

2013 Depreciation Report Update

1500 Pendrell Street, Vancouver, BC



SUBMITTED TO The Owners, Strata Plan LMS1491
C/O Ms. Bunny Porteous, Property Manager
FirstService Residential
400 - 1281 West Georgia Street
Vancouver BC V6E 3J7

SUBMITTED BY RDH Building Engineering Ltd.
224 West 8th Avenue
Vancouver BC V5Y 1N5

PROJECT # 2928.60

DATE September 13, 2013

Table of Contents

1. Introduction.....	1
2. Evaluation of Assets	2
2.2. Physical Assessment	2
2.3. Financial Assessment	4
3. Major Maintenance and Renewals.....	6
3.1. Maintenance Summary	6
3.2. Renewals Summary.....	7
4. Project Planning.....	9
4.1. “Strategic” Planning Horizon.....	9
4.2. “Tactical” Planning Horizon.....	10
4.3. “Operational” Planning Horizon	12
4.4. Project Implementation Strategies	12
5. Funding Scenarios	13
5.1. Alternative Funding Scenarios.....	13
5.2. Funding Scenario “A” – Current (Status Quo).....	15
5.3. Funding Scenario “B” – Alternative	16
5.4. Funding Scenario “C” – Progressive	17
5.5. Funding by Individual Owners	18
6. Recommendations.....	19

Appendices

A - Glossary of Terms

B - Asset Inventory

C - Asset Service Life Summary

D - Funding Scenario Cash Flow Tables

E - Disclosures and Disclaimers

F - RDH Qualifications

G - Insurance Certificate

1. Introduction

RDH Building Engineering Ltd. (RDH) was retained by The Owners, Strata Plan LMS1491 (the Owners) to prepare an updated Depreciation Report (the Report) for the common property components (the Assets) at the residential low-rise building located at 1500 Pendrell Street, Vancouver, BC.

The purpose of the Report is to help the Owners, the strata council, and the management team to make informed decisions about the allocation of resources to the common property assets (such as roofs, boilers, and carpets).

The initial Reserve Fund Study Report that forms the basis of this Depreciation Report was issued on June 2, 2011. The draft Depreciation Report Update was submitted to council and management on April 30, 2013. The final version of the Report was updated to reflect feedback from council and management.

The information provided in the Report satisfies the requirements stipulated in the Strata Property Act. In order to prepare the Report, RDH acknowledges that there is no relationship between the employees at RDH and the Strata Corporation. In addition to the requirements outlined in the legislation, RDH has developed an interactive software tool that enables the Owners to proactively manage their funding requirements and maintenance obligations.

This Report is provided as a PDF so that it can be readily printed and distributed. It represents a synopsis of many hundreds of pages of information. The supporting data are posted on a secure website at <http://bams.rdhbe.com>. The purpose of the website is to provide a tool to empower the strata council and management team to:

- Track and monitor the health of the assets
- Generate alternative funding scenarios
- Keep the data current as projects are completed

The data is owned by the Strata Corporation and can be printed and/or exported to spreadsheets as required.

As the physical and financial status of the commonly owned assets changes, the Report will require updating. The BC legislation requires updates to the Report to be performed every three years.

A glossary of terms is included in the appendices.

2. Evaluation of Assets

A Depreciation Report should include two key parts: a “physical” assessment and a “financial” assessment. Together these two sets of data provide the baseline of information regarding the current status of the assets on the site. Once the status of the assets has been determined, the data can be used to generate operational, tactical and strategic plans. The strategic plan is used to help guide the creation of possible funding scenarios. This process is summarized in the graphic below:

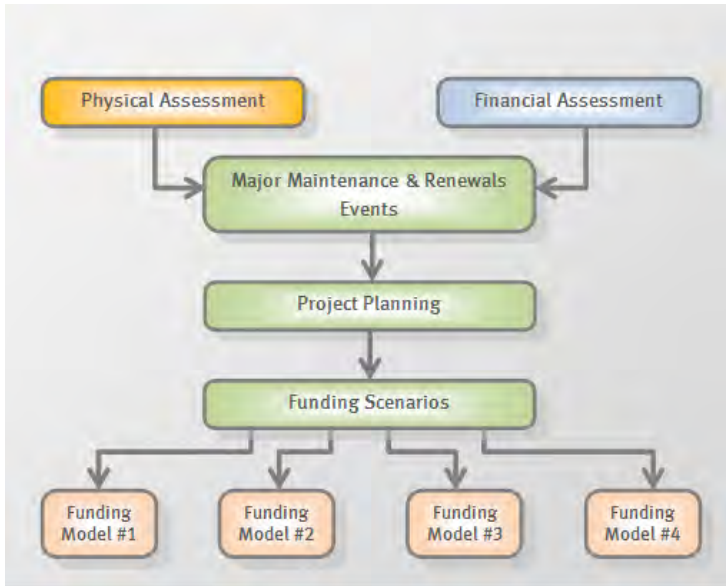


Fig. 2.1 Depreciation Report Process

The physical and financial assessments evaluate when major maintenance and renewals events are required, and how much they will cost.

Tentative project plans are developed for the next year, 10 years and 30 years.

Funding models are built based on the strategic plan (30 years). Owners will choose one model as the basis for the reserve fund contributions.

2.2. Physical Assessment

All assets are subject to physical deterioration as a result of the action of the elements, normal wear & tear, misuse & abuse and various other factors. Deterioration results in the need for maintenance, repair and renewal of assets. To this end, the physical assessment identifies the following:

- The inventory of common property assets.
- The effective age of the assets and the estimated remaining useful life of the assets.

The method of determining the physical health of the assets is based on discussions with facility representatives, a visual review of a representative sample of the assets in readily accessible locations, and review of readily available reference documents. No destructive testing was carried out on any of the assets, nor was the assets disassembled or subjected to confirmation of operational characteristics.

Below is a bird's eye view of 1500 Pendrell, showing an overview of some building reference location.



Fig. 2.2.1 Bird's eye view of 1500 Pendrell.

Over time, all assets move through a series of life cycle stages. In this regard, 1500 Pendrell can be considered a “mature” building where the majority of the assets date from the original construction but some significant major maintenance activities and renewals projects have occurred. The history projects completed since the initial reserve study in 2011 is summarized in the table below.

Table 2.2.1 History of completed projects.

Summary of Completed Projects – Listed by System	
<p>Enclosure System</p> <ul style="list-style-type: none"> ⇨ Commissioning of the initial Reserve Study (2011) ⇨ Replacement and repair of sill plates (2010/ 2011) ⇨ Completion of a building enclosure condition assessment (2010/ 2011) ⇨ Renewal of the lobby entrance door (2012) ⇨ Completion of balcony assessment (2012/2013) ⇨ Targeted repair and renewal of balconies (2013) ⇨ Re-painting of exterior concrete walls, and fascia boards (Various) 	<p>Amenity System</p> <ul style="list-style-type: none"> ⇨ Cyclical replacement of miscellaneous fitness equipment (Various)
	<p>Mechanical System</p> <ul style="list-style-type: none"> ⇨ Cyclical replacement the sump pump (2011) ⇨ Replacement of one make-up air unit (2011) ⇨ Replacement of circulation pumps (2012) ⇨ Replacement of miscellaneous pumps and valves (Various)
<p>Sitework System</p> <ul style="list-style-type: none"> ⇨ Localized repairs to garbage enclosure (2012) 	<p>Fire System</p> <ul style="list-style-type: none"> ⇨ Cyclical replacement of fire detection equipment (Various) ⇨ Cyclical renewal of fire extinguishers (Various)

The table below summarizes some of the key physical parameters of 1500 Pendrell.

Table 2.2.2 Summary of key physical parameters


Key Physical Parameters		
	Date of Original Construction	1979
	Gross Floor Area, Approximate (Square feet)	100,000
	Stories Above Grade	4
	Number of Suites	100
	Total number of Assets in inventory	81

Fig. 2.2.2 East courtyard elevation.

2.3. Financial Assessment

Owners will spend money for operating, reviewing, renewing and maintaining assets over their service lives. Sometimes more comprehensive renewal costs are also incurred. The financial assessment identifies the following:

- The current replacement costs of the assets and their future replacement costs.
- The status of the current Capital Reserve Fund (CRF) balance and how it relates to ongoing CRF requirements.
- The ability of the current budget to meet major maintenance and renewal needs.

Over the life of the assets, the costs associated with the stewardship of the assets can be distributed into three general categories: "Catch-up costs", "Keep-up costs" and "Get-ahead costs".

The Report is concerned primarily with the "Keep-up" costs. All costs are presented as "Class D" estimates. Soft costs, such as consulting fees and contingency allowances are not included.

Listed below is a summary of the key financial parameters of 1500 Pendrell, which are used to develop funding scenarios and the tactical and strategic plans.

Table 2.3.1 Summary of Key Financial Parameters

Financial Parameters	2013
Fiscal Year End	31 December
Building Reproduction Cost	\$14,600,000
Operating Budget	\$480,500
Annual Reserve Allocation	\$100,000
Accumulated Reserve Balance*	\$283,000

* The balance in the reserve fund varies each month as funds are allocated from the operating budget and withdrawn for capital renewal projects and major maintenance activities. Accumulated reserve balance is as of November 2012.

3. Major Maintenance and Renewals

Maintenance includes work that is necessary to preserve the assets and to allow their continued use and function above a minimum acceptable level of performance. Maintenance reduces the risk that the assets fail to achieve their full service lives. Renewal includes the financial planning and logistics for the replacement of the assets as they reach the end of their useful service lives.

3.1. Maintenance Summary

The Strata Corporation’s maintenance budget has increased since the initial Reserve Study, and is now \$207,600 per year. The maintenance budget represents approximately 43% of the annual operating budget. The Strata Corporation has 10 line items in the budget that are devoted to maintenance of the different systems, including a line item of \$80,000 for unspecified repairs and maintenance. The Strata Corporation has at least three maintenance service contracts, such as mechanical, elevators and janitorial services.

The figure below summarizes the distribution of the current annual maintenance costs for 1500 Pendrell.

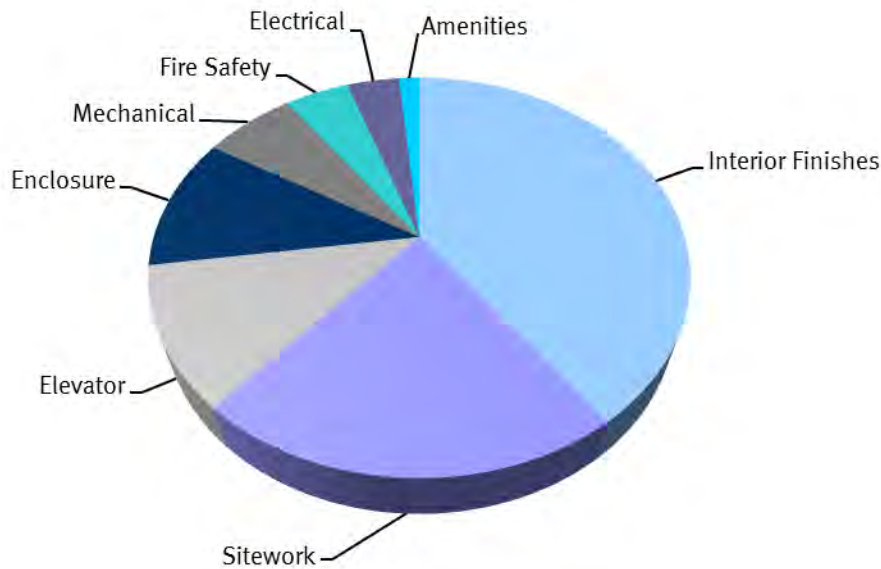


Fig. 3.1.1 Distribution of Annual Maintenance Costs

In January 2013, RDH conducted a site review on a representative sample of the common elements at 1500 Pendrell for the purpose of developing an inventory of common property assets and to estimate the useful remaining life of the assets. The condition of the property is consistent with its age.

While the Depreciation Report does not constitute a maintenance review, some observations regarding the general condition of the assets are made as part of the visual review. Listed below are examples of some of the observations that were identified during the review. These observations can be divided into four priority categories:

- **Level 1 – Currently Critical:** Deficiencies or observations that require immediate action to correct a safety hazard or stop accelerated deterioration.
- **Level 2 – Potentially Critical:** Deficiencies or observations that if not addressed promptly may become critical or that may indicate concealed damage or deterioration.

-> **Level 3 – Necessary:** Deficiencies or observations that should be addressed to prevent predictable deterioration and downtime. Work to address deficiencies in this priority category is not discretionary but is not necessarily time sensitive.
-> **Level 4 – Recommended:** Deficiencies or observations that could be addressed. Work to address these observations would not affect the most basic function of the facility but improve overall usability and can lower maintenance costs.

No currently critical observations were made at 1500 Pendrell.

Priority	Visual Observations
Level 2: Potentially Critical	<ul style="list-style-type: none">> Loose wood cladding at mechanical room wall.> Deteriorated wood cladding at a few locations, typically areas not protected by overhangs.
Level 3: Necessary	<ul style="list-style-type: none">> Ridging of 2-ply SBS membrane on main roof.> Ponding on 2-ply SBS membrane on main roof, around roof penetrations such as vents.> Delaminated or deteriorated paint on fascia wood trim.> Cracking of sealant at roof detailing.> Missing rain water leader at south courtyard near the east entrance from the lane.> Separation of carpet seams in many locations throughout the common hallways.> Boiler igniter and burner issues reported by resident caretaker> Dislodged light bollards in courtyard on south elevation.> Poorly secured vent covers on the north elevation at some locations.> Vegetation growth and staining on stucco cladding and fencing at various locations.
Level 4: Recommended	<ul style="list-style-type: none">> Deteriorated paint coating on concrete flooring.> Separation of gypsum seam at ceiling in hallway on first floor.

3.2. Renewals Summary

The Strata Corporation will need to spend approximately \$10.9M in capital expenditures over the next 30 years. The distribution of the projected major maintenance and renewal costs within each system over the next 30 years is described in the following table.

Table 3.2.1 Costs Broken Down by System

System	Sample Assets	Current Dollars	Future Dollars
Enclosure	Roofs, windows, doors, etc.	\$5,512,000	\$7,146,000
Electrical	Lighting, distribution, etc.	\$206,000	\$256,000
Mechanical	Plumbing, drainage, ventilation, etc.	\$1,021,000	\$1,515,000
Elevator	Controls, motors, relays, finishes, etc.	\$772,000	\$1,034,000
Fire Safety	Detection, suppression, egress, etc.	\$104,000	\$144,000
Interior Finishes	Flooring, painting, doors, etc.	\$406,000	\$562,000
Amenities	Furnishings, etc.	\$127,000	\$167,000
Sitework	Fencing, paving, etc.	\$53,000	\$71,000
Total		\$8,201,000	\$10,895,000

The distribution of the major maintenance and renewal costs for the next 10 years is summarized in the figure below. Approximately \$2.3M in capital expenditures is expected over the next 10 years. For 1500 Pendrell, the majority of these costs are associated with the enclosure system.

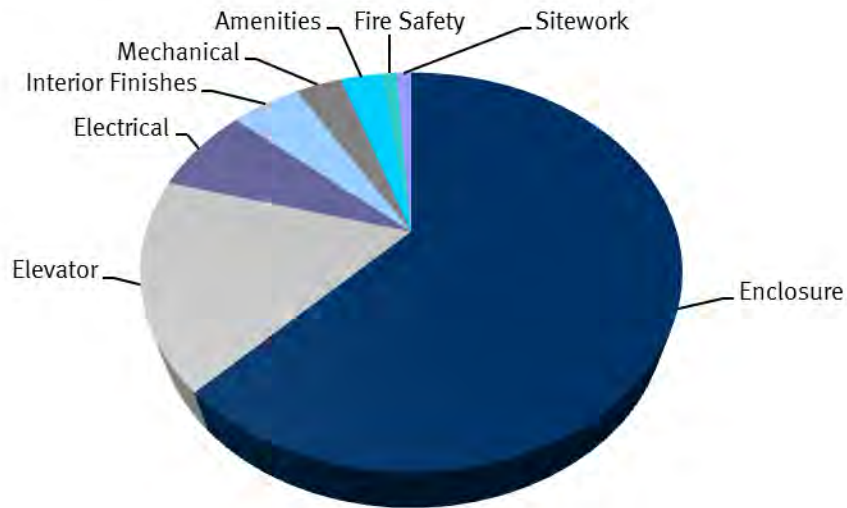


Fig. 3.2.1 Distribution of Major Maintenance and Renewal Costs Over the Next 10 years (2013 to 2022)

The cost implications of these events, together with scheduling considerations, are addressed in the following sections of the Report together with additional supporting material, such as photographs.

4. Project Planning

When making forecasts about future events and plans for these events, it is recommended that these are projected over three different planning horizons:

- “**Strategic**” (30 years): Since the average service life of many of the assets is approximately 25 years (such as roofs and boilers) it is recognized that a long-range view enables the Owners to anticipate the majority of the future renewal projects.
- “**Tactical**” (5-10 years): A five year outlook enables the Owners to break up the strategic plan into manageable stages and to thereby bridge the annual operating budget with the long-range strategic plan. Most Owners do not consider ownership of their real estate investment beyond a 5-year term and are therefore only concerned about special levies that may arise during this time period.
- “**Operational**” (1 year): The annual operating period encompasses one fiscal cycle (12 months). The reserve allocation in the operating budget should reflect the majority of the projects in the tactical plan (5 years) and ideally should also contemplate some elements of the strategic plan (30 years).

The following sections identify all capital expenditures that are projected for 1500 Pendrell with specific expenditures identified within the sections outlining the operation and tactical planning periods.

4.1. “Strategic” Planning Horizon

The chart below illustrates the estimated major maintenance and renewal costs over the next 30 years and provides a high-level overview of the longer term projected cash flow. The red bars indicate the years in which some renewal work is projected. Estimated maintenance costs (green bars) are generally more consistent from year-to-year.

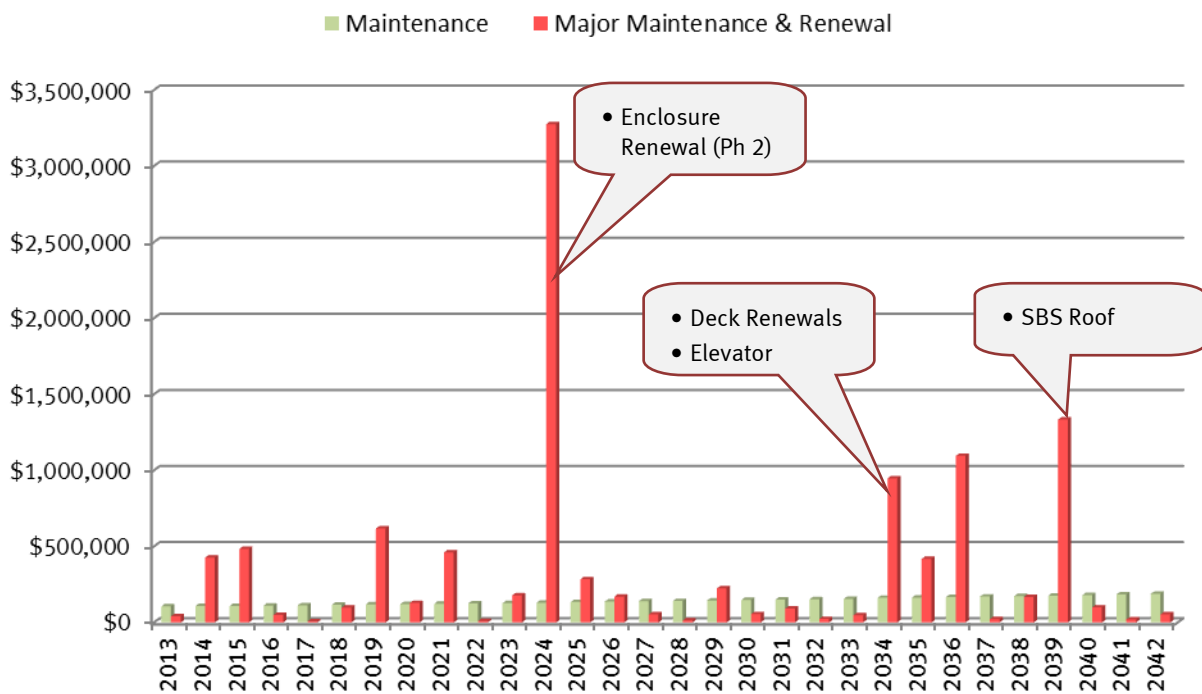


Fig. 4.1.1 Strategic Forecast (30 Years) with some key projects identified

The fluctuation of major maintenance and renewal costs over the 30-year period is due to a variety of factors, such as:

- The different service lives for each of the range of assets in the asset inventory. For example, some assets may have a useful life of 5 years whereas other assets may have a useful life of 25 years.
- The different magnitude of renewal costs for each of the assets.
- The impact of different rehabilitation strategies to either replace assets or extend their useful service lives through major maintenance projects.
- The cumulative financial impact of inflation compounded annually over 30 years.

The actual timing of renewal projects will depend on the quality of maintenance and other factors, which either may result in earlier replacement or, in some cases, extend the life of the assets.

4.2. “Tactical” Planning Horizon

The chart below provides the projected major maintenance and renewal costs for the next ten years. The bars indicate the years in which an event (or bundle of events) is most likely to occur as well as the total magnitude of major maintenance and renewal costs for that year.

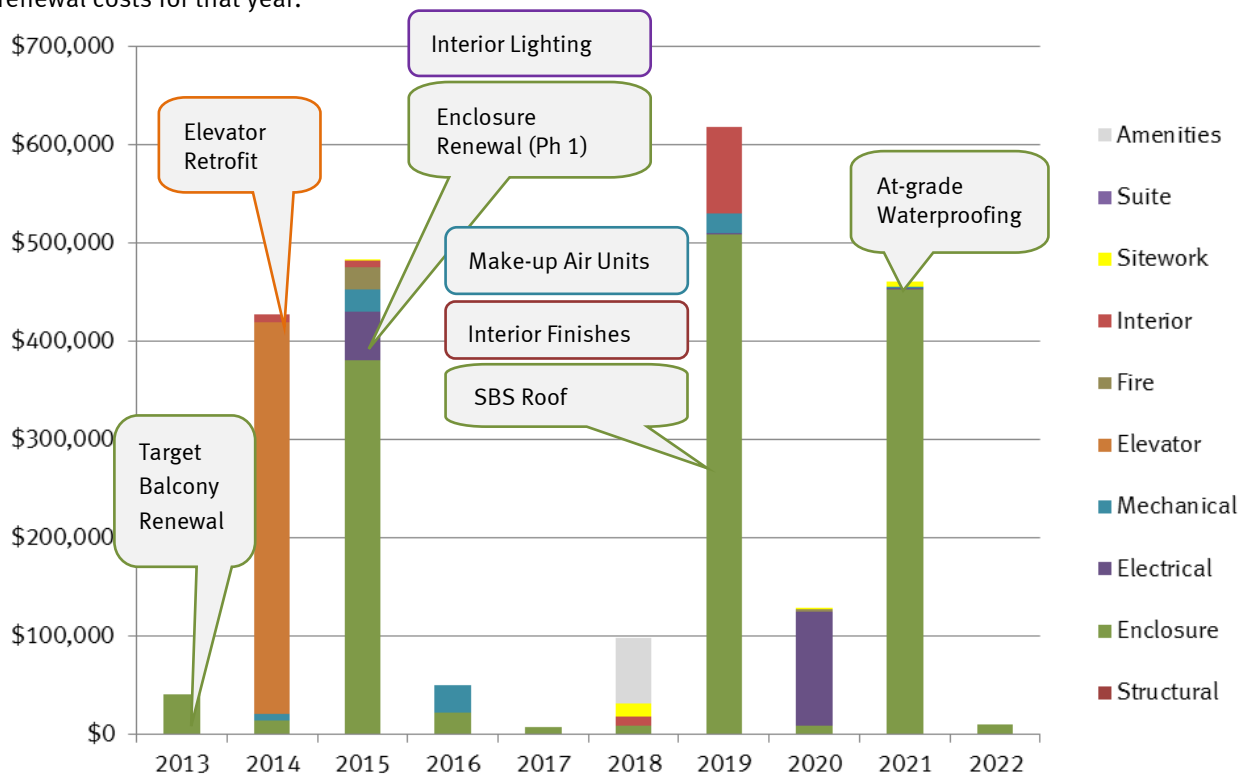


Fig. 4.2.1 10-Year Expenditure Forecast with some key projects identified

The tactical plan above differs from the initial Reserve Study issued in 2011. Since the initial study, the Strata Corporation commissioned a Building Enclosure Condition Assessment (BECA) Report by RDH (issued on September 29, 2011) and a Balcony Assessment (issued on January 9, 2013), and several adjustments to construction costs were also made.

Key changes to the tactical plan include:

- 2013 – An increase in capital expenditures to implement targeted balcony renewals at two suites
- 2015 – An increase in capital expenditures to implement the first phase of a building enclosure renewal program, focussing on balconies and associated components as required.
- 2016 – A decrease in capital expenditures because renewal of several building enclosure assets such as stucco and windows has been adjusted to a later date. Instead, a small additional cost to undertake periodic BECA updates has been added every three years (to coincide with Depreciation Report Updates).
- 2021 – A decrease in capital expenditures because of an update to the cost to reflect construction cost changes.

Listed below are some of the key major maintenance activities and asset renewal projects contemplated in the preceding bar graph:

Group 1: Major Maintenance

This group of projects are intended to preserve the assets to achieve their full design life. In accordance with the Strata Property Act, any maintenance “...that usually occurs less often than once a year” is a capital expense.

- Testing of all isolation valves by cycling through full operation.
- Replacement of exterior sealant.
- Augering and hydro-flushing of drain lines, including in-camera scoping survey, as required.
- Hydrostatic testing of fire extinguishers.
- Updating of Depreciation Report every three years.

Group 2: Condition Based Asset Renewal Projects

Listed below are asset renewal projects that will require additional investigation to confirm condition and eventual replacement schedules. Some of these projects are also discretionary and could potentially be postponed for reasonable periods with manageable risk.

- Phased replacement of wood cladding.
- Repainting of wood fascia adjacent sloped metal roofs.
- Replacement of SBS roofing.
- Phased replacement of PVC balcony membranes.
- Repainting of interior common area hallways in high traffic areas, as required.
- Replacement of carpentry & millwork in washrooms, as required.
- Replacement of common area tile flooring, as required for aesthetic purposes.
- Replacement of wood paneling in the lobby, as required.
- Localized replacement of original windows, as required.
- Cyclical replacement of insulated glazing units (IGUs) at original windows not replaced, as required.
- Replacement of remaining rooftop make-up air units.
- Cyclical replacement of domestic hot water storage tanks.
- Replacement of parking garage exhaust fans.
- Cyclical replacement of miscellaneous pumps and fans.

Group 3: Primarily Time-Based Asset Renewal Projects

The following projects are considered those that can be reasonably predicted to coincide with the end of the useful service life of certain assets. These projects are non-discretionary and cannot be postponed without significant risk.

- Replacement of elevator door operator hardware and signal fixtures.
- Replacement of elevator controls, motors, relays and finishes.

Some projects will require refinement through a normal design process to further define the scope and budget prior to tendering the renewal project. "Class D" estimates have been provided in the Report and a number of general assumptions about the potential scopes of work were made when costs associated with these projects were generated.

Implementation steps for any renewal event will vary and may include an investigation to confirm existing construction and any design requirements included in the project scope. Various options, such as phasing, product choice, and project bundling are also typically evaluated as part of the design requirements. Through this process, the scope of work will be finalized and the total project costs will be estimated for the Strata as a budget suitable for formal expenditure approval from the CRF. The costs associated with the investigation and design requirements are not included in the Report as the need and magnitude for this work varies with renewal activities and specific Owner needs.

4.3. "Operational" Planning Horizon

The Strata Corporation is currently planning targeted balcony renewals and repair work for the summer of 2013.

Replacement of interior millwork and refurbishing of the sauna interior finishes could also be considered for the next fiscal year. These projects are typically considered lower priority, and the Strata Corporation could reasonably defer this work until a later date.

4.4. Project Implementation Strategies

As renewal projects are implemented the Strata Corporation will need to engage consultants and contractors to confirm the appropriate scopes of work, to develop specifications and to coordinate and supervise the work.

The Owners will need to consider several implementation strategies including:

- **Targeted Projects.** These are projects that are localized to particular portions of the building. Different exposure conditions and wear patterns may require that only some sections of the building require renewal at one point in time. For example: the carpets in amenity rooms would be replaced at a different time to the hallway carpets due to additional wear in high traffic locations.
- **Phased Projects.** These are projects that are carried out in multiple stages rather than as a single coordinated project. For example: the sealant could be renewed on one elevation in the first year and then on the other elevations in subsequent years. While phased projects can reduce the financial burden by spreading the costs over a longer period, the Owners will likely pay more over the long term due to the remobilization of contractors.
- **Comprehensive Projects.** These are projects that are implemented as one coordinated undertaking. Some of the major advantages of this approach are that the Owners can sometimes leverage the best economies of scale, shorten the overall duration and lower the overall costs. For example: the exterior wood trim is recoated in all locations around the building at the same time.
- **Bundled Projects.** Often it makes sense to bundle or combine various projects due to proximity, availability of skills, and funding needs. The major advantage of project bundling is that the Owners can leverage economies of scale and lower the overall costs rather than if these projects were completed as several, individual projects. For example: the exterior wood trim is repainted at the same time as the repainting of the cladding for the building.

5. Funding Scenarios

The physical assessment and financial assessment have together provided a baseline of information for the Owners and management team to evaluate the current funding levels and to consider an appropriate funding strategy based on their tolerance for risk and desired standard of care for the property. RDH provides the tools but the funding level that the Owners choose is up to them as long as it meets the minimum legislative requirements.

5.1. Alternative Funding Scenarios

To help the Owners make an informed decision about their funding level, BAMS software is used to generate some alternative funding scenarios to compare the financial impact of different funding levels over the next 30 years. These scenarios serve as a sensitivity analysis to determine the size of the special levies that may occur as a result of different allocations to the CRF.

While there are many different scenarios that can be generated, the table below compares the following alternatives:

Table 5.1.1 Comparison of Different Funding Scenarios

	"A" Current (2013)	"B" Alternative	"C" Progressive Reserve
Percent of Progressive Reserve	30 %	Starting at 30 %	100 %
Reserve Allocation	\$100,000	\$100,000 + 10% increase per annum	\$336,000
Estimated Cost Per Suite:		Starting at	
- Per Month	\$83	\$83	\$280
- Per Year	\$996	\$1,500	\$3,360
Estimated Cost Per Square Foot:		Starting at	
- Per Month	\$0.08	\$0.08	\$0.28
- Per Year	\$1.00	\$1.00	\$3.36
Number of Special Levies (over next 30 years)	13	4	1
Value of Special Levies, approx. (over next 30 years)	7.8M	3.4M	1.3M
Assumed Inflation Rate	2%	2%	2%
Assumed Interest Rate	2%	2%	2%

- **“A” Current Reserve Allocation (2013).** This is the funding level that was approved by the Owners at the last Annual General Meeting and represents the status quo.
- **“B” Alternative Reserve Allocation.** This allocation starts with the current reserve allocation and incorporates an incremental increase of 10% per annum in subsequent years.
- **“C” Progressive Reserve Allocation.** This is the annual allocation that would have been set aside since the first year of operations to ensure that the reserve balance is sufficient to avoid any special assessments over a 30-year period. In other words, the progressive reserve is equivalent to a fully funded reserve balance. The "progressive" reserve allocation is an idealistic target that many strata corporations are not able to meet.

The funding scenarios are provided as a guide for the Owners. The Owners can use the BAMS software to create additional funding scenarios to assist in development of a scenario that is in alignment with their financial position. Based on the findings of the Report, the Strata Corporation is currently considered to be funding 30% of the progressive reserve level.

Although the Strata Corporation is meeting the statutory minimum contribution to the CRF, it is important to note that the statutory guideline is not a good measure of the financial preparedness of the corporation. If the Owners wish to avoid special levies, or to mitigate the financial hardship by reducing the number and size of the levies, then increases will need to be made over the upcoming years to move the current funding level from 30%.

5.2. Funding Scenario “A” – Current (Status Quo)

Cash flows for the first ten years of the funding model have been reproduced below. Appendix D contains the full 30 years of cash flow data for each scenario or this information can be reviewed in the online BAMS software.

Scenario “A” represents the current funding level approved by the Owners at the last general meeting (i.e., status quo) and is based on a fixed annual reserve contribution of **\$100,000** and is summarized in the following cash flow table.

Table 5.2.1 Status Quo Funding Model: Cash Flow Table

Fiscal Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Closing Balance
2013	\$283,000	\$100,000	\$0	\$5,660	\$41,000	\$2,000	\$345,660
2014	\$345,660	\$100,000	\$0	\$6,913	\$427,400	\$2,000	\$23,173
2015	\$23,173	\$100,000	\$371,263	\$463	\$482,900	\$2,000	\$10,000
2016	\$10,000	\$100,000	\$0	\$200	\$49,900	\$2,000	\$58,300
2017	\$58,300	\$100,000	\$0	\$1,166	\$8,100	\$2,000	\$149,366
2018	\$149,366	\$100,000	\$0	\$2,987	\$97,600	\$2,000	\$152,753
2019	\$152,753	\$100,000	\$373,592	\$3,055	\$617,400	\$2,000	\$10,000
2020	\$10,000	\$100,000	\$30,200	\$200	\$128,400	\$2,000	\$10,000
2021	\$10,000	\$100,000	\$362,400	\$200	\$460,600	\$2,000	\$10,000
2022	\$10,000	\$100,000	\$0	\$200	\$9,700	\$2,000	\$98,500

The figure below provides a graphical illustration of the status quo funding scenario. The annual contribution into the reserve account is shown by the blue bars, the closing balance in the CRF is shown by the purple line and the special levies (to offset the shortfall in the reserve account) are shown as red bars.

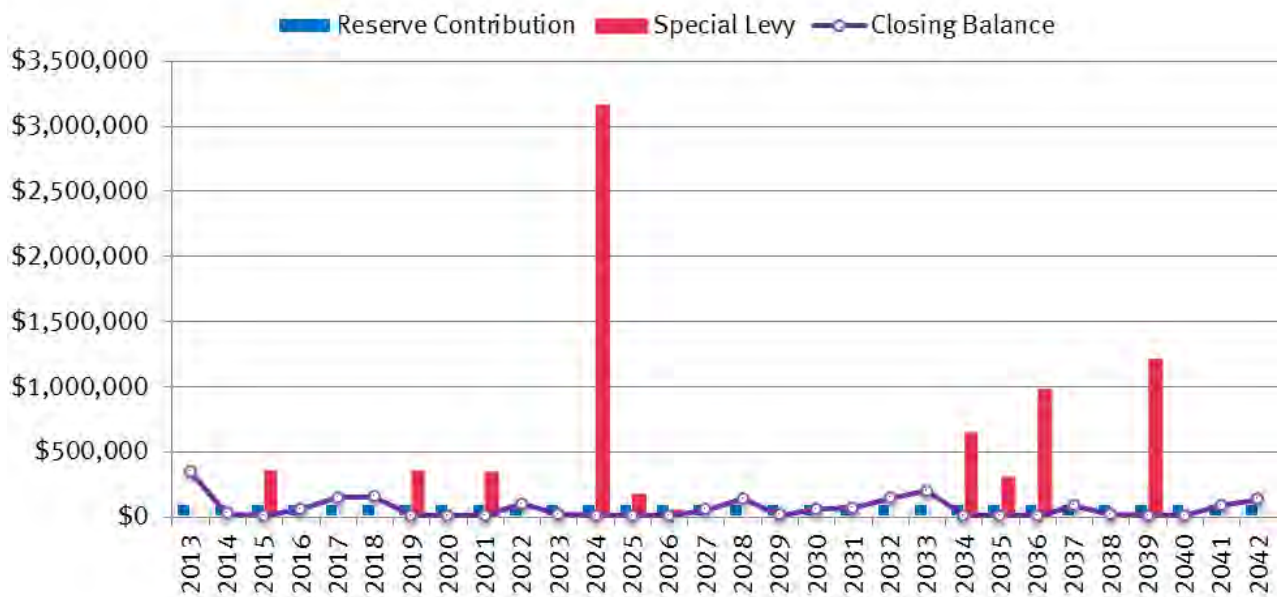


Fig. 5.2.1 Status Quo Funding Model: Graphical Analysis

The BAMS software tool enables the strata council and management to adjust the financial variables in this model (such as inflation rates and interest rates) and to generate additional models.

5.3. Funding Scenario “B” – Alternative

The next scenario is based on a fixed annual reserve contribution of approximately \$100,000 with a 10% increase per annum over the 30-year planning horizon. This represents a reserve contribution that is equivalent to a starting value of approximately \$83 per suite per month (averaged).

Table 5.3.1 Alternative Funding Model: Cash Flow Table

Fiscal Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Closing Balance
2013	\$283,000	\$100,000	\$0	\$5,660	\$41,000	\$2,000	\$345,660
2014	\$345,660	\$110,000	\$0	\$6,913	\$427,400	\$2,000	\$33,173
2015	\$33,173	\$121,000	\$340,063	\$663	\$482,900	\$2,000	\$10,000
2016	\$10,000	\$133,100	\$0	\$200	\$49,900	\$2,000	\$91,400
2017	\$91,400	\$146,410	\$0	\$1,828	\$8,100	\$2,000	\$229,538
2018	\$229,538	\$161,051	\$0	\$4,591	\$97,600	\$2,000	\$295,580
2019	\$295,580	\$177,156	\$150,752	\$5,912	\$617,400	\$2,000	\$10,000
2020	\$10,000	\$194,872	\$0	\$200	\$128,400	\$2,000	\$74,672
2021	\$74,672	\$214,359	\$182,076	\$1,493	\$460,600	\$2,000	\$10,000
2022	\$10,000	\$235,795	\$0	\$200	\$9,700	\$2,000	\$234,295

Scenario “B” eliminates or minimizes most of the smaller levies; however it is still not adequate to offset all the special levies. The figure below graphically illustrates the annual contributions (blue bars), the closing balance in the CRF (the purple line) and the size of the special levies (red bars) resulting from this funding level.

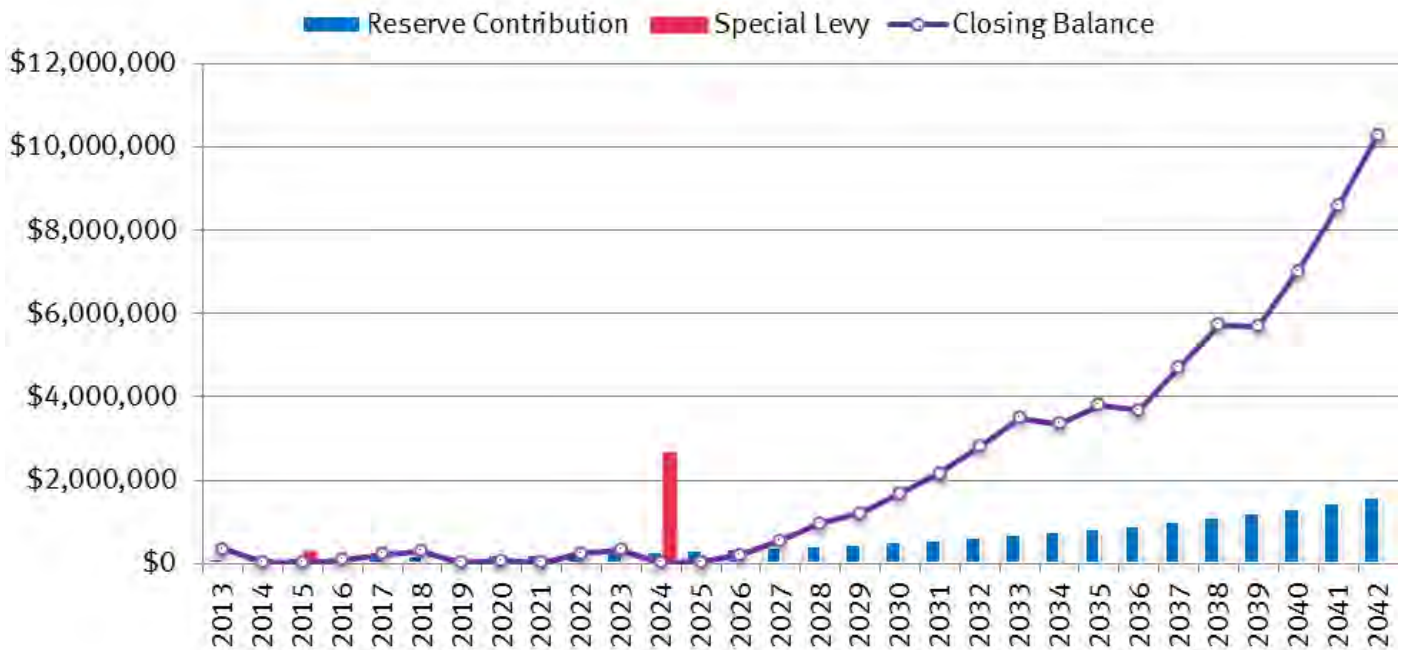


Fig. 5.3.1 Alternative Funding Model: Graphical Analysis

The BAMS software tool enables the strata council and management to adjust the financial variables in this model (such as inflation rates and interest rates) and to generate additional models.

5.4. Funding Scenario “C” – Progressive

The next scenario is based on a fixed annual reserve contribution of approximately \$336,000 over the 30-year planning horizon. This represents a reserve contribution that is equivalent to approximately \$280 per suite per month (averaged), which is approximately three times the current funding level.

Table 5.4.1 Progressive Funding Model: Cash Flow Table

Cash Flow Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Closing Balance
2013	\$283,000	\$336,000	\$0	\$5,660	\$41,000	\$2,000	\$581,660
2014	\$581,660	\$336,000	\$0	\$11,633	\$427,400	\$2,000	\$499,893
2015	\$499,893	\$336,000	\$0	\$9,998	\$482,900	\$2,000	\$360,991
2016	\$360,991	\$336,000	\$0	\$7,220	\$49,900	\$2,000	\$652,311
2017	\$652,311	\$336,000	\$0	\$13,046	\$8,100	\$2,000	\$991,257
2018	\$991,257	\$336,000	\$0	\$19,825	\$97,600	\$2,000	\$1,247,482
2019	\$1,247,482	\$336,000	\$0	\$24,950	\$617,400	\$2,000	\$989,032
2020	\$989,032	\$336,000	\$0	\$19,781	\$128,400	\$2,000	\$1,214,412
2021	\$1,214,412	\$336,000	\$0	\$24,288	\$460,600	\$2,000	\$1,112,101
2022	\$1,112,101	\$336,000	\$0	\$22,242	\$9,700	\$2,000	\$1,458,643

Scenario “D is not adequate to offset all the special levies over the 30-year planning horizon, because of the approximate timing of renewals projects. The figure below graphically illustrates the annual contributions (blue bars), the closing balance in the CRF (the purple line) and the size of the special levies (red bars) resulting from this funding level.

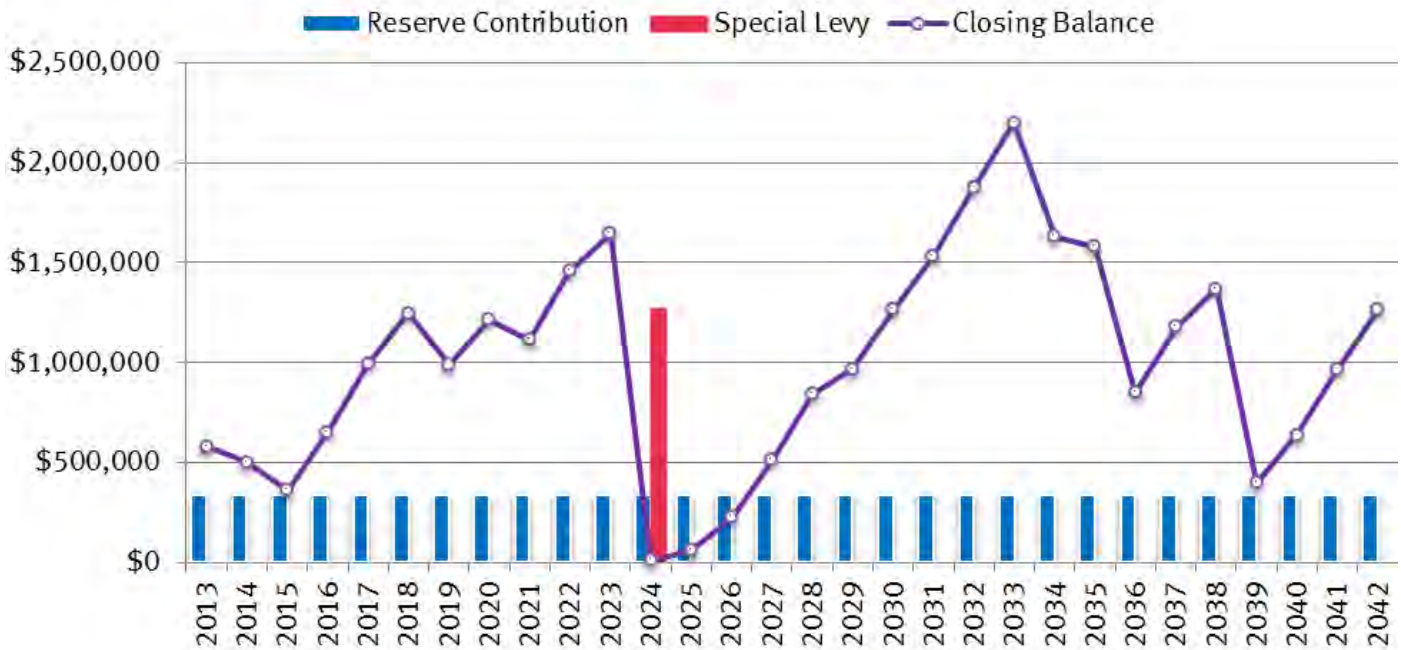


Fig. 5.4.1 Progressive Funding Model: Graphical Analysis

The BAMS software tool enables the strata council and management to adjust the financial variables in this model (such as inflation rates and interest rates) and to generate additional models.

5.5. Funding by Individual Owners

Regardless of which funding scenario may ultimately be selected by the Strata Corporation at the next general meeting, each owner can develop their own individual funding plans based on the renewal costs identified in the Report.

Since the Depreciation Report has identified approximately \$10.9M in capital reserve and major maintenance projects over the next 30 years, each of the 100 suite owners can estimate their personal share based on unit entitlements.

6. Recommendations

The following key recommendations are presented for the Owners consideration. The goal is to help the Owners move to a more objective basis of allocating CRF contributions for 1500 Pendrell.

- **Assumptions.** Review the disclosures and disclaimers listed in the appendix of the Report. Understand how the assumptions can be updated over time as new information comes to light about the performance of the assets and as certain projects are completed. Seek clarification from RDH regarding any of the disclosures and disclaimers.
- **Funding Scenarios.** Review the alternative funding scenarios in the Report and develop scenarios for presentation to the Owners that are most likely to secure approval of the Owners.
- **Funding Levels.** Review the current annual reserve allocation levels relative to the funding levels illustrated in the Report.
- **Software Tool.** Utilize the web-based building asset management system on an ongoing basis to keep the data current and ensure that it is readily accessible to the council members and property manager.
- **Updates.** Plan for updates to the financial component of the Report at least once a year (such as reserve balances) and updates to the physical component of the Report in three years (such as remaining useful life of the assets). The online data can be updated at any time during the course of the year by authorized users.
- **Further Investigations.** Conduct additional condition investigations, as required, to refine the data.
- **Full System Maintenance Plan.** Review the adequacy of checklists and budgeting of routine maintenance to ensure that a program is implemented to achieve full service lives from the assets.

RDH is available to assist the Owners with all aspects of the Report and the on-line BAMS software. Please contact our office with any questions or if you should require further information.

Sincerely,

RDH Building Engineering Ltd.



Laureen Stokes, Dipl.T

Project Manager



Rob Mathena, Dipl.T.

Senior Building Asset Management Technologist

Appendix A

Glossary of Terms

GLOSSARY

Annual Contribution – Funds allocated to the Reserve Fund each fiscal year. Sometimes referred to as the Annual Allocation. Determining the appropriate size of the Annual Allocation is aided with a Reserve Study (a Depreciation Report in B.C.).

Asset – An integrated assembly of multiple physical components, which requires periodic maintenance, repair and eventual renewal. Typical examples of assets are: roofs, boilers and hallway carpets.

Catch-up Costs - The costs associated with the accumulated backlog of deferred maintenance associated with the assets.

Chronological Age – The calendar age of an Asset. Compare with Effective Age.

Classes of Cost Estimates - Until a project is actually constructed, a cost estimate represents the best judgement of the professional according to their experience and knowledge and the information available at the time. Its completeness and accuracy is influenced by many factors, including the project status and development stage. Estimates have a limited life and are subject to inflation and fluctuating market conditions. The precision of cost estimating is categorized into the following four classes and are as defined in guidelines prepared by the Association of Professional Engineers and Geoscientists of B.C. The percentage figures in parentheses refer to the level of precision or reliability of the cost estimates.

- **Class A Estimate** (±10-15%): A detailed estimate based on quantity take-offs from final drawings and specifications. It is used to evaluate tenders or as a basis of cost control during day-labour construction.
- **Class B Estimate** (±15-25%): An estimate prepared after site investigations and studies have been completed and the major systems defined. It is based on a project brief and preliminary design. It is used for obtaining effective project approval and for budgetary control.
- **Class C Estimate** (±25-40%): An estimate prepared with limited site information and based on probable conditions affecting the project. It represents the summation of all identifiable project elemental costs and is used for program planning, to establish a more specific definition of client needs and to obtain preliminary project approval.
- **Class D Estimate** (±50%): A preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client's broad requirements. This overall cost estimate may be derived from lump sum or unit costs for a similar project. It may be used in developing long term capital plans and for preliminary discussion of proposed capital projects.

Closing Balance - Alternatively referred to as the Starting Balance. The balance of funds remaining in the reserve account at the end of a fiscal period (Fiscal year end, calendar year or study period). The Closing Balance becomes the Opening Balance for the subsequent fiscal period.

Contingency Costs - An allowance for unexpected or unforeseen costs that may impact monies required for projects to maintain or replace assets. (Not to be confused with costs of Renewal or Major Maintenance projects which are paid for out of the Reserve Fund (otherwise known the Contingency Reserve Fund.)

Current Dollars –dollars in the year they were actually received or paid, unadjusted for price changes.

Effective Age – The Age of an asset relative to its condition. Compare with: Chronological Age.

Funding Model - A mathematical model used to establish an appropriate funding level for sustaining the assets in a building. Running a number of scenarios out of the funding model using different parameters (such as inflation rates and interest rates) can serve as a sensitivity analysis to determine the financial impact of different funding levels.

Future Dollars - The projected cost of future asset renewal projects, which accounts for inflation and escalation factors.

Get Ahead costs - These are costs associated with adaptation of the building to counter the forces of retirement associated with different forms of obsolescence, such as:

- Functional obsolescence
- Legal obsolescence
- Style obsolescence

Some of the costs in this category are discretionary spending that result in either a change or an improvement to the existing strata building. This category includes projects to alter the physical plant for changes in use, codes and standards. Some typical examples include:

- Energy retrofits
- Code retrofits
- Hazardous material abatement
- Barrier free access retrofits
- Seismic Upgrades

Keep-up Costs - The monies required for renewal projects as each asset reaches the end of its useful service life. If an asset is not replaced at the end of its useful service life and is kept in operation, through targeted repairs, then these costs get reclassified into the “catch-up” category.

Major Maintenance – Any maintenance work for common expenses that usually occurs less often than once a year or that do not usually occur. Major maintenance provides for the preservation of assets to ensure that they achieve their full intended service life.

Opening Balance – Alternatively referred to as the Starting Balance. The amount of money in an account at the beginning of a fiscal period. Opening balances are derived from the balance sheet and are used in cash flow calculations in the Funding Model.

Operating Costs - Frequently recurring expenses that arise during the course of a single fiscal year and are paid from the operating budget as opposed to the Reserve Fund.

Operational Plan/Horizon (1 year) - The annual operating period encompasses one fiscal cycle (12 months). The Reserve Contribution in the operating budget should reflect the majority of the projects in the Tactical Plan (5 years) and ideally should also contemplate elements of the Strategic Plan (30 years).

Percent Funded - The ratio, at a particular point of time (typically the beginning of the fiscal year), of the actual or projected Reserve Fund balance to the accrued Reserve Fund balance, expressed as a percentage. For example: If the 100% funded balance is \$100,000 and there is \$76,000 in the Reserve Fund, the Reserve Fund is 76% funded.

Since funds can typically be allocated from one asset to another with ease, this parameter has no real meaning on an individual reserve component basis. The purpose of this parameter is to identify the relative

strength or weakness of the entire Reserve Fund at a particular point in time. The value of this parameter is to provide a more stable measure of Reserve Fund strength, since cash in reserve may mean very different things to different governing bodies or owner groups.

- **Poor Level.** When the Percent Funded falls to 0% - 30%, the current reserves may be considered to be at a 'poor' level. At this funding level, Special Levies are common. This is also commonly known as the Unfunded or Special Levy Model. The Owner Group does not have a Reserve Fund balance that will cover expected renewal costs and the only recourse is to raise funds by Special Levies to cover those costs when they become due.
- **Fair Level.** If the Percent Funded level is 31 to 70% then the current reserve may be considered to be in a mid-range level.
- **Good Level.** If the Percent Funded level is 70% or higher this is likely to be considered 'strong' because cash flow problems are rare.

Renewal – The replacement of an Asset as it reaches the end of its useful service life.

Renewal Cost – The cost required to replace an Asset, which is paid from the Reserve Fund, Special Levy or combination thereof.

Reserve Contribution - The amount of money that is allocated to the Reserve Fund each fiscal year. Determining the appropriate size of the Reserve Contribution is aided with a Reserve Fund Study (Depreciation Report in B.C.).

Reserve Fund – Also known as the Contingency Reserve Fund. The account in which the accumulated Annual Contributions are deposited and from which costs are withdrawn for Renewal projects and Major Maintenance projects.

Reserve Income – The interest earned from investing the money deposited in the Reserve Fund.

Reserve Study - Also referred to as a Reserve Fund Study or Depreciation Report in BC.

- A long-range financial planning tool that identifies the current status of the owners' Reserve Fund and recommends a stable and equitable funding plan to offset the costs of anticipated future major expenditures associated with replacement of the assets and major maintenance.
- The purpose of the Reserve Study is to provide a plan for appropriate funding for renewal and major maintenance work.
- While Reserve Studies provide analysis of the timing, costs and funding for renewal projects, they should ideally be supported by a maintenance plan that assists the owners to plan for maintenance activities so that assets achieve their predicted service lives.

Special Levy - Also referred to as a "Special Assessment". A financial levy to be paid by the owner group to finance large-scale projects for major maintenance, repairs, renewal and rehabilitation of an asset, which occur as result of a shortfall in available funds and requires special decision making and approval procedures. A Reserve Study contains funding scenarios that assist the owners in long-range financial planning.

Strategic Horizon - The longest of the three planning horizons, which typically covers the full study period of 30 years and identifies the long-term needs of the assets.

Style Obsolescence - When an asset is no longer desirable because it has fallen out of popular fashion, its style is obsolete. Some assets, particularly interior furnishings, reflect fashion cycles and can become out-dated.

Tactical Plan/Horizon - A period of planning for asset Renewal projects and Major Maintenance projects, which typically extends five years from the current year.

Appendix B

Asset Inventory

1500 Pendrell

Enclosure

Roofs & Decks

Encl 01 - Protected SBS Membrane Roof with Ballast



Location

Above the main entry to the building on the north elevation.

Information

Service Life:	30
Chronological Age:	4
Effective Age:	4

Description

SBS membrane overlaid with drain mat, filter fabric and stone ballast.

Install Year:	2009
Next Event Year:	2039

Encl 02 - Varied Deck Membranes



Location

4th and 5th floor decks.

Information

Service Life:	20
Chronological Age:	14
Effective Age:	18

Description

A variety of different deck configurations; exposed 2-ply SBS membrane; 2-ply SBS membrane overlaid with wood deck-boards; sheet vinyl membrane. The age of the assembly refers to an average of the deck membranes.

Install Year:	1999
Next Event Year:	2015

Encl 03 - 2 Ply SBS Roof



Location

Main roof at the building.

Information

Service Life:	20
Chronological Age:	14
Effective Age:	14

Description

2 plies of a manufactured modified bitumen sheet membrane. The membrane is exposed and fully bonded to the substrate.

Install Year:	1999
Next Event Year:	2019

1500 Pendrell

Encl 04 - Metal Roof



Location

Sloped sections of the main roof above the building.

Information

Service Life: 40
Chronological Age: 34
Effective Age: 29

Description

Profiled roof steel sheets with exposed fasteners.

Install Year: 1979
Next Event Year: 2024

Skylight

Encl 05 - Acrylic Dome Skylights



Location

Low sloped portions of the main roof.

Information

Service Life: 20
Chronological Age: 34
Effective Age: 14

Description

Dome shaped acrylic glazing mounted on raised curbs with perimeter flashing and sealant.

Install Year: 1979
Next Event Year: 2019

Encl 06 - Skylights



Location

Sloped metal roofs at roof level, skylights on the east, west and north elevations on all floors.

Information

Service Life: 30
Chronological Age: 34
Effective Age: 24

Description

Aluminum framed, double glazed skylight assemblies and t-bar aluminum framed skylights.

Install Year: 1979
Next Event Year: 2019

Walls

Encl 07 - Metal Panel Cladding



Location

Exterior base of walls and other locations.

Information

Service Life: 40
Chronological Age: 4
Effective Age: 4

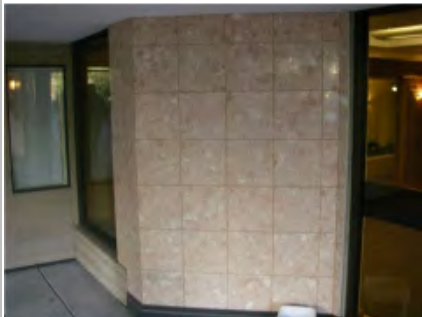
Description

Coated metal cladding over waterproofing membrane and cast-in-place concrete walls.

Install Year: 2009
Next Event Year: 2049

1500 Pendrell

Encl 08 - Tiled Cladding



Location

Portion of exterior walls at the lobby entrance.

Information

Service Life:	40
Chronological Age:	34
Effective Age:	34

Description

Ceramic tiles with grout applied to an unknown substrate.

Install Year:	1979
Next Event Year:	2019

Encl 09 - Wood Siding & Wood Trim



Location

Balcony upstand walls and portions of the exterior walls throughout the building. Soffits at balconies.

Information

Service Life:	30
Chronological Age:	34
Effective Age:	28

Description

Horizontal cedar siding with painted finish, building paper and wall sheathing.

Install Year:	1979
Next Event Year:	2015

Encl 10 - Coated Concrete



Location

Portions of the exterior walls throughout the building.

Information

Service Life:	8
Chronological Age:	5
Effective Age:	5

Description

Poured-in-place concrete walls with an exposed finish. Wall finish is flat. Service life cited refers to coating.

Install Year:	2008
Next Event Year:	2016

Encl 11 - Stucco Cladding - Face Seal



Location

Exterior walls at all elevations.

Information

Service Life:	30
Chronological Age:	34
Effective Age:	28

Description

The assembly relies on the exterior stucco to deflect the water from the wall assembly.

Install Year:	1979
Next Event Year:	2015

1500 Pendrell

Windows

Encl 12 - Aluminum Windows - New (Placeholder)



Location	2nd floor on the north elevation above the main entry.	Description	Unknown window assembly.
Information			
Service Life:	30	Install Year:	2005
Chronological Age:	8	Next Event Year:	2035
Effective Age:	8		

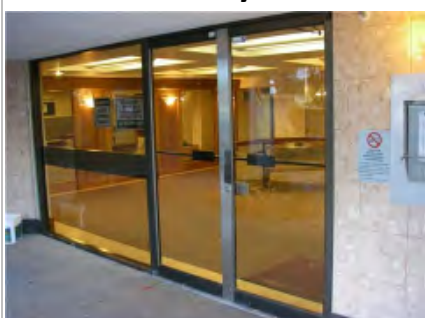
Encl 13 - Aluminum Windows



Location	All elevations throughout the building.	Description	Exterior glazed, non-thermally broken aluminum windows with both fixed and operable units. Windows at the roof terrace are single glazed, fixed units with wired glass.
Information			
Service Life:	30	Install Year:	1979
Chronological Age:	34	Next Event Year:	2024
Effective Age:	19		

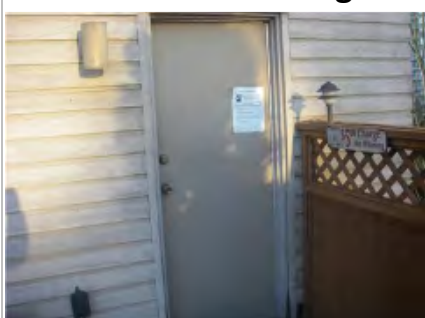
Doors

Encl 14 - Lobby Door Assembly



Location	Main entry to the building on the north elevation.	Description	Commercial glazing system including both fixed glazing units and operable door hardware with electric strike connected enterphone system.
Information			
Service Life:	25	Install Year:	2012
Chronological Age:	1	Next Event Year:	2037
Effective Age:	1		

Encl 15 - Metal Swing Doors



Location	Access and egress doors from star wells and providing	Description	Metal doors in pressed steel frame set in cast in place concrete walls and wood frame door openings.
Information			
Service Life:	25	Install Year:	1979
Chronological Age:	34	Next Event Year:	2015
Effective Age:	23		

1500 Pendrell

Encl 16 - Sliding Glass Doors



Location

Balcony access doors at all elevations.

Description

Non-thermally improved aluminum frames with fixed IGUs and operable hardware including rollers.

Information

Service Life: 25
Chronological Age: 34
Effective Age: 14

Install Year: 1979
Next Event Year: 2024

Balconies

Encl 17 - Varied Balcony Waterproofing Membranes



Location

Balconies on levels 2 to 5 on all elevations.

Description

Wood joists and sleepers overlaid with plywood board and a variety of balcony membranes: Vinyl sheet membrane some with a coating applied; 2-ply SBS membrane. The membranes are either exposed and overlaid with wood decking. Wood guardrails or aluminum guardrails with glazed section are topmounted to the side of balcony upstand walls.

Information

Service Life: 10
Chronological Age: 14
Effective Age: 8

Install Year: 1999
Next Event Year: 2015

At and Below Grade

Encl 18 - At Grade Waterproofing - Existing



Location

Backyard on the south side of the property.

Description

Built-up roof (BUR) membrane assembly consisting of multiple layers of roofing felt bonded together with hot-applied bitumen. Membrane is protected by combination of hard and soft landscaping overburden.

Information

Service Life: 30
Chronological Age: 34
Effective Age: 22

Install Year: 1979
Next Event Year: 2021

1500 Pendrell

Encl 19 - At Grade Waterproofing - New



Location

Along the perimeter of the building on all elevations, including decks and entrance ramp/ walkway.

Information

Service Life: 30
Chronological Age: 4
Effective Age: 4

Description

2-Ply SBS waterproofing membrane overburdened with hard landscaping or soil and plantings.

Install Year: 2009
Next Event Year: 2039

Parking Garage

Encl 20 - Parking Garage Slab



Location

Parking garage.

Information

Service Life: 7
Chronological Age: 13
Effective Age: 1

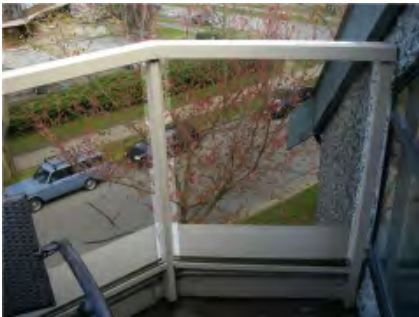
Description

Exposed concrete slab on grade with penetrations for storm water drainage. Service life cited refers to traffic marking.

Install Year: 2000
Next Event Year: 2019

General & Inspections

Encl 21 - Varied Guardrail Configurations



Location

Balconies throughout the building.

Information

Service Life: 40
Chronological Age: 23
Effective Age: 29

Description

Glass and metal frame balcony guardrails at some balconies and wood framed and wood clad upstand walls and guardrails at other balconies.

Install Year: 1990
Next Event Year: 2024

Encl 22 - Exterior Sealant



Location

Roof to wall interfaces, window to wall interfaces and other locations throughout the building.

Information

Service Life: 10
Chronological Age: 13
Effective Age: 8

Description

Sealant of various types located at joints between building enclosure assemblies, as well as around components and penetrations within building enclosure assemblies.

Install Year: 2000
Next Event Year: 2015

1500 Pendrell

Encl 23 - Miscellaneous & Inspections



Location

Roofs, walls and other enclosure assemblies.

Description

Miscellaneous interior and exterior components, such as service penetrations and interface details, not related to any particular assembly.

Information

Service Life: 40
Chronological Age: 34
Effective Age: 34

Install Year: 1979
Next Event Year: 2019

Electrical

Power Supply

Elec 01 - Distribution transformer



Location

Main electrical room parking garage level P1.

Description

A 300KVA 3 phase, dry-type step down transformer (Marcus).

Information

Service Life: 40
Chronological Age: 34
Effective Age: 33

Install Year: 1979
Next Event Year: 2020

Elec 02 - Emergency Generator



Location

Fenced in near parkade entrance in parkade

Simpower 30kw/37.5KVA, 3 phase, 120/208 volt, neutral gas synchronous AC generator feeding emergency loads such as elevator light, sump pump, emergency lighting & exit lighting.

Description

Information

Service Life: 30
Chronological Age: 34
Effective Age: 23

Install Year: 1979
Next Event Year: 2020

1500 Pendrell

Distribution

Elec 03 - Electrical Distribution



Location
Main electrical room

Description
A 600V hydro incoming power supply terminated to a 400A fused disconnected switch. The 600V power supply is converted to 120/208V via the 300KVA step down transformer. A 1200A 120/208V Sylvania fused distribution panel fed the meter stacks for the suites and another 400A 120/208V Sylvania fused distribution panel fed the house load such as lighting, elevator, mechanical equipments. There is an emergency panel located adjacent to the emergency generator. Meter stack with individual meters are installed in electrical closet at various typical floor to serve the load centre in each suite.

Information
Service Life: 40
Chronological Age: 34
Effective Age: 33

Install Year: 1979
Next Event Year: 2020

Light Fixtures

Elec 04 - Exterior Light Fixtures



Location
Exterior entrance, courtyard

Description
A mixture of wall-mounted, fully recessed, soffit recessed fixtures with compact fluorescent lights, incandescent, LV accents fixtures lights. Some bollards at the back courtyard are disconnected from the power supply. Low voltage landscape lighting were installed in August 2010.

Information
Service Life: 20
Chronological Age: 34
Effective Age: 18

Install Year: 1979
Next Event Year: 2015

1500 Pendrell

Elec 05 - Interior Lighting Components



Location

Parkade, hallways and other common areas.

Description

A mixture of compact fluorescent wall sconces and retrofit compact fluorescent & incandescent pot lights in typical hallway. A mixture of T8 & T12 fluorescent up/down fixtures in entrance lobby, 2x4 T12 fluorescent fixtures in recreation room, 1x4 T12 fluorescent lamp in squash court and surface mounted T12 fluorescent strip in parkade area and service rooms.

Information

Service Life: 25
Chronological Age: 34
Effective Age: 23

Install Year: 1979
Next Event Year: 2015

Security

Elec 06 - Enterphone System



Location

Main entrance door.

Description

Recessed mounted entryphone panel with associated dial in key pads located at main entrance to call into suites.

Information

Service Life: 25
Chronological Age: 34
Effective Age: 18

Install Year: 1979
Next Event Year: 2020

Mechanical

Controls and End Devices

Mech 01 - Heat Tracing - Freeze Protection



Location

Phone/ Cable room.

Description

Heat trace controller for piping systems exposed to freezing (self regulating heater cable with parallel circuit heater strip and outer thermoplastic elastomer jacket); UL listed for pipe freeze protection on fire sprinkler system.

Information

Service Life: 15
Chronological Age: 13
Effective Age: 13

Install Year: 2000
Next Event Year: 2015

1500 Pendrell

Mech 02 - Chemical Treatment



Location

Parkade level boiler room.

Information

Service Life: 10
Chronological Age: 7
Effective Age: 7

Description

Water filters. Pot feeders, chemicals , and other associated equipment to provide chemical treatment to HVAC systems.

Install Year: 2006
Next Event Year: 2016

Mech 03 - Valves & Cross Connection



Location

Parkade level boiler room.

Information

Service Life: 30
Chronological Age: 7
Effective Age: 7

Description

Various types and sizes of valves, including pressure reducing valves, backflow preventers and check valves to regulate the flow of water through domestic systems.

Install Year: 2006
Next Event Year: 2036

Plumbing & Drainage

Mech 04 - Domestic Recirculation Pumps



Location

Parkade level boiler room.

Information

Service Life: 10
Chronological Age: 7
Effective Age: 7

Description

Fractional horsepower hot water recirculation pumps.

Install Year: 2006
Next Event Year: 2016

Mech 05 - Domestic Storage Tanks



Location

Parkade level boiler room.

Information

Service Life: 10
Chronological Age: 7
Effective Age: 7

Description

Tanks to store domestic hot water for plumbing fixtures.

Install Year: 2006
Next Event Year: 2016

Mech 06 - Domestic Hot Water Boiler



Location

Parkade level boiler room.

Information

Service Life: 20
 Chronological Age: 7
 Effective Age: 7

Description

Pennant Laar 1250 MBH input gas fired domestic hot water boiler to heat recirculated water for plumbing fixtures.

Mech 07 - Domestic Water Distribution



Location

Throughout the building.

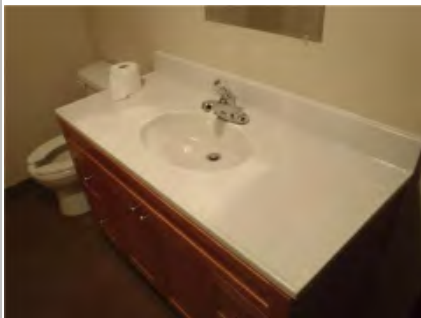
Information

Service Life: 30
 Chronological Age: 7
 Effective Age: 7

Description

Copper piping throughout building.

Mech 08 - Plumbing Fixtures



Location

Amenities space.

Information

Service Life: 25
 Chronological Age: 7
 Effective Age: 7

Description

Hand basins, toilets, and other commercial grade plumbing supply fixtures.

Mech 09 - Sanitary Drainage Distribution



Location

Connected to waste fixtures and distributed P-traps, typically cast iron piping with throughout the building.

Information

Service Life: 50
 Chronological Age: 34
 Effective Age: 34

Description

mechanical joints.

Install Year: 1979
 Next Event Year: 2029

1500 Pendrell

Mech 10 - Storm Drainage Distribution



Location

Roofs, balconies, at grade perimeter.

Information

Service Life: 50
Chronological Age: 34
Effective Age: 34

Description

Roof drains with leaf guard, parking drains, trench drains, catch basins and associated piping systems for rainwater runoff.

Install Year: 1979
Next Event Year: 2029

Mech 11 - Sump Pump



Location

Parkade level, lowest point - stall 49.

Information

Service Life: 15
Chronological Age: 2
Effective Age: 2

Description

Simplex high head vortex submersible sewage sump pump for storm.

Install Year: 2011
Next Event Year: 2026

Heating & Cooling

Mech 12 - Hydronic Baseboards



Location

Throughout building.

Information

Service Life: 20
Chronological Age: 34
Effective Age: 18

Description

Standard grade and architectural grade, wall mounted, hydronic convector baseboard heaters for localized radiant space heating.

Install Year: 1979
Next Event Year: 2015

Mech 13 - Heating Boilers



Location

Parkade level boiler room.

Information

Service Life: 20
Chronological Age: 7
Effective Age: 7

Description

Pennant Laars 999 MBH input natural gas fired, high efficiency type, copper finned boilers.

Install Year: 2006
Next Event Year: 2026

1500 Pendrell

Mech 14 - Expansion Tanks



Location

Parkade level boiler room.

Information

Service Life: 20
Chronological Age: 7
Effective Age: 7

Description

Vertical expansion tanks for HVAC piping systems to handle increases in fluid volume due to temperature changes.

Install Year: 2006
Next Event Year: 2026

Mech 15 - Inline HVAC Pumps



Location

Parkade level boiler room.

Information

Service Life: 15
Chronological Age: 1
Effective Age: 1

Description

Centrifugal, vertical in-line pumps for heating water.

Install Year: 2012
Next Event Year: 2027

Ventilation and Air-conditioning

Mech 16 - Make Up Air Units



Location

Roof

Information

Service Life: 20
Chronological Age: 2
Effective Age: 2

Description

Belt-driven centrifugal fans to supply make-up air to the interior of the building.

Install Year: 2011
Next Event Year: 2031

Mech 17 - General Exhaust Fans



Location

Various locations in buiding.

Information

Service Life: 15
Chronological Age: 7
Effective Age: 7

Description

Direct drive ceiling fans, ceiling and cabinet fans, centrifugal inline blower fans, propellor wall fans.

Install Year: 2006
Next Event Year: 2021

1500 Pendrell

Mech 18 - Squash Court Ventilation Unit



Location
Above squash court.

Information
Service Life: 15
Chronological Age: 34
Effective Age: 13

Description
Belt-driven centrifugal fan to supply ventilation make-up air to and remove exhaust from the Squash Court.

Install Year: 1979
Next Event Year: 2015

Mech 19 - Parkade Ventilation Fans



Location
East and West sides of parkade.

Information
Service Life: 15
Chronological Age: 9
Effective Age: 9

Description
Belt driven, shaft-mounted, fans to exhaust air from parkade.

Install Year: 2004
Next Event Year: 2019

Elevator

Traction

Elev 01 - Geared Traction Elevators



Location
Basement elevator room.

Information
Service Life: 25
Chronological Age: 34
Effective Age: 24

Description
Northern geared basement traction elevators with Northern relay controls, two-speed AC drive exterior rotor, Northern 261 geared machines, 1500 lbs capacity, 150 fpm rated speed.

Install Year: 1979
Next Event Year: 2014

Car Interiors

Elev 02 - Elevator Cabs & Hoistway



Location
Cab and travelling hoistway from parkade level to 3rd floor.

Information
Service Life: 25
Chronological Age: 24
Effective Age: 24

Description
Single speed, front opening doors, square plastic incandescent illumination pushbuttons, multilight position indicators, infrared door protection, original MAC door operators, plastic laminate panels with stainless steel reveals and tile flooring.

Install Year: 1989
Next Event Year: 2014

Fire Safety

Controls

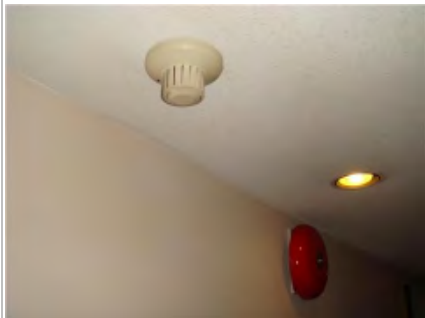
Fire 01 - Fire Control Panels



Location		Description	
Main electrical room and entrance lobby.		Mircom hardwired fire alarm panel located inside main electrical room, annunciator panel with zoned light is located at main entrance lobby, fire alarm audio devices throughout the building include suites.	
Information			
Service Life:	20	Install Year:	2011
Chronological Age:	2	Next Event Year:	2031
Effective Age:	2		

Detection

Fire 02 - Fire Detection & Alarm



Location		Description	
various services room, stairwell and hallway		Smoke detectors, heat detectors, flow switches, tamper switches, bells, pull stations and other fixed apparatus field devices to detect fire & smoke conditions and initiate timely response via audible devices. review next event date	
Information			
Service Life:	20	Install Year:	1995
Chronological Age:	18	Next Event Year:	2015
Effective Age:	18		

Suppression

Fire 03 - Dry Sprinkler Compressor



Location		Description	
Parkade level boiler room.		Belt drive, single-stage, air cooled, fan type compressor assembly to increase the pressure of air in the fire sprinkler lines.	
Information			
Service Life:	15	Install Year:	1994
Chronological Age:	19	Next Event Year:	2015
Effective Age:	13		

1500 Pendrell

Fire 04 - Portable Fire Extinguishers



Location

Throughout building.

Information

Service Life: 24
Chronological Age: 13
Effective Age: 13

Description

Wall mounted, manually operated, 5lb and 10lb ABC type pressurized vessels for controlled discharge of chemicals to extinguish small fires.

Install Year: 2000
Next Event Year: 2024

Fire 05 - Sprinklers & Standpipe



Location

Throughout building.

Information

Service Life: 40
Chronological Age: 19
Effective Age: 19

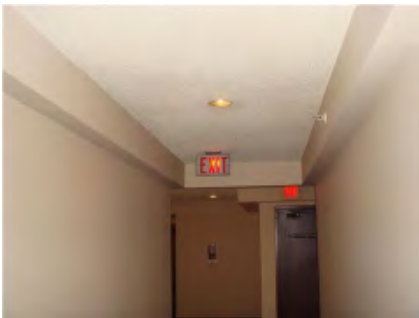
Description

Quick response upright, pendant and sidewall sprinkler heads, distribution lines and valves.

Install Year: 1994
Next Event Year: 2034

Egress

Fire 06 - Emergency Egress Equipment



Location

Various location in hallways and parkade.

Information

Service Life: 20
Chronological Age: 18
Effective Age: 18

Description

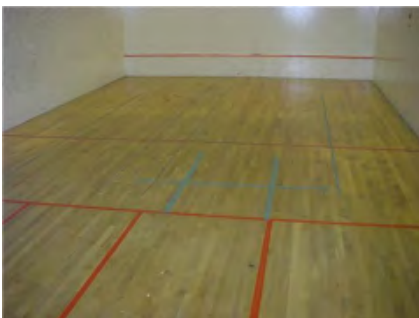
Metallic housing exit lights with compact fluorescent lamps. Newer installed exit lights are white plastic housing.

Install Year: 1995
Next Event Year: 2015

Interior Finishes

Floors

Finish 01 - Wood Flooring



Location

Squash court.

Information

Service Life: 40
Chronological Age: 34
Effective Age: 34

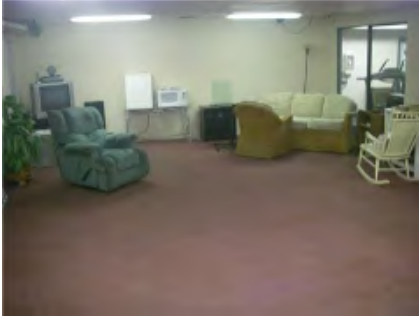
Description

Wood parquet flooring.

Install Year: 1979
Next Event Year: 2019

1500 Pendrell

Finish 02 - Carpet Flooring



Location

Hallways, stairwells, amenity rooms and other locations throughout the building.

Description

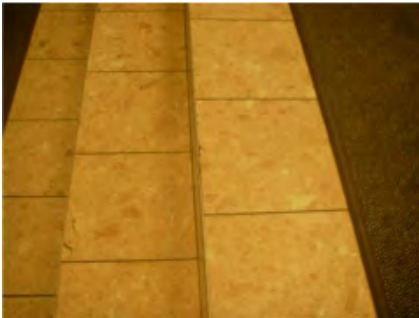
Synthetic, low level loop, textile floor covering laid on cushion over concrete substrate with seam binding and door thresholds.

Information

Service Life: 15
Chronological Age: 5
Effective Age: 5

Install Year: 2008
Next Event Year: 2023

Finish 03 - Tiled Flooring



Location

Lobby, mens and womens washrooms, elevator landings, stairs in lobby.

Description

Ceramic tiles and grout laid on concrete substrate.

Information

Service Life: 25
Chronological Age: 34
Effective Age: 23

Install Year: 1979
Next Event Year: 2015

Finish 04 - Painted Concrete Flooring



Location

Elevator landing and hallway in basement. Electrical room.

Description

Exposed concrete floors, painted in some locations to provide a cleaner finish. This flooring asset does not include the foundation, which is included with the structural system.

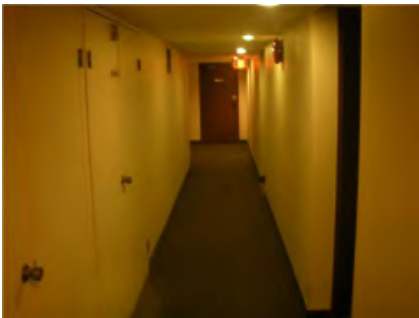
Information

Service Life: 8
Chronological Age: 9
Effective Age: -6

Install Year: 2004
Next Event Year: 2027

Walls

Finish 05 - Interior Painting



Location

Interior walls and ceilings in common areas.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard, millwork trim details and metal trim.

Information

Service Life: 10
Chronological Age: 4
Effective Age: 4

Install Year: 2009
Next Event Year: 2019

1500 Pendrell

Finish 06 - Wood Paneling



Location

Lobby area.

Information

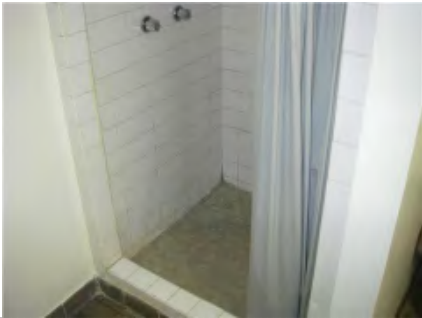
Service Life: 30
Chronological Age: 34
Effective Age: 24

Description

Wood veneer paneling.

Install Year: 1979
Next Event Year: 2019

Finish 07 - Ceramic Tiled Walls



Location

Showers in mens and womens sauna changerooms.

Information

Service Life: 30
Chronological Age: 34
Effective Age: 25

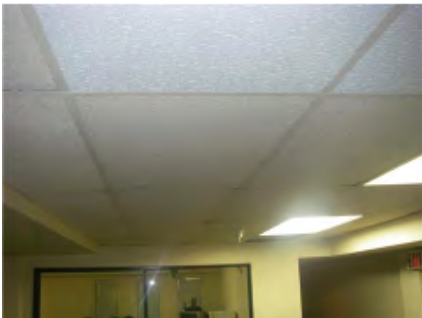
Description

Ceramic tiles on mortar bed and substrate with grout and caulking for interface details.

Install Year: 1979
Next Event Year: 2018

Ceilings

Finish 08 - Acoustic Ceiling Tiles



Location

Fitness room and amenity room.

Information

Service Life: 25
Chronological Age: 12
Effective Age: 12

Description

Suspended grid of tiles and metal T channels that form a drop ceiling, together will cover numerous electrical and mechanical service penetrations.

Install Year: 2001
Next Event Year: 2026

Architectural Woodwork

Finish 09 - Carpentry & Millwork



Location

Men and women washrooms and other common areas throughout the building.

Information

Service Life: 30
Chronological Age: 34
Effective Age: 25

Description

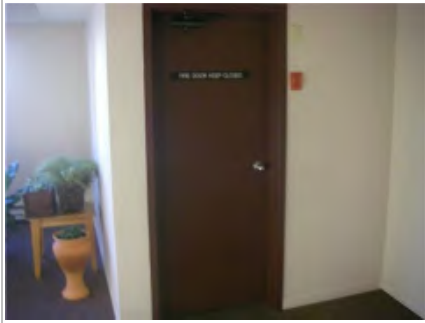
Shop fabricated custom casework, built-in countertops with laminate surface, wood veneer cabinets, mouldings, and door casings.

Install Year: 1979
Next Event Year: 2018

1500 Pendrell

Furnishings

Finish 10 - Interior Swing Doors



Location	Providing access to various common areas.	Description	Variety of solid wood core and hollow metal swing doors hung in framed openings. Exterior doors are considered separately as part of the building enclosure system.
Information			
Service Life:	40	Install Year:	1979
Chronological Age:	34	Next Event Year:	2019
Effective Age:	34		

Housekeeping

Finish 11 - General Housekeeping

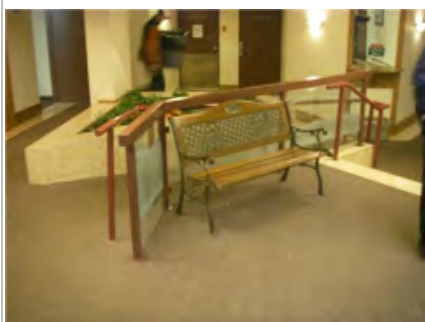


Location	Common areas throughout the building.	Description	Cleaning and care of miscellaneous brightwork, millwork, casework, and other interior finishes.
Information			
Service Life:	25	Install Year:	1979
Chronological Age:	34	Next Event Year:	2018
Effective Age:	20		

Amenities

Furnishings

Amen 01 - Furniture & Accessories



Location	Lobby, amenity rooms and other common areas.	Description	Wood and fabric benches, glass and metal tables, area rugs, paintings, pot plants, ornaments, and other miscellaneous accessories. Exterior furnishings are included separately.
Information			
Service Life:	15	Install Year:	2000
Chronological Age:	13	Next Event Year:	2018
Effective Age:	10		

Amen 02 - Wood Storage Lockers



Location	Basement level.	Description	Wood framed general purpose storage lockers with swing door hardware.
Information			
Service Life:	30	Install Year:	1979
Chronological Age:	34	Next Event Year:	2018
Effective Age:	25		

1500 Pendrell

Amen 03 - Central Mailboxes



Location

Lobby at ground level.

Description

Flush mounted, front loading, suite series, horizontal natural anodized aluminum finish, extruded aluminum trim, 5-pin cam locks, and Canada postal crown lock.

Information

Service Life:	30
Chronological Age:	34
Effective Age:	25

Install Year:	1979
Next Event Year:	2018

Amen 04 - Public Signage



Location

Mounted to walls in common areas throughout the building.

Description

Variety of permanently displayed information placards in the public areas of the building.

Information

Service Life:	25
Chronological Age:	34
Effective Age:	23

Install Year:	1979
Next Event Year:	2015

Amenities

Amen 05 - Dry Saunas



Location

Men and womens saunas on the main floor.

Description

Wood paneling, wood benches, electric element, controller. Tylo electric element and timer control.

Information

Service Life:	18
Chronological Age:	34
Effective Age:	13

Install Year:	1979
Next Event Year:	2018

Amen 06 - Fitness Equipment



Location

Fitness room on main floor.

Description

Equipment by Hoist including a selection of indoor bikes, climber, elliptical cross trainer, treadmill, selectorized strength machine, pumphouse weight stacks, etc.

Information

Service Life:	15
Chronological Age:	11
Effective Age:	10

Install Year:	2002
Next Event Year:	2018

1500 Pendrell

Sitework

Hard Landscaping

Site 01 - Wood Structures



Location	South side of the property.	Description	Wood framed recycling and trash enclosure
Information			
Service Life:	35	Install Year:	1979
Chronological Age:	34	Next Event Year:	2018
Effective Age:	30		

Site 02 - Metal Fencing, Railings & Gates



Location	Entrance to parkade on the north elevation, entry to the property on the south elevation and other locations.	Description	Coated posts, rails and pickets, with posts fastened to adjacent walls.
Information			
Service Life:	40	Install Year:	1979
Chronological Age:	34	Next Event Year:	2018
Effective Age:	35		

Site 03 - Chainlink Fencing



Location	South side of the property.	Description	6' woven fence with metal posts set in concrete.
Information			
Service Life:	40	Install Year:	1979
Chronological Age:	34	Next Event Year:	2021
Effective Age:	32		

Site 04 - Concrete Paving



Location	Walkways on the south and north elevation.	Description	Poured in place concrete paving (4-6" depth depending whether pedestrian or traffic surfaces); compacted base gravel and compacted sub-grade.
Information			
Service Life:	35	Install Year:	1979
Chronological Age:	34	Next Event Year:	2023
Effective Age:	25		

1500 Pendrell

Site 05 - Unit Paving



Location

Main entry on the north elevation.

Information

Service Life: 40
Chronological Age: 4
Effective Age: 4

Description

Concrete unit pavers on a compacted sub-base.

Install Year: 2009
Next Event Year: 2049

Site 06 - Concrete Block Retaining Walls



Location

Main entry to the building on the north elevation.

Information

Service Life: 50
Chronological Age: 4
Effective Age: 4

Description

Precut concrete unit façade, precast concrete cap, compacted sub-grade.

Install Year: 2009
Next Event Year: 2059

Site 07 - Wood Fencing



Location

All elevations of the building.

Information

Service Life: 20
Chronological Age: 4
Effective Age: 4

Description

Pressure treated timber hemfire - posts, picket boards, top rails and caps, footings and subgrade.

Install Year: 2009
Next Event Year: 2029

Soft Landscaping

Site 08 - Soft Landscaping



Location

Perimeter of the building and courtyard on the south elevation.

Information

Service Life: 35
Chronological Age: 4
Effective Age: 4

Description

Lawns, ground cover, shrubs, perennials and trees. There are no automated irrigation sprinklers.

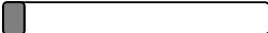




















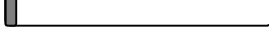
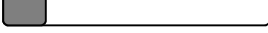


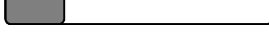






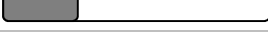
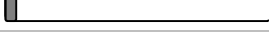

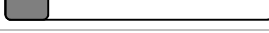
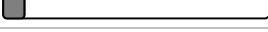

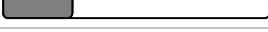
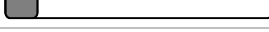


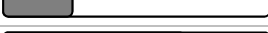
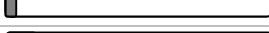













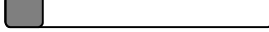
Install Year: 2009
Next Event Year: 2044

Appendix C

Asset Service Life Summary

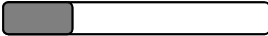
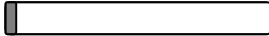








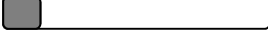
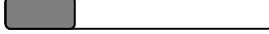


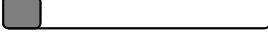
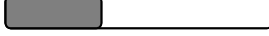

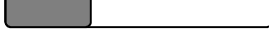








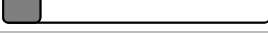
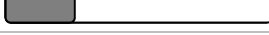
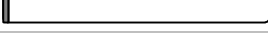
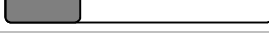
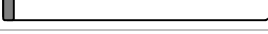
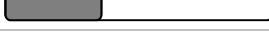
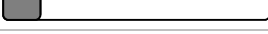
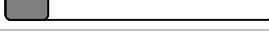

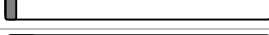



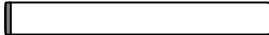


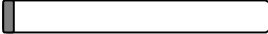
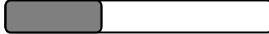
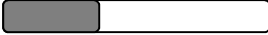
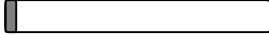
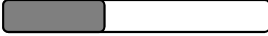
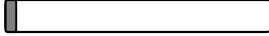
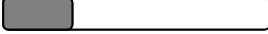
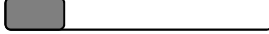





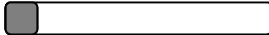



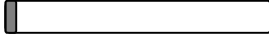
1500 Pendrell

Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Enclosure			
Encl 01	Protected SBS Membrane Roof with Ballast	4 	26 
Encl 02	Varied Deck Membranes	14 	2 
Encl 03	2 Ply SBS Roof	14 	6 
Encl 04	Metal Roof	34 	11 
Encl 05	Acrylic Dome Skylights	34 	6 
Encl 06	Skylights	34 	6 
Encl 07	Metal Panel Cladding	4 	36 
Encl 08	Tiled Cladding	34 	6 
Encl 09	Wood Siding & Wood Trim	34 	2 
Encl 10	Coated Concrete	5 	3 
Encl 11	Stucco Cladding - Face Seal	34 	2 
Encl 12	Aluminum Windows - New (Placeholder)	8 	22 
Encl 13	Aluminum Windows	34 	11 
Encl 14	Lobby Door Assembly	1 	24 
Encl 15	Metal Swing Doors	34 	2 
Encl 16	Sliding Glass Doors	34 	11 
Encl 17	Varied Balcony Waterproofing Membranes	14 	2 
Encl 18	At Grade Waterproofing - Existing	34 	8 
Encl 19	At Grade Waterproofing - New	4 	26 
Encl 20	Parking Garage Slab	13 	6 
Encl 21	Varied Guardrail Configurations	23 	11 
Encl 22	Exterior Sealant	13 	2 
Encl 23	Miscellaneous & Inspections	34 	6 
Electrical			
Elec 01	Distribution transformer	34 	7 
Elec 02	Emergency Generator	34 	7 
Elec 03	Electrical Distribution	34 	7 
Elec 04	Exterior Light Fixtures	34 	2 
Elec 05	Interior Lighting Components	34 	2 
Elec 06	Enterphone System	34 	7 

1500 Pendrell

Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Mechanical			
Mech 01	Heat Tracing - Freeze Protection	13 	2 
Mech 02	Chemical Treatment	7 	3 
Mech 03	Valves & Cross Connection	7 	23 
Mech 04	Domestic Recirculation Pumps	7 	3 
Mech 05	Domestic Storage Tanks	7 	3 
Mech 06	Domestic Hot Water Boiler	7 	13 
Mech 07	Domestic Water Distribution	7 	23 
Mech 08	Plumbing Fixtures	7 	18 
Mech 09	Sanitary Drainage Distribution	34 	16 
Mech 10	Storm Drainage Distribution	34 	16 
Mech 11	Sump Pump	2 	13 
Mech 12	Hydronic Baseboards	34 	2 
Mech 13	Heating Boilers	7 	13 
Mech 14	Expansion Tanks	7 	13 
Mech 15	Inline HVAC Pumps	1 	14 
Mech 16	Make Up Air Units	2 	18 
Mech 17	General Exhaust Fans	7 	8 
Mech 18	Squash Court Ventilation Unit	34 	2 
Mech 19	Parkade Ventilation Fans	9 	6 
Elevator			
Elev 01	Geared Traction Elevators	34 	1 
Elev 02	Elevator Cabs & Hoistway	24 	1 
Fire Safety			
Fire 01	Fire Control Panels	2 	18 
Fire 02	Fire Detection & Alarm	18 	2 
Fire 03	Dry Sprinkler Compressor	19 	2 
Fire 04	Portable Fire Extinguishers	13 	11 
Fire 05	Sprinklers & Standpipe	19 	21 
Fire 06	Emergency Egress Equipment	18 	2 
Interior Finishes			
Finish 01	Wood Flooring	34 	6 
Finish 02	Carpet Flooring	5 	10 
Finish 03	Tiled Flooring	34 	2 

1500 Pendrell

Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Finish 04	Painted Concrete Flooring	9	14
Finish 05	Interior Painting	4	6
Finish 06	Wood Paneling	34	6
Finish 07	Ceramic Tiled Walls	34	5
Finish 08	Acoustic Ceiling Tiles	12	13
Finish 09	Carpentry & Millwork	34	5
Finish 10	Interior Swing Doors	34	6
Finish 11	General Housekeeping	34	5

Amenities

Amen 01	Furniture & Accessories	13	5
Amen 02	Wood Storage Lockers	34	5
Amen 03	Central Mailboxes	34	5
Amen 04	Public Signage	34	2
Amen 05	Dry Saunas	34	5
Amen 06	Fitness Equipment	11	5

Sitework

Site 01	Wood Structures	34	5
Site 02	Metal Fencing, Railings & Gates	34	5
Site 03	Chainlink Fencing	34	8
Site 04	Concrete Paving	34	10
Site 05	Unit Paving	4	36
Site 06	Concrete Block Retaining Walls	4	46
Site 07	Wood Fencing	4	16
Site 08	Soft Landscaping	4	31

Appendix D

Funding Scenario Cash Flow Tables



Name	Fixed annual funding of \$ 100,000 (2013 Status Quo)
Type	Basic
Regarding	1500 Pendrell
Start Year	2013
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	100

Init Catchup Cost	
Operating Budget	\$481,000
Starting Reserve Balance	\$283,000
Reserver Contribution Threshold	\$500,000
Contribution Below Threshold	\$100,000
Contribution Above Threshold	\$100,000
Reserve Contribution Increase	0.0%
Monthly Avg. Unit Contribution	\$83

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2013	\$283,000	\$100,000	\$0	\$5,660	\$41,000	\$2,000	\$0	\$345,660	10.66 %
2014	\$345,660	\$100,000	\$0	\$6,913	\$427,400	\$2,000	\$0	\$23,173	0.74 %
2015	\$23,173	\$100,000	\$371,263	\$463	\$482,900	\$2,000	\$0	\$10,000	0.33 %
2016	\$10,000	\$100,000	\$0	\$200	\$49,900	\$2,000	\$0	\$58,300	1.78 %
2017	\$58,300	\$100,000	\$0	\$1,166	\$8,100	\$2,000	\$0	\$149,366	4.12 %
2018	\$149,366	\$100,000	\$0	\$2,987	\$97,600	\$2,000	\$0	\$152,753	3.91 %
2019	\$152,753	\$100,000	\$373,592	\$3,055	\$617,400	\$2,000	\$0	\$10,000	0.27 %
2020	\$10,000	\$100,000	\$30,200	\$200	\$128,400	\$2,000	\$0	\$10,000	0.25 %
2021	\$10,000	\$100,000	\$362,400	\$200	\$460,600	\$2,000	\$0	\$10,000	0.26 %
2022	\$10,000	\$100,000	\$0	\$200	\$9,700	\$2,000	\$0	\$98,500	2.34 %
2023	\$98,500	\$100,000	\$0	\$1,970	\$178,600	\$2,000	\$0	\$19,870	0.44 %
2024	\$19,870	\$100,000	\$3,167,033	\$397	\$3,275,300	\$2,000	\$0	\$10,000	0.66 %
2025	\$10,000	\$100,000	\$186,100	\$200	\$284,300	\$2,000	\$0	\$10,000	0.68 %
2026	\$10,000	\$100,000	\$72,200	\$200	\$170,400	\$2,000	\$0	\$10,000	0.64 %
2027	\$10,000	\$100,000	\$0	\$200	\$52,800	\$2,000	\$0	\$55,400	3.12 %
2028	\$55,400	\$100,000	\$0	\$1,108	\$14,300	\$2,000	\$0	\$140,208	6.90 %
2029	\$140,208	\$100,000	\$0	\$2,804	\$224,900	\$2,000	\$0	\$16,112	0.77 %
2030	\$16,112	\$100,000	\$0	\$322	\$54,800	\$2,000	\$0	\$59,634	2.57 %
2031	\$59,634	\$100,000	\$0	\$1,193	\$91,500	\$2,000	\$0	\$67,327	2.67 %
2032	\$67,327	\$100,000	\$0	\$1,347	\$23,200	\$2,000	\$0	\$143,474	5.14 %
2033	\$143,474	\$100,000	\$0	\$2,869	\$46,800	\$2,000	\$0	\$197,543	6.47 %
2034	\$197,543	\$100,000	\$657,406	\$3,951	\$946,900	\$2,000	\$0	\$10,000	0.41 %
2035	\$10,000	\$100,000	\$319,200	\$200	\$417,400	\$2,000	\$0	\$10,000	0.45 %
2036	\$10,000	\$100,000	\$997,000	\$200	\$1,095,200	\$2,000	\$0	\$10,000	0.77 %
2037	\$10,000	\$100,000	\$0	\$200	\$21,600	\$2,000	\$0	\$86,600	6.22 %
2038	\$86,600	\$100,000	\$0	\$1,732	\$168,300	\$2,000	\$0	\$18,032	1.32 %
2039	\$18,032	\$100,000	\$1,227,107	\$361	\$1,333,500	\$2,000	\$0	\$10,000	8.33 %
2040	\$10,000	\$100,000	\$800	\$200	\$99,000	\$2,000	\$0	\$10,000	22.22 %
2041	\$10,000	\$100,000	\$0	\$200	\$20,000	\$2,000	\$0	\$88,200	205.11 %
2042	\$88,200	\$100,000	\$0	\$1,764	\$52,900	\$2,000	\$0	\$135,064	100.00 %
		\$3,000,000	\$7,764,301		\$10,894,700				



Name	Initial annual funding of \$ 100,000, with a 10% per annum increase (Alternative)
Type	Basic
Regarding	1500 Pendrell
Start Year	2013
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	100

Init Catchup Cost	
Operating Budget	\$481,000
Starting Reserve Balance	\$283,000
Reserver Contribution Threshold	\$500,000
Contribution Below Threshold	\$100,000
Contribution Above Threshold	\$100,000
Reserve Contribution Increase	10.0%
Monthly Avg. Unit Contribution	\$83

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2013	\$283,000	\$100,000	\$0	\$5,660	\$41,000	\$2,000	\$0	\$345,660	10.66 %
2014	\$345,660	\$110,000	\$0	\$6,913	\$427,400	\$2,000	\$0	\$33,173	1.06 %
2015	\$33,173	\$121,000	\$340,063	\$663	\$482,900	\$2,000	\$0	\$10,000	0.33 %
2016	\$10,000	\$133,100	\$0	\$200	\$49,900	\$2,000	\$0	\$91,400	2.79 %
2017	\$91,400	\$146,410	\$0	\$1,828	\$8,100	\$2,000	\$0	\$229,538	6.33 %
2018	\$229,538	\$161,051	\$0	\$4,591	\$97,600	\$2,000	\$0	\$295,580	7.58 %
2019	\$295,580	\$177,156	\$150,752	\$5,912	\$617,400	\$2,000	\$0	\$10,000	0.27 %
2020	\$10,000	\$194,872	\$0	\$200	\$128,400	\$2,000	\$0	\$74,672	1.90 %
2021	\$74,672	\$214,359	\$182,076	\$1,493	\$460,600	\$2,000	\$0	\$10,000	0.26 %
2022	\$10,000	\$235,795	\$0	\$200	\$9,700	\$2,000	\$0	\$234,295	5.56 %
2023	\$234,295	\$259,374	\$0	\$4,686	\$178,600	\$2,000	\$0	\$317,755	7.18 %
2024	\$317,755	\$285,312	\$2,677,878	\$6,355	\$3,275,300	\$2,000	\$0	\$10,000	0.66 %
2025	\$10,000	\$313,843	\$0	\$200	\$284,300	\$2,000	\$0	\$37,743	2.56 %
2026	\$37,743	\$345,227	\$0	\$755	\$170,400	\$2,000	\$0	\$211,325	13.55 %
2027	\$211,325	\$379,750	\$0	\$4,226	\$52,800	\$2,000	\$0	\$540,501	30.50 %
2028	\$540,501	\$417,725	\$0	\$10,810	\$14,300	\$2,000	\$0	\$952,736	46.88 %
2029	\$952,736	\$459,497	\$0	\$19,055	\$224,900	\$2,000	\$0	\$1,204,389	57.73 %
2030	\$1,204,389	\$505,447	\$0	\$24,088	\$54,800	\$2,000	\$0	\$1,677,124	72.44 %
2031	\$1,677,124	\$555,992	\$0	\$33,542	\$91,500	\$2,000	\$0	\$2,173,158	86.44 %
2032	\$2,173,158	\$611,591	\$0	\$43,463	\$23,200	\$2,000	\$0	\$2,803,013	100.46 %
2033	\$2,803,013	\$672,750	\$0	\$56,060	\$46,800	\$2,000	\$0	\$3,483,023	114.08 %
2034	\$3,483,023	\$740,025	\$0	\$69,660	\$946,900	\$2,000	\$0	\$3,343,809	138.80 %
2035	\$3,343,809	\$814,028	\$0	\$66,876	\$417,400	\$2,000	\$0	\$3,805,313	172.26 %
2036	\$3,805,313	\$895,431	\$0	\$76,106	\$1,095,200	\$2,000	\$0	\$3,679,650	286.57 %
2037	\$3,679,650	\$984,974	\$0	\$73,593	\$21,600	\$2,000	\$0	\$4,714,617	338.93 %
2038	\$4,714,617	\$1,083,471	\$0	\$94,292	\$168,300	\$2,000	\$0	\$5,722,081	421.98 %
2039	\$5,722,081	\$1,191,818	\$0	\$114,442	\$1,333,500	\$2,000	\$0	\$5,692,841	4,744.03 %
2040	\$5,692,841	\$1,311,000	\$0	\$113,857	\$99,000	\$2,000	\$0	\$7,016,698	>10000%
2041	\$7,016,698	\$1,442,100	\$0	\$140,334	\$20,000	\$2,000	\$0	\$8,577,132	>10000%
2042	\$8,577,132	\$1,586,310	\$0	\$171,543	\$52,900	\$2,000	\$0	\$10,280,085	100.00 %
		\$16,449,410	\$3,350,770		\$10,894,700				



Name	Fixed annual funding of \$ 336,000 (2013 Progressive)
Type	Basic
Regarding	1500 Pendrell
Start Year	2013
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	100

Init Catchup Cost	\$300
Operating Budget	\$481,000
Starting Reserve Balance	\$283,000
Reserver Contribution Threshold	\$500,000
Contribution Below Threshold	\$336,000
Contribution Above Threshold	\$336,000
Reserve Contribution Increase	0.0%
Monthly Avg. Unit Contribution	\$280

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2013	\$283,000	\$336,000	\$0	\$5,660	\$41,000	\$2,000	\$0	\$581,660	17.94 %
2014	\$581,660	\$336,000	\$0	\$11,633	\$427,400	\$2,000	\$0	\$499,893	16.06 %
2015	\$499,893	\$336,000	\$0	\$9,998	\$482,900	\$2,000	\$0	\$360,991	12.15 %
2016	\$360,991	\$336,000	\$0	\$7,220	\$49,900	\$2,000	\$0	\$652,311	19.94 %
2017	\$652,311	\$336,000	\$0	\$13,046	\$8,100	\$2,000	\$0	\$991,257	27.34 %
2018	\$991,257	\$336,000	\$0	\$19,825	\$97,600	\$2,000	\$0	\$1,247,482	32.00 %
2019	\$1,247,482	\$336,000	\$0	\$24,950	\$617,400	\$2,000	\$0	\$989,032	27.03 %
2020	\$989,032	\$336,000	\$0	\$19,781	\$128,400	\$2,000	\$0	\$1,214,412	31.05 %
2021	\$1,214,412	\$336,000	\$0	\$24,288	\$460,600	\$2,000	\$0	\$1,112,101	28.99 %
2022	\$1,112,101	\$336,000	\$0	\$22,242	\$9,700	\$2,000	\$0	\$1,458,643	34.67 %
2023	\$1,458,643	\$336,000	\$0	\$29,173	\$178,600	\$2,000	\$0	\$1,643,216	37.17 %
2024	\$1,643,216	\$336,000	\$1,275,220	\$32,864	\$3,275,300	\$2,000	\$0	\$10,000	0.66 %
2025	\$10,000	\$336,000	\$0	\$200	\$284,300	\$2,000	\$0	\$59,900	4.07 %
2026	\$59,900	\$336,000	\$0	\$1,198	\$170,400	\$2,000	\$0	\$224,698	14.41 %
2027	\$224,698	\$336,000	\$0	\$4,494	\$52,800	\$2,000	\$0	\$510,392	28.80 %
2028	\$510,392	\$336,000	\$0	\$10,208	\$14,300	\$2,000	\$0	\$840,300	41.35 %
2029	\$840,300	\$336,000	\$0	\$16,806	\$224,900	\$2,000	\$0	\$966,206	46.31 %
2030	\$966,206	\$336,000	\$0	\$19,324	\$54,800	\$2,000	\$0	\$1,264,730	54.63 %
2031	\$1,264,730	\$336,000	\$0	\$25,295	\$91,500	\$2,000	\$0	\$1,532,525	60.95 %
2032	\$1,532,525	\$336,000	\$0	\$30,650	\$23,200	\$2,000	\$0	\$1,873,975	67.16 %
2033	\$1,873,975	\$336,000	\$0	\$37,480	\$46,800	\$2,000	\$0	\$2,198,655	72.01 %
2034	\$2,198,655	\$336,000	\$0	\$43,973	\$946,900	\$2,000	\$0	\$1,629,728	67.65 %
2035	\$1,629,728	\$336,000	\$0	\$32,595	\$417,400	\$2,000	\$0	\$1,578,922	71.47 %
2036	\$1,578,922	\$336,000	\$0	\$31,578	\$1,095,200	\$2,000	\$0	\$849,301	66.14 %
2037	\$849,301	\$336,000	\$0	\$16,986	\$21,600	\$2,000	\$0	\$1,178,687	84.73 %
2038	\$1,178,687	\$336,000	\$0	\$23,574	\$168,300	\$2,000	\$0	\$1,367,960	100.88 %
2039	\$1,367,960	\$336,000	\$0	\$27,359	\$1,333,500	\$2,000	\$0	\$395,820	329.84 %
2040	\$395,820	\$336,000	\$0	\$7,916	\$99,000	\$2,000	\$0	\$638,736	1,419.41 %
2041	\$638,736	\$336,000	\$0	\$12,775	\$20,000	\$2,000	\$0	\$965,511	2,245.37 %
2042	\$965,511	\$336,000	\$0	\$19,310	\$52,900	\$2,000	\$0	\$1,265,921	100.00 %
		\$10,080,000	\$1,275,220		\$10,894,700				

Appendix E

Disclosures and Disclaimers

Disclosures and Disclaimers

Condition of the Assets

The method of determining the physical condition of the assets is based on a visual review of a representative sampling of the assets in readily accessible locations, discussions with facility representatives, and review of readily available reference documents. No destructive testing or exploratory openings are carried out on any of the assets and the equipment is not disassembled, operated or subject to re-commissioning tests. The physical review is not a full “condition assessment” since operating, testing or exploratory openings are excluded from the scope of services.

Cost Estimating for Assets

- All estimates of costs are provided in future year dollars.
- All estimates of costs are Class D estimates intended for planning purposes and not for accounting or tender use. See Glossary of Terms for definition of Class D estimates.
- Actual costs will vary depending on several factors. The estimates assume economies of scale will be achieved by bundling work tasks together into larger renewal, repair or rehabilitation projects. Small tasks performed individually may exceed the estimates presented.
- Soft costs, such as consulting services and contingency allowances are not included in the budget estimates. When developing cost estimates for projects in greater detail for budgeting, each project should include appropriate soft costs - such as owner contingency, permit fees, engineering fees, etc. Depending on the sizes, scope and timing of individual projects, the magnitude of the soft costs will vary.
- Construction costs are subject to the vagaries of the marketplace. At the time of tender, costs may vary depending on the time of the year, contractor availability, and other factors.
- The estimates must be updated over time, further developed for scope of work and confirmed by competitive tender before any contracts are awarded.
- Detailed repair specifications are required to be prepared in order to confirm scopes of work and costs.
- The estimates do not include allowances for site specific access requirements or environmental concerns, which should be addressed on a project-by-project basis.
- Consideration may sometimes need to be given to costs arising from the impact of projects on occupancy use and facility operations.
- Replacement costs are typically based on like-for-like with a similar asset unless code or other circumstances require the replacement cost to include an upgrade.

Maintenance of the Assets:

- The maintenance checklists are not exhaustive and are intended as a framework for the ongoing refinement of the maintenance program.
- Work must only be carried out by appropriately qualified personnel who have the necessary and sufficient knowledge about the maintenance tasks and maintenance intervals.
- The manufacturers' latest printed instructions should take precedence in the event of any conflict with the maintenance checklists.
- The owners' maintenance staff and/or service contractors are responsible to verify what is contained in the manufacturers' documentation regarding recommended maintenance procedures and intervals.
- The maintenance checklists and maintenance intervals should be reviewed annually and adjusted, as required, to reflect the service environment, feedback from contractors, etc.

Specialist and Non-Specialist Reviews

Our personnel collect the asset inventory data for all the different systems, including mechanical, plumbing, fire safety, elevator, electrical, interior finishes and sitework. Our scope of services is to identify the assets within each system, determine their age and report on their reasonable service life-cycles according to accepted industry standards. RDH personnel do not make observations with regard to specialty building system conditions unless specifically addressed in our proposal.

Forecasting the Useful Service Life of Assets

The service life of assets can be affected by a variety of circumstances, including the following:

- The quality of the maintenance conducted on an asset will affect the service life of the asset. Poor maintenance can lead to a reduced service life and may result in the premature failure of an asset.
- Insurable losses (force majeure), such as earthquakes, fires and floods can shorten the life of an asset. These events are not considered in a depreciation report.
- Asset service life in a Depreciation Report is determined according to accepted industry standards.

Funding Models

The funding models for Depreciation Reports are based on a 30-year horizon and use “future year dollars termed” methodology. This methodology projects the costs (in future year dollars) over the planning horizon and not beyond the terminus year of the planning horizon. The current year is the starting year of the planning horizon. The term, therefore, matches the initial horizon and does not respect a shifting horizon. This means that in year 1 the funding scenarios will look forward for 30 years.

For example, in 2012 the model looks forward to 2042. In year two, it will be accurate for 29 years, as it is only looking forward to year 2042. When an update study is performed in three years, the revised funding scenarios will look forward 30 years from 2015 to 2045. Renewal and major maintenance projects that occur beyond the 30-year planning horizon are not considered in the scenarios; that is, those projects that occur beyond 30 years are unfunded in the funding scenarios.

Appendix F

RDH Qualifications



DEPRECIATION REPORT

New regulations in British Columbia make Depreciation Reports mandatory for most strata corporations. RDH Building Engineering Ltd. offers building science and building asset management services from three offices in BC; Vancouver, Victoria, and Courtenay. RDH staff have broad practical experience assisting building owners with all aspects of planning for the long term stewardship of their building(s). Our reserve fund analysts, engineers, architects, and technologists have a wide variety of formal training—including building science, structural engineering, and mechanical engineering. To supplement our in-house expertise, we hire subconsultants for items such as elevator and swimming pool reviews. We believe that by using a team approach, we can ensure an appropriate level of thoroughness and quality.

We have prepared hundreds of Depreciation Reports and are recognized as industry leaders. David Albrice is a certified Professional Reserve Analyst and was one of the key people consulted when the legislation was drafted. He has an unrivaled depth of understanding of the physical, financial planning, and strata governance issues that need to be considered in the development of an effective Depreciation Report.



ABOUT US



David Albrice, B.Sc. URP, ARP, PRA

- Professional Reserve Analyst, APRA
- B.Sc. Urban and Regional Planning
- Associate Reserve Planner, REIC
- Project Manager on 100s of Facility Condition Assessments and Reserve Studies (Depreciation Reports)



Mike Wilson, P.Eng.

- B.Eng. & M.Eng., Structural Engineering
- Registered professional engineer, APEGBC
- 20 years experience as a consultant focused in the field of building science



Mark Will, Dipl.T., BA

- Dipl.T., Building Science Technology
- B.A., Economics
- 15 years experience in project management
- CHOA Board Member



Peter Fitch, C.Tech.

- UBC/UBCM Certified Professional program (audit only)
- Member of Applied Science Technologists & Technicians of British Columbia
- 30 years of experience in the mechanical design field



Phil Johnson, P.Eng.

- B.Sc. & M.Sc., Agricultural Engineering
- Registered professional engineer, APEGBC
- 20 years experience as a consultant focused in the field of building science



Matt Mulleray, P.Eng.

- B.A.Sc., Civil Engineering
- Dipl.T., Civil and Structural Engineering
- Registered professional engineer, APEGBC
- 10 years experience in bldg. science & engineering consulting





Harvey Goodman, P.Eng.

- B.A.Sc., Civil Engineering
- Registered professional engineer, APEGBC
- 20 years experience in building science consulting



Serge Desmarais, Architect AIBC, CP

- B.Arch.
- Registered architect, AIBC
- Certified Professional, UBC
- 30 years experience in building design and construction capital renewal projects



Jason Dunn, B.Arch.Sc., CCA

- B.Arch.Sc, Building Science Option
- Certified Construction Contract Administrator, CSC
- 10 years experience in building science consulting



Robin Breuer, A.Sc.T., RRO

- Dipl.T., Building Engineering Technology (Building Science Option)
- Registered Roof Observer, RCI Inc.
- 15 years experience in building science consulting



Lauren Stokes, Dipl.T.

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 5 years experience in building science consulting



Rob Mathena, Dipl.T.

- Dipl.T., Technology in Building Engineering (Building Science Option)
- 15 years experience in building science consulting and construction



Tim Smith, A.Sc.T.

- Dipl.T., Civil Engineering Technologist
- Member of Applied Science Technologists & Technicians of British Columbia
- 5 years experience in building science consulting



Brandon Carreira, Dipl.T.

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)



**climatesmart
business2011**

We are committed to reducing our environmental impact. RDH participated in Climate Smart to evaluate and reduce our carbon footprint.



Jesus De Mesa, Dipl.T.

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)



Alex Seto, Dipl.T.

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)



Roma Santos, Dipl.T.

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)



Nick Smit, Dipl.T.

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)



Kingston Chow, EIT, Dipl.T.

→ B.Eng., Civil Engineering
→ Dipl.T., Civil Engineering



Jeff Coulombe, Dipl.T.

→ Dipl.T., Green Building & Renewable Energy

Administrators and Client Support



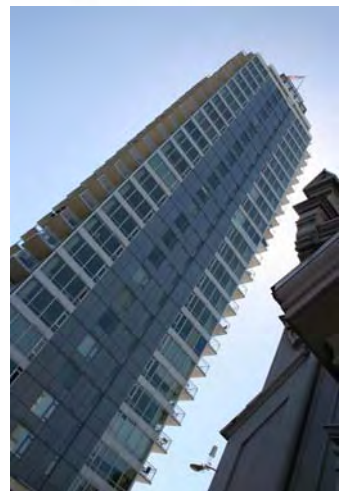
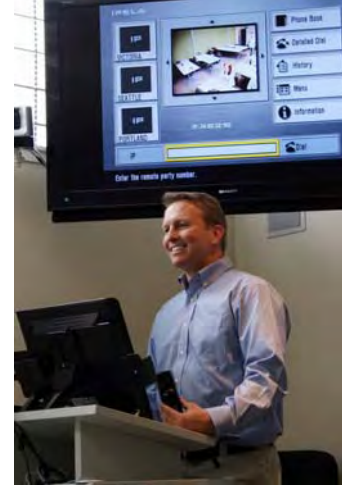
Vanessa Jumawan

→ 4 years experience in administration with engineering/architecture firm



Anna Qiu

→ Cert., Business Administration
→ 8 years experience in administration with engineering/architecture firm



Software Support and Programmers



Matthew Branch, P.Eng.

- B.Sc., Civil Engineering
- Registered professional engineer, APEGBC
- 12 years experience in engineering data analysis



Gary Zhang, B.Sc.

- B.Sc., Computer Science and Engineering
- 16 years experience in software development



Kan Ma, B.Sc.

- B.Sc., Computing Science
- 6 years experience in software development

Quantity Take-Offs



Andrea Corona, Dipl.

- Dipl., Small Craft Naval Architecture
- 25 years experience in architectural drafting



Roya Kiani Amin, B.Sc.

- B.Sc., Civil Engineering
- 5 years experience in architectural drafting
- 2 years experience in construction



Brigitte MacKenzie

- 3-year Apprenticeship Program, Germany
- 25 years experience in architectural drafting



Appendix G

Insurance Certificate

Aon Reed Stenhouse Inc.
 401 West Georgia Street, Suite 1200
 PO Box 3228 STN. TERMINAL
 Vancouver BC V6B 3X8
tel 604-688-4442 *fax* 604-682-4026

Amending Certificate No. : 320006772239

Re: Evidence of Insurance:

To Whom It May Concern

Insurance as described herein has been arranged on behalf of the Insured named herein under the following policy(ies) and as more fully described by the terms, conditions, exclusions and provisions contained in the said policy(ies) and any endorsements attached thereto.

Insured

RDH Building Engineering Ltd.
 224 West 8th Avenue
 Vancouver, BC V5Y 1N5

Coverage

Commercial General Liability	Insurer	Royal and Sun Alliance Insurance Co. of Canada	
Policy #	8141333		
Effective	01-Jun-2013	Expiry	02-May-2014
Limits of Liability	Bodily Injury & Property Damage, Each Occurrence \$5,000,000 Products and Completed Operations, Aggregate \$5,000,000 Personal Injury \$5,000,000 Advertising Liability \$5,000,000 Non-Owned Automobile Liability \$5,000,000 Legal Liability for Damage to Hired Automobiles \$50,000 Policy may be subject to a general aggregate and other aggregates where applicable		

Professional Liability	Insurer	Certain Underwriters At Lloyd's	
Policy #	QC1302155		
Effective	02-May-2013	Expiry	02-May-2014
Limits of Liability	Subject to aggregate where applicable		

Terms and / or Additional Coverage

Professional Liability
 Limit: \$2,000,000 Per Claim Limit / \$4,000,000 Aggregate Limit

THE POLICY CONTAINS A CLAUSE THAT MAY LIMIT THE AMOUNT PAYABLE
 OR, IN THE CASE OF AUTOMOBILE INSURANCE,
 THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE



Commercial General Liability

Products and Completed Operations
Broad Form Property Damage
Cross Liability
Contractual Liability

THIS CERTIFICATE CONSTITUTES A STATEMENT OF THE FACTS AS OF THE DATE OF ISSUANCE AND ARE SO REPRESENTED AND WARRANTED ONLY TO THE INSURED. OTHER PERSONS RELYING ON THIS CERTIFICATE DO SO AT THEIR OWN RISK.

Aon Reed Stenhouse Inc.

L Hadden

Dated : 30-May-2013
Issued By : Hadden,Lindsay D.
Tel : 604-443-2524

THE POLICY CONTAINS A CLAUSE THAT MAY LIMIT THE AMOUNT PAYABLE
OR, IN THE CASE OF AUTOMOBILE INSURANCE,
THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE