Second Depreciation Report Update | Project 5243.027

Brook at the Village, 181 West 1st Avenue, Vancouver, BC

To The Owners, Strata Plan BCS3818
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Site Visit: June 11, 2019
Submitted September 12, 2019
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1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners, Strata Plan BCS3818 (the Owners) to prepare a Second Depreciation Report Update (the Report) for the building known as Brook at the Village (the Air Space Parcel - ASP), which is located at 181 West 1st Avenue, Vancouver, BC. The parkade is shared with an adjoining building located at 151 West 1st Avenue (the Remainder). Please note that the Remainder is not included in this Report. In addition, the Owners own a share of the off-site Amenity Facility, which is also not included in this Report. The Report considers the common property and limited common property components (the Assets) that the Strata Corporation is solely 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, windows, and piping).

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 three funding models. Refer to the Appendices for RDH's qualifications and information on errors and omissions insurance. In accordance with the requirements of the Act, RDH declares that there is no relationship between the employees at RDH and the Owners.

This Report is an update to the Depreciation Report Update issued on July 14, 2017. A site visit was for this Report was completed on June 11, 2019, and the financial data is based on the 2018/2019 fiscal year. The final Report was distributed to Council and Strata Management on September 12, 2019.

The Second Depreciation Report Update 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 Second Depreciation Report Update. 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.

As the physical and financial status of the Assets change over time, 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 more frequently, at their discretion, to reflect changes to their financial status and completed work.

2 Governance

Governance refers to how Strata Corporations determine who is responsible for maintaining, repairing, and replacing different physical components, referred to as Assets of the building.

In order to prepare the Second Depreciation Report Update, the following legal documents were reviewed:

- Disclosure Statement, only the 5th amendment, May 11th, 2010
- Amended draft Strata Plan of Air Space Parcel 1, April 12, 2010
- Reciprocal Easement for Amenity Facility, November 23rd, 2012
- Bylaws, Strata Plan BCS 3818 "Brook at the Village on False Creek", April 15, 2019

Based on section 9 in the bylaws, the Strata Corporation is obliged to repair and maintain:

- Common Assets of the Strata Corporation,
- Common property that has not been designated as limited common property,
- Such portions of the Limited Common Property that in the ordinary course of events require repair and maintenance less than once a year,
- The structure of the building,
- The exterior of the building,
- Roof decks, patios, stairs, balconies, and other things attached to the exterior of the building,
- Doors, windows, or skylights on the exterior of the building or that front on the common property, and
- Railings and similar structures that enclose patios (and) balconies.

Strata Corporation BCS3818, Brook at the Village (the Air Space Parcel or ASP), shares a portion of the below-grade parkade at 151 and 181 West 1st Avenue; there is an air parcel agreement with the Owners of 151 West 1st Avenue (the Remainder). The relationship between the two Owners, including the responsibility to maintain, repair, and replace various Assets, and cost sharing arrangements between the Owners should be confirmed in the Reciprocal Easement Agreement.

The boundaries of the ASP are defined in the Strata Plan. It is our understanding, based on a review of the Strata Plan, that the ASP includes the tower (Brook at the Village), a majority of level P2 of the parkade, and portion of level P1 of the parkade. The figures below are excerpts of the Strata Plan and outlines the areas of the ASP and the Remainder.

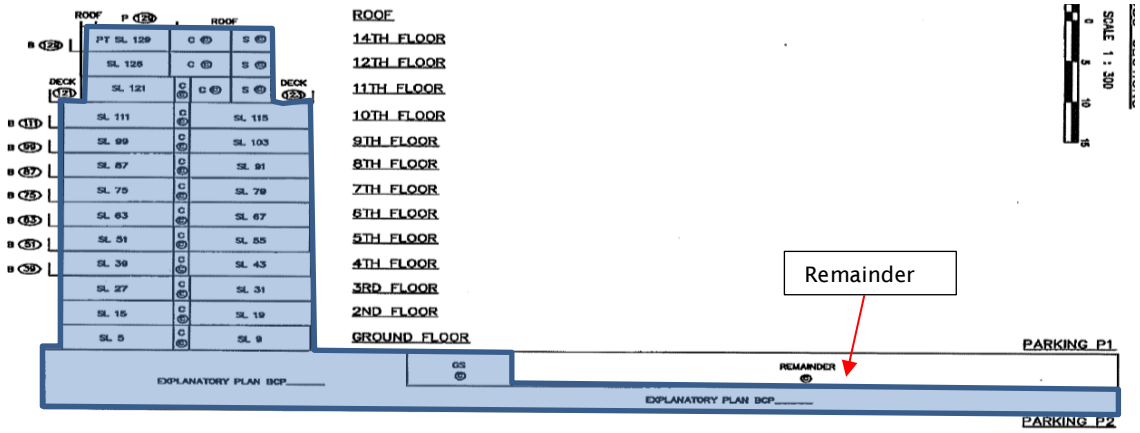

Figure 2.1 Section view of Brook at the Village and shared parking garage.

Figure 2.2 and Figure 2.3 below shows the areas in the parkade, coloured in blue, that the ASP is solely responsible for or shares responsibility with the Remainder. The white areas solely belong to the Remainder.

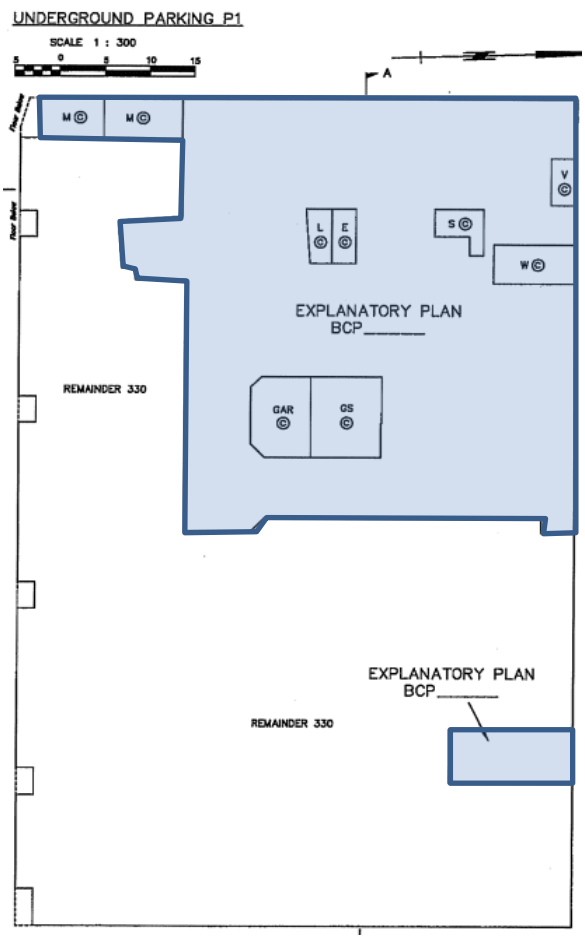

Figure 2.2 Plan View - P1 Parking Garage

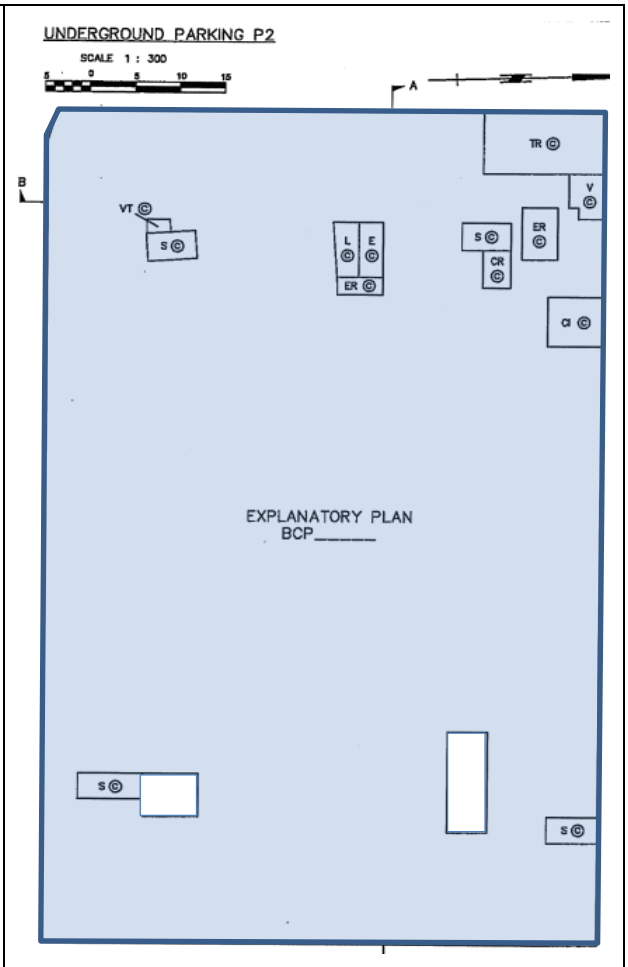

Figure 2.3 Plan View - P2 Parking Garage

As a result of the Air Space Parcel Agreement, some Assets are wholly owned by the Strata Corporation, some Assets are wholly owned by the Remainder, some Assets are owned by both the ASP and the Remainder, and a cost sharing ratio is applied to renewal, repair, and maintenance costs.

Assets shared by both the ASP and the Remainder have been identified with an [S] in the Asset Inventory. The Reciprocal Easement identifies the party responsible for "operation and upkeep". The Disclosure Statement Exhibit "K" describes the cost sharing ratios for Shared Assets. A summary of the Shared Assets, the party responsible for operation, and upkeep and cost sharing ratios are described in Table 2.1.

TABLE 2.1 DIVISION OF COSTS ASSOCIATED WITH ASP AGREEMENT

System and Associated Assets	**ASP**	**Remainder**
Parkade Area and below grade structure	66%	34%
Common/shared Mechanical Equipment	61%	39%
Common/shared Mechanical Rooms	61%	39%
Domestic Water Pump Electricity Usage	61%	39%
Main High Voltage Switch Room	61%	39%
Main Transformer Room	61%	39%
Common/shared Electrical Equipment	61%	39%
Common/shared Electrical Rooms	61%	39%
Emergency Generator	61%	39%
Shared Life Safety & Fire Alarm Systems	66%	34%
Parking Area and below grade structure	66%	34%
Common/shared Mechanical Equipment	61%	39%
Common/shared Mechanical Rooms	61%	39%
Domestic Water Pump Electricity Usage	61%	39%
Main High Voltage Switch Room	61%	39%
Main Transformer Room	61%	39%

The Shared Asset's major maintenance and renewal costs (capital costs) are included in the Second Depreciation Report Update, along with Assets exclusively belonging to the ASP. However, the ASP Owners should consider reconciling their Second Depreciation Report Update against the Remainder's projected capital costs.

3 Brook at the Village

Brook at the Village is a nine year old high-rise building fabricated of cast-in-place concrete construction with steel stud infill walls, built above a two level concrete parkade.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical, communications, and security equipment), mechanical (heating, cooling, and plumbing), elevators, 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 Brook at the Village are summarized in Table 3.1 below.

TABLE 3.1 KEY PHYSICAL PARAMETERS

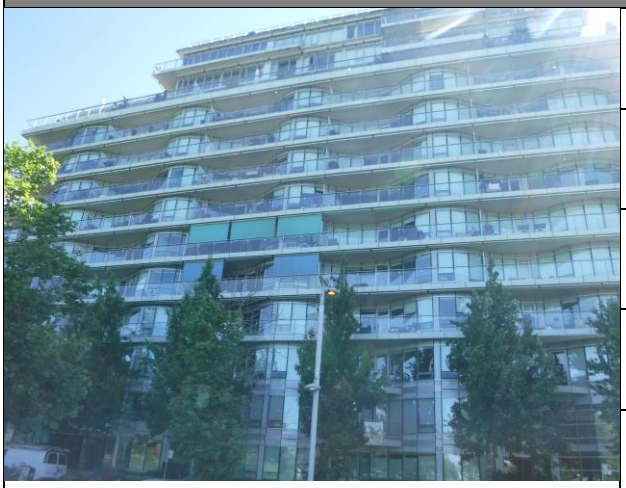

Figure 3.1 West elevation photograph of Brook at the Village (ASP)

Approximate date of first occupancy	2010
Approximate gross floor area (ft²)	241,900
Total area of Unit Entitlement	11,629
Stories above grade	13
Total number of strata lots	129

Figure 3.2 Aerial photograph of Brook at the Village (© 2017 Google).

4 Assessments

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

The process of preparing a Depreciation Report is summarized in Figure 4.1 below:

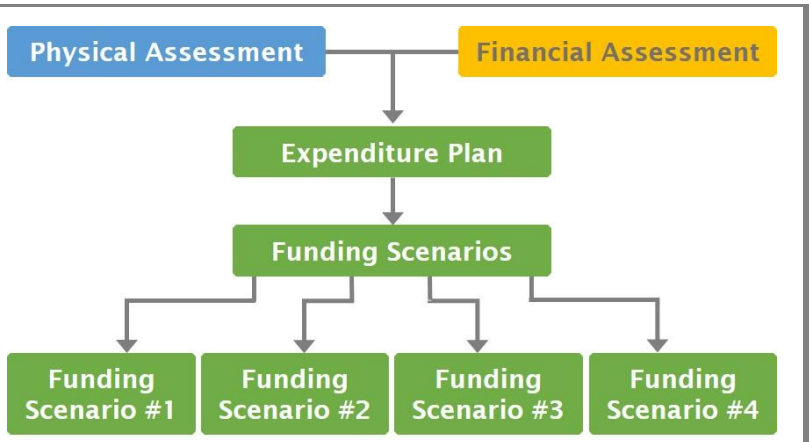

Figure 4.1

Depreciation Report Process

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

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

4.1 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 4.1 below.

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,

→ 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 or reports, and maintenance manuals.

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

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

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 4.1 below. The history of renewals establishes the chronological age of the Assets while the history of major maintenance may affect the effective age of the Assets.

TABLE 4.1 MAINTENANCE AND RENEWALS HISTORY

Building Enclosure

→ 2017 – Localized repairs to the exterior concrete wall in the electrical room.

→ 2010-2015 – Commissioned annual Maintenance Operations Review.

→ 2015 – Localized recoating of the concrete eyebrows.

→ 2015 – Localized repairs in the level P2 of the parkade.

→ 2014 – Localized repairs of the traffic-bearing membrane in parkade.

→ As required – Localized repairs to the metal frame swing doors leading to the balconies on the south elevation is due. It is our understanding these repairs were required due to damage caused by wind gusts when doors were left open.

Electrical

→ 2017 – Interior lights retrofitted to LED.

→ As required – Exterior lights replaced with LED, as required.

Mechanical

→ 2019 – Repairs to the backflow preventer.

→ 2019 – Replaced sump pump.

→ 2016 – Reconfigured grey water booster pump station and replaced pumps.

→ 2015/2016 – Repairs to exterior blinds system and additional wind sensors added.

Fire Safety → 2014 – Replaced dry sprinkler compressor.
Interior Finishes → 2019 – Repainted the garbage room. → As required – Localized repairs to the carpet.
Amenities → 2019 – Added a television in the lounge.
Sitework → 2018 – Irrigation drip system installed.

On June 11, 2019, a representative of RDH visited the site to visually review the Assets. While the Second Depreciation Report Update does not constitute a maintenance review or condition assessment, some observations regarding the general condition, design, and construction of the Assets were made as part of the visual review. These observations were used to determine a reasonable estimated remaining service life of various assets. Table 4.2 includes examples of some observations made during the review.

TABLE 4.2 OBSERVATIONS BY SYSTEM

SYSTEM	OBSERVATION
Building Enclosure	→ The building incorporates overhangs and balcony projections providing protection to the enclosure assemblies below. → At the time of our review, localized crack injection repairs were being performed on the balcony soffit above Suite 1203.
Mechanical	→ At the time of our review, the backflow prevention valves in mechanical room P1-09 were being serviced.

4.2 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 current market prices, and is obtained from the most recent insurance appraisal.

The Financial Assessment begins with a review of the current financial situation of the Strata Corporation. Table 4.3 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 4.3 KEY FINANCIAL PARAMETERS		
PARAMETER	PREVIOUS STUDY (2016/2017)	UPDATE STUDY (2018/2019)
Fiscal year end	July 31st	
Building reproduction cost	$65,000,000	$76,000,000
Operating budget (excluding CRF contribution)	$731,729	$764,025
Annual CRF contribution	$75,000	$80,000
Opening Balance of the CRF	$367,000	$503,598
Accumulated Balance of the CRF		$656,312

**The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities. The opening CRF balance is reconciled as of the beginning of the 2018/2019 fiscal year. The accumulated CRF balance is reconciled as of July 31st, 2019.*

Depreciation Reports (and Updates) 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 Second Depreciation Report Update 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 Second Depreciation Report Update 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 Engineers and Geoscientists of British Columbia (EGBC). 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. Scopes of work for specific projects should be developed well in advance so that project budgets, including soft costs, can be refined.

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 and visual observations on site. The unit rates are based on historical information, construction trends, information from contractors, and other sources, as appropriate. Unit rates will fluctuate over time. Basic unit rates are adjusted for the relative complexity of the property. A detailed list of activities and their associated costs are available online through BAMS. Please contact the Strata Council or Strata Manager for additional information on how to access and view this information.

Costing Caveats

The capital costs given in the Second Depreciation Report Update provide a basic estimate for long term planning. They are intended to help guide priority setting and provide a clearer sense of timing. They are not suitable for planning specific projects as they cannot account for project soft costs such as taxes,

grants, engineering or design, municipal permits, etc., or for project specific construction costs, such as access to the work (e.g. scaffold), contingencies, hazardous materials, disposal, project management, etc. Such costs cannot be estimated without more information, including a project scope and preliminary design work. Once a project reaches the planning stages, a reasonable assumption of soft costs should be made based on the actual needs of the project. It is recommended that this happen well in advance of predicted work to allow time to plan for the funding of the soft costs.

5 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 Second Depreciation Report Update funding models, as required by the Strata Property Act. Costs associated with Minor Maintenance are included in the Strata Corporation's operating budget.

5.1 Major Maintenance and Renewal Expenditures

Table 5.1 below summarizes all major maintenance and renewal costs by system, including costs forecasted for the next 30 years. The values are rounded.

TABLE 5.1 CAPITAL EXPENDITURES SUMMARY BY SYSTEM

SYSTEM	10 YEAR CAPITAL COSTS (WITHOUT INFLATION)	10 YEAR CAPITAL COSTS (WITH INFLATION)	30 YEAR CAPITAL COSTS (WITHOUT INFLATION)	30 YEAR CAPITAL COSTS (WITH INFLATION)
Building Enclosure	$750,000	$830,000	$4,100,000	$5,600,000
Electrical	$110,000	$120,000	$560,000	$800,000
Mechanical	$190,000	$220,000	$2,200,000	$3,100,000
Elevator	$0	$0	$320,000	$440,000
Fire Safety	$1,300	$1,600	$250,000	$350,000
Interior Finishes	$300,000	$320,000	$900,000	$1,100,000
Amenities	$15,000	$16,000	$77,000	$100,000
Sitework	$17,000	$19,000	$43,000	$58,000
Building Total	**$1,383,300**	**$1,526,600**	**$8,450,000**	**$11,548,000**

Approximately 15% of the Strata Corporation's capital expenditures may occur in the next 10 years. The distribution of estimated capital expenditures over the next 10 years is shown in Figure 5.1 below.

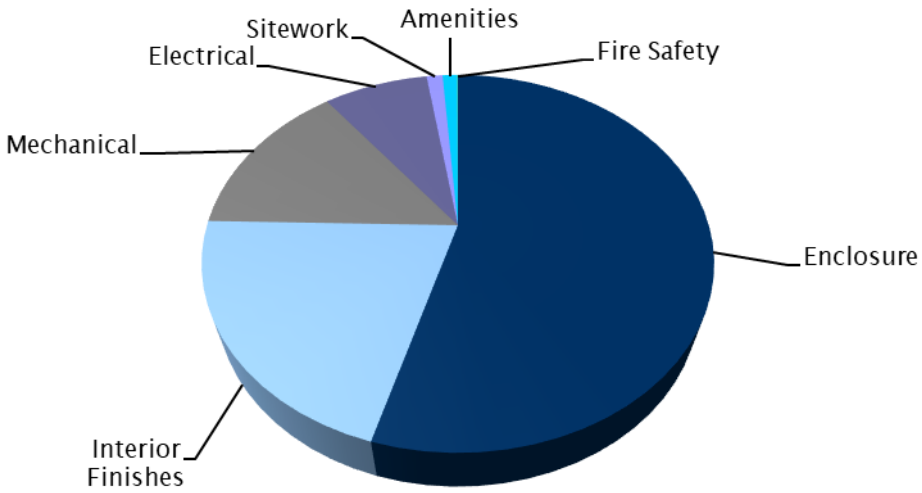

Figure 5.1 Distribution of estimated capital expenditures over 10 years by system.

Section 6 discusses the timing and size of renewal projects forecast for the next 30 years. A detailed list of each major maintenance and renewals activity, including the frequency, costs expressed in current year dollars (CYD), and costs including inflation rates, expressed in future year dollars (FYD) are available to Strata Corporation Owners.

6 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 10 years.

6.1 Strategic Planning Horizon

Estimated major maintenance and renewal costs over the next 30 years are shown on the graph below (Figure 6.1). The red bars represent the estimated value of capital costs.

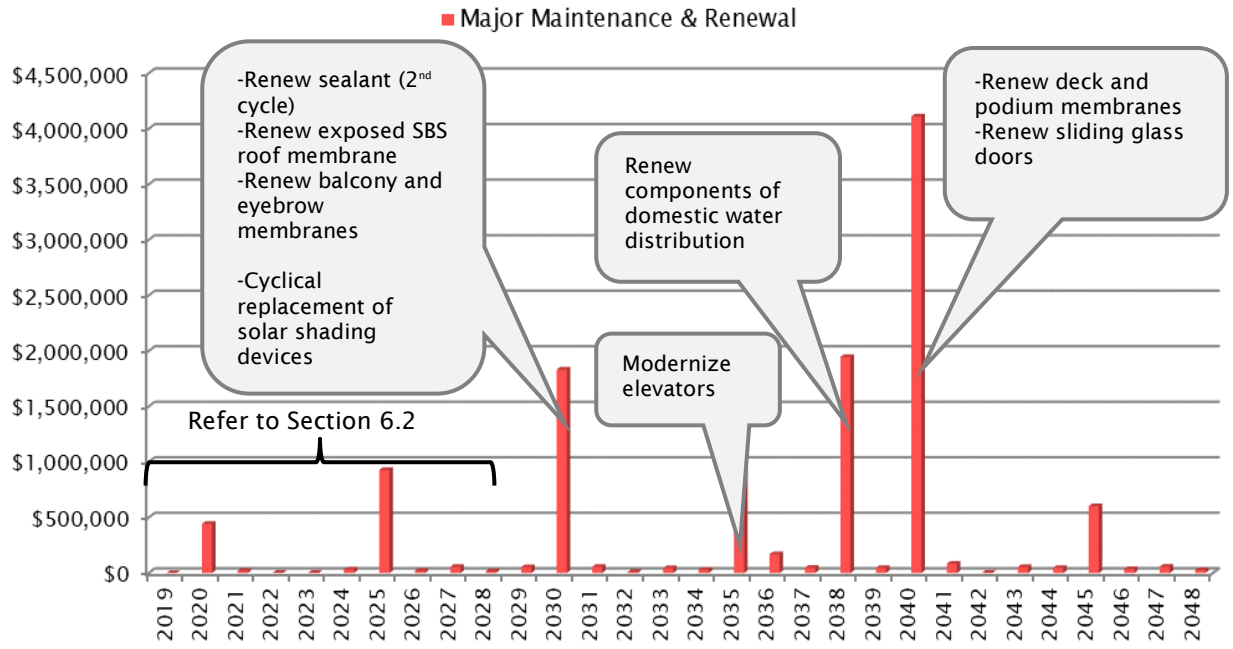

Figure 6.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different major maintenance and renewal activities, each with different values. 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 Second

Depreciation Report Update, 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.

6.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next 10 years (Figure 6.2). Commonly, building managers refer to a five-year tactical plan; however, a 10-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. The costs associated to correct any warranty defects are not included. The soft costs associated with project implementation, such as site access, design, and contract administration, are not included.

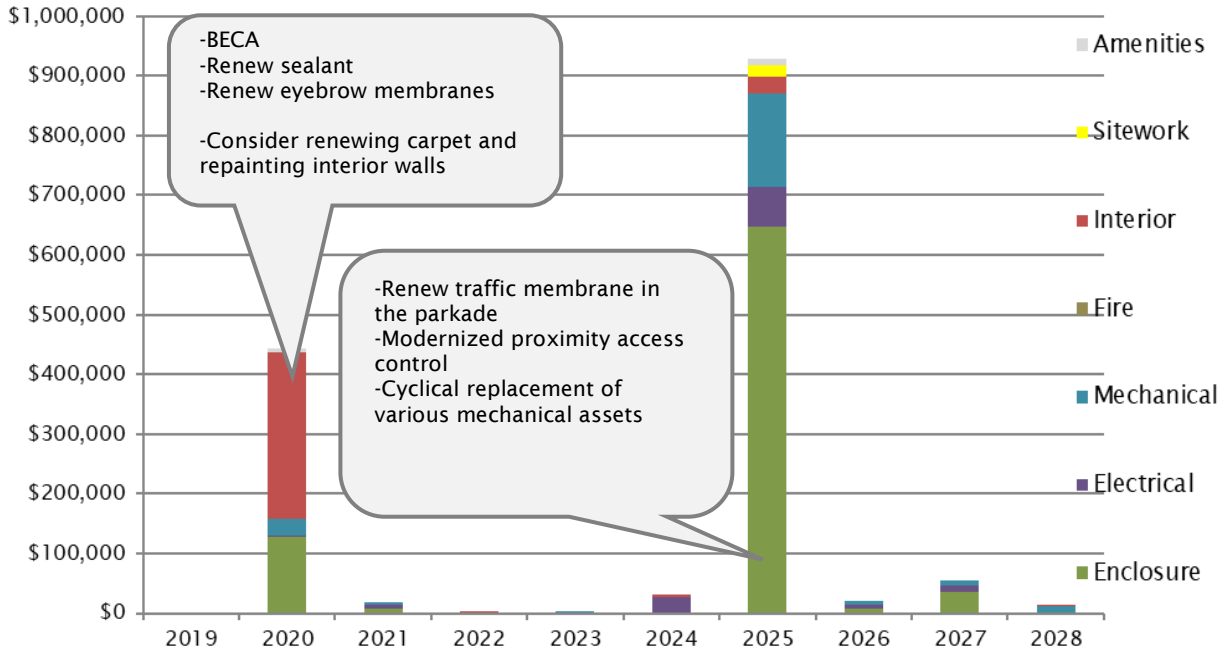

Figure 6.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

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, some of the activities forecast for the next 10 years are listed below. Because the timing is somewhat uncertain, renewals and major maintenance activities are grouped into three-year planning periods. The list below is not comprehensive; It is limited to renewals and major maintenance activities likely to cost more than $10,000 in current year dollars or significant assessments. A complete list of maintenance and renewals are included in the Appendices.

2019 to 2021

Building Enclosure

- → Encl 19 General & Inspections – Commission a Building Enclosure Condition Assessment (BECA) to confirm the remaining service life of Assets, such as the eyebrow membranes, the parkade traffic membrane, and sealant. The assessment should be completed in advance of the various building enclosure renewals to assist with the planning process.
- → Encl 12 Concrete Eyebrows – Prepare and re-apply membrane top coat.
- → Encl 20 Sealant – Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies.

Electrical

- → Elec 01, 03 & 04 Distribution Transformers, Unit Substation, and Electrical Distribution – Conduct a service shutdown service and infrared scanning of the electrical distribution equipment (every five years).

Mechanical

- → Mech 14 & 19 Sanitary and Perimeter Foundation Drainage Collection – Insert video cameras into the main lines to conduct pipe inspection and jetflush drainage Assets, as needed (camera inspection completed on a 5-year cycle; cleaning on 10-year cycle).

Interior Finishes

- → Finish 01 & 07 Carpet Flooring & Paint – Consider the replacement of the carpet flooring and re-coating painted wall surface.

2022 to 2024

Electrical

- → Elec 09 Security Surveillance – Consider modernizing the security surveillance system.

2025 to 2028

Building Enclosure

- → Encl 17 Parkade Suspended Concrete Slab with Traffic-Bearing Membrane – Prepare concrete surface and re-apply traffic-bearing membrane. Frequency will depend on traffic volume and other factors.
- → Encl 08 & 09 Curtain Wall and Aluminum Framed Windows – Cyclical replacement of insulating glazing units (IGUs), as required. An allowance has been included on a two-year cycle.

Electrical

- → Elec 08 Proximity Access Control – Consider modernizing components of the proximity access control system.
- → Elec 02 Emergency Generator – Rebuild emergency generator.

Mechanical

- → Mech 25 & 33 Heat and Heating Circulation Pump – Cyclical replacement of heat pumps and circulating pumps.
- → Mech 04 Variable Frequency Drives – Replace variable frequency drives.

→ Mech 05 Controls Direct Digital – Replace DDC controllers.

→ Mech 34 Fan Coil Unit – Cyclical replacement of AC unit fan coils.

6.3 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 Second Depreciation Report Update 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 Second Depreciation Report Update are considered Class D (±50%) due to the lack of information regarding specific projects and are based on a number of general assumptions regarding scopes of work.

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

→ *Targeted Projects*. These projects are localized to particular portions of the building. Different exposure conditions and wear patterns may require that only some sections of the building require renewal at one point in time.

→ *Phased Projects*. These projects are carried out in multiple stages rather than as a single coordinated project. Phased projects can reduce the financial burden by spreading the costs over a longer time period.

→ *Comprehensive Projects*. These projects are implemented as one coordinated undertaking. Comprehensive projects may allow the Strata Corporation to leverage the best economies of scale, shorten the overall duration, and lower the overall costs.

→ *Bundled Projects*. These projects bundle or combine various related renewal activities (e.g. renewals that are located in close physical proximity, or that require the same type of trade workers). Bundled projects may allow the Strata Corporation to leverage economies of scale and lower the overall costs, improve the quality of the work, and incorporate upgrades.

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

7 Funding Scenarios

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

The Strata Corporation can use the funding scenarios to choose an appropriate funding strategy, based on their tolerance for risk and desired standard of care for the property. RDH provides the tools so the Owners can determine a CRF contribution that suits their needs.

7.1 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 7.1 below shows the calculation to confirm the Strata Corporation meets the minimum requirements set out in the Strata Property Act Regulation.

TABLE 7.1 MINIMUM FUNDING REQUIREMENT CALCULATION

PARAMETER	VALUE
2018/2019 operating budget (excluding CRF contribution)	$ 764,025
→ 25% of the operating budget	$ 191,006
→ 10% of the operating budget	$ 76,403
2017/2018 CRF closing balance	$ 503,598
2018/2019 CRF Contribution	$ 80,000
Will the CRF closing balance exceed 25% of the operating budget at the end of the fiscal year?	Yes
Does the CRF contribution exceed 10% of the operating budget?	Yes

Although the Strata Corporation exceeds the statutory minimum contribution to the CRF, it is important to note that the statutory guideline is not a good measure of the financial preparedness of the Corporation.

7.2 Alternative Funding Scenarios

The funding scenarios below compare the financial impact of different funding levels over the next 30 years. The scenarios serve as a sensitivity analysis 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 7.2 below compares the following alternatives:

→ ***Previous (2016/207).*** The CRF allocation that was approved by the Owners at the 2016 AGM.

- → ***Current (2018/2019)***. The CRF allocation that was approved by the Owners at the 2018 AGM. The current allocation is also known as the Status Quo.
- → ***Alternative***. A non-linear funding scenario that begins with an increase in contribution to $120,000 with a 3% annual increase in subsequent years. The Alternative is just one of many possible scenarios for a new funding level in the next fiscal year.
- → ***Progressive***. This is the annual contribution that would need to be set aside, commencing in the first fiscal year of this Report, to ensure that the reserve balance is sufficient to eliminate or bring special levies over a 30-year period to a minimum. With "Progressive" reserve allocation, older Stratas with underfunded reserves may still require some special levies at some point in their Strategic Plan. The "Progressive" reserve contribution is an optimum target that a Strata Corporation could use as a guide.

TABLE 7.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	PREVIOUS (2016/2017)	CURRENT (2018/2019)	ALTERNATIVE	PROGRESSIVE RESERVE
Annual CRF allocation	$75,000	$80,000	Starting at $120,000 +	$405,000
Annual CRF increase	0 %	0 %	3 %	0 %
Percent of progressive reserve	19 %	20 %	30 % +	100 %
CRF contribution per unit of unit entitlement			Starting at	
Per month	$0.54	$0.57	$0.86 +	$2.90
Per year	$6.45	$6.88	$10.32 +	$34.83
CRF contribution per average strata lot			Starting at	
Per month	$48	$52	$78 +	$262
Per year	$581	$620	$930 +	$3,140
Approximate number of special levies (over 30 years)	8	8	4	0
Approximate value of special levies (over 30 years)	$8.8M	$8.7M	$6.3M	$0.0M
Minimum Closing Balance	$10,000			
Assumed Inflation Rate	2 %			
Assumed Interest Rate	2 %			

The following sections of the Report provide more detailed information about each funding scenario (excluding the Previous funding scenario), including a graph showing the closing balance of the CRF, annual CRF contributions, and the approximate value of special levies. Tables with 10 years of cash flow data are also provided.

Appendix E includes 30 years of cash flow data for each funding scenario.

7.3 Current (2018/2019) Funding Scenario

The Current Funding Scenario is based on the CRF contribution approved by the Owners at the 2018 AGM. The Scenario is based on a fixed annual CRF contribution (no increases).

TABLE 7.3 CURRENT (2018/2019) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2019	$656,312	$80,000	$0	$13,126	$0	$0	$749,438
2020	$749,438	$80,000	$0	$14,989	$442,980	$0	$401,447
2021	$401,447	$80,000	$0	$8,029	$18,700	$0	$470,776
2022	$470,776	$80,000	$0	$9,416	$3,800	$0	$556,391
2023	$556,391	$80,000	$0	$11,128	$3,300	$0	$644,219
2024	$644,219	$80,000	$0	$12,884	$31,700	$0	$705,404
2025	$705,404	$80,000	$138,688	$14,108	$928,200	$0	$10,000
2026	$10,000	$80,000	$0	$200	$19,500	$0	$70,700
2027	$70,700	$80,000	$0	$1,414	$54,700	$0	$97,414
2028	$97,414	$80,000	$0	$1,948	$14,720	$0	$164,642

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.

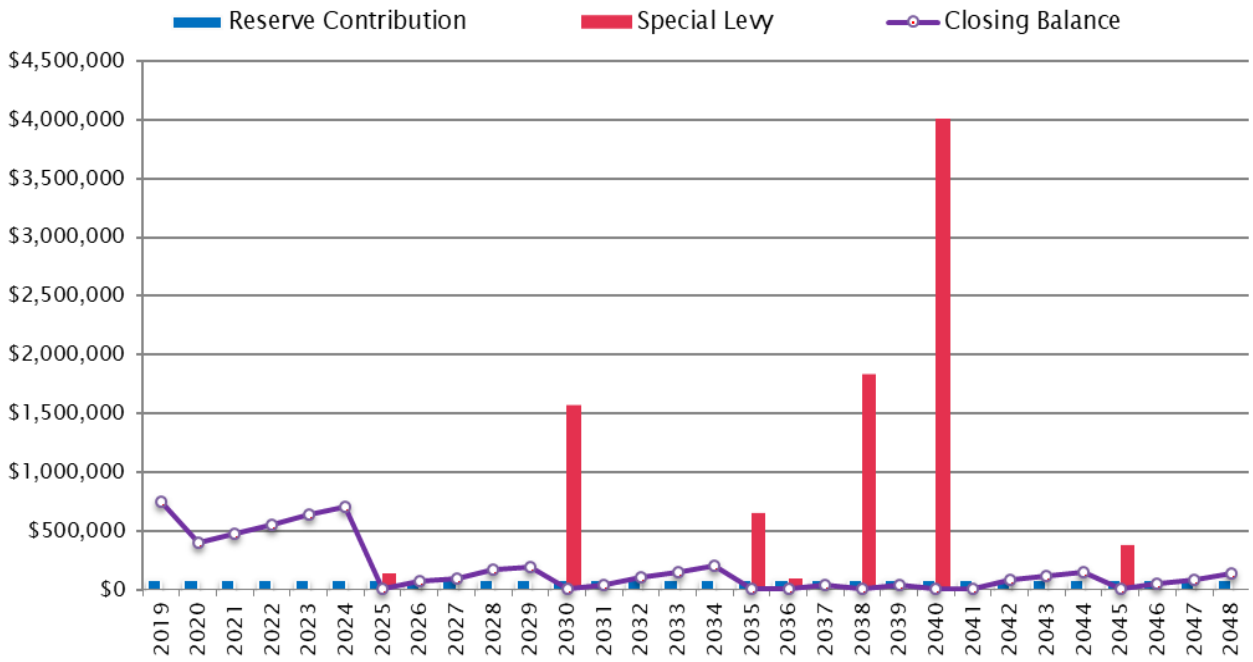

Figure 7.1 CRF balance, contribution, and special levies based on the Current funding.

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.

7.4 Alternative Funding Scenario

The Alternative Funding Scenario is based on an initial annual CRF contribution of $120,000, with a 3% annual increase.

TABLE 7.4 ALTERNATIVE FUNDING SCENARIO #0: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2019	$656,312	$120,000	$0	$13,126	$0	$0	$789,438
2020	$789,438	$123,600	$0	$15,789	$442,980	$0	$485,847
2021	$485,847	$127,308	$0	$9,717	$18,700	$0	$604,172
2022	$604,172	$131,127	$0	$12,083	$3,800	$0	$743,583
2023	$743,583	$135,061	$0	$14,872	$3,300	$0	$890,215
2024	$890,215	$139,113	$0	$17,804	$31,700	$0	$1,015,433
2025	$1,015,433	$143,286	$0	$20,309	$928,200	$0	$250,827
2026	$250,827	$147,585	$0	$5,017	$19,500	$0	$383,929
2027	$383,929	$152,012	$0	$7,679	$54,700	$0	$488,920
2028	$488,920	$156,573	$0	$9,778	$14,720	$0	$640,551

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

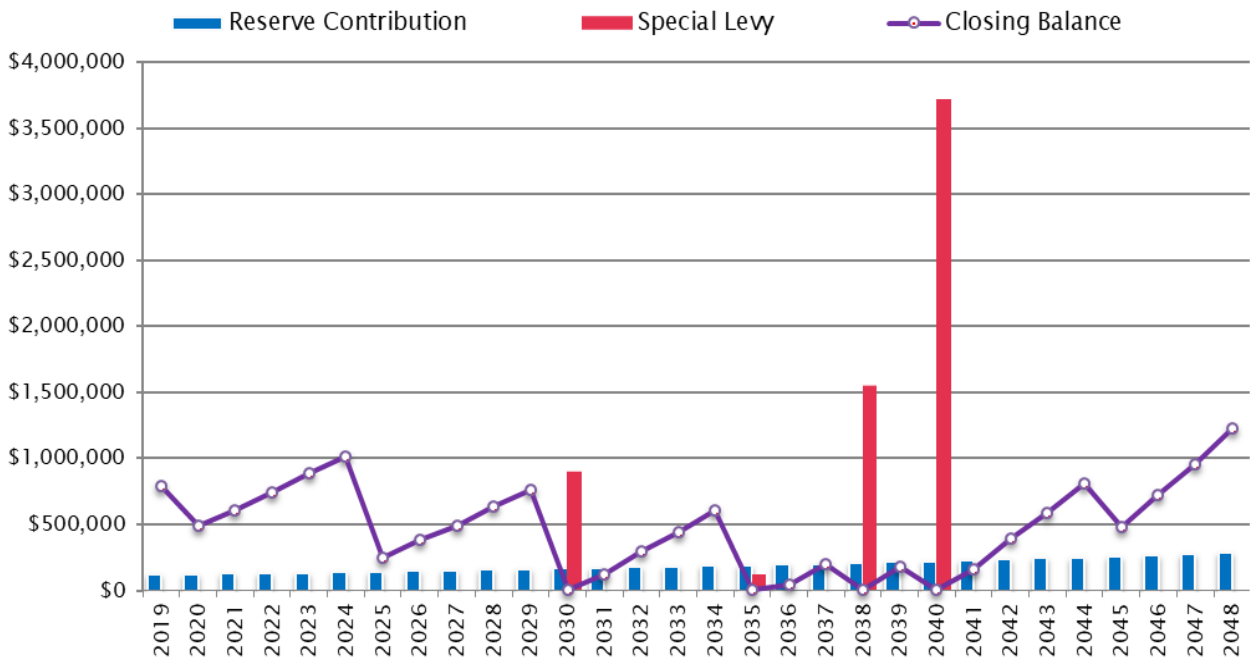

Figure 7.2 CRF balance, contribution, and special levies based on the Alternative.

7.5 Progressive Funding Scenario

The Progressive Funding Scenario is based on a fixed annual CRF contribution.

TABLE 7.5 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2019	$656,312	$405,000	$0	$13,126	$0	$0	$1,074,438
2020	$1,074,438	$405,000	$0	$21,489	$442,980	$0	$1,057,947
2021	$1,057,947	$405,000	$0	$21,159	$18,700	$0	$1,465,406
2022	$1,465,406	$405,000	$0	$29,308	$3,800	$0	$1,895,914
2023	$1,895,914	$405,000	$0	$37,918	$3,300	$0	$2,335,532
2024	$2,335,532	$405,000	$0	$46,711	$31,700	$0	$2,755,543
2025	$2,755,543	$405,000	$0	$55,111	$928,200	$0	$2,287,454
2026	$2,287,454	$405,000	$0	$45,749	$19,500	$0	$2,718,703
2027	$2,718,703	$405,000	$0	$54,374	$54,700	$0	$3,123,377
2028	$3,123,377	$405,000	$0	$62,468	$14,720	$0	$3,576,124

The Progressive Reserve would potentially eliminate all special levies. 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.

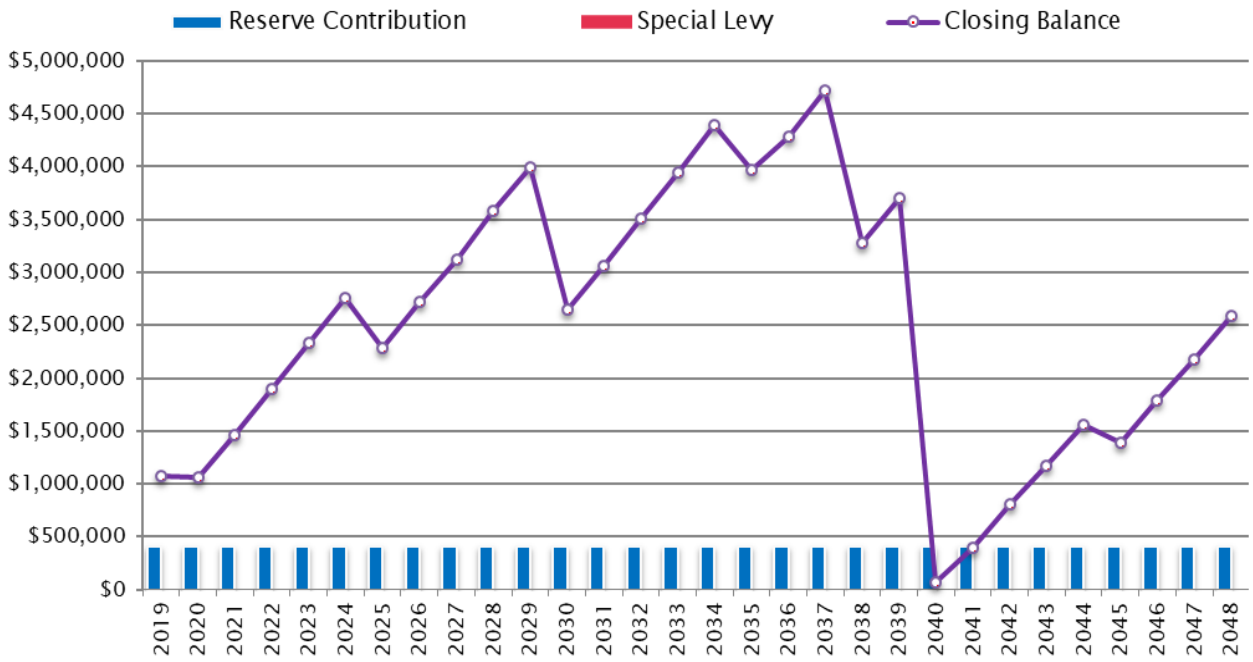

Figure 7.3 CRF balance, contribution, and special levies based on a Progressive Reserve calculation.

8 Next Steps

The Second Depreciation Report Update identifies the possible major maintenance and renewal expenditures that Brook at the Village may encounter over the next 30 years. Estimated timelines have been provided to assist the Strata Corporation with the planning process; however, the Second Depreciation Report Update should still 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.

Brook at the Village is a nine year old building (as of 2019), and some of the Assets, such as the sealant, eyebrow membrane, and parkade traffic membrane may require renewal in the next 10 years. It is recommended that the Owners commission a Building Enclosure Condition Assessment (BECA) to verify the concealed condition of the Assets and refine the timing and scope of the renewals.

It is unlikely that the Strata Corporation can avoid special levies in this time period; however, there may be opportunities to reduce the scope of work needed or otherwise manage projects to alleviate the financial impact on individual Owners.

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

Recommendations

- **Building Enclosure Condition Assessment**. Conduct a Condition Assessment of the building enclosure prior to or in conjunction with the next update to the Depreciation Report in three years' time. The condition assessment should assist in refining the renewals forecast.
- **Project Planning:** Review the information in Section 6.2, and begin planning for significant projects, including commissioning assessments, requesting information, and preparing construction budgets, well in advance of the forecasted date of renewal. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- **Major Maintenance Planning:** Review Appendix H for a detailed checklist of forecasted major maintenance activities and renewals on an annual basis.
- **Record keeping:** Continue to record significant renewals, repairs, and maintenance activities. These records will be used to improve the forecast at the time of the next Depreciation Report Update.
- **CRF Planning:** On a yearly basis, review and update the CRF funding strategy based on the estimated forecasts presented in this Report and update information obtained from assessments, investigations and quotations.
- **Further Investigations.** Conduct additional condition assessments/investigations, as required, to refine the data and confirm assumptions.
- **Updates:** Plan for an update to the Depreciation Report Update in three years' time.

Yours truly,

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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

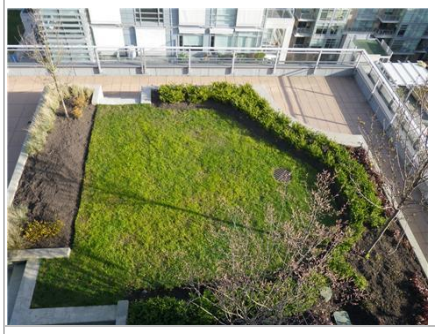
Asset Inventory

Brook at the Village
Asset Inventory

Enclosure

Roofs & Decks

Encl 01 - Protected SBS Membrane Deck with Landscaping



Location

Various decks

Description

SBS membrane overlaid with combination of filter fabric, drain rocks, insulation, pavers, and intensive and extensive landscaping overburden.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Encl 02 - Exposed SBS Membrane Roof

Location

Penthouse roofs.

Description

A SBS (Styrene-Butadiene-Styrene) membrane is torch applied and consists of two waterproofing layers, the base sheet and granulized cap sheet.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Encl 03 - Protected Liquid-Applied (Hot Rubber) Podium Membrane

Location

Patios and areas above the parking garage.

Description

Architectural drawings indicate liquid-applied, fully reinforced membrane overlaid with combination of drain boards, filter fabric, pavers and/or landscaping overburden.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Encl 04 - Stucco Clad Soffit

Location

Penthouse level

Description

Stucco cladding over supporting structure. Venting strips have been provided at the exterior edge.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Fall Protection

Encl 05 - Anchor Fall Protection Equipment

Location

Throughout roof and decks.

Description

Safety anchoring system for work on various exterior walls,decks, and roofs.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Encl 06 - Guardrail Glazed Aluminum

Location

Various roofs, deck, balcony, and patio perimeters.

Description

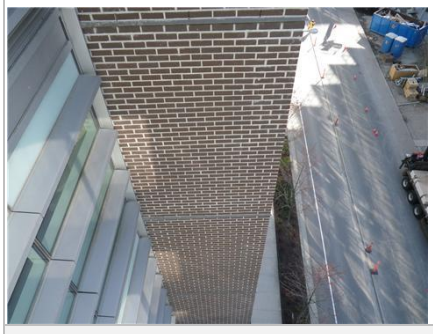
Aluminum Posts and glass infill panels functioning as a protective barrier at the open sides of balconies, decks, patios, other locations to prevent accidental falls from one level to another.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Walls

Encl 07 - Clay Masonry Veneer Wall



Location

North, east, and south building elevations.

Description

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

Information

Service Life:	45
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2055

Glazing Systems

Encl 08 - Curtain Wall

Location

First three floors of the north and west building elevations.

Description

Curtain wall, unitized assembly, structurally glazed on 2 sides, capped on 2 sides, with double glazing units.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Encl 09 - Aluminum Framed Window

Location

All building elevations.

Description

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

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Doors

Encl 10 - Aluminum Framed Sliding Glass Door

Location

East and north building elevations, providing access to various limited common property balconies, patios, and decks.

Description

Sliding glass doors, double insulating glazing units, aluminum framing.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Encl 11 - Metal Frame Swing Door

Location

Various patios, balconies, decks, and fire exit doors throughout the building.

Description

Metal framed wood swing door with and without insulating glazing units.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Balconies

Encl 12 - Concrete Eyebrows

Location

Concrete overhangs throughout the building.

Description

Poured-in-place architectural concrete overhang with urethane coating.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Encl 13 - Protected Urethane Balcony Membrane

Location

Pedestrian surfaces at the balconies.

Description

Tiles over liquid applied waterproofing membrane installed on the concrete balcony.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Canopies

Encl 14 - Metal Frame and Glass Canopy

Location

Adjacent to various building entrances.

Description

Canopy constructed with metal framing and single glazing. Glass panels get damaged and repaired as required.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

At and Below Grade

Encl 15 - Below Grade Vertical Waterproofing [S]

Location

Various locations at perimeter of parking garage.

Description

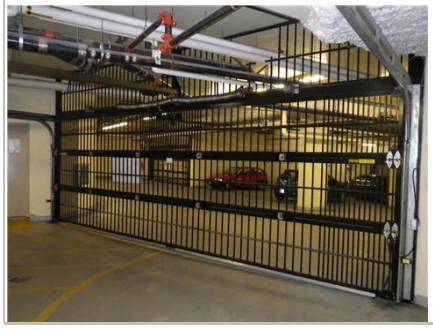
Waterproof membrane on concrete walls with drainage medium. Repaired as needed.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Parking Garage

Encl 16 - Sectional Overhead Door - Metal



Location

P1 Parking garage

Description

Pre-finished metal sectional overhead garage door with motor drive and hardware.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Encl 17 - Parkade Suspended Concrete Slab with Traffic-bearing Membrane

Location

P1 parkade, storage rooms, and service rooms.

Description

Traffic-bearing membrane on concrete parking garage floor slab.

Information

Service Life:	75
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2085

Encl 18 - Slab-on-Grade

Location

P2 parking garage.

Description

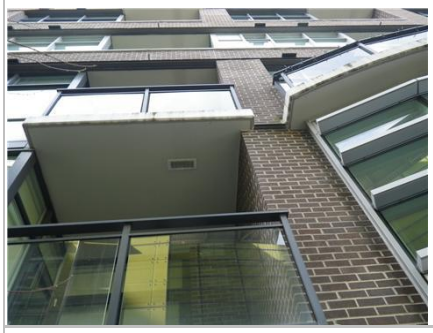
Concrete slab on grade.

Information

Service Life:	75
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2085

General & Inspections

Encl 19 - General & Inspections



Location

All elevations and all levels of the building.

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:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2085

Encl 20 - Sealant

Location

Interfaces and service penetrations at the exterior walls, roofs and other locations.

Description

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

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Electrical

Power Supply

Elec 01 - Distribution Transformers

Location

P1 and P2 electrical rooms (near stall #18 and 148).

Description

Square D, 75, 112.5, and 300 KVA, 208/600 V, 3 phase, dry-type, coil and core units with vibration dampers and NEMA enclosures.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Elec 02 - Emergency Generator [S]

Location

P1 parking garage. (near parking stall #1)

Description

Cummins Power Generation DFGE - 576840, 750 KW, 937.5 KVA, 3 phase, 347/600V, 1800 rpm, four cylinder, diesel generator with two 1140L steel tanks to provide emergency power.

Information

Service Life:	35
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2045

Elec 03 - Unit Substation [S]

Location

P2 parking garage. (Near stall #148)

Description

The Delta Group,1650 KVA, 12.47 KV/600 V, 3 phase, dry type transformer; main breaker, load break switches and metering compartments contained within unit substation to provide primary electrical service.

Information

Service Life:	35
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2045

Distribution

Elec 04 - Electrical Distribution

Location

Throughout the building.

Description

Square D, 400, 600, 800, and 1200A, 3 phase switchgear units; downstream switchboards, panelboards, breakers, switches, disconnects and wiring to mechanical, lighting and power loads throughout the building and to individual

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

suites through BC Hydro owned metering devices.

Light Fixtures

Elec 05 - Exterior Light Fixtures

Location

Mounted to walls, soffit, slab, and other various locations.

Description

A variety of fixture types, including wall, pole and post mounted, street, underside of soffit, in-slab, and pathway. A variety of lamp types, including fluorescent, compact fluorescent, LED, etc. for exterior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers and photocells. Replaced with LED, as required.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Elec 06 - Interior Light Fixtures

Location

All common area rooms throughout the building.

Description

A variety of fixture types, including fixed surface (pendant, track and sconce) and recessed (pot, troffer and cove). A variety of lamp types, including fluorescent, compact fluorescent, LED, etc. for interior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers, dimmers and photocells. Retrofitted to LED in 2016.

Information

Service Life:	20
Installed Year:	2016
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2036

Security

Elec 07 - Enterphone System [S]

Location

Entrances to building and in parking garage.

Description

Viscount MESH, surface mounted, enterphone panels with associated key pads and display panels.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Elec 08 - Proximity Access Control

Location

Access locations from exterior into common areas.

Description

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:	2010
Chronological Age:	9
Effective Age:	6
Next Renewal Year:	2025

Elec 09 - Security Surveillance [S]

Location

Throughout common areas and parking garage.

Description

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

Information

Service Life:	14
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2024

Mechanical

Controls and End Devices

Mech 01 - Solar Shading Device

Location

South and west elevations, 4th floor and up

Description

Motor-driven shading devices with fabric along cable track. Repaired in 2015/2016 and wind sensors added in 2017.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 02 - Controls - Electronic Actuators [S]

Location

Emergency generator room (P1-02)

Description

Electronic motor-driven control devices on dampers for ventilation in emergency generator room.

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Mech 03 - Controls - Electronic Actuators [S]

Location

P1 mechanical rooms

Description

Electronic motor-driven control devices on valves, dampers etc to control heating, air-conditioning, domestic hot water system and etc.

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Mech 04 - Variable Frequency Drives [S]

Location

P1 and P2 mechanical rooms (P1-18, P1-19, P1-33, P2-05).

Description

Danfoss and Toshiba, solid state devices used to modulate pumps flows in mechanical systems, to save energy by modulating flow rates.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 05 - Controls - Direct Digital [S]

Location

P1 mechanical room (P1 - 19)

Description

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

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 06 - Gas Detection - Parking Garage [S]

Location

Throughout parking garage

Description

AirTest, TR-2000 electronic sensing devices for detection of dangerous gases, carbon monoxide, propane, combustible fuels, produced by vehicles and to activate the exhaust fans accordingly. Replaced in 2018.

Information

Service Life:	10
Installed Year:	2018
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2028

Mech 07 - HVAC Instrumentation [S]

Location

Mounted to walls in common areas and equipment service rooms

Description

Daikin and Honeywell thermostats, programmable thermostats, flow gauges, thermometers, metering equipment, gauges, and other field devices to monitor and regulate pressure and temperature in the HVAC and plumbing distribution systems.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	16
Next Renewal Year:	2023

Plumbing & Drainage

Mech 08 - Tank - Water Storage [S]

Location

P1 mechanical room (P1-19)

Description

Viessmann, 300 L tanks, stainless steel water storage tanks connected to hydronic loop with indirect immersion coil.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 09 - Pumps - Grey Water Booster - Submersible [S]

Location

Cistern Room (P2-05)

Description

Cistern rainwater system with submersible pumps to grey water fixtures and equipment on all levels. Pump system and controls reconfigured and changed out in 2016.

Information

Service Life:	14
Installed Year:	2016
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2030

Mech 10 - Piping - Gas Distribution

Location

Throughout the building

Description

Gas distribution system consisting of threaded sch 40 steel piping from meter to appliance.

Information

Service Life:	50
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2060

Mech 11 - Fixtures - Toilets, Taps & Sinks

Location

Fitness room washroom and lounge.

Description

Sinks and other plumbing supply fixtures.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Mech 12 - Pump - Domestic Circulation & Recirculation [S]

Location

P1 Mechanical room (P1- 19)

Description

Armstrong and Baldor, fractional and 5 HP, pipe-mounted bronze body domestic hot water circulation and recirculation pumps.

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Mech 13 - Pumps - Storm Lift and Control Panel [S]

Location

P2 parking garage.

Description

Northwest Tech-con Systems, Duplex, 2x 7.5 HP, storm sump pumps and control panels for storm water runoff and sub-surface drainage. Replaced in 2019.

Information

Service Life:	15
Installed Year:	2019
Chronological Age:	0
Effective Age:	0
Next Renewal Year:	2034

Mech 14 - Sanitary Drainage Collection [S]

Location

Connected to waste fixtures throughout the building.

Description

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

Information

Service Life:	50
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2060

Mech 15 - Sediment Interceptor [S]

Location

P2 parking garage, near stall 136

Description

Underslab concrete silt interceptor assembly with backwater valve, cast steel cover and frame

Information

Service Life:	50
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2060

Mech 16 - Tank - DHW Storage - Heat Pumps [S]

Location

P1 Mechanical room (P1-19)

Description

200 gallon hot water storage tank connected to heat exchanger which is connected to an external energy source (ETS).

Information

Service Life:	8
Installed Year:	2010
Chronological Age:	9
Effective Age:	7
Next Renewal Year:	2020

Mech 17 - Cross Connection & Backflow Prevention [S]

Location

P1 Mechanical room (P1-09)

Description

Various types and sizes of backflow prevention valves, including vacuum breakers, double check, reduced pressure valves on systems. Serviced in 2019.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 18 - Heat Tracing - Heat Maintenance [S]

Location

P1 and P2 parking garage.

Description

Digitrace, high wattage heat trace controller for temperature maintenance of domestic hot water distribution systems, self regulating heater cable with parallel circuit heater strip and outer thermoplastic elastomer jacket.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 19 - Perimeter and Foundation Drainage [S]

Location

Perimeter and under slab of P2.

Description

Perforated PVC piping forming part of a sub-surface foundation perimeter drainage system around perimeter of building and underground structures.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Mech 20 - Piping - Domestic Water Distribution

Location

Connected to fixtures throughout the building.

Description

Mixture of insulated K and L copper for vertical/horizontal mains system and PEX piping within the suites.

Information

Service Life:	28
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2038

Mech 21 - Storm Drainage Collection [S]

Location

Roofs, decks, balconies, at grade perimeter.

Description

Trench drains, catch basins and associated piping systems for rainwater runoff. Roof drains may be included with the roof assets. This building incorporates a rainwater recovery and reuse system.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Mech 22 - Valves - Plumbing Flow Control and Directional [S]

Location

Mechanical rooms in P1 and P2.

Description

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

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Heating & Cooling

Mech 23 - Electric Cadet Heater

Location

Stairwells and mechanical rooms

Description

Engineered Air, 1.6 and 3 kW wall-mounted electric fan heaters with integral thermostat control for localized space heating.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 24 - Tank - Fuel Storage [S]

Location

Emergency generator room (P1-02)

Description

Two 300 USG, steel single wall fuel storage tank in building, with secondary containment.

Information

Service Life:	50
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2060

Mech 25 - Heat Pump - Water to Water [S]

Location

Mechanical room (P1-19)

Description

Water Furnace, water-to-water heat pumps, comprising waterloop condensor/evaporator, and pump centre.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 26 - Heating/Chilled Water Distribution [S]

Location

Throughout the building

Description

Closed piping system delivering heating/chilled water to radiant floor systems, coils in AHU's, CRAC units, etc. throughout the building. Includes valves, unions, hangers, etc.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Mech 27 - Electric Fireplace

Location

Lounge

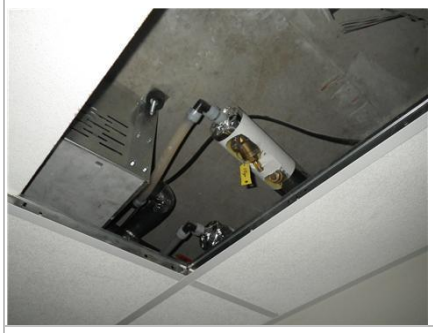
Description

Electric fireplaces with hearth mantel and electric heating element.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Mech 28 - Radiant Manifold Assembly - Suite Heating/Cooling



Location

In suite ceiling.

Description

Ceiling mounted hydronic heating/cooling header/manifold system with control valves and isolation valves. Distributes heating/cooling water to radiant capillary mat system at ceiling.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 29 - Heating System Expansion Tanks - Diaphragm-Type [S]

Location

P1 mechanical rooms

Description

Floor mounted diaphragm expansion tanks for heating system.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 30 - Valves - HVAC Flow Control and Directional [S]

Location

P1 mechanical rooms.

Description

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

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 31 - Chemical Treatment Equipment [S]

Location

P1 and P2 mechanical rooms

Description

Pot feeder, chemicals (such as biocide, scale, corrosion and oxygen inhibitor, glycol), metering pumps and other associated equipment to provide corrosion protection to boilers, loops and piping.

Information

Service Life:	8
Installed Year:	2010
Chronological Age:	9
Effective Age:	6
Next Renewal Year:	2021

Mech 32 - Hydronic Baseboard Heater

Location

Lounge and fitness room.

Description

Runtal curved radiant panel/convector, with control valve and room thermostat control.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Mech 33 - Primary & Secondary Heating Circulation Pump [S]

Location

P1 mechanical room (P1-18)

Description

Armstrong pumps for heating and chilled hydronic loop to heat exchangers, and systems.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 34 - Fan Coil Unit [S]

Location

Main electrical room (P2-11)

Description

Ceiling suspended fan coil units for electrical room air conditioning; matched condensing units in parking garage.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 35 - Water Cooled Condensing Units [S]

Location

Parkade P2, next to Main Electrical Room

Description

Daikin water cooled air conditioning condensing units, connected to associated ceiling mounted fan coil units for air conditioning of Main Electircal Room.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Mech 36 - Heat Exchanger - Plate & Frame [S]

Location

Mechanical room (P1-18)

Description

Sondex, plate-and-frame heat exchangers to separate secondary HVAC and plumbing systems from the main heating cooling loop.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Ventilation and Air-conditioning

Mech 37 - Exhaust Fans Parkade - Inline [S]

Location

Parkade exhaust equipment room (P1-33)

Description

Combination parking garage exhaust system and heat rejection unit. Scott Springfield, 120,000 CFM, with coils to expel heat from hydronic loop.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 38 - Supply Fans Parkade - Propellor [S]

Location

Northwest corner of both levels of the parkade.

Description

Greenheck 7.5 hp belt driven propellor supply fan mounted in exterior wall.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 39 - Trickle Vents - Indoor - Hydronic

Location

End of hallway and elevator area on each floor.

Description

E.H. Price, with motorized louvers to allow fresh air through and is heated with hot water heating coil to supply tempered make-up air to the interior spaces.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Mech 40 - Transfer Fans Parkade - Inline [S]

Location

Throughout both level of the parkade.

Description

Greenheck , axial centrifugal fan suspended from structure.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 41 - General Exhaust Fan [S]

Location

Service and storage rooms.

Description

Direct drive fans and ceiling fans.

Information

Service Life:	12
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2022

Other

Mech 42 - Trash Compactor

Location

P1 garbage room.

Description

Horizontal hydraulic ram compactor.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Mech 43 - Overhead Gate Motor

Location

P1 parking garage.

Description

Liftmaster, 1/2 HP AC motor and commercial-grade overhead sectional door controlled by an electric operator.

Information

Service Life:	7
Installed Year:	2010
Chronological Age:	9
Effective Age:	6
Next Renewal Year:	2020

Elevator

Traction

Elev 01 - Traction Elevators, Machine Roomless

Location

Elevator machine room in parking garage.

Description

Machine room-less traction passenger elevators, Hollister Whitney gearless machines (located in the hoistway overhead), MCE 4000 microprocessor controls, Torqmax VVVF drives, 2500 lbs capacity, 350 fpm rated speed.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Car Interiors

Elev 02 - Elevator Cabs & Hoistway

Location

Elevator cab and travelling hoistway.

Description

Gearless Imperial machines (located in the overhead), single speed side opening doors, stainless steel car and hall pushbuttons, one car operating panel (per elevator), GAL MOVFR door operators, infrared door protection, stainless steel doors and front return, glass panels on non-access walls, stainless steel ceiling, tile flooring, hands-free voice communication device, firefighter's emergency operation, emergency power operation, seismic provisions.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Fire Safety

Controls

Fire 01 - Fire Alarm Panel - Addressable

Location

Lobby and Fire Control Panel room (P1-13)

Description

Edwards EST microprocessor and supervised unit with annunciator and graphic display.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Detection

Fire 02 - Fire Detection & Alarm

Location

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

Description

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

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	-1
Next Renewal Year:	2030

Suppression

Fire 03 - Dry Sprinkler Compressor [S]

Location

Water entry room (P1-09)

Description

Swan compressor with 1 HP motor to maintain the pressure of air in the dry fire sprinkler lines.

Information

Service Life:	14
Installed Year:	2014
Chronological Age:	5
Effective Age:	5
Next Renewal Year:	2028

Fire 04 - Portable Fire Extinguisher

Location

Mounted to walls in various strategic locations throughout the building.

Description

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

Information

Service Life:	24
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2034

Fire 05 - Sprinkler & Standpipe - Wet

Location

Throughout the building, except parking garage.

Description

Upright, pendant, and sidewall sprinkler heads, flow switches and indicating devices, gauges, steel distribution lines.

Information

Service Life:	100
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2110

Fire 06 - Sprinkler System - Dry [S]

Location

Throughout the parking garage.

Description

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

Information

Service Life:	100
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2110

Fire 07 - Sprinkler Valve Assembly - Dry [S]

Location

Water Entry room (P1-09)

Description

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

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Egress

Fire 08 - Emergency Egress Equipment

Location

Mounted to walls and near doors in various strategic locations throughout.

Description

Unit battery packs and exit signs.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Interior Finishes

Floors

Finish 01 - Carpet Flooring

Location

Fitness room and common area corridors.

Description

Synthetic, low level loop, textile floor carpet tile units glued over floor substrate.

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Finish 02 - Laminate Flooring

Location

Lounge and elevator vestibules.

Description

Laminate flooring.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2030

Finish 03 - Painted Concrete Flooring

Location

Stairwells

Description

Exposed concrete floors, painted in some locations to provide a cleaner finish. This flooring asset does not include the concrete slab, which is not considered to be a renewable asset.

Information

Service Life:	75
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2085

Finish 04 - Floor Tile

Location

Lobby, washroom in fitness room, and lounge.

Description

Floor tile on thin set mortar with grout, cove base and interface thresholds with adjoining floor finishes.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Walls

Finish 05 - Wallpaper Covering

Location

Lobby and wall between fitness room and lounge.

Description

Decorative wallpaper sheet covering adhered to substrate sheathing.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Finish 06 - Ceramic Tile

Location

Fitness room washroom and feature wall in the lobby.

Description

Ceramic tile on mortar bed and substrate with grout and caulking at interfaces.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Finish 07 - Paint

Location

Lobby, common are corridors, stairwells, fitness room, and lounge.

Description

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

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Architectural Woodwork

Finish 08 - Baseboard, Molding and Casing

Location

Common are corridors,

Description

Linear components out of painted or finished wood or composite. Includes synthetic cove at wall to floor interface.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Finish 09 - Carpentry and Millwork

Location

Lounge and washroom.

Description

Built-in cabinetry with stone countertops.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Doors

Finish 10 - Interior Swing Door - General

Location

Stairwells, common are corridors, fitness room, lounge, parking garage, and other miscellaneous locations.

Description

Solid wood core or hollow metal swing door hung in framed opening including hardware. Exterior door is considered separately as part of the building enclosure system.

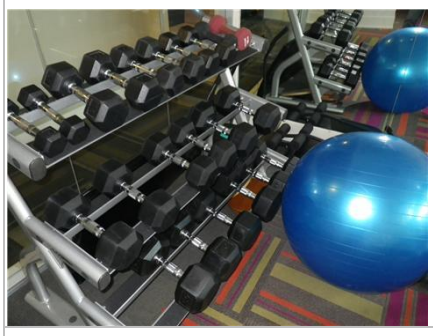
Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Amenities

Equipment

Amen 01 - Fitness Equipment



Location

Fitness room

Description

Various fitness machines and equipment.

Information

Service Life:	10
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2020

Amen 02 - Domestic Appliances

Location

Lounge.

Description

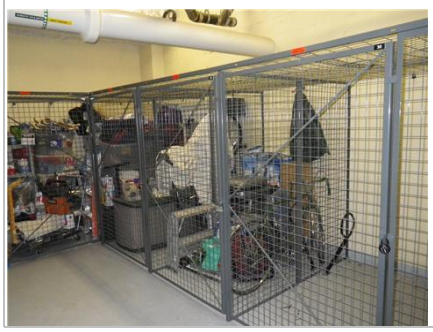
Small refrigerator, microwave oven, and dishwasher.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Specialties

Amen 03 - Metal Screen Storage Locker



Location

Storage rooms

Description

Painted metal screen storage lockers with steel framing and hardware.

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Furnishings

Amen 04 - Bicycle Rack

Location

In storage lockers.

Description

Floor mounted, steel frame bicycle rack.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Amen 05 - Central Mailboxes

Location

Lobby

Description

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

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Amen 06 - Public Signage

Location

Mounted to equipment, doors and other locations throughout the buildings.

Description

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

Information

Service Life:	25
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Amen 07 - Furniture

Location

Lounge and lobby.

Description

Sofas, chairs, tables, and desks.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Suite

Amen 08 - Television

Location

Lounge.

Description

Television.

Information

Service Life:	10
Installed Year:	2019
Chronological Age:	0
Effective Age:	0
Next Renewal Year:	2029

Sitework

Hard Landscaping

Site 01 - Water Feature [S]

Location

East elevation, between ASP and the Remainder building.

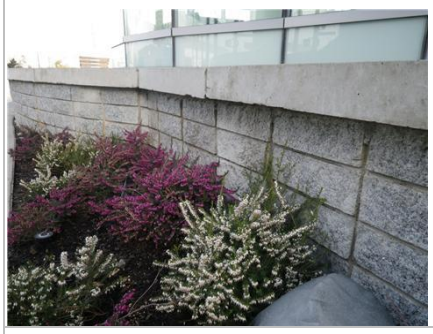
Description

Ponds and channels to retain water; pond liner, submersible recirculating pump, distribution piping, valves, and filtration for water treatment.

Information

Service Life:	15
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Site 02 - Stone Retaining Wall



Location

Various locations throughout the site.

Description

Stone masonry with grouted joints and precast concrete cap.

Information

Service Life:	45
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2055

Site 03 - Interlocking Unit Paving Driveway/Walkway

Location

Walkway between ASP and the Remainder building.

Description

Precast concrete unit pavers with a combination of chip seal joint filler and jointing sand, bedding sand, and onto compacted gravel base.

Information

Service Life:	40
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2050

Soft Landscaping

Site 04 - Soft Landscaping

Location

Throughout the site and at various decks.

Description

Lawn, ground cover, shrubs, perennials and small trees.

Information

Service Life:	30
Installed Year:	2010
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2040

Site 05 - Irrigation System

Location

Soft landscaping throughout the site.

Description

Controller with time clock, network of pipes, valves, and irrigation drip system distributed around the soft landscaping. Drip system installed in 2018.

Information

Service Life:	15
Installed Year:	2018
Chronological Age:	1
Effective Age:	9
Next Renewal Year:	2025

Appendix C

Asset Service Life Summary

RDH BUILDING SCIENCE

RDH Building Science Inc.
4333 Still Creek Drive #400
Burnaby, BC V5C 6S6

Making Buildings Better™

Brook at the Village

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Encl 01	Protected SBS Membrane Deck with Landscaping	9	21
Encl 02	Exposed SBS Membrane Roof	9	11
Encl 03	Protected Liquid-Applied (Hot Rubber) Podium Membrane	9	21
Encl 04	Stucco Clad Soffit	9	31
Encl 05	Anchor Fall Protection Equipment	9	31
Encl 06	Guardrail Glazed Aluminum	9	21
Encl 07	Clay Masonry Veneer Wall	9	36
Encl 08	Curtain Wall	9	31
Encl 09	Aluminum Framed Window	9	31
Encl 10	Aluminum Framed Sliding Glass Door	9	21
Encl 11	Metal Frame Swing Door	9	16
Encl 12	Concrete Eyebrows	9	11
Encl 13	Protected Urethane Balcony Membrane	9	11
Encl 14	Metal Frame and Glass Canopy	9	31
Encl 15	Below Grade Vertical Waterproofing [S]	9	31
Encl 16	Sectional Overhead Door - Metal	9	16
Encl 17	Parkade Suspended Concrete Slab with Traffic-bearing Membrane	9	66
Encl 18	Slab-on-Grade	9	66
Encl 19	General & Inspections	9	66
Encl 20	Sealant	9	1
Elec 01	Distribution Transformers	9	31
Elec 02	Emergency Generator [S]	9	26
Elec 03	Unit Substation [S]	9	26
Elec 04	Electrical Distribution	9	31
Elec 05	Exterior Light Fixtures	9	11
Elec 06	Interior Light Fixtures	3	17
Elec 07	Enterphone System [S]	9	16
Elec 08	Proximity Access Control	9	6
Elec 09	Security Surveillance [S]	9	5
Mech 01	Solar Shading Device	9	11
Mech 02	Controls - Electronic Actuators [S]	9	1
Mech 03	Controls - Electronic Actuators [S]	9	1
Mech 04	Variable Frequency Drives [S]	9	6
Mech 05	Controls - Direct Digital [S]	9	6
Mech 06	Gas Detection - Parking Garage [S]	1	9
Mech 07	HVAC Instrumentation [S]	9	4
Mech 08	Tank - Water Storage [S]	9	6

Mech 09	Pumps - Grey Water Booster - Submersible [S]	3	11
Mech 10	Piping - Gas Distribution	9	41
Mech 11	Fixtures - Toilets, Taps & Sinks	9	16
Mech 12	Pump - Domestic Circulation & Recirculation [S]	9	1
Mech 13	Pumps - Storm Lift and Control Panel [S]	0	15
Mech 14	Sanitary Drainage Collection [S]	9	41
Mech 15	Sediment Interceptor [S]	9	41
Mech 16	Tank - DHW Storage - Heat Pumps [S]	9	1
Mech 17	Cross Connection & Backflow Prevention [S]	9	11
Mech 18	Heat Tracing - Heat Maintenance [S]	9	6
Mech 19	Perimeter and Foundation Drainage [S]	9	31
Mech 20	Piping - Domestic Water Distribution	9	19
Mech 21	Storm Drainage Collection [S]	9	31
Mech 22	Valves - Plumbing Flow Control and Directional [S]	9	11
Mech 23	Electric Cadet Heater	9	11
Mech 24	Tank - Fuel Storage [S]	9	41
Mech 25	Heat Pump - Water to Water [S]	9	6
Mech 26	Heating/Chilled Water Distribution [S]	9	21
Mech 27	Electric Fireplace	9	21
Mech 28	Radiant Manifold Assembly - Suite Heating/Cooling	9	11
Mech 29	Heating System Expansion Tanks - Diaphragm-Type [S]	9	11
Mech 30	Valves - HVAC Flow Control and Directional [S]	9	11
Mech 31	Chemical Treatment Equipment [S]	9	2
Mech 32	Hydronic Baseboard Heater	9	31
Mech 33	Primary & Secondary Heating Circulation Pump [S]	9	6
Mech 34	Fan Coil Unit [S]	9	6
Mech 35	Water Cooled Condensing Units [S]	9	6
Mech 36	Heat Exchanger - Plate & Frame [S]	9	11
Mech 37	Exhaust Fans Parkade - Inline [S]	9	11
Mech 38	Supply Fans Parkade - Propellor [S]	9	11
Mech 39	Trickle Vents - Indoor - Hydronic	9	16
Mech 40	Transfer Fans Parkade - Inline [S]	9	11
Mech 41	General Exhaust Fan [S]	9	3
Mech 42	Trash Compactor	9	11
Mech 43	Overhead Gate Motor	9	1
Elev 01	Traction Elevators, Machine Roomless	9	16
Elev 02	Elevator Cabs & Hoistway	9	16
Fire 01	Fire Alarm Panel - Addressable	9	11
Fire 02	Fire Detection & Alarm	9	11
Fire 03	Dry Sprinkler Compressor [S]	5	9

Fire 04	Portable Fire Extinguisher	9	15
Fire 05	Sprinkler & Standpipe - Wet	9	91
Fire 06	Sprinkler System - Dry [S]	9	91
Fire 07	Sprinkler Valve Assembly - Dry [S]	9	31
Fire 08	Emergency Egress Equipment	9	11
Finish 01	Carpet Flooring	9	1
Finish 02	Laminate Flooring	9	11
Finish 03	Painted Concrete Flooring	9	66
Finish 04	Floor Tile	9	31
Finish 05	Wallpaper Covering	9	6
Finish 06	Ceramic Tile	9	21
Finish 07	Paint	9	1
Finish 08	Baseboard, Molding and Casing	9	31
Finish 09	Carpentry and Millwork	9	21
Finish 10	Interior Swing Door - General	9	31
Amen 01	Fitness Equipment	9	1
Amen 02	Domestic Appliances	9	6
Amen 03	Metal Screen Storage Locker	9	16
Amen 04	Bicycle Rack	9	21
Amen 05	Central Mailboxes	9	21
Amen 06	Public Signage	9	16
Amen 07	Furniture	9	6
Amen 08	Television	0	10
Site 01	Water Feature [S]	9	6
Site 02	Stone Retaining Wall	9	36
Site 03	Interlocking Unit Paving Driveway/Walkway	9	31
Site 04	Soft Landscaping	9	21
Site 05	Irrigation System	1	6

Appendix D

Disclosures and Disclaimers

Disclosures and Disclaimers

Condition of the Assets

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

Cost Estimating for Assets

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

Maintenance of the Assets:

The maintenance checklists are not exhaustive and are intended as a framework for the ongoing refinement of the maintenance program.

- Work must only be carried out by appropriately qualified personnel who have the necessary and sufficient knowledge about the maintenance tasks and maintenance intervals.
- The manufacturers' latest printed instructions should take precedence in the event of any conflict with the maintenance checklists.
- The Owners' maintenance staff and/or service contractors are responsible to verify what is contained in the manufacturers' documentation regarding recommended maintenance procedures and intervals.
- The maintenance checklists and maintenance intervals should be reviewed annually and adjusted, as required, to reflect the service environment, feedback from contractors, etc.

Specialist and Non-Specialist Reviews

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

Forecasting the Useful Service Life of Assets

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

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

Funding Models

The funding models for Depreciation Reports are based on a 30-year horizon and use "future year dollars termed" methodology. This methodology projects the costs (in future year dollars) over the planning horizon and not beyond the terminus year of the planning horizon. The current year is the starting year of the planning horizon. The term,

therefore, matches the initial horizon and does not respect a shifting horizon. This means that in year 1 the funding scenarios will look forward for 30 years.

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

Appendix E

Funding Scenario Cash Flow Tables

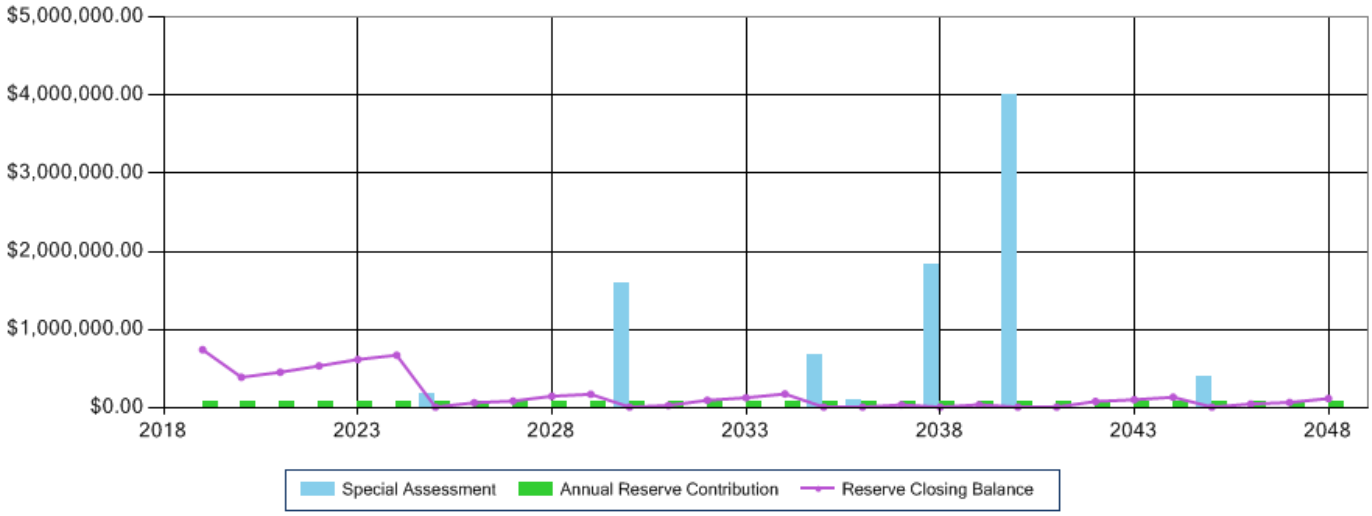
RDH
Making Buildings Better

Building - Funding Model
Brook at the Village

Name	A 2018/2019 - Previous (2016/2017) $75,000
Type	Basic
Regarding	Brook at the Village
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	129

Init Catchup Cost	$0
Operating Budget	$764,025
Starting Reserve Balance	$656,312
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$75,000
Contribution Above Threshold	$75,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$48

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$656,312	$75,000	$0	$13,126	$0	$0	$0	$744,438	29.76 %
2020	$744,438	$75,000	$0	$14,889	$442,980	$0	$0	$391,347	16.38 %
2021	$391,347	$75,000	$0	$7,827	$18,700	$0	$0	$455,474	16.69 %
2022	$455,474	$75,000	$0	$9,109	$3,800	$0	$0	$535,783	17.31 %
2023	$535,783	$75,000	$0	$10,716	$3,300	$0	$0	$618,199	17.78 %
2024	$618,199	$75,000	$0	$12,364	$31,700	$0	$0	$673,863	17.46 %
2025	$673,863	$75,000	$175,860	$13,477	$928,200	$0	$0	$10,000	0.29 %
2026	$10,000	$75,000	$0	$200	$19,500	$0	$0	$65,700	1.75 %
2027	$65,700	$75,000	$0	$1,314	$54,700	$0	$0	$87,314	2.10 %
2028	$87,314	$75,000	$0	$1,746	$14,720	$0	$0	$149,340	3.25 %
2029	$149,340	$75,000	$0	$2,987	$53,000	$0	$0	$174,327	3.47 %
2030	$174,327	$75,000	$1,589,666	$3,487	$1,832,480	$0	$0	$10,000	0.27 %
2031	$10,000	$75,000	$0	$200	$54,800	$0	$0	$30,400	0.76 %
2032	$30,400	$75,000	$0	$608	$9,540	$0	$0	$96,468	2.18 %
2033	$96,468	$75,000	$0	$1,929	$43,900	$0	$0	$129,497	2.68 %
2034	$129,497	$75,000	$0	$2,590	$29,100	$0	$0	$177,987	3.38 %
2035	$177,987	$75,000	$678,853	$3,560	$925,400	$0	$0	$10,000	0.20 %
2036	$10,000	$75,000	$93,560	$200	$168,760	$0	$0	$10,000	0.19 %
2037	$10,000	$75,000	$0	$200	$46,500	$0	$0	$38,700	0.70 %
2038	$38,700	$75,000	$1,840,826	$774	$1,945,300	$0	$0	$10,000	0.25 %
2039	$10,000	$75,000	$0	$200	$45,900	$0	$0	$39,300	0.92 %
2040	$39,300	$75,000	$4,006,194	$786	$4,111,280	$0	$0	$10,000	2.38 %
2041	$10,000	$75,000	$8,500	$200	$83,700	$0	$0	$10,000	2.39 %
2042	$10,000	$75,000	$0	$200	$3,700	$0	$0	$81,500	16.33 %
2043	$81,500	$75,000	$0	$1,630	$53,300	$0	$0	$104,830	19.70 %
2044	$104,830	$75,000	$0	$2,097	$45,900	$0	$0	$136,027	23.61 %
2045	$136,027	$75,000	$397,753	$2,721	$601,500	$0	$0	$10,000	22.22 %
2046	$10,000	$75,000	$0	$200	$35,200	$0	$0	$50,000	104.16 %
2047	$50,000	$75,000	$0	$1,000	$57,000	$0	$0	$69,000	300.00 %
2048	$69,000	$75,000	$0	$1,380	$26,420	$0	$0	$118,960	100.00 %
		$2,250,000	$8,791,212		$11,690,280				


$5,000,000.00
$4,000,000.00
$3,000,000.00
$2,000,000.00
$1,000,000.00
$0.00
2018
2023
2028
2033
2038
2043
2048
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

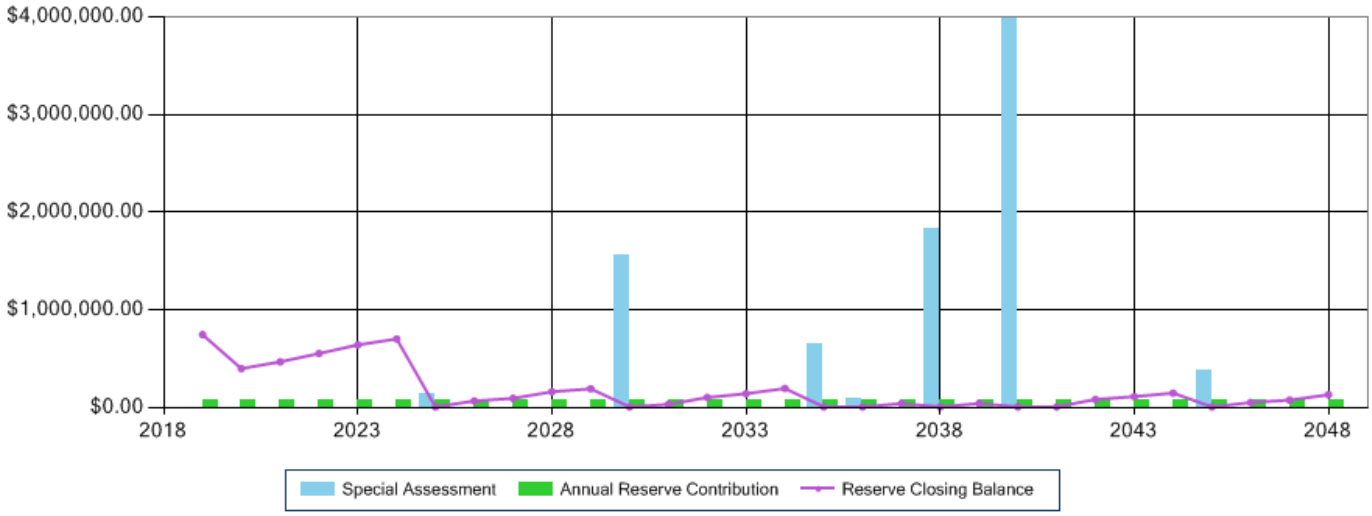
RDH
Making Buildings Better

Building - Funding Model
Brook at the Village

Name	B 2018/2019 - Current (2018/2019) $80,000
Type	Basic
Regarding	Brook at the Village
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	129

Init Catchup Cost	$0
Operating Budget	$764,025
Starting Reserve Balance	$656,312
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$80,000
Contribution Above Threshold	$80,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$52

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$656,312	$80,000	$0	$13,126	$0	$0	$0	$749,438	29.96 %
2020	$749,438	$80,000	$0	$14,989	$442,980	$0	$0	$401,447	16.80 %
2021	$401,447	$80,000	$0	$8,029	$18,700	$0	$0	$470,776	17.25 %
2022	$470,776	$80,000	$0	$9,416	$3,800	$0	$0	$556,391	17.98 %
2023	$556,391	$80,000	$0	$11,128	$3,300	$0	$0	$644,219	18.53 %
2024	$644,219	$80,000	$0	$12,884	$31,700	$0	$0	$705,404	18.27 %
2025	$705,404	$80,000	$138,688	$14,108	$928,200	$0	$0	$10,000	0.29 %
2026	$10,000	$80,000	$0	$200	$19,500	$0	$0	$70,700	1.88 %
2027	$70,700	$80,000	$0	$1,414	$54,700	$0	$0	$97,414	2.35 %
2028	$97,414	$80,000	$0	$1,948	$14,720	$0	$0	$164,642	3.58 %
2029	$164,642	$80,000	$0	$3,293	$53,000	$0	$0	$194,935	3.88 %
2030	$194,935	$80,000	$1,563,646	$3,899	$1,832,480	$0	$0	$10,000	0.27 %
2031	$10,000	$80,000	$0	$200	$54,800	$0	$0	$35,400	0.88 %
2032	$35,400	$80,000	$0	$708	$9,540	$0	$0	$106,568	2.41 %
2033	$106,568	$80,000	$0	$2,131	$43,900	$0	$0	$144,799	3.00 %
2034	$144,799	$80,000	$0	$2,896	$29,100	$0	$0	$198,595	3.77 %
2035	$198,595	$80,000	$652,833	$3,972	$925,400	$0	$0	$10,000	0.20 %
2036	$10,000	$80,000	$88,560	$200	$168,760	$0	$0	$10,000	0.19 %
2037	$10,000	$80,000	$0	$200	$46,500	$0	$0	$43,700	0.80 %
2038	$43,700	$80,000	$1,830,726	$874	$1,945,300	$0	$0	$10,000	0.25 %
2039	$10,000	$80,000	$0	$200	$45,900	$0	$0	$44,300	1.03 %
2040	$44,300	$80,000	$3,996,094	$886	$4,111,280	$0	$0	$10,000	2.38 %
2041	$10,000	$80,000	$3,500	$200	$83,700	$0	$0	$10,000	2.39 %
2042	$10,000	$80,000	$0	$200	$3,700	$0	$0	$86,500	17.33 %
2043	$86,500	$80,000	$0	$1,730	$53,300	$0	$0	$114,930	21.60 %
2044	$114,930	$80,000	$0	$2,299	$45,900	$0	$0	$151,329	26.27 %
2045	$151,329	$80,000	$377,145	$3,027	$601,500	$0	$0	$10,000	22.22 %
2046	$10,000	$80,000	$0	$200	$35,200	$0	$0	$55,000	114.58 %
2047	$55,000	$80,000	$0	$1,100	$57,000	$0	$0	$79,100	343.91 %
2048	$79,100	$80,000	$0	$1,582	$26,420	$0	$0	$134,262	100.00 %
		$2,400,000	$8,651,192		$11,690,280				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2018
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Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

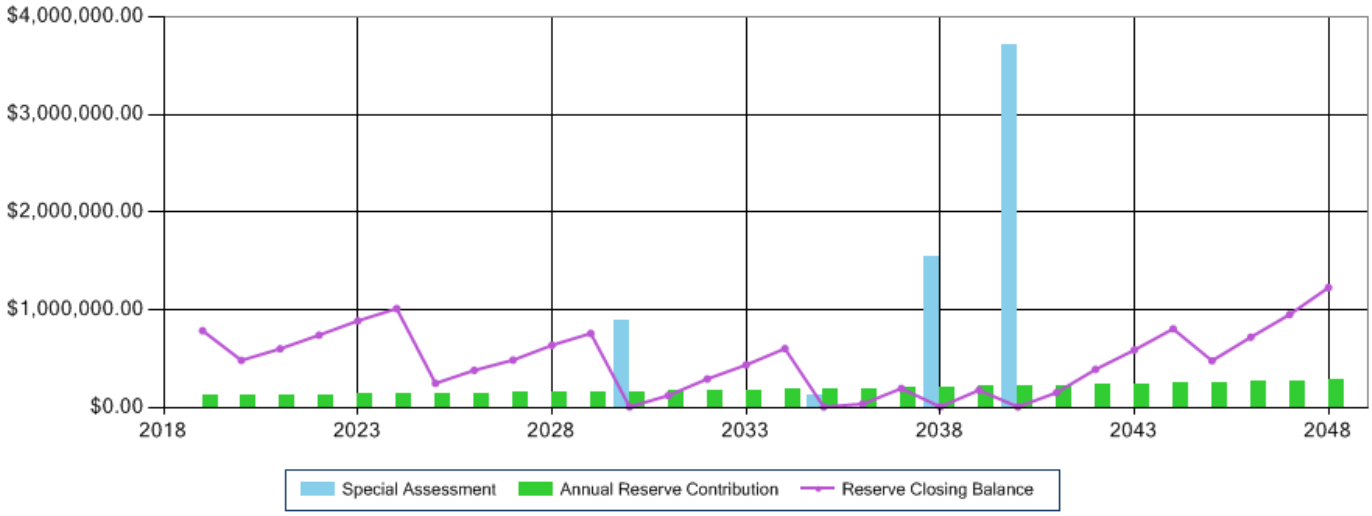
RDH
Making Buildings Better

Building - Funding Model
Brook at the Village

Name	C 2018/2019 - Alternative $120,000
Type	Basic
Regarding	Brook at the Village
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	129

Init Catchup Cost	$0
Operating Budget	$764,025
Starting Reserve Balance	$656,312
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$120,000
Contribution Above Threshold	$120,000
Reserve Contribution Increase	3.00 %
Monthly Avg. Unit Contribution	$78

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$656,312	$120,000	$0	$13,126	$0	$0	$0	$789,438	31.56 %
2020	$789,438	$123,600	$0	$15,789	$442,980	$0	$0	$485,847	20.33 %
2021	$485,847	$127,308	$0	$9,717	$18,700	$0	$0	$604,172	22.14 %
2022	$604,172	$131,127	$0	$12,083	$3,800	$0	$0	$743,583	24.03 %
2023	$743,583	$135,061	$0	$14,872	$3,300	$0	$0	$890,215	25.61 %
2024	$890,215	$139,113	$0	$17,804	$31,700	$0	$0	$1,015,433	26.31 %
2025	$1,015,433	$143,286	$0	$20,309	$928,200	$0	$0	$250,827	7.50 %
2026	$250,827	$147,585	$0	$5,017	$19,500	$0	$0	$383,929	10.22 %
2027	$383,929	$152,012	$0	$7,679	$54,700	$0	$0	$488,920	11.80 %
2028	$488,920	$156,573	$0	$9,778	$14,720	$0	$0	$640,551	13.95 %
2029	$640,551	$161,270	$0	$12,811	$53,000	$0	$0	$761,632	15.19 %
2030	$761,632	$166,108	$899,508	$15,233	$1,832,480	$0	$0	$10,000	0.27 %
2031	$10,000	$171,091	$0	$200	$54,800	$0	$0	$126,491	3.17 %
2032	$126,491	$176,224	$0	$2,530	$9,540	$0	$0	$295,705	6.69 %
2033	$295,705	$181,511	$0	$5,914	$43,900	$0	$0	$439,230	9.10 %
2034	$439,230	$186,956	$0	$8,785	$29,100	$0	$0	$605,870	11.51 %
2035	$605,870	$192,565	$124,847	$12,117	$925,400	$0	$0	$10,000	0.20 %
2036	$10,000	$198,342	$0	$200	$168,760	$0	$0	$39,782	0.78 %
2037	$39,782	$204,292	$0	$796	$46,500	$0	$0	$198,369	3.63 %
2038	$198,369	$210,421	$1,542,543	$3,967	$1,945,300	$0	$0	$10,000	0.25 %
2039	$10,000	$216,733	$0	$200	$45,900	$0	$0	$181,033	4.24 %
2040	$181,033	$223,235	$3,713,391	$3,621	$4,111,280	$0	$0	$10,000	2.38 %
2041	$10,000	$229,932	$0	$200	$83,700	$0	$0	$156,432	37.51 %
2042	$156,432	$236,830	$0	$3,129	$3,700	$0	$0	$392,691	78.69 %
2043	$392,691	$243,935	$0	$7,854	$53,300	$0	$0	$591,180	111.12 %
2044	$591,180	$251,253	$0	$11,824	$45,900	$0	$0	$808,357	140.33 %
2045	$808,357	$258,791	$0	$16,167	$601,500	$0	$0	$481,815	1,070.69 %
2046	$481,815	$266,554	$0	$9,636	$35,200	$0	$0	$722,806	1,505.84 %
2047	$722,806	$274,551	$0	$14,456	$57,000	$0	$0	$954,813	4,151.36 %
2048	$954,813	$282,788	$0	$19,096	$26,420	$0	$0	$1,230,277	100.00 %
		$5,709,047	$6,280,289		$11,690,280				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2048
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

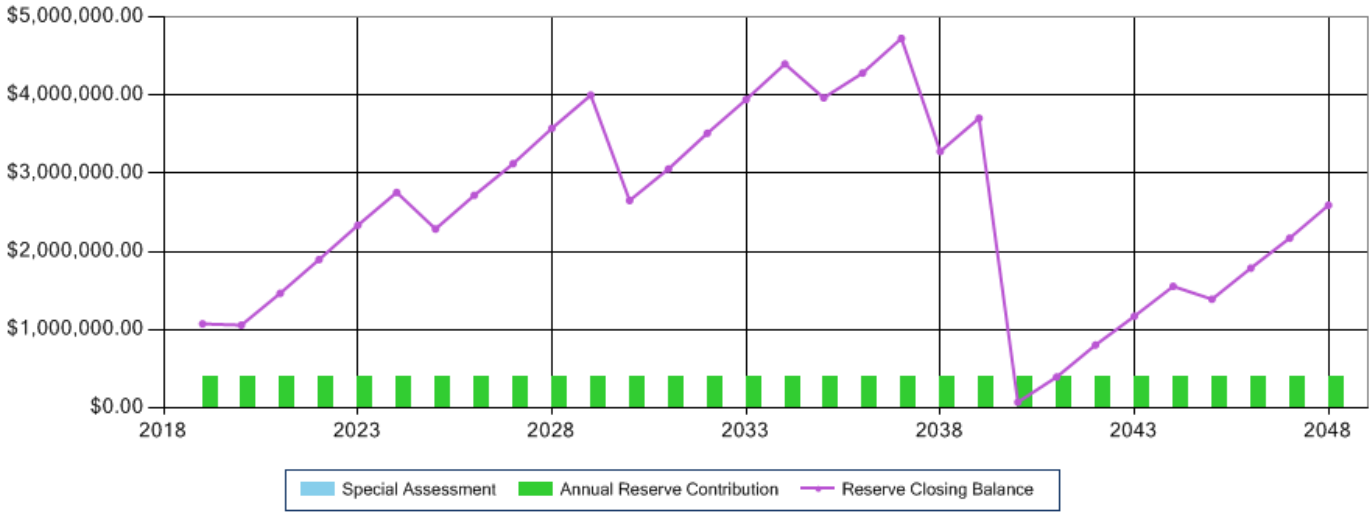
RDH
Making Buildings Better

Building - Funding Model
Brook at the Village

Name	D 2018/2019 - Progressive $405,000
Type	Basic
Regarding	Brook at the Village
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	129

Init Catchup Cost	$0
Operating Budget	$764,025
Starting Reserve Balance	$656,312
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$405,000
Contribution Above Threshold	$405,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$262

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$656,312	$405,000	$0	$13,126	$0	$0	$0	$1,074,438	42.96 %
2020	$1,074,438	$405,000	$0	$21,489	$442,980	$0	$0	$1,057,947	44.28 %
2021	$1,057,947	$405,000	$0	$21,159	$18,700	$0	$0	$1,465,406	53.71 %
2022	$1,465,406	$405,000	$0	$29,308	$3,800	$0	$0	$1,895,914	61.27 %
2023	$1,895,914	$405,000	$0	$37,918	$3,300	$0	$0	$2,335,532	67.20 %
2024	$2,335,532	$405,000	$0	$46,711	$31,700	$0	$0	$2,755,543	71.40 %
2025	$2,755,543	$405,000	$0	$55,111	$928,200	$0	$0	$2,287,454	68.44 %
2026	$2,287,454	$405,000	$0	$45,749	$19,500	$0	$0	$2,718,703	72.44 %
2027	$2,718,703	$405,000	$0	$54,374	$54,700	$0	$0	$3,123,377	75.38 %
2028	$3,123,377	$405,000	$0	$62,468	$14,720	$0	$0	$3,576,124	77.92 %
2029	$3,576,124	$405,000	$0	$71,522	$53,000	$0	$0	$3,999,647	79.80 %
2030	$3,999,647	$405,000	$0	$79,993	$1,832,480	$0	$0	$2,652,160	73.18 %
2031	$2,652,160	$405,000	$0	$53,043	$54,800	$0	$0	$3,055,403	76.57 %
2032	$3,055,403	$405,000	$0	$61,108	$9,540	$0	$0	$3,511,971	79.52 %
2033	$3,511,971	$405,000	$0	$70,239	$43,900	$0	$0	$3,943,311	81.74 %
2034	$3,943,311	$405,000	$0	$78,866	$29,100	$0	$0	$4,398,077	83.58 %
2035	$4,398,077	$405,000	$0	$87,962	$925,400	$0	$0	$3,965,639	82.56 %
2036	$3,965,639	$405,000	$0	$79,313	$168,760	$0	$0	$4,281,192	84.54 %
2037	$4,281,192	$405,000	$0	$85,624	$46,500	$0	$0	$4,725,316	86.57 %
2038	$4,725,316	$405,000	$0	$94,506	$1,945,300	$0	$0	$3,279,522	83.00 %
2039	$3,279,522	$405,000	$0	$65,590	$45,900	$0	$0	$3,704,213	86.85 %
2040	$3,704,213	$405,000	$0	$74,084	$4,111,280	$0	$0	$72,017	17.18 %
2041	$72,017	$405,000	$0	$1,440	$83,700	$0	$0	$394,757	94.66 %
2042	$394,757	$405,000	$0	$7,895	$3,700	$0	$0	$803,952	161.11 %
2043	$803,952	$405,000	$0	$16,079	$53,300	$0	$0	$1,171,731	220.25 %
2044	$1,171,731	$405,000	$0	$23,435	$45,900	$0	$0	$1,554,266	269.83 %
2045	$1,554,266	$405,000	$0	$31,085	$601,500	$0	$0	$1,388,851	3,086.33 %
2046	$1,388,851	$405,000	$0	$27,777	$35,200	$0	$0	$1,786,428	3,721.72 %
2047	$1,786,428	$405,000	$0	$35,729	$57,000	$0	$0	$2,170,157	9,435.46 %
2048	$2,170,157	$405,000	$0	$43,403	$26,420	$0	$0	$2,592,140	100.00 %
		$12,150,000	$0		$11,690,280				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Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

Appendix F

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 (BAMS)

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 versus what is outstanding so that you are better able to produce reports and make informed decisions.

RDH

About Us

RDH Qualifications

Mark Will | B.A. Econ.

Managing Principal, Vancouver Regional Manager

- B.A., Economics
- Has worked in project management since 1997
- Member of the Board of Directors, Condominium Home Owner's Association (CHOA)
- Member of Professional Association of Managing Agents (PAMA)

Jason Dunn | B.Arch.Sc., CCCA

Principal, Senior Project Manager

- B.Arch.Sc., Building Science Option
- Certified Construction Contract Administrator, CSC
- Has worked in building science consulting since 2004

Jesse Listoen | Dipl.T.

Associate, Project Manager

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 5+ years' experience in maintenance and planning consulting and has been involved in the preperation 70+ depreciation reports

Brandon Carreira | Dipl.T.

Project Manager

- MaP Service Area Leader
- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- Has worked in maintenance and planning consulting since 2011
- Prepared 150+ Depreciation Reports and has been involved with 200+ MaP projects

David Taguchi | Eng.L., RRO

Associate, Building Science Specialist

- Eng.L., Engineers & Geoscientists of British Columbia
- RRO, Roofing Consultants Institute Inc.
- Member of Applied Science Technologists and Techicians of British Columbia
- Has 19 years of Building Science Experience

Alex Seto | Dipl.T.

Building Science Technologist

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- Has worked in maintenance and planning consulting since 2012

RDH

RDH Qualifications

Jackie Wong | Dipl.T.

Building Science Technologist

- → Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- → Has worked in maintenance and planning consulting since 2016

Talen Springer | EIT

Building Science Engineer (EIT)

- → B.A.Sc., Civil Engineering
- → Has worked in maintenance and planning consulting since 2016

Preston Wu | Dipl.T.

Maintenance and Planning Technologist

- → Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- → Has worked in maintenance and planning consulting since 2016

Cameron Skoglund | GradTech.

Maintenance and Planning Technologist

- → GradTech., ASTTBC
- → Has worked in maintenance and planning consulting since 2017

Torrance Beamish | B.F.A., Dipl.T.

Building Science Technologist

- → Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- → Has worked in maintenance and planning consulting since 2017

Yan Marineau-Brachmann | B.A.Sc.

Building Science Engineer (EIT)

- → B.A.Sc., Civil Engineering
- → Has worked in maintenance and planning consulting since 2018

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RDH Qualifications

Administrators and Client Support

Vanessa Jumawan

Maintenance and Planning Coordinator

- → Has worked in administration within engineering/architecture since 2008
- → Preparation of Depreciation Report estimates and proposals

Anna Qiu

Maintenance and Planning Project Assistant

- → Certificate, Business Administration
- → Has worked in administration within engineering/architecture firms since 2004
- → BAMS user account setup and maintenance

Software Support and Programmer

Matthew Branch | P.Eng.

Software Developer

- → B.Sc., Civil Engineering
- → Registered professional engineer, APEGBC
- → Has worked in engineering data analysis since 2000

Acknowledgements

Serge Desmarais | B.Arch. Architect AIBC, CP

Principal (In Memoriam), Senior Building Science Specialist

RDH gratefully acknowledges the contributions of Serge Desmarais as the building science technical lead for the MaP group.

- → Registered Architect AIBC, Certified Professional
- → 30+ years' experience in building design and construction capital renewal projects
- → RDH 2004 - 2017

Appendix G

Insurance Certificate

Ref. No. 320008109489

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

Re: Evidence of Insurance:

To Whom It May Concern
Suite 400, 4333 Still Creek Drive
Burnaby, BC V5C 6S6

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.
Suite 400, 4333 Still Creek Drive
Burnaby, BC V5C 6S6

Coverage

Commercial General Liability

Insurer	Zurich Insurance Company Ltd		
Policy #	8850746		
Effective	02-May-2019	**Expiry**	02-May-2020
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 Tenant's Legal Liability - All Risks $1,000,000 Legal Liability for Damage to Hired Automobiles $100,000 Policy may be subject to a general aggregate and other aggregates where applicable		

Architects & Engineers Professional Liability

Insurer	Lloyd's Underwriters		
Policy #	PSDEF1900249		
Effective	02-May-2019	**Expiry**	02-May-2020
Limits of Liability	Subject to aggregate where applicable		

Terms and / or Additional Coverage

Professional Liability
Limit: $1,000,000 Per Claim Limit / $2,000,000 Aggregate Limit

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

AON

Ref. No. 320008109489

CERTIFICATE OF INSURANCE

Commercial General Liability

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

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

Aon Reed Stenhouse Inc.

Dated : 10-May-2019
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

Appendix H

Strategic Plan

RDH Building Science Inc.
4333 Still Creek Drive #400
Burnaby, BC V5C 6S6

Making Buildings Better™

Brook at the Village
Major Maintenance and Renewals Schedule

Accuracy of Budget Cost Estimates:

1. Budget costs in this report are provided in both current year dollars(without inflation or escalation factors) and future year dollars(with inflation or escalation factors).
2. All budget costs are preliminary estimates intended for planning purposes and not for accounting use.
3. Actual costs will vary depending on several factors. The budget estimates assume economies of scale will be achieved by bundling work items together into larger projects. Small projects done individually may exceed the budget estimates.
4. Each project should include appropriate cost line-items when developing an overall project budget.
5. Labour and material costs are subject to the vagaries of the marketplace. At the time of tender, costs may vary depending on the time of the year and/or contractor availability.
6. The budget estimates must be updated over time and confirmed by competitive tender before any contracts are awarded.
7. Detailed repair specifications are required to be prepared in order to confirm scopes of work and costs.
8. Soft costs, such as consulting services and contingency allowances are not included in the budget estimates. Depending on the sizes, scope and timing of individual projects, the magnitude of the soft costs will vary.
9. Cost savings may be realized depending on the use of in-house labor or 3rd party-contractors.
10. The estimates do not include allowances for site specific access requirements and environmental concerns, which should be addressed on a project-by-project basis.
11. Consideration may sometimes need to be given to costs arising from the impact of projects on occupancy use and facility operations.

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																				
ROOFS & DECKS																																				
Encl 01	R01	Replace roof membrane assembly and associated components. Some of the pavers and overburden may be salvageable.	30 Yrs	$675,000	2040	$1,000,000																					•									
Encl 02	R01	Replace SBS membrane roof assembly and associated component such as drains and flashing.	25 Yrs	$21,580	2030	$27,000												•																		
Encl 03	R01	Replace roof membrane assembly and associated components. Some of the pavers and overburden may be salvageable.	30 Yrs	$196,800	2040	$300,000																					•									
Encl 04	R01	Clean and renew acrylic stucco finish coat as required.	10 Yrs	$225	2020	$230		•										•									•									
Encl 04	R02	Replace stucco clad soffit and associated components.	40 Yrs	$4,500	2050	$8,300																														
FALL PROTECTION																																				
Encl 05	R01	Replace components of fall protection system, as required.	40 Yrs	$45,000	2050	$83,000																														
Encl 06	J02	Review guardrails for structural adequacy including attachments.	10 Yrs	$0	2020	$0		•										•																		
Encl 06	R01	Replace exterior guardrails.	30 Yrs	$335,400	2040	$510,000																					•									
WALLS																																				
Encl 07	J02	Repoint mortar joints in clay masonry veneer wall, as required.	5 Yrs	$11,920	2030	$15,000												•				•					•						•			
Encl 07	J03	Re-apply sealer over masonry as required.	10 Yrs	$0	2020	$0		•										•									•									
Encl 07	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.]	45 Yrs	$96,850	2055	$200,000																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																				
GLAZING SYSTEMS																																				
Encl 08	R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$5,000	2025	$5,600							•		•		•		•		•		•		•		•		•		•		•		•	
Encl 08	R02	Replace curtain wall assembly.	40 Yrs	$1,100,000	2050	$2,000,000																														
Encl 09	J03	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$24,800	2025	$28,000							•		•		•		•		•		•		•		•		•		•		•		•	
Encl 09	R01	Replace aluminum framed windows and associated components.	40 Yrs	$4,811,200	2050	$8,900,000																														
DOORS																																				
Encl 10	J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$0	2025	$0							•		•		•		•		•		•		•		•									
Encl 10	R01	Replace sliding glass doors and associated components.	30 Yrs	$237,500	2040	$360,000																						•								
Encl 11	J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$0	2020	$0		•		•		•		•		•		•		•		•											•		•	
Encl 11	R01	Replace metal frame swing doors.	25 Yrs	$137,000	2035	$190,000																	•													
BALCONIES																																				
Encl 12	J01	Repair locally damaged and delaminated balcony membrane prior to re-application of top coat.	10 Yrs	$3,400	2020	$3,500		•																				•								
Encl 12	R01	Prepare and re-apply membrane top coat.	10 Yrs	$16,320	2020	$17,000		•																				•								
Encl 12	R02	Replace urethane eyebrow membranes.	20 Yrs	$48,960	2030	$61,000												•																		
Encl 13	R02	Replace Exposed Urethane Balcony Membrane and associated component.	25 Yrs	$522,600	2030	$650,000												•																		
CANOPIES																																				
Encl 14	R02	Replace metal and glass canopy assembly.	40 Yrs	$43,400	2050	$80,000																														
AT AND BELOW GRADE																																				
Encl 15	R01	Repair from interior, as required.	10 Yrs	$10,534	2025	$12,000							•										•										•			
Encl 15	R02	Repair from interior (as required) or replaces sections of at grade waterproofing assembly, excluding landscape overburden, as required. [The below grade waterproofing generally is not considered a reserve component.]	40 Yrs	$70,224	2050	$130,000																														
PARKING GARAGE																																				
Encl 16	J02	Repaint overhead doors.	10 Yrs	$1,000	2020	$1,000		•										•										•								
Encl 16	R02	Replacement of sectional overhead doors and associated hardware.	25 Yrs	$3,900	2035	$5,400																	•													
Encl 17	J01	Re-apply traffic demarcation striping and directional signage as required. Frequency will depend on traffic volume and other factors.	7 Yrs	$1,000	2021	$1,000			•							•							•							•						
Encl 17	R01	Locally repair damaged traffic-bearing membrane.	15 Yrs	$6,811	2029	$8,300											•																			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																				
Encl 17	R02	Prepare concrete surface and re-apply traffic-bearing membrane. Frequency will depend on traffic volume and other factors.	15 Yrs	$516,000	2025	$580,000							•														•									
Encl 17	R03	Concrete slab is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	75 Yrs	$0	2085	$0																														
Encl 18	R01	Prepare surface and apply concrete sealer.	5 Yrs	$6,600	2021	$6,900			•					•					•					•					•					•		
Encl 18	R02	Concrete slab is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	75 Yrs	$0	2085	$0																														
GENERAL & INSPECTIONS																																				
Encl 19	J01	Perform 10-year warranty review in sufficient time prior to expiration of warranty period for certain portions of the work. Prepare list of any deficiencies for correction.	10 Yrs	$5,000	2020	$5,100		•																												
Encl 19	J03	Update depreciation report every three years.	3 Yrs	$0	2022	$0				•			•			•			•			•			•			•			•			•		
Encl 19	J04	Perform full condition assessment of all enclosure systems.	5 Yrs	$10,000	2020	$10,000		•					•					•					•					•					•		
Encl 19	R01	Update maintenance and renewals plan. Review frequency of maintenance tasks and adjust maintenance intervals based on service environment, assembly behaviour over the preceding year and feedback from contractors.	75 Yrs	$0	2085	$0																														
Encl 20	R01	Replace sealants at various locations at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	10 Yrs	$9,000	2025	$10,000							•																							
Encl 20	R02	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	10 Yrs	$90,000	2020	$92,000		•										•										•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELECTRICAL																																				
POWER SUPPLY																																				
Elec 01	R01	Conduct infrared thermography and ultrasonic scanning tests on distribution transformers. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	5 Yrs	$1,220	2021	$1,300			•					•					•					•					•					•		
Elec 01	R02	Replace distributions transformers as required.	40 Yrs	$9,150	2050	$17,000																														
Elec 02	R01	Replace generator hoses.	10 Yrs	$915	2020	$930		•										•										•								
Elec 02	R02	Rebuild emergency generator.	17 Yrs	$9,150	2027	$11,000									•																	•				
Elec 02	R03	Replace generator battery packs.	4 Yrs	$183	2020	$190		•				•				•				•				•				•					•			•
Elec 02	R04	Replace emergency generator and transfer switch.	35 Yrs	$73,200	2045	$120,000																											•				
Elec 03	J01	Lubricate all moving contacts.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELECTRICAL																																					
Elec 03	J02	Perform mechanical tests in accordance with manufacturer guidelines to verify mechanical integrity of unit substation equipment and main secondary disconnects (e.g. check switches for correct operation and alignment; megger and verify equipment phase colours; inspect candles for damage or cracking, oil leakage and oil level for oil circuit breakers).	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Elec 03	J03	Calibrate electrical relays to match documented (or utility company) settings.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Elec 03	J04	Prior to cleaning verify nameplate information; check insulator chips, cracks and tracking; inspect lightning arrestors and visually inspect contacts and bus.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Elec 03	J05	Verify that unit substation grounding network is adequate to ensure safety during work and while equipment is in operation.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Elec 03	J06	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Elec 03	R01	Clean and maintain all unit substation equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	5 Yrs	$1,830	2021	$1,900			•					•					•					•					•					•		
Elec 03	R02	Conduct infrared thermography and ultrasonic scanning tests on unit substation equipment. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	5 Yrs	$1,220	2021	$1,300			•					•					•					•					•					•		
Elec 03	R03	Replace unit substation equipment.	35 Yrs	$122,000	2045	$200,000																											•			
DISTRIBUTION																																				
Elec 04	R01	Conduct infrared thermography and ultrasonic scanning tests on all switchgear, distribution panels, cable and bus connections, and other critical equipment. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated prior to planned maintenance to identify areas that require immediate attention. Tests should be conducted on energized equipment during peak demand periods if possible.	5 Yrs	$1,830	2021	$1,900			•					•					•					•					•					•		
Elec 04	R02	Cyclical replacement of components of the electrical distribution equipment, as required.	40 Yrs	$36,600	2050	$68,000																														
LIGHT FIXTURES																																				
Elec 05	R05	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	20 Yrs	$7,000	2030	$8,700												•																		
Elec 06	R05	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	20 Yrs	$102,000	2036	$140,000																		•												
SECURITY																																				
Elec 07	R01	Replace enterphone panels, excluding field wiring.	25 Yrs	$24,000	2035	$33,000																	•													
Elec 08	R01	Replace media in recording device to maintain continuous records from proximity access control devices. Retain records in secure archive for period determined by policy.	6 Yrs	$0	2022	$0				•						•						•					•					•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELECTRICAL																																				
Elec 08	R02	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	15 Yrs	$60,000	2025	$68,000							•														•									
Elec 09	R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	14 Yrs	$24,400	2024	$27,000						•													•											

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
CONTROLS AND END DEVICES																																				
Mech 01	R01	Cyclical replacement of shading devices, as required.	20 Yrs	$180,000	2030	$220,000												•																		
Mech 02	R01	Cyclical replacement of electronic actuator controls, as required.	10 Yrs	$1,220	2020	$1,200		•										•									•									
Mech 03	R01	Cyclical replacement of electronic actuator controls, as required.	3 Yrs	$1,220	2020	$1,200		•			•			•			•			•			•			•			•			•			•	
Mech 04	R01	Replace variable frequency drives.	15 Yrs	$19,520	2025	$22,000							•															•								
Mech 05	R01	Cyclical replacement of sensors and other field devices, as required.	3 Yrs	$0	2019	$0	•			•			•			•			•			•			•			•			•			•		
Mech 05	R02	Replace DDC controllers.	15 Yrs	$15,250	2025	$17,000							•															•								
Mech 06	R01	Cyclical replacement of gas detection sensors.	5 Yrs	$3,267	2028	$3,900										•					•					•					•					•
Mech 07	R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	3 Yrs	$1,830	2023	$2,000					•			•			•			•			•			•			•			•			•	
PLUMBING & DRAINAGE																																				
Mech 08	R01	Cyclical replacement of water storage tanks.	15 Yrs	$6,100	2025	$6,900							•															•								
Mech 09	J01	Inspect brushes and remove brush dust from motor.	2 Yrs	$0	2019	$0	•		•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Mech 09	R01	Replace motor bearings, pump bearings and housing, as required.	7 Yrs	$0	2023	$0					•							•							•							•				
Mech 09	R02	Replace or rebuild submersible pumps.	14 Yrs	$9,150	2030	$11,000												•														•				
Mech 10	R01	Cyclical replacement of fittings and valves, as required.	20 Yrs	$75,000	2060	$170,000																														
Mech 11	R01	Cyclical replacement of sinks and faucets, as required.	20 Yrs	$3,000	2035	$4,100																	•													
Mech 12	R01	Cyclical replacement of recirculating pumps, as required.	8 Yrs	$1,830	2020	$1,900		•								•								•								•				
Mech 13	R01	Overhaul storm sump pumps.	5 Yrs	$1,220	2021	$1,300			•					•						•					•					•					•	
Mech 13	R02	Cyclic replacement of sump pump storm lift and control panels.	15 Yrs	$7,320	2034	$9,900																•														
Mech 14	J01	Insert video cameras into main lines to conduct pipe inspection.	5 Yrs	$1,830	2020	$1,900		•					•					•					•					•					•			
Mech 14	J02	Auger lateral drain lines.	10 Yrs	$2,440	2020	$2,500		•										•										•								
Mech 14	R01	Repair components of sanitary drainage distribution system, as required.	50 Yrs	$30,500	2060	$69,000																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
Mech 16	J01	Dismantle, inspect and clean tube bundle on immersion heating tanks.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Mech 16	J02	Replace anode rods in hot water heaters.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Mech 16	R01	Cyclical replacement of domestic hot water storage tanks.	8 Yrs	$2,745	2020	$2,700		•								•							•								•				
Mech 17	R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	20 Yrs	$6,100	2030	$7,600												•																	
Mech 18	R01	Cyclical replacement of components of electric heat tracing cable, including control module and pipe insulation.	15 Yrs	$6,100	2025	$6,900							•															•								
Mech 19	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.	5 Yrs	$915	2020	$930		•					•					•					•					•				•				
Mech 19	R01	Jetflush or auger drains to remove buildup and blockages.	10 Yrs	$1,525	2020	$1,600		•										•										•								
Mech 19	R02	Repair and/replace components of perimeter drainage system, as required.	40 Yrs	$30,500	2050	$56,000																														
Mech 20	J01	Comprehensive third party testing and inspection of the copper domestic water distribution system.	25 Yrs	$10,000	2035	$14,000																	•													
Mech 20	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.]	28 Yrs	$1,290,000	2038	$1,900,000																				•										
Mech 21	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.	5 Yrs	$0	2020	$0		•					•					•					•					•					•			
Mech 21	J02	Auger lateral drain lines.	10 Yrs	$0	2020	$0		•										•										•								
Mech 21	R01	Repair and/replace components of storm water drainage distribution system, as required.	40 Yrs	$24,400	2050	$45,000																														
Mech 22	R01	Cyclical replacement of valves, as required.	20 Yrs	$7,320	2030	$9,100												•																		
HEATING & COOLING																																				
Mech 23	R01	Cyclic replacement of cadet heaters, as required.	20 Yrs	$7,800	2030	$9,700												•																		
Mech 24	R01	Replacement of diesel storage tanks.	50 Yrs	$3,050	2060	$6,900																														
Mech 25	R01	Cyclical replacement of heat pumps.	20 Yrs	$48,800	2025	$55,000							•																				•			
Mech 26	R01	Replace components of chilled water distribution system.	30 Yrs	$68,784	2040	$100,000																						•								
Mech 27	R01	Replace fireplace.	30 Yrs	$500	2040	$760																						•								
Mech 28	R01	Cyclical replacement of hydronic valves and actuators.	20 Yrs	$90,300	2030	$110,000												•																		
Mech 29	R01	Cyclic replacement of diaphragm heating expansion tanks, as required.	20 Yrs	$6,100	2030	$7,600												•																		
Mech 30	R01	Cyclical replacement of valves, as required.	20 Yrs	$6,100	2030	$7,600												•																		
Mech 31	R01	Cyclical replacement of components of water treatment equipment.	8 Yrs	$3,050	2021	$3,100			•							•								•								•			
Mech 32	R01	Cyclical replacement of hydronic baseboards and controllers.	20 Yrs	$3,000	2050	$5,500																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
Mech 33	R01	Replace circulating pumps for hydronic loop - heating and condenser water.	15 Yrs	$18,300	2025	$21,000							•														•									
Mech 34	R01	Cyclic replacement of split system AC unit fan coils.	15 Yrs	$13,420	2025	$15,000							•														•									
Mech 35	R01	Cyclical replacement of components of condensing units and fan coil units on split system AC.	15 Yrs	$8,540	2025	$9,600							•														•									
Mech 36	J01	Dissemble plate and frame assembly and remove scale and fouling from plates. Check and service gaskets.	5 Yrs	$0	2021	$0			•					•					•					•					•					•		
Mech 36	R01	Replace plate type heat exchangers.	20 Yrs	$6,100	2030	$7,600												•																		
VENTILATION AND AIR-CONDITIONING																																				
Mech 37	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$0	2019	$0	•			•			•			•			•			•			•			•			•			•		
Mech 37	R02	Rebuild exhaust fan, as required.	20 Yrs	$13,200	2030	$16,000												•																		
Mech 38	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$0	2019	$0	•			•			•			•			•			•			•			•			•			•		
Mech 38	R02	Rebuild of supply and exhaust fans, as required.	20 Yrs	$3,660	2030	$4,600												•																		
Mech 39	R02	Cyclical rebuild or replacement of make-up air units.	15 Yrs	$38,000	2035	$52,000																	•													
Mech 40	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$0	2019	$0	•			•			•			•			•			•			•			•			•			•		
Mech 40	R02	Rebuild of supply and exhaust fans, as required.	20 Yrs	$16,470	2030	$20,000												•																		
Mech 41	R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	12 Yrs	$1,830	2022	$1,900				•												•												•		
OTHER																																				
Mech 42	R01	Replace hydraulic pumps.	10 Yrs	$4,000	2020	$4,100		•										•										•								
Mech 42	R02	Replace compactor hoses.	10 Yrs	$1,500	2020	$1,500		•										•										•								
Mech 42	R03	Replace trash compactor.	20 Yrs	$15,000	2030	$19,000												•																		
Mech 43	R01	Replace overhead door motors and operators, as required.	7 Yrs	$7,500	2020	$7,500		•							•							•							•							•

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELEVATOR																																				
TRACTION																																				
Elev 01	J01	Conduct full load performance test.	2 Yrs	$0	2018	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	2 Yrs	$0	2018	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	J03	Check and test the overload devices.	2 Yrs	$0	2018	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	R01	Replace elevator hoist ropes. Covered under service agreement.	20 Yrs	$0	2030	$0												•																		
Elev 01	R02	Replace elevator controls and drives.	25 Yrs	$160,000	2035	$220,000																	•													

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELEVATOR																																					
CAR INTERIORS																																					
Elev 02	R01	Refurbish gearless machines, replace suspension ropes, replace door operator(s), replace elevator operating and signal fixtures, upgrade cab interior.	15 Yrs	$160,000	2035	$220,000																	•														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
FIRE SAFETY																																					
CONTROLS																																					
Fire 01	R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	20 Yrs	$40,000	2030	$50,000												•																				
DETECTION																																					
Fire 02	R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	10 Yrs	$50,000	2030	$62,000												•										•									
SUPPRESSION																																					
Fire 03	R01	Replace fire sprinkler compressor.	14 Yrs	$1,320	2028	$1,600										•													•								
Fire 04	J01	Conduct hydrotest on fire extinguishers.	12 Yrs	$0	2022	$0				•												•													•		
Fire 04	R01	Cyclical replacement of fire extinguishers.	12 Yrs	$3,200	2034	$4,300																•													•		
Fire 05	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$0	2021	$0			•				•						•				•					•							•		
Fire 05	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2021	$0			•				•						•				•					•							•		
Fire 05	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$0	2030	$0												•																				
Fire 05	R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	5 Yrs	$21,000	2030	$26,000												•					•					•						•			
Fire 05	R03	Replace all heads, or submit representative sample of heads for testing by recognised testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction at the 50th anniversary, in accordance with NFPA 25.	10 Yrs	$63,000	2060	$140,000																																
Fire 05	R04	Replace sprinkler heads.	100 Yrs	$4,200	2110	$0																																
Fire 06	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$0	2021	$0			•				•						•				•					•							•		
Fire 06	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2021	$0			•				•						•				•					•							•		
Fire 06	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.	10 Yrs	$25,740	2060	$58,000																																
Fire 06	R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains etc as required.	5 Yrs	$0	2020	$0		•					•					•					•					•						•			
Fire 06	R03	Replace sprinkler heads, as required.	100 Yrs	$1,716	2110	$0																																

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
FIRE SAFETY																																					
Fire 07	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$0	2030	$0												•																		
Fire 07	R02	Replace gaskets in dry sprinkler valves.	20 Yrs	$0	2030	$0												•																		
Fire 07	R03	Rebuild dry sprinkler valves.	20 Yrs	$2,640	2030	$3,300												•																		
Fire 07	R04	Replace sprinkler valves, as required.	40 Yrs	$7,920	2050	$15,000																														
EGRESS																																				
Fire 08	R02	Cyclical replacement of LED exit signs.	15 Yrs	$9,000	2030	$11,000												•															•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
INTERIOR FINISHES																																				
FLOORS																																				
Finish 01	R01	Renew carpet.	10 Yrs	$147,000	2020	$150,000		•										•										•								
Finish 02	R01	Replace laminate flooring, as required.	20 Yrs	$7,930	2030	$9,900												•																		
Finish 03	R01	Repaint concrete flooring in service rooms and stairwells, as required. Repaint faded stair tread safety markings.	8 Yrs	$4,100	2024	$4,500						•								•								•								•
Finish 03	R02	Concrete floor is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	75 Yrs	$0	2085	$0																														
Finish 04	R01	Recolour or replace tile grout as required.	12 Yrs	$1,800	2022	$1,900				•												•													•	
Finish 04	R02	Renew tile floor.	40 Yrs	$27,000	2050	$50,000																														
WALLS																																				
Finish 05	R01	Replace wall paper covering at affected walls.	15 Yrs	$6,300	2025	$7,100							•															•								
Finish 06	R01	Locally replace grout at wall tile, as required.	15 Yrs	$1,100	2025	$1,200							•																							
Finish 06	R02	Replace ceramic wall tiles.	30 Yrs	$16,500	2040	$25,000																						•								
Finish 07	R01	Locally repaint interior wall in high traffic area, as required.	5 Yrs	$17,500	2025	$20,000		•					•										•										•			
Finish 07	R02	Re-coat painted wall surface including preparation of substrate.	10 Yrs	$105,000	2020	$110,000		•										•										•								
ARCHITECTURAL WOODWORK																																				
Finish 08	R01	Replace damaged components of baseboard, molding, and casing.	40 Yrs	$28,800	2050	$53,000																														
Finish 09	R01	Replace damaged components of carpentry and millwork, as required.	30 Yrs	$6,000	2040	$9,100																						•								
DOORS																																				
Finish 10	J03	Repaint door and frame in high-traffic locations as required.	8 Yrs	$1,888	2020	$1,900		•								•								•								•				
Finish 10	R01	Cyclical replacement of interior swing door in low traffic/exposure locations, as required.	40 Yrs	$30,200	2050	$56,000																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
AMENITIES																																				
EQUIPMENT																																				
Amen 01	R01	Replace components of fitness equipment, as required.	10 Yrs	$6,000	2020	$6,100		•										•										•								
Amen 02	R01	Replace domestic appliances.	15 Yrs	$4,000	2025	$4,500							•															•								
SPECIALTIES																																				
Amen 03	R01	Locally replace metal storage lockers, as required.	25 Yrs	$20,000	2035	$27,000																	•													
FURNISHINGS																																				
Amen 04	R01	Replace bicycle racks, as required.	30 Yrs	$5,000	2040	$7,600																						•								
Amen 05	R01	Replace central mail boxes as required.	30 Yrs	$8,000	2040	$12,000																						•								
Amen 06	R01	Replace damaged and outdated signage, as required.	25 Yrs	$6,000	2035	$8,200																	•													
Amen 07	R01	Replace furniture and associated component.	15 Yrs	$5,000	2025	$5,600							•															•								
SUITE																																				
Amen 08	R01	Cyclical replacement and upgrade of components of audiovisual equipment, excluding field wiring, as required.	10 Yrs	$1,000	2029	$1,200											•										•									

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
SITEWORK																																				
HARD LANDSCAPING																																				
Site 01	R01	Cyclical replacement of components (pumps, pipes, etc) of water feature, as required.	15 Yrs	$3,660	2025	$4,100							•															•								
Site 02	J01	Repoint mortar joints in masonry wall.	10 Yrs	$0	2020	$0		•										•										•								
Site 02	R01	Locally reconstruct components of masonry retaining walls, as required.	45 Yrs	$25,920	2055	$53,000																														
Site 03	R01	Rebuild sections of interlocking paving, including sub-grade, as required.	10 Yrs	$3,240	2025	$3,600							•										•										•			
Site 03	R03	Interlocking paving is not deemed to be a renewable asset.	40 Yrs	$0	2050	$0																														
SOFT LANDSCAPING																																				
Site 04	R01	Renovate sections of the soft landscaping, as required.	15 Yrs	$6,120	2040	$9,300																						•								
Site 05	J01	Replace the back-up battery in the timer/controller.	2 Yrs	$0	2020	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Site 05	R01	Cyclical replacement of components of irrigation sprinkler system, as required.	15 Yrs	$10,000	2025	$11,000							•															•								