Depreciation Report Update - FINAL | Project 6047.012

Pinnacle Living False Creek, 1887 Crowe Street, Vancouver, BC

To The Owners, Strata Plan BCS4064
c/o Mr. Roger Yang, Strata Agent
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1125 Howe Street,
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Site Visit: September 25, 2019
Submitted: April 17, 2020
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1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners, Strata Plan BCS4064 (the Owners) to prepare a Depreciation Report Update (the Report) for the strata complex known as Pinnacle Living False Creek, which is located at 1887 Crowe Street, Vancouver, BC. The Report considers the common property and limited common property components (the Assets) that the Strata Corporation is responsible to maintain, repair, and replace.

The 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, plumbing, and paving).

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

This Report is an update to the Depreciation Report issued on June 10, 2015. As part of our work for this Report, a site visit was completed on September 25, 2019, and the financial data is based on the 2019/ 2020 fiscal year. A draft Report was distributed to the Strata Council and Strata Management on February 19, 2020. Feedback from the Strata Council was incorporated into the Report, and the finalized Report was issued on April 17, 2020.

The 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 Depreciation Report. The appendices provide detailed information to support the summary report. The appendices include a glossary of terms. Words that are *italicized* are defined in the glossary.

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 Owners can choose to update portions of the Report more frequently, at their discretion, to reflect changes to their financial status and completed work.

2 Pinnacle Living False Creek

Pinnacle Living False Creek is a strata complex comprised of an 11-storey tower (east tower) and an attached 7-storey tower (west tower) that was constructed in approximately 2012. The buildings are typically of cast-in-place concrete construction with steel stud infill walls atop a 2-storey below-grade parking garage.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical distribution, 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 Pinnacle Living False Creek are summarized in Table 2.1, Figure 2.1, and Figure 2.2 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

Figure 2.1 Northwest elevation photograph of East Tower at Pinnacle Living False Creek

Date of first occupancy (approximate)	2012
Gross floor area, including the parkade (ft²)	148,300
Total area of Unit Entitlement	7,837
Stories above grade: East Tower West Tower	 11 7
Total number of strata lots	105

Figure 2.2 Aerial photograph of Pinnacle Living False Creek (© 2019 Google Map Data).

3 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 Figure 3.1 in below:

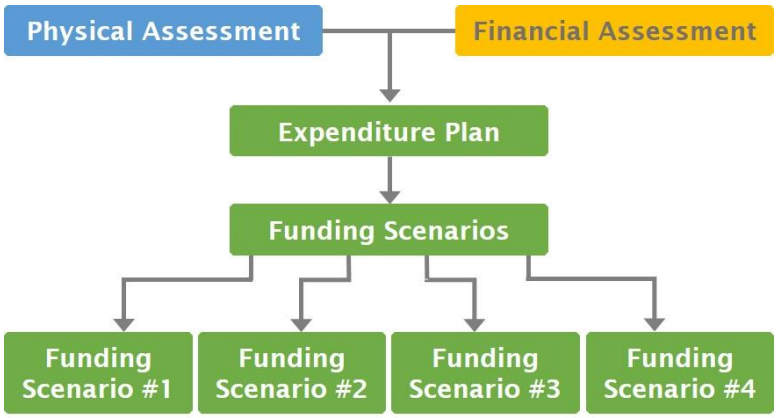

Figure 3.1

Depreciation Report Process

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

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

3.1 Physical Assessment

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

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

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

The evaluation is typically based on:

- → A review of historical documentation such as minutes, and invoices,
- → Discussions with Strata Corporation representatives,
- → A visual review of the complex, limited to a sample of readily accessible Assets, and
- → A review of other technical information such as construction drawings, previous investigations or reports, and maintenance manuals.

Destructive testing, disassembly, and performance testing are not included in the physical evaluation; this report does not replace a Warranty Review or Condition Assessment. Please visit www.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 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 3.1 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 3.1 MAINTENANCE AND RENEWALS HISTORY

Building Enclosure

- → 2018 – Coating renewal of the exterior architectural concrete walls
- → 2018 – Sealant renewal in coordination with concrete coating renewal
- → 2018 – Commissioned a Suite Leak Review Report by RDH Building Science Inc.
- → 2016 – Commissioned a 5-Year Warranty Review by RDH Building Science Inc.
- → 2014 – Commissioned a 2-Year Warranty Review by RDH Building Science Inc.

Electrical

- → 2014 – Installation of security surveillance cameras
- → As required – Replacement of interior and exterior lighting
- → As required – Regular servicing of the main electrical vault

3.2 Financial Assessment

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

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

The future value of major maintenance and renewals costs can be compared against the building reproduction cost. The building reproduction cost is the cost to reproduce the complex 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 3.2 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.2 KEY FINANCIAL PARAMETERS		
PARAMETER	INITIAL STUDY (2013/2014)	UPDATE STUDY (2019/2020)
Fiscal year end	July 31	
Building reproduction cost	$38,900,000	$48,655,000
Operating budget (excluding CRF contribution)	$437,494	$548,746
Annual CRF contribution	$46,800	$50,400
Opening Balance of the CRF	$141,100	$358,397*

**The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities.*

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

Costs are considered *Class D* estimates (±50%), as defined by the Engineers and Geoscientists of British Columbia. 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 in Appendix H.

Costing Caveats

The capital costs given in the 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.

4 Expenditures

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

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

4.1 Major Maintenance and Renewals Expenditures

Table 4.1 below summarizes all major maintenance and renewal costs by system, including costs forecasted for the next 30 years. The values are rounded.

TABLE 4.1 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	$380,000	$450,000	$3,200,000	$4,600,000
Electrical	$87,000	$100,000	$510,000	$790,000
Mechanical	$190,000	$210,000	$1,800,000	$2,600,000
Elevator	$0	$0	$460,000	$720,000
Fire Safety	$3,500	$3,900	$190,000	$260,000
Interior Finishes	$92,000	$100,000	$290,000	$400,000
Amenities	$7,000	$7,700	$24,000	$31,000
Sitework	$14,000	$16,000	$87,000	$120,000
Building Total	**$773,500**	**$887,600**	**$6,561,000**	**$9,521,000**

Approximately 10% 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 4.1 below.

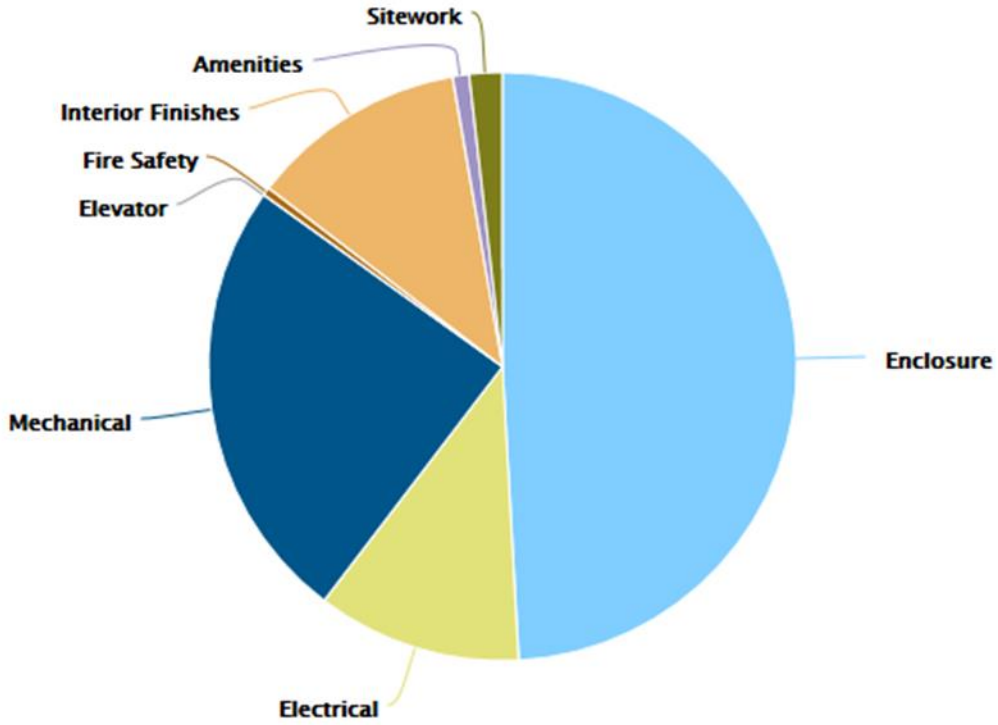

Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

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

5 Major Maintenance and Renewals Planning Horizons

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

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

5.1 Strategic Planning Horizon

Estimated major maintenance and renewal costs over the next 30 years are shown on the graph below (Figure 5.1). The blue bars represent the estimated value of capital costs. Each bar on the graph represents a collection of different major maintenance and renewals activities, each with different values.

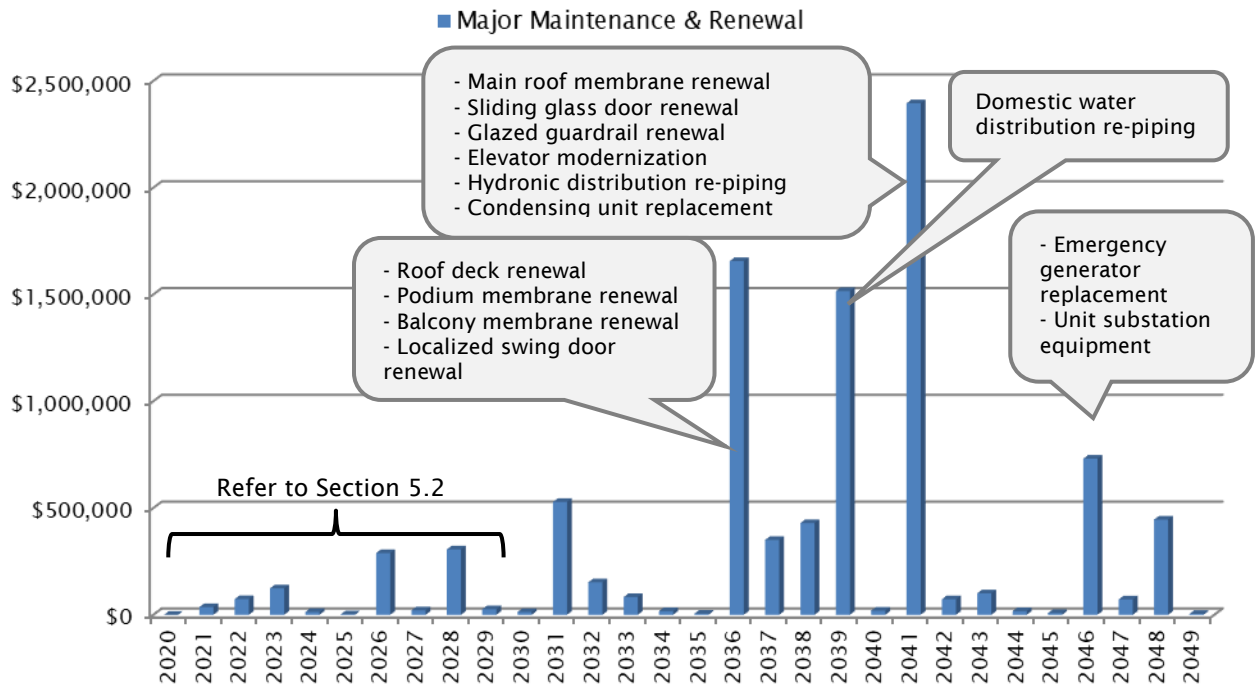

Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Detailed information about each year, including a description of the maintenance and renewal activities and estimated costs, is provided in the Appendices of the Report.

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

5.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next 10 years (Figure 5.2). 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.

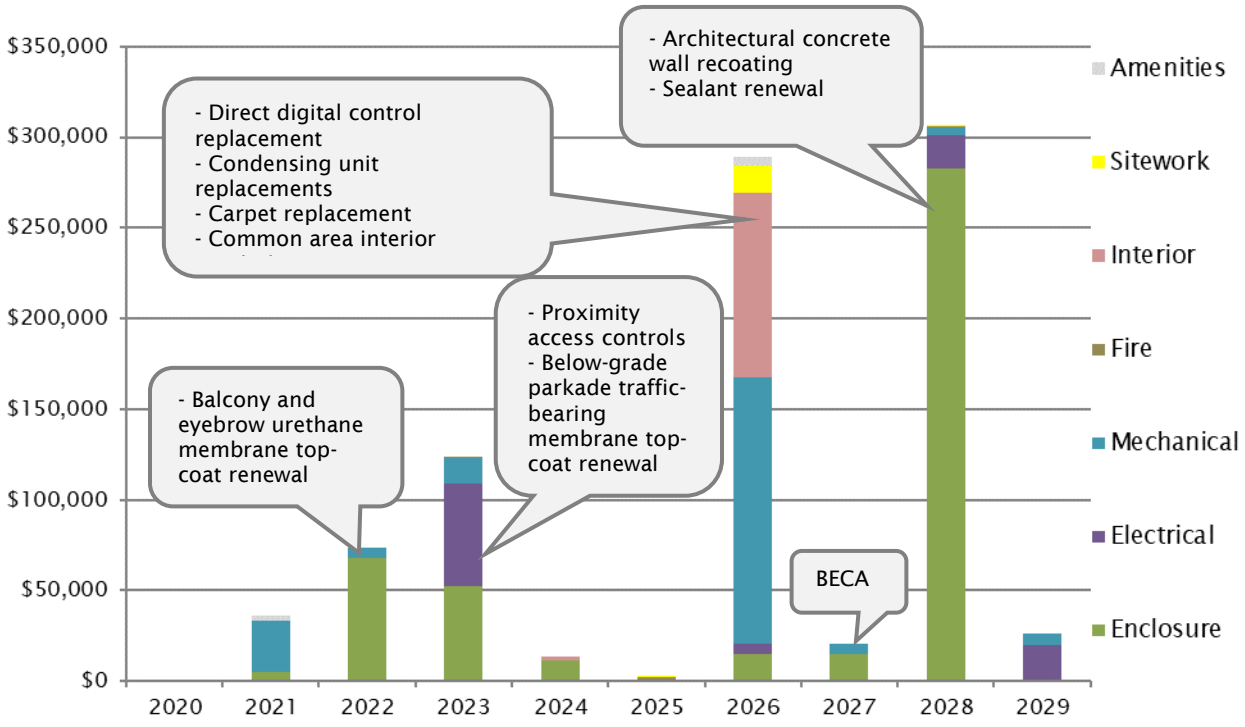

Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

The Tactical Plan above represents one of many possible approaches to planning major maintenance and renewals activities. The Strata Corporation can use this initial plan as a tool, a starting point to identify probable projects, priorities, and strategies. The actual cost, timing, and scope of projects will be determined by the Strata Corporation and may be reflected in updates to the Depreciation Report.

To help the Strata Corporation start the project planning process, 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.

2020 to 2022

Enclosure

- → Encl 21 General & Inspections – Commission a 10-year structural warranty review in sufficient time prior to expiration of the warranty period.
- → Encl 15 Exposed Urethane Balcony and Eyebrow Membrane – Anticipate a localized top-coat membrane renewal for the balcony and eyebrow surfaces, as it is typically worn from occupant use and weathering.

Mechanical

- → Mech 07 and Mech 11 Sanitary and Storm Drainage – Camera scoping and jet-flushing of sanitary and storm water drainage lines throughout the buildings.
- → Mech 25 HVAC Flow Control and Directional Valves – Cyclical replacement of valves, as required.

2023 to 2025

Building Enclosure

- → Encl 09 Aluminum Framed Windows – Locally replace failed insulating glazing units (IGUs) with condensation or misting between the panes of glass, as required. Localized replacement of failed IGUs are scheduled to be completed on a two-year cycle.
- → Encl 19 Parking Slab Traffic-Bearing Membrane – Anticipate a top-coat membrane renewal for the below-grade parkade suspended slabs, as this is typically worn from vehicular traffic.

Electrical

- → Elec 02 and 03 Electrical Distribution Equipment – Conduct infrared thermography, ultrasonic scanning, and cleaning of the main components of the electrical distribution equipment to detect hidden hazards (every five years).
- → Elec 07 Proximity Access Control – Modernize components of the proximity access control system, as required.

Mechanical

- → Mech 18 Domestic Hot Water Storage Tanks – Anticipate cyclical replacement of the domestic hot water (DHW) storage tanks.

2026 to 2029

Building Enclosure

- → Encl 21 General & Inspection – Commission a Building Enclosure Condition Assessment (BECA) Report to confirm the existing conditions, including concealed conditions, of the building enclosure Assets (in particular, the balcony and eyebrow membranes, concrete wall coatings and sealant) and refine the renewal forecast.
- → Encl 07 Coated Architectural Concrete Walls – Localized repairs of delaminated or spalled concrete and reapplication of the protective coating, as required. The renewal will depend on the findings of the BECA.

- Encl 22 Sealant – Anticipate renewal of sealants at interfaces between building enclosure assemblies and penetrations, in coordination with the building enclosure major maintenance and renewals described above.

Electrical

- Elec 01 Emergency Generator – Rebuilding of the emergency generator, as required. The Strata should consult with their electrical service contractor to confirm the existing conditions and the remaining service life.

Mechanical

- Mech 05 Direct Digital Controls – Replace direct digital controls, as required.
- Mech 31 Condensing Unit – Cyclical replacement of components of the condensing units and fan coil units for split AC systems have been forecasted based on its anticipated service life. The Strata should consult with their mechanical service contractor to confirm the existing conditions and the remaining service life.

Interior Finishes

- Interior renovations are completed to refurbish the interior common areas and are typically renewed at the Owners' discretion. The following Assets include:
  - Finish 02 Carpet
  - Finish 06 Paint

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

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

6 Funding Scenarios

The physical assessment and financial assessment were used to create a tentative schedule and budget for 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.

6.1 Minimum Funding Requirements

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

TABLE 6.1 MINIMUM FUNDING REQUIREMENT CALCULATION

PARAMETER	VALUE
2019/2020 operating budget (excluding CRF contribution)	$ 548,746
→ 25% of the operating budget	$ 137,187
→ 10% of the operating budget	$ 54,875
2019/2020 CRF opening balance	$ 358,397
2019/2020 CRF Contribution	$ 50,400
Does the CRF balance exceed 25% of the operating budget?	Yes
Does the CRF contribution exceed 10% of the operating budget?	No

Although the Strata Corporation meets 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.

6.2 Alternative Funding Scenarios

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

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

- → ***Current (2019/2020)***. The CRF allocation that was approved by the Owners at the 2018/2019 AGM. The Current allocation is also known as the Status Quo.
- → ***Alternative #1***. A fixed increase from the Status Quo.
- → ***Alternative #2***. A non-linear increase from the Status Quo. The Alternatives are just two 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 Strata Corporations 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 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	CURRENT (2019/2020)	ALTERNATIVE #1	ALTERNATIVE #2	PROGRESSIVE RESERVE
Annual CRF allocation	$50,400	$100,000	Starting at $100,000 +	$317,000
Annual CRF increase	0%	0%	3%	0%
Percent of progressive reserve	16%	32%	32% +	100%
CRF contribution per unit of unit entitlement			Starting at	
Per month	$0.54	$1.06	$1.06 +	$3.37
Per year	$6.43	$12.76	$12.76 +	$40.45
CRF contribution per average strata lot			Starting at	
Per month	$40	$79	$79 +	$252
Per year	$480	$948	$948 +	$3,024
Approximate number of special levies (over 30 years)	14	7	5	0
Approximate value of special levies (over 30 years)	$7.7M	$6.1M	$4.5M	$0
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, 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.

6.3 Current (2019/2020) Funding Scenario

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

TABLE 6.3 CURRENT (2019/2020) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	$358,397	$50,400	$0	$7,168	$0	$2,000	$413,965
2021	$413,965	$50,400	$0	$8,279	$36,100	$2,000	$434,544
2022	$434,544	$50,400	$0	$8,691	$73,600	$2,000	$418,035
2023	$418,035	$50,400	$0	$8,361	$124,080	$2,000	$350,716
2024	$350,716	$50,400	$0	$7,014	$13,700	$2,000	$392,430
2025	$392,430	$50,400	$0	$7,849	$2,530	$2,000	$446,149
2026	$446,149	$50,400	$0	$8,923	$289,250	$2,000	$214,222
2027	$214,222	$50,400	$0	$4,284	$20,900	$2,000	$246,006
2028	$246,006	$50,400	$16,934	$4,920	$306,260	$2,000	$10,000
2029	$10,000	$50,400	$0	$200	$26,000	$2,000	$32,600

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

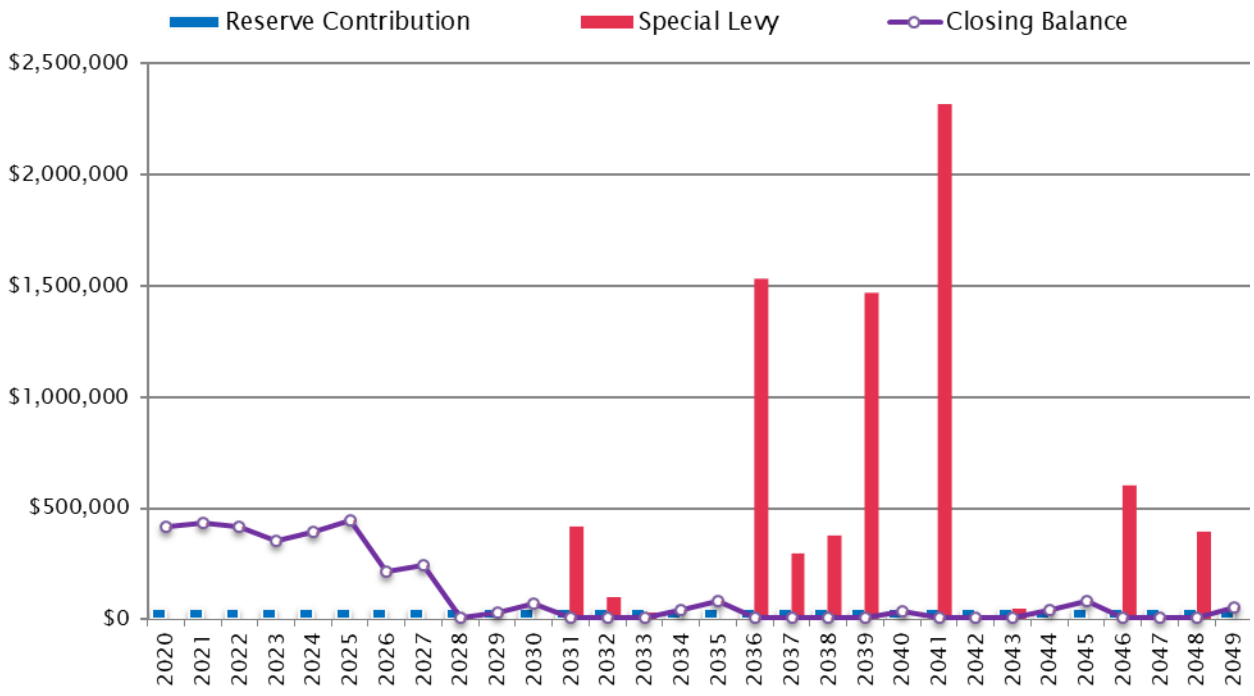

Figure 6.1 CRF balance, contribution, and special levies based on the current funding.

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

6.4 Alternative #1 Funding Scenario

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

TABLE 6.4 ALTERNATIVE #1 FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	$358,397	$100,000	$0	$7,168	$0	$2,000	$463,565
2021	$463,565	$100,000	$0	$9,271	$36,100	$2,000	$534,736
2022	$534,736	$100,000	$0	$10,695	$73,600	$2,000	$569,831
2023	$569,831	$100,000	$0	$11,397	$124,080	$2,000	$555,148
2024	$555,148	$100,000	$0	$11,103	$13,700	$2,000	$650,551
2025	$650,551	$100,000	$0	$13,011	$2,530	$2,000	$759,032
2026	$759,032	$100,000	$0	$15,181	$289,250	$2,000	$582,962
2027	$582,962	$100,000	$0	$11,659	$20,900	$2,000	$671,721
2028	$671,721	$100,000	$0	$13,434	$306,260	$2,000	$476,896
2029	$476,896	$100,000	$0	$9,538	$26,000	$2,000	$558,434

Alternative #1 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.

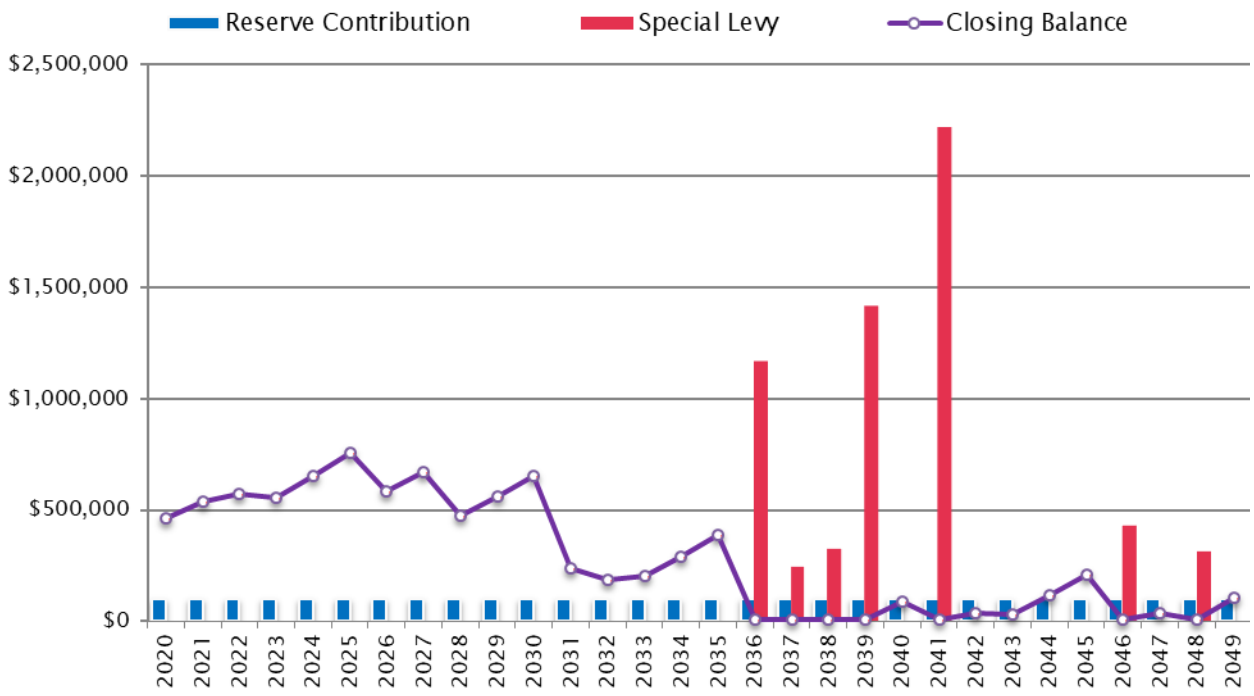

Figure 6.2 CRF balance, contribution, and special levies based on Alternative #1.

6.5 Alternative #2 Funding Scenario

Alternative #2 Funding Scenario is based on a non-linear annual CRF contribution of $100,000 with an annual increase of three percent (3%).

TABLE 6.5 ALTERNATIVE #2 FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	$358,397	$100,000	$0	$7,168	$0	$2,000	$463,565
2021	$463,565	$103,000	$0	$9,271	$36,100	$2,000	$537,736
2022	$537,736	$106,090	$0	$10,755	$73,600	$2,000	$578,981
2023	$578,981	$109,273	$0	$11,580	$124,080	$2,000	$573,753
2024	$573,753	$112,551	$0	$11,475	$13,700	$2,000	$682,079
2025	$682,079	$115,927	$0	$13,642	$2,530	$2,000	$807,118
2026	$807,118	$119,405	$0	$16,142	$289,250	$2,000	$651,416
2027	$651,416	$122,987	$0	$13,028	$20,900	$2,000	$764,531
2028	$764,531	$126,677	$0	$15,291	$306,260	$2,000	$598,239
2029	$598,239	$130,477	$0	$11,965	$26,000	$2,000	$712,681

Alternative #2 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.

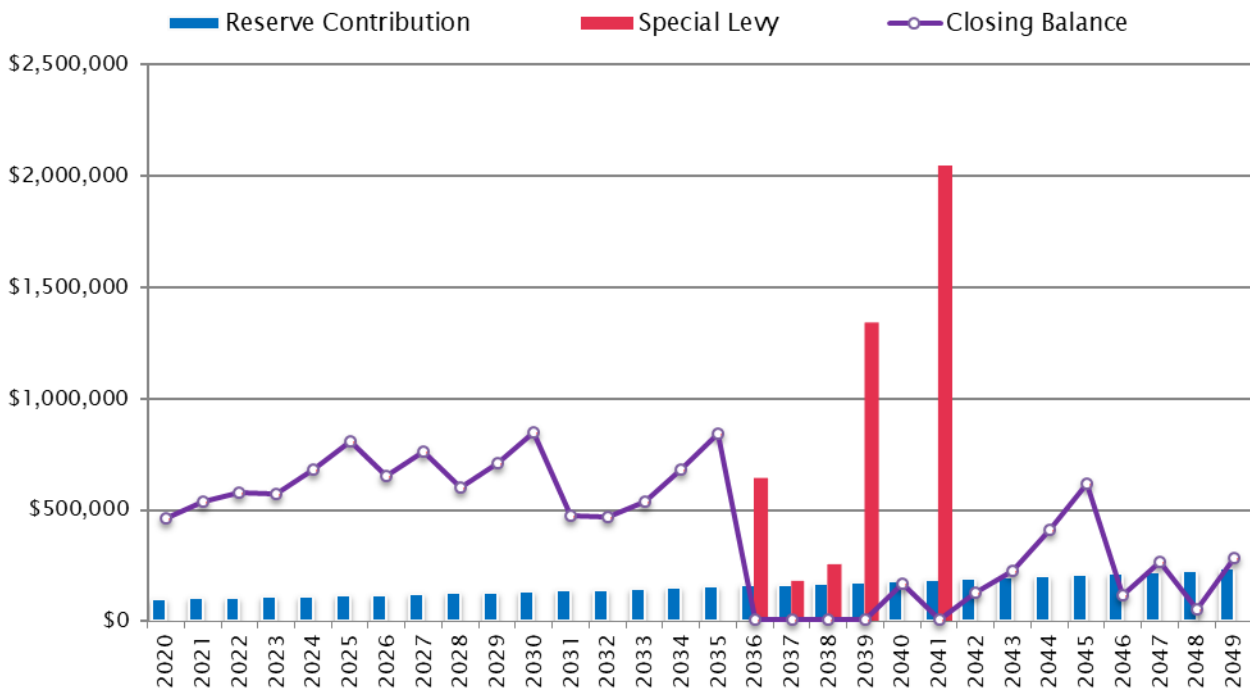

Figure 6.3 CRF balance, contribution, and special levies based on Alternative #2.

6.6 Progressive Funding Scenario

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

TABLE 6.6 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	$358,397	$317,000	$0	$7,168	$0	$2,000	$680,565
2021	$680,565	$317,000	$0	$13,611	$36,100	$2,000	$973,076
2022	$973,076	$317,000	$0	$19,462	$73,600	$2,000	$1,233,938
2023	$1,233,938	$317,000	$0	$24,679	$124,080	$2,000	$1,449,537
2024	$1,449,537	$317,000	$0	$28,991	$13,700	$2,000	$1,779,827
2025	$1,779,827	$317,000	$0	$35,597	$2,530	$2,000	$2,127,894
2026	$2,127,894	$317,000	$0	$42,558	$289,250	$2,000	$2,196,202
2027	$2,196,202	$317,000	$0	$43,924	$20,900	$2,000	$2,534,226
2028	$2,534,226	$317,000	$0	$50,685	$306,260	$2,000	$2,593,650
2029	$2,593,650	$317,000	$0	$51,873	$26,000	$2,000	$2,934,523

The Progressive Reserve would offset 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.

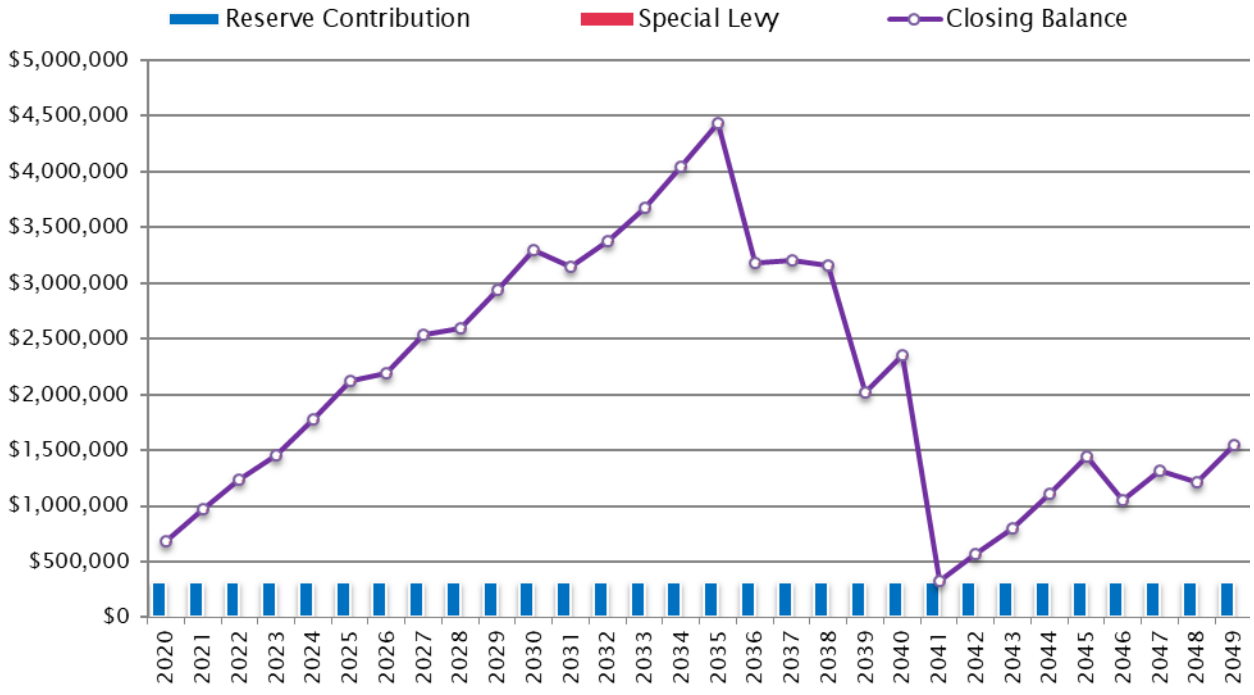

Figure 6.4 CRF balance, contribution, and special levies based on a Progressive Reserve calculation.

7 Next Steps

The Depreciation Report Update identifies the possible major maintenance and renewal expenditures that Pinnacle Living False Creek may encounter over the next 30 years. Estimated timelines have been provided to assist the Strata Corporation with the planning process; however, the Depreciation Report Update should be considered a first step when planning for renewals. Funding scenarios have been developed to provide the Strata Corporation with an objective basis for determining appropriate CRF contributions.

Pinnacle Living False Creek is an 8-year-old complex (as of 2020), and some Assets, such as the balcony and eyebrow membranes, and the below-grade traffic bearing membrane may require renewal within the next 10 years. In addition, the major maintenance of the Assets, such as interior repainting and drainage cleaning have been forecasted. This is a fairly typical renewal pattern for younger Strata Corporations, such as Pinnacle Living False Creek. The Strata should continue to be diligent in performing maintenance tasks so Assets may achieve their full service life.

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.

Over the past five years since the initial Depreciation Report was issued, Pinnacle Living False Creek has improved their contingency reserve funding. This has allowed the Strata Corporation to build up a strong contingency reserve fund, while continuing to perform maintenance of a number of Assets. By continuing to save early for anticipated large expenditures, the Strata Corporation will benefit from accrued interest and financial preparedness, while minimizing the number of special levies.

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

Recommendations

- → **Project Planning**. Review the information in Section 5.2, and begin planning for significant projects, including commissioning assessments, requesting information, and preparing construction budgets well in advance of the forecasted date of renewals. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- → **Major Maintenance Plan**. 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.
- → **Updates.** Plan for an update to the Report in three years' time. On a yearly basis, the Strata Corporation should review and update their CRF funding strategy based on the estimated forecasts presented in the Report.

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

Pinnacle Living False Creek
Asset Inventory

Enclosure

Roofs & Decks

Encl 01 - Protected Liquid-Applied (Hot Rubber) Membrane Roof (IRMA Assembly)

Location

Main landscaped roofs of the buildings.

Description

Hot-applied rubberized asphalt membrane overlaid with insulation, protection board, and landscaping.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Encl 02 - Protected Liquid-Applied (Hot Rubber) Membrane Deck/Podium

Location

Roof decks and podium.

Description

Hot-applied rubberized asphalt membrane overlaid with insulation, protection board, and paver traffic-bearing surface at roof decks. Podium (area above the parking garage) overlaid with landscaping and pavement.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Encl 03 - Aluminum Panel Soffit

Location

Underside of various ground and second floor overhangs and soffits.

Description

Aluminum panel soffit.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Fall Protection

Encl 04 - Guardrail Glazed Aluminum

Location

Balconies and decks.

Description

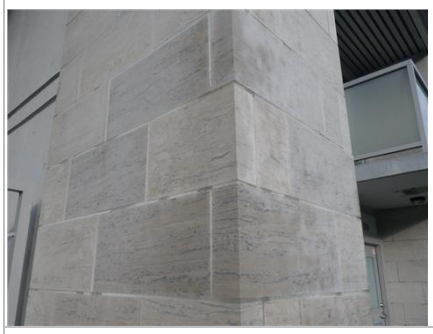
Aluminum posts and glass infill panels functioning as a protective barrier to prevent accidental falls from one level to another.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Walls

Encl 05 - Calcium Silicate Masonry Unit (CSMU) Veneer Clad Rainscreen Wall



Location

Ground level and 2nd floor walls on north and south elevations.

Description

Calcium silicate masonry unit (CSMU) applied as a veneer with a drained and vented cavity over concrete wall.

Information

Service Life:	45
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2056

Encl 06 - Composite Panel Wall

Location

Exterior walls.

Description

Composite panel system with integral framing and anchorage to create drainage cavity over supporting structure.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Encl 07 - Coated Architectural Concrete Wall

Location

Exterior walls on all levels and elevations.

Description

Poured-in-place architectural concrete wall with protective coating. Architectural concrete walls were repainted in 2018, which is shown as a component of this asset.

Information

Service Life:	75
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2086

Glazing Systems

Encl 08 - Curtain Wall

Location

Double height glazing at ground to 2nd floors on north, south, and east elevations, including entry lobby.

Description

Aluminum framed curtain wall assembly, capped on 4 sides, with double glazing units and casement operators.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Encl 09 - Aluminum Framed Window

Location

Exterior walls on all levels and elevations.

Description

Aluminum framed, thermally broken windows with double insulating glazing units, and casement operators. Windows are arranged in either to two configurations - punched window or window-wall all based on the same window system.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Doors

Encl 10 - Aluminum Frame Glazed Swing Door

Location

Balconies, decks and ground floor unit entrances.

Description

Aluminum frame swing door with insulating glazing units.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Encl 11 - Aluminum Framed Sliding Glass Door

Location

Various balconies and roof decks.

Description

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

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Encl 12 - Steel Swing Door

Location

Building access at ground floor and roofs.

Description

Hollow steel swing door with painted coating.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Encl 13 - Aluminum Frame Lobby Door

Location

Lobby entrance.

Description

Outswing aluminum-framed doors with fixed IGU's and low-profile thresholds with electric strike and hardware.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Encl 14 - Steel Rollup Door

Location

Garbage room access door.

Description

Pre-finished steel roll-up door for access to the garbage room.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Balconies

Encl 15 - Exposed Urethane Balcony & Eyebrow Membrane - Concrete Substrate

Location

Balconies and eyebrows.

Description

Liquid applied urethane membrane applied over concrete balcony and eyebrow slabs. Balcony slab edges were re-coated as part of coating renewal program.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Canopies

Encl 16 - Metal Frame and Glass Canopy

Location

Above various doors at the courtyard level.

Description

Canopy constructed with metal framing and single glazing.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Encl 17 - Decorative Metal Frame

Location

East tower roof.

Description

Metal framed architectural feature with painted finish mounted to walls of mechanical penthouse. Metal frames are painted as required.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Parking Garage

Encl 18 - Open-grid Overhead Parkade Gate

Location

Parkade entrance.

Description

Pre-finished metal grid overhead gates for below grade parkade. Overhead gate has been modified to inhibit break-ins.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Encl 19 - Parking Slab with Traffic-bearing Membrane

Location

Parkade Level P1.

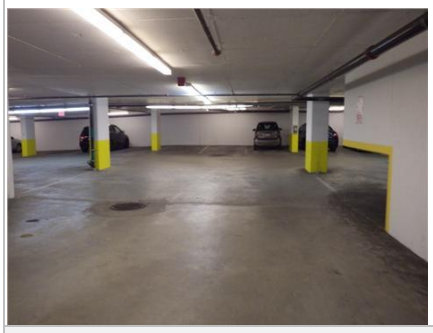
Description

Traffic-bearing membrane on concrete parking garage suspended slab. The maintenance and renewal of this asset is shown as components within the asset.

Information

Service Life:	75
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2086

Encl 20 - Slab-on-Grade



Location

Parkade Level P2.

Description

Concrete slab on grade.

Information

Service Life:	75
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2086

General & Inspections

Encl 21 - General & Inspections

Location

Throughout the site.

Description

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

Information

Service Life:	75
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2086

Encl 22 - Sealant

Location

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

Description

Sealant of various types improving the exterior water shedding characteristics of various building enclosure interfaces, as well as around components and penetrations within building enclosure assemblies.

Information

Service Life:	10
Installed Year:	2018
Chronological Age:	2
Effective Age:	2
Next Renewal Year:	2028

Electrical

Power Supply

Elec 01 - Emergency Generator

Location

Generator room, P1.

Description

Kohler, 350KW, 438KVA, 3 phase, 120/240V, 1800rpm, diesel AC/DC generator with steel single wall fuel tank, 1140L, to provide standby.

Information

Service Life:	35
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2046

Elec 02 - Unit Substation

Location

Main electrical room, P1.

Description

MGM Transformer Company, 1000KVA, 3 phase, dry type transformer; main breaker, load break switches and metering compartments contained within single dual radial unit substation to provide primary electrical service.

Information

Service Life:	35
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2046

Distribution

Elec 03 - Electrical Distribution

Location

Throughout the building.

Description

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

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Light Fixtures

Elec 04 - Exterior Light Fixtures

Location

Mounted to various walls and soffits at all elevations.

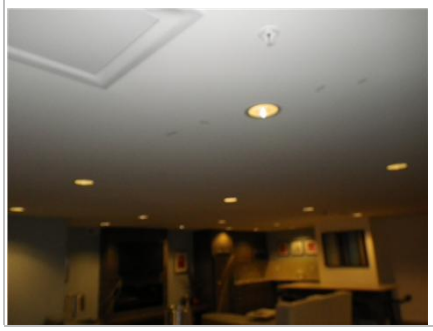
Description

A mixture of wall-mounted, soffit recessed and metal bollard fixtures with compact fluorescent lights, metal halide, PAR halogen fixtures and fluorescent accent lights.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Elec 05 - Interior Lighting Components



Location

Common areas throughout the building.

Description

A variety of fixture types and wattage, including fluorescents, compact fluorescents, pot lights, surface, pendant and wall sconces, halogen spot lights for accent lighting.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Security

Elec 06 - Enterphone System

Location

Lobby and parking garage entrance.

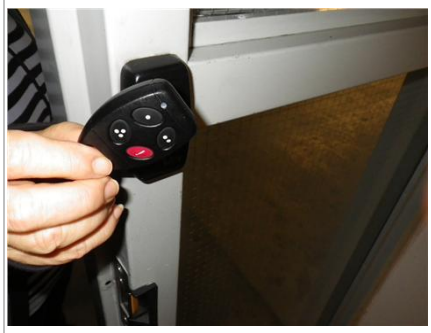
Description

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

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Elec 07 - Proximity Access Control



Location

Lobbies, parking garage, elevators, and common area entrances.

Description

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

Information

Service Life:	12
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2023

Elec 08 - Security Surveillance

Location

Strategically located throughout the building.

Description

Cameras, multiplexer, monitors and storage media to deter and track activity on and within building premises. Some cameras replaced as needed.

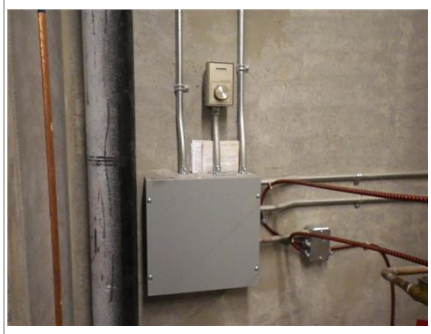
Information

Service Life:	14
Installed Year:	2014
Chronological Age:	6
Effective Age:	6
Next Renewal Year:	2028

Mechanical

Controls and End Devices

Mech 01 - Controls - HVAC Instrumentation



Location

Connected to equipment and distribution systems throughout.

Description

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:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 02 - Controls - Variable Frequency Drives

Location

P1 main mechanical room.

Description

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

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 03 - Gas Detection - Parking Garage

Location

Mounted to columns throughout the parking garage.

Description

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

Information

Service Life:	10
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2021

Mech 04 - Heat Tracing - Freeze Protection

Location

Throughout the parking garage.

Description

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

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 05 - Controls - Direct Digital

Location

Main mechanical room.

Description

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

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 06 - Controls - Electronic Actuators

Location

Various locations throughout the building.

Description

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

Information

Service Life:	10
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2021

Plumbing & Drainage

Mech 07 - Drainage - Storm - Internal

Location

Throughout the building.

Description

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

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Mech 08 - Piping - Domestic Water Distribution

Location

Connected to fixtures throughout the building.

Description

Mixture of ductile, copper and PEX, for vertical/horizontal mains system and distribution piping within the suites.

Information

Service Life:	28
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2039

Mech 09 - Valves - Cross Connection & Backflow Prevention

Location

Connected to equipment and distributed throughout the building.

Description

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

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 10 - Valves - Plumbing Flow Control and Directional

Location

Mechanical rooms and throughout the building.

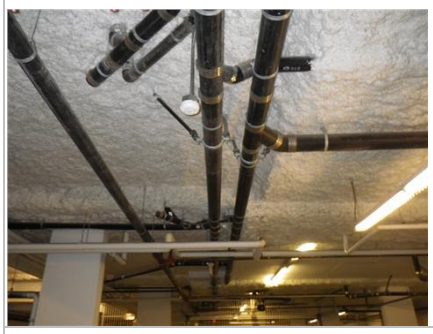
Description

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:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 11 - Drainage - Sanitary



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:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2061

Mech 12 - Fixtures - Taps & Sinks

Location

Amenity washrooms, across from the fitness room.

Description

Snks, janitors mop sinks, and other plumbing supply fixtures.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Mech 13 - Fixtures - Toilets

Location

Amenity washrooms, across from the fitness room.

Description

Standard floor mounted toilets.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 14 - Pump - DHW - Circulation and Recirculation

Location

P1 main mechanical room.

Description

Armstrong fractional HP, pipe-mounted bronze body domestic hot water circulation pumps. Circulating hot water from boilers to tanks and recirculating hot water from system. Some pumps replaced as needed.

Information

Service Life:	10
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2021

Mech 15 - Pumps - Sanitary Lift and Control Panel

Location

Parking garage level P2, adjacent to stall 89.

Description

Myers and Northwest TechCon duplex, 1.5 HP, sanitary sump pumps and control panels for sanitary lift/drainage.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 16 - Pumps - Storm Lift and Control Panel

Location

Parking garage level P2, adjacent to stall 89.

Description

Myers and Northwest TechCon, duplex 5 HP, storm sump pumps and control panels for storm water runoff and sub-surface drainage.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 17 - Tank - Expansion -DHW - Diaphragm

Location

P1 main mechanical room.

Description

Therm-X-Trol floor mounted diaphragm expansion tank for domestic water system.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 18 - Tank - DHW - Storage

Location

P1 main mechanical room.

Description

A.O. Smith 120 gallon tanks, glass-lined hot water storage tanks connected to domestic boiler system.

Information

Service Life:	12
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2023

Heating & Cooling

Mech 19 - Baseboard - Electric

Location

Service and storage rooms throughout the building.

Description

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

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Mech 20 - Chemical Treatment Equipment

Location

P1 main mechanical room.

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:	2011
Chronological Age:	9
Effective Age:	7
Next Renewal Year:	2021

Mech 21 - Heat Exchanger - Plate & Frame

Location

P1 main mechanical room.

Description

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

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 22 - Piping - Hydronic Distribution

Location

Throughout the building.

Description

Hydronic heating water supply and return system consisting of insulated piping.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	19
Next Renewal Year:	2031

Mech 23 - Pump - Hydronic Loop - Basemount

Location

P1 main mechanical room.

Description

Armstrong, centrifugal basemount pumps for heating water hydronic loop

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 24 - Tank - Expansion - Hydronic - Diaphragm

Location

P1 main mechanical room.

Description

Therm-X-Trol floor mounted diaphragm expansion tank for hydronic heating system.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 25 - Valves - HVAC Flow Control and Directional

Location

Mechanical rooms and throughout the building.

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:	2011
Chronological Age:	9
Effective Age:	19
Next Renewal Year:	2021

Mech 26 - Baseboard - Hydronic Heater

Location

Throughout the building.

Description

Horizontal baseboard hot water (hydronic) convectors along perimeter and interior wall faces.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Mech 27 - Condensing Unit - AC Cooling only

Location

Adjacent to the main electrical vault.

Description

York condensing unit, and associated indoor fan coil units for common areas air conditioning (cooling only).

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Mech 28 - Electric Cadet Heater

Location

Hallways and lobby.

Description

Rosemex wall-mounted electric fan heaters with integral thermostat control for localized space heating.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 29 - Fireplace - Electric

Location

Amenity room.

Description

Electric fireplace with hearth mantel and electric heating element.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Mech 30 - Unit Heater - Hydronic

Location

Garbage room/ loading dock.

Description

Engineered air hydronic hot water unit heater with fans and louver.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 31 - Condensing Unit - Outdoor Section - Heat Pump

Location

Rooftops.

Description

Daikin VRV-S heat pump outdoor units, and associated indoor fan coil units for forced air conditioning (36,000 BTU/hr) and heating (30,000 BTU/hr).

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Ventilation and Air-conditioning

Mech 32 - Exhaust Fan - Parkade

Location

Parking garage.

Description

Pennbarry belt driven, 2,300 CFM, exhaust fans mounted in exterior wall with motorized louvre.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 33 - Exhaust Fan - Small Service - Cabinet

Location

Washrooms, service and storage rooms.

Description

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

Information

Service Life:	12
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2023

Mech 34 - Heat Recovery Ventilator - Small

Location

Garbage room/ loading dock to service amenity rooms.

Description

Aeromatic 8260, heat recovery ventilator, to exhaust amenity rooms and provides make-up back into the area. Exhaust air and outside air both pass through a common heat exchanger, which preheats the air up to 70% of the exhaust air temperature for energy savings.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Mech 35 - Outdoor Air Handler - Makeup Air

Location

Rooftop, midrise roof and mechanical room.

Description

Delhi 2,300 - 5,700 CFM, 1.5, 2 and 3 HP, outdoor (rooftop) units. Belt-driven, centrifugal fan with hydronic heating to supply tempered make-up air to the interior spaces.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Elevator

Traction

Elev 01 - Traction Elevators, Gearless & Machine Room-less

Location

Elevator control room at roof level.

Description

Gearless machine room-less traction elevators with OTIS Gen2 microprocessor controls; OTIS Regen VVVF drives; OTIS Gen2 gearless machines; 2100 lbs capacity (Elevator 1), 2500 lbs capacity (Elevator 2); 350 fpm estimated speed.

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Car Interiors

Elev 02 - Elevator Cabs & Hoistway

Location

Elevator cab and travelling hoistway

Description

Single speed side opening doors; Stainless steel car and hall pushbuttons; One (1) car operating panel per elevator (stainless steel); Infrared light curtain door protection; OTIS belt door operators; Stainless steel door, door header, and front return; Mirror panel on all non-access walls, with plastic laminate below handrails; Stainless steel ceiling; Tile flooring; Stainless-steel tubular handrails; Phase 1 and 2 firefighter's emergency operation; Standby power provisions; Hands-free voice communication; Seismic provisions.

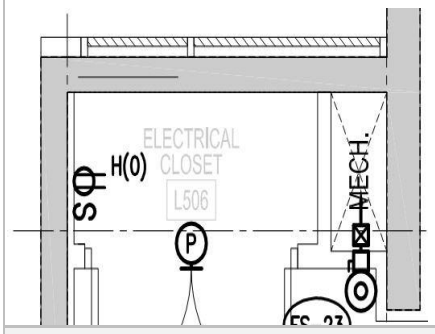
Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Fire Safety

Fire Safety

Fire 01 - Pressurization/Smoke Control Dampers



Location

Service closet at each floor.

Description

Motorized smoke dampers for control of building pressure and smoke in a building.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Controls

Fire 02 - Fire Alarm Panel - Addressable

Location

Lobby.

Description

EST addressable, multi-zone, solid state microprocessor and supervised unit with graphic annunciator and LCD display for all fire detection devices and fire suppression devices connected to the fire alarm system.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Detection

Fire 03 - Fire Detection & Alarm

Location

Common areas throughout the building.

Description

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

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Suppression

Fire 04 - Portable Fire Extinguisher

Location

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:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2035

Fire 05 - Sprinkler & Standpipe - Wet

Location

Distributed throughout the common areas, hallways, and suites.

Description

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

Information

Service Life:	100
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2111

Fire 06 - Sprinkler System - Dry

Location

Unheated common areas; parking garage.

Description

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

Information

Service Life:	100
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2111

Fire 07 - Sprinkler Valve Assembly - Dry

Location

P1 water entry room.

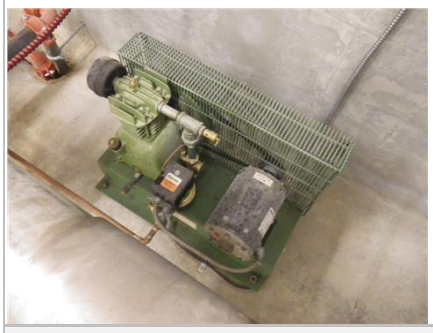
Description

Viking 4" dry sprinkler valves, trim and gauges, steel piping.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Fire 08 - Dry Sprinkler Compressor



Location

P1 water entry room.

Description

Swan compressor with 1/2 HP motor to maintain the pressure of air in the dry fire sprinkler lines.

Information

Service Life:	14
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2025

Egress

Fire 09 - Emergency Egress Equipment

Location

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

Description

Exit lights and emergency lighting equipment to facilitate evacuation from the interior of the building in the event of an emergency.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Interior Finishes

Floors

Finish 01 - Porcelain Floor Tile

Location

Lobby.

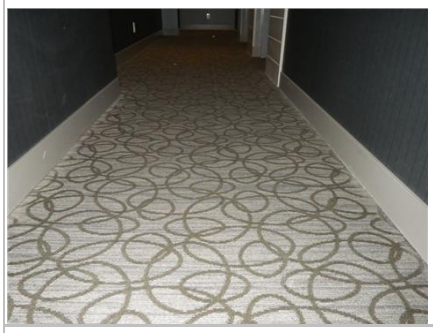
Description

Porcelain floor tile on thin set mortar with grout. Custom fitted carpet installed.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Finish 02 - Sheet Carpet - Glued Down



Location

Hallway and amenity room floor finish.

Description

Synthetic, low level loop, textile sheet floor covering glued over floor substrate.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Finish 03 - Stone Floor Tile

Location

Parking garage elevator vestibules.

Description

Cut stone floor tile on thin set mortar with grout.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Finish 04 - Wood Flooring

Location

Amenity room.

Description

Wood laminate flooring.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Finish 05 - Rubber Sports Flooring

Location

Exercise room.

Description

High density, impact resistant rubber sports flooring.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Walls

Finish 06 - Paint

Location

Wall finish at the hallways, amenity rooms, service rooms.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard, millwork trim details, and metal trim. Touched up and repainted as needed.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Finish 07 - Wallpaper Covering

Location

Penthouse hallway finish, across from the elevators.

Description

Decorative wallpaper sheet covering adhered to substrate sheathing.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Finish 08 - Wood Paneling

Location

Wall finish in the lobby.

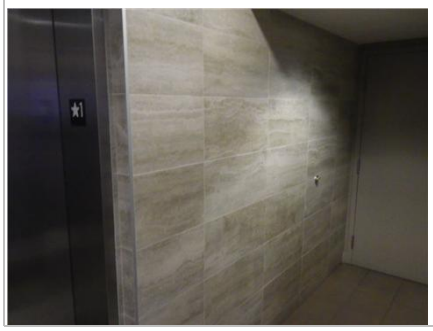
Description

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

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Finish 09 - Natural Stone



Location

Elevators, lobby level.

Description

Stone mortared to substrate or installed using structural fasteners.

Information

Service Life:	35
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2046

Architectural Woodwork

Finish 10 - Carpentry and Millwork

Location

Amenity room.

Description

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

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Doors

Finish 11 - Interior Swing Door - General

Location

Stairwells, service room, amenity rooms, storage rooms.

Description

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

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Amenities

Equipment

Amen 01 - Domestic Appliances

Location

Amenity room.

Description

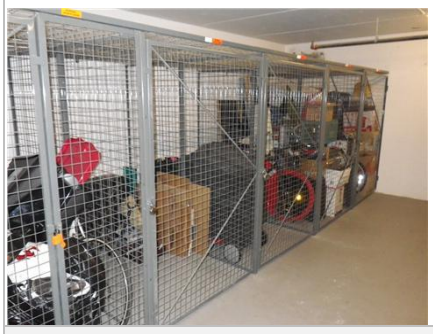
Refrigerator and microwave of miscellaneous brands.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Specialties

Amen 02 - Metal Screen Storage Locker



Location

Parking garage storage rooms.

Description

Painted metal screen storage lockers with steel framing and hardware.

Information

Service Life:	25
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2036

Furnishings

Amen 03 - Central Mailboxes

Location

Lobby.

Description

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

Information

Service Life:	30
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2041

Amen 04 - Furniture

Location

Amenity room.

Description

Sofas, chairs, tables, etc.

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Amen 05 - Pool & Ping Pong Tables

Location

Amenity room.

Description

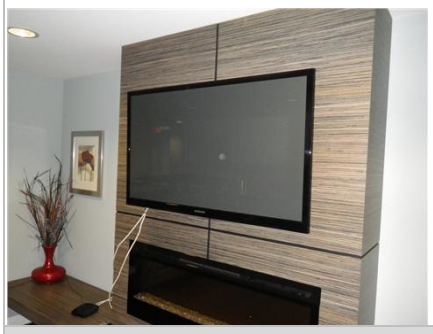
Pool table with felt on high density substrate, bumpers, pockets and frame. Protective cover, pool cues and other miscellaneous accessories. Mobile ping pong table.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Suite

Amen 06 - Audio Visual Equipment



Location

Amenity room and lobby.

Description

Television, speakers and other miscellaneous equipment.

Information

Service Life:	10
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2021

Sitework

Hard Landscaping

Site 01 - Concrete Paving

Location

Parkade entry and various locations throughout the site.

Description

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

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Site 02 - Interlocking Unit Paving

Location

Walkways throughout the site.

Description

Precast concrete unit pavers without curbs, combination of chip seal joint filler and jointing sand, bedding sand, and onto compacted gravel base.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Site 03 - Metal Fencing

Location

Courtyard surrounding playground, courtyard entrances, and unit entrances at ground level.

Description

3-6 foot high rail and picket metal fence with prefinished posts; gates with hardware.

Information

Service Life:	40
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2051

Site 04 - Playground Equipment

Location

North west corner of the courtyard.

Description

Modular plastic and metal playground apparatus. Reconstituted rubber safety flooring in playground area.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2031

Soft Landscaping

Site 05 - Irrigation System

Location

Landscaping throughout the site.

Description

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

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

Site 06 - Soft Landscaping

Location

Ground level, courtyard and perimeter of the building at grade.

Description

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

Information

Service Life:	15
Installed Year:	2011
Chronological Age:	9
Effective Age:	9
Next Renewal Year:	2026

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™

Pinnacle Living False Creek

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Encl 01	Protected Liquid-Applied (Hot Rubber) Membrane Roof (IRMA Assembly)	9	21
Encl 02	Protected Liquid-Applied (Hot Rubber) Membrane Deck/Podium	9	16
Encl 03	Aluminum Panel Soffit	9	21
Encl 04	Guardrail Glazed Aluminum	9	21
Encl 05	Calcium Silicate Masonry Unit (CSMU) Veneer Clad Rainscreen Wall	9	36
Encl 06	Composite Panel Wall	9	31
Encl 07	Coated Architectural Concrete Wall	9	66
Encl 08	Curtain Wall	9	31
Encl 09	Aluminum Framed Window	9	31
Encl 10	Aluminum Frame Glazed Swing Door	9	16
Encl 11	Aluminum Framed Sliding Glass Door	9	21
Encl 12	Steel Swing Door	9	16
Encl 13	Aluminum Frame Lobby Door	9	11
Encl 14	Steel Rollup Door	9	6
Encl 15	Exposed Urethane Balcony & Eyebrow Membrane - Concrete Substrate	9	16
Encl 16	Metal Frame and Glass Canopy	9	31
Encl 17	Decorative Metal Frame	9	31
Encl 18	Open-grid Overhead Parkade Gate	9	16
Encl 19	Parking Slab with Traffic-bearing Membrane	9	66
Encl 20	Slab-on-Grade	9	66
Encl 21	General & Inspections	9	66
Encl 22	Sealant	2	8
Elec 01	Emergency Generator	9	26
Elec 02	Unit Substation	9	26
Elec 03	Electrical Distribution	9	31
Elec 04	Exterior Light Fixtures	9	6
Elec 05	Interior Lighting Components	9	16
Elec 06	Enterphone System	9	16
Elec 07	Proximity Access Control	9	3
Elec 08	Security Surveillance	6	8
Mech 01	Controls - HVAC Instrumentation	9	11
Mech 02	Controls - Variable Frequency Drives	9	6
Mech 03	Gas Detection - Parking Garage	9	1
Mech 04	Heat Tracing - Freeze Protection	9	6
Mech 05	Controls - Direct Digital	9	6
Mech 06	Controls - Electronic Actuators	9	1

Mech 07	Drainage - Storm - Internal	9	31
Mech 08	Piping - Domestic Water Distribution	9	19
Mech 09	Valves - Cross Connection & Backflow Prevention	9	11
Mech 10	Valves - Plumbing Flow Control and Directional	9	11
Mech 11	Drainage - Sanitary	9	41
Mech 12	Fixtures - Taps & Sinks	9	16
Mech 13	Fixtures - Toilets	9	11
Mech 14	Pump - DHW - Circulation and Recirculation	9	1
Mech 15	Pumps - Sanitary Lift and Control Panel	9	6
Mech 16	Pumps - Storm Lift and Control Panel	9	6
Mech 17	Tank - Expansion -DHW - Diaphragm	9	11
Mech 18	Tank - DHW - Storage	9	3
Mech 19	Baseboard - Electric	9	31
Mech 20	Chemical Treatment Equipment	9	1
Mech 21	Heat Exchanger - Plate & Frame	9	11
Mech 22	Piping - Hydronic Distribution	9	11
Mech 23	Pump - Hydronic Loop - Basemount	9	6
Mech 24	Tank - Expansion - Hydronic - Diaphragm	9	11
Mech 25	Valves - HVAC Flow Control and Directional	9	1
Mech 26	Baseboard - Hydronic Heater	9	31
Mech 27	Condensing Unit - AC Cooling only	9	6
Mech 28	Electric Cadet Heater	9	11
Mech 29	Fireplace - Electric	9	21
Mech 30	Unit Heater - Hydronic	9	11
Mech 31	Condensing Unit - Outdoor Section - Heat Pump	9	6
Mech 32	Exhaust Fan - Parkade	9	11
Mech 33	Exhaust Fan - Small Service - Cabinet	9	3
Mech 34	Heat Recovery Ventilator - Small	9	11
Mech 35	Outdoor Air Handler - Makeup Air	9	11
Elev 01	Traction Elevators, Gearless & Machine Room-less	9	21
Elev 02	Elevator Cabs & Hoistway	9	21
Fire 01	Pressurization/Smoke Control Dampers	9	11
Fire 02	Fire Alarm Panel - Addressable	9	11
Fire 03	Fire Detection & Alarm	9	11
Fire 04	Portable Fire Extinguisher	9	15
Fire 05	Sprinkler & Standpipe - Wet	9	91
Fire 06	Sprinkler System - Dry	9	91
Fire 07	Sprinkler Valve Assembly - Dry	9	31
Fire 08	Dry Sprinkler Compressor	9	5
Fire 09	Emergency Egress Equipment	9	11
Finish 01	Porcelain Floor Tile	9	31

Finish 02	Sheet Carpet - Glued Down	9	6
Finish 03	Stone Floor Tile	9	31
Finish 04	Wood Flooring	9	11
Finish 05	Rubber Sports Flooring	9	16
Finish 06	Paint	9	6
Finish 07	Wallpaper Covering	9	6
Finish 08	Wood Paneling	9	16
Finish 09	Natural Stone	9	26
Finish 10	Carpentry and Millwork	9	21
Finish 11	Interior Swing Door - General	9	21
Amen 01	Domestic Appliances	9	6
Amen 02	Metal Screen Storage Locker	9	16
Amen 03	Central Mailboxes	9	21
Amen 04	Furniture	9	6
Amen 05	Pool & Ping Pong Tables	9	11
Amen 06	Audio Visual Equipment	9	1
Site 01	Concrete Paving	9	31
Site 02	Interlocking Unit Paving	9	31
Site 03	Metal Fencing	9	31
Site 04	Playground Equipment	9	11
Site 05	Irrigation System	9	6
Site 06	Soft Landscaping	9	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

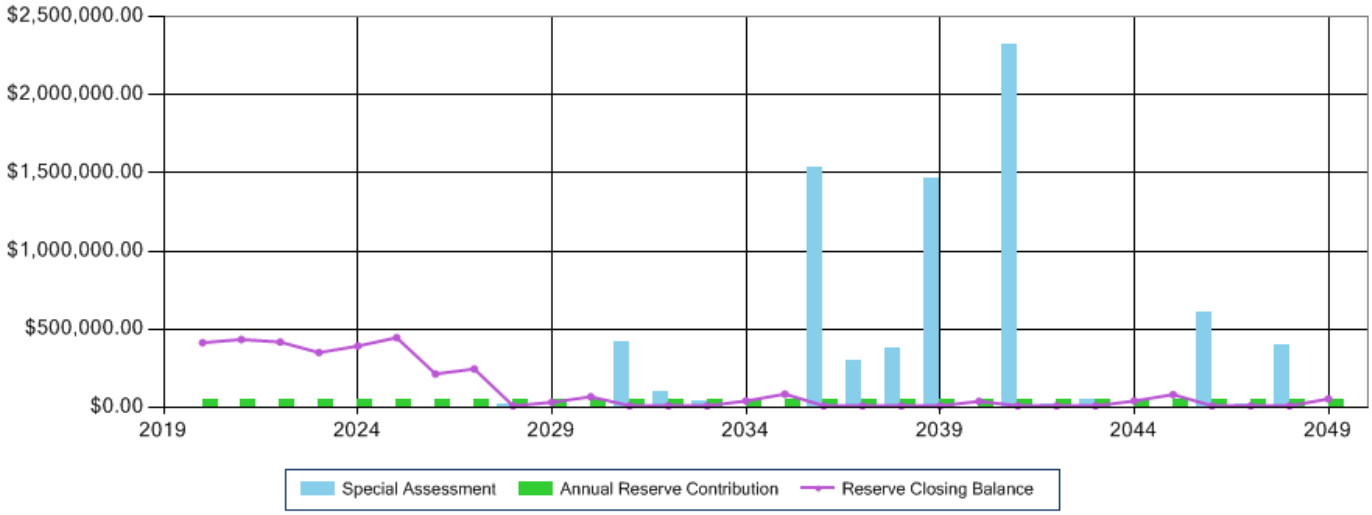
Building - Funding Model

Pinnacle Living False Creek

Name	2020 - Fixed Annual Funding of $50,400 (Current)
Type	Basic
Regarding	Pinnacle Living False Creek
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	105

Init Catchup Cost	$0
Operating Budget	$548,746
Starting Reserve Balance	$358,397
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$50,400
Contribution Above Threshold	$50,400
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$40

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	$358,397	$50,400	$0	$7,168	$0	$2,000	$0	$413,965	22.51 %
2021	$413,965	$50,400	$0	$8,279	$36,100	$2,000	$0	$434,544	21.08 %
2022	$434,544	$50,400	$0	$8,691	$73,600	$2,000	$0	$418,035	18.46 %
2023	$418,035	$50,400	$0	$8,361	$124,080	$2,000	$0	$350,716	14.41 %
2024	$350,716	$50,400	$0	$7,014	$13,700	$2,000	$0	$392,430	14.41 %
2025	$392,430	$50,400	$0	$7,849	$2,530	$2,000	$0	$446,149	14.70 %
2026	$446,149	$50,400	$0	$8,923	$289,250	$2,000	$0	$214,222	6.99 %
2027	$214,222	$50,400	$0	$4,284	$20,900	$2,000	$0	$246,006	7.27 %
2028	$246,006	$50,400	$16,934	$4,920	$306,260	$2,000	$0	$10,000	0.29 %
2029	$10,000	$50,400	$0	$200	$26,000	$2,000	$0	$32,600	0.86 %
2030	$32,600	$50,400	$0	$652	$13,080	$2,000	$0	$68,572	1.65 %
2031	$68,572	$50,400	$419,927	$1,371	$528,270	$2,000	$0	$10,000	0.25 %
2032	$10,000	$50,400	$103,700	$200	$152,300	$2,000	$0	$10,000	0.23 %
2033	$10,000	$50,400	$34,510	$200	$83,110	$2,000	$0	$10,000	0.22 %
2034	$10,000	$50,400	$0	$200	$17,210	$2,000	$0	$41,390	0.85 %
2035	$41,390	$50,400	$0	$828	$5,200	$2,000	$0	$85,418	1.62 %
2036	$85,418	$50,400	$1,530,674	$1,708	$1,656,200	$2,000	$0	$10,000	0.25 %
2037	$10,000	$50,400	$302,020	$200	$350,620	$2,000	$0	$10,000	0.25 %
2038	$10,000	$50,400	$380,960	$200	$429,560	$2,000	$0	$10,000	0.26 %
2039	$10,000	$50,400	$1,467,300	$200	$1,515,900	$2,000	$0	$10,000	0.38 %
2040	$10,000	$50,400	$0	$200	$19,550	$2,000	$0	$39,050	1.38 %
2041	$39,050	$50,400	$2,316,669	$781	$2,394,900	$2,000	$0	$10,000	1.47 %
2042	$10,000	$50,400	$24,380	$200	$72,980	$2,000	$0	$10,000	1.37 %
2043	$10,000	$50,400	$52,000	$200	$100,600	$2,000	$0	$10,000	1.33 %
2044	$10,000	$50,400	$0	$200	$17,300	$2,000	$0	$41,300	4.83 %
2045	$41,300	$50,400	$0	$826	$8,200	$2,000	$0	$82,326	8.46 %
2046	$82,326	$50,400	$608,748	$1,647	$731,120	$2,000	$0	$10,000	2.79 %
2047	$10,000	$50,400	$23,500	$200	$72,100	$2,000	$0	$10,000	2.77 %
2048	$10,000	$50,400	$397,060	$200	$445,660	$2,000	$0	$10,000	333.33 %
2049	$10,000	$50,400	$0	$200	$4,130	$2,000	$0	$54,470	100.00 %
		$1,512,000	$7,678,381		$9,510,410				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2019
2024
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2039
2044
2049
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

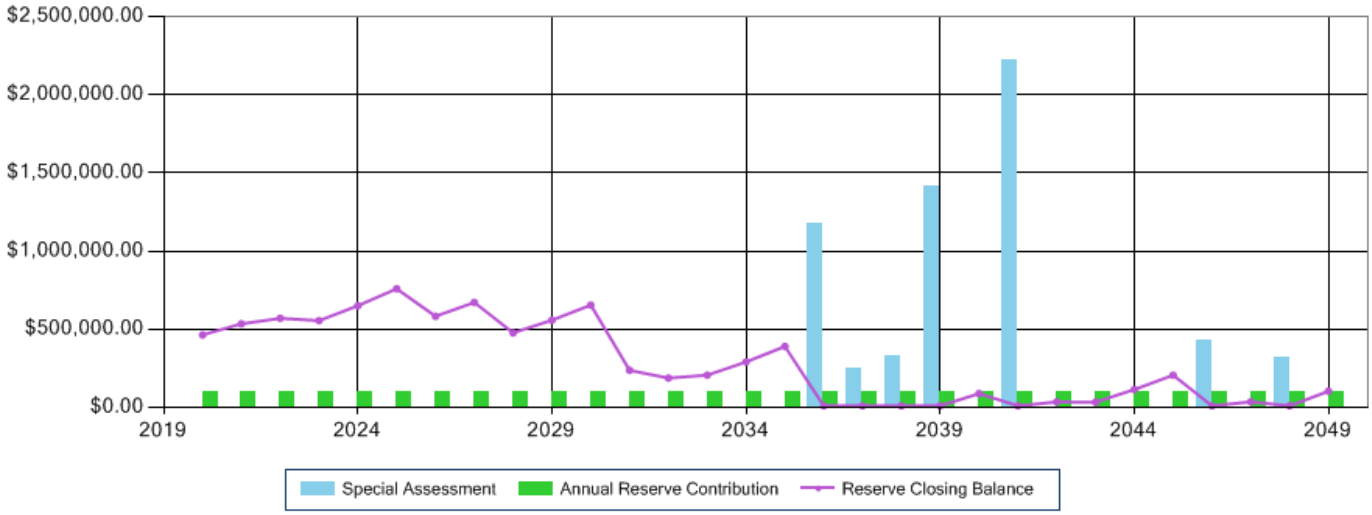
RDH
Making Buildings Better

Building - Funding Model
Pinnacle Living False Creek

Name	2020 - Fixed Annual Funding of $100,000 (Alternative)
Type	Basic
Regarding	Pinnacle Living False Creek
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	105

Init Catchup Cost	$0
Operating Budget	$548,746
Starting Reserve Balance	$358,397
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$100,000
Contribution Above Threshold	$100,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$79

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	$358,397	$100,000	$0	$7,168	$0	$2,000	$0	$463,565	25.20 %
2021	$463,565	$100,000	$0	$9,271	$36,100	$2,000	$0	$534,736	25.94 %
2022	$534,736	$100,000	$0	$10,695	$73,600	$2,000	$0	$569,831	25.16 %
2023	$569,831	$100,000	$0	$11,397	$124,080	$2,000	$0	$555,148	22.81 %
2024	$555,148	$100,000	$0	$11,103	$13,700	$2,000	$0	$650,551	23.89 %
2025	$650,551	$100,000	$0	$13,011	$2,530	$2,000	$0	$759,032	25.02 %
2026	$759,032	$100,000	$0	$15,181	$289,250	$2,000	$0	$582,962	19.02 %
2027	$582,962	$100,000	$0	$11,659	$20,900	$2,000	$0	$671,721	19.86 %
2028	$671,721	$100,000	$0	$13,434	$306,260	$2,000	$0	$476,896	13.85 %
2029	$476,896	$100,000	$0	$9,538	$26,000	$2,000	$0	$558,434	14.78 %
2030	$558,434	$100,000	$0	$11,169	$13,080	$2,000	$0	$654,523	15.82 %
2031	$654,523	$100,000	$0	$13,090	$528,270	$2,000	$0	$237,343	5.96 %
2032	$237,343	$100,000	$0	$4,747	$152,300	$2,000	$0	$187,790	4.47 %
2033	$187,790	$100,000	$0	$3,756	$83,110	$2,000	$0	$206,436	4.59 %
2034	$206,436	$100,000	$0	$4,129	$17,210	$2,000	$0	$291,354	6.00 %
2035	$291,354	$100,000	$0	$5,827	$5,200	$2,000	$0	$389,981	7.43 %
2036	$389,981	$100,000	$1,170,419	$7,800	$1,656,200	$2,000	$0	$10,000	0.25 %
2037	$10,000	$100,000	$252,420	$200	$350,620	$2,000	$0	$10,000	0.25 %
2038	$10,000	$100,000	$331,360	$200	$429,560	$2,000	$0	$10,000	0.26 %
2039	$10,000	$100,000	$1,417,700	$200	$1,515,900	$2,000	$0	$10,000	0.38 %
2040	$10,000	$100,000	$0	$200	$19,550	$2,000	$0	$88,650	3.13 %
2041	$88,650	$100,000	$2,216,477	$1,773	$2,394,900	$2,000	$0	$10,000	1.47 %
2042	$10,000	$100,000	$0	$200	$72,980	$2,000	$0	$35,220	4.85 %
2043	$35,220	$100,000	$0	$704	$100,600	$2,000	$0	$33,324	4.44 %
2044	$33,324	$100,000	$0	$666	$17,300	$2,000	$0	$114,691	13.42 %
2045	$114,691	$100,000	$0	$2,294	$8,200	$2,000	$0	$206,785	21.25 %
2046	$206,785	$100,000	$432,200	$4,136	$731,120	$2,000	$0	$10,000	2.79 %
2047	$10,000	$100,000	$0	$200	$72,100	$2,000	$0	$36,100	10.00 %
2048	$36,100	$100,000	$320,838	$722	$445,660	$2,000	$0	$10,000	333.33 %
2049	$10,000	$100,000	$0	$200	$4,130	$2,000	$0	$104,070	100.00 %
		$3,000,000	$6,141,414		$9,510,410				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2019
2024
2029
2034
2039
2044
2049
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

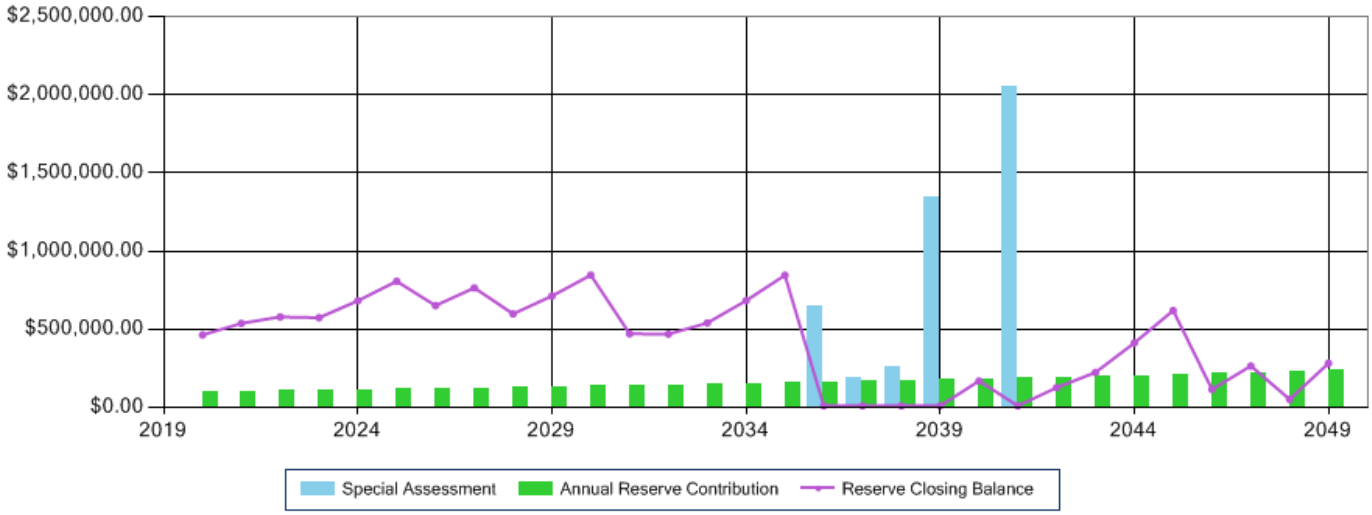
RDH
Making Buildings Better

Building - Funding Model
Pinnacle Living False Creek

Name	2020 - Annual Funding of $100,000 w. 3% increase (Alternative 2)
Type	Basic
Regarding	Pinnacle Living False Creek
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	105

Init Catchup Cost	$0
Operating Budget	$548,746
Starting Reserve Balance	$358,397
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$100,000
Contribution Above Threshold	$100,000
Reserve Contribution Increase	3.00 %
Monthly Avg. Unit Contribution	$79

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	$358,397	$100,000	$0	$7,168	$0	$2,000	$0	$463,565	25.20 %
2021	$463,565	$103,000	$0	$9,271	$36,100	$2,000	$0	$537,736	26.09 %
2022	$537,736	$106,090	$0	$10,755	$73,600	$2,000	$0	$578,981	25.57 %
2023	$578,981	$109,273	$0	$11,580	$124,080	$2,000	$0	$573,753	23.58 %
2024	$573,753	$112,551	$0	$11,475	$13,700	$2,000	$0	$682,079	25.05 %
2025	$682,079	$115,927	$0	$13,642	$2,530	$2,000	$0	$807,118	26.61 %
2026	$807,118	$119,405	$0	$16,142	$289,250	$2,000	$0	$651,416	21.26 %
2027	$651,416	$122,987	$0	$13,028	$20,900	$2,000	$0	$764,531	22.61 %
2028	$764,531	$126,677	$0	$15,291	$306,260	$2,000	$0	$598,239	17.38 %
2029	$598,239	$130,477	$0	$11,965	$26,000	$2,000	$0	$712,681	18.86 %
2030	$712,681	$134,392	$0	$14,254	$13,080	$2,000	$0	$846,246	20.46 %
2031	$846,246	$138,423	$0	$16,925	$528,270	$2,000	$0	$471,325	11.84 %
2032	$471,325	$142,576	$0	$9,426	$152,300	$2,000	$0	$469,027	11.16 %
2033	$469,027	$146,853	$0	$9,381	$83,110	$2,000	$0	$540,151	12.03 %
2034	$540,151	$151,259	$0	$10,803	$17,210	$2,000	$0	$683,003	14.07 %
2035	$683,003	$155,797	$0	$13,660	$5,200	$2,000	$0	$845,260	16.12 %
2036	$845,260	$160,471	$645,564	$16,905	$1,656,200	$2,000	$0	$10,000	0.25 %
2037	$10,000	$165,285	$187,135	$200	$350,620	$2,000	$0	$10,000	0.25 %
2038	$10,000	$170,243	$261,117	$200	$429,560	$2,000	$0	$10,000	0.26 %
2039	$10,000	$175,351	$1,342,350	$200	$1,515,900	$2,000	$0	$10,000	0.38 %
2040	$10,000	$180,611	$0	$200	$19,550	$2,000	$0	$169,261	5.98 %
2041	$169,261	$186,029	$2,048,224	$3,385	$2,394,900	$2,000	$0	$10,000	1.47 %
2042	$10,000	$191,610	$0	$200	$72,980	$2,000	$0	$126,830	17.46 %
2043	$126,830	$197,359	$0	$2,537	$100,600	$2,000	$0	$224,125	29.92 %
2044	$224,125	$203,279	$0	$4,483	$17,300	$2,000	$0	$412,587	48.31 %
2045	$412,587	$209,378	$0	$8,252	$8,200	$2,000	$0	$620,017	63.72 %
2046	$620,017	$215,659	$0	$12,400	$731,120	$2,000	$0	$114,956	32.11 %
2047	$114,956	$222,129	$0	$2,299	$72,100	$2,000	$0	$265,284	73.48 %
2048	$265,284	$228,793	$0	$5,306	$445,660	$2,000	$0	$51,722	1,724.06 %
2049	$51,722	$235,656	$0	$1,034	$4,130	$2,000	$0	$282,283	100.00 %
		$4,757,539	$4,484,390		$9,510,410				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2049
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

RDH
Making Buildings Better

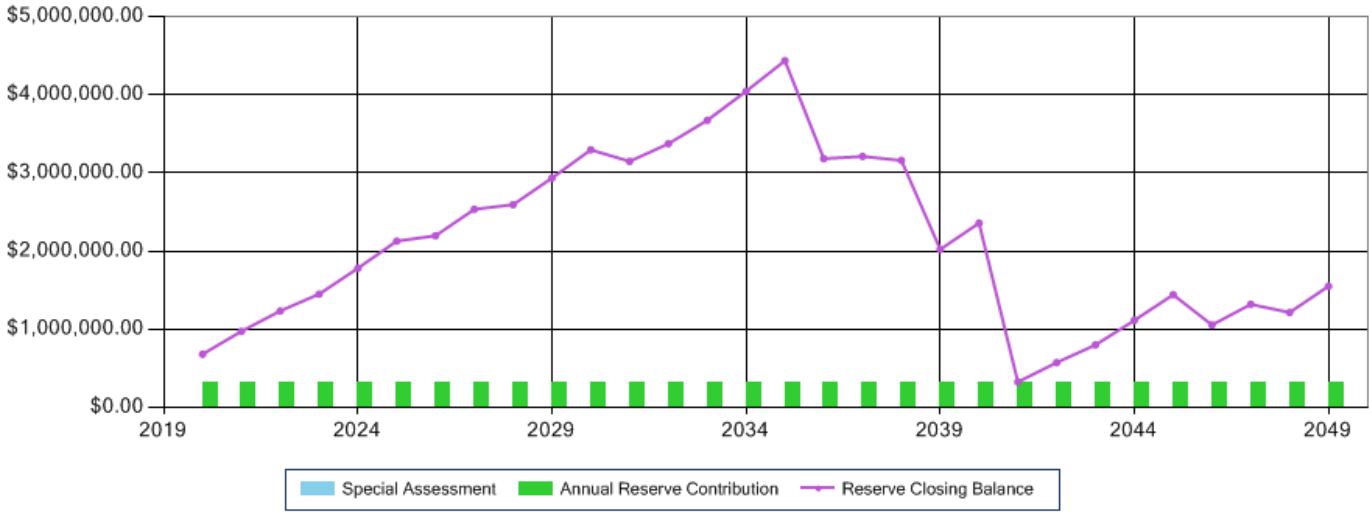
Building - Funding Model

Pinnacle Living False Creek

Name	2020 - Fixed Annual Funding of $317,000 (Progressive)
Type	Basic
Regarding	Pinnacle Living False Creek
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	105

Init Catchup Cost	$0
Operating Budget	$548,746
Starting Reserve Balance	$358,397
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$317,000
Contribution Above Threshold	$317,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$252

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	$358,397	$317,000	$0	$7,168	$0	$2,000	$0	$680,565	37.00 %
2021	$680,565	$317,000	$0	$13,611	$36,100	$2,000	$0	$973,076	47.21 %
2022	$973,076	$317,000	$0	$19,462	$73,600	$2,000	$0	$1,233,938	54.50 %
2023	$1,233,938	$317,000	$0	$24,679	$124,080	$2,000	$0	$1,449,537	59.57 %
2024	$1,449,537	$317,000	$0	$28,991	$13,700	$2,000	$0	$1,779,827	65.38 %
2025	$1,779,827	$317,000	$0	$35,597	$2,530	$2,000	$0	$2,127,894	70.15 %
2026	$2,127,894	$317,000	$0	$42,558	$289,250	$2,000	$0	$2,196,202	71.67 %
2027	$2,196,202	$317,000	$0	$43,924	$20,900	$2,000	$0	$2,534,226	74.95 %
2028	$2,534,226	$317,000	$0	$50,685	$306,260	$2,000	$0	$2,593,650	75.35 %
2029	$2,593,650	$317,000	$0	$51,873	$26,000	$2,000	$0	$2,934,523	77.69 %
2030	$2,934,523	$317,000	$0	$58,690	$13,080	$2,000	$0	$3,295,134	79.66 %
2031	$3,295,134	$317,000	$0	$65,903	$528,270	$2,000	$0	$3,147,766	79.08 %
2032	$3,147,766	$317,000	$0	$62,955	$152,300	$2,000	$0	$3,373,422	80.33 %
2033	$3,373,422	$317,000	$0	$67,468	$83,110	$2,000	$0	$3,672,780	81.83 %
2034	$3,672,780	$317,000	$0	$73,456	$17,210	$2,000	$0	$4,044,026	83.33 %
2035	$4,044,026	$317,000	$0	$80,881	$5,200	$2,000	$0	$4,434,706	84.58 %
2036	$4,434,706	$317,000	$0	$88,694	$1,656,200	$2,000	$0	$3,182,200	80.93 %
2037	$3,182,200	$317,000	$0	$63,644	$350,620	$2,000	$0	$3,210,224	81.99 %
2038	$3,210,224	$317,000	$0	$64,204	$429,560	$2,000	$0	$3,159,869	82.26 %
2039	$3,159,869	$317,000	$0	$63,197	$1,515,900	$2,000	$0	$2,022,166	77.95 %
2040	$2,022,166	$317,000	$0	$40,443	$19,550	$2,000	$0	$2,358,059	83.38 %
2041	$2,358,059	$317,000	$0	$47,161	$2,394,900	$2,000	$0	$325,320	48.12 %
2042	$325,320	$317,000	$0	$6,506	$72,980	$2,000	$0	$573,847	79.04 %
2043	$573,847	$317,000	$0	$11,477	$100,600	$2,000	$0	$799,724	106.77 %
2044	$799,724	$317,000	$0	$15,994	$17,300	$2,000	$0	$1,113,418	130.37 %
2045	$1,113,418	$317,000	$0	$22,268	$8,200	$2,000	$0	$1,442,486	148.25 %
2046	$1,442,486	$317,000	$0	$28,850	$731,120	$2,000	$0	$1,055,216	294.75 %
2047	$1,055,216	$317,000	$0	$21,104	$72,100	$2,000	$0	$1,319,221	365.43 %
2048	$1,319,221	$317,000	$0	$26,384	$445,660	$2,000	$0	$1,214,945	>10000%
2049	$1,214,945	$317,000	$0	$24,299	$4,130	$2,000	$0	$1,550,114	100.00 %
		$9,510,000	$0		$9,510,410				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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 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

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

AON

Appendix H

Strategic Plan

RDH BUILDING SCIENCE

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

Making Buildings Better™

Pinnacle Living False Creek
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	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	2049
ENCLOSURE																																				
ROOFS & DECKS																																				
Encl 01	R01	Replace roof membrane assembly and associated components.	30 Yrs	$424,200	2041	$640,000																					•									
Encl 02	R01	Replace roof membrane assembly and associated components. Some of the pavers and overburden may be salvagable.	30 Yrs	$896,000	2036	$1,200,000																•														
Encl 03	R01	Replace soffit panels and associated components, such as venting strips.	40 Yrs	$13,000	2041	$20,000																					•									
FALL PROTECTION																																				
Encl 04	J02	Review guardrails for structural adequacy including attachments.	10 Yrs	$0	2036	$0																•														
Encl 04	R01	Remove and re-install sections of guardrail in conjunction with balcony waterproofing membrane renewal, including inspect and re-certify guardrail.	15 Yrs	$14,280	2036	$20,000																•														
Encl 04	R02	Replace exterior guardrails.	30 Yrs	$132,600	2041	$200,000																					•									
WALLS																																				
Encl 05	J02	Repoint mortar joints in CSNU veneer wall, as required.	5 Yrs	$4,800	2023	$5,100				•				•						•					•					•						•	
Encl 05	R01	Replace sections of stone veneer cladding along with associated flashing and sealants as required. [Extent of renewal may vary based on site condition.]	10 Yrs	$23,400	2056	$48,000																															
Encl 06	J01	Clean exterior surfaces of metal panels, as required, to remove atmospheric dirt and other surface staining.	5 Yrs	$5,000	2023	$5,000				•				•						•					•					•						•	
Encl 06	R01	Replace metal panels along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	40 Yrs	$198,000	2051	$370,000																															
Encl 07	J01	Clean exterior coated concrete wall surfaces.	5 Yrs	$5,003	2023	$5,300				•				•						•					•					•						•	

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ENCLOSURE																																				
Encl 07	J02	Review exterior concrete walls for signs of distress, such as spalling, cracking or delaminating of the concrete. Pay close attention to cracks and construction joints. Contact consultant to review large cracks and significant areas of spalling if required.	3 Yrs	$0	2023	$0				•			•			•			•			•			•			•			•			•		
Encl 07	R01	Reapplication of the protective coating as required, including preparation of the concrete substrate.	10 Yrs	$120,000	2028	$160,000									•										•										•	
Encl 07	R02	Concrete wall is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	75 Yrs	$0	2086	$0																														
GLAZING SYSTEMS																																				
Encl 08	R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	$1,400	2024	$1,500					•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 08	R02	Replace or refurbish curtain wall assembly.	40 Yrs	$158,200	2051	$290,000																														
Encl 09	J03	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	$9,375	2024	$10,000					•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 09	R01	Replace aluminum framed windows and associated components.	40 Yrs	$3,637,500	2051	$6,700,000																														
DOORS																																				
Encl 10	J02	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	$0	2022	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 10	R01	Replace aluminum frame swing doors.	25 Yrs	$243,600	2052	$460,000																														
Encl 10	R02	Replace aluminum frame swing doors.	25 Yrs	$81,200	2036	$110,000																•														
Encl 11	J03	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$0	2024	$0					•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 11	R01	Replace sliding glass doors and associated components.	30 Yrs	$128,800	2041	$200,000																						•								
Encl 12	J02	Repaint steel swing doors.	5 Yrs	$2,400	2023	$2,500				•					•					•								•					•			
Encl 12	R01	Replace metal clad swing doors.	25 Yrs	$16,000	2036	$22,000																•														
Encl 13	R02	Replace aluminum frame lobby doors.	20 Yrs	$6,000	2031	$7,500												•																		
Encl 14	J02	Repaint overhead doors.	10 Yrs	$0	2022	$0			•													•											•			
Encl 14	R01	Replace steel rollup door.	25 Yrs	$2,000	2026	$2,300							•																							
BALCONIES																																				
Encl 15	R01	Repair locally damaged and delaminated balcony membrane prior to re-application of top coat.	10 Yrs	$5,440	2022	$5,700			•										•														•			
Encl 15	R02	Prepare and locally re-apply membrane top coat.	10 Yrs	$54,400	2022	$57,000			•										•														•			
Encl 15	R03	Replace exposed urethane balcony membrane and associated components.	25 Yrs	$108,800	2036	$150,000																•														
CANOPIES																																				
Encl 16	R01	Repaint exposed metal frame of canopy assemblies.	20 Yrs	$2,000	2032	$2,500													•																		
Encl 16	R02	Replace metal and glass canopy assembly.	40 Yrs	$26,600	2051	$49,000																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ENCLOSURE																																				
Encl 17	R01	Repaint exposed metal frame and shedding surface of canopy assemblies.	5 Yrs	$5,000	2022	$5,200			•					•					•				•					•					•			
Encl 17	R02	Replace decorative metal frame.	40 Yrs	$50,000	2051	$92,000																														
PARKING GARAGE																																				
Encl 18	R02	Replacement of sectional overhead doors and associated hardware, as required.	25 Yrs	$8,000	2036	$11,000																	•													
Encl 19	J01	Re-apply traffic demarcation striping and directional signage as required. Frequency will depend on traffic volume and other factors.	5 Yrs	$1,500	2023	$1,600				•					•					•					•					•					•	
Encl 19	J02	Review traffic-bearing membrane for signs of distress, such tears, peeling, delamination, and discolouration, particularly at high traffic areas.	5 Yrs	$0	2023	$0				•					•					•					•					•					•	
Encl 19	J03	Repair damaged and delaminated membrane prior to re-application of top coat.	10 Yrs	$8,544	2023	$9,100				•										•										•						
Encl 19	R01	Re-apply membrane top coat in high traffic areas (e.g. drive aisles).	10 Yrs	$22,250	2023	$24,000				•										•										•						
Encl 19	R02	Prepare concrete surface and re-apply traffic-bearing membrane. [Frequency will depend on traffic volume and other factors.]	25 Yrs	$213,600	2037	$300,000																		•												
Encl 19	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	2086	$0																														
Encl 20	J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	5 Yrs	$0	2022	$0			•				•					•					•					•					•			
Encl 20	J02	Heavy duty cleaning on slab surface to remove oil stains, etc.	5 Yrs	$0	2022	$0			•				•					•					•					•					•			
Encl 20	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	2086	$0																														
GENERAL & INSPECTIONS																																				
Encl 21	J01	Review metal flashing at all location and touch-up paint as required.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•			•
Encl 21	J02	Repaint dryer, kitchen and bathroom exhaust vents as required.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•			•
Encl 21	J03	Update depreciation report.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•			•
Encl 21	J06	Perform 10-year extended 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	2021	$5,100		•																												
Encl 21	J07	Perform full condition assessment of all enclosure systems.	5 Yrs	$8,000	2027	$9,200								•					•					•					•					•		
Encl 21	R01	This is not a renewable asset.	75 Yrs	$0	2086	$0																														
Encl 22	J01	Review condition of sealant at all locations and undertake localized repairs or replacement as required.	2 Yrs	$0	2022	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 22	J02	Assess current condition of various sealant and develop renewals plan. The plan should consider current condition, exposure conditions, types of sealant, other work that should be bundled with the sealant work like painting, and phasing of the work.	10 Yrs	$0	2024	$0					•										•										•						

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ENCLOSURE																																				
Encl 22	R01	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	10 Yrs	$75,000	2028	$88,000									•										•									•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ELECTRICAL																																				
POWER SUPPLY																																				
Elec 01	R01	Replace generator hoses.	10 Yrs	$0	2022	$0			•										•										•							
Elec 01	R02	Rebuild emergency generator.	17 Yrs	$15,000	2029	$20,000										•																	•			
Elec 01	R03	Replace generator battery packs.	4 Yrs	$300	2022	$300			•				•				•				•				•				•				•			
Elec 01	R04	Replace emergency generator and transfer switch.	35 Yrs	$120,000	2046	$200,000																											•			
Elec 02	J01	Lubricate all moving contacts.	5 Yrs	$0	2023	$0				•					•					•					•					•					•		
Elec 02	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	2023	$0				•					•					•					•					•					•		
Elec 02	J03	Calibrate electrical relays to match documented (or utility company) settings.	5 Yrs	$0	2023	$0				•					•					•					•					•					•		
Elec 02	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	2023	$0				•					•					•					•					•					•		
Elec 02	J05	Verify that unit substation grounding network is adequate to ensure safety during work and while equipment is in operation.	5 Yrs	$0	2023	$0				•					•					•					•					•					•		
Elec 02	J06	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	5 Yrs	$0	2023	$0				•					•					•					•					•					•		
Elec 02	R01	Service shutdown event. Inspect, 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	$5,000	2023	$6,100				•					•					•					•					•					•		
Elec 02	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	$2,000	2023	$2,100				•					•					•					•					•					•		
Elec 02	R03	Replace unit substation equipment.	35 Yrs	$150,000	2046	$250,000																											•			
DISTRIBUTION																																				
Elec 03	J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ELECTRICAL																																				
Elec 03	J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elec 03	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	$3,000	2023	$3,200				•					•					•						•				•					•		
Elec 03	R02	Cyclical replacement of components of the electrical distribution equipment, as required.	40 Yrs	$60,000	2051	$110,000																														
LIGHT FIXTURES																																				
Elec 04	R01	Replace photocell time clocks for exterior lights, excluding field wiring.	6 Yrs	$0	2021	$0		•						•						•					•						•					
Elec 04	R02	Cyclical replacement of exterior lighting, excluding field wiring.	15 Yrs	$5,000	2026	$5,600							•															•								
Elec 05	J01	Inspect interior lighting fixtures for signs of distress, such as surface dents, scratches, and burns that can lead to rust formation.	2 Yrs	$0	2022	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Elec 05	J02	Perform survey of actual lighting use and lighting levels to determine lighting needs.	3 Yrs	$0	2025	$0						•			•			•			•			•			•			•			•			•
Elec 05	R01	Cyclical replacement of ballasts and other components, excluding lamps.	10 Yrs	$18,000	2036	$25,000																	•										•			
SECURITY																																				
Elec 06	R01	Replace enterphone panels, excluding field wiring.	25 Yrs	$12,000	2036	$16,000																	•										•			
Elec 07	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	2024	$0					•						•						•					•						•	
Elec 07	R02	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	15 Yrs	$42,000	2023	$45,000				•															•											
Elec 08	R01	Service the multiplex unit, update software as required.	5 Yrs	$0	2023	$0				•					•					•					•				•					•		
Elec 08	R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	14 Yrs	$4,800	2028	$6,300									•													•							

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
MECHANICAL																																				
CONTROLS AND END DEVICES																																				
Mech 01	R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	3 Yrs	$2,000	2031	$2,500												•			•			•			•			•			•			•

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
MECHANICAL																																				
Mech 02	R01	Replace variable frequency drives.	15 Yrs	$8,000	2026	$9,000							•															•								
Mech 03	R01	Cyclical replacement of gas detection sensors.	5 Yrs	$1,800	2021	$1,800		•					•					•					•					•					•			
Mech 04	R01	Cyclical replacement of components of electric heat tracing cable, including control module and pipe insulation.	15 Yrs	$5,000	2026	$5,600							•															•								
Mech 05	R01	Cyclical replacement of sensors and other field devices, as required.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•			•
Mech 05	R02	Replace DDC controllers.	15 Yrs	$10,000	2026	$11,000							•															•								
Mech 06	R01	Cyclical replacement of electronic actuator controls, as required.	5 Yrs	$5,000	2021	$5,100		•					•					•					•					•					•			
PLUMBING & DRAINAGE																																				
Mech 07	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. Jet flush or auger to suit.	5 Yrs	$3,000	2022	$3,100			•					•					•					•						•					•		
Mech 07	R01	Repair and/replace components of storm water drainage collection system, as required.	40 Yrs	$40,000	2051	$74,000																														
Mech 08	J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	5 Yrs	$0	2023	$0				•					•					•					•					•					•	
Mech 08	J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	5 Yrs	$0	2023	$0				•					•					•					•					•					•	
Mech 08	J03	Check integrity of all soldered pipe connections and couplings.	5 Yrs	$0	2023	$0				•					•					•					•					•					•	
Mech 08	J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	20 Yrs	$10,000	2032	$14,000													•																	
Mech 08	R01	Replace components of domestic plumbing distribution system, including domestic valves.[Extent and timing of renewal will be dependent on the third-party testing of the domestic water distribution piping recommended in tactical plan.	28 Yrs	$1,050,000	2039	$1,500,000																				•										
Mech 09	R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	20 Yrs	$8,000	2031	$9,900												•																		
Mech 10	R01	Cyclical replacement of valves, as required.	20 Yrs	$6,000	2031	$7,500												•																		
Mech 11	J01	Insert video cameras into main lines to conduct pipe inspection.	10 Yrs	$3,000	2021	$3,100		•										•										•								
Mech 11	J02	Auger lateral drain lines.	10 Yrs	$4,000	2021	$4,100		•										•										•								
Mech 11	R01	Repair components of sanitary drainage distribution system, as required.	50 Yrs	$30,000	2061	$68,000																														
Mech 12	R01	Cyclical replacement of sinks and faucets, as required.	20 Yrs	$2,000	2036	$2,700																	•													
Mech 13	R01	Cyclical replacement of toilets and urinals, as required.	20 Yrs	$2,000	2031	$2,500												•																		
Mech 14	J01	Inspect brushes and remove brush dust from motor.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 14	R01	Cyclical replacement of recirculating pumps, as required.	8 Yrs	$3,000	2021	$3,100		•								•								•								•				
Mech 15	J01	Coat exposed shaft of impeller with anti-seize compound.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 15	R01	Overhaul sanitary sump pumps.	5 Yrs	$2,000	2022	$2,300			•					•					•					•					•					•		
Mech 15	R02	Cyclical replacement of sump pumps.	15 Yrs	$8,000	2026	$9,000							•															•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
MECHANICAL																																				
Mech 16	J01	Coat exposed shaft of impeller with anti-seize compound.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 16	R01	Overhaul storm sump pumps.	5 Yrs	$2,000	2023	$2,100				•					•					•					•				•					•		
Mech 16	R02	Cyclic replacement of sump pump storm lift and control panels.	15 Yrs	$8,000	2026	$9,000							•															•								
Mech 17	J01	Drain down and clean out tank; examine lining and shell. Check air pressure. check diaphragm if present.	5 Yrs	$0	2023	$0				•					•					•					•				•					•		
Mech 17	R01	Replace expansion tank, as required.	20 Yrs	$5,000	2031	$6,200												•																		
Mech 18	J01	Dismantle, inspect and clean tube bundle on immersion heating tanks.	5 Yrs	$0	2023	$0				•					•					•					•				•					•		
Mech 18	J02	Replace anode rods in hot water heaters.	5 Yrs	$0	2023	$0				•					•					•					•				•					•		
Mech 18	R01	Cyclical replacement of domestic hot water storage tanks.	8 Yrs	$8,910	2023	$9,500				•								•							•								•		
HEATING & COOLING																																				
Mech 19	J01	Check that circuit breakers for electric baseboard heaters are properly labeled for maintenance and servicing.	3 Yrs	$0	2023	$0				•			•			•			•			•			•			•			•			•		
Mech 19	J02	Inspect baseboard heaters for signs of distress, such as detachment from the wall substrate, impact damage, loose connections and potential hazards.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 19	R01	Cyclical replacement of electric baseboard heaters, as required.	40 Yrs	$2,250	2051	$4,200																														
Mech 20	R01	Cyclical replacement of components of water treatment equipment.	8 Yrs	$2,000	2021	$2,000		•								•							•							•					
Mech 21	J01	Dissemble plate and frame assembly and remove scale and fouling from plates. Check and service gaskets.	5 Yrs	$1,000	2023	$1,100				•					•					•					•				•					•		
Mech 21	R01	Replace or rebuild plate type heat exchangers.	20 Yrs	$20,000	2031	$25,000												•																		
Mech 22	J01	Check fitting for leakage and condensation. Tighten fittings.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 22	R01	Cyclical replacement of valves, fittings etc, as required.	10 Yrs	$90,000	2031	$110,000												•										•								
Mech 23	R01	Replace circulating pumps for hydronic loop - heating water.	15 Yrs	$6,000	2026	$6,800							•															•								
Mech 24	R01	Cyclic replacement of diaphragm heating expansion tanks, as required.	20 Yrs	$1,500	2031	$1,900												•																		
Mech 25	R01	Cyclical replacement of valves, as required.	5 Yrs	$9,000	2021	$9,200		•					•					•					•						•							
Mech 26	R01	Cyclical replacement of hydronic baseboards and controllers, as required.	20 Yrs	$60,000	2051	$110,000																														
Mech 27	R01	Cyclical replacement of components of the condensing unit and fan coil unit on split system AC.	15 Yrs	$7,000	2026	$7,900							•															•								
Mech 28	R01	Cyclic replacement of cadet heaters, as required.	20 Yrs	$4,200	2031	$5,200												•																		
Mech 29	R01	Replace fireplace.	30 Yrs	$1,500	2041	$2,300																						•								
Mech 30	R01	Cyclical replacement of hydronic unit heaters.	20 Yrs	$3,000	2031	$3,700												•																		
Mech 31	R01	Cyclical replacement of components of condensing units and fan coil units on split system AC.	15 Yrs	$63,000	2026	$71,000							•															•								
VENTILATION AND AIR-CONDITIONING																																				
Mech 32	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$0	2023	$0				•			•			•			•			•			•			•			•			•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
MECHANICAL																																				
Mech 32	R02	Rebuild of fan, as required.	20 Yrs	$4,000	2031	$5,000												•																		
Mech 33	R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	12 Yrs	$1,500	2023	$1,600				•												•												•		
Mech 34	R01	Replace heat recovery ventilator.	20 Yrs	$3,000	2031	$3,700												•																		
Mech 35	J01	Motor mount - Inspect for damage, cracks or corrosion.	2 Yrs	$0	2021	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 35	J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	5 Yrs	$0	2023	$0				•					•					•					•				•					•		
Mech 35	R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	8 Yrs	$0	2022	$0			•								•								•							•				
Mech 35	R02	Cyclical rebuild or replacement of make-up air units.	20 Yrs	$75,000	2031	$93,000												•																		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
ELEVATOR																																				
TRACTION																																				
Elev 01	J01	Conduct full load performance test.	2 Yrs	$0	2020	$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	2020	$0	•		•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Elev 01	J03	Check and test the overload devices.	2 Yrs	$0	2020	$0	•		•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Elev 01	R01	Replace elevator hoist ropes. Covered under service agreement.	20 Yrs	$0	2032	$0													•																	
Elev 01	R02	Replace elevator gearless machines, control and drive system (to be completed with asset 2). Note: Fire alarm upgrades may be required if this asset is implemented. The budget for fire alarm upgrade is not included in the estimate.	30 Yrs	$340,000	2041	$530,000																						•								
CAR INTERIORS																																				
Elev 02	R01	Replace elevator operating and signal fixtures, replace door operator, upgrade cab interior (to be completed in conjunction with asset 1).	30 Yrs	$120,000	2041	$190,000																						•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
FIRE SAFETY																																				
FIRE SAFETY																																				
Fire 01	R01	Replace damper operators and seals.	20 Yrs	$17,000	2031	$21,000												•																		
CONTROLS																																				
Fire 02	J01	Replace battery packs for fire alarm control panels.	5 Yrs	$0	2023	$0				•					•					•					•					•					•		
Fire 02	R01	Replace battery packs.	5 Yrs	$250	2023	$260				•					•					•					•					•					•		

RDH BUILDING SCIENCE

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

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FIRE SAFETY																																				
Fire 02	R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	30 Yrs	$40,000	2031	$50,000												•																		
DETECTION																																				
Fire 03	R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	20 Yrs	$60,000	2031	$75,000												•																		
SUPPRESSION																																				
Fire 04	J01	Conduct hydrotest on fire extinguishers.	12 Yrs	$0	2024	$0					•												•												•	
Fire 04	R01	Cyclical replacement of fire extinguishers.	12 Yrs	$2,400	2035	$3,200																•												•		
Fire 05	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$0	2023	$0				•					•					•				•					•						•	
Fire 05	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2023	$0				•					•					•				•					•						•	
Fire 05	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$2,500	2032	$3,500													•																	
Fire 05	R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	5 Yrs	$10,000	2032	$14,000													•					•					•					•		
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	$30,000	2062	$76,000																														
Fire 05	R04	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	100 Yrs	$100,000	2111	$0																														
Fire 06	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$500	2023	$520				•					•					•				•					•						•	
Fire 06	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2023	$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	$15,000	2062	$38,000																														
Fire 06	R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains etc as required.	5 Yrs	$0	2023	$0				•					•					•				•					•						•	
Fire 06	R03	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	100 Yrs	$50,000	2111	$0																														
Fire 07	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$0	2032	$0													•																	
Fire 07	R02	Replace gaskets in dry sprinkler valves.	20 Yrs	$0	2032	$0													•																	
Fire 07	R03	Rebuild dry sprinkler valves, as required.	20 Yrs	$4,000	2032	$5,600													•																	
Fire 07	R04	Replace sprinkler valves, as required.	40 Yrs	$6,000	2051	$11,000																														
Fire 08	R01	Replace fire sprinkler compressor.	14 Yrs	$2,000	2025	$2,200						•														•										
EGRESS																																				
Fire 09	R01	Cyclicacl replacement of batteries and lamps in DC battery packs.	5 Yrs	$0	2023	$0				•					•					•				•					•					•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
FIRE SAFETY																																					
Fire 09	R02	Cyclical replacement of LED exit signs.	15 Yrs	$9,000	2031	$11,000												•															•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
INTERIOR FINISHES																																					
FLOORS																																					
Finish 01	J01	Locally replace, reseal and/or recolour tile grout, as required.	12 Yrs	$0	2024	$0					•												•												•		
Finish 01	R01	Renew porcelain tile floor.	40 Yrs	$13,200	2051	$24,000																															
Finish 02	R01	Renew carpet.	15 Yrs	$42,400	2026	$48,000							•															•								
Finish 03	J02	Locally replace, reseal and/or recolour tile grout, as required.	12 Yrs	$2,000	2024	$2,200					•												•												•		
Finish 03	R01	Renew stone floor tile.	40 Yrs	$7,500	2051	$14,000																															
Finish 04	R01	Replace wood flooring, as required.	20 Yrs	$15,600	2031	$19,000												•																			
Finish 05	R01	Replace resilient flooring.	20 Yrs	$3,800	2036	$5,200																	•														
WALLS																																					
Finish 06	R01	Repaint interior wall in high traffic area, as required.	5 Yrs	$8,625	2031	$11,000												•					•												•		
Finish 06	R02	Repaint wall surface including preparation of substrate.	15 Yrs	$41,400	2026	$47,000							•															•								
Finish 07	R01	Replace wall paper covering at affected walls.	15 Yrs	$2,610	2026	$2,900							•															•								
Finish 08	R01	Replace wood paneling.	25 Yrs	$4,320	2036	$5,900																	•														
Finish 09	J01	Clean grout with medium bristle brush.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•				•
Finish 09	J02	Review surfaces of stone finish for signs of distress, such as cracks, delamination, loose stone, failing grout, etc. Repair as required.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•				•
Finish 09	R02	Replace sections of stone wall finish, as required.	35 Yrs	$1,800	2046	$3,000																											•				
ARCHITECTURAL WOODWORK																																					
Finish 10	R01	Replace damaged components of carpentry and millwork, as required.	30 Yrs	$6,000	2041	$9,100																						•								
DOORS																																					
Finish 11	J01	Lubricate and adjust doors and moving parts. Tighten mechanical parts and screws. Adjust door swing arms and hardware as required. Replace broken hardware.	3 Yrs	$0	2022	$0			•			•			•			•			•			•			•			•			•				•
Finish 11	J02	On wood doors, apply a thin coat of sanding sealer to promote uniform appearance and to avoid sharp contrasts in color or a blotchy appearance.	5 Yrs	$0	2023	$0				•					•						•				•									•			
Finish 11	J03	Repaint door and frame in high-traffic locations as required.	10 Yrs	$3,156	2026	$3,600							•										•														
Finish 11	J04	Rekey master door cylinders and issue new master keys to facility staff.	10 Yrs	$0	2022	$0			•										•																		
Finish 11	R01	Replace interior swing door as required.	30 Yrs	$50,500	2041	$77,000																						•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
AMENITIES																																				
EQUIPMENT																																				
Amen 01	R01	Replace domestic appliances.	15 Yrs	$1,500	2026	$1,700							•															•								
SPECIALTIES																																				
Amen 02	R01	Replace/ repair metal storage lockers, as required.	25 Yrs	$1,500	2036	$2,100																	•													
FURNISHINGS																																				
Amen 03	J01	Lubricate locks and hinges.	2 Yrs	$0	2022	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Amen 03	J02	Rekey cylinder on master lock.	5 Yrs	$0	2023	$0				•					•					•					•								•			
Amen 03	R01	Replace central mail boxes as required.	30 Yrs	$3,000	2041	$4,500																						•								
Amen 04	R01	Replace/ update furniture, as required.	15 Yrs	$3,000	2026	$3,400							•															•								
Amen 05	R01	Replace pool and ping pong tables, as required.	20 Yrs	$2,500	2031	$3,100												•																		
SUITE																																				
Amen 06	R01	Cyclical replacement and upgrade of components of audiovisual equipment, excluding field wiring, as required.	10 Yrs	$2,500	2021	$2,600		•										•										•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
SITEWORK																																				
HARD LANDSCAPING																																				
Site 01	R01	Replace sections of concrete paving, as required. (1/4)	40 Yrs	$1,800	2042	$3,100																							•							
Site 01	R02	Replace sections of concrete paving, as required. (3/4)	40 Yrs	$1,800	2062	$4,600																														
Site 01	R03	Replace sections of concrete paving, as required. (4/4)	40 Yrs	$1,800	2072	$5,600																														
Site 01	R04	Replace sections of concrete paving, as required. (2/4)	40 Yrs	$1,800	2051	$3,300																														
Site 02	R02	Rebuild sections of interlocking paving, including sub-grade, as required.	10 Yrs	$22,800	2036	$31,000																	•											•		
Site 02	R03	Interlocking paving is not deemed to be a renewable asset.	40 Yrs	$0	2051	$0																														
Site 03	J01	Review metal fencing posts to ensure posts are adequately anchored in the ground.	5 Yrs	$0	2023	$0				•					•					•					•					•					•	
Site 03	J02	Repaint metal fencing as required.	10 Yrs	$0	2022	$0			•										•										•							
Site 03	R01	Replace gate hardware.	10 Yrs	$0	2022	$0			•										•										•							
Site 03	R02	Replace metal fencing.	40 Yrs	$12,650	2051	$23,000																														
Site 04	R01	Recoat/Retreat/Repaint playground equipment using non-toxic materials.	3 Yrs	$300	2025	$330						•			•			•			•			•			•			•			•			•
Site 04	R02	Replace outdoor playground equipment.	20 Yrs	$10,000	2031	$12,000												•																		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	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	2049
SITEWORK																																				
SOFT LANDSCAPING																																				
Site 05	J01	Replace the back-up battery in the timer/controller.	2 Yrs	$0	2022	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Site 05	R01	Cyclical replacement of components of irrigation sprinkler system, as required.	15 Yrs	$5,000	2026	$5,600							•															•								
Site 06	R01	Renovate sections of the soft landscaping, as required.	15 Yrs	$8,280	2026	$9,300							•															•								