RDH
Making Buildings Better

rdh.com

Depreciation Report | Project 3160.30

Azura 2, 1495 Richards Street, Vancouver, BC

To The Owners, Strata Plan BCS890
c/o Mr. Gus Ramirez,
Property Manager
Rancho Management Services
Unit 600 - 1190 Hornby St
Vancouver BC V6Z 2K5

Site Visit December 19, 2013
Submitted November 25, 2014 by
RDH Building Engineering Ltd.
224 W 8th Avenue
Vancouver BC V5Y 1N5

Contents

Appendices

A - Glossary of Terms

B - Asset Inventory

C - Asset Service Life Summary

D - Disclosures and Disclaimers

E - Funding Scenario Cash Flow Tables

F - RDH Qualifications

G - Insurance Certificate

1 Introduction

RDH Building Engineering Ltd. (RDH) was retained by The Owners, Strata Plan BCS890 (the Owners) to prepare a Depreciation Report (the Report) for the residential complex known as Azura 2 and located at 1495 Richards Street, Vancouver, BC. The Report considers the common property and limited common property components (the Assets) that the Strata Corporation is responsible to maintain, repair and replace.

The Owners, Strata Plan BCS890 also own the Super Club amenity facilities, and have a cost sharing agreement with the adjacent strata corporations. The Super Club Assets are not included in this report. A separate Depreciation Report has been prepared for the Super Club.

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

This Report meets the requirements stipulated in the current Strata Property Act and Regulations. The Report includes a physical inventory of the common property assets; estimated costs for capital expenditures over a 30 year horizon; and five funding models. Refer to the appendices for RDH's qualifications and information on errors and omissions insurance. In accordance with the requirements of the Act, RDH declares that there is no relationship between the employees at RDH and the Owners.

This report is an update to the Reserve Fund Study issued on October 11, 2007. A site visit was completed on December 19, 2013, and the financial data is based on the 2014 fiscal year. A draft report was distributed to the strata council and strata management on May 30, 2014. A second draft with updated financial information was provided to council and management on September 5, 2014. The final report was later issued on November 25, 2014.

The Depreciation Report is a synopsis of many hundreds of pages of data and has two parts: the summary and the appendices. The summary is intended to provide an overview of the Depreciation Report. The appendices provide detailed information to support the summary report. The appendices include a glossary of terms. Words that are *italicized* are defined in the glossary.

In addition to the Report, the supporting data are available to authorized users through RDH's interactive Building Asset Management Services (BAMS) software, posted on a secure website. The data is owned by the Strata Corporation and can be printed and/or exported on request. RDH has developed the interactive software tool to enable Owners to proactively manage their funding requirements and maintenance obligations, and a variety of other services in addition to the Depreciation Report are available.

As the physical and financial status of the Assets changes, the Report will require updating. The Strata Property Act requires updates to the Report every three years; however, the Strata Corporation can choose to update portions of the Report to reflect changes to their financial status and completed work more frequently at their discretion.

2 Azura 2

Azura 2 is a 10 year old strata complex comprised of one high-rise building and adjacent townhouses. The building is typically of cast-in-place concrete construction with steel stud infill walls. At the west end of the building is the amenity facilities known as the Super Club. The Super Club Assets are included in a separate Depreciation Report.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical, communications and security equipment), mechanical (heating, cooling, and plumbing), fire safety (sprinklers, fire detection, and egress equipment), elevators, site work, interior finishes, and amenities (excluding those within the Super Club). The Assets within each system are described in detail in Appendix B.

Key physical parameters of Azura 2 are summarized in Table 2.1and Figure 2.1 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS	
Date of first occupancy (approximate)	2004
Gross floor area, including the parkade (square feet)	290,000
Stories above grade	37
Total number of strata lots	207

Figure 2.1
Elevation Photo
South elevation of the building.

Figure 2.2 Bird's Eye: Overall view of the property. Map Data Google Maps © 2014.

3 Assessments

Depreciation Reports combine two distinct types of analysis: a *physical assessment,* and a *financial assessment*. The assessments are used to determine what the Strata Corporation owns, what condition the Assets are in, what the strata is responsible for, and the *capital costs* associated with the Assets.

The process of preparing a Depreciation Report is summarized in Figure 3.1 below:

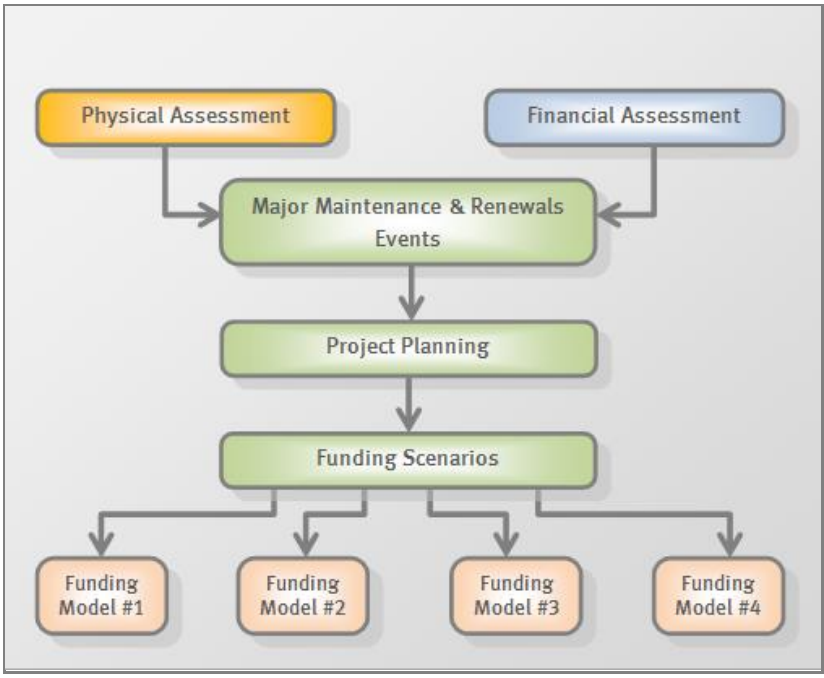


Figure 3.1

Depreciation Report Process

Funding models are built based on the strategic plan (30 years).

The following sections provide a brief overview of the physical assessment and financial assessment including a summary of key information.

3.1 Physical Assessment

The physical assessment has two parts: an inventory and an evaluation.

The *Asset Inventory* identifies "the common property, the common assets and those parts of a strata lot or limited common property, or both, that the Strata Corporation is responsible to maintain or repair under the Act, the Strata Corporation's bylaws or an agreement with an owner" (*Strata Property Act Regulation,* BC Reg 43/2000, Ch. 6.2). In other words, it identifies what the Strata Corporation owns and must repair and maintain. The Asset Inventory is included as an appendix to this report.

The evaluation is used to forecast common repairs, replacements and maintenance activities that "usually occur less often than once a year or that do not usually occur" (*Strata Property Act Regulation*, BC Reg 43/2000, Ch.6.2). In other words, the evaluation predicts only events that occur at intervals greater than one year.

The evaluation is typically based on:

→ A review of historical documentation such as minutes, invoices, and the general ledger,

→ Discussions with Strata Corporation representatives,

→ A visual review of the complex, limited to a sample of readily accessible Assets, and

→ A review of other technical information such as construction drawings, previous investigations or reports, and maintenance manuals.

Destructive testing, disassembly, and performance testing are not included in the physical evaluation; this report does not replace a Warranty Review or Condition Assessment. Please visit www.rdhbe.com for additional information on Warranty Reviews and Condition Assessments.

Failure of some Assets may be concealed, for example, buried infrastructure such as sanitary drainage lines or building enclosure assets such as cladding. For Assets with the potential for concealed failure, a number of tools are used to assign a reasonable expected service life including the typical performance of the asset in other, similar properties; the performance history reported by the Strata Corporation; the original drawings; and any previous investigation reports commissioned by the Strata Corporation. It is expected that the Strata Corporation will need more detailed reviews as Assets approach the end of their service lives. Allowances for additional reviews or investigations are included as appropriate. Recommendations taken from any additional reviews should be incorporated into future Depreciation Report updates.

Azura 2 is relatively young, and aside from deficiencies from the original construction, few major renewals have taken place. However the strata corporation has already replaced several smaller assets, and has completed several significant maintenance activities.

As part of the physical assessment, RDH compiled a history of completed projects by reviewing the documents provided by the strata and interviewing Strata Corporation representatives. The history is summarized in Table 3.1. The history establishes the chronological age of the Assets.

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY

<table>
<tr>
<td>Building Enclosure
→ 2011 – Exterior repainting of concrete elements throughout building envelope.
→ 2011 (Approx.) – Recoating of urethane membranes at balconies.
→ Cyclical cleaning of exterior surfaces.
→ Commissioning of building investigation reports.
→ Commissioning of 2 and 5 year warranty reviews.</td>
<td>Mechanical
→ Localized replacement of domestic water booster pump.
→ Cyclical replacement of miscellaneous pumps, fans, and motors.
→ Cyclical replacement of overhead gate motors.</td>
</tr>
<tr>
<td>Electrical
→ Cyclical replacement of batteries in emergency generator.
→ Cyclical de-energized service of unit substation.</td>
<td rowspan="2">Fire Safety
→ Replacement of fire extinguishers at 6-year hydrostatic test cycle.
→ Replacement of batteries in fire alarm control panel, annunciator panels, and emergency lighting packs.
→ Cyclical replacement of fire alarm initiating devices, such as smoke detectors and heat detectors.</td>
</tr>
<tr>
<td>Interior Finishes
→ 2014 – Replacement of hallway carpets.</td>
</tr>
</table>

On December 19, 2013, a representative of RDH Building Engineering Ltd. visited the site to visually review the Assets. While the Depreciation Report does not constitute a maintenance review or condition assessment, some observations regarding the general condition, design and construction of the Assets were made as part of the visual review.

3.2 Financial Assessment

The financial assessment estimates the future costs associated with the Assets, and examines how future funding requirements will be affected by current financial practises. More specifically, the financial assessment identifies:

- The balance in the *Contingency Reserve Fund* (CRF).
- The estimated value of capital expenditures, expressed in *Current Year Dollars* (CYD).
- The estimated future value of capital expenditures, expressed in *Future Year Dollars* (FYD). These costs are calculated by applying an inflation rate (2% per year) to the current costs.

The future value of major maintenance and renewals costs can be compared against the building reproduction cost. The building reproduction cost is the cost to reproduce the building in similar materials, in accordance with current market prices.

The financial assessment begins with a review of the current financial situation of the Strata Corporation. The table below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.2 KEY FINANCIAL PARAMETERS

PARAMETER	INITIAL STUDY (2007)	UPDATE STUDY (2014)
Fiscal Year End	August 31	December 31
Building Reproduction Cost	$39,067,000	$61,200,000
Operating Budget (excluding CRF contribution)	$648,738	$868,736
Annual CRF Allocation	$64,942	$131,240
Accumulated CRF Balance	$186,000	$393,000*

**The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities. The accumulated CRF balance is current as of the beginning of the current fiscal year.*

Depreciation Reports include capital costs only: the costs for activities that occur at intervals greater than one year. Activities that occur annually or more frequently than once a year are considered operating expenses and are not included in the Depreciation Report funding models and calculations.

Capital costs can be distributed into three general categories:

- *Catch-up costs*. The cost to complete any deferred maintenance and renewals
- *Keep-up costs*. The cost to complete planned cyclical maintenance and renewals
- *Get-ahead costs*. The cost to adapt, upgrade and improve

The Depreciation Report is based on keep-up costs. Get-ahead costs (improvements) may also be included, but only if they are required to meet changing codes or standards.

Costs are considered *Class D* estimates (±50%), as defined by the Association of Professional Engineers and Geoscientists of BC (APEG BC). Unless otherwise noted, soft costs, such as consulting fees and contingency

allowances are not included, because these costs are highly dependent on the scope of work for a particular project.

The cost estimates in the Depreciation Report are a starting point for the capital planning process, and can help Strata Corporations make preliminary decisions about how and when to implement projects. These cost estimates will be refined as the Strata Corporation makes decisions such as what is included or excluded in a project, and if Assets will be improved or changed.

The current value of many major maintenance and renewals activities is calculated by multiplying the quantity of an Asset by standard unit rates (for example, the cost per square foot or cost per linear foot). Quantities are measured from original construction documents and visual observations on site. The unit rates are based on historical information, construction trends, information from contractors, and other sources as appropriate. Unit rates will fluctuate over time. Basic unit rates are adjusted for the relative complexity of the property. A detailed list of activities and their associated costs are available through the online BAMS software. Please contact the strata council or strata manager for additional information on how to access and view this information.

4 Expenditures

Maintenance refers to activities that preserve the Assets, to ensure the Assets will last their predicted service lives and perform as expected. *Renewal* refers to the replacement or refurbishment of an Asset at the end of its useful service life.

Major maintenance refers to maintenance that occurs at intervals greater than one year, for example, every 18 months or five years (less frequently than once a year). Major maintenance typically includes activities such as testing and inspecting, and is considered a capital expense. Minor maintenance includes maintenance activities that occur once a year or more frequently such as quarterly or monthly. The costs associated with *major maintenance and renewals* are included in the Depreciation Report funding models. Costs associated with minor maintenance are included in the Strata Corporation's operating budget.

4.1 Operational Expenditures

This section focuses on minor maintenance and operational expenditures. Some systems, like interior finishes, have relatively high operational costs but proportionately lower capital costs. This section is included to show a more complete portrait of Azura 2. The operating budget and annual maintenance expenditures are summarized in Table 4.1 below.

In addition, many Strata Corporations use a portion of their annual operating budget to pay for major maintenance and renewal activities with a relatively small cost. This amount is not included in the Depreciation Report financial modeling.

The Strata Corporation has historically paid for some capital expenditures through their operating budget. The 2014 budget was reviewed, and budget items that could reasonable be considered capital costs identified. The total value of these items is included as a source of funding of capital expenditures within one funding model.

TABLE 4.1 SUMMARY OF ANNUAL MAINTENANCE AND OPERATING EXPENSES

BUDGET SUMMARY (2014)	
Operating budget (excluding CRF contribution)	$868,736
Contingency Reserve Fund allocation	$131,240
Budget items from Operating Budget that may be used for capital costs:	
→ HVAC R & M	$45,000
→ FLOOR R & M	$2,000
→ FIRE & SAFETY EQUIP. R & M	$10,000
Total	$57,000

Annual maintenance is needed to ensure the Assets last as long as possible. When estimating the remaining service life of Assets, RDH assumes that regularly scheduled maintenance will be performed – deferring maintenance may reduce the service life of some Assets. In order to manage the annual maintenance, the Strata Corporation can prepare a formal maintenance plan, including checklists for different activities.

4.2 Major Maintenance and Renewals Expenditures

Azura 2 is now approximately 10 years old, and has completed a number of major maintenance projects. As the building ages, some renewals expenditures can be anticipated in the next 10 years. Table 4.2 below summarizes all major maintenance and renewal costs by system, including costs forecast for the next 30 years.

TABLE 4.2 CAPITAL EXPENDITURES SUMMARY BY SYSTEM

SYSTEM	10 YEAR CAPITAL COSTS (WITHOUT INFLATION)	10 YEAR CAPITAL COSTS (WITH INFLATION)	30 YEAR CAPITAL COSTS (WITHOUT INFLATION)	30 YEAR CAPITAL COSTS (WITH INFLATION)
Building Enclosure	$464,000	$519,000	$2,770,000	$3,802,000
Electrical	$110,000	$121,000	$632,000	$928,000
Mechanical	$118,000	$130,000	$2,397,000	$3,419,000
Elevator	$51,000	$55,000	$481,000	$599,000
Fire Safety	$2,000	$2,000	$108,000	$147,000
Interior Finishes	$33,000	$36,000	$185,000	$251,000
Amenities	$0	$0	$14,000	$20,000
Sitework	$35,000	$39,000	$79,000	$104,000
Building Total	**$812,000**	**$901,000**	**$6,666,000**	**$9,270,000**

Section 5 discusses the timing and size of renewals projects forecast for the next 30 years. A detailed list of each major maintenance and renewals activity, including the frequency, costs expressed in current year dollars (CYD), and costs including inflation rates, expressed in future year dollars (FYD) are available to Strata Corporation owners.

Approximately 12% of the Strata Corporation's capital expenditures will occur in the next 10 years. The distribution of capital expenditures over the next 10 years is shown in Figure 4.1 below.

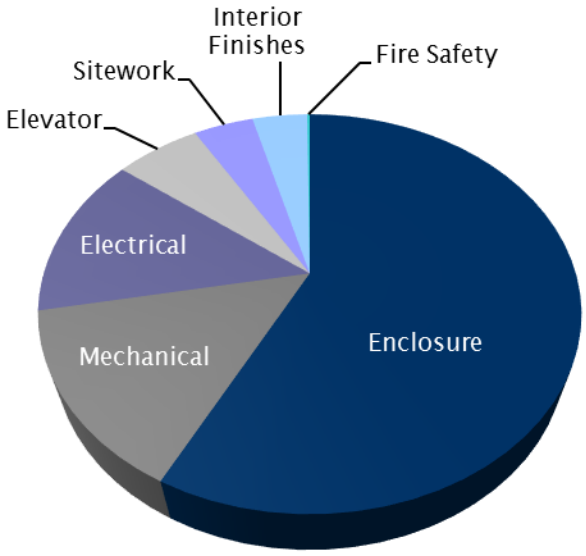


Figure 4.1 Distribution of capital expenditures over 10 years by system.

5 Major Maintenance and Renewals Planning

There are three common planning horizons, used for making different types of capital planning decisions:

- ***Strategic*** (30 years): The average service life of many of Assets is approximately 25 years (such as roofs) so a long-range view captures most renewal projects. In some cases, an asset may be replaced more than once in the 30 year horizon.
- ***Tactical*** (5-10 years): Many residential Owners will own their strata lot for less than 10 years; the tactical plan captures projects that may occur while current Owners still have an interest in the Strata Corporation.
- ***Operational*** (1 year): The annual operating period encompasses one fiscal cycle (12 months). Typically the budget is presented and approved at the annual general meeting (AGM) and will include any capital expenditures paid from the CRF, as well as the CRF contributions for the year. As a minimum, the decision on the CRF contribution should consider projects forecast for the next five to ten years.

5.1 Strategic Planning Horizon

Estimated major maintenance and renewal costs over the next 30 years are shown on the graph below (Figure 5.1). The red bars represent the estimated value of capital costs.

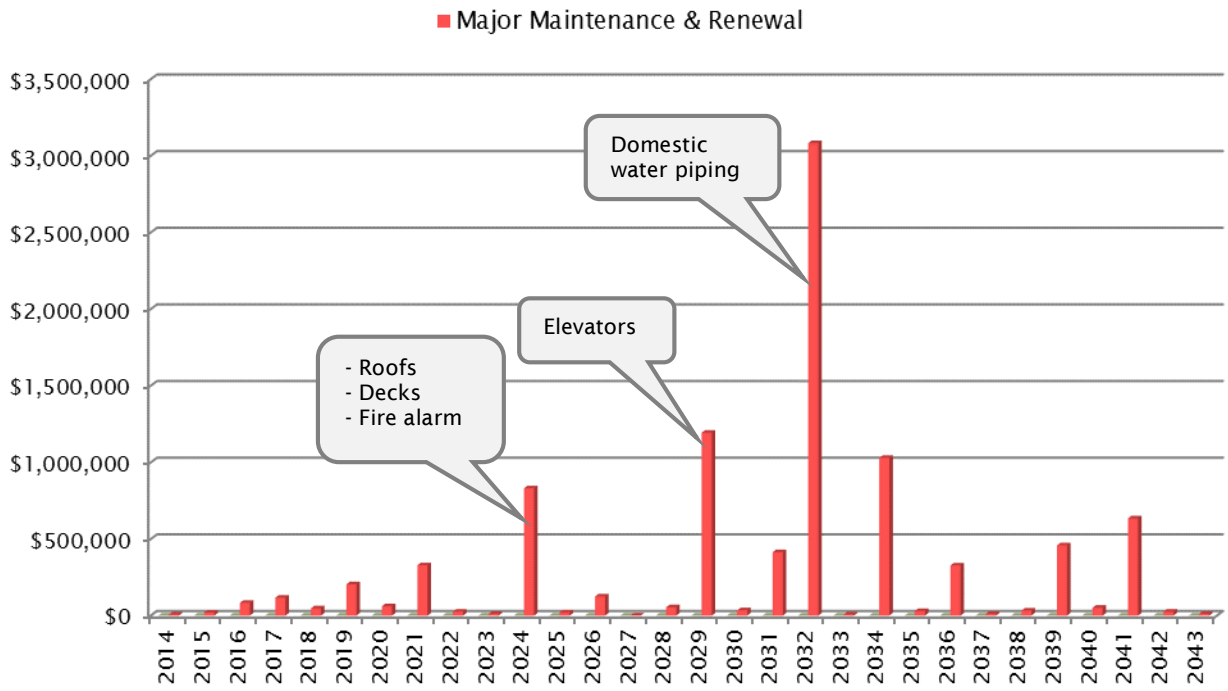


Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of capital expenditures.

Each bar on the graph represents a collection of different major maintenance and renewals activities, each with different values. The labels on the graph summarize large renewals projects forecast for that year. Detailed information about each year, including a description of the maintenance and renewals activities

and estimated costs, is also available through the online version of the Depreciation Report, available through BAMS (please contact the strata council for additional information).

The strategic plan represents a reasonable estimate of future projects. The actual timing of projects may vary. Assets may be replaced earlier or later, depending on the quality of maintenance, in-service conditions and other factors. The Strata Corporation can anticipate changes to the strategic plan with each update of the Depreciation Report.

5.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next ten years (Figure 5.2). Commonly, building managers refer to a five year tactical plan; however, a ten year plan allows the Strata Corporation to see a wider range of projects.

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 and the costs broken down by system. Labels summarize renewals and major maintenance activities forecast for that year. The costs associated to correct any warranty defects are not included, nor are soft costs associated with project implementation, such as site access, design, contract administration etc.

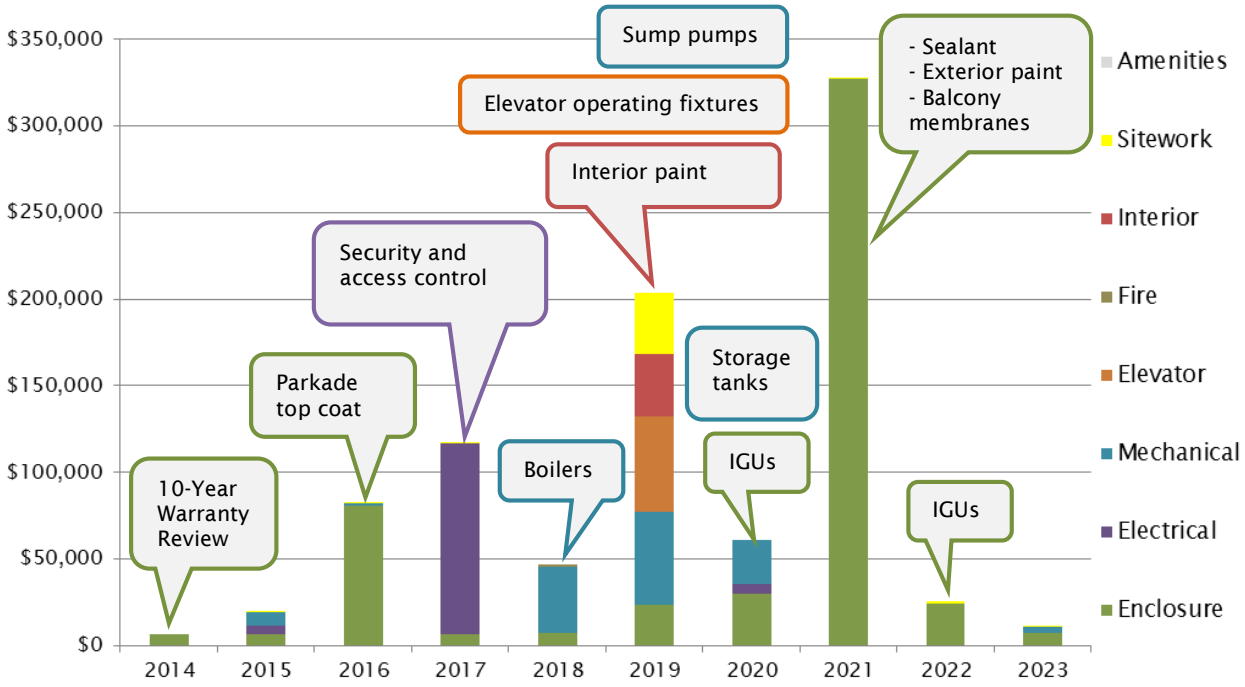


Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of capital expenditures.

The tactical plan shown does not include any amenity assets that are part of the Super Club. The tactical plan above represents one of many possible approaches to planning major maintenance and renewals activities. The Strata Corporation can use this initial plan as a tool, a starting point to identify probable projects, priorities and strategies. The actual cost, timing, and scope of projects will be determined by the Strata Corporation and may be reflected in updates to the Depreciation Report.

To help the Strata Corporation start the project planning process, Table 5.1below categorizes some of the activities forecast for the next 10 years into different management strategies: Major maintenance, condition based renewals, and time based renewals. The categories are based on the risks associated with

failure of an Asset. The list below is not comprehensive; more detailed information is available to the Strata Corporation.

TABLE 5.1 SUMMARY OF KEY PROJECTS WITHIN THE TACTICAL PLAN
CATEGORY AND ACTIVITIES
Major Maintenance Major maintenance projects are intended to preserve the assets to achieve their full design life, and typically occur on a regular, predictable basis. → Commissioning of 10-year structural warranty review. → Cyclical cleaning of exterior surfaces. → Localized replacement of failed insulated glazing units (IGUs). → De-energized service of unit substation, switchgear, and panelboards. → Cyclical cleaning and survey of sanitary and storm drain lines. → Cyclical rebuilding of sump pumps. → Performing of building enclosure condition assessment (BECA). → Cyclical re-ballasting of fluorescent strip fixture in parkade. → Conducting of cyclical 5-year safety test on elevators. → Repainting of exterior concrete surfaces. → Updating of depreciation report every three years.
Condition Based Renewals Assets are kept in service as long as possible, but the intent is to replace them before they fail. Condition based strategies require Assets be periodically reviewed in detail, potentially with some destructive testing, in order to predict when failure is likely. The actual timing of renewals in this category may be determined by the results of an assessment, or by other project planning considerations. → Reapplication of top coat on exposed urethane balcony membranes. → Cyclical replacement of miscellaneous pumps, valves, and fans. → Cyclical replacement of gas detection sensors in the parking garage. → Reapplication of top coat on parking garage traffic bearing membrane at high traffic locations. → Modernization of components of proximity access control system at end of technological life. → Cyclical replacement of domestic hot water heaters. → Cyclical replacement of domestic water booster pumps. Consideration for energy upgrade to variable frequency drives (VFD). → Replacement of wallpaper. → Cyclical replacement of pond filtration, sanitation, and circulation equipment. → Modernization of DDC control panels. → Cyclical replacement of domestic hot water storage tanks. → Replacement of exterior sealant.

TABLE 5.1 SUMMARY OF KEY PROJECTS WITHIN THE TACTICAL PLAN
CATEGORY AND ACTIVITIES
Time Based Renewals Assets are replaced on a regular, time based schedule. This strategy is used when there is low tolerance for failure or out of service conditions. Components, materials or assemblies are typically replaced or refurbished at fixed intervals. → Replacement of elevator operating fixtures. → Replacement of fire extinguishers at 6-year hydrostatic test cycle. → Replacement of batteries in fire alarm control panel, annunciator panels, and emergency lighting packs.

In addition to the three categories mentioned above, the Strata Corporation may also elect to replace some Assets only once they have failed, or upon imminent failure. This strategy is known as *run to failure*. This strategy is only appropriate when failure does not create a safety hazard, will not result in damage to other property, and does not affect the operations of the building. The Strata Corporation should still have funds available to replace assets within this category.

5.3 Operational Planning Horizon

The significant renewal projects or major maintenance projects forecast for the next fiscal year include the commissioning of a 10-year warranty review.

5.4 Project Implementation

The projects identified in the previous section represent a preliminary step, and is only intended to help the Strata Corporation identify, prioritize and plan projects. Most significant renewals projects identified in the Depreciation Report will subsequently go through four basic steps before implementing the work: Assessment, Design, Documentation and Quotation.

→ Assessment – Determines what work must be done, what should be done and what could be done in general terms. The evaluation will help the Strata Corporation understand the risks and opportunities associated with deferring or implementing renewals work.

→ Design – Refines the recommendations from the evaluation, and defines what work will be done in a specific project. The Design may include recommendations for different project strategies such as phasing or bundling projects, or may include recommendations for upgrades.

→ Documentation – Describes the project in enough technical detail to get competitive pricing.

→ Quotation – Obtains competitive pricing from different contractors or service providers to perform the work described in the documents, including alternate prices for optional work.

The time period for each step can range from a few days to a few months or more, depending on the scale of the project under consideration. The budget and scope of work will be refined in each step. Most estimates currently included in the Depreciation Report are considered Class D (±50%) due to the lack of information regarding specific projects and are based on a number of general assumptions regarding scopes of work.

The Owners can implement projects in a variety of ways, including:

- → *Targeted Projects*. These projects 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.
- → *Phased Projects*. These projects are carried out in multiple stages rather than as a single coordinated project. Phased projects can reduce the financial burden by spreading the costs over a longer time period.
- → *Comprehensive Projects*. These projects are implemented as one coordinated undertaking. Comprehensive projects may allow the Strata Corporation to leverage the best economies of scale, shorten the overall duration, and lower the overall costs.
- → *Bundled Projects*. These projects bundle or combine various related renewals activities (e.g. renewals that are located in close physical proximity, or that require the same type of trade workers). Bundled projects may allow the Strata Corporation to leverage economies of scale and lower the overall costs, improve the quality of the work, and incorporate upgrades.

The scope of the Depreciation Report does not compare different implementation methods.

6 Funding Scenarios

The physical assessment and financial assessment were used to create a tentative schedule and budget for major maintenance and renewals projects. Within this section, hypothetical *funding scenarios*, also known as *funding models*, based on different annual contributions to the contingency reserve fund (CRF) are presented. The Strata Corporation can use the funding scenarios to choose an appropriate funding strategy, based on their tolerance for risk and desired standard of care for the property. RDH provides the tools so the Owners can choose the CRF contribution they prefer.

6.1 Minimum Funding Requirements

The Strata Property Act Regulations dictates that if the CRF closing balance is less than 25% of the operating budget, then the Strata Corporation must contribute either the difference between the balance and 25% of the operating budget, or up to 10% of the operating budget (*Strata Property Act Regulation*, BC Reg 43/2000, Ch. 6.1). Table 6.1below shows the calculation to confirm the Strata Corporation meets the minimum requirements set out in the Strata Property Act Regulation.

TABLE 6.1 MINIMUM FUNDING REQUIREMENT CALCULATION

PARAMETER	VALUE
2014 annual operating budget (not including CRF contribution)	$ 868,736
→ 25% of the annual operating budget	$ 217,184
→ 10% of the annual operating budget	$ 86,874
2013 CRF Closing Balance	$ 393,000
2014 CRF Contribution	$ 131,240
Will the CRF closing balance exceed 25% of the annual operating budget at the end of the fiscal year?	Yes
Is the CRF contribution equal to or greater than 10% of the annual operating budget?	Yes

Although the Strata Corporation exceeds 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 to the CRF contributions will need to be made over the upcoming years.

6.2 Alternative Funding Scenarios

The funding scenarios below compare the financial impact of different funding levels over the next 30 years. The scenarios serve as a sensitivity analysis. The scenarios allow the Strata Corporation to evaluate how changes to the contingency reserve fund impact the number and size of special levies; however the actual size and timing of special levies will be affected by how the Strata Corporation chooses to implement the renewals projects.

While there are many different scenarios that can be generated, Table 6.2 below compares five alternatives: Statutory reserve allocation, 2014 (Current or Status quo) reserve allocation, 2014 Current with operating budget, Alternative #1 and Progressive reserve allocation.

- ***Statutory Reserve Allocation.*** The CRF allocation required to meet the statutory requirements in BC, as described in section 6.1 above. For comparison purposes, the table below shows the amount equal to 10% of the operating budget, this is the maximum that would be allocated to the reserve fund annually under this scenario.
- ***Current (2014) Reserve Allocation***. The CRF allocation that was approved by the Owners at the 2013 Annual General Meeting. The current allocation is also known as the status quo.
- ***Current (2014) Reserve Allocation, with Operating Budget***. The CRF allocation and the portion of the operating budget allocated to capital projects that was approved by the Owners at the last Annual General Meeting. Refer to Section 4.1. Typically, this would include the replacement or repair of mechanical equipment valued at less than $10,000.
- ***Alternative #1 Reserve Allocation***. An incremental increase from the status quo. Alternative #1 is just one of many possible scenarios for a new funding level in the next fiscal year.
- ***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 would have been sufficient to avoid any special assessments over a 30-year period. The progressive reserve allocation is an idealistic target that most Strata Corporations will not meet and is provided for reference purposes.

	TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS				
	STATUTORY	CURRENT (2014)	CURRENT (2014) CRF & OPERATING	ALTERNATIVE #1	PROGRESSIVE RESERVE
Annual allocation					
CRF	$0 to $84,574	$131,240	$131,240	$200,000	$323,000
Op. Budget	-	-	$57,000	-	-
Percent of progressive reserve	26 %	41 %	58%	62 %	100 %
CRF contribution per average strata lot					
Per month	$0 to $34	$53	$76	$81	$130
Per year	$0 to $408	$636	$912	$972	$1,560
Approximate number of special levies (over next 30 years)	9	7	3	3	0
Approximate value of special levies (over next 30 years)	$6.9M	$5.0M	$3.3M	$2.9M	-
Assumed Inflation Rate	2 %	2 %	2 %	2 %	2 %
Assumed Interest Rate	2 %	2 %	2 %	2 %	2 %

The following sections of the report provide more detailed information about each funding scenario, including a graph showing the closing balance of the CRF, annual CRF contributions, and the approximate value of special levies. Tables with ten years of cash flow data are also provided.

The appendices to the report include 30 years of cash flow data for each funding model.

6.3 Statutory Funding Scenario

The first scenario is based on the minimum funding level required by the Strata Property Act Regulation, as described in section 6.1 above. The scenario is based a variable annual CRF contribution over the 30-year planning horizon; when the CRF closing balance is greater than 25% of the estimated operating budget, no funds are deposited into the CRF.

TABLE 6.3 STATUTORY FUNDING MODEL: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2014	$393,000	$0	$0	$7,860	$6,500	$2,000	$392,360
2015	$392,360	$0	$0	$7,847	$19,330	$2,000	$378,877
2016	$378,877	$0	$0	$7,578	$82,920	$2,000	$301,535
2017	$301,535	$0	$0	$6,031	$116,550	$2,000	$189,015
2018	$189,015	$28,169	$0	$3,780	$46,800	$2,000	$172,164
2019	$172,164	$45,020	$0	$3,443	$203,880	$2,000	$14,747
2020	$14,747	$86,874	$0	$295	$60,570	$2,000	$39,346
2021	$39,346	$86,874	$202,514	$787	$327,520	$2,000	$0
2022	$0	$86,874	$0	$0	$25,710	$2,000	$59,164
2023	$59,164	$86,874	$0	$1,183	$11,020	$2,000	$134,200

The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

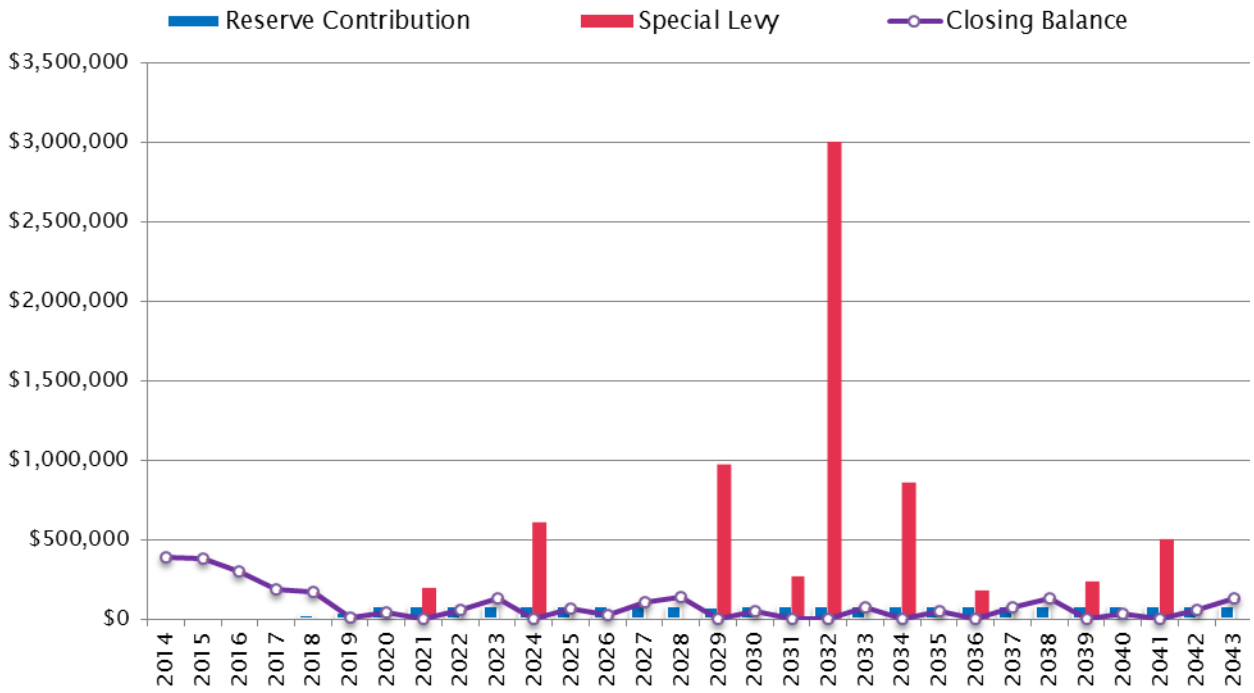


Figure 6.1 CRF balance, contribution and special levies based on the statutory minimum funding.

The minimum CRF contributions required by the Strata Property Act Regulation will result in numerous special levies, and is generally not considered adequate as a long-term funding strategy.

6.4 Current (2014) Funding Scenario

The current funding scenario is based on the CRF contribution approved by the Owners at the last annual general meeting (2014). The scenario is based on a fixed annual CRF contribution (no increases).

TABLE 6.4 CURRENT (2014) FUNDING MODEL: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2014	$393,000	$131,240	$0	$7,860	$6,500	$2,000	$523,600
2015	$523,600	$131,240	$0	$10,472	$19,330	$2,000	$643,982
2016	$643,982	$131,240	$0	$12,880	$82,920	$2,000	$703,182
2017	$703,182	$131,240	$0	$14,064	$116,550	$2,000	$729,935
2018	$729,935	$131,240	$0	$14,599	$46,800	$2,000	$826,974
2019	$826,974	$131,240	$0	$16,539	$203,880	$2,000	$768,873
2020	$768,873	$131,240	$0	$15,377	$60,570	$2,000	$852,921
2021	$852,921	$131,240	$0	$17,058	$327,520	$2,000	$671,699
2022	$671,699	$131,240	$0	$13,434	$25,710	$2,000	$788,663
2023	$788,663	$131,240	$0	$15,773	$11,020	$2,000	$922,657

The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

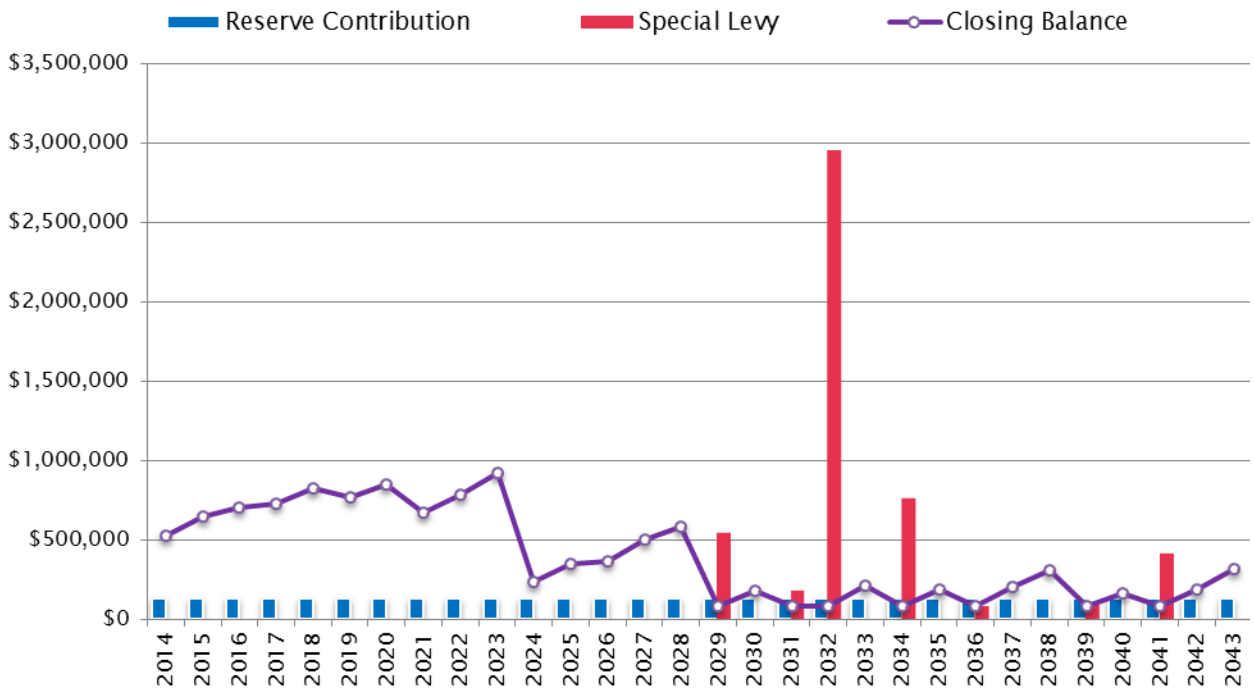


Figure 6.2 CRF balance, contribution and special levies based on the current budget.

Compared to 2007, the strata corporation has already increased their CRF contribution. Continuing with a CRF contribution similar to that approved in 2014 would likely offset capital expenditures over the next 10 years.

6.5 Current (2014) Reserve Allocation, with Operating Budget Funding Scenario

This funding scenario represents the current contingency fund reserve allocation approved by the Owners at the last general meeting and the estimated portion of the annual operating budget allocated towards capital expenditures. The scenario is based on a fixed annual reserve contribution of $188,240 and is summarized in the following cash flow table.

TABLE 6.5 CURRENT WITH OPERATING BUDGET FUNDING MODEL: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2014	$393,000	$188,240	$0	$7,860	$6,500	$2,000	$580,600
2015	$580,600	$188,240	$0	$11,612	$19,330	$2,000	$759,122
2016	$759,122	$188,240	$0	$15,182	$82,920	$2,000	$877,624
2017	$877,624	$188,240	$0	$17,552	$116,550	$2,000	$964,867
2018	$964,867	$188,240	$0	$19,297	$46,800	$2,000	$1,123,604
2019	$1,123,604	$188,240	$0	$22,472	$203,880	$2,000	$1,128,437
2020	$1,128,437	$188,240	$0	$22,569	$60,570	$2,000	$1,276,675
2021	$1,276,675	$188,240	$0	$25,534	$327,520	$2,000	$1,160,929
2022	$1,160,929	$188,240	$0	$23,219	$25,710	$2,000	$1,344,677
2023	$1,344,677	$188,240	$0	$26,894	$11,020	$2,000	$1,546,791

This scenario eliminates some of the smaller levies, but it is not adequate to offset all the special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

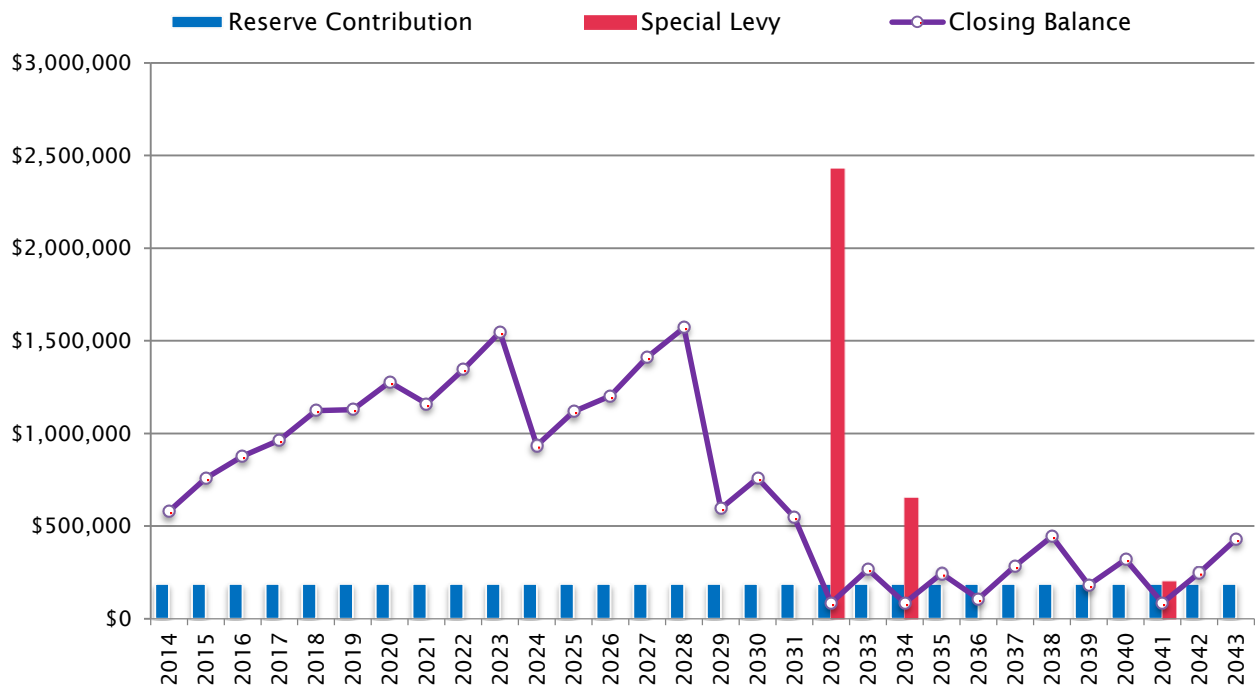


Figure 6.3 CRF balance, contribution and special levies based on Current with Operating Budget.

6.6 Alternative Funding Scenario # 1

Alternative funding scenario #1 is based on a fixed annual CRF contribution. The contribution is approximately twice the current funding level.

TABLE 6.6 ALTERNATIVE FUNDING MODEL #1: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2014	$393,000	$200,000	$0	$7,860	$6,500	$2,000	$592,360
2015	$592,360	$200,000	$0	$11,847	$19,330	$2,000	$782,877
2016	$782,877	$200,000	$0	$15,658	$82,920	$2,000	$913,615
2017	$913,615	$200,000	$0	$18,272	$116,550	$2,000	$1,013,337
2018	$1,013,337	$200,000	$0	$20,267	$46,800	$2,000	$1,184,804
2019	$1,184,804	$200,000	$0	$23,696	$203,880	$2,000	$1,202,620
2020	$1,202,620	$200,000	$0	$24,052	$60,570	$2,000	$1,364,102
2021	$1,364,102	$200,000	$0	$27,282	$327,520	$2,000	$1,261,864
2022	$1,261,864	$200,000	$0	$25,237	$25,710	$2,000	$1,459,392
2023	$1,459,392	$200,000	$0	$29,188	$11,020	$2,000	$1,675,559

Alternative funding scenario #1 eliminates some of the smaller levies, but it is not adequate to offset all the special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

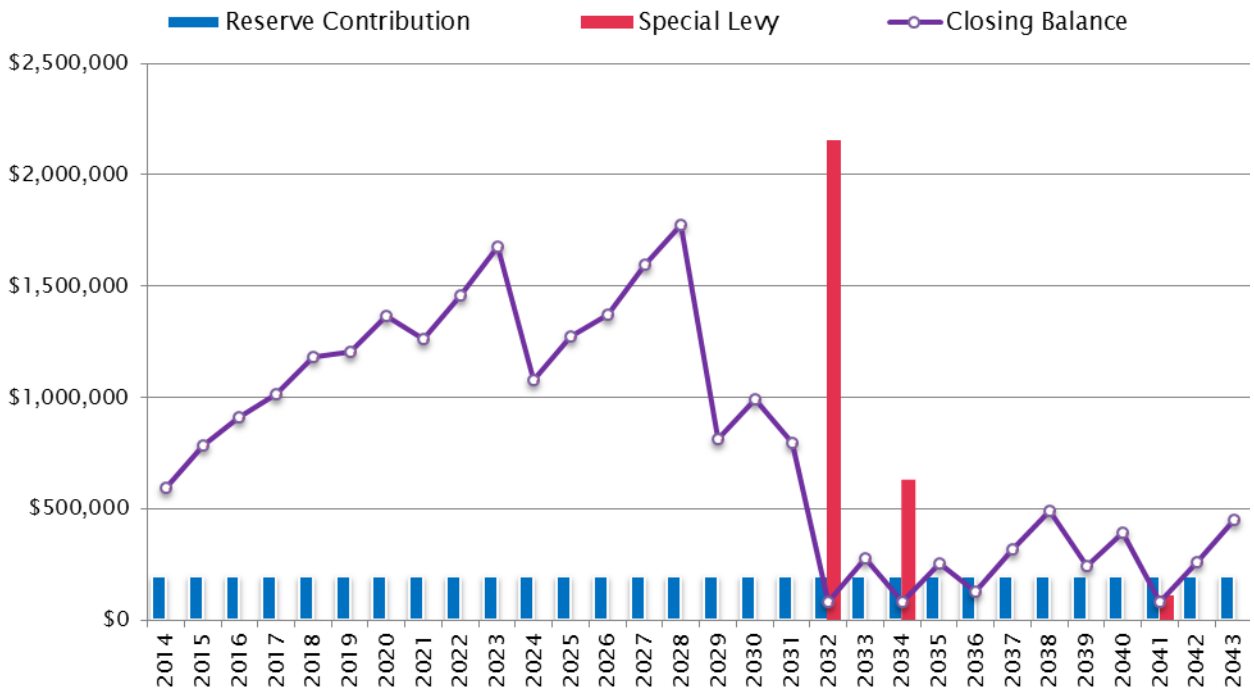


Figure 6.4 CRF balance, contribution and special levies based on Alternative #1.

Alternative #1 would significantly reduce the probability of special levies in the next fifteen years.

6.7 Progressive Funding Scenario

The progressive funding scenario is based on a fixed annual CRF contribution.

TABLE 6.7 PROGRESSIVE FUNDING MODEL: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2014	$393,000	$323,000	$0	$7,860	$6,500	$2,000	$715,360
2015	$715,360	$323,000	$0	$14,307	$19,330	$2,000	$1,031,337
2016	$1,031,337	$323,000	$0	$20,627	$82,920	$2,000	$1,290,044
2017	$1,290,044	$323,000	$0	$25,801	$116,550	$2,000	$1,520,295
2018	$1,520,295	$323,000	$0	$30,406	$46,800	$2,000	$1,824,901
2019	$1,824,901	$323,000	$0	$36,498	$285,880	$2,000	$1,896,519
2020	$1,896,519	$323,000	$0	$37,930	$60,570	$2,000	$2,194,879
2021	$2,194,879	$323,000	$0	$43,898	$327,520	$2,000	$2,232,257
2022	$2,232,257	$323,000	$0	$44,645	$25,710	$2,000	$2,572,192
2023	$2,572,192	$323,000	$0	$51,444	$11,020	$2,000	$2,933,616

The Progressive Reserve would eliminate all special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

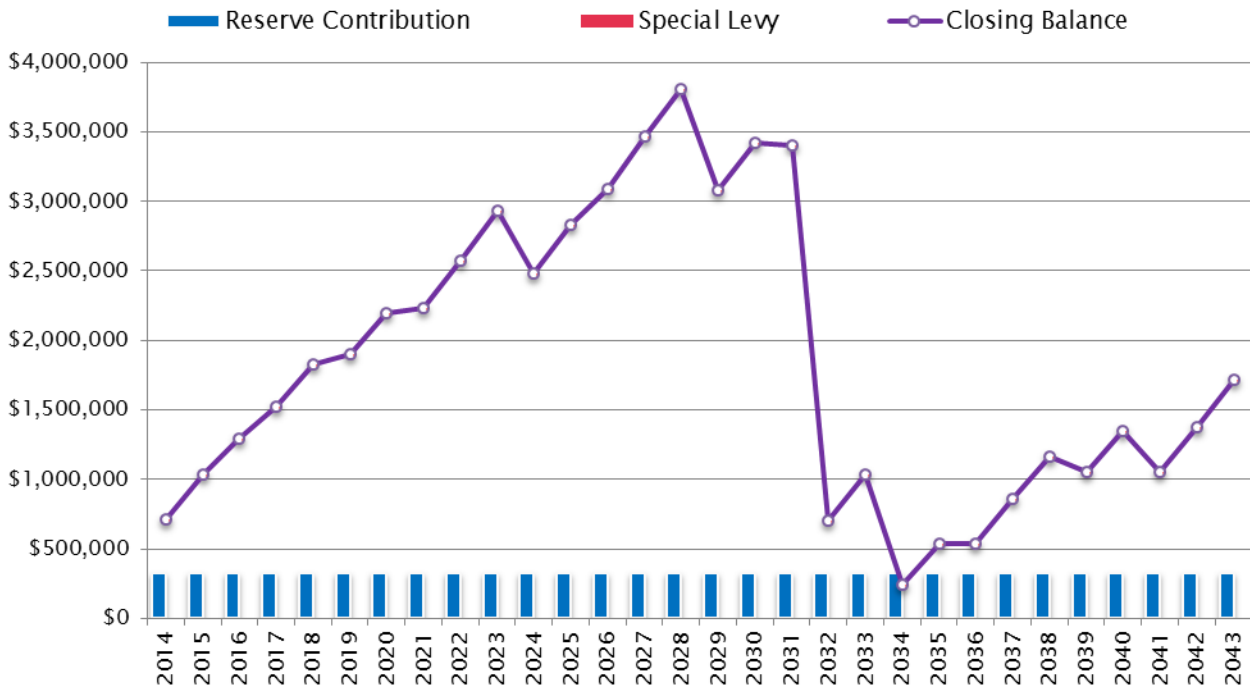


Figure 6.5 CRF balance, contribution and special levies based on a Progressive Reserve calculation.

7 Next Steps

The Depreciation Report identifies the predictable major maintenance and renewals expenditures Azura 2 is likely to encounter over the next 30 years. Estimated timelines have been provided to assist the Strata Corporation with the planning process; however the Depreciation Report should be considered a first step when planning for renewals. Funding scenarios have been developed to provide the Strata Corporation with an objective basis for determining appropriate CRF contributions.

Azura 2 is a 10 year old residential tower and a majority of the costs forecast for the next ten years relate to major maintenance of the assets, such as recoating of building surfaces and concrete walls. The Strata should continue to be diligent in performing maintenance tasks so assets may achieve their full service life.

Azura 2 has an opportunity to build up a strong contingency reserve fund over the coming years. By saving early for anticipated large expenditures, the Strata Corporation will benefit from accrued interest and financial preparedness, while minimizing the amount of special levies.

The recommendations below are intended to aid the Strata Corporation in the next steps of the renewals planning process.

Recommendations

- **Asset Replacement Policy**. Using the Asset Inventory, develop an asset replacement policy. The policy would assign replacement strategies (run-to-failure, condition based, or time-based) to assets.
- **Maintenance Plan**. Using the Asset Inventory, develop a maintenance plan, or commission a maintenance plan through RDH. The maintenance plan should provide the Strata Corporation with information on how and when to implement different maintenance activities.
- **Further Investigations.** Conduct additional condition assessments/investigations, as required, to refine the data and confirm assumptions.
- **Updates.** Plan for an update to the Depreciation Report in three years' time. On a yearly basis, the Stata should review and update their CRF funding strategy based on the estimated forecasts presented in the Report.

Sincerely,

RDH Building Engineering Ltd.

Laureen Stokes | Dipl.T.
Project Manager, Maintenance and Planning
lstokes@rdh.com
RDH Building Engineering Ltd.

Jesus De Mesa | Dipl.T.
Maintenance and Planning Technologist
jdemesa@rdh.com
RDH Building Engineering Ltd.

Appendix A

Glossary of Terms

RDH
Making Buildings Better

224 W 8th Avenue
Vancouver, BC V5Y 1N5

604 873 1181
rdhbe.com

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

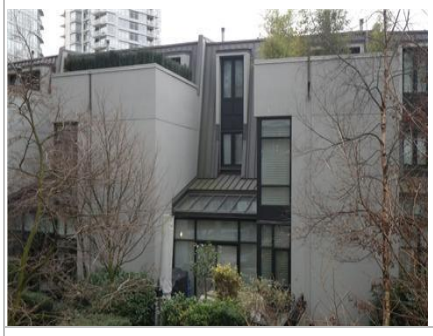
Asset Inventory

Azura 2 - Tower & TH (2014)
Asset Inventory

Enclosure

Roofs & Decks

Encl 01 - Sheet Metal Roof



Location

North side of townhouses.

Description

Pre-finished sheet steel panels with concealed fasteners and underlayment applied over sheathing at sloped roof.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Encl 02 - Protected Urethane Membrane Roof

Location

Main roof of tower above elevator machine and penthouse level.

Description

Liquid-applied, fully reinforced asphalt modified urethane membrane overlaid with combination of drainage mat, insulation,and rock ballast.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Encl 03 - Protected Urethane Membrane Deck

Location

Penthouse decks at tower and townhouses.

Description

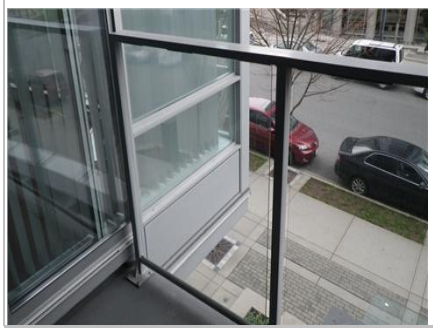
Liquid-applied, fully reinforced asphalt modified urethane membrane overlaid with combination of drainage mat, insulation, and pavers.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Fall Protection

Encl 04 - Guardrail Glazed Aluminum



Location

Mounted to the surface of the suspended concrete slab around balconies.

Description

Aluminum posts and glass infill panels functioning as a protective barrier at the open sides of balconies and decks or other locations to prevent accidental falls from one level to another.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Encl 05 - Anchor Fall Protection Equipment

Location

Mounted to main roof.

Description

Safety anchoring system for work on exterior walls and roofs.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Walls

Encl 06 - Stone Cladding Wall

Location

South and east elevation of townhouses.

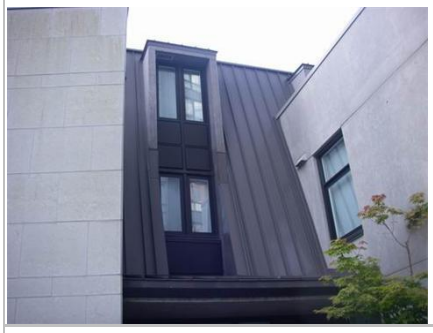
Description

The stone wall assembly consists of a single wythe of stone with mortar joints, applied as veneer.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Encl 07 - Profiled Sheet Metal Cladding Wall



Location

North and east elevation at townhouses.

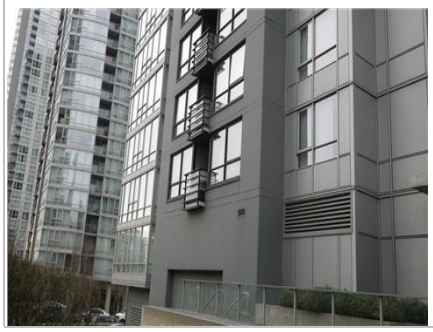
Description

Sheet metal cladding is installed over galvanized Z-girts, installed vertically to create a drainage cavity.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Encl 08 - Coated Architectural Concrete Wall



Location

Throughout exterior of the building.

Description

Poured-in-place architectural concrete wall with protective coating.

Information

Service Life:	75
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2079

Glazing Systems

Encl 09 - Curtain Wall

Location

Beside ground floor lobby and meeting room at south and east elevations.

Description

Rainscreen assembly that consists of capped glass wall that is double glazed and insulated.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Encl 10 - Aluminum Framed Window

Location

North, south, east and west elevation of the tower.

Description

Aluminum framed windows with double insulating glazing units, and awning operators. Windows are arranged in either of three configurations - punched window, strip windows or window-wall all based on the same window system.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Encl 11 - Aluminum Skylight

Location

North elevation of townhouses.

Description

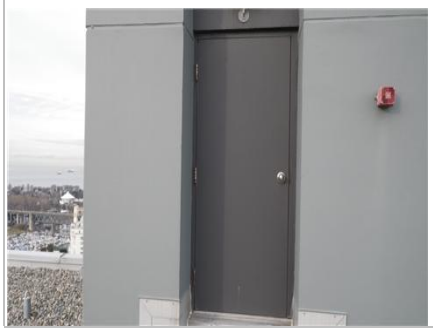
Thermally broken aluminum frames and double glazed IGUs with sealed pressure caps and weep holes.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Doors

Encl 12 - Metal Swing Door



Location

Rooftop accessory structures and ground level stairwell egress.

Description

Metal doors in pressed steel frame.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Encl 13 - Aluminum Frame Glazed Swing Door

Location

Balconies and townhouse buildings.

Description

US Aluminum 250 series door system.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Encl 14 - Aluminum Framed Sliding Glass Door

Location

Balconies/decks at all elevations of tower and townhouses (excluding enclosed balconies).

Description

Thermally improved aluminum frames with fixed IGUs manufactured by Metro Aluminum.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Balconies

Encl 15 - Exposed Urethane Balcony Membrane

Location

North, south, east, and west elevations at all levels of the tower.

Description

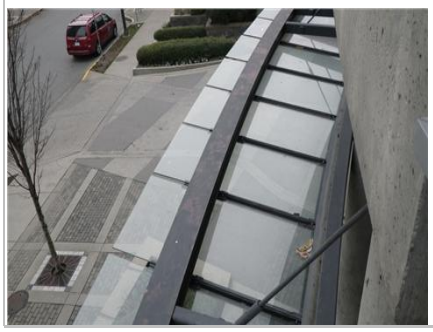
Liquid applied urethane membrane applied over concrete balcony.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2036

Canopies

Encl 16 - Metal & Glass Canopy



Location

Entrance lobby at the east elevation.

Description

Canopy constructed with metal framing and glass.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Parking Garage

Encl 17 - Open-grid Overhead Parkade Gate

Location
Parkade entrance.

Description
Pre-finished metal grid overhead gate for underground parkade.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Encl 18 - Slab-on-Grade

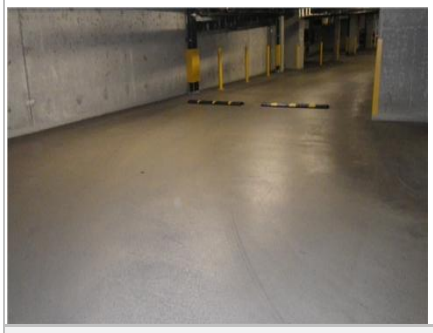
Location
Parking garage.

Description
Concrete slab on grade.

Information

Service Life:	75
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2079

Encl 19 - Parking Slab with Traffic-bearing Membrane



Location
Parking garage levels.

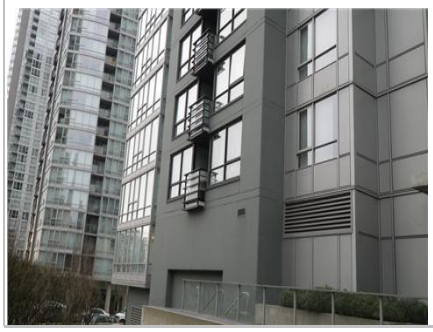
Description
Traffic-bearing membrane on concrete parking garage floor slab.

Information

Service Life:	75
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2079

General & Inspections

Encl 20 - General & Inspections



Location
All levels and elevations.

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

Information

Service Life:	75
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2079

Encl 21 - Sealant

Location

Around windows/doors, cast in place concrete joints and various cladding penetrations.

Description

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

Information

Service Life:	10
Installed Year:	2004
Chronological Age:	10
Effective Age:	3
Next Renewal Year:	2021

Electrical

Power Supply

Elec 01 - Unit Substation

Location

Parking level 1 beside generator room.

Description

Windings 3 phase, dry type transformer; main breaker, load break switches and metering compartments contained within unit substation to provide primary electrical service.

Information

Service Life:	35
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2039

Elec 02 - Distribution Transformer - Interior

Location

Parking level 1 beside generator room.

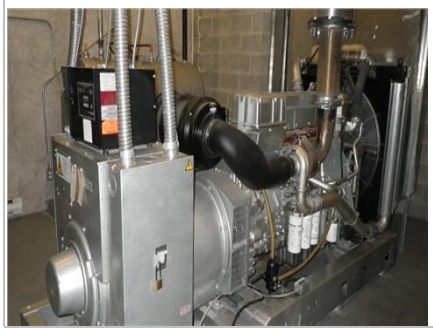
Description

3 windings primary transformer, 1000 KvA, 12.5 Kv to 600 Volt. 1,250 KVA 12.5 to 120/208. 3 secondary transformers.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Elec 03 - Emergency Generator



Location

Parking level 1 opposite compactor room.

Description

250 KW diesel generator for standby AC power, including fuel tank.

Information

Service Life:	35
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2039

Distribution

Elec 04 - Electrical Distribution

Location

Buried in floors and wall cavities throughout the building.

Description

Federal Pioneer 3 phase switchgear units; downstream switchboards, panelboards, breakers, switches, disconnects and wiring to mechanical, lighting and power loads throughout the building.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Light Fixtures

Elec 05 - Exterior Light Fixtures

Location

Mounted to concrete upstand walls at grade, soffit at lobby entrance, landscape planters.

Description

A variety of fixture types and lamp types for exterior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers and photocells.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Elec 06 - Interior Light Fixtures

Location

Throughout the building.

Description

A variety of fixture types and lamp types for interior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers, dimmers and photocells.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Security

Elec 07 - Enterphone System

Location

Lobby entrance, parkade ramp and parkade elevator landings.

Description

Flush mounted, enterphone panels with associated key pads and display panels.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Elec 08 - Proximity Access Control

Location

Throughout the building.

Description

Local proximity access control system components include fob/card devices for building occupants, fob/card readers, RTE sensors/buttons, electric strikes and door controllers. Network level components include door control panel, communication boards, backup batteries, RTE board, conduit, cable and connectors.

Information

Service Life:	12
Installed Year:	2004
Chronological Age:	10
Effective Age:	9
Next Renewal Year:	2017

Mechanical

Controls and End Devices

Mech 01 - Heat Tracing - Freeze Protection

Location

Parking garage.

Description

Digitrace 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
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Mech 02 - Gas Detection - Parking Garage

Location

Mounted to concrete columns on each parking garage levels.

Description

Electronic sensing devices for detection of dangerous gases, carbon monoxide (CO) produced by vehicles and to activate the exhaust fans accordingly.

Information

Service Life:	10
Installed Year:	2004
Chronological Age:	10
Effective Age:	9
Next Renewal Year:	2015

Mech 03 - Controls - Direct Digital

Location

Mechanical room beside 38th floor hallway.

Description

DDC panels to control heating, air-conditioning, domestic hot water system and boilers etc.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Plumbing & Drainage

Mech 04 - Tank - Expansion -DHW - Diaphragm

Location

Mechanical room beside 38th floor hallway.

Description

Amtrol floor mounted diaphragm expansion tank for domestic water system.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 05 - Pumps - Sanitary Lift and Control Panel

Location

Basement parkade level near stalls 228, 229 and 245.

Description

Northwest Tech-con, duplex, 7.5 HP, sanitary sump pumps and control panels for sanitary lift/drainage.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Mech 06 - Pumps - Storm Lift and Control Panel

Location

Basement parkade level near stalls 228, 229 and 245.

Description

Northwest Tech-con, duplex, 15 HP, storm sump pumps and control panels for storm water run-off and sub-surface drainage.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Mech 07 - Drainage - Sanitary

Location

Suspended from parkade ceilings and buried in walls throughout the building.

Description

Cast iron DWV piping, with mechanical joints, p-traps, and fittings.

Information

Service Life:	50
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2054

Mech 08 - Drainage - Storm - Internal

Location

Suspended from parkade ceilings and buried in walls throughout the building.

Description

Trench drains, catch basins and associated piping systems for rainwater runoff. Roof drains may be included with the roof assets.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Mech 09 - Tank - DHW - Storage

Location

Mechanical room beside 38th floor hallway.

Description

115 US gallon tanks, glass-lined hot water storage tanks connected to domestic boiler system.

Information

Service Life:	8
Installed Year:	2004
Chronological Age:	10
Effective Age:	2
Next Renewal Year:	2020

Mech 10 - Pump - DHW - Circulation and Recirculation

Location

Mechanical room beside 38th floor hallway.

Description

B&G pipe-mounted bronze body domestic hot water circulation pumps. Circulating hot water from boilers to tanks and recirculating hot water from system.

Information

Service Life:	10
Installed Year:	2004
Chronological Age:	10
Effective Age:	9
Next Renewal Year:	2015

Mech 11 - Boiler - DHW - Heating - Gas Fired

Location

Mechanical room beside 38th floor hallway.

Description

RBI coppertube natural gas fired, domestic service hot water heater, 1,260,000 BTU/Hr input. Atmospheric vent/chimney. Water Heaters are connected to storage tanks.

Information

Service Life:	14
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2018

Mech 12 - Valves - Cross Connection & Backflow Prevention

Location

The main backflow preventer is located in the water service entrance room on the P1 level.

Description

Various types and sizes of backflow prevention valves, including vacuum breakers, double check, reduced pressure valves on systems.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 13 - Valves - Plumbing Flow Control and Directional

Location

Water service entrance room on the P1 level.

Description

Various types and sizes of valves, including pressure reducing valves, isolation valves, two-way and three way valves, circuit flow control valves and check valves to regulate the flow of water through domestic plumbing systems.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 14 - Piping - Domestic Water Distribution

Location

Service rooms and buried in floors and walls throughout the building.

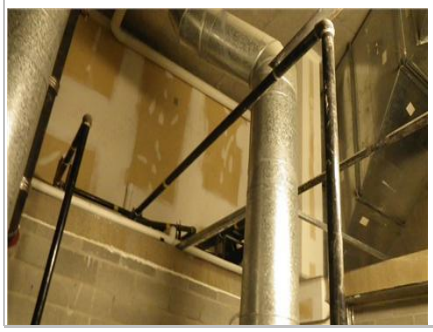
Description

Mixture of K and L copper for vertical/horizontal mains system and distribution piping within the suites. Soldered connections.

Information

Service Life:	28
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2032

Mech 15 - Piping - Gas Distribution



Location

Service rooms and buried in floors and walls throughout the building.

Description

Gas distribution system consisting of (threaded sch 40 steel)(soldered copper)(stainless steel flex) piping from meter to appliance. Piping inside townhouse is not Strata owned.

Information

Service Life:	50
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2054

Mech 16 - Pump - Domestic Water Booster

Location

Mechanical room at parking level 1 near visitors parking.

Description

Triplex system with 15 HP lead pump, 25 HP lag pumps, packaged motor control system, to supply constant boosted pressure to fixtures and equipment on all levels.

Information

Service Life:	14
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2018

Heating & Cooling

Mech 17 - Heat Pump

Location

Parking garage level.

Description

Heat pump indoor fan coil unit, comprising direct expansion air-side coil, and blower/filter section.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Mech 18 - Baseboard - Electric

Location

Service rooms and parkade vestibules.

Description

Standard grade, wall mounted, electric convector baseboard heaters with electrical fins for localized space heating and integral thermostat control.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Ventilation and Air-conditioning

Mech 19 - Indoor Air Handler - Gas Fired

Location

Mechanical room beside 38th floor hallway.

Description

Engineered Air, 13,000 CFM indoor unit, belt-driven, centrifugal fan with natural gas fired heating to supply tempered make-up air to the interior spaces.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 20 - Exhaust Fan - Parkade - Propellor

Location

Parking garage levels.

Description

Belt driven propellor exhaust fan mounted in exterior wall.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 21 - Exhaust Fan - Small Service - Cabinet

Location

Service and storage rooms.

Description

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

Information

Service Life:	12
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2016

Other

Mech 22 - Overhead Gate Motor

Location

Parking garage levels.

Description

AC motor and commercial-grade overhead sectional door controlled by an electric operator.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 23 - Trash Compactor

Location

Parking level 1 opposite generator room.

Description

Horizontal hydraulic ram compactor.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Elevator

Traction

Elev 01 - Geared Traction Elevators

Location

Penthouse level machine room, elevator shaft.

Description

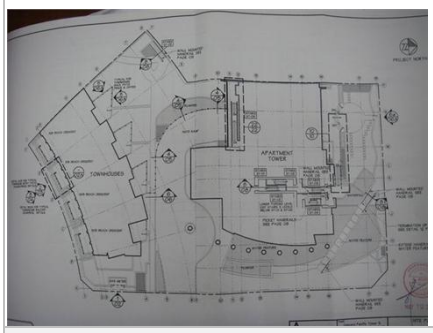
Geared traction machines for vertical passenger transportation between the levels of the building.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Hydraulic

Elev 02 - Hydraulic Elevator Equipment



Location

Northeast side of townhouses at entrance to courtyard.

Description

Vertical passenger transportation between the levels of the building.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Car Interiors

Elev 03 - Elevator Cab Furnishings

Location

Elevator cabs beside central corridors.

Description

Vertical passenger transportation between the levels of the building.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Fire Safety

Controls

Fire 01 - Fire Alarm Panel - Addressable

Location

Mounted to lobby wall.

Description

Solid state central processing unit for all fire detection devices and fire suppression devices connected to the fire alarm system.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Detection

Fire 02 - Fire Detection & Alarm

Location

Mounted to walls and ceilings in various strategic locations throughout the building.

Description

Smoke detectors, heat detectors, flow switches, tamper switches, horns, pull stations and other fixed apparatus field devices to detect fire and smoke conditions and initiate timely response.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Suppression

Fire 03 - Sprinkler & Standpipe - Wet

Location

Throughout the building.

Description

Standard upright, pendant and sidewall sprinkler heads, flow switches and indicating devices, gauges, steel and PVC distribution lines.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Fire 04 - Sprinkler System - Dry

Location

Throughout the parkade.

Description

Exposed dry sprinklers, upright and sidewall sprinkler heads, steel piping.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Fire 05 - Fire & Jockey Pump

Location

Mechanical room on level 1 parking near visitors parking area.

Description

Motor control centre connected to fire pump and jockey pump, which work in tandem to supply water flow and pressure to the sprinkler system and standpipe system.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Fire 06 - Sprinkler Valve Assembly - Dry

Location

Fire sprinkler valve room on level 1 parking.

Description

Viking dry sprinkler valves, trim and gauges, steel piping.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Fire 07 - Dry Sprinkler Compressor

Location

Fire sprinkler valve room on level 1 parking.

Description

Pro Air II compressor with motor to maintain the pressure of air in the dry fire sprinkler lines.

Information

Service Life:	14
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2018

Fire 08 - Portable Fire Extinguisher

Location

Mounted to walls in various strategic locations throughout the building.

Description

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

Information

Service Life:	24
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2028

Egress

Fire 09 - Emergency Egress Equipment

Location

Mounted to walls in various strategic locations throughout the building.

Description

Unit battery packs and exit signs.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Interior Finishes

Floors

Finish 01 - Resilient Sheet Flooring

Location

Elevator lobbies at parkade levels.

Description

Vinyl sheet adhered to the substrate.

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Finish 02 - Sheet Carpet

Location

Common hallways, ground floor meeting room.

Description

Synthetic, low level loop, textile sheet floor covering glued over floor substrate. (Old photo shown)

Information

Service Life:	15
Installed Year:	2014
Chronological Age:	0
Effective Age:	0
Next Renewal Year:	2029

Finish 03 - Stone Floor Tile

Location

Lobby, mailroom, three elevator cabs.

Description

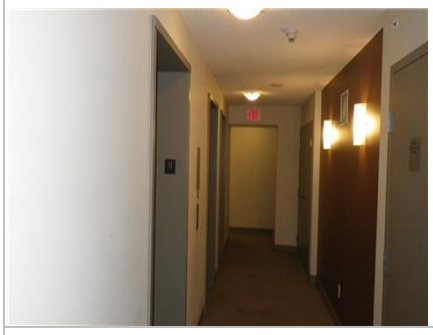
Cut stone floor tile on thin set mortar with grout.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Walls

Finish 04 - Paint



Location
Walls/ceilings in hallways, lobby, and other common areas throughout the building.

Description
Primers and multiple pigmented coating finishes applied to interior gypsum wallboard.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Finish 05 - Wallpaper Covering

Location
Lobby elevator landing, penthouse floors at top 4 levels.

Description
Decorative wallpaper sheet covering adhered to substrate sheathing.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Finish 06 - Wood Paneling

Location
Mounted to walls at the lobby elevator landing and lobby meeting room.

Description
Decorative wood paneling; wood veneer on substrate sheathing and structural framing.

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Architectural Woodwork

Finish 07 - Carpentry and Millwork

Location
Lobby, ground floor meeting room.

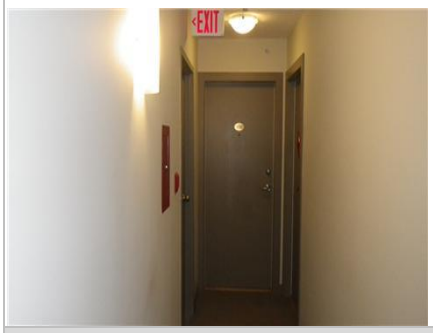
Description
Shop fabricated custom casework, built-in counter-tops with laminate, composite or stone surface, wood veneer or composite cabinets.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Doors

Finish 08 - Interior Swing Door - General



Location

Throughout the building.

Description

Solid core wood or hollow metal swing door hung in framed opening including hardware.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Amenities

Specialties

Amen 01 - Wood Storage Locker

Location

Storage rooms.

Description

Wood framed general purpose storage locker with swing door and hardware.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Furnishings

Amen 02 - Central Mailboxes

Location

Mounted to walls in lobby vestibule.

Description

Flush mounted, front loading, brushed aluminum finish, extruded aluminum trim.

Information

Service Life:	30
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2034

Amen 03 - Public Signage

Location

Mounted to doors, walls and equipment in various strategic locations throughout.

Description

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

Information

Service Life:	25
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2029

Sitework

Hard Landscaping

Site 01 - Concrete Paving

Location

Around building perimeter.

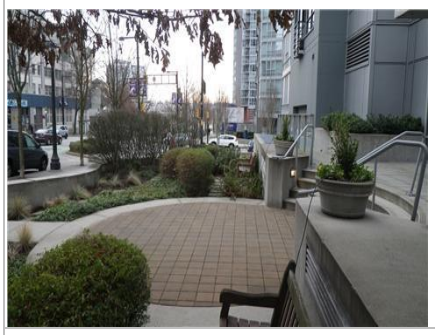
Description

Concrete pavement, cast with control and construction joints, onto compacted gravel base.

Information

Service Life:	40
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2044

Site 02 - Outdoor Furniture



Location

North side beside fitness club; south courtyard; parkade storage areas.

Description

Benches, bicycle racks, bollards, potted plants, ornaments, and other miscellaneous features mounted onto the hardscape surfaces.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Site 03 - Water Feature

Location

At grade along the north and east sides of main entrance.

Description

Mechanically cycled water and spray nozzles in an outdoor pond for ambience and at the main pedestrian entrance to the building.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Soft Landscaping

Site 04 - Irrigation System

Location

Controller in mechanical room at parking level 1 near visitor's parking.

Description

Controller with time clock, network of pipes, valves, and irrigation heads distributed around the soft landscaping.

Information

Service Life:	15
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2019

Site 05 - Soft Landscaping

Location

North, south, east and west sides of the building

Description

Lawn, ground cover, shrubs, perennials and small trees (up to 30').

Information

Service Life:	20
Installed Year:	2004
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Appendix C

Asset Service Life Summary

Azura 2 - Tower & TH (2014)

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Encl 01	Sheet Metal Roof	10	20
Encl 02	Protected Urethane Membrane Roof	10	10
Encl 03	Protected Urethane Membrane Deck	10	10
Encl 04	Guardrail Glazed Aluminum	10	20
Encl 05	Anchor Fall Protection Equipment	10	30
Encl 06	Stone Cladding Wall	10	10
Encl 07	Profiled Sheet Metal Cladding Wall	10	30
Encl 08	Coated Architectural Concrete Wall	10	65
Encl 09	Curtain Wall	10	30
Encl 10	Aluminum Framed Window	10	30
Encl 11	Aluminum Skylight	10	10
Encl 12	Metal Swing Door	10	15
Encl 13	Aluminum Frame Glazed Swing Door	10	15
Encl 14	Aluminum Framed Sliding Glass Door	10	20
Encl 15	Exposed Urethane Balcony Membrane	3	22
Encl 16	Metal & Glass Canopy	10	30
Encl 17	Open-grid Overhead Parkade Gate	10	15
Encl 18	Slab-on-Grade	10	65
Encl 19	Parking Slab with Traffic-bearing Membrane	10	65
Encl 20	General & Inspections	10	65
Encl 21	Sealant	10	7
Elec 01	Unit Substation	10	25
Elec 02	Distribution Transformer - Interior	10	30
Elec 03	Emergency Generator	10	25
Elec 04	Electrical Distribution	10	30
Elec 05	Exterior Light Fixtures	10	10
Elec 06	Interior Light Fixtures	10	10
Elec 07	Enterphone System	10	15
Elec 08	Proximity Access Control	10	3
Mech 01	Heat Tracing - Freeze Protection	10	5
Mech 02	Gas Detection - Parking Garage	10	1
Mech 03	Controls - Direct Digital	10	5
Mech 04	Tank - Expansion -DHW - Diaphragm	10	10
Mech 05	Pumps - Sanitary Lift and Control Panel	10	5
Mech 06	Pumps - Storm Lift and Control Panel	10	5
Mech 07	Drainage - Sanitary	10	40
Mech 08	Drainage - Storm - Internal	10	30
Mech 09	Tank - DHW - Storage	10	6
Mech 10	Pump - DHW - Circulation and Recirculation	10	1
Mech 11	Boiler - DHW - Heating - Gas Fired	10	4
Mech 12	Valves - Cross Connection & Backflow Prevention	10	10
Mech 13	Valves - Plumbing Flow Control and Directional	10	10

Mech 14	Piping - Domestic Water Distribution	10	18
Mech 15	Piping - Gas Distribution	10	40
Mech 16	Pump - Domestic Water Booster	10	4
Mech 17	Heat Pump	10	5
Mech 18	Baseboard - Electric	10	30
Mech 19	Indoor Air Handler - Gas Fired	10	10
Mech 20	Exhaust Fan - Parkade - Propellor	10	10
Mech 21	Exhaust Fan - Small Service - Cabinet	10	2
Mech 22	Overhead Gate Motor	10	10
Mech 23	Trash Compactor	10	10
Elev 01	Geared Traction Elevators	10	15
Elev 02	Hydraulic Elevator Equipment	10	15
Elev 03	Elevator Cab Furnishings	10	5
Fire 01	Fire Alarm Panel - Addressable	10	10
Fire 02	Fire Detection & Alarm	10	10
Fire 04	Sprinkler System - Dry	10	30
Fire 05	Fire & Jockey Pump	10	20
Fire 06	Sprinkler Valve Assembly - Dry	10	30
Fire 07	Dry Sprinkler Compressor	10	4
Fire 08	Portable Fire Extinguisher	10	14
Fire 09	Emergency Egress Equipment	10	10
Finish 01	Resilient Sheet Flooring	10	10
Finish 02	Sheet Carpet	0	15
Finish 03	Stone Floor Tile	10	30
Finish 04	Paint	10	5
Finish 05	Wallpaper Covering	10	5
Finish 06	Wood Paneling	10	15
Finish 07	Carpentry and Millwork	10	20
Finish 08	Interior Swing Door - General	10	20
Amen 01	Wood Storage Locker	10	20
Amen 02	Central Mailboxes	10	20
Amen 03	Public Signage	10	15
Site 01	Concrete Paving	10	30
Site 02	Outdoor Furniture	10	5
Site 03	Water Feature	10	5
Site 04	Irrigation System	10	5
Site 05	Soft Landscaping	10	10

Appendix D

Disclosures and Disclaimers

RDH
Making Buildings Better

224 W 8th Avenue
Vancouver, BC V5Y 1N5

604 873 1181
rdhbe.com

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 regarded 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 E

Funding Scenario Cash Flow Tables

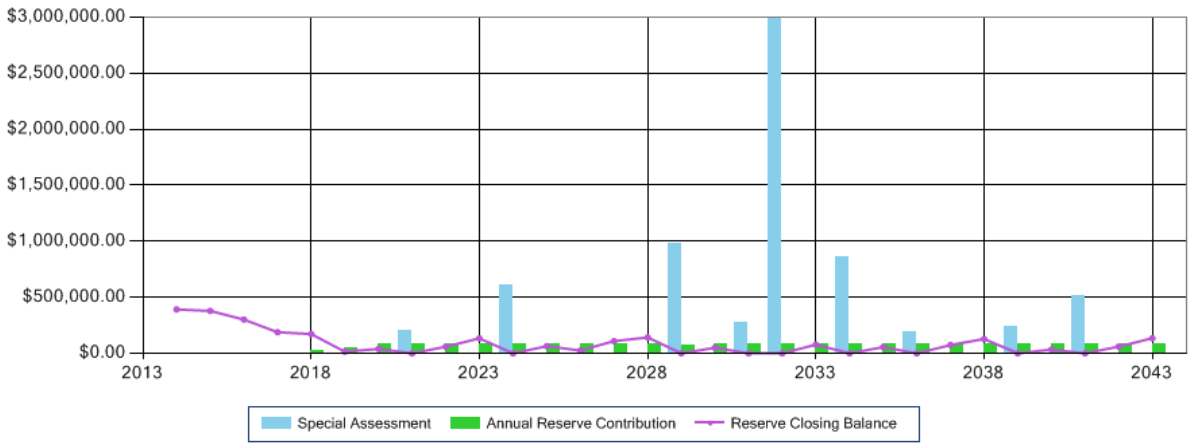
Funding Model - Statutory Funding Scenario

Funding Model Name	Statutory Funding Scenario		Initial Catch-Up Cost	$0
Building	Azura 2 - Tower & TH (2014)		Operating Budget	$868,736
Start Year	2014		Starting Reserve Balance	$393,000
Interest/Investment Rate	2.0 %		Contribution Threshold	$217,184
Estimated Contingency Allowance	$2,000		Contribution Below Threshold	$86,874
Tax Rate	0.0 %		Contribution Above Threshold	$0
Planning Horizon	30		Reserve Contribution Increase	0.0
Number of Units	207		Monthly Avg. Unit Contribution	$0

Year	Opening Balance	Reserve Contribution	Additional Funding	Reserve Income	Keep-Up	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2014	$393,000	$0	$0	$7,860	$6,500	$2,000	$0	$392,360	19.46 %
2015	$392,360	$0	$0	$7,847	$19,330	$2,000	$0	$378,877	16.58 %
2016	$378,877	$0	$0	$7,578	$82,920	$2,000	$0	$301,535	12.06 %
2017	$301,535	$0	$0	$6,031	$116,550	$2,000	$0	$189,015	7.01 %
2018	$189,015	$28,169	$0	$3,780	$46,800	$2,000	$0	$172,164	5.80 %
2019	$172,164	$45,020	$0	$3,443	$203,880	$2,000	$0	$14,747	0.47 %
2020	$14,747	$86,874	$0	$295	$60,570	$2,000	$0	$39,346	1.16 %
2021	$39,346	$86,874	$202,514	$787	$327,520	$2,000	$0	$0	0.00 %
2022	$0	$86,874	$0	$0	$25,710	$2,000	$0	$59,164	1.58 %
2023	$59,164	$86,874	$0	$1,183	$11,020	$2,000	$0	$134,200	3.28 %
2024	$134,200	$82,984	$612,032	$2,684	$829,900	$2,000	$0	$0	0.00 %
2025	$0	$86,874	$0	$0	$21,080	$2,000	$0	$63,794	1.62 %
2026	$63,794	$86,874	$0	$1,276	$124,630	$2,000	$0	$25,313	0.60 %
2027	$25,313	$86,874	$0	$506	$1,570	$2,000	$0	$109,123	2.41 %
2028	$109,123	$86,874	$0	$2,182	$54,100	$2,000	$0	$142,079	2.94 %
2029	$142,079	$75,105	$975,174	$2,842	$1,193,200	$2,000	$0	$0	0.00 %
2030	$0	$86,874	$0	$0	$34,980	$2,000	$0	$49,894	1.15 %
2031	$49,894	$86,874	$277,525	$998	$413,290	$2,000	$0	$0	0.00 %
2032	$0	$86,874	$2,997,427	$0	$3,082,300	$2,000	$0	$0	0.00 %
2033	$0	$86,874	$0	$0	$7,160	$2,000	$0	$77,714	4.74 %
2034	$77,714	$86,874	$864,659	$1,554	$1,028,800	$2,000	$0	$0	0.00 %
2035	$0	$86,874	$0	$0	$29,600	$2,000	$0	$55,274	6.31 %
2036	$55,274	$86,874	$185,697	$1,105	$326,950	$2,000	$0	$0	0.00 %
2037	$0	$86,874	$0	$0	$10,400	$2,000	$0	$74,474	9.62 %
2038	$74,474	$86,874	$0	$1,489	$32,520	$2,000	$0	$128,317	14.93 %
2039	$128,317	$86,874	$242,543	$2,566	$458,300	$2,000	$0	$0	0.00 %
2040	$0	$86,874	$0	$0	$51,180	$2,000	$0	$33,694	5.97 %
2041	$33,694	$86,874	$514,459	$674	$633,700	$2,000	$0	$0	0.00 %
2042	$0	$86,874	$0	$0	$24,840	$2,000	$0	$60,034	1,000.56 %
2043	$60,034	$86,874	$0	$1,201	$10,830	$2,000	$0	$135,278	100.00 %

Funding Model - Statutory Funding Scenario

GRAPHIC REPRESENTATION



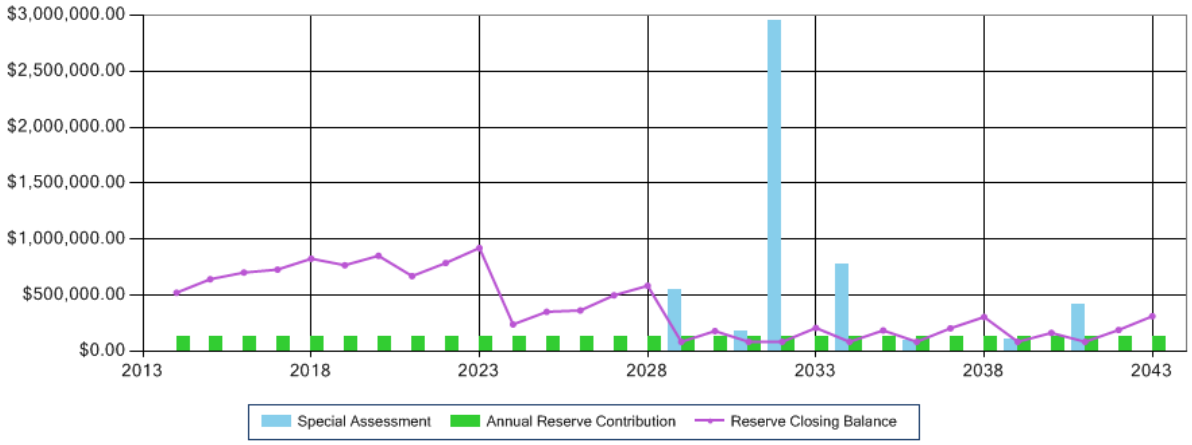
Funding Model - Fixed Annual Funding of $ 131,240 (Current)

Funding Model Name	Fixed Annual Funding of $ 131,240 (Current)		Initial Catch-Up Cost	$0
Building	Azura 2 - Tower & TH (2014)		Operating Budget	$868,736
Start Year	2014		Starting Reserve Balance	$393,000
Interest/Investment Rate	2.0 %		Contribution Threshold	$500,000
Estimated Contingency Allowance	$2,000		Contribution Below Threshold	$131,240
Tax Rate	0.0 %		Contribution Above Threshold	$131,240
Planning Horizon	30		Reserve Contribution Increase	0.0
Number of Units	207		Monthly Avg. Unit Contribution	$53

Year	Opening Balance	Reserve Contribution	Additional Funding	Reserve Income	Keep-Up	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2014	$393,000	$131,240	$0	$7,860	$6,500	$2,000	$0	$523,600	25.97 %
2015	$523,600	$131,240	$0	$10,472	$19,330	$2,000	$0	$643,982	28.18 %
2016	$643,982	$131,240	$0	$12,880	$82,920	$2,000	$0	$703,182	28.12 %
2017	$703,182	$131,240	$0	$14,064	$116,550	$2,000	$0	$729,935	27.07 %
2018	$729,935	$131,240	$0	$14,599	$46,800	$2,000	$0	$826,974	27.86 %
2019	$826,974	$131,240	$0	$16,539	$203,880	$2,000	$0	$768,873	24.82 %
2020	$768,873	$131,240	$0	$15,377	$60,570	$2,000	$0	$852,921	25.24 %
2021	$852,921	$131,240	$0	$17,058	$327,520	$2,000	$0	$671,699	19.77 %
2022	$671,699	$131,240	$0	$13,434	$25,710	$2,000	$0	$788,663	21.13 %
2023	$788,663	$131,240	$0	$15,773	$11,020	$2,000	$0	$922,657	22.56 %
2024	$922,657	$131,240	$0	$18,453	$829,900	$2,000	$0	$240,450	6.64 %
2025	$240,450	$131,240	$0	$4,809	$21,080	$2,000	$0	$353,419	8.98 %
2026	$353,419	$131,240	$0	$7,068	$124,630	$2,000	$0	$365,097	8.78 %
2027	$365,097	$131,240	$0	$7,302	$1,570	$2,000	$0	$500,069	11.08 %
2028	$500,069	$131,240	$0	$10,001	$54,100	$2,000	$0	$585,210	12.11 %
2029	$585,210	$131,240	$552,046	$11,704	$1,193,200	$2,000	$0	$85,000	2.12 %
2030	$85,000	$131,240	$0	$1,700	$34,980	$2,000	$0	$180,960	4.20 %
2031	$180,960	$131,240	$184,471	$3,619	$413,290	$2,000	$0	$85,000	2.01 %
2032	$85,000	$131,240	$2,951,360	$1,700	$3,082,300	$2,000	$0	$85,000	5.78 %
2033	$85,000	$131,240	$0	$1,700	$7,160	$2,000	$0	$208,780	12.74 %
2034	$208,780	$131,240	$771,604	$4,176	$1,028,800	$2,000	$0	$85,000	10.95 %
2035	$85,000	$131,240	$0	$1,700	$29,600	$2,000	$0	$186,340	21.29 %
2036	$186,340	$131,240	$92,643	$3,727	$326,950	$2,000	$0	$85,000	12.66 %
2037	$85,000	$131,240	$0	$1,700	$10,400	$2,000	$0	$205,540	26.55 %
2038	$205,540	$131,240	$0	$4,111	$32,520	$2,000	$0	$306,371	35.66 %
2039	$306,371	$131,240	$101,562	$6,127	$458,300	$2,000	$0	$85,000	16.37 %
2040	$85,000	$131,240	$0	$1,700	$51,180	$2,000	$0	$164,760	29.21 %
2041	$164,760	$131,240	$421,405	$3,295	$633,700	$2,000	$0	$85,000	653.84 %
2042	$85,000	$131,240	$0	$1,700	$24,840	$2,000	$0	$191,100	3,185.00 %
2043	$191,100	$131,240	$0	$3,822	$10,830	$2,000	$0	$313,332	100.00 %

Funding Model - Fixed Annual Funding of $ 131,240 (Current)

GRAPHIC REPRESENTATION



Created On: 2014-09-05

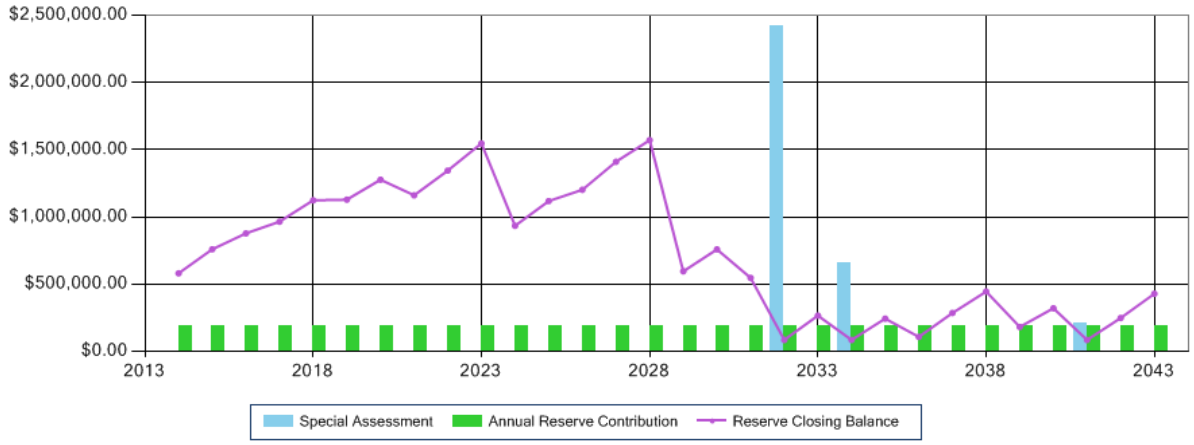
Funding Model - Fixed Annual Funding of $188,240 (CRF + Op.B)

Funding Model Name	Fixed Annual Funding of $188,240 (CRF + Op.B)		Initial Catch-Up Cost	
Building	Azura 2 - Tower & TH (2014)		Operating Budget	$868,736
Start Year	2014		Starting Reserve Balance	$393,000
Interest/Investment Rate	2.0 %		Contribution Threshold	$500,000
Estimated Contingency Allowance	$2,000		Contribution Below Threshold	$188,240
Tax Rate	0.0 %		Contribution Above Threshold	$188,240
Planning Horizon	30		Reserve Contribution Increase	0.0
Number of Units	207		Monthly Avg. Unit Contribution	$76

Year	Opening Balance	Reserve Contribution	Additional Funding	Reserve Income	Keep-Up	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2014	$393,000	$188,240	$0	$7,860	$6,500	$2,000	$0	$580,600	28.79 %
2015	$580,600	$188,240	$0	$11,612	$19,330	$2,000	$0	$759,122	33.22 %
2016	$759,122	$188,240	$0	$15,182	$82,920	$2,000	$0	$877,624	35.10 %
2017	$877,624	$188,240	$0	$17,552	$116,550	$2,000	$0	$964,867	35.78 %
2018	$964,867	$188,240	$0	$19,297	$46,800	$2,000	$0	$1,123,604	37.85 %
2019	$1,123,604	$188,240	$0	$22,472	$203,880	$2,000	$0	$1,128,437	36.43 %
2020	$1,128,437	$188,240	$0	$22,569	$60,570	$2,000	$0	$1,276,675	37.78 %
2021	$1,276,675	$188,240	$0	$25,534	$327,520	$2,000	$0	$1,160,929	34.17 %
2022	$1,160,929	$188,240	$0	$23,219	$25,710	$2,000	$0	$1,344,677	36.04 %
2023	$1,344,677	$188,240	$0	$26,894	$11,020	$2,000	$0	$1,546,791	37.82 %
2024	$1,546,791	$188,240	$0	$30,936	$829,900	$2,000	$0	$934,067	25.82 %
2025	$934,067	$188,240	$0	$18,681	$21,080	$2,000	$0	$1,117,908	28.41 %
2026	$1,117,908	$188,240	$0	$22,358	$124,630	$2,000	$0	$1,201,876	28.91 %
2027	$1,201,876	$188,240	$0	$24,038	$1,570	$2,000	$0	$1,410,584	31.25 %
2028	$1,410,584	$188,240	$0	$28,212	$54,100	$2,000	$0	$1,570,935	32.51 %
2029	$1,570,935	$188,240	$0	$31,419	$1,193,200	$2,000	$0	$595,394	14.85 %
2030	$595,394	$188,240	$0	$11,908	$34,980	$2,000	$0	$758,562	17.62 %
2031	$758,562	$188,240	$0	$15,171	$413,290	$2,000	$0	$546,683	12.93 %
2032	$546,683	$188,240	$2,423,443	$10,934	$3,082,300	$2,000	$0	$85,000	5.78 %
2033	$85,000	$188,240	$0	$1,700	$7,160	$2,000	$0	$265,780	16.22 %
2034	$265,780	$188,240	$656,464	$5,316	$1,028,800	$2,000	$0	$85,000	10.95 %
2035	$85,000	$188,240	$0	$1,700	$29,600	$2,000	$0	$243,340	27.81 %
2036	$243,340	$188,240	$0	$4,867	$326,950	$2,000	$0	$107,497	16.02 %
2037	$107,497	$188,240	$0	$2,150	$10,400	$2,000	$0	$285,487	36.88 %
2038	$285,487	$188,240	$0	$5,710	$32,520	$2,000	$0	$444,917	51.79 %
2039	$444,917	$188,240	$0	$8,898	$458,300	$2,000	$0	$181,755	35.02 %
2040	$181,755	$188,240	$0	$3,635	$51,180	$2,000	$0	$320,450	56.81 %
2041	$320,450	$188,240	$205,601	$6,409	$633,700	$2,000	$0	$85,000	653.84 %
2042	$85,000	$188,240	$0	$1,700	$24,840	$2,000	$0	$248,100	4,135.00 %
2043	$248,100	$188,240	$0	$4,962	$10,830	$2,000	$0	$428,472	100.00 %

Funding Model - Fixed Annual Funding of $188,240 (CRF + Op.B)

GRAPHIC REPRESENTATION



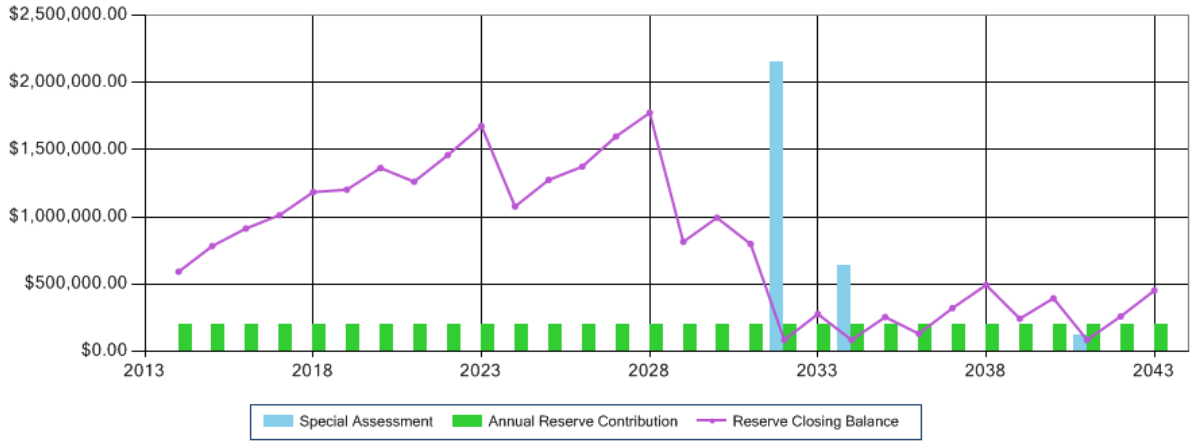
Funding Model - Fixed Annual Funding of $200,000

Funding Model Name	Fixed Annual Funding of $200,000		Initial Catch-Up Cost	$0
Building	Azura 2 - Tower & TH (2014)		Operating Budget	$868,736
Start Year	2014		Starting Reserve Balance	$393,000
Interest/Investment Rate	2.0 %		Contribution Threshold	$500,000
Estimated Contingency Allowance	$2,000		Contribution Below Threshold	$200,000
Tax Rate	0.0 %		Contribution Above Threshold	$200,000
Planning Horizon	30		Reserve Contribution Increase	0.0
Number of Units	207		Monthly Avg. Unit Contribution	$81

Year	Opening Balance	Reserve Contribution	Additional Funding	Reserve Income	Keep-Up	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2014	$393,000	$200,000	$0	$7,860	$6,500	$2,000	$0	$592,360	29.38 %
2015	$592,360	$200,000	$0	$11,847	$19,330	$2,000	$0	$782,877	34.26 %
2016	$782,877	$200,000	$0	$15,658	$82,920	$2,000	$0	$913,615	36.54 %
2017	$913,615	$200,000	$0	$18,272	$116,550	$2,000	$0	$1,013,337	37.58 %
2018	$1,013,337	$200,000	$0	$20,267	$46,800	$2,000	$0	$1,184,804	39.91 %
2019	$1,184,804	$200,000	$0	$23,696	$203,880	$2,000	$0	$1,202,620	38.83 %
2020	$1,202,620	$200,000	$0	$24,052	$60,570	$2,000	$0	$1,364,102	40.36 %
2021	$1,364,102	$200,000	$0	$27,282	$327,520	$2,000	$0	$1,261,864	37.14 %
2022	$1,261,864	$200,000	$0	$25,237	$25,710	$2,000	$0	$1,459,392	39.11 %
2023	$1,459,392	$200,000	$0	$29,188	$11,020	$2,000	$0	$1,675,559	40.97 %
2024	$1,675,559	$200,000	$0	$33,511	$829,900	$2,000	$0	$1,077,171	29.78 %
2025	$1,077,171	$200,000	$0	$21,543	$21,080	$2,000	$0	$1,275,634	32.42 %
2026	$1,275,634	$200,000	$0	$25,513	$124,630	$2,000	$0	$1,374,517	33.07 %
2027	$1,374,517	$200,000	$0	$27,490	$1,570	$2,000	$0	$1,598,437	35.41 %
2028	$1,598,437	$200,000	$0	$31,969	$54,100	$2,000	$0	$1,774,306	36.71 %
2029	$1,774,306	$200,000	$0	$35,486	$1,193,200	$2,000	$0	$814,592	20.32 %
2030	$814,592	$200,000	$0	$16,292	$34,980	$2,000	$0	$993,904	23.08 %
2031	$993,904	$200,000	$0	$19,878	$413,290	$2,000	$0	$798,492	18.89 %
2032	$798,492	$200,000	$2,154,839	$15,970	$3,082,300	$2,000	$0	$85,000	5.78 %
2033	$85,000	$200,000	$0	$1,700	$7,160	$2,000	$0	$277,540	16.94 %
2034	$277,540	$200,000	$632,709	$5,551	$1,028,800	$2,000	$0	$85,000	10.95 %
2035	$85,000	$200,000	$0	$1,700	$29,600	$2,000	$0	$255,100	29.15 %
2036	$255,100	$200,000	$0	$5,102	$326,950	$2,000	$0	$131,252	19.56 %
2037	$131,252	$200,000	$0	$2,625	$10,400	$2,000	$0	$321,477	41.53 %
2038	$321,477	$200,000	$0	$6,430	$32,520	$2,000	$0	$493,387	57.43 %
2039	$493,387	$200,000	$0	$9,868	$458,300	$2,000	$0	$242,954	46.81 %
2040	$242,954	$200,000	$0	$4,859	$51,180	$2,000	$0	$394,633	69.97 %
2041	$394,633	$200,000	$118,174	$7,893	$633,700	$2,000	$0	$85,000	653.84 %
2042	$85,000	$200,000	$0	$1,700	$24,840	$2,000	$0	$259,860	4,331.00 %
2043	$259,860	$200,000	$0	$5,197	$10,830	$2,000	$0	$452,227	100.00 %

Funding Model - Fixed Annual Funding of $200,000

GRAPHIC REPRESENTATION



Funding Model - Fixed Annual Funding of $323,000

Funding Model Name	Fixed Annual Funding of $323,000		Initial Catch-Up Cost	$0
Building	Azura 2 - Tower & TH (2014)		Operating Budget	$868,736
Start Year	2014		Starting Reserve Balance	$393,000
Interest/Investment Rate	2.0 %		Contribution Threshold	$500,000
Estimated Contingency Allowance	$2,000		Contribution Below Threshold	$323,000
Tax Rate	0.0 %		Contribution Above Threshold	$323,000
Planning Horizon	30		Reserve Contribution Increase	0.0
Number of Units	207		Monthly Avg. Unit Contribution	$130

Year	Opening Balance	Reserve Contribution	Additional Funding	Reserve Income	Keep-Up	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2014	$393,000	$323,000	$0	$7,860	$6,500	$2,000	$0	$715,360	35.48 %
2015	$715,360	$323,000	$0	$14,307	$19,330	$2,000	$0	$1,031,337	45.13 %
2016	$1,031,337	$323,000	$0	$20,627	$82,920	$2,000	$0	$1,290,044	51.60 %
2017	$1,290,044	$323,000	$0	$25,801	$116,550	$2,000	$0	$1,520,295	56.39 %
2018	$1,520,295	$323,000	$0	$30,406	$46,800	$2,000	$0	$1,824,901	61.48 %
2019	$1,824,901	$323,000	$0	$36,498	$203,880	$2,000	$0	$1,978,519	63.88 %
2020	$1,978,519	$323,000	$0	$39,570	$60,570	$2,000	$0	$2,278,519	67.43 %
2021	$2,278,519	$323,000	$0	$45,570	$327,520	$2,000	$0	$2,317,570	68.22 %
2022	$2,317,570	$323,000	$0	$46,351	$25,710	$2,000	$0	$2,659,211	71.27 %
2023	$2,659,211	$323,000	$0	$53,184	$11,020	$2,000	$0	$3,022,375	73.91 %
2024	$3,022,375	$323,000	$0	$60,448	$829,900	$2,000	$0	$2,573,923	71.16 %
2025	$2,573,923	$323,000	$0	$51,478	$21,080	$2,000	$0	$2,925,321	74.35 %
2026	$2,925,321	$323,000	$0	$58,506	$124,630	$2,000	$0	$3,180,198	76.52 %
2027	$3,180,198	$323,000	$0	$63,604	$1,570	$2,000	$0	$3,563,232	78.95 %
2028	$3,563,232	$323,000	$0	$71,265	$54,100	$2,000	$0	$3,901,397	80.74 %
2029	$3,901,397	$323,000	$0	$78,028	$1,193,200	$2,000	$0	$3,107,225	77.52 %
2030	$3,107,225	$323,000	$0	$62,144	$34,980	$2,000	$0	$3,455,389	80.26 %
2031	$3,455,389	$323,000	$0	$69,108	$413,290	$2,000	$0	$3,432,207	81.19 %
2032	$3,432,207	$323,000	$0	$68,644	$3,082,300	$2,000	$0	$739,551	50.34 %
2033	$739,551	$323,000	$0	$14,791	$7,160	$2,000	$0	$1,068,182	65.21 %
2034	$1,068,182	$323,000	$0	$21,364	$1,028,800	$2,000	$0	$381,746	49.19 %
2035	$381,746	$323,000	$0	$7,635	$29,600	$2,000	$0	$680,781	77.80 %
2036	$680,781	$323,000	$0	$13,616	$326,950	$2,000	$0	$688,446	102.60 %
2037	$688,446	$323,000	$0	$13,769	$10,400	$2,000	$0	$1,012,815	130.85 %
2038	$1,012,815	$323,000	$0	$20,256	$32,520	$2,000	$0	$1,321,551	153.84 %
2039	$1,321,551	$323,000	$0	$26,431	$458,300	$2,000	$0	$1,210,682	233.27 %
2040	$1,210,682	$323,000	$0	$24,214	$51,180	$2,000	$0	$1,504,716	266.79 %
2041	$1,504,716	$323,000	$0	$30,094	$633,700	$2,000	$0	$1,222,110	9,400.84 %
2042	$1,222,110	$323,000	$0	$24,442	$24,840	$2,000	$0	$1,542,713	>10000%
2043	$1,542,713	$323,000	$0	$30,854	$10,830	$2,000	$0	$1,883,737	100.00 %

Funding Model - Fixed Annual Funding of $323,000

GRAPHIC REPRESENTATION

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 consult 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.

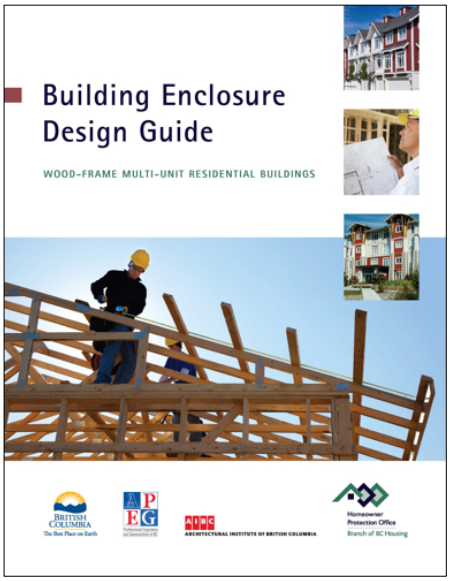
- B.Eng. & M.Eng., Structural Engineering
- Registered professional engineer, APEGBC
- 20 years experience as a consultant focused in the field of building science

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



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., CCCA

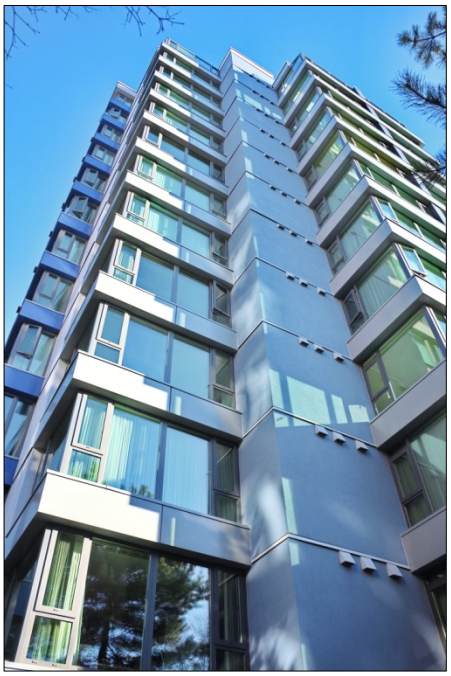
- B.Arch.Sc, Building Science Option
- Certified Construction Contract Administrator, CSC
- 10 years experience in building science consulting

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

Laureen Stokes, Dipl.T.

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



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

Amy Montgomery, EIT

- B.Sc., Mechanical Engineering
- M.A.Sc., Mechanical Engineering, in progress

Byron Searle, BBSc

- BBSc., Building Science, New Zealand
- 3 years experience in Carpentry
- 2 years experience in Architectural Drafting

Jesus De Mesa, Dipl.T.

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

Alex Seto, Dipl.T.

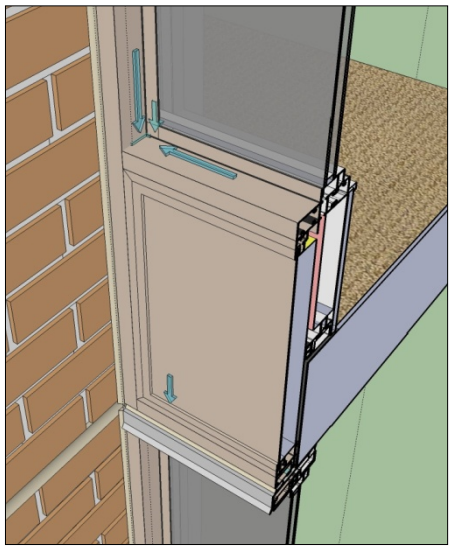
- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)

Roma Santos, Dipl.T.

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

Brandon Carreira, Dipl.T.

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



Jesse Listoen, Dipl.T.

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

James Hornett, Dipl.T.

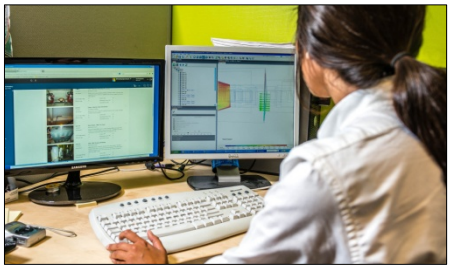
- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)

Nicola Alexander, B.Tech.

- B.Tech., Architectural Science

Megan Butland, Dipl.T.

- Dipl.T., Civil Engineering
- Certificate, Drafting



Administrators and Client Support

Vanessa Jumawan

- 5 years experience in administration with engineering/architecture firm

Anna Qiu

- Cert., Business Administration
- 10 years experience in administration with engineering/architecture firm

Software Support and Programmers

Matthew Branch, P.Eng.

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

Gary Zhang, B.Sc.

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

Kan Ma, B.Sc.

- B.Sc., Computing Science
- 7 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

Ref. No. 320006981632 AMENDED

CERTIFICATE OF INSURANCE

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. : 320006980411

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 & Sun Alliance Ins Co of Canada

Policy # 8141333

Effective 02-May-2014 **Expiry** 02-May-2015

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
Non-Owned Automobile Liability $5,000,000
Policy may be subject to a general aggregate and other aggregates where applicable

Professional Liability

Insurer Lloyd's Underwriters

Policy # QC1402155

Effective 02-May-2014 **Expiry** 02-May-2015

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

AON

Ref. No. 320006981632 AMENDED

CERTIFICATE OF INSURANCE

Commercial General Liability

Products and Completed Operations
Broad Form Property Damage
Cross Liability
Contractual Liability
Owners and Contractors Protective
Contractual Liability included

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.

LHadden

Dated : 06-May-2014
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

AON