RDH BUILDING SCIENCE

Depreciation Report | Project 5325.013

2710 Grosvenor Road, Victoria, BC

To: The Owners, Strata Plan VIS2981
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Site Visit: January 27, 2016
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1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners, Strata Plan VIS2981 (the Owners) to prepare a Depreciation Report (the Report) for the building located at 2710 Grosvenor Road, Victoria, 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 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, fences, and paving).

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 four 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. Past projects that RDH has completed for the Strata are listed below:

→ 2013-2014: Building Enclosure Condition Assessment

→ 2014-2015: Building Enclosure Rehabilitation Design and Field Review Services

As a result of RDH's involvement with the rehabilitation project the material description for the building enclosure Assets installed as part of the project is much more refined and detailed compared to other Assets in the Depreciation Report.

A site visit was completed on January 27, 2106, and the financial data is based on the 2015/2016 fiscal year. A draft report was distributed to the strata council and strata management on March 01, 2016. Feedback from the strata council, received on June 10, was incorporated into the report, and the final 2016 report was issued on June 28, 2016.

The Depreciation Report is a synopsis of a significant volume 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 2710 Grosvenor Road

2710 Grosvenor Road is a 22-year old strata complex, with one building that is typically of wood-framed construction. 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 and plumbing), elevator, fire safety (sprinklers, fire detection, and egress equipment), interior finishes, amenities, and site work. The Assets within each system are described in detail in Appendix B.

Key physical parameters of 2710 Grosvenor Road are summarized in Table 2.1 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

Figure 2.1 North elevation photograph

Date of first occupancy (approximate)	1994
Gross floor area, including the parkade (ft²)	29,300
Stories above grade	4
Total number of strata lots	32

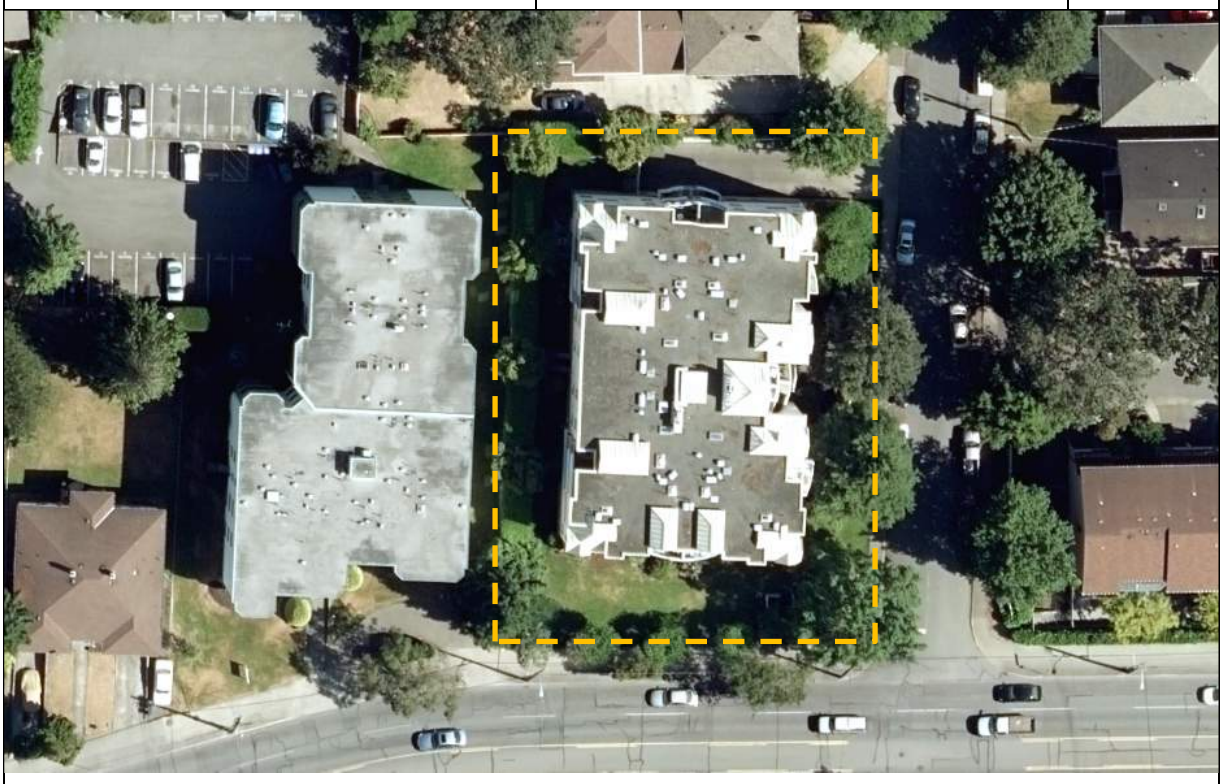


Figure 2.2 Aerial photograph of 2710 Grosvenor (© CRD Atlas 2013).

In 2015 2710 Grosvenor underwent a building enclosure rehabilitation. Please see Table 3.2 Maintenance and Renewals History for details of the work completed.

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.

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.

Some Assets have been identified as placeholders. Placeholder Assets are included in the Asset Inventory for reference purposes, however they are not included in the financial analysis and do not affect the funding models or other financial calculations. Placeholder Assets are identified based on typical agreements with utilities, the Strata Corporation bylaws, and information provided by the strata manager and council. A summary of placeholder assets is provided in Table 3.1 below.

TABLE 3.1 SUMMARY OF PLACEHOLDER ASSETS

ASSET	PARTY RESPONSIBLE FOR CAPITAL EXPENDITURES
Elec 05 - Proximity Access Control	→ Equipment is leased from Price's Alarms.

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 and invoices,
- → Discussions with Strata Corporation representatives,
- → A visual review of the building, limited to a sample of readily accessible Assets, and
- → A review of other technical information such as construction drawings, previous investigations and 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.rdh.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. A summary of asset service lives is provided in the appendices of this report. Allowances for additional reviews or investigations are included as appropriate. Recommendations taken from any additional reviews should be incorporated into future Depreciation Report updates.

2710 Grosvenor Road has undertaken several significant renewal projects, and key systems such as the majority of the building enclosure elements are comparable to newer buildings.

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 3.2 below. The history establishes the chronological age of any renewed Assets.

TABLE 3.2 MAINTENANCE AND RENEWALS HISTORY

Building Enclosure

- 2015 – Enclosure Rehabilitation, encompassing:
  - New rainscreen cladding at levels 2, 3, and 4, and portions of the ground floor
  - New windows, sliding glass doors, and patio swing doors
  - Balcony assemblies repaired and redesigned with aluminum railings, new membranes, and privacy walls
  - Rain water leaders relocated to the exterior of the building, to new tight drains above the podium, and new backwater valves for low-point drains
  - Metal roofing repainted
  - New below-grade SBS waterproofing membrane at building perimeter, tied-in to the existing podium membrane

Mechanical	Interior Finishes
→ 2015 – Gas detection sensors replaced → 2014 – Check valve installed and sump pump replaced	→ 2014 – Carpets in common hallways were replaced

Electrical

- 2013 – Security cameras upgraded in the parking garage

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 opening 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 renewal 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 the most recent insurance appraisal.

The financial assessment begins with a review of the current financial situation of the Strata Corporation. Table 3.3 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.3 KEY FINANCIAL PARAMETERS	
PARAMETER	INITIAL STUDY (2016)
Fiscal year end	April 31, 2016
Building reproduction cost	$5,445,000
Operating budget (excluding CRF contribution)	$104,950
Annual CRF contribution	$16,500
Opening Balance of the CRF*	$63,827.35

**As of May 01, 2015*

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 British Columbia (APEGBC). 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 renewal 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, the recent enclosure renewal 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 is provided in the appendices of this report. The major maintenance and renewals costs included in Appendix D are for events forecasted within the 30-year planning horizon. Events beyond the horizon are excluded.

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, two years, five years, etc. (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 and not in this report.

4.1 Major Maintenance and Renewals Expenditures

2710 Grosvenor Road is now approximately 22 years old, and has replaced building enclosure and some electrical and mechanical assets (please see Table 3.2 Maintenance and Renewals History on page 4 for a detailed list of projects). As the building ages, some significant renewals expenditures can be anticipated in the next 10 years. Table 4.1 below summarizes all major maintenance and renewal costs by system, including costs forecast for the next 30 years.

TABLE 4.1 CAPITAL EXPENDITURES SUMMARY BY SYSTEM

SYSTEM	10 YEAR CAPITAL COSTS (WITHOUT INFLATION)	10 YEAR CAPITAL COSTS (WITH 2% INFLATION)	30 YEAR CAPITAL COSTS (WITHOUT INFLATION)	30 YEAR CAPITAL COSTS (WITH 2% INFLATION)
Enclosure	$460,000	$500,000	$1,000,000	$1,400,000
Electrical	$16,000	$17,000	$71,000	$97,000
Mechanical	$120,000	$140,000	$490,000	$650,000
Elevator	$80,000	$84,000	$160,000	$220,000
Fire Safety	$13,000	$14,000	$34,000	$48,000
Interior Finishes	$13,000	$14,000	$70,000	$95,000
Amenities	$500	$570	$4,000	$5,300
Sitework	$34,000	$35,000	$90,000	$120,000
Building Total	**$736,500**	**$804,570**	**$1,919,000**	**$2,635,300**

Approximately 35% of the Strata Corporation's capital expenditures will occur in the next 10 years. The distribution of estimated capital expenditures over the next 10 years is shown in Figure 4.1 below.

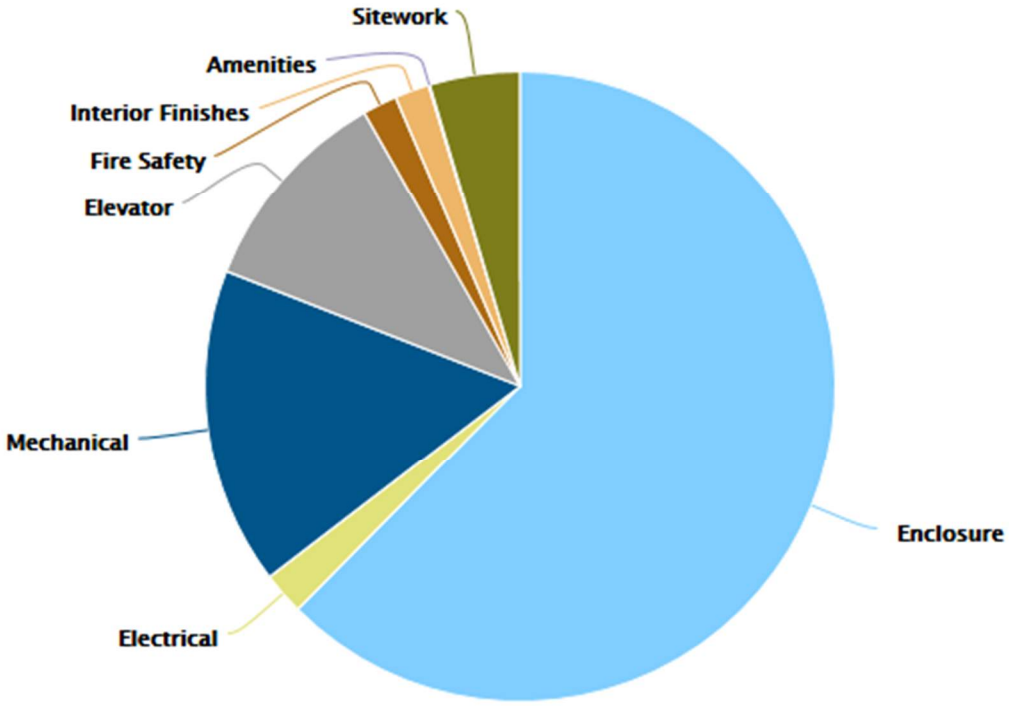


Figure 4.1 Distribution of estimated capital expenditures over 10 years, by system.

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

5 Major Maintenance and Renewals Planning Horizons

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.

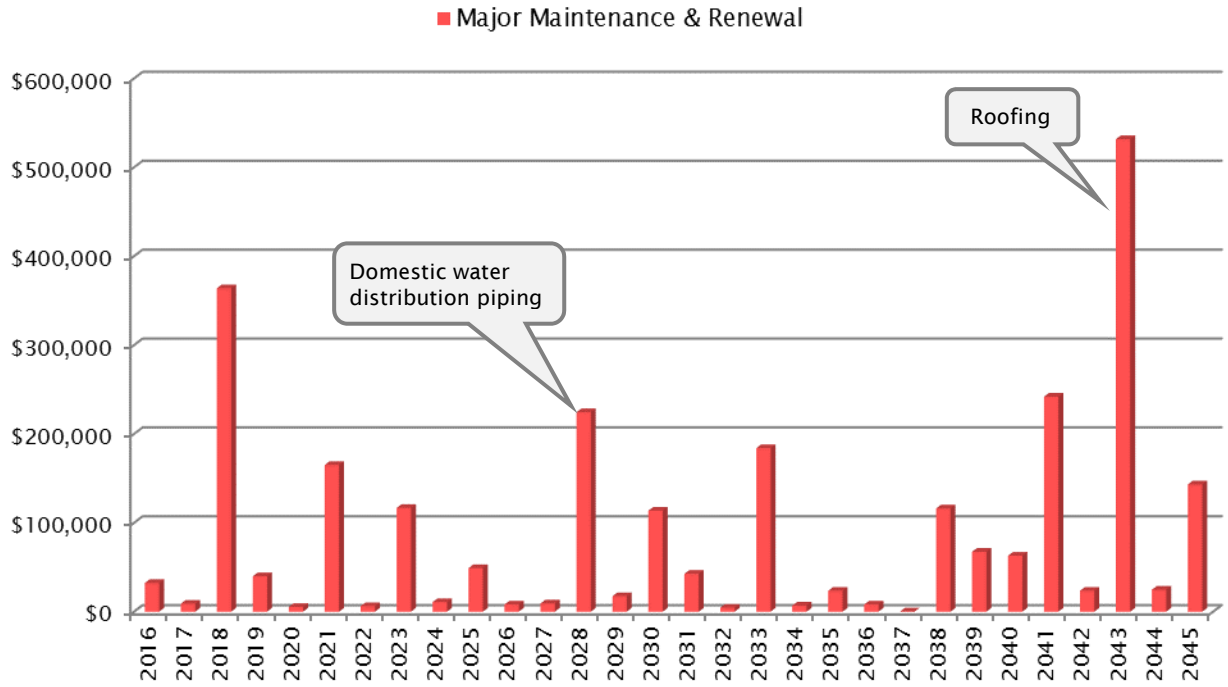


Figure 5.1 Strategic Forecast (30 Years) showing the approximate timing and value of capital expenditures

Each bar on the graph represents a collection of different major maintenance and renewal activities, each with different values. The labels on the graph summarize significant renewal expenditures forecast for that year. Detailed information about each year, including a description of the maintenance and renewal 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 an estimate of future projects. The actual timing of projects will likely 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, or contract administration, with the exception of the upcoming low-slope roof renewal. We have included project costs in the Depreciation Report costing, shown in the graph below, for the low-slope roofing renewal as obtained as part of the 2015 enclosure rehabilitation.

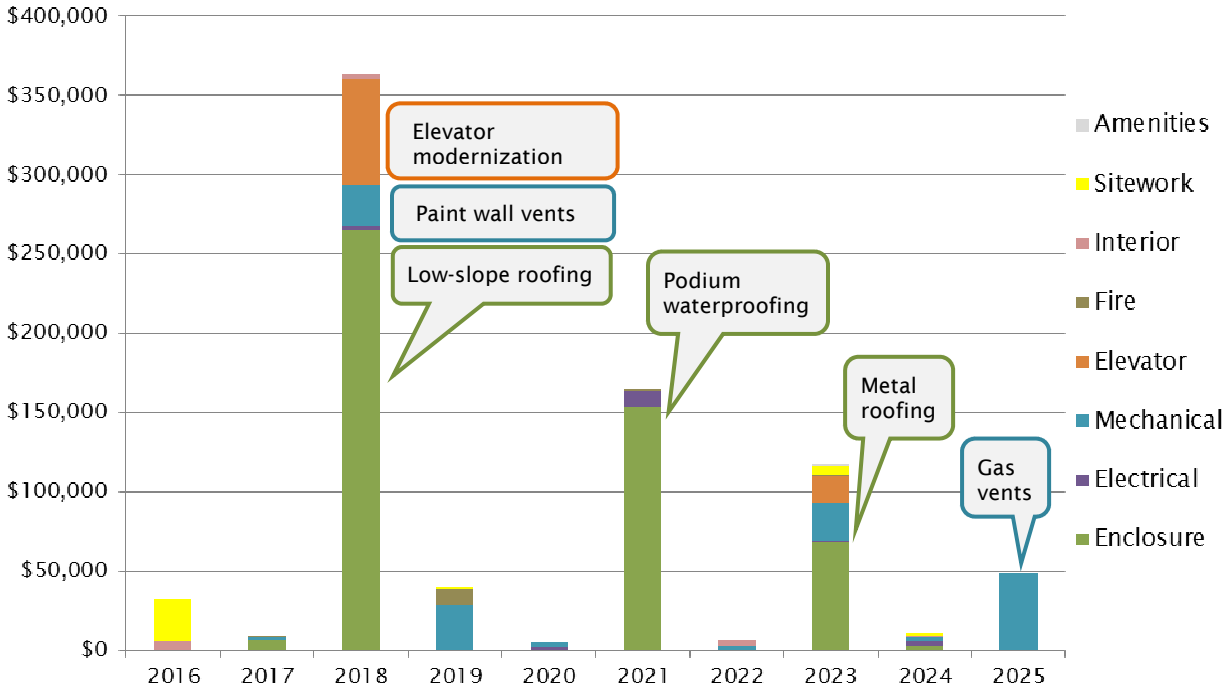


Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of capital expenditures.

The tactical plan above represents one of many possible approaches to planning major maintenance and renewal 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 5.1 below 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 list below is not comprehensive; more detailed information is available to the Strata Corporation in the appendices and the online software.

TABLE 5.1 SUMMARY OF KEY PROJECTS WITHIN THE 10-YEAR 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. → 2016: Replace carpet flooring in the stairwells. → 2018: Apply heat-resistant paint to wall vents. → 2018: Electrical Distribution System: Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs. → 2018: Interior painting. Currently, 25% of the interior (one floor at a time) is painted every 4 years → 2020: Drainage – Perimeter and Exterior Storm: By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. → 2023: Re-point mortar joints in masonry veneer walls and re-apply sealer, as required.
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 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. → 2018: Replace low-slope roof assembly and associated components such as skylights. → 2021: Replace original podium membrane assembly and associated components. → 2023: Replace metal roof assemblies and associated components.
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. Assets that have not been replaced are also included in time-based renewals. → 2016: Renovate sections of the soft landscaping. → 2018: Elevator modernization: Replace elevator controls, tank unit, valve, and door operator. → 2018: Cyclical replacement of failed or damaged general purpose exhaust fans, as required. → 2019: Cyclical rebuild or replacement of rooftop unit. → 2019: Replace fire alarm annunciator panel and control panel, excluding field wiring and devices. → 2025: Cyclical replacement of gas detection sensors. → 2025: Replace domestic venting system.

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

We understand the Strata Corporation is currently planning to renovate the soft landscaping and replace the carpet in the stairwells in 2016 following the rehabilitation.

5.4 Project Implementation

The projects identified in the previous section represent a preliminary step that is only intended to help the Strata Corporation identify, prioritize and plan projects. Most significant renewal 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. *Example*: the carpets in stairwells would be replaced at a different time to the hallway carpets due to additional wear in high traffic locations.
- → *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. *Example*: the sealant could be renewed on one elevation in the first year and then on the other elevations in subsequent years.
- → *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. *Example*: all wood trim is repainted in all locations around the building at the same time.
- → *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. *Example*: the skylights are replaced at the same time as the low-slope roofing.

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

6 Funding Scenarios

The physical and financial assessments were used to create a tentative schedule and budget for forecasted major maintenance and renewal projects. Within this section, *funding scenarios*, also known as *funding models*, based on different annual contributions to the contingency reserve fund (CRF) are presented.

The process of developing funding scenarios for a Depreciation Report is outlined below in Figure 6.1

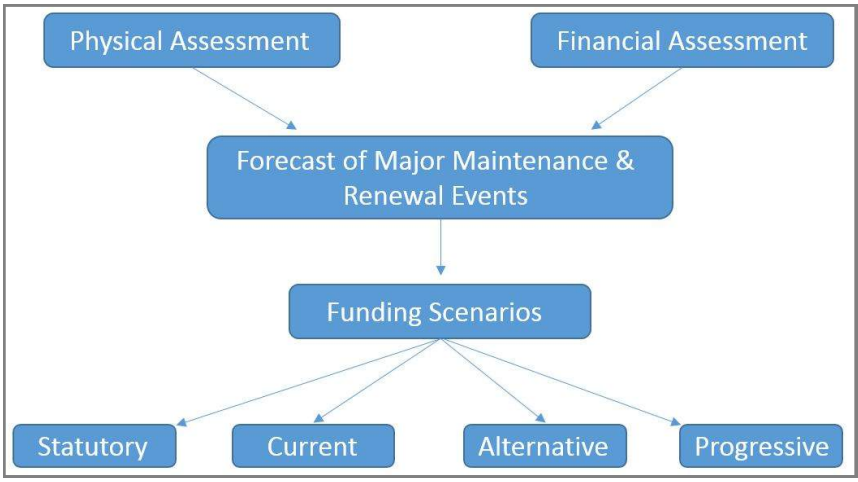


Figure 6.1 Depreciation Report Processes

Strata council can use the funding scenarios provided to develop a funding scenario that fits with their current goals.

The Strata Corporation can use the funding scenarios as benchmarks to develop 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 determine a CRF contribution that suits their needs.

6.1 Minimum Funding Requirements

The Strata Property Act Regulations dictates that if the CRF closing balance is less than 25% of the operating fund, then the Strata Corporation must contribute either the difference between the balance and 25% of the operating fund, or up to 10% of the operating fund (*Strata Property Act Regulation*, BC Reg 43/2000, Ch. 6.1). Table 6.1 below 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
2015/16 operating fund (excluding CRF contribution)	$ 104,950
→ 25% of the operating fund	$ 26,238
→ 10% of the operating fund	$ 10,495
2014/15 CRF closing balance	$ 63,827
2015/16 CRF Contribution	$ 16,500
Will the CRF closing balance exceed 25% of the operating fund at the end of the fiscal year?	Yes
Does the CRF contribution exceed 10% of the operating fund?	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 reduce the number and size of the levies, then increases to the CRF contributions will need to be made over the upcoming years.

6.2 Funding Scenario Comparison

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

While there are many different scenarios that can be generated, Table 6.2 compares the following four:

- → ***Statutory***. The CRF allocation required to meet the statutory requirements in BC, as described in section 0 above. The statutory scenario represents the lower bound for the CRF allocation amount.
- → ***Current (2016)***. The CRF allocation that was approved by the Owners at the last Annual General Meeting. The current allocation is also known as the status quo.
- → ***Alternative***. An increase from the status quo. The alternate is just one of many possible scenarios for a new funding level in the next fiscal year.
- → ***Progressive***. 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 typically represents an upper bound for the amount allocated to the CRF.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	STATUTORY	CURRENT	ALTERNATE	PROGRESSIVE
Annual CRF allocation	$10,495	$16,500	$20,000	$137,000
Percent of progressive reserve	8 %	12 %	15 %	100 %
CRF contribution per average strata lot				
Per month	$27.33	$42.97	$52.08	$356.77
Per year	$327.97	$515.63	$625.00	$4,281.25
Approximate number of special levies (over 30 years)	20	18	17	0
Approximate value of special levies (over 30 years)	$2.3 M	$2.1 M	$2.0 M	n/a
Assumed rate of interest	2 %	2 %	2 %	2 %
Assumed interest earned on CRF balance	0 %	0 %	0 %	0 %

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 scenario.

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 on a variable annual CRF contribution over the 30-year planning horizon; when the CRF closing balance is greater than 25% of the current operating fund, no funds are deposited into the CRF.

TABLE 6.3 STATUTORY FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$0	$0	$0	$32,220	$31,607
2017	$31,607	$0	$0	$0	$8,880	$22,727
2018	$22,727	$3,510	$337,587	$0	$363,824	$0
2019	$0	$10,495	$29,425	$0	$39,920	$0
2020	$0	$10,495	$0	$0	$5,291	$5,204
2021	$5,204	$10,495	$149,331	$0	$165,030	$0
2022	$0	$10,495	$0	$0	$6,240	$4,255
2023	$4,255	$10,495	$101,947	$0	$116,697	$0
2024	$0	$10,495	$265	$0	$10,760	$0
2025	$0	$10,495	$38,485	$0	$48,980	$0

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.

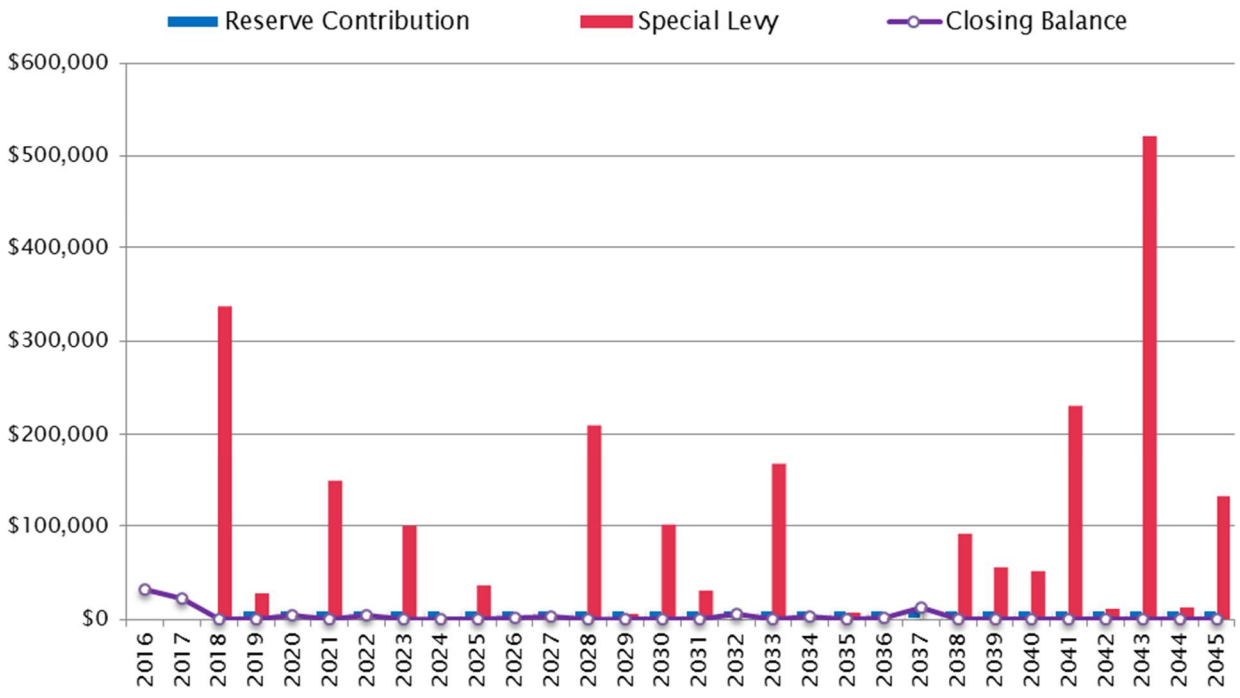


Figure 6.2 CRF balance, contribution and special levies based on the statutory minimum funding.

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 (2015/2016) Funding Scenario

The current funding scenario is based on the CRF contribution approved by the Owners at the last annual general meeting (2015). The scenario is based on a fixed annual CRF contribution (with no increases).

TABLE 6.4 CURRENT (2015/2016) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$16,500	$0	$0	$32,220	$48,107
2017	$48,107	$16,500	$0	$0	$8,880	$55,727
2018	$55,727	$16,500	$291,597	$0	$363,824	$0
2019	$0	$16,500	$23,420	$0	$39,920	$0
2020	$0	$16,500	$0	$0	$5,291	$11,209
2021	$11,209	$16,500	$137,321	$0	$165,030	$0
2022	$0	$16,500	$0	$0	$6,240	$10,260
2023	$10,260	$16,500	$89,937	$0	$116,697	$0
2024	$0	$16,500	$0	$0	$10,760	$5,740
2025	$5,740	$16,500	$26,740	$0	$48,980	$0

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.

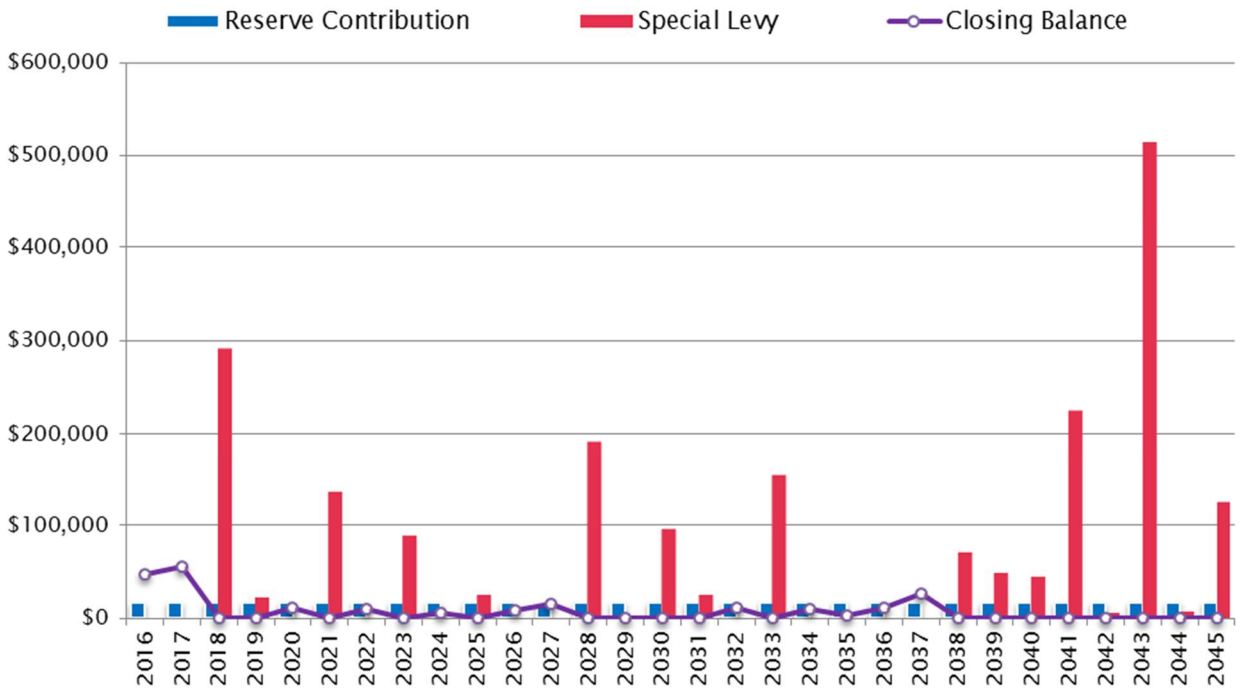


Figure 6.3 CRF balance, contribution and special levies based on the current funding.

If the Strata Corporation wishes to reduce the number and size of special levies, then increases will need to be made over the upcoming years.

6.5 Alternate Funding Scenario

The alternate funding scenario is based on a fixed annual CRF contribution that is higher by $10 per unit per month than the current funding level.

TABLE 6.5 ALTERNATE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$20,000	$0	$0	$32,220	$51,607
2017	$51,607	$20,000	$0	$0	$8,880	$62,727
2018	$62,727	$20,000	$281,097	$0	$363,824	$0
2019	$0	$20,000	$19,920	$0	$39,920	$0
2020	$0	$20,000	$0	$0	$5,291	$14,709
2021	$14,709	$20,000	$130,321	$0	$165,030	$0
2022	$0	$20,000	$0	$0	$6,240	$13,760
2023	$13,760	$20,000	$82,937	$0	$116,697	$0
2024	$0	$20,000	$0	$0	$10,760	$9,240
2025	$9,240	$20,000	$19,740	$0	$48,980	$0

The alternate funding 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.

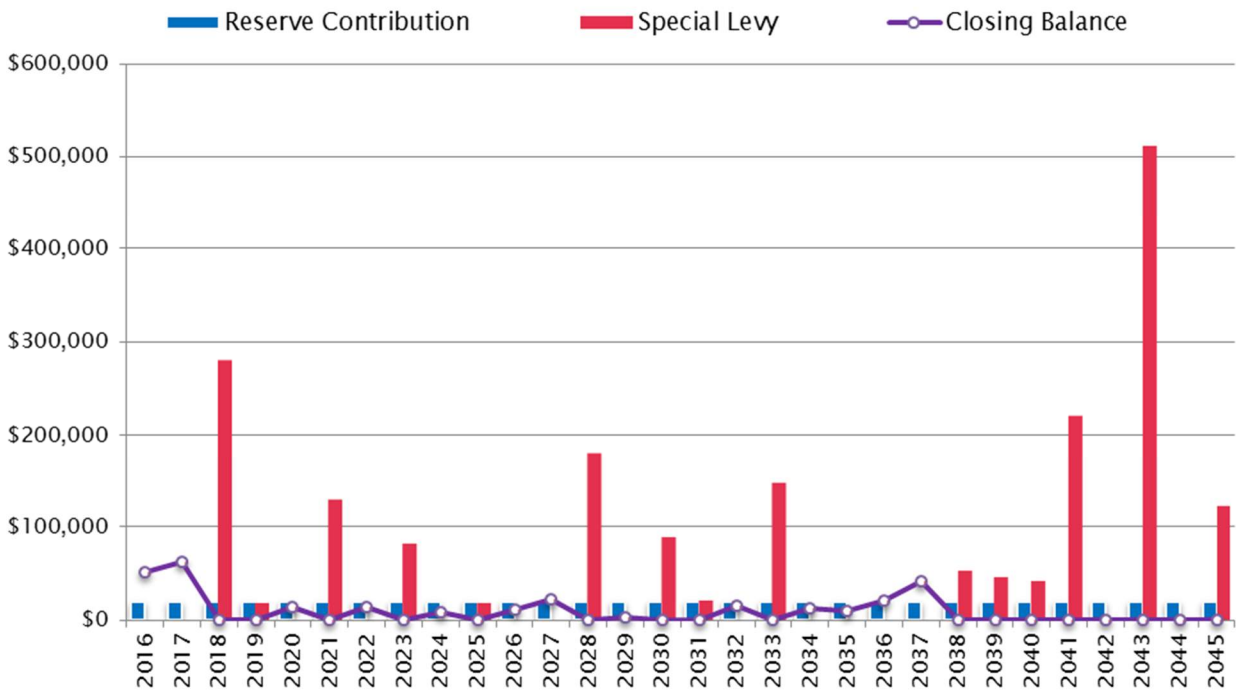


Figure 6.4 CRF balance, contribution, and special levies based on alternate reserve contribution.

6.6 Progressive Funding Scenario

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

TABLE 6.6 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$137,000	$0	$0	$32,220	$168,607
2017	$168,607	$137,000	$0	$0	$8,880	$296,727
2018	$296,727	$137,000	$0	$0	$363,824	$69,903
2019	$69,903	$137,000	$0	$0	$39,920	$166,983
2020	$166,983	$137,000	$0	$0	$5,291	$298,692
2021	$298,692	$137,000	$0	$0	$165,030	$270,662
2022	$270,662	$137,000	$0	$0	$6,240	$401,422
2023	$401,422	$137,000	$0	$0	$116,697	$421,725
2024	$421,725	$137,000	$0	$0	$10,760	$547,965
2025	$547,965	$137,000	$0	$0	$48,980	$635,985

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

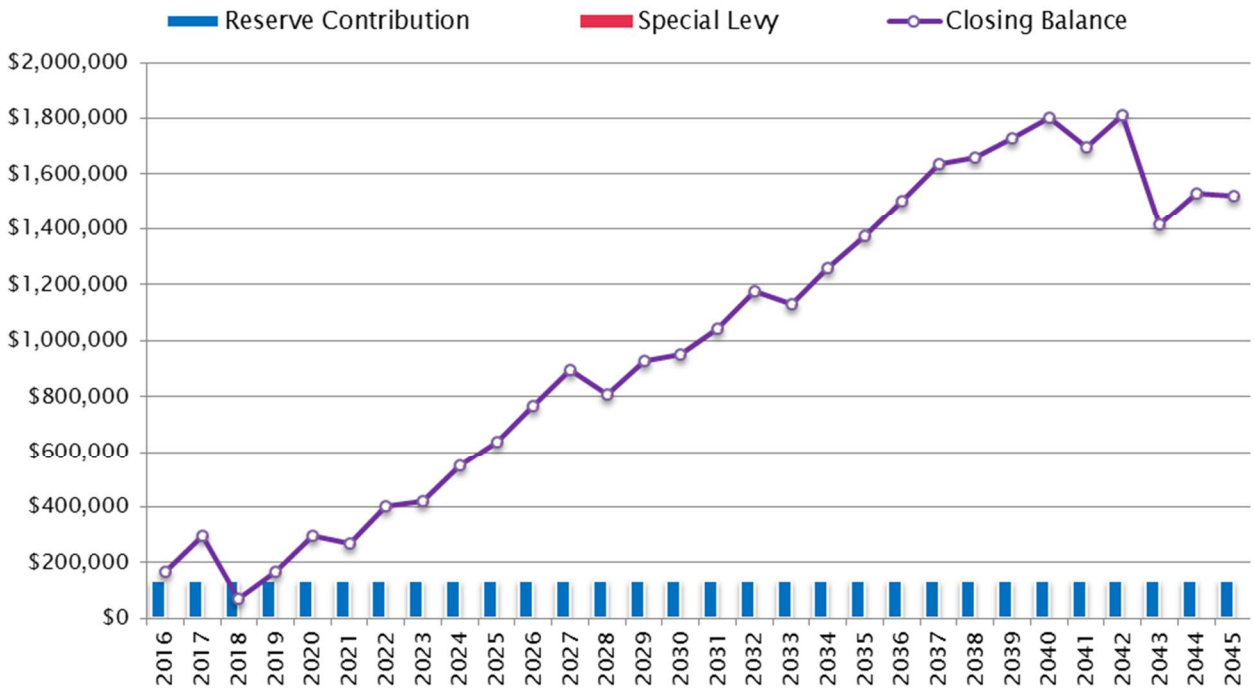


Figure 6.5 CRF balance, contribution and special levies based on a progressive calculation.

7 Next Steps

The Depreciation Report identifies the predictable major maintenance and renewal expenditures 2710 Grosvenor Road 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.

2710 Grosvenor Road is a 22-year-old building and much of the enclosure assemblies have been replaced. Other significant enclosure assets, such as the low-slope roofing and podium waterproofing will likely need to be renewed in the next 10 years.

The recommendations below are intended to aid the Strata Corporation in the next steps of the renewal 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.
- **Operating vs. Capital Costs**. Identify those small capital items that are generally funded from the annual operating budget, such as exterior lighting etc. Update the Depreciation Report accordingly.
- **Project Planning**. The following projects have been identified as highest priority, and the Strata Corporation should consider completing these projects prior to the update of the Depreciation Report in three years' time.
  - Replace the main low-slope roofing assembly.

Yours truly,

RDH Building Science Inc.

Appendix A

Glossary of Terms

Glossary

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

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

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

Chronological Age – The age of an asset relative to its date of installation (current year minus year of installation).

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.)

Contribution Threshold - A dollar value which dictates the size of the Contingency Reserve Fund (CRF) contribution based on whether the accumulated CRF balance is greater than or less than the specified dollar value. For example, the Strata Property Act indicates that if the closing balance of the CRF at the end of the fiscal year is less than 25% of the operating budget for the next fiscal year, then the CRF contribution for the next fiscal year should be a minimum of 10% of the operating budget. In this case, the threshold is 25% of the operating budget.

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

Effective Age – An assessment of the age of an asset relative to its condition and how that condition may have accelerated or decelerated the chronological age of the asset (service life minus remaining service life).

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.

Next Renewal Year - The forecasted date of asset replacement or renewal.

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 – See Annual Contribution.

Reserve Fund – Also known as the Contingency Reserve Fund (CRF). 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.

Service Life - The estimated period of time over which an asset (and its components or assembly) provides adequate performance and function.

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.

Statutory Funding Model - A funding model which uses the Strata Property Act and Regulations to determine the minimum amount of money to contribute to the Contingency Reserve Fund on an annual basis.

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

2710 Grosvenor
Asset Inventory

Structural

Struct 01 - Concrete Foundation and Parking Garage Structure

Location

Foundation and parking garage.

Description

Cast-in-place concrete building foundation and underground parking structure.

Information

Service Life:	100
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2093

Struct 02 - Wood Frame Structure

Location

Upper levels.

Description

Wood framed walls, floors, and roof structure.

Information

Service Life:	75
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2068

Enclosure

Encl 01 - Fiber Cement Board Cladding

Location

Beam at balconies.

Description

Painted fiber-cement panel.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 02 - Aluminum Panel Soffit

Location

Underside of roof eaves and balconies.

Description

Perforated aluminum panel soffit.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 03 - Sheet Metal Roof

Location

All sloped roofs.

Description

Pre-finished sheet steel panels with concealed fasteners (including standing seams) and underlayment applied over (insulated) sheathing at sloped roof. Typically, gutters are provided at roof eaves to manage rainwater. Metal roofing assemblies were repainted in 2015.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2023

Encl 04 - Exposed BUR Membrane Roof

Location

Main low-sloped roof.

Description

(3-ply) built-up roof (BUR) membrane consisting of multiple layers of roofing felt bonded together with hot-applied bitumen. A protective layer of gravel is typically seeded into the upper layer of bitumen.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2018

Encl 05 - Protected Urethane Membrane Podium

Location

Parking garage concrete deck, below grade surrounding building. Waterproofing at the perimeter of the building was replaced in 2015 in conjunction with the building enclosure rehabilitation (see Encl 19).

Description

Liquid-applied urethane membrane overlaid with landscaping overburden.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	15
Next Renewal Year:	2021

Skylight

Encl 06 - Acrylic Domed Skylights

Location

Main roof

Description

Acrylic domed aluminum framed curb mounted skylights.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	18
Next Renewal Year:	2018

Walls

Encl 07 - Rainscreen Stucco Wall Assembly

Location

Primary exterior wall cladding.

Description

Dryvit Sytems DPR Finish Coat (Sand Pebble) acrylic stucco system installed over a strapped cavity rainscreen wall assembly with Dupont Tyvek sheathing membrane.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 08 - Original Stucco, Face Seal

Location

Main entrance wall and soffit and mechanical vent housing on the roof.

Description

Stucco applied directly to the building paper. The assembly relies on the exterior stucco to deflect the water from the wall assembly.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	13
Next Renewal Year:	2033

Encl 09 - Clay Masonry Veneer Wall

Location

Portions of the ground floor walls.

Description

Clay masonry units applied as a veneer with a drained and vented cavity over exterior sheathing membrane.

Information

Service Life:	45
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2038

Encl 10 - Wood Trim

Location

Balcony edges, concealing guard rail attachments.

Description

Horizontal wood trim boards with coated surface for protection of the substrate and aesthetics.

Information

Service Life:	30
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2045

Windows

Encl 11 - Vinyl Framed Windows

Location

All elevations.

Description

Starline Windows Ltd. 7100 series exterior glazed PVC framed windows with dual glazing and low-e coated glass. Some with casement and awning style operable vents.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 12 - Glass Block Window

Location

Main entrance.

Description

Glass block windows with a concealed mortar support and moisture barrier.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	18
Next Renewal Year:	2028

Doors

Encl 13 - Vinyl Framed Sliding Glass Doors

Location

East, south and west elevation balconies.

Description

Starline Windows Ltd. 8500 series vinyl framed sliding glass doors with dual glazing and low-e coated glass, c/w screens.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 14 - Lobby Doors

Location

Main entry

Description

Main pedestrian point of entry to the building comprised of glazed aluminum frame entry doors and side lites.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2023

Encl 15 - Metal Exit Doors

Location

Exit door on West elevation and at South East corner of site.

Description

Exterior steel doors for egress. Security upgrades have been made.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2023

Encl 16 - Vinyl Frame Glazed Swing Door

Location

Balconies on the North elevation and certain balconies on the East elevation.

Description

Vinyl frame swing door with insulating glazing units.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Balconies

Encl 17 - Glazed Aluminum Guardrails

Location

Balconies on all elevations.

Description

Welded aluminum railing assemblies by SunRay Aluminum Railings, TIGER Drylac Series 68 powder coating finish and glass infill panels.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

Encl 18 - Vinyl Balcony Membrane

Location

All balconies.

Description

DecTec Select 60 mil vinyl membrane installed on sloped plywood sheathing.

Information

Service Life:	25
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2040

At and Below Grade

Encl 19 - Below Grade Parkade Waterproofing

Location

Located at the base of exterior walls and extending 2' onto the podium surface.

Description

SBS waterproofing membrane tied in to original membrane on parkade pedestal.

Information

Service Life:	40
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2055

General & Inspections

Encl 20 - Exterior Sealant

Location

Windows, doors, service penetrations and siding interfaces.

Description

Dow Corning 790 silicone sealant. Sealants are located at joints between building enclosure assemblies, as well as at penetrations within building enclosure assemblies.

Information

Service Life:	15
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2030

Encl 21 - General & Inspections

Location

Throughout the site.

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:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2068

Electrical

Distribution

Elec 01 - Electrical Distribution

Location

Electrical room in parking garage.

Description

Commander 120/208V, 800A distribution switchgear, panelboards, breakers and wiring to several local sub-panels and mechanical loads.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Light Fixtures

Elec 02 - Exterior Light Fixtures

Location

Balconies, soffits, and entrance pathway.

Description

A variety of fixture types, including wall mounted, post mounted pathway and recessed soffit pot lighting. A variety of 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:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2035

Elec 03 - Interior Light Fixtures

Location

All common areas throughout the building.

Description

A variety of fixture types, including fixed surface and recessed pot. A variety of lamp types, including fluorescent and compact fluorescent etc. for interior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches and timers.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	3
Next Renewal Year:	2033

Security

Elec 04 - Enterphone System

Location

Lobby entrance. Common control located in small electrical room in parking garage.

Description

Enterphone 2000 flush mounted, enterphone panel with associated key pad.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	20
Next Renewal Year:	2021

Elec 05 - Proximity Access Control [PLACEHOLDER]

Location

Lobby, parking garage, and common area entrances.

Description

Kantech KT-300 local proximity access control system components include fob devices for building occupants, fob 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:	2013
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2025

Elec 06 - Security Surveillance

Location

Cameras strategically located throughout the building. Monitor in small electrical room.

Description

Cameras, multiplexer, monitors and storage media to deter and track activity on and within building premises.

Information

Service Life:	14
Installed Year:	2013
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2027

Mechanical

Controls and End Devices

Mech 01 - Gas Detection - Parking Garage

Location

Mounted to columns throughout the parking garage.

Description

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

Information

Service Life:	10
Installed Year:	2015
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2025

Mech 02 - Heat Tracing - Freeze Protection

Location

Throughout the parking garage.

Description

Heat trace controller for piping systems exposed to freezing (self regulating heater cable with parallel circuit heater strip and outer thermoplastic elastomer jacket).

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	18
Next Renewal Year:	2023

Plumbing & Drainage

Mech 03 - Drainage - Perimeter and Foundation

Location

Perimeter of building parkade and at grade over podium.

Description

Perforated PVC piping forming part of a sub-surface drainage system around perimeter of building. Several sections of piping at building edge over podium added or renewed in 2015.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Mech 04 - Drainage - Storm - Exterior System

Location

Perimeter of building at grade, over podium.

Description

DWV-PVC underground tight piping forming part of a drainage system around perimeter of building, intended for collection of downspout drains and hard surface area drainage. Not including aluminum downspouts and gutters. Several sections of piping at building edge over podium added or renewed in 2015.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Mech 05 - Drainage - Storm - Internal

Location

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:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Mech 06 - Piping - Domestic Water Distribution

Location

Connected to fixtures throughout the building.

Description

Copper for vertical/horizontal mains system and distribution piping within the suites. Typically insulated where exposed. Soldered connections.

Information

Service Life:	35
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2028

Mech 07 - Valves - Cross Connection & Backflow Prevention

Location

Water entry room, South East corner of the parking garage.

Description

Various types and sizes of backflow prevention valves, including double check valves on systems.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	3
Next Renewal Year:	2033

Mech 08 - Drainage - Sanitary

Location

Connected to waste fixtures throughout the building.

Description

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

Information

Service Life:	50
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2043

Mech 09 - Pumps - Storm Lift and Control Panel

Location

Centre of parking garage, near elevator machine room.

Description

Northwest Tech-con Systems duplex storm sump pumps and control panel for storm water runoff and sub-surface drainage.

Information

Service Life:	15
Installed Year:	2014
Chronological Age:	2
Effective Age:	2
Next Renewal Year:	2029

Heating

Mech 10 - Gas Chimney Vent

Location

From appliance to roof on fourth floor, from appliance to wall vent on lower floors.

Description

Gas appliance vent with approved collars, fittings, and vent terminal.

Information

Service Life:	35
Installed Year:	1993
Chronological Age:	23
Effective Age:	26
Next Renewal Year:	2025

Mech 11 - Baseboard - Electric

Location

Corridors and service rooms in the parking garage.

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:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Ventilation

Mech 12 - Exhaust Fan - Parkade - Propellor

Location
External corners of the parking garage.

Description
1hp direct drive propellor exhaust fan mounted in exterior walls.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	3
Next Renewal Year:	2033

Mech 13 - Exhaust Fan - Small Service - Cabinet

Location
Parking garage service rooms.

Description
Direct drive fans, cabinet fans.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2018

Mech 14 - Outdoor Air Handler - Gas Heat

Location
Rooftop.

Description
Sterling outdoor rooftop gas-fired air-handling unit to provide tempered ventilation up air and heating to the interior spaces.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	22
Next Renewal Year:	2019

Other

Mech 15 - Overhead Gate Motor

Location
Entrance to parking garage.

Description
Doorlex Corporation 1/2HP 115V AC motor and door operator mechanism. Door not included in this asset.

Information

Service Life:	12
Installed Year:	2012
Chronological Age:	4
Effective Age:	4
Next Renewal Year:	2024

Elevator

Elev 01 - Hydraulic Elevator, Double Bottom

Location

Elevator machine room.

Description

Dover DMC-1 direct acting hydraulic elevator with a buried cylinder, 950kg capacity.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2018

Elev 02 - Elevator Cabs & Hoistway

Location

Elevator cab.

Description

Single opening door with mechanical door protection, tile flooring, wall panels and handrail.

Information

Service Life:	15
Installed Year:	1993
Chronological Age:	23
Effective Age:	8
Next Renewal Year:	2023

Fire Safety

Controls

Fire 01 - Fire Alarm Panel - Addressable

Location

Electrical room in parking garage.

Description

Edwards 6616 fire alarm panel.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	17
Next Renewal Year:	2019

Detection

Fire 02 - Fire Detection & Alarm

Location

Throughout common areas above grade.

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:	1993
Chronological Age:	23
Effective Age:	3
Next Renewal Year:	2033

Suppression

Fire 03 - Dry Sprinkler Compressor

Location

Water entry room.

Description

Swan compressor with HP Baldor motor and 7kg/cm2 max pressure to maintain the pressure of air in the dry fire sprinkler lines.

Information

Service Life:	14
Installed Year:	1993
Chronological Age:	23
Effective Age:	9
Next Renewal Year:	2021

Fire 04 - Portable Fire Extinguisher

Location

Common corridors.

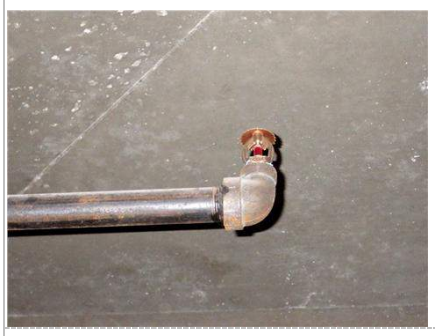
Description

Wall mounted, manually operated pressurized vessels for controlled discharge of chemicals to extinguish small fires.

Information

Service Life:	24
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2017

Fire 05 - Sprinkler System - Dry



Location

Parking garage.

Description

Exposed dry sprinklers, upright sprinkler heads, steel piping.

Information

Service Life:	100
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2093

Fire 06 - Sprinkler Valve Assembly - Dry

Location

Water entry room in parking garage.

Description

Gem 4" dry sprinkler valve, trim and gauges, steel piping.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Egress

Fire 07 - Emergency Egress Equipment

Location

Common areas of the building.

Description

Emergency lighting, unit battery packs; LED exit signs.

Information

Service Life:	20
Installed Year:	1993
Chronological Age:	23
Effective Age:	3
Next Renewal Year:	2033

Interior Finishes

Floors

Finish 01 - Carpet Flooring

Location

Corridors and stairwells.

Description

Commercial grade loop pile nylon texture carpet, laid on high density commercial rubber under-cushion. Hallway and stairwell carpets were installed at different times. The installation year refers to the hallway carpets.

Information

Service Life:	15
Installed Year:	2014
Chronological Age:	2
Effective Age:	2
Next Renewal Year:	2029

Finish 02 - Tiled Flooring

Location

Lobby entrance.

Description

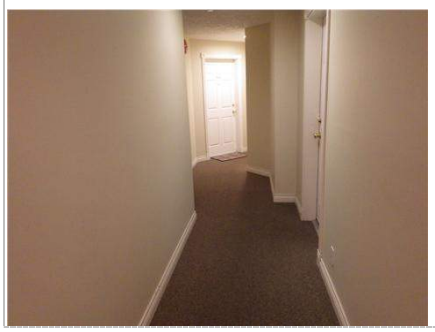
Ceramic tiles and grout laid on concrete substrate.

Information

Service Life:	35
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2028

Walls

Finish 03 - Interior Painting



Location

Corridors and stairwells.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard with millwork trim details. The strata currently paints one floor (25%) every 4 years.

Information

Service Life:	10
Installed Year:	1993
Chronological Age:	23
Effective Age:	8
Next Renewal Year:	2018

Finish 04 - Carpentry & Millwork

Location
Corridors, stairwells, lobby, and parkade vestibule.

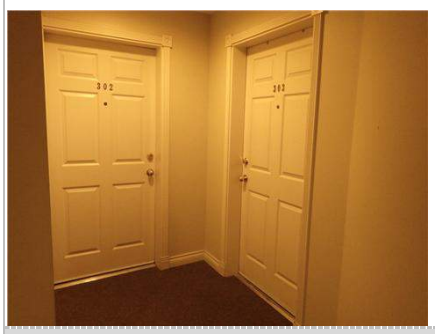
Description
Door casings and baseboards.

Information

Service Life:	25
Installed Year:	1993
Chronological Age:	23
Effective Age:	25
Next Renewal Year:	2016

Furnishings

Finish 05 - Interior Swing Doors



Location
Unit entrance and stairwell doors.

Description
Variety of hollow core, solid and insulated swing doors hung in framed openings. Exterior doors are considered separately as part of the building enclosure system.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Amenities

Amen 01 - Wood Storage Locker

Location
Storage rooms in parkade.

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

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Amen 02 - Central Mailboxes

Location
At main entrance.

Description
Flush or surface mounted, front loading, brushed aluminum finish, extruded aluminum trim.

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	18
Next Renewal Year:	2028

Amen 03 - Public Signage

Location

Throughout common areas of the building and site.

Description

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

Information

Service Life:	30
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2023

Sitework

Hard Landscaping

Site 01 - Concrete Paving

Location

Entrance, patios, ramp to parking garage.

Description

Concrete pavement, cast with control and construction joints, onto compacted gravel base. Concrete finish consists of combination of exposed aggregate/broom finish.

Information

Service Life:	40
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2033

Site 02 - Exterior Metal Railings

Location

Stairwell to parking garage & entrance ramp.

Description

Tubular painted exterior aluminum metal guardrails with pickets. Guardrails associated with the building (i.e. balconies) are included in the Aluminum Guardrails asset of the Enclosure System.

Information

Service Life:	35
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2028

Soft Landscaping

Site 03 - Irrigation System

Location

Controller is in water entry room in parking garage.

Description

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

Information

Service Life:	15
Installed Year:	1993
Chronological Age:	23
Effective Age:	8
Next Renewal Year:	2023

Site 04 - Soft Landscaping

Location

Surrounding building above parking garage.

Description

Lawn, ground cover, shrubs, perennials and small trees. Photo shows pre-rehabilitation condition. It is understood that new landscaping will be completed in late 2016.

Information

Service Life:	15
Installed Year:	1993
Chronological Age:	23
Effective Age:	15
Next Renewal Year:	2016

Site Services

Site 05 - Electrical Site Services

Location

Concealed asset. Service from BC Hydro pole on South side of Hillside Ave. 2-4" ducts to South East property corner.

Description

Underground secondary distribution conduits and services from pole to building electrical room.

Information

Service Life:	50
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2043

Site 06 - Underground Drainage Services - Storm

Location

Concealed asset running from parking garage to municipal connection near main entrance.

Description

Storm sewer from buildings and catch basins to property line.

Information

Service Life:	80
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2073

Site 07 - Underground Sewer Services - Sewer

Location

Running below grade between building and city connection on Grosvenor Road.

Description

Sanitary sewer system from the building to the property line, including all appurtenances.

Information

Service Life:	80
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2073

Site 08 - Underground Water Services with PVC/Copper and Ductile Piping

Location

Running below grade between building and city connection at South East corner of site.

Description

Fire/domestic water supplies, from the property line to the building.

Information

Service Life:	50
Installed Year:	1993
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2043

Appendix C

Asset Service Life Summary

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Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Struct 01	Concrete Foundation and Parking Garage Structure	23	77
Struct 02	Wood Frame Structure	23	52
Encl 01	Fiber Cement Board Cladding	1	39
Encl 02	Aluminum Panel Soffit	1	39
Encl 03	Sheet Metal Roof	23	7
Encl 04	Exposed BUR Membrane Roof	23	2
Encl 05	Protected Urethane Membrane Podium	23	5
Encl 06	Acrylic Domed Skylights	23	2
Encl 07	Rainscreen Stucco Wall Assembly	1	39
Encl 08	Original Stucco, Face Seal	23	17
Encl 09	Clay Masonry Veneer Wall	23	22
Encl 10	Wood Trim	1	29
Encl 11	Vinyl Framed Windows	1	39
Encl 12	Glass Block Window	23	12
Encl 13	Vinyl Framed Sliding Glass Doors	1	39
Encl 14	Lobby Doors	23	7
Encl 15	Metal Exit Doors	23	7
Encl 16	Vinyl Frame Glazed Swing Door	1	39
Encl 17	Glazed Aluminum Guardrails	1	39
Encl 18	Vinyl Balcony Membrane	1	24
Encl 19	Below Grade Parkade Waterproofing	1	39
Encl 20	Exterior Sealant	1	14
Encl 21	General & Inspections	23	52
Elec 01	Electrical Distribution	23	17
Elec 02	Exterior Light Fixtures	1	19
Elec 03	Interior Light Fixtures	23	17
Elec 04	Enterphone System	23	5
Elec 05	Proximity Access Control [PLACEHOLDER]	3	9
Elec 06	Security Surveillance	3	11
Mech 01	Gas Detection - Parking Garage	1	9
Mech 02	Heat Tracing - Freeze Protection	23	7
Mech 03	Drainage - Perimeter and Foundation	23	17
Mech 04	Drainage - Storm - Exterior System	23	17
Mech 05	Drainage - Storm - Internal	23	17
Mech 06	Piping - Domestic Water Distribution	23	12
Mech 07	Valves - Cross Connection & Backflow Prevention	23	17
Mech 08	Drainage - Sanitary	23	27
Mech 09	Pumps - Storm Lift and Control Panel	2	13
Mech 10	Gas Chimney Vent	23	9
Mech 11	Baseboard - Electric	23	17
Mech 12	Exhaust Fan - Parkade - Propellor	23	17

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Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Mech 13	Exhaust Fan - Small Service - Cabinet	23	2
Mech 14	Outdoor Air Handler - Gas Heat	23	3
Mech 15	Overhead Gate Motor	4	8
Elev 01	Hydraulic Elevator, Double Bottom	23	2
Elev 02	Elevator Cabs & Hoistway	23	7
Fire 01	Fire Alarm Panel - Addressable	23	3
Fire 02	Fire Detection & Alarm	23	17
Fire 03	Dry Sprinkler Compressor	23	5
Fire 04	Portable Fire Extinguisher	23	1
Fire 05	Sprinkler System - Dry	23	77
Fire 06	Sprinkler Valve Assembly - Dry	23	17
Fire 07	Emergency Egress Equipment	23	17
Finish 01	Carpet Flooring	2	13
Finish 02	Tiled Flooring	23	12
Finish 03	Interior Painting	23	2
Finish 04	Carpentry & Millwork	23	0
Finish 05	Interior Swing Doors	23	17
Amen 01	Wood Storage Locker	23	17
Amen 02	Central Mailboxes	23	12
Amen 03	Public Signage	23	7
Site 01	Concrete Paving	23	17
Site 02	Exterior Metal Railings	23	12
Site 03	Irrigation System	23	7
Site 04	Soft Landscaping	23	0
Site 05	Electrical Site Services	23	27
Site 06	Underground Drainage Services - Storm	23	57
Site 07	Underground Sewer Services - Sewer	23	57
Site 08	Underground Water Services with PVC/Copper and Ductile Piping	23	27

Appendix D

Depreciation Report Costing

2710 Grosvenor

Depreciation Report Costing

Enclosure

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Roofs & Decks						
Encl 01 - Fiber Cement Board Cladding						
R01	Recoat fiber cement board soffits as required.	2030	15 Yrs (2)	$135	$270	$420
Encl 02 - Aluminum Panel Soffit						
J01	Clean exterior soffit surfaces to remove atmospheric dirt, vegetative growth and other stains.	2018	3 Yrs (10)	$240	$2,400	$3,320
Encl 03 - Sheet Metal Roof						
J01	Clean all exterior surfaces of metal roofs.	2018	5 yrs (5)	$1,500	$7,500	$10,500
J02	Replace damaged gutters and rainwater leaders as required.	2033	10 Yrs (2)	$0	$0	$0
J03	Review and touch up paint on metal roof and flashing as required.	2020	5 yrs (4)	$75	$300	$441
R01	Replace metal roof assemblies and associated components such as gutters and flashing.	2023	30 Yrs (1)	$42,000	$42,000	$48,000
Encl 04 - Exposed BUR Membrane Roof						
R01	Replace BUR membrane roof assembly and associated components such as drains and flashing.	2018	25 Yrs (2)	$189,508	$379,016	$520,000
Encl 05 - Protected Urethane Membrane Podium						
J02	Locally remove pavers, landscaping and soil overburden to visually review the surface of the underlying membrane, paying close attention to all penetration locations for signs of distress, such as ridges, cracks, and delamination. Review to include sealants and flashings.	2017	2 Yrs (13)	$0	$0	$0
J03	Continue to monitor the parking garage for signs of water ingress.	2019	6 Yrs (4)	$0	$0	$0
R01	Replace podium membrane assembly and associated components.	2021	20 Yrs (2)	$138,600	$277,200	$380,000
Skylight						
Encl 06 - Acrylic Domed Skylights						
R01	Replace skylight and sealants.	2018	20 Yrs (2)	$4,000	$8,000	$10,400
Walls						
Encl 07 - Rainscreen Stucco Wall Assembly						
R01	Clean and renew acrylic stucco finish coat.	2030	15 Yrs (2)	$29,000	$58,000	$89,000
Encl 08 - Original Stucco, Face Seal						
J01	Clean existing stucco surfaces to remove localized accumulations of atmospheric dirt, vegetative growth and other stains. [Cost included with the Rainscreen Stucco asset of the Enclosure System].	2018	5 yrs (6)	$0	$0	$0
R01	Repaint the original stucco cladding.	2023	10 Yrs (3)	$570	$1,710	$2,420

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Depreciation Report Costing

Enclosure

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
R02	Replace original stucco cladding.	2033	30 Yrs (1)	$3,420	$3,420	$4,800
Encl 09 - Clay Masonry Veneer Wall						
J01	Clean exterior surfaces of masonry veneer cladding to remove vegetation growth and other atmospheric staining.	2018	3 Yrs (9)	$180	$1,620	$2,190
J02	Repoint mortar joints in clay masonry veneer wall, as required.	2018	5 yrs (5)	$4,500	$22,500	$29,600
J03	Re-apply sealer over masonry as required.	2023	10 Yrs (2)	$6,000	$12,000	$15,300
R01	Replace sections of clay masonry veneer cladding along with associated flashing and sealants as required. [Extent of renewal may vary based on site condition.]	2038	45 Yrs (1)	$29,250	$29,250	$45,000
Encl 10 - Wood Trim						
J01	Clean surface of wood trim, as required, to remove vegetation growth and other staining. [Cost to be included with cleaning of exterior wall asset.]	2018	3 Yrs (10)	$0	$0	$0
R01	Repaint wood trim.	2021	6 Yrs (5)	$980	$4,900	$6,900
R02	Replace wood trim, as required.	2045	30 Yrs (1)	$2,450	$2,450	$4,400
Windows						
Encl 11 - Vinyl Framed Windows						
J01	Conduct warranty review in sufficient time prior to expiration of vinyl window manufacturer's warranty period.	2020	5 yrs (1)	$0	$0	$0
J02	Conduct warranty review in sufficient time prior to expiration of sealed glazing unit manufacturers warranty period.	2025	10 Yrs (1)	$0	$0	$0
Encl 12 - Glass Block Window						
J01	Reapply sealer at grout joints on the interior and exterior of the glass block windows.	2017	5 yrs (6)	$120	$720	$970
J02	Repoint mortar joints in glass block windows, as required.	2018	5 yrs (5)	$36	$180	$245
R01	Replace glass block windows.	2028	30 Yrs (1)	$3,900	$3,900	$4,900
Doors						
Encl 13 - Vinyl Framed Sliding Glass Doors						
J01	Conduct warranty review in sufficient time prior to expiration of vinyl window manufacturer's warranty period.	2020	5 yrs (1)	$0	$0	$0
J02	Conduct warranty review in sufficient time prior to expiration of sealed glazing unit manufacturers warranty period.	2025	10 Yrs (1)	$0	$0	$0
Encl 14 - Lobby Doors						
R01	Replace lobby door assembly.	2023	25 Yrs (1)	$3,500	$3,500	$4,000

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Depreciation Report Costing

Enclosure

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Encl 15 - Metal Exit Doors						
J01	Grind off signs of corrosion, prime and repaint metal door and frame.	2028	5 yrs (4)	$150	$600	$890
R01	Replace metal exit doors.	2023	30 Yrs (1)	$3,000	$3,000	$3,400
Encl 16 - Vinyl Frame Glazed Swing Door						
J01	Replace or repair gasket and weatherstripping, as required.	2027	2 Yrs (10)	$27	$270	$404
J02	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2017	2 Yrs (15)	$154	$2,310	$3,140
Balconies						
Encl 18 - Vinyl Balcony Membrane						
J01	Conduct warranty review in sufficient time prior to expiration of vinyl membrane manufacturers warranty period.	2020	5 yrs (1)	$0	$0	$0
R01	Replace vinyl membrane.	2040	25 Yrs (1)	$30,000	$30,000	$48,000
General & Inspections						
Encl 20 - Exterior Sealant						
R01	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	2030	15 Yrs (2)	$32,000	$64,000	$99,000
Encl 21 - General & Inspections						
J01	Review metal flashing at all locations and touch-up paint as required.	2018	3 Yrs (10)	$2,000	$20,000	$27,600
J02	Update depreciation report. Considered an operating expense.	2019	3 Yrs (9)	$0	$0	$0
J03	Perform 2-year warranty review in sufficient time prior to expiration of warranty period. Prepare list of deficiencies for correction.	2017	1 x (1)	$6,000	$6,000	$6,100
R01	Project costs associated with low-slope roof renewal.	2018	1 x (1)	$50,000	$50,000	$52,000
				Enclosure - 30 Year Capital Costs	**$1,037,016**	**$1,423,340**

2710 Grosvenor

Depreciation Report Costing

Electrical

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Distribution						
Elec 01 - Electrical Distribution						
J03	Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs.	2018	3 Yrs (10)	$2,500	$25,000	$34,400
J04	Clean and test main breakers and central distribution panel board.	2017	3 Yrs (10)	$500	$5,000	$6,760
R01	Cyclical replacement of components of the electrical distribution equipment, as required.	2033	30 Yrs (1)	$20,000	$20,000	$28,000
Light Fixtures						
Elec 02 - Exterior Light Fixtures						
R02	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	2020	6 Yrs (5)	$800	$4,000	$5,550
R05	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	2035	20 Yrs (1)	$3,500	$3,500	$5,100
Elec 03 - Interior Light Fixtures						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	2017	6 Yrs (5)	$0	$0	$0
R02	Cyclical replacement of electronic ballasts.	2023	10 Yrs (3)	$0	$0	$0
R03	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	2033	20 Yrs (1)	$5,000	$5,000	$7,000
Security						
Elec 04 - Enterphone System						
R01	Replace enterphone panels, excluding field wiring.	2021	25 Yrs (1)	$6,000	$6,000	$6,600
Elec 06 - Security Surveillance						
R01	Service the multiplex unit, update software as required.	2018	5 yrs (6)	$0	$0	$0
R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	2027	14 Yrs (2)	$1,200	$2,400	$3,500
				Electrical - 30 Year Capital Costs	**$70,900**	**$96,910**

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Depreciation Report Costing

Mechanical

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Controls and End Devices						
Mech 01 - Gas Detection - Parking Garage						
R01	Cyclical replacement of gas detection sensors.	2025	5 yrs (5)	$7,000	$35,000	$50,600
Mech 02 - Heat Tracing - Freeze Protection						
R01	Cyclical replacement of components of electric heat tracing cable, including control module and pipe insulation.	2023	15 Yrs (2)	$5,000	$10,000	$13,400
Plumbing & Drainage						
Mech 03 - Drainage - Perimeter and Foundation						
J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions.	2020	5 yrs (6)	$1,040	$6,240	$8,700
R01	Repair and/replace components of perimeter drainage system, as required.	2033	40 Yrs (1)	$10,400	$10,400	$15,000
Mech 04 - Drainage - Storm - Exterior System						
J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions.	2020	5 yrs (6)	$1,040	$6,240	$8,700
R01	Repair and replace components of exterior drainage system, as required.	2033	40 Yrs (1)	$7,600	$7,600	$11,000
Mech 05 - Drainage - Storm - Internal						
R01	Repair and/replace components of storm water drainage distribution system, as required.	2033	40 Yrs (1)	$20,000	$20,000	$28,000
Mech 06 - Piping - Domestic Water Distribution						
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	2018	5 yrs (6)	$0	$0	$0
J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	2023	20 Yrs (1)	$10,000	$10,000	$11,000
R01	Replace components of domestic plumbing distribution system, including domestic valves. Extent and timing of renewal will be dependent on the third-party testing of the domestic water distribution piping recommended in tactical plan.	2028	35 Yrs (1)	$160,000	$160,000	$200,000
Mech 07 - Valves - Cross Connection & Backflow Prevention						
R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	2033	20 Yrs (1)	$6,000	$6,000	$8,400

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Depreciation Report Costing

Mechanical

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Mech 08 - Drainage - Sanitary						
J01	Insert video cameras into main lines to conduct pipe inspection.	2018	5 yrs (6)	$2,000	$12,000	$16,200
J02	Auger lateral drain lines.	2023	10 Yrs (3)	$3,000	$9,000	$12,700
R01	Repair components of sanitary drainage distribution system, as required.	2043	50 Yrs (1)	$30,000	$30,000	$51,000
Mech 09 - Pumps - Storm Lift and Control Panel						
J01	Coat exposed shaft of impeller with anti-seize compound.	2017	2 Yrs (15)	$0	$0	$0
R01	Overhaul storm sump pumps.	2022	8 Yrs (3)	$2,000	$6,000	$8,000
R02	Cyclic replacement of sump pump storm lift and control panels.	2029	15 Yrs (2)	$4,000	$8,000	$12,200
Heating						
Mech 10 - Gas Chimney Vent						
J01	Inspect interior and exterior of gas vent assembly for deterioration corrosion leakage or displacement.	2018	5 yrs (6)	$0	$0	$0
R01	Apply heat-resistant paint to wall vents.	2018	1 x (1)	$16,000	$16,000	$17,000
R02	Replace domestic venting system.	2025	35 Yrs (1)	$32,000	$32,000	$38,000
Mech 11 - Baseboard - Electric						
R01	Cyclical replacement of electric baseboard heaters, as required.	2033	40 Yrs (1)	$3,375	$3,375	$4,700
Ventilation						
Mech 12 - Exhaust Fan - Parkade - Propellor						
R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	2017	3 Yrs (10)	$1,500	$15,000	$20,200
R02	Rebuild of fans, as required.	2033	20 Yrs (1)	$3,000	$3,000	$4,200
Mech 13 - Exhaust Fan - Small Service - Cabinet						
R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	2018	12 Yrs (3)	$6,000	$18,000	$24,100
Mech 14 - Outdoor Air Handler - Gas Heat						
R02	Cyclical rebuild or replacement of rooftop unit.	2019	20 Yrs (2)	$26,000	$52,000	$69,000
Other						
Mech 15 - Overhead Gate Motor						
R01	Replace motor and drive unit.	2024	7 Yrs (4)	$2,500	$10,000	$14,600
			Mechanical - 30 Year Capital Costs		**$485,855**	**$646,700**

Elevator

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Elev 01 - Hydraulic Elevator, Double Bottom						
R01	Replace elevator controls, tank unit, and valve	2018	25 Yrs (2)	$55,000	$110,000	$151,000
Elev 02 - Elevator Cabs & Hoistway						
R01	Replace elevator cylinder.	2043	50 Yrs (1)	$0	$0	$0
R02	Replace door operator.	2018	25 Yrs (2)	$10,000	$20,000	$27,000
R03	Replace elevator operating and signal fixtures, including cab phones.	2023	15 Yrs (2)	$15,000	$30,000	$40,000
			Elevator - 30 Year Capital Costs		**$160,000**	**$218,000**

Fire Safety

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Controls						
Fire 01 - Fire Alarm Panel - Addressable						
R01	Replace battery packs.	2018	5 yrs (6)	$250	$1,500	$2,040
R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	2019	20 Yrs (2)	$10,000	$20,000	$27,000
Detection						
Fire 02 - Fire Detection & Alarm						
R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring. No cost included since upgrades, as necessary, are typically funded from the annual operating budget.	2033	20 Yrs (1)	$0	$0	$0
Suppression						
Fire 03 - Dry Sprinkler Compressor						
R01	Replace fire sprinkler compressor.	2021	14 Yrs (2)	$1,500	$3,000	$3,900
Fire 04 - Portable Fire Extinguisher						
J01	Conduct hydrotest on fire extinguishers.	2017	12 Yrs (3)	$0	$0	$0
R01	Cyclical replacement of fire extinguishers.	2017	12 Yrs (3)	$480	$1,440	$1,900
Fire 05 - Sprinkler System - Dry						
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	2018	5 yrs (6)	$0	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	2018	5 yrs (6)	$0	$0	$0
R01	Replace all heads, or submit representative sample of heads for testing by recognized testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	2043	10 Yrs (1)	$5,040	$5,040	$8,600

Fire Safety

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains etc as required.	2018	5 yrs (6)	$84	$504	$683
Fire 06 - Sprinkler Valve Assembly - Dry						
R04	Replace sprinkler valves, as required.	2033	40 Yrs (1)	$3,000	$3,000	$4,200
Egress						
Fire 07 - Emergency Egress Equipment						
R01	Cyclical replacement of batteries and lamps in DC battery packs.	2018	5 yrs (6)	$0	$0	$0
R02	Cyclical replacement of LED exit signs and emergency lighting. No cost included since upgrades, as necessary, are typically funded from the annual operating budget.	2033	15 Yrs (1)	$0	$0	$0
				Fire Safety - 30 Year Capital Costs	**$34,484**	**$48,323**

Interior Finishes

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Floors						
Finish 01 - Carpet Flooring						
R01	Replace carpet flooring in the stairwells.	2016	15 Yrs (2)	$2,200	$4,400	$5,200
R02	Replace carpet flooring in the corridors.	2029	15 Yrs (2)	$6,000	$12,000	$17,800
Finish 02 - Tiled Flooring						
R01	Replace tiled flooring.	2028	25 Yrs (1)	$1,920	$1,920	$2,400
Walls						
Finish 03 - Interior Painting						
R01	Repaint interior walls at hallways and stairwells. Strata currently paints one floor at a time, every 4 years.	2018	4 Yrs (7)	$3,375	$23,625	$31,500
R02	Refer to renew components for interior painting	2018	10 Yrs (3)	$0	$0	$0
Finish 04 - Carpentry & Millwork						
R01	Repaint components of carpentry and millwork, as required. [Cost included with repainting of the interior walls].	2026	10 Yrs (2)	$0	$0	$0
R02	Replace damaged components of carpentry and millwork, as required.	2016	25 Yrs (2)	$3,175	$6,350	$8,400
Furnishings						
Finish 05 - Interior Swing Doors						
J02	Repaint doors and frames in high-traffic locations as required.	2016	8 Yrs (4)	$400	$1,600	$2,060
R01	Cyclical replacement of interior swing doors in high traffic locations, as required.	2033	20 Yrs (1)	$10,000	$10,000	$14,000

Interior Finishes

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
R02	Replace interior swing doors in low traffic locations, as required.	2033	40 Yrs (1)	$10,000	$10,000	$14,000
				Interior Finishes - 30 Year Capital Costs	**$69,895**	**$95,360**

Amenities

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Amen 01 - Wood Storage Locker						
R01	Reconstruct wood storage lockers, as required.	2033	30 Yrs (1)	$2,000	$2,000	$2,800
Amen 02 - Central Mailboxes						
R01	Replace central mail boxes as required.	2028	30 Yrs (1)	$1,500	$1,500	$1,900
Amen 03 - Public Signage						
R01	Replace damaged and outdated signage, as required.	2023	30 Yrs (1)	$500	$500	$570
				Amenities - 30 Year Capital Costs	**$4,000**	**$5,270**

Sitework

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Hard Landscaping						
Site 01 - Concrete Paving						
J01	Reapply traffic markings on roadways.	2018	5 yrs (6)	$0	$0	$0
R01	Replace sections of concrete paving, as required. (1/4)	2028	40 Yrs (1)	$2,250	$2,250	$2,900
R02	Replace sections of concrete paving, as required. (3/4)	2038	40 Yrs (1)	$2,250	$2,250	$3,500
R03	Replace sections of concrete paving, as required. (4/4)	2043	40 Yrs (1)	$2,250	$2,250	$3,800
R04	Replace sections of concrete paving, as required. (2/4)	2033	40 Yrs (1)	$2,625	$2,625	$3,700
Site 02 - Exterior Metal Railings						
J01	Prepare and re-finish railings.	2016	10 Yrs (3)	$420	$1,260	$1,550
J02	Review all railing anchor points to ensure fasteners and anchors are tight and secure. Provide corrections as required	2017	3 Yrs (10)	$0	$0	$0
R01	Replace sections of exterior railings, as required.	2028	35 Yrs (1)	$1,225	$1,225	$1,600
Soft Landscaping						
Site 03 - Irrigation System						
J01	Replace the back-up battery in the timer/controller.	2017	2 Yrs (15)	$0	$0	$0
R01	Cyclical replacement of components of irrigation sprinkler system, as required.	2023	15 Yrs (2)	$5,000	$10,000	$13,400

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Depreciation Report Costing

Sitework

	Description	Next Event	Frequency (events in 30 years)	cost per event (no inflation)	30 Year Cost (no inflation)	30 Year Cost (inflation)
Site 04 - Soft Landscaping						
R01	Renovate sections of the soft landscaping, as required.	2016	15 Yrs (2)	$26,400	$52,800	$62,000
Site Services						
Site 05 - Electrical Site Services						
R01	Replace underground electrical services.	2043	50 Yrs (1)	$6,400	$6,400	$11,000
Site 06 - Underground Drainage Services - Storm						
J01	Review underground drainage piping by video camera for condition and performance.	2019	5 yrs (6)	$220	$1,320	$1,810
J02	Powerflush underground drainage piping to clear and remove any buildup of debris.	2024	10 Yrs (3)	$220	$660	$950
Site 07 - Underground Sewer Services - Sewer						
J01	CCTV length of services for inspection of condition and function.	2019	5 yrs (6)	$500	$3,000	$4,140
J02	Powerflush underground sanitary drains to remove buildup and debris.	2024	10 Yrs (3)	$500	$1,500	$2,170
Site 08 - Underground Water Services with PVC/Copper and Ductile Piping						
R05	Replace underground water services with PVC/copper piping, hydrants, valves and connections. (1/5)	2043	50 Yrs (1)	$2,850	$2,850	$4,900
				Sitework - 30 Year Capital Costs	**$90,390**	**$117,420**

Appendix E

Funding Scenario Cash Flow Tables

STATUTORY FUNDING SCENARIO: CASH FLOW TABLE (30 YEARS)

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$0	$0	$0	$32,220	$31,607
2017	$31,607	$0	$0	$0	$8,880	$22,727
2018	$22,727	$3,510	$337,587	$0	$363,824	$0
2019	$0	$10,495	$29,425	$0	$39,920	$0
2020	$0	$10,495	$0	$0	$5,291	$5,204
2021	$5,204	$10,495	$149,331	$0	$165,030	$0
2022	$0	$10,495	$0	$0	$6,240	$4,255
2023	$4,255	$10,495	$101,947	$0	$116,697	$0
2024	$0	$10,495	$265	$0	$10,760	$0
2025	$0	$10,495	$38,485	$0	$48,980	$0
2026	$0	$10,495	$0	$0	$8,000	$2,495
2027	$2,495	$10,495	$0	$0	$9,194	$3,796
2028	$3,796	$10,495	$210,129	$0	$224,420	$0
2029	$0	$10,495	$6,840	$0	$17,335	$0
2030	$0	$10,495	$103,145	$0	$113,640	$0
2031	$0	$10,495	$32,151	$0	$42,646	$0
2032	$0	$10,495	$0	$0	$4,440	$6,055
2033	$6,055	$10,495	$167,408	$0	$183,958	$0
2034	$0	$10,495	$0	$0	$6,840	$3,655
2035	$3,655	$10,495	$9,339	$0	$23,489	$0
2036	$0	$10,495	$0	$0	$7,950	$2,545
2037	$2,545	$10,495	$0	$0	$271	$12,769
2038	$12,769	$10,495	$92,822	$0	$116,086	$0
2039	$0	$10,495	$56,908	$0	$67,403	$0
2040	$0	$10,495	$52,545	$0	$63,040	$0
2041	$0	$10,495	$231,409	$0	$241,904	$0
2042	$0	$10,495	$13,005	$0	$23,500	$0
2043	$0	$10,495	$521,102	$0	$531,597	$0
2044	$0	$10,495	$14,185	$0	$24,680	$0
2045	$0	$10,495	$132,593	$0	$143,088	$0

CURRENT (2015/16) FUNDING SCENARIO: CASH FLOW TABLE (30 YEARS)

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$16,500	$0	$0	$32,220	$48,107
2017	$48,107	$16,500	$0	$0	$8,880	$55,727
2018	$55,727	$16,500	$291,597	$0	$363,824	$0
2019	$0	$16,500	$23,420	$0	$39,920	$0
2020	$0	$16,500	$0	$0	$5,291	$11,209
2021	$11,209	$16,500	$137,321	$0	$165,030	$0
2022	$0	$16,500	$0	$0	$6,240	$10,260
2023	$10,260	$16,500	$89,937	$0	$116,697	$0
2024	$0	$16,500	$0	$0	$10,760	$5,740
2025	$5,740	$16,500	$26,740	$0	$48,980	$0
2026	$0	$16,500	$0	$0	$8,000	$8,500
2027	$8,500	$16,500	$0	$0	$9,194	$15,806
2028	$15,806	$16,500	$192,114	$0	$224,420	$0
2029	$0	$16,500	$835	$0	$17,335	$0
2030	$0	$16,500	$97,140	$0	$113,640	$0
2031	$0	$16,500	$26,146	$0	$42,646	$0
2032	$0	$16,500	$0	$0	$4,440	$12,060
2033	$12,060	$16,500	$155,398	$0	$183,958	$0
2034	$0	$16,500	$0	$0	$6,840	$9,660
2035	$9,660	$16,500	$0	$0	$23,489	$2,671
2036	$2,671	$16,500	$0	$0	$7,950	$11,221
2037	$11,221	$16,500	$0	$0	$271	$27,450
2038	$27,450	$16,500	$72,136	$0	$116,086	$0
2039	$0	$16,500	$50,903	$0	$67,403	$0
2040	$0	$16,500	$46,540	$0	$63,040	$0
2041	$0	$16,500	$225,404	$0	$241,904	$0
2042	$0	$16,500	$7,000	$0	$23,500	$0
2043	$0	$16,500	$515,097	$0	$531,597	$0
2044	$0	$16,500	$8,180	$0	$24,680	$0
2045	$0	$16,500	$126,588	$0	$143,088	$0

ALTERNATE FUNDING SCENARIO: CASH FLOW TABLE (30 YEARS)

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$20,000	$0	$0	$32,220	$51,607
2017	$51,607	$20,000	$0	$0	$8,880	$62,727
2018	$62,727	$20,000	$281,097	$0	$363,824	$0
2019	$0	$20,000	$19,920	$0	$39,920	$0
2020	$0	$20,000	$0	$0	$5,291	$14,709
2021	$14,709	$20,000	$130,321	$0	$165,030	$0
2022	$0	$20,000	$0	$0	$6,240	$13,760
2023	$13,760	$20,000	$82,937	$0	$116,697	$0
2024	$0	$20,000	$0	$0	$10,760	$9,240
2025	$9,240	$20,000	$19,740	$0	$48,980	$0
2026	$0	$20,000	$0	$0	$8,000	$12,000
2027	$12,000	$20,000	$0	$0	$9,194	$22,806
2028	$22,806	$20,000	$181,614	$0	$224,420	$0
2029	$0	$20,000	$0	$0	$17,335	$2,665
2030	$2,665	$20,000	$90,975	$0	$113,640	$0
2031	$0	$20,000	$22,646	$0	$42,646	$0
2032	$0	$20,000	$0	$0	$4,440	$15,560
2033	$15,560	$20,000	$148,398	$0	$183,958	$0
2034	$0	$20,000	$0	$0	$6,840	$13,160
2035	$13,160	$20,000	$0	$0	$23,489	$9,671
2036	$9,671	$20,000	$0	$0	$7,950	$21,721
2037	$21,721	$20,000	$0	$0	$271	$41,450
2038	$41,450	$20,000	$54,636	$0	$116,086	$0
2039	$0	$20,000	$47,403	$0	$67,403	$0
2040	$0	$20,000	$43,040	$0	$63,040	$0
2041	$0	$20,000	$221,904	$0	$241,904	$0
2042	$0	$20,000	$3,500	$0	$23,500	$0
2043	$0	$20,000	$511,597	$0	$531,597	$0
2044	$0	$20,000	$4,680	$0	$24,680	$0
2045	$0	$20,000	$123,088	$0	$143,088	$0

PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE (30 YEARS)

FISCAL YEAR	CRF OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CRF CLOSING BALANCE
2016	$63,827	$137,000	$0	$0	$32,220	$168,607
2017	$168,607	$137,000	$0	$0	$8,880	$296,727
2018	$296,727	$137,000	$0	$0	$363,824	$69,903
2019	$69,903	$137,000	$0	$0	$39,920	$166,983
2020	$166,983	$137,000	$0	$0	$5,291	$298,692
2021	$298,692	$137,000	$0	$0	$165,030	$270,662
2022	$270,662	$137,000	$0	$0	$6,240	$401,422
2023	$401,422	$137,000	$0	$0	$116,697	$421,725
2024	$421,725	$137,000	$0	$0	$10,760	$547,965
2025	$547,965	$137,000	$0	$0	$48,980	$635,985
2026	$635,985	$137,000	$0	$0	$8,000	$764,985
2027	$764,985	$137,000	$0	$0	$9,194	$892,791
2028	$892,791	$137,000	$0	$0	$224,420	$805,371
2029	$805,371	$137,000	$0	$0	$17,335	$925,036
2030	$925,036	$137,000	$0	$0	$113,640	$948,396
2031	$948,396	$137,000	$0	$0	$42,646	$1,042,750
2032	$1,042,750	$137,000	$0	$0	$4,440	$1,175,310
2033	$1,175,310	$137,000	$0	$0	$183,958	$1,128,352
2034	$1,128,352	$137,000	$0	$0	$6,840	$1,258,512
2035	$1,258,512	$137,000	$0	$0	$23,489	$1,372,023
2036	$1,372,023	$137,000	$0	$0	$7,950	$1,501,073
2037	$1,501,073	$137,000	$0	$0	$271	$1,637,802
2038	$1,637,802	$137,000	$0	$0	$116,086	$1,658,716
2039	$1,658,716	$137,000	$0	$0	$67,403	$1,728,313
2040	$1,728,313	$137,000	$0	$0	$63,040	$1,802,273
2041	$1,802,273	$137,000	$0	$0	$241,904	$1,697,369
2042	$1,697,369	$137,000	$0	$0	$23,500	$1,810,869
2043	$1,810,869	$137,000	$0	$0	$531,597	$1,416,272
2044	$1,416,272	$137,000	$0	$0	$24,680	$1,528,592
2045	$1,528,592	$137,000	$0	$0	$143,088	$1,522,504

Appendix F

Insurance Certificate,

Disclosures and Disclaimers

RDH
Making Buildings Better

3795 Carey Road #500
Victoria, BC V8Z 6T8

250 479 1110
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.

Ref. No. 320007358120 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. : 320007355770

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 Science Inc.
224 West 8th Avenue
Vancouver, BC V5Y 1N5

Coverage

Commercial General Liability	**Insurer**	Zurich Insurance Company Ltd		
	Policy #	8611292		
	Effective	02-May-2015	**Expiry**	02-May-2016
	Limits of Liability	Bodily Injury & Property Damage, Each Occurrence $1,000,000 Products and Completed Operations, Aggregate $1,000,000 Non-Owned Automobile Liability $1,000,000 Policy may be subject to a general aggregate and other aggregates where applicable		
Professional Liability	**Insurer**	Lloyd's Underwriters		
	Policy #	QC1502155		
	Effective	02-May-2015	**Expiry**	02-May-2016
	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

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.

Dated : 14-January-2016
Issued By : McLean,Chris J.
Tel : 1-604-688-4442

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

Appendix G

RDH Qualifications

Maintenance and Planning (MaP)

Our Maintenance and Planning (MaP) group works with your owner group to plan and develop strategies for the long- and short-term needs of your building – everything from roof maintenance to boiler replacement. As the acronym suggests, our services are designed so that we can provide you with a comprehensive roadMaP for the management of your assets.

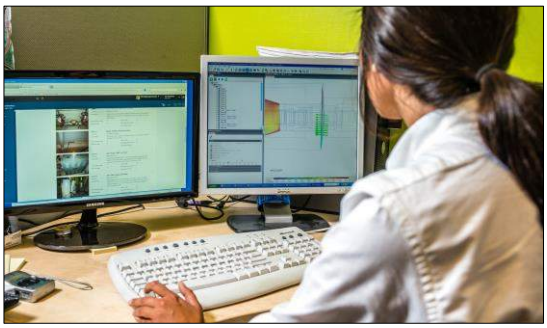
RDH staff have broad practical experience assisting building owners with all aspects of planning for the long term stewardship of their building(s). Our reserve fund analysts, engineers, architects, and technologists have a wide variety of formal training—including building science, structural engineering, and mechanical engineering. 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.

Depreciation Reports

A depreciation report is a long-range financial planning tool. It's used to identify funding requirements for costs associated with future repair, renewal, and replacement projects. The report establishes where you need to focus resources and is a good place to start developing your roadMaP.

The first step in preparing the report is to compile an inventory of all of your building's assets (roofs, boilers, carpets, etc.). Using the inventory as a foundation, we estimate the remaining life of each asset, forecast the replacement costs in future-year dollars, and display the financial analysis with graphs and cash flow tables.

Building Asset Management Software



All of this information is accessible through our propriety online BAM software - we do the groundwork and provide the critical information so that you can leverage the software to track and report on maintenance, repair, and renewal activities. Alternatively, we can follow up and manage the activities on your behalf.

The software tool also empowers you to create your own funding scenarios so you can evaluate different funding levels and find a solution that works specifically for your building. Where a depreciation report identifies what items you need to spend money on and when you need to spend it, this tool helps you optimize the way you spend your money. Ultimately, we can help you track what work is completed vs. what is outstanding so that you are better able to produce reports and make informed decisions.

About Us

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

Principal, Senior Specialist, Maintenance and Planning

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

Serge Desmarais, B.Arch. Architect AIBC, CP

Managing Principal, Senior Building Science Specialist

- Registered architect, AIBC, Certified Professional, UBC
- 30 years' experience in building design and construction capital renewal projects
- Technical lead for MaPs

Peter Fitch, C.Tech.

Senior Project Manager, Mechanical Specialist

- UBC/UBCM Certified Professional program (audit only)
- Member of Applied Science Technologists & Technicians of British Columbia
- 40 years' experience in the mechanical design field
- Technical review of asset inventories for MEFS and site assets

Harvey Goodman, P.Eng.

Building Science Specialist

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

Robin Breuer, A.Sc.T., RRO

Senior Building Science Technologist

- Dipl.T., Building Engineering Technology (Building Science Option)
- Registered Roof Observer, RCI Inc.
- 15 years' experience in building science consulting

Laureen Stokes, Dipl.T.

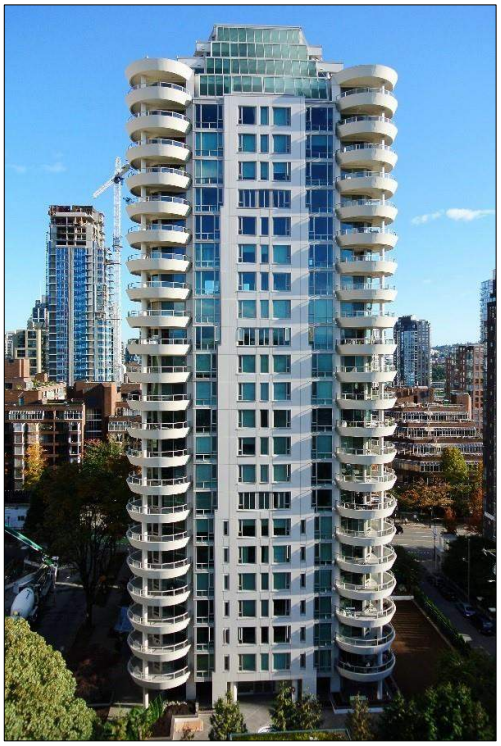
Associate, Regional Manager Maintenance and Planning

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 5+ years' experience in building science consulting

Jason Dunn, B.Arch.Sc., CCCA

Associate, Project Manager

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



Amy Montgomery, P.Eng., MASc., LEED® AP

Building Science Engineer

- M.A.Sc., Mechanical Engineering
- 8 years' experience in building asset reserve studies and energy modeling

Brandon Carreira, Dipl.T.

Maintenance and Planning Technologist

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 4 years' experience in maintenance and planning consulting
- Prepared over 50+ depreciation reports and has been involved with 75+ MaP projects

Roma Santos, Dipl.T.

Maintenance and Planning Technologist

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 3 years' experience in maintenance and planning consulting and has prepared 50+ depreciation reports

Jesse Listoen, Dipl.T.

Maintenance and Planning Technologist

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 2+ years' experience in maintenance and planning consulting and has prepared 50+ depreciation reports

Roya Kiani Amin, B.Sc.

Maintenance and Planning Technologist

- B.Sc., Civil Engineering
- 5+ years' experience in architectural drafting
- 2+ years' experience in construction
- Prepares quantified + itemized lists of enclosure elements from architectural drawings
- Provides quantity estimating for depreciation reports in the Vancouver office

Nicola Alexander, B.Tech

Maintenance and Planning Technologist

- B.Tech., Architectural Science
- 2+ years' experience in maintenance and planning consulting and has prepared 50+ depreciation reports in the Victoria office

Megan Butland, Dipl.T

Building Science Technologist

- Dipl.T., Civil Engineering
- Certificate, Drafting
- Provides quantity estimating for depreciation reports in the Courtenay office

Administrators and Client Support

Vanessa Jumawan

Maintenance and Planning Coordinator

- 5+ years' experience in administration within engineering/architecture
- Preparation of depreciation report estimates and proposals

Anna Qiu

Maintenance and Planning Project Assistant

- Certificate, Business Administration
- 10+ years' experience in administration within engineering/architecture firms
- BAMs user account setup and maintenance

Software Support and Programmer

Matthew Branch, P.Eng.

Software Engineer

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