BUILDING CONDITION ASSESSMENT REPORT

Little Qualicum Hall Building,
1210 Centre Road, Qualicum Beach BC

PREPARED FOR:
REGIONAL DISTRICT OF NANAIMO
Parks Services
6300 Hammond Bay Road
Nanaimo BC V9T 6N2

Prepared by:
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HEROLD ENGINEERING

Table of Contents

BUILDING CONDITION ASSESSMENT REPORT **1**

1.0 Introduction **1**

2.0 Building Description **1**

3.0 Key Plans **2**

Aerial Photograph *2*

4.0 Scope of Building Assessment **2**

5.0 Terms of Reference and Limitations **2**

6.0 Estimated Useful Service Life **3**

7.0 Field Review Summary **3**

8.0 Field Review **5**

8.1 Landscape Areas - General 5

8.1.1 Landscaping, Sidewalks and Driveway *5*

8.2 Drainage 6

8.2.1 Site Drainage *6*

8.3 Structure 7

8.3.1 Primary Structure *7*

8.4 Building Envelope Assemblies 9

8.4.1 Exterior Walls *10*

8.4.2 ROOFING AND SOFFITS *11*

8.4.3 Windows *12*

8.4.4 Access and Service Doors *13*

8.5 Finishes & Components – Interior 14

8.5.1 Interior Components & Finishes *14*

8.6 Mechanical Systems 15

8.6.1 Domestic Plumbing *15*

8.6.2 Electrical Infrastructure Systems *16*

9.0 Recommendations **17**

1.0 INTRODUCTION

Herold Engineering Limited (HEL) was retained by the Regional District of Nanaimo to perform a visual assessment of the accessible architectural, structural, mechanical, electrical and building envelope components of the Little Qualicum Hall Building located at 1210 Centre Road, Qualicum Beach, BC. The scope of our review was visual in nature and no destructive testing was performed. HEL has not been asked to provide detailed drawings, site direction, or remediation at this time. The following report outlines the results of our field review, performed on Sept. 29th, 2017. The Owner's representative, Mark Dobbs, was on site during the assessment to assist with building access and provide an overview of the building layout.

2.0 BUILDING DESCRIPTION

The subject building is a one (1) storey wood frame structure that is used as a Community Hall Assembly building. It is approximately 1,300 sq.ft. and was built circa 1940.

The roof consists of asphalt shingles over the main hall and low slope asphalt roll roofing over the kitchen and washrooms, located at the rear of the building. The cladding is face sealed stucco, with wood trim and fascia's.

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3.0 KEY PLANS

AERIAL PHOTOGRAPH

4.0 SCOPE OF BUILDING ASSESSMENT

During the review we attempted to examine the site drainage, exterior elevations, roofing, numerous interior rooms and finishes, architectural components and assemblies. The location and general condition of mechanical and electrical systems was noted during this review; however, detailed mechanical, and electrical reviews are outside of the scope of this assessment.

5.0 TERMS OF REFERENCE AND LIMITATIONS

This report has been prepared by HEL exclusively for the Client. HEL accepts no responsibility for the improper or unauthorized use of this report by any third party. HEL, its employees, sub-consultants, and agents accept no responsibility to any other party, including contractors, suppliers, consultants and stakeholders, or their employees or agents, for loss or liability incurred as a result of their use of this report.

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HEL accepts no responsibility for any deficiency, misstatement, inaccuracy or omissions contained in this report as a result of deficiencies, misstatements, inaccuracies or omissions of persons providing information to HEL for use in this report.

This report is based on visual observations and data acquired from the Client, and is limited to major items and major maintenance activities. Private property was not inspected. Unless otherwise agreed in writing by HEL, this report shall not be used to express or imply warranty to the property for any particular purpose.

The work reflects the Consultant's best judgment in light of the information reviewed by them at the time of preparation. HEL is not providing advice about mold, mildew, pollutants, contaminants or other hazardous materials. We recommend an Environmental Consultant be retained for these services.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Herold Engineering Limited and our consultants accept no responsibility for damage, if any, suffered by any third party because of decisions made or actions undertaken based on this report.

6.0 ESTIMATED USEFUL SERVICE LIFE

Expected service life time frames referenced for the building components are based on available manufacturer's literature, warranties, theoretical industry standards, BOMA Preventative Maintenance Guidebook, and the CMHC Life Expectancy Guidelines.

All asset systems and components are subject to a wide variety of factors that affect their life expectancy including; quality of installation, quality of materials, weather conditions and quality of maintenance programs. As a result of this variation, some components may out-live their expected service life, while others may not.

None of the mechanical or electrical systems or equipment was tested during our investigation and this report reflects our best judgment in the light of the information available at the time of the study.

7.0 FIELD REVIEW SUMMARY

The roofing is due for replacement, and the exterior walls and exterior building envelope components generally appear to be in fair to poor condition. The building has small overhangs on the front and sides of the building which have provided the walls with some protection from wind driven rain.

The exterior walls are clad predominantly with face sealed stucco, with wood trim and fascias, and are in fair to poor condition. It appears that the cladding materials have been maintained and painted, however the materials are aged and showing signs of deterioration.

The interior assemblies and components including mechanical units, fixtures and fittings, flooring, walls and ceilings are in poor condition and are dated. It is our understanding that the lighting fixtures in the main hall and the emergency lighting and exit lighting were updated around 2011.

The windows do not appear to be original to the building and consist of double paned insulated glazing units (IGUs) in non-thermally broken aluminum frames and are beyond their expected service life. Due to the roof overhangs and additional plexi glass coverings, the windows appear to be in fair condition given their age. The doors were observed to be in poor condition and the stairs and handrails do not meet current code for required exiting safety or handicap accessibility.

The heating of the building is provided by electric baseboard units that appear to be aged but in serviceable condition.

Life safety items in the building include electrical safety devices, emergency lighting, and fire protection including an accessible fire extinguisher. The building does not have Handicap accessibility nor proper emergency exits as required by current building codes.

The structural components of the roof system consist of hand framed rafters with collar ties acting as the ceiling support over the hall and pre-engineered trusses over the storage and entry area. The floor system consists of a mix of 2x6 and 2x8 floor joists spanning from exterior concrete walls to interior log beams which span onto heavy timber posts. The interior posts are supported by on grade concrete pads. Framing is deteriorated and there are obvious signs of deterioration and settlement in the bathroom and kitchen areas.

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8.0 FIELD REVIEW

8.1 Landscape Areas - General

8.1.1 LANDSCAPING, SIDEWALKS AND DRIVEWAY

Estimated Useful Service Life:

- N/A years

Asset Age:

- N/A years

Estimated Useful Service Life Remaining:

- N/A years

Asset Condition:

- Good/ Fair

View from front of Hall

Asset Description

The Little Qualicum Hall is located in the Dashwood Community Park, which has well established site landscaping.

Observations/Comments

The landscaping has a variety of established native plants and lawn.

8.2 Drainage

8.2.1 Site Drainage

Estimated Useful Service Life:

- N/A years

Asset Age:

- N/A years

Estimated Useful Service Life Remaining:

- N/A years

Asset Condition:

- Serviceable

View from front of Hall

Asset Description

Surface water run-off is drained into the landscaping, and the roof rain water leaders drain into the landscaping as well. Building perimeter drainage clean outs were not identified around the building perimeter, and are likely not present with the age of the building.

Observations / Comments

The site drainage systems appear to be in serviceable condition, however, rainwater leaders are not directing water away from the foundations and the bathroom/kitchen area is framed within close proximity to the natural grade.

8.3 Structure

8.3.1 Primary Structure

Estimated Useful Service Life:

- 75 years

Asset Age:

- 75 years

Estimated Useful Service Life Remaining:

- 0 years

Asset Condition:

- Poor

View in crawl space

View in crawl space

View of foundation

Asset Description

The exterior walls appear to be 2x4 wood stud construction and the roof assembly is timber trusses with OSB sheathing on the front portion of the building, with 2x6 roof rafters and collar ties for the main hall roof structure. The floor consists of 2x6 and 2x8 floor joist on wood beams and columns, which have a newer, circa 1995 perimeter foundation.

Observations / Comments

Where exposed, the primary structure was observed to be in fair to poor condition. There were some areas on the road side or front of the building where the structure was observed to be in fair condition for its age. However, at the rear of the building where the wood structure is located closer to grade the structure is observed to be in very poor condition.

The floor in the bathrooms has structurally failed. The area was not accessible due to the low clearance and debris in the crawlspace. It is our opinion that the washroom floor in the rear corner of the building should not be used by occupants in its current state. Any repairs should be directed by a Professional Engineer to determine the extent of deterioration and appropriate

repairs as the floor system does not appear to be adequately sized for the intended loads.

It was observed onsite, that it may be possible to repair or renovate the main hall structure however, the rear portion where the kitchen and washrooms are located are likely required to be rebuilt due to significant settlement and signs of deterioration.

The option of removing the rear addition and incorporating accessible washrooms in the storage area near the front of the building while providing a second exit would require further review of the space in order to determine overall costs and feasibility.

The existing roof structure consisting of rafter framing with spliced collar ties which act as support for the ceiling have passed the test of time, however they do not meet current prescribed BC Building Code requirements for snow loading or current best practices for framing. Herold Engineering does not recommend adding any additional dead or live load to the existing ceiling or roof structure unless the framing is upgraded. It should be noted that changing the insulation in the attic space and/or the current air/vapour barrier system could have unintended consequences.

Furthermore, the entire floor structure is not adequately sized to carry the prescribed BC Building Code live load of 100psf for Assembly occupancy and should be upgraded.

Concrete foundations were found to be in good to fair condition. However, the crawl space is not heated and the foundations do not have adequate frost protection.

8.4 Building Envelope Assemblies

The building envelope is typically defined as an environmental separator and includes the foundation, exterior wall assemblies, windows, exterior doors, and the roof assembly. It refers to those parts of the building which separate the indoor conditioned spaces from exterior or unconditioned spaces.

The performance of the building envelope assembly and the expected useful service life of each assembly are directly affected by the following factors:

- Exposure to climatic conditions in the area
- Structural design and installation of the supporting assemblies
- Type, quality, and construction details of supporting assemblies
- Occupant use and interior environmental conditions
- Quality and quantity of inspections
- Quality of maintenance programs

The structural integrity, moisture protection, and overall general condition of the foundation system was reviewed. It is our understanding that a cast in place foundation wall and footing was built around the existing structure and is now supporting the exterior walls and floor system of the building. There were signs of deterioration on the original wood foundations and this is likely the cause of some of the settlement issues that are obvious in the kitchen/bathroom areas of the structure.

The cast in place concrete foundations do not have any visible signs of distress and the accessible portion of the crawl space was relatively dry and free of organic growth. It should be noted that our assessment was completed during a relatively dry period and that conditions during the rainy season may differ.

8.4.1 Exterior Walls

Estimated Useful Service Life:

- 50 years

Asset Age:

- unknown

Estimated Service Life Remaining:

- Variable

Asset Condition:

- Poor

View from front of Hall

View of handrail at entry stair

View of side of Hall

Asset Description

Exterior walls are predominantly clad with face sealed stucco, with wood trim and fascias.

Observations / Comments

Generally, the stucco is in fair to poor condition, and nearing the end of its service life. The wood trim and fascias were observed to be in poor condition and appear due for replacement. Stucco Cladding can be an extremely durable exterior wall assembly provided that its performance characteristics are understood. The overall continued performance of the stucco clad walls will depend on periodic review and, if necessary, repair of the cracks and joints.

8.4.2 ROOFING AND SOFFITS

Estimated Useful Service Life:

- 25 years low slope/asphalt shingles

Asset Age:

- 30 years

Estimated Service Life Remaining:

- Expired

Asset Condition:

- Poor

View of roof over entry

View from front of Hall

View of roof over rear of Hall

Asset Description

The roofing consists of asphalt shingles over the main hall and asphalt roll roofing over the rear kitchen and washrooms. The soffits are painted, exposed wood rafters and plywood. The gutter over the front entrance is damaged and does not direct water to the rainwater leader. The rainwater leaders do not direct water away from the building foundation.

Observations / Comment

The roofing is expired and in need of replacement, the soffits are in need of repairs and repainting. The gutters and rainwater leaders need repair/replacement. Furthermore, we recommend removing or replacing the chimney with a metal one as the current one could be a significant hazard during a seismic event.

8.4.3 WINDOWS

Estimated Useful Service Life:

- 25 years

Asset Age:

- 23 years

Estimated Service Life Remaining:

- 2 years

Asset Condition:

- Fair

View of side windows

Asset Description

The windows are double pane with non-thermally broken aluminum frames which were installed in circa 1995.

Observations / Comments

Most of the windows have an exterior plexi glass frame/covering, providing protection which has prevented severe weathering of the windows. While the frames and glazing continue to function as intended they are considered to have a very poor thermal performance with a high level of heat loss during the heating season.

Given the age of these assemblies, it is recommended that consideration be given to the replacement of the existing windows with assemblies that are compliant with current North American Fenestration Standard (NAFS) requirements with respect to thermal performance and air and water penetration requirements. It is advised that the replacement windows be installed in accordance with Best Practices for Window and Door Replacement in Wood-Frame Buildings, publication.

8.4.4 Access and Service Doors

Estimated Useful Service Life:

- 35 years

Asset Age:

- 70 years

Estimated Service Life Remaining:

- Unknown

Asset Condition:

- Poor

View of rear kitchen door

View of main entry door and stair

View of kichen door

Asset Description

Exterior doors consist of wood frames and wood swing doors and appear original to the building.

Observations / Comments

All doors, frames and hardware are in poor condition and are in need of replacement.

The hand rails and exit paths/doors do not meet current BC Building code requirements. Specifically, the exterior door in the kitchen, configuration of the kitchen equipment, and the mechanism to keep the door closed are not conducive to exiting the building in an emergency.

Furthermore, the Building Code requires a minimum of two compliant exits for the intended us of this building.

8.5 Finishes & Components – Interior

8.5.1 Interior Components & Finishes

Interior components and finishes consist of:

Item	Estimated Useful Service Life	Asset Age	Estimated Remaining Service Life	Asset Condition
Sheet vinyl flooring	15 years	Unknown	0 years	Expired
Interior Wood panels	50 years	70 years	unknown	Fair

Hall-Flooring

Kitchen Flooring

Bathroom Flooring

Kitchen

Asset Description

Interior finishes consist of vinyl tile flooring throughout the Hall. The walls and ceilings are all generally painted wood paneling.

Observations / Comments

Interior finishes are in poor condition and in need of replacement. The vinyl tile flooring in the main hall contains asbestos, and the paint is lead based according to the Hazardous Materials Report completed by Lewkowich Engineering and Associates dated March 29, 2017.

8.6 Mechanical Systems

8.6.1 Domestic Plumbing

The common Plumbing Systems consists of:

Item	Estimated Useful Service Life	Asset Age	Estimated Remaining Service Life	Asset Condition
Storm Drainage	50 years	N/A	N/A	N/A
Domestic Water Distribution	45 years	70 years	Expired	Serviceable
Hot Water Tank	12 years	N/A	N/A	N/A
Sanitary Waste System a/g	50 years	70 years	unknown	Unknown

Asset Description

The sanitary system drains into a septic field. There does not appear to be any storm water system.

Observations / Comments

The condition of the sanitary piping, the storm piping and the connection to municipal services were not assessed as this would require scoping the inside of the system with a pipe camera. Generally, the plumbing is beyond its expected service life.

- The life cycle of a sanitary/storm drainage application, on BOMA estimates, is 50 years.
- The life cycle of piping in a domestic water application, based on BOMA estimates, is 45 years.

The main ventilation fan for the Hall vents directly into the attic space. The fan is not connected to any duct work and has the potential to introduce hot moist air into the attic. The fan should be ducted to the exterior and the duct should be insulated in order to avoid condensation. Furthermore, the remaining mechanical system and means of ventilation are outdated and not in compliance with the Current BC Building Code. Any modifications would be subject to approval by the Authority Having Jurisdiction.

The storm water from the roof should be directed away from the building and into a proper disposal or infiltration system.

It is our understanding that a Registered Onsite Wastewater Practitioner (ROWP) has stated that the septic system requires complete replacement.

8.6.2 Electrical Infrastructure Systems

Item	Estimated Useful Service Life	Asset Age	Estimated Remaining Service Life	Asset Condition
Power Panels & Circuit Breakers	30 years	Unknown	Unknown	Serviceable
Wiring – Under 600V	40 years	Unknown	Unknown	Serviceable

Asset Description

BC Hydro enters the building with an overhead service at the front of the building. The wiring does not appear original to the building, but the age is unknown.

Comments / Observations

Overall, the electrical system appears to be in fair condition and suitable for the present use of the building. The life cycle of the distribution system components, based on BOMA estimates, are as follows:

- Power Panels – 30 to 40 years
- Circuit Breakers – 30 years
- Wire under 600 volt – 40 years

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9.0 RECOMMENDATIONS

Based on our visual review, the current age of the building, and the published data of the life cycle of materials, it appears that the major common building systems and components are generally in poor condition.

The economic life of the building has likely expired, without major renovations.

The following recommendations are based on our observations and visual assessment conducted during our field review, as well as on CMHC Standards for Living Environments. The recommendations below are generally in order of importance:

- The wood structure is in need of repairs to the front main hall portion and complete replacement in the rear kitchen and washroom portion. It will be required to redesign, repair and replace the wood structure, dispose of waste and add a new secondary exit at the rear. The bathroom area floor is deteriorated and may require structural joists to be replaced. Demolition of the floor area and a review of the floor framing required prior to reinstatement of any sheathing.
- Remove existing masonry chimney as this is a hazard during a seismic event.
- Double up all joists in the floor system and provide frost cover to the foundations, provide a ground seal to help control moisture.
- The building currently has no handicap accessibility. A handicap ramp will need to be added to the new exit at the rear of the building and the front entry stairs and handrails will need to be replaced. The building is in need of a new handicap accessible washroom.
- Anchorage of existing walls to foundations, improve connections of floor beams to posts, improve connection of walls to roof diaphragm for seismic stability.
- The roofing and gutters are in need of replacement. Our observations indicate there is OSB sheathing on the roof that is in serviceable condition.
- The stucco and wood trims are in need of replacement and would be required to be replaced with a rainscreen cladding assembly.
- Replacement of the insulation in the floor, roof and exterior walls, and the new rebuilt rear walls.
- The electrical and mechanical systems were not reviewed in detail as part of this report but appear due for replacement.
- The plumbing will need to be replaced to service the new washrooms and kitchen.
- The stucco and wood trims are in need of replacement and should be replaced with a rainscreen cladding assembly.
- The aluminum, non-thermally broken windows and exterior and interior doors have reached the end of their economic service life and will require replacement. We recommend that the Owners consider a replacement program.
- The flooring is in need of replacement and abatement is required of the existing floor coverings.

- The interior wood wall paneling will need to be replaced, the 2x4 walls furred out and insulation added to the wall cavity and finished with new vapour retarder, drywall and paint.

In our opinion there are (3) feasible options to addressing the current state of the building as follows:

Option 1 (New Build) $$$

Demolish and Replace

Complete demolition and construct a new community hall that fits the requirements of all stakeholders.

It is estimated that new construction of a similar building would cost between $225/sq.ft and $275/sq.ft. This is a hard construction cost and does not include professional design, permitting, contingency or other related soft costs.

Option 2 (Life Safety and Accessibility) $$

Address the life safety items only. This would consist of addressing the deteriorated flooring in the bathroom, new septic field and incorporating a code compliant second exit. Furthermore, it would likely be prudent to ensure the building is accessible while completing these renovations.

It is estimated that a new septic field, exit and ramp would cost in the order of $40,000.00. The tenant Improvement for the washroom/kitchen facilities is estimated in the order of $150/sq.ft for bathrooms. The renovation costs are variable depending on the size and location of the washrooms as well as new plumbing and abatement costs. It is recommended to have design drawings completed and priced by a quantity surveyor or general contractor in order to acquire accurate costing for this option.

Option 3 (Complete Renovation) $$$$

Complete renovation addressing the recommendations listed above and bringing the building up to current BC Building Code standards.

It is estimated that the renovation could cost in the order of $250k to $300k. This estimate could have significant variances and a quantity survey or quote from a general contractor should be used to verify this information. The extent of deterioration is not completely quantified at this time. Furthermore, the choice of interior finishes, cladding, windows, roofing material, and timing of the renovation and market conditions at the time of the renovation will all affect the budget.

As such, it is our opinion that repairing and renovating the building to bring it up to current BC Building Code Standards may not be economical. Consideration should be given to building a new structure, providing life safety upgrades or demolishing the existing building.

We trust the information contained within this report satisfies your current requirements. Should you have any comments, questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

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