New commercial-grade metal door and frame systems complete with hardware.	P020, P023, P024, P025	10 years	$10,000	*Provide new commercial-grade insulated metal door and thermally-broken pressed steel frames c/w threshold, perimeter weatherstripping and new door hardware.*
2.8	Asphalt Roof Shingles	Entire roof area	New fiber glass asphalt roof shingles.	P092	10 years	$40,000	*Replace existing shingles (as may have reached their life expectancy) with new fiberglass asphalt roof shingles* *Reuse existing penthouse style roof vents.*
2.9	Hardboard Siding Finish	Entire building	Existing hardboard siding.	P009, P022, P024, P028	10 years	$10,000	*Clean and repaint all existing hardboard siding with isolated board replacement work as may be required.*
3.1	Interior Building Materials and Finishes	Entire building	-	-	**IMMEDIATE**	$6,000	*Retain the services of a Hazardous Materials Consultant to complete a Designated Substances survey and report for the exisitng buildng.*

Item	Building Element / Concern	Location	Material Description	Photo(s)	Recommended Replacement Timeline	Order of Magnitude 2023 Replacement Cost	Comments
	Architectural						
3.2	Roof System Vapour Barrier and Insulation	Entire building	New roof system vapour barrier, new blown-in attic insulation, new drywall ceiling and new acoustical ceiling tile finishes and new drywall bulkheads complete with control joints. ***(Note: new lighting will also be provided by completing this work in conjunction with Electrical item 3.1)***	P051, P052, P059, P061, P073, P074, P075, P076, P077, P078, P080	**IMMEDIATE** ***(complete in conjunction with architecutral item 2.3 and electrical item 3.1)***	$100,000 ***(plus $5,000 for roof venting work per architectural item 2.3 and $50,000 for new LED lighting as per Electrical item 3.1)***	*Remove all existing gypsum wallboard (drywall) ceiling and bulkhead finishes, acoustical ceiling tile grid finishes, plastic vapour barrier and blanket insulation materials.* ***Note: Remediation work to address mouse/rodent feces and potentially mould growth in the attic space may be required and is not included in the order of magnitude cost estimate.*** *Install roof baffles in truss cavities as required to ensure soffit venting is not restricted by new attic insulation. Provide new, continous 6mil. polyethylene vapour barrier at the underside of the roof trusses. Reinstate drywall ceiling and bulkhead finishes, complete with control joints at locations where past cracking has occured, and new acoustical ceiling tile finishes. Provide blown-in fiberglass insulation in entire attic space to meet current O.B.C. requirements.* ***Notes: 1. In the best interest of eliminating ice damming at the roof eaves, this work must be completed in conjunction with item 2.3 - Roof Venting. 2. As this work will require removal and replacement of all of the exisitng finished ceilings, new LED lighting upgrades should also be completed at the same time as per Electrical item 3.1.***
3.3	Dead-end Corridors and Exiting	Hallway 107 (outside of the washrooms) and the hallway leading to the Storage/Mechanical Room and Electrical Room.	-	P049, P063, P079	**IMMEDIATE**	$15,000	*Construct a new drywall partition complete with commercial-grade metal door and frame system and commercial-grade hardware to eliminate the dead-end corridor leading to Storage/Mech. Room 111 and Electrical Room 112. As a temporary solution, remove the existing locking hardware on the door in Hallway 107 to allow for free egress, in both directions at all times, and also provide access to the barrier-free washroom for members of the public using the Skate Change Room.*
3.4	Door Replacement	Electrical Room door.	New commercial-grade metal door and frame system c/w hardware.	P090, P091	**IMMEDIATE**	$2,000	*Replace existing Electrical Room door with new, commercial-grade, solid-core wood door and metal frame, complete with commercial-grade locking hardware.*
3.5	Door Hardware Replacement	Storage/Mechanical Room 111 door.	New commercial-grade lever hardware	P045, P049, P064, P090	**IMMEDIATE**	$2,500	*Replace existing knob hardware with new O.B.C. compliant, commercial-grade locking lever hardware.*
3.6	Interior Stair Handrail	Small stair in Hall 103.	New wood or metal handrail.	P036, P037	**IMMEDIATE**	$1,000	*Remove existing handrail and provide new O.B.C. compliant metal handrail complete with mounting brackets.*
3.7	Flooring at Ramp	Hallway 107	New safety sheet flooring.	P053	**IMMEDIATE**	$1,000	*Remove existing cracked and deteriorated resilent sheet flooring and replace with new safety sheet flooring.*
3.8	Interior Sealant Renewal	Entire building	Sealant renewal at existing plumbing fixtures, millwork countertops, interior perimter of windows and doors and interior trim work.	P038, P039, P042, P046, P047, P067	**IMMEDIATE**	$2,500	*Interior sealant installation and/or renewal at all plumbing fixtures and millwork countertops as required to maintain watertightness and around interior perimeter of windows and doors to minimize air infiltration.*
3.9	Hooks in Skate Change Room	Skate Change Room 110	New collapsable metal hooks.	P087, P088	**IMMEDIATE**	$600	*Replace all hooks in the Skate Change Room with new, collapsable safety hooks.*
3.10	Millwork Replacement	Bar 102 and Kitchen 106	New millwork and countertops	P043, P054, P055	5 years	$60,000	*Replace all existing*
3.11	Rubber Floor Tiles	Hallway 107 and Skate Change Room 110	New vapour-permeable flooring material.	P082, P083, P084	5 years	$8,500	*Remove existing rubber floor tile finish in Hallway 107, Men's WC 108, Women's WC 109 and Skate Change Room 110. Examine underlying concrete floor slab for any signs of mould and / or damage.* ***Note: no costs have been included for any mould remediation or repairs to the concrete floor slab.*** *Install new vapour-permeable flooring in rooms as noted.*
3.12	Interior Painting	Entire builidng interior	Gypsum wallboard and concrete block surfaces	-	5 years	$20,000	*Repaint entire building interior including, walls, partitions, ceilings, bulkheads, doors and frames.*
3.13	Resilent Sheet Flooring Replacement	Hall 100, Entrance 101, Bar 102, B.F. WR 104, Hallway 105 and Kitchen 106	New resilient sheet flooring and safety sheet flooring.	-	10 years	$30,000	*Replace existing resilient sheet flooring in Hall 100, Entrance 101, Bar 102, B.F. WR 104 and Hallway 105 with new resilient sheet flooring c/w welded floor seams. Replace existing resilient sheet flooring in Kitchen 106 with new safety sheet flooring c/w welded floor seams.*

This work is intended solely for the Client, the Club Action 50+ East Ferris. The scope of work and related responsibilities are defined in the body of the report and any proposals issued to the Client. Any use which a third party makes of this work, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Decisions made or actions taken as a result of our work shall be the responsibility of the parties directly involved in the decisions or actions. Any third-party user of this report specifically denies any right to any claims, whether in contract, tort and/or any other cause of action in law, against the Consultant (including Sub-Consultants, their officers, agents and employees).

The work reflects the Consultant's best judgement considering the information reviewed by them at the time of preparation of this document. Unless otherwise agreed in writing by Larocque Elder Architects, Architectes Inc., this document shall not be used to express or imply warranty as to the fitness of the property for a particular purpose. This is not a certification of compliance with past or present regulations. No portion of this report may be used as a separate entity; it is written to be read in its entirety.

This work does not wholly eliminate uncertainty regarding the potential for existing or future costs, hazards or losses in connection with the property. No physical or destructive testing and no design calculations have been performed unless specifically recorded. Conditions existing but not recorded were not apparent given the level of study undertaken. Only conditions actually seen during examination of representative samples can be said to have been appraised and comments on the balance of the conditions are assumptions based upon extrapolation. We can perform further investigation on items of concern if required.

Only the specific information identified has been reviewed. The Consultant is not obligated to identify mistakes or insufficiencies in the information obtained from the various sources or to verify the accuracy of the information.

Larocque Elder Architects, Architectes Inc. is not investigating or providing advice about pollutants, contaminants or hazardous materials.

Corbeil Hall
Mechanical, Electrical, and Structural
Building Condition Assessment

Suppa Engineering Project No.:
22-171

PROJECT CONTACTS:

Contact:	**Patrick Rochefort, P.Eng.** Structural Engineer Suppa Engineering 592 Cassells, North Bay, ON.	**Brenden Wendover, P.Eng.** Mechanical Engineer Suppa Engineering 592 Cassells, North Bay, ON
Email:	prochefort@suppaengineering.ca	bwendover@suppaengineering.ca
Phone:	705.707.2121	705.707.2121.

1. INTRODUCTION

1.1. BACKGROUND

1. Suppa Engineering was retained by Larocque Elder Architects Inc. (LEA) to conduct an independent preliminary building condition assessment of the Mechanical, Electrical, and Structural building components of the Corbeil Park Hall, located at 392 Hwy #94, Corbeil, ON. This document is intended to be read in conjunction with the Architectural Building Condition Assessment (ABCA) authored by LEA, to minimize repeated information.

1.2. SCOPE OF WORK

1.2.1. MECHANICAL AND ELECTRICAL SCOPE OF WORK

1. The building review has been carried out relative to the provisions as indicated in the specific codes referenced, as well as good engineering practice.
2. Further information regarding reviewed documents (as provided by LEA) can be found in section 2.1 Project Description and 2.2 Project Tasks and Deliverables of the ABCA authored by LEA.

1.2.2. STRUCTURAL SCOPE OF WORK

1. Professional Engineers Ontario's (PEO) guide for *Structural Condition Assessment of Existing Buildings and Designated Structures* defines a "Preliminary Assessment" as one that results in the preparation of a written report based on a condition survey of the building, and is qualitative rather quantitative in nature, and means that the assessment is based on visual review. The scope of this structural assessment therefore only included a visual cursory review of the readily visible portions of the building's structure.

2. Where defects are noted in finishes, it is to highlight locations where this may indicate defects with the underlying structure. Deficiencies directly associated with finishes are referenced in the ABCA by LEA.

3. The overall scope of work for the assessment was as follows:
    1. Gather existing available information pertaining to the building and property, including but not limited to existing drawings, previous assessment reports, Orders, etc. The Client is responsible for making these documents available to the Consultant upon award of the work.
    2. Complete a site visit to review the current conditions of the structure (completed on December 8, 2022 and January 24, 2023). This may include the visual review of:

1. Exposed exterior structural elements, such as: visible foundation walls, exterior walls, and visible portions of the roof exterior.
2. Exposed interior structural elements, such as: vertical loadbearing elements, main floor supporting systems, and main roof supporting systems.
3. Exposed interior portions of the foundation walls.

3. A visual review of the above noted elements will be carried out as follows:
    1. Visually review the condition of the structural elements of the building in order to identify types of structural defects, signs of structural distress and deformations, and signs of material deterioration.
    2. Visually review the structure in order to identify any obvious deviations from their likely intended uses, and/or misuse and abuse, which can result in overloading.
    3. Review any perceived or identified additions or alterations affecting the building structures in order to identify any potential overloading or adverse effects on the structure.
    4. Review any visible non-structural components that might affect the structure.

1.3. APPLICABLE CODES AND STANDARDS

1.3.1. MECHANICAL AND ELECTRICAL CODES AND STANDARDS

1. Mechanical and Electrical systems shall be designed and installed in accordance with applicable codes and standards, including but not limited to:
    1. Ontario Building Code (OBC)
    2. Ontario Fire Code (OFC)
    3. Ontario Electrical Safety Code (OESC)
    4. Canadian Standards Association (CSA)
    5. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
    6. National Fire Protection Association (NFPA)
    7. American Society of Mechanical Engineers (ASME)
    8. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
    9. Air Conditioning and Refrigeration Institute (ARI)
    10. Illumination Engineering Society (IES)
    11. American National Standards Institute (ANSI)
    12. Local requirements by Authorities Having Jurisdiction, including building or fire department requirements, municipal by-laws, etc.

1.3.2. STRUCTURAL CODES AND STANDARDS

1. To ensure that the assessment meets current industry standards, the following references were used, where applicable:

1. PEO Structural Engineering Assessments of Existing Buildings.
2. Ontario Structures Inspection Manual (OSIM).
3. National Research Council – Protocols for Building Condition Assessments.

1.4. METHODOLOGY

1.4.1. MECHANICAL AND ELECTRICAL METHODOLOGY

1. This report is based on existing site conditions as observed during a site visit conducted on January 24th 2023, as well as a review of all existing documentation made available to Suppa Engineering from LEA (on behalf of the client) and relevant items as listed in section 2.0 Introduction of their ABCA.
2. Destructive testing by Suppa Engineering was not undertaken and is outside the scope of this review. System performance testing was not undertaken and is also outside the scope of this review.
3. A random representative sampling of relevant areas was undertaken as part of this review.

1.4.2. STRUCTURAL ASSESSMENT METHODOLOGY

1. Exterior observations were completed from the ground, along the exterior of the building, at close proximity to the building as well as from a distance. Interior observations were completed from the floors as well as from a ladder, where required.
2. In this report, the condition of concrete, steel, wood, and masonry deterioration has been qualified based on an adaptation of the procedures described in the OSIM. Despite the fact that the OSIM provides procedures for bridge inspections, the OSIM procedures are an industry accepted standard used to help provide a detailed ranking system for quantifying the state of deterioration (i.e., Light, Medium, Severe, Very Severe).

    1. The following concrete deficiencies, as suggested in the OSIM, were considered during the assessment:
        1. Scaling – Local flaking, or loss of the surface portion of concrete or mortar as a result of the freeze-thaw deterioration of concrete.
        2. Corrosion of Reinforcement - Deterioration of reinforcement by electrolysis.
        3. Delamination – A discontinuity in the surface concrete, which is substantially separated, but not completely detached, from the larger concrete mass.
        4. Spalling – A portion of concrete that has been completely separated and detached from the larger concrete mass.
        5. Cracking – Linear fracturing of the concrete which may extend partly or completely through the member.
        6. Surface Defects – A weakness or potential weakness in the concrete. Defects include stratification, segregation, cold joints, surface deposits, honeycombing, pop-outs, abrasion, and wear.

2. The following steelwork deficiencies, as suggested in the OSIM, were considered during the assessment:
    1. Corrosion – Deterioration of the steel from exposure to air, moisture, or other chemicals and contaminants in the environment.
    2. Permanent Deformations – Bending, buckling, twisting, elongation, or any combination of these which may be caused by overloading conditions or impact.
    3. Cracking – A linear fracture in the steel due to fatigue,
    4. Connection Deficiencies – Loose, cracked, or corroded connections, and missing connectors.

3. The following wood deficiencies, as suggested in the OSIM, were considered during the assessment:
    1. Checks, Splits, and Shakes – Longitudinal tissue separations.
    2. Weathering – Gradual deterioration of wood due to exposure to the weather elements.
    3. Rot or Decay – Biological decomposition of wood caused by microorganisms called fungi.
    4. Insect Damage – Defects in wood caused by insects.
    5. Cracking, Splintering, Crushing, and Shattering – Forms of physical damage resulting from overloading of a member.
    6. Fire and Chemical Damage – Damage caused by fire and/or exposure to chemicals over time.
    7. Connection Deficiencies – Loosened or damage connections.

4. The following masonry deficiencies, as suggested in the OSIM, were considered during the assessment:
    1. Cracking – Incomplete separation into one or more parts with or without space in between.
    2. Splitting, Spalling, and Disintegration – Opening of seams or cracks in the masonry, chipping away of pieces of masonry, gradual breakdown of the masonry into small fragments.
    3. Loss of Mortar and Masonry – Due to the destructive actions of frost, erosion, plant growth, or softening by water.

3. Where deemed necessary, wood elements were probed using a sharp knife, and concrete and masonry was hammer sounded with a standard hammer.

4. Additionally, the following terms from the OSIM provide qualitative definitions of conditions:

CONDITION	DESCRIPTION
Excellent	• This refers to an element (or part of an element) that is “new” (as constructed) condition.

	• No visible deterioration type defects are present and remedial action is not required. • Minor construction defects do not constitute visible deterioration type defects.
Good	• This refers to an element (or part of an element) where first signs of "light" (minor) defects are visible. This usually occurs after the structure has been in service for several years. These types of defects would not normally trigger any remedial action since the overall performance of the elements is not affected.
Fair	• This refers to an element (or part of an element) where medium defects are visible. These types of defects may trigger a "preventative maintenance" type of remedial action where it is economical to do so.
Poor	• This refers to an element (or part of an element) where severe defects are visible. In concrete, any spalling or delamination would be considered "poor" since these defects usually indicate more serious underlying problems in the material. These types of defects would normally trigger rehabilitation or replacement if the extent and location affect the overall performance of that element.

1.5. LIMITATIONS

1.5.1. MECHANICAL AND ELECTRICAL LIMITATIONS

1. Reviewed drawings, specifications, correspondence, material, data, evaluations and reports furnished by others are expected to the free of latent deficiencies or inaccuracies.
2. Tests and detailed analysis have not been done, nor were they within the scope of work for this project. Our review is limited to the visual observations of surface conditions and did not include operations tests of any system of equipment. Deficiencies existing but not recorded in this report were not apparent given the level of review and overall scope of the project.
3. Comments and conclusions within this report represent our opinion, which has been based on an examination of the documents provided and a visual review of the conditions of the building. This review is limited to the technical performance and existing condition of the building related to the requirements of applicable codes and standards.
4. The information and opinions expressed in the report, or any document forming part of the report, are for the sole benefit of the Client.
5. No other party may use or rely upon the report or any portion thereof without our written consent and such use shall be on such terms and conditions as the consultant may expressly approve.

6. The contents of the report remain the copyright property of Suppa Engineering. The Client may not give, lend or sell the report, or otherwise make the report, or any portion thereof, available to any person without our prior written permission.
7. Any use which a third party makes of the report, are the sole responsibility of such third parties. Unless expressly permitted by Suppa Engineering, no person other than the Client is entitled to rely on this report.
8. Suppa Engineering accept no responsibility whatsoever for damages suffered by any third party resulting from use of the report without our express written permission. Decisions made or actions taken as a result of the information contained in the document shall be the responsibility of the parties directly involved in the decisions and/or actions.
9. In issuing this report, Suppa Engineering and the authors do not assume any of the duties or liabilities of the designers, builders, owner or operators of the building. Owners, prospective purchasers, tenants or others who use or rely on the contents of this report do so with the understanding as to the limitations of the documents examined and the general visual review undertaken. Such persons understand that Suppa Engineering cannot be held liable for damages they may suffer in respect to the purchase, ownership, use or operation of the building.

1.5.2. STRUCTURAL LIMITATIONS

1. The assessment consisted of a cursory visual review only and was limited to areas where structure was previously readily visible. Therefore, the assessment did not consist of a full and/or comprehensive review of all structural elements or members, but rather included a reasonable random sampling of readily available elements to allow for a general condition to be attributed.
2. Given the inaccessibility of foundation systems, a review of these elements was not carried out, beyond a visual review of any visible foundation walls or surrounding soils at grade.
3. The assessment did not consist of an Ontario Building Code review, or a review of the current structure's compliance with modern building codes (i.e., OBC, NBCC, etc.).
4. Review of the building's exterior structure was limited to readily available visible areas that could be observed from the ground. These readily available elements included visible portions of exterior face of foundation walls, exterior face of perimeter walls, and visible portions of exterior roof structure. A close-up review of the exterior portions of the roof was not completed.
5. Review of the interior structure was completed from floor level and included the use of a step stool and ladder, where required. Readily available elements of interior structure that were reviewed included interior visible portions of foundation walls, interior face of perimeter walls, and top of concrete floor slabs.
6. Access to the attic space was not available and therefore the underside of the roof structure was not reviewed.

7. Review of the exterior portions of the building between Gridlines A and B, along Gridline 1, was not possible because of an existing fence enclosure.
8. An assessment of existing small auxiliary buildings (i.e., sheds, garages, etc.) was not completed, beyond a general cursory review of the structure's general condition/stability from the exterior. None of the small auxiliary buildings were accessible at the time of review.
9. Maintenance staff noted that no crawl space was known to exist.
10. No existing finishes were removed to facilitate the review.

1.6. CONFIDENTIALITY

1. This report is intended for use only by the Larocque Elder Architects Inc. and may contain information that is privileged, confidential, proprietary or exempt from disclosure under applicable law. This report is not to be distributed to the general public.

2. BUILDING DESCRIPTION

1. The building description, size, use and occupancy classifications can be found in section 3.0 General Building Information of the ABCA by LEA.

3. MECHANICAL

3.1. PLUMBING

1. Existing Conditions

1. Building is serviced by a 1" water line from a local well (well condition unknown), complete with 20 USG expansion tank and associated pressure switching and water treatment system (as supplied by clean water solutions).

   Well water expansion tank:
   Manufacturer: Flexcon Industry
   Model No.: WWT20
   Serial No.: WWT2015690
   Capacity: 20 Gallons
   Pre-charge from Factory: 38 psi
   Current charge unknown
   Date of Manufacture: 05/09/11 (12 years old)

2. A secondary service is located in the garage for use on the ice rink. This water is not treated and it is assumed as non-potable. Pressure is provided by an independent pressure tank and associated pump, complete with pressure switch, drain own valves, etc.

3. An electric domestic hot water heater provides hot water to washroom and kitchen facilities. Hot water lines appear to be insulated where visible.

   Manufacturer: Giant
   Model No.: 172STE-3S8M-E8
   Capacity: 73.7 US Gallons
   Electrical Input: 4500 W
   Electrical Information: 240V-1PH-60Hz
   Date of manufacture: 2017-09-12 (5.5 years old)

4. Plumbing fixtures are in good to fair condition as they were replaced during a major renovation in 2013.
   1. Water closets are lower consumption tank type with vandal proof lids. Pressure assisted noted in specification for 2013 renovation. Consumption 1.6 USG per flush as per documents.
   2. Sinks have sensor operated faucets (barrier free type in barrier free washroom)
   3. Urinals are wall hung type with sensor operated flush valves (with manual override) with a consumption of 1.0 USG per flush.
   4. Standard single bowl and double bowl counter sinks found in bar area and kitchen with manually operated faucets, assumed consumption of 1.5 UGSPM.
5. A below counter grease interceptor serves the three-compartment sink in the kitchen
6. Commercial grade dishwasher does not appear to have independent grease interceptor.

2. Code Requirements & Best Practice

1. Code Requirement:
    1. Provide independent grease interceptor for the dishwasher unless prohibited by local municipal bylaw.
    2. Recommend installing a mixing valve on main domestic hot water heating unit to temper water to 120 deg. F throughout building with exception to the kitchen. Domestic hot water tank water temperature to be set to 140 to limit the growth of legionella bacteria. Refer to Photo 1.
2. Best Practices
    1. Recommend relocating existing electric baseboard heater in custodial closet as incoming water and sanitary lines (plastic) are routed so close that damage is likely should it ever turn on. Refer to Photo 2.
    2. Domestic hot water heater approaching end of useful life, replacement likely necessary within the next 2 to 5 years.
    3. Routine maintenance to be provided for well pressure switch and expansion tank. Replacements recommended to be on hand in the event of failure.
    4. It is recommended that all decommissioned equipment, piping, valves, etc. be removed of and disposed off of site. Refer to Photo 3.

3.2. HEATING VENTILATION AND AIR CONDITIONING

1. Existing Conditions

1. Gas fired equipment are serviced by individual propane tanks. Kitchen equipment gas is provided by a smaller tank (~375L) located outside of kitchen adjacent to the building, with the custom ERV unit being served by a 1000 L tank installed away from the building via an underground gas line to the unit enclosure.
2. The building is serviced by several HVAC units that provide heating, cooling and fresh air loads to the space based on the usage.
3. A single large custom propane fired Energy Recovery Ventilation (ERV) unit has been installed at grade and ducted into the space to provide fresh air into the large community hall space, this unit has been retrofitted to operate more like standard packaged air handling unit by recirculating air rather than a typical ERV which exhausts 100% of the air from the space and provides 100% fresh air with an enthalpy wheel to transfer energy between the two airstreams (heat and humidity).

    Manufacturer: Engineered Air
    Model No.: DJE40/O
    Serial No.:M15565
    Heating Cap.: 250 MBH input, 200 MBH Output (80% AFUE)
    Airflow Cap: Supply Air – 2700 cfm, Exhaust Air – 2980 cfm
    External Static Pressure: 1.5” W.C (supply), 0.75” W.C (exhaust)
    Electrical Data.: 230V-1PH-60 Hz, MOCP: 60 Amps
    Date of Manufacture: Nov. 2013 (~10 years old)

4. A secondary Heat recovery ventilator (HRV) provides fresh air to the skate change area and is tied into an electric cabinet unit heater which provides heat to the space. Heating is controlled via a local thermostat and operation of the HRV is interlocked with the electric cabinet unit heater. Unit is equipped with a 3.5 kW electric preheater in the fresh air stream to preheat the unconditioned air prior to the HRV's heat exchanger. Operation is interlocked with HRV.

   Manufacturer: Lifebreath (Not verified due to accessibility issues)
   Model No.: 300 DCS
   Airflow Cap: 200 cfm
   External Static Pressure: 0.5 " W.C.
   Electrical Data.: 120V-1PH-60 Hz
   Unit designed with 3.5 kW duct pre-heater installed on the incoming fresh air duct.
   Date of manufacture: Unknown, unit age assumed as 10 years.

5. A stand-alone air conditioning unit is mounted on the roof complete with roof curb and ducted to a portion of the community hall as well as the bar and kitchen areas. This unit appears to be equipped with an economizer section however it's setpoint and operational characteristics are unknown.

   Manufacturer: Lennox
   Model No.: CHA16-060-1P
   Serial No.: 5602E 03727
   Cooling Cap.: 5 tons (60 MBH)
   Airflow Cap.: 2000 cfm (assumed).
   Electrical Data: 208/240 V, 1PH, 60 hz
   Date of Manufacture: May 2002 (21 years old)
   Note: HCFC-22 (R22) refrigerant used. This refrigerant is now phased out of production due to it's high ozone depleting potential. It is no longer manufactured and any replacements must be done from reclaimed refrigerant from decommissioned units.

6. Commercial kitchen equipment is serviced by an NFPA 96 rated hood assembly, consisting of a self-contained fire extinguishing system tied into the hood and a roof mounted upblast fan. No information was available for the exhaust fan due to accessibility issues, however based on the age of the existing systems we're estimating the exhaust fan is over 20 years of age. No make up air was noted.

7. Washrooms are individually exhausted to the outdoors and are controlled in conjunction with the lights via an occupancy sensor. Exhaust fans were replaced during the 2013 renovation and are approximately 10 years old.

2. Code Requirements & Best Practice

1. Code Requirement:
   1. Make up air to be provided for NFPA 96 rated hood assembly, complete with interlock to fan and suppression systems. Any change in cooking operation should consider a review of existing hood's suitability including fan replacement and the addition of make up air to meet NFPA 96 code requirements. Refer to Photo 4.
   2. Provide interlock between heating and cooling systems such that simultaneous heating and cooling is prohibited.

2. Best Practices
    1. Replace roof mounted air handling unit with newer more efficient heat pump model. Existing unit is well passed its median life expectancy and due to the refrigerant used cannot be repaired without considerable costs. Consideration should be given to replacement once repair work becomes burdensome. Refer to Photo 5.

4. ELECTRICAL

4.1. POWER

4.1.1. INCOMING ELECTRICAL SERVICE

1. Existing Conditions

1. The existing main electrical services consists of an above ground feed to the building and feeds a 400A, 120/240V, 1ph, 3 wire main disconnect in the main electrical room. Refer to Photo 6.

4.1.2. ELECTRICAL DISTRIBUTION

1. Existing Conditions

1. 400A, 12/240V, 1ph, 3 wire main disconnect feeds multiple splitters and subsequent sub-panels and disconnects.
2. Panel A is a 200A, 1ph, 120/240V, 3W, 40 cct panel of unknown manufacturer. Age is unknown but unit appears original to building. Panel appears to serve a variety of lighting, and receptacle loads as well as mechanical pump loads.
3. Panel B is a 200A, 1ph, 120/240V, 3W, 40cct stab-lok panel manufactured by Federal Pioneer. Age unknown but appears to be original to building. Panel appears to serve a variety of lighting, receptacle, electric heat and mechanical loads throughout space.
4. Panel C is 100A, 1ph, 120/240V, 3W, 30 cct panel fed from a 100 amp disconnect switch, both panel and disconnect switch are manufactured by Square D. Panel C feeds some emergency lighting and electric heater loads as well as various equipment loads. Only 12 circuits are in use with 7 spares. Panel was installed during the 2013 renovation and is approximately 10 years old.
5. Garage panel is a 200A, 1ph, 120/240V, 3W, 20 cct panel manufactured by Eaton, panel is lightly loaded and services garage receptacles, water pump (for outdoor rink flooding) and various lights and heaters. Age is unknown but appears in good condition.
6. Commercial dishwasher is served with a 60A disconnect switch manufactured by cutler-hammer.
7. Outdoor ERV is served with a 60A industrial duty switch manufactured by siemens fused down to 40A.
8. A manual transfer switch is installed adjacent to main disconnect switch for future generator (not currently tied in, wiring coiled on floor). Currently set to utility power, this transfer switch feeds several disconnects, splitter, panel, timers and auxiliary electrical equipment all which appear to serve the recreational facilities outdoor lighting.

2. Code Requirements & Best Practice

1. Code Requirements & Best Practices:
    1. All electrical panels are to have working closing latches
    2. All electrical equipment is to have a minimum 1 meter working clearance
2. Best Practice – Electrical Equipment
    1. It is recommended that all electrical panels and circuit schedules be clearly labelled for identification purposes.

4.1.3. WIRING DEVICES

1. Existing Conditions

1. Receptacles located throughout building interior.
2. Wiring throughout building a mix of NMD cabling, BX armoured cable, TECK cable and plastic conduit. It is assumed that a majority of the existing building previous to the 2013 renovation is serviced by the NMD cabling from the older panels. Refer to Photo 7.
3. A number of electrical fan forced unit heaters are installed throughout the community hall space totalling approximately 10 kW (as per 2013 renovation drawings). Electric heating panels installed in the washrooms with the skate/change room being served by an electric cabinet unit heater. These items were installed during the 2013 renovation and are all approximately 10 years old. Some older fan forced heaters were noted on site at the main entrance and in the kitchen space, however their age and electrical capacities are unknown.

2. Code Requirements & Best Practice

1. Code Requirements – Wiring
    1. All wiring run in exposed areas shall be adequately protected from mechanical damage (e.g., bx wiring).
    2. All wiring run in plenum return space shall be plenum rated.
2. Best Practices:
    1. It is recommended to reduce all unnecessary exposed wiring by rerouting exposed branch circuit wiring inside wall cavities. If branch circuits are required to be run on wall surfaces, they need to be of a type that provides protection from mechanical damping.

4.2. LIGHTING

4.2.1. INTERIOR LIGHTING

1. Existing Conditions

1. Corridor: Recessed 48”x12” troffer, 2x28W T5 Lamp

2. Washrooms: Recessed 48”x24” troffer, 2x28W T5 Lamp, Pot lights with 2–26-watt quad tubes (fluorescent).
3. Kitchen: Recessed 48”x24” Troffer, 4x28W T5 Lamps (assumed)
4. Skate Change: 48”x24” Troffer, 4x28W T5 Lamps (assumed)
5. Storage: Recessed 48”x12” Troffer, 4x28W T5 Lamps (assumed)
6. Electrical: Recessed 48”x12” Troffer, 4x28W T5 Lamps (assumed)
7. Bar and Community Hall dropped ceiling area: Surface mounted 48”x12” troffer, 2x28W T5 Lamp and Pot lights with coloured flood lamps (wattage unknown).
8. Community Hall: 48”x24” Troffer, 4x28W T5 Lamps (assumed) and Pot lights with coloured flood lamps (wattage unknown).
9. Exterior Lighting: Soffit mounted pot lights with halogen style flood lights, wattage unknown.

2. Code Requirements & Best Practice

1. Code Requirements – Lighting Levels
    1. Every area where food is intended to be processed, prepared or manufactured and where equipment or utensils are intended to be cleaned shall be equipped to provide illumination to a level of not less than 500 lx measured at the floor level.
2. Best Practices:
    1. It is recommended that all interior non-LED lighting be replaced with new LED fixtures to reduce energy consumption and required maintenance.

4.2.2. LIGHTING CONTROL

1. Existing Conditions

1. Lighting control is a mix between local single pole switches and occupancy sensors.
2. Outdoor lighting control is unknown, multiple timers noted in the electrical room.

2. Code Requirements & Best Practice

1. Best Practices:
    1. It is recommended to replace storage room and janitor closet light switches with wall mounted occupancy sensor switches. Occupancy sensors increase convenience and reduce energy consumption with automatic shut off.

4.3. SECURITY AND LIFE SAFETY SYSTEMS

1. Existing Conditions

1. Security cameras were noted on building exterior.
2. No fire alarm system was noted on site.

3. Exit signs and emergency lights and battery packs were noted throughout, exit signs are older text style signs. All exits and emergency lights are older style and were not upgraded at the time of the 2013 renovation. It is assumed that emergency lights and exit signs are 10+ years of age.

2. Code Requirements & Best Practice

1. Code Requirement – Emergency/Exit Lighting Testing
    1. Emergency lights must be tested as part of the emergency lighting system to stay illuminated for a minimum of 30 minutes on battery backup. This should be done on a routine basis to ensure adequate illumination is provided in the event of a power outage. Refer to Photo 8.

2. Best Practices – Fire detectors
    1. It is recommended to install heat detectors in the kitchen, bar area, custodial closet and storage room. This should be coupled with a security system to call out to AHJ in the event of a fire.
    2. It is recommended to replace existing text style exit signs to the new running man type as the existing signs are approaching their useful life.

5. STRUCTURAL

5.1. OBSERVATIONS

1. Building Structural Systems

1. In the absence of structural drawings, the building's structural systems were reasonably assumed based on field conditions and observations. The existing roof appears to consist of a gable-end roof system, comprised of wood trusses or rafters bearing on perimeter concrete masonry unit (CMU) walls, supported by CMU foundation walls onto assumed conventional concrete strip footings. The interior floors appear to consist of concrete slab on grade.

2. General Structural Observations

1. Exterior Observations:
    1. It was noted that the existing surrounding grade near the main entrance on Gridline A, near Gridline 2, appeared to slope towards the structure. Refer to Photo 9.
    2. Select narrow to medium vertical cracks were noted in select locations of the exposed portions of foundation walls. Refer to Photo 10.
    3. Significant amounts of ice build-up were noted at select locations on the roof, near the eaves. Refer to Photo 11.
    4. The 2014 Facility Review Report completed by Mitchell Architects noted "cracks, loose and displaced block" at the "northern half of the building". Suppa Engineering did not observe such conditions during the review.
2. Interior Observations:
    1. General medium cracking in gypsum wallboard finishes was observed in several locations between Gridline 1 and 2. Refer to Photos 12 and 13.
    2. Suspected water infiltration was observed along the underside of the ceiling finishes near the display cabinets along Gridline B.
    3. General medium cracking of the slab on grade in the Electrical Room was noted. Refer to Photo 14.

5.2. DISCUSSION AND RECOMMENDATIONS

1. Based on observations noted above, generally the building structure appears to be in good to fair condition. Minor recommendations are noted below.
    1. Minor regrading of the surrounding soils should be completed at the main entrance, ensuring soils are sloped away from the structure minimum 2-3%, to mitigate water infiltration to the building.
    2. Localized aesthetic repairs to gypsum wallboard finishes are recommended and further investigation of the structure behind finishes should be completed. Structural issues are not expected, however should be confirmed.

3. Investigation of the underside of the roof structure from the attic is also recommended. Temporary means of accessing the attic will be required.

5.3. CONCLUSION

1. Our opinions are based on the information made available to us at the time of this assessment, as well as from our visual observations made during the site visit. The visual review performed could not include the inaccessible areas of the structure. We request that should any new information pertaining to this matter become available, including deviations from assumptions listed herein, that we be advised immediately, in order to evaluate this new information in conjunction with the above commentary.

6. PHOTOS

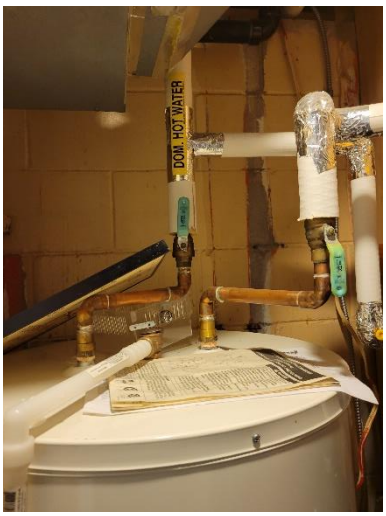


Photo 1


Photo 2


Photo 3


Photo 4

Photo 5

Photo 6

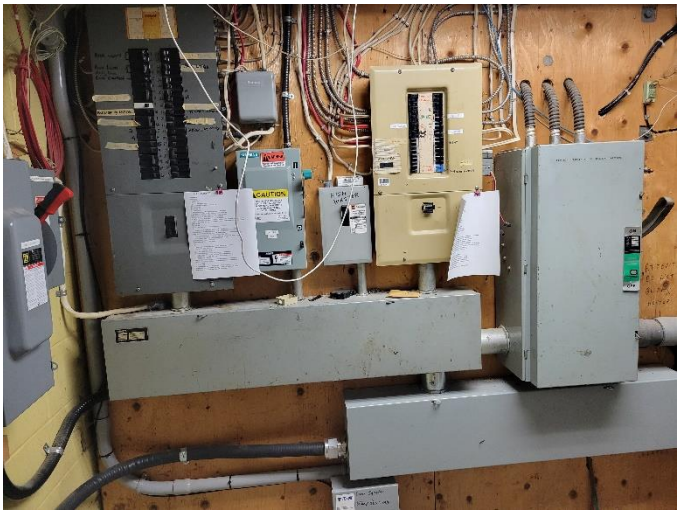


Photo 7

Photo 8

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

7. COSTING CHART

Corbeil Park Hall
Building Condition Assessment
Corbeil Park Hall

SE Project No.: 22-171

April 20, 2023

BUILDING CONDITION ASSESSMENT AND COSTING CHART

Item	Building Element	Location	Material Description	Photo	Recommended Replacement Timeline	Order of Magnitude 2023 Replacement Cost	Observations / Comments
1.0	**Structural**						
1.1	Regrading of soils	Main Entrance	Granular		**IMMEDIATE**	$5,000	
2.0	**Mechanical**						
2.1	Additional Grease Interceptor	Kitchen	New Grease Interceptor		**IMMEDIATE**	$15,000	Independent grease interceptor for commercial grade dishwasher
2.2	Mixing valve for DHWH	Custodial Closet	New Thermostatic Mixing Valve	ME Fig.1	**IMMEDIATE**	$500	
2.3	Remove Decommissioned plumbing equipment	Electrical room		ME Fig.3	N/A	N/A	Can be done by owners own forces at their leisure.
2.4	NFPA 96 Compliant Exhaust system	Kitchen	New MUA unit	ME Fig.4	5 years	$50,000	Recommend reviewing exhaust system and upgrading during next kitchen renovation to meet current code requirements
2.5	New RTU	Community Hall (roof)	New RTU	ME Fig.5	**IMMEDIATE**	$35,000 - $60,000	Replace aged RTU with new Heat pump, modifications to HVAC ductwork can be done at the time depending on budget alotment.
3.0	**Electrical**						
3.1	Lighting Upgrade	Entire Building	New LED fixtures throughout		**IMMEDIATE**	$50,000	Replace all light fixtures with an LED equivalent including updating controls and associated light fixture layouts.
3.2	Exit and Emergency Lights	Entire Building	New Exit signs and Emergency light Fixtures		5 years	$15,000	Replace older style exits and Emergency Lights
3.3	Update electrical panels	Electrical Room	New Panels	ME Fig.7	5 years	$40,000 - $60,000	Replace older obsolete panels (2) with new including all new breakers etc.