Building Condition Assessment Reports

Asset	C3b - Holly Drive cottage 106
Address	Riverview Lands, 2601 Lougheed Highway, Coquitlam, BC. V5C 4J2
Construction Year	1918.
Size (Gross Floor Area)	3,087 Sq.Ft.
Asset Type	RV_Cottage 107 etc., 2 Story Vinyl Siding & 15% Brick Veneer / Wood Frame
Floors Above Ground	1
Report Date	October 2013

Executive Summary

Cottage 106 is one of nine residences that were initially constructed to accommodate various site staff. This Cottage was constructed in 1918 as the Farm Superintendent's Residence. It is one and a half storeys with wood frame construction with stucco finish. It has a side entry porch, a jerkhin-headed roof with a jerkhin-headed dormer. The Cottage is 286.88 m2 and is centrally located, close to site services and several major BCMHS facilities. Cottage 106 was given a "good" rating in the previous Heritage Evaluation. This Cottage is currently occupied by PHSA, FPS. PHSA have requested to renew their tenancy for a further five year term.

This report assumes a continuation of the current use (or previous use if building is vacant) and does not include costs associated with a change of use of the building.

Summary Results of Assessment: C3b - Holly Drive Cottage 106

Replacement Costs	Renewal Costs	FCI
$574,348.00	$312,200.00	54%

Definitions:

• **Replacement Cost:** The combined costs (construction only - soft costs are not included) to replace all the components in the building without demolition and rebuilding. This number is arrived at from RS Means and other sources then verified (validated) by the persons doing the building assessments.

• **Renewal Cost:** The combined costs (construction only - soft costs are not included) of all the identified renewal needs.

• **Facility Condition Index (FCI)**: a ratio of renewal costs divided by replacement costs

• **FCI Level Definitions:**
o Good: 0%-5%
o Fair: 6%-10%
o Poor: 11%-30%
o Critical: greater than 30%

A10 Foundations

Component	**1**	Overall Condition	Poor

Last Major Action Year	1918.
Replacement Value	$35,000
What & Where	Footings and foundation's are reinforced (presumed)concrete cast in place.
Commentary (Condition ...)	Various locations indicate issues with perimeter drainage.

Action	**1.**
Action type	Study
Action Cost	$1,500
Action Year	2014.
Brief Description	Foundation perimeter drainage.
Commentary	Investigate extent of perimeter drainage and repair as required. Study required to address seismic and overall building conditions.

A20 Basement Construction

Component	**1**	Overall Condition	Poor

Last Major Action Year	1918.
Replacement Value	$45,000
What & Where	Reinforced slab on grade. Footings and foundations reinforced, cast in place.
Commentary (Condition ...)	There are visual signs (efflorescence) of water ingress.

Action	**1.**
Action type	Study
Action Cost	$0
Action Year	2014.
Brief Description	There are visual signs of water ingress. Investigate source of leakage into basement.
Commentary	Study required to address seismic and overall building structural conditions.

B10 Superstructure

Component	**1**	Overall Condition	Good

Last Major Action Year	1918.
Replacement Value	$25,000
What & Where	Wood frame construction with side entry porch. Chimney for fireplace. No visual signs of distress.
Commentary (Condition ...)	The building's framing system appears to consist of standard dimensional lumber, joists, studs and beams; however this was not verified due to the presence of architectural finishes. The gravity load resistance system has provided acceptable performance levels.

Action	**1.**
Action type	Study
Action Cost	$0
Action Year	2014.
Brief Description	The structural system for the above grade portion of the building is wood framing, which would be typical for this building type/era.
Commentary	Study required to address seismic and overall building conditions. See "Foundations"

B2010 Exterior Walls

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$130,000
What & Where	Rock dash stucco, painted.
Commentary (Condition ...)	The buildings framing system appears to consist of standard sawn lumber, joists and beams with the exception of reinforced concrete posts and beams at front entry porch area.

Action	**1.**
Action type	Repair
Action Cost	$6,000
Action Year	2014.
Brief Description	Targeted repairs to stucco siding, (short term).
Commentary	Cracking has occurred due to age and exposure to elements.

B2020 Exterior Windows

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$30,000
What & Where	Original single glazed wood frame casement windows. 22 total.
Commentary (Condition ...)	Mix of wood casement vertical slide and fixed multi-pane wood casement single glazed windows.

Action	**1.**
Action type	Replacement
Action Cost	$30,000
Action Year	2018.
Brief Description	Original wood frame windows. Replace or repair windows.
Commentary	Re & re with new, or repair and paint existing trim.

B2030 Exterior Doors

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$6,000
What & Where	Front entry solid wood with lite and rear and basement entry exterior wood doors with lites. 3 total.
Commentary (Condition ...)	Doors are beyond life cycle. Condition is fair to poor. Glass lites are single glazed.

Action	**1.**
Action type	Replacement
Action Cost	$6,000
Action Year	2018.
Brief Description	Replace exterior doors.
Commentary	Doors are beyond life cycle. Condition is fair to poor. Glass lites are single glazed.

B30 Roofing

Component	**1**	Overall Condition	Good
Last Major Action Year	2010.		
Replacement Value	$50,000		
What & Where	Jerkhin-head roof with a Jerkhin-head dormer asphalt shingled.		
Commentary (Condition ...)	New roof 2010.		

Action	**1.**
Action type	Replacement
Action Cost	$50,000
Action Year	2032.
Brief Description	
Commentary	

C1010 Partitions

Component	**1**	Overall Condition	Fair
Last Major Action Year	1918.		
Replacement Value	$40,000		
What & Where	Lath & plaster on wood studs, painted.		
Commentary (Condition ...)	Repair damaged walls throughout and paint as required.		

Action	**1.**
Action type	Repair
Action Cost	$40,000
Action Year	2029.
Brief Description	Ensure any/all compromised wall finishes are reinstated to ensure fire separations remain intact.
Commentary	Asbestos identified in various areas, guidelines must be followed. Ensure Asbestos inventory is updated.

C1020 Interior Doors

Component	**1**	Overall Condition	Fair
Last Major Action Year	1918.		
Replacement Value	$40,000		
What & Where	Original solid wood interior doors.		
Commentary (Condition ...)	Most raised panel with wood frames. Some with single glazed glass lite panels.		

Action	**1.**
Action type	Replacement
Action Cost	$40,000
Action Year	2018.
Brief Description	Upgrade, replace doors.
Commentary	Frames and doors do not have a Fire Resistance Rating tag.

C1030 Fittings

Component	**1**	Overall Condition	Fair
Last Major Action Year	1995.		
Replacement Value	$24,000		
What & Where	Kitchen and bathroom cabinetry.		
Commentary (Condition ...)	Melamine veneer surfaced particle board cabinets and laminate countertops.		

Action	**1.**
Action type	Replacement
Action Cost	$24,000
Action Year	2018.
Brief Description	Replace fittings.
Commentary	Fixed fittings throughout in fair condition.

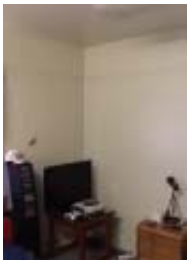
C20 Stairs

Component	**1**	Overall Condition	Fair
Last Major Action Year	1918.		
Replacement Value	$14,000		
What & Where	Exterior: Mix of reinforced concrete and wood frame. Interior: Wood frame with carpet finish.		
Commentary (Condition ...)	Interior stairs in good condition. Exterior stairs in varying need of repair.		

Action	**1.**
Action type	Replacement
Action Cost	$14,000
Action Year	2018.
Brief Description	Concrete and wood frame stair finishing.
Commentary	Repair concrete stair and stairwells, power wash and paint. Wood frame stairs require paint or stain finish.

C3010 Wall Finishes

Component	**1**	Overall Condition	Good
Last Major Action Year	1918.		
Replacement Value	$11,000		
What & Where	Basement perimeter walls reinforced (presumed) concrete, full height with interior wood framed bearing walls. Upper floor - Lath and Plaster walls.		
Commentary (Condition ...)	Overall in good to fair condition.		



Action	**1.**
Action type	Replacement
Action Cost	$11,000
Action Year	2018.
Brief Description	Repair and repaint walls as required.
Commentary	Ensure any/all compromised wall finishes are reinstated to ensure fire separations remain intact. Asbestos identified in various areas, guidelines to be followed. Ensure Asbestos inventory is updated.

C3020 Floor Finishes

Component	**1**	Overall Condition	Good

Last Major Action Year	1918.
Replacement Value	$25,000
What & Where	Wood floor substrate with vinyl and carpet finishes, main and second floor. Reinforced concrete floor in basement.
Commentary (Condition ...)	Overall condition good to fair condition.

Action	**1.**
Action type	Replacement
Action Cost	$25,000
Action Year	2018.
Brief Description	Common areas, carpet. Walk-in closet, VC Tile. May have ACM. Kitchen and bathroom, Armstrong vinyl sheet goods.
Commentary	Re & re as required. ACMaterials have been identified in various areas, guidelines must be followed. Ensure Asbestos inventory is updated.

C3030 Ceiling Finishes

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$15,000
What & Where	Painted lath and plaster ceilings. Living and dining rooms have coffered ceilings. Enclosed porch area has painted strip T & G finish, painted.
Commentary (Condition ...)	Conditions range fair to poor.

Action	**1.**
Action type	Replacement
Action Cost	$15,000
Action Year	2018.
Brief Description	Re & re as required.
Commentary	Re & re as required. ACMaterials have been identified in various areas, guidelines must be followed. Ensure Asbestos inventory is updated.

D2010 Plumbing Fixtures

Component	**1**	Overall Condition	Fair

Last Major Action Year	1995.
Replacement Value	$10,000
What & Where	Kitchen, 2 washrooms and laundry room in basement.
Commentary (Condition ...)	Era and finishes of units vary.

Action	**1.**
Action type	Replacement
Action Cost	$10,000
Action Year	2018.
Brief Description	Replace fixtures as required.
Commentary	Upgrade fixtures with water efficient type units.

D2020 Domestic Water Distribution

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$5,000
What & Where	Main supply copper piping in basement with PRV. Washer connections have thrust arresters installed.
Commentary (Condition ...)	1/2" copper supply lines to each floor with flexible and non-flexible connections to each fixture.

Action	**1.**
Action type	Study
Action Cost	$1,500
Action Year	2014.
Brief Description	Domestic water system.
Commentary	Recommend Consultant study to define scope of work and order of magnitude for multiple buildings on site to achieve economies of scale.

D2030 Sanitary Waste

Component	**1**	Overall Condition	Fair

Last Major Action Year	1918.
Replacement Value	$3,000
What & Where	Sanitary sewer from building to collector on site.
Commentary (Condition ...)	Cast in iron piping - Gravity based risers leading to sewer pipe in the basement.

Action	**1.**
Action type	Study
Action Cost	$0
Action Year	2014.
Brief Description	Sanitary waste lines.
Commentary	Assess at time of domestic Water Distribution Consultant study.

D2040 Rain Water Drainage

Component	**1**	Overall Condition	Good

Last Major Action Year	1918.
Replacement Value	$2,000
What & Where	Gravity based storm system terminating in main collector on site.
Commentary (Condition ...)	Eavestrough with exterior rigid rainwater leaders to perimeter drainage.

Action	**1.**
Action type	Repair
Action Cost	$500
Action Year	2014.
Brief Description	Gutters, rain water leaders and perimeter drainage.
Commentary	Repair at various locations as required.

D2095 Domestic Water Heaters

Component	**1**	Overall Condition	Fair

Last Major Action Year	2000.
Replacement Value	$1,200
What & Where	Electric hot water storage tank.
Commentary (Condition ...)	Replaced in 2001.

Action	**1.**
Action type	Replacement
Action Cost	$1,200
Action Year	2014.
Brief Description	Replace hot water tank.
Commentary	Hot water tank located in basement. Replace at first sign of leaking.

D3012 Gas Supply System

Component	**1**	Overall Condition	Good

Last Major Action Year	2011.
Replacement Value	$6,000
What & Where	Propane heating with heat exchanger in basement.
Commentary (Condition ...)	3 - 100 gallon propane fuel interconnected storage tanks located in outside mechanical room. Upgrade completed 2011.

Action	**1.**
Action type	Maintenance
Action Cost	$1,000
Action Year	2014.
Brief Description	Replace system.
Commentary	Future heating system TBD based on future development.

D3027 Heating Generating Equipment & Piping Insulation

Component	**1**	Overall Condition	Good

Last Major Action Year	2011.
Replacement Value	$10,000
What & Where	Viessmann propane gas fired wall mounted condensing boiler with heat exchanger in basement. New 2011
Commentary (Condition ...)	Hot water piping to cast iron heat registers.

Action	**1.**
Action type	Maintenance
Action Cost	$1,000
Action Year	2014.
Brief Description	
Commentary	

D3045 Exhaust Ventilation Systems

Component	**1**	Overall Condition	Good

Last Major Action Year	1995.
Replacement Value	$2,500
What & Where	Kitchen & laundry exhaust.
Commentary (Condition ...)	Clean exhaust systems annually.

Action	**1.**
Action type	Replacement
Action Cost	$2,500
Action Year	2020.
Brief Description	
Commentary	

D3055 Fin Tube Radiation

Component	**1**	Overall Condition	Good
Last Major Action Year	1918.		
Replacement Value	$5,000		
What & Where	Cast in iron radiators.		
Commentary (Condition ...)	Re & re as required.		

Action	**1.**
Action type	Replacement
Action Cost	$5,000
Action Year	2018.
Brief Description	Cast iron radiators throughout,
Commentary	Re & re as required.

D3060 Controls And Instrumentation

Component	**1**	Overall Condition	Good
Last Major Action Year	1918.		
Replacement Value	$6,000		
What & Where	Cast iron radiators throughout cottage.		
Commentary (Condition ...)	Manual control throttle valves on each C.I. radiator.		

Action	**1.**
Action type	Replacement
Action Cost	$6,000
Action Year	2018.
Brief Description	Original equipment.
Commentary	Re & re as required. Recommend Mechanical Consultant assessment to define scope of work and order of magnitude for multiple buildings on site to achieve economies of scale.

D5010 Electrical Service And Distribution

Component	**1**	Overall Condition	Good

Last Major Action Year	1995.
Replacement Value	$10,000
What & Where	150 Amp electrical service.
Commentary (Condition ...)	Main panel and meter located in basement.

Action	**1.**
Action type	Replacement
Action Cost	$10,000
Action Year	2018.
Brief Description	
Commentary	All wiring devices (interior and exterior) should be tested for correct wiring, polarity and retentive force. Any defective devices should be replaced.

D5021 Branch Wiring

Component	**1**	Overall Condition	Good

Last Major Action Year	1995.
Replacement Value	$15,000
What & Where	Insulated copper wiring.
Commentary (Condition ...)	Typically not visible.

Action	**1.**
Action type	Repair
Action Cost	$2,000
Action Year	2014.
Brief Description	Insulated copper wiring. Interior/exterior wiring & devices.
Commentary	All wiring devices (interior & exterior) should be tested for correct wiring polarity and retentive force. Any defective devices should be replaced.

D5022 Lighting Equipment

Component	**1**	Overall Condition	Fair

Last Major Action Year	1995.
Replacement Value	$3,000
What & Where	Mostly incandescent some flourescent in the kitchen and metal halide on exterior.
Commentary (Condition ...)	Lighting - General With advances in technology, there are opportunities for energy savings that will offset the cost of lighting retrofits. For example, the cost of LED lighting, which uses far less energy than traditional fluorescent or incandescent lights has reduced drastically, and may be an economical choice. Also, T-5 fluorescent fixtures use less energy than T-8 fixtures.

Action	**1.**
Action type	Replacement
Action Cost	$3,000
Action Year	2018.
Brief Description	Mostly incandescent some flourescent in the kitchen and metal halide on exterior.
Commentary	Upgrade exterior/interior light fixtures as required. Undertake a lighting study or energy audit to investigate/determine energy savings for all cottages on site.

D5033 Telephone Systems

Component	**1**	Overall Condition	Good

Last Major Action Year	1918.
Replacement Value	$5,000
What & Where	The main telephone equipment is located in the basement with wall mounted handset centrally located on main floor.
Commentary (Condition ...)	Phone system provided and maintained by service provider (Telus typically).

Action	**1.**
Action type	Replacement
Action Cost	$1,000
Action Year	2025.
Brief Description	
Commentary	

D5037 Fire Alarm System

Component	**1**	Overall Condition	Good

Last Major Action Year	1918.
Replacement Value	$648
What & Where	Fire Alarm system is located in the basement and is regularly tested as required by code and monitored by a third party service contractor.
Commentary (Condition ...)	Smoke detectors are located appropriately throughout the facility. Pull station and alarm bell located by front entrance. Smoke detectors tend to get replaced, as they fail, by the service contractor.

Action	**1.**
Action type	Replacement
Action Cost	$5,000
Action Year	2025.
Brief Description	Replace fire alarm control panel.
Commentary	The cottage is equipped with a fire alarm system. The fire alarm panel is located in the basement. The panel is aging but should operate well for another 5 to 10 years. It will still be operational after 10 years; however; experience dictates that it becomes increasingly difficult to find replacement parts and technical support for older fire alarm control panels. Therefore, it becomes a discretionary call that at some point in time replacing the panel is less costly than trying to maintain it. 5K has been budgeted for the replacement of the fire alarm panel within 10 years time to account for changes in the product line of the suppliers.