



To The Owners, Strata Plan LMS2686  
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Site Visit: April 15, 2020  
Submitted: July 7, 2020 by  
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# 1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners LMS2686 (the Owners) to prepare a Depreciation Report Update (the Report) for the mixed-use complex known as The Murchies, which is located at 1216 Homer, Vancouver, BC. The complex includes two sections: Commercial and Residential. 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, elevator, and drainage lines).

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 initial Depreciation Report issued on April 18, 2013. As part of our work for this Report, a site visit was completed on April 15, 2020. The financial data is based on the 2019/2020 fiscal year. A draft Report was distributed to the Strata Council and Strata Management on May 29, 2020. A final Report was distributed to the Strata Council and Strata Management on July 7, 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 Update. The appendices provide detailed information to support the summary report. The appendices include a glossary of terms. Words that are *italicized* are defined in the glossary.

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


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

## 2 The Murchies

The Murchies is a mixed-use, heritage converted, low-rise building that was constructed in approximately 1912. The building was converted to a residential and commercial Strata Corporation in 1997. The building consists of commercial units at the ground floor and five floors of residential suites. The building is typically of concrete construction and built above a single storey, below-grade, cast-in-place concrete parkade.

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 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 The Murchies are summarized in Table 2.1, Figure 2.1, and Figure 2.2 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS		
 <p><i>Figure 2.1 East elevation photograph of The Murchies.</i></p>	Date of original construction (approximate)	1912
	Date of first occupancy (approximate)	1997
	Approximate gross floor area, excluding the parkade (ft <sup>2</sup> )	53,000
	Total Unit Entitlement	43,842
	Residential	37,275
	Commercial	6,567
	Stories above grade	7
Total number of strata lots	78	
Residential	59	
Commercial	19	

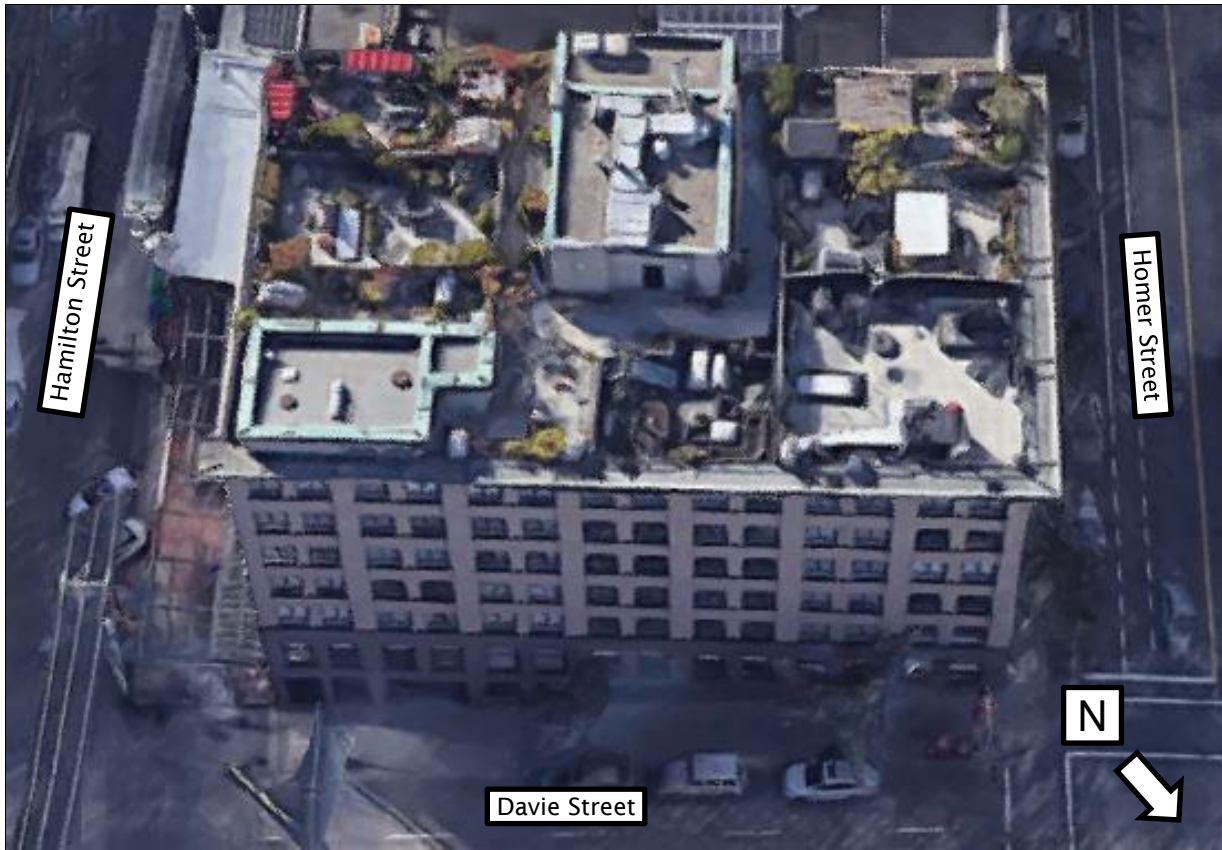


Figure 2.2 Aerial photograph of The Murchies (© Google 2020).

# 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 Update is summarized in Figure 3.1 below:

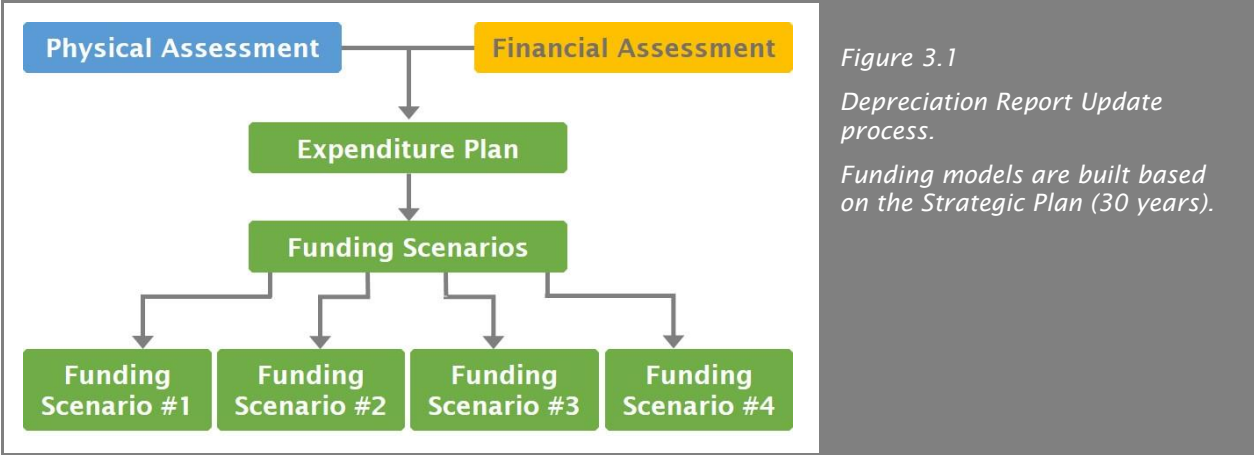


Figure 3.1  
 Depreciation Report Update process.  
 Funding models are built based on the Strategic Plan (30 years).

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.

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

TABLE 3.1 SUMMARY OF PLACEHOLDER ASSETS	
ASSET	PARTY RESPONSIBLE FOR CAPITAL EXPENDITURES
Mech 15 - Hytec Domestic Water Treatment Equipment	→ Hytec
Site 01 - Interlocking Unit Paving	→ City of Vancouver

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 meeting minutes and invoices,
- Discussions with Strata Corporation representatives,
- A visual review of the building, limited to a sample of readily accessible Assets, and
- A review of other technical information, such as construction drawings, previous investigations 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](http://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 3.2 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 3.2 MAINTENANCE AND RENEWALS HISTORY
<p>Building Enclosure</p> <ul style="list-style-type: none"> <li>→ 2018 - Commissioned an Inspection Report of the roof anchors completed by Probel</li> <li>→ 2017 - Commissioned a Required Roof Repairs and Maintenance report, completed by Design Roofing</li> <li>→ 2011 - Application of an elastomeric coating at the east elevation exterior wall</li> <li>→ 2011 - Refurbished wood window frames on all elevations</li> <li>→ 2010 - Recoating of the concrete and stucco clad exterior walls</li> </ul>
<p>Electrical</p> <ul style="list-style-type: none"> <li>→ 2019 - Replacement of the 5<sup>th</sup> floor interior lights with LED</li> <li>→ 2012 - Commissioned an energy usage audit</li> <li>→ 2010 - Installation of proximity access control system</li> </ul>



**TABLE 3.2 MAINTENANCE AND RENEWALS HISTORY**

<p><b>Mechanical</b></p> <ul style="list-style-type: none"> <li>→ 2020 - Replacement of the residential hot water boilers</li> <li>→ 2019 - Replacement of the commercial hot water boiler</li> <li>→ 2019 - Replacement of the overhead gate motor</li> <li>→ 2019 - Commissioned a Review of Parkade Excessive Heat and Boilers completed by BC Building Science</li> <li>→ 2017 - Replacement of the hot water storage tank</li> <li>→ 2015 - Replacement of four air conditioning units in the parkade</li> <li>→ 2013 - Installation of the Hytec system</li> <li>→ 2011 - Partial re-piping of the domestic water distribution on the 5<sup>th</sup> floor</li> </ul>
<p><b>Elevator</b></p> <ul style="list-style-type: none"> <li>→ 2009 - Installation of elevator phone</li> </ul>
<p><b>Fire Safety</b></p> <ul style="list-style-type: none"> <li>→ 2013 - Replacement of the fire panel</li> </ul>
<p><b>Interior Finishes</b></p> <ul style="list-style-type: none"> <li>→ 2019 and 2009 - Renewal of carpet flooring</li> <li>→ 2019 and 2009 - Repainting of interior common areas</li> </ul>

On April 15, 2020, RDH visited the site to visually review the Assets. In addition, sub consultants reviewed the elevators. While the Depreciation Report Update does not constitute a maintenance review or condition assessment, some observations regarding the general condition, design, and construction of the Assets were made as part of the visual review. These observations were used to determine a reasonable estimated remaining service life of various assets. Table 3.3 includes examples of some observations made during the review.

**TABLE 3.3 OBSERVATIONS BY SYSTEM**

SYSTEM	OBSERVATION
Electrical	→ It is our understanding regular inspections of the electrical equipment are completed.
Mechanical	→ It is our understanding regular inspections of the mechanical equipment are completed.
Elevator	→ It is our understanding regular inspections of the elevators are completed.
Fire Safety	→ It is our understanding regular inspections of the fire safety equipment are completed.

### 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 building in similar materials, in accordance with current market prices, and is obtained from the most recent insurance appraisal.

The financial assessment begins with a review of the current financial situation of the Strata Corporation. Table 3.4 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.4 KEY FINANCIAL PARAMETERS		
PARAMETER	PREVIOUS STUDY (2013/2014)	UPDATE STUDY (2019/2020)
Fiscal year end	March 31	
Building reproduction cost	\$13,500,000	\$18,526,000
Operating budget (excluding CRF contribution)	\$232,055	\$324,644
Residential	\$80,465	\$105,607
Commercial	\$17,050	\$24,607
Joint/Shared	\$134,540	\$194,430
Annual CRF contribution	\$14,522	\$38,000
Residential	\$7,315	-
Commercial	\$800	\$8,000
Joint/Shared	\$6,407	\$30,000
Accumulated CRF Balance	\$76,000	\$388,625*
Residential	\$54,500	\$112,642
Commercial	\$22,500	\$30,544
Joint/Shared	-\$1,000	\$245,439

*\*The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities. The accumulated CRF balance is reconciled as of February 2020.*

The Murchies also has sections, and capital costs associated with several assets are shared. The residential section is comprised of Level 2 to the roof and the below grade parkade. The commercial section is comprised of the ground level. Those Assets that are wholly the responsibility of the Residential are identified as “[R]” in the Asset Inventory. Those Assets that are wholly the responsibility of Commercial are identified as “[C]” in the Asset Inventory. A cross section of The Murchies is provided in Figure 3.2 to clarify the section boundaries.



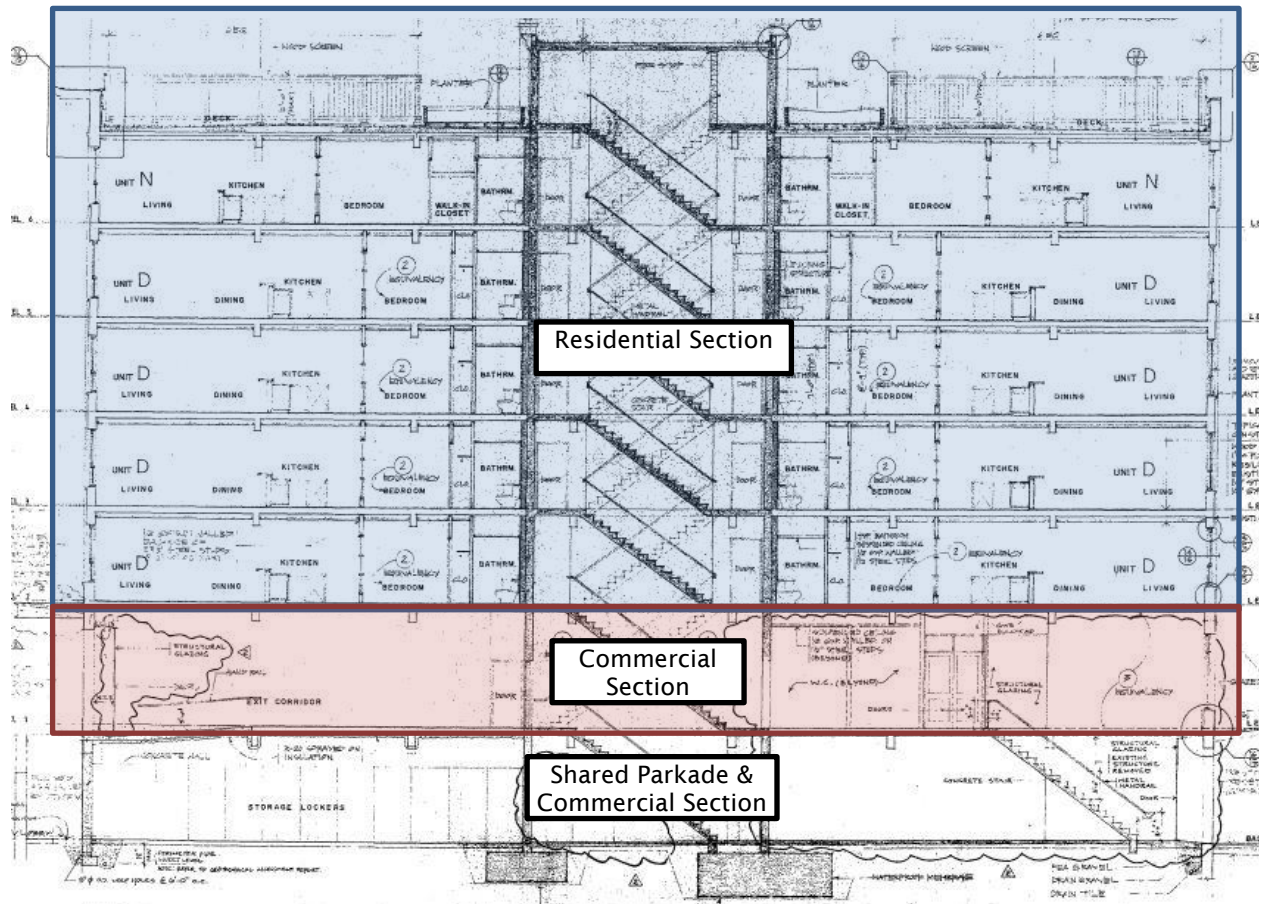


Figure 3.2 A building cross section of The Murchies showing the approximate boundaries of the Residential and Commercial Sections.

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

Costs are considered *Class D* estimates ( $\pm 50\%$ ), 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 for all sections combined. 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	\$570,000	\$630,000	\$2,000,000	\$2,600,000
Electrical	\$77,000	\$82,000	\$270,000	\$370,000
Mechanical	\$790,000	\$870,000	\$1,100,000	\$1,400,000
Elevator	\$280,000	\$290,000	\$280,000	\$290,000
Fire Safety	\$57,000	\$65,000	\$160,000	\$220,000
Interior Finishes	\$38,000	\$45,000	\$350,000	\$490,000
Amenities	\$22,000	\$24,000	\$48,000	\$65,000
Sitework	\$27,000	\$30,000	\$35,000	\$42,000
<b>Building Total</b>	<b>\$1,861,000</b>	<b>\$2,036,000</b>	<b>\$4,243,000</b>	<b>\$5,477,000</b>

Approximately 45% 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.

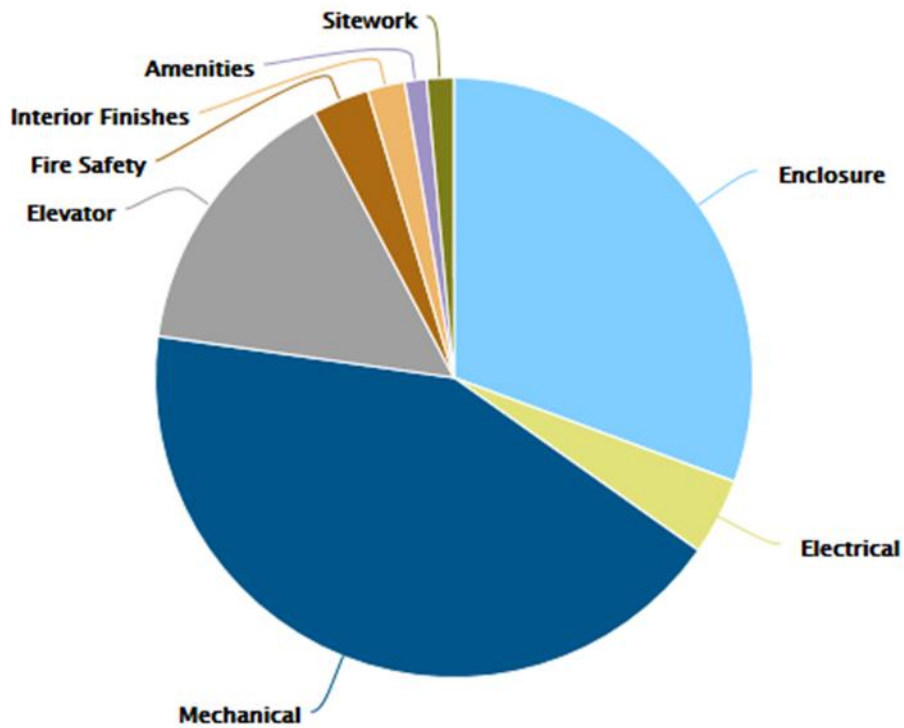


Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

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 for all sections combined are shown on the graph below (Figure 5.1). The blue bars represent the estimated value of capital costs.

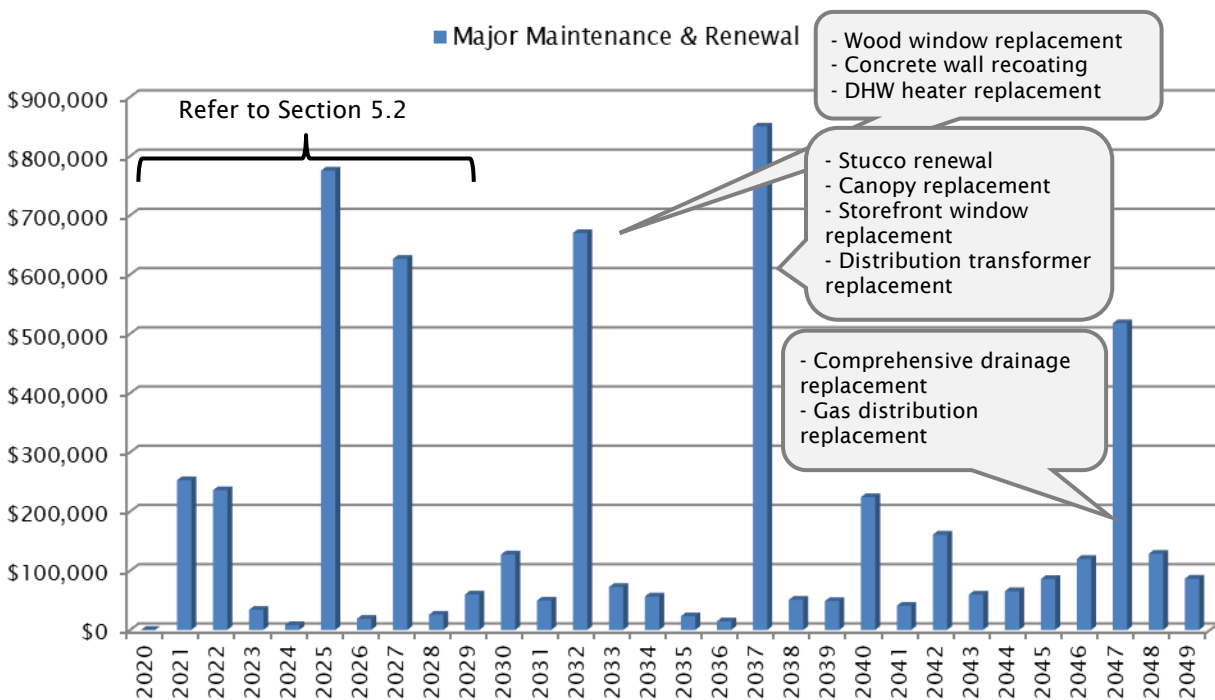


Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different major maintenance and renewals activities, each with different values. Detailed information about each year, including a description of the maintenance and renewal activities and estimated costs, is also available through the Appendices of this 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 Update.

## 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 5-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 soft costs associated with project implementation, such as site access, design, and contract administration are not included.

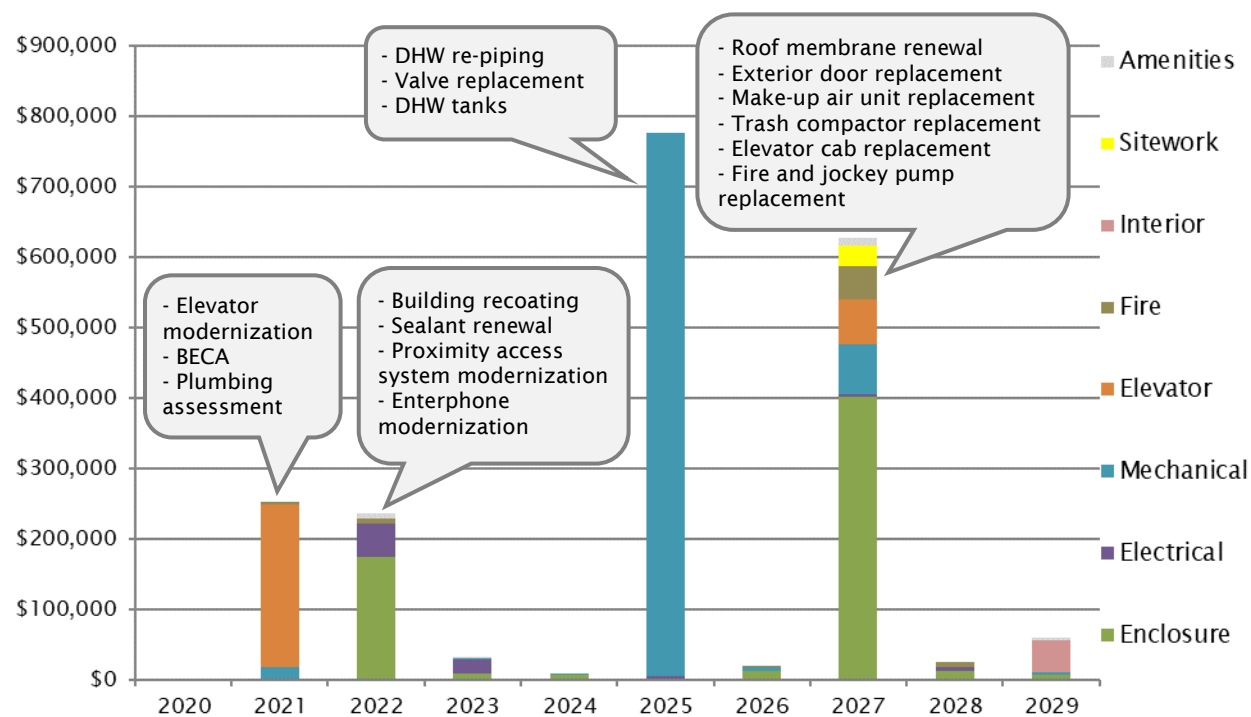


Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

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 Update.

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 \$5,000 in CYD or significant assessments. A complete list of maintenance and renewals are included in the appendices.

## **2020 to 2022**

### Building Enclosure

- Encl 02 SBS Membrane Roof – Commission a condition assessment of the roof to confirm the existing conditions and refine the renewal forecast.
- Encl 18 General and Inspection – Commission a Building Enclosure Condition Assessment (BECA) Report to confirm the existing conditions, including concealed conditions, of the building enclosure Assets and refine the renewal forecast.
- Encl 10 Wood Framed Windows – Locally replace failed insulating glazing units (IGUs) with condensation or misting between the panes of glass, as required. Localized replacement of the failed IGUs are scheduled to be completed on a two-year cycle.
- Based on the findings of the BECA report, the Strata should consider a comprehensive coatings and sealant renewal of the exterior walls and wood windows. The Assets would include:
  - Encl 07 Stucco Walls
  - Encl 08 Coated Concrete Walls
  - Encl 10 Wood Framed Windows
  - Encl 19 Sealant
  - Encl 20 Flowerbox Platforms

### Electrical

- Elec 01 Distribution Transformer and 02 Electrical Distribution – Conduct infrared thermography, ultrasonic scanning, and cleaning of the main components of the electrical distribution equipment to detect hidden hazards (typically every five years).
- Elec 05 Enterphone System – Replacement or modernization of the enterphone control panel, as the enterphone system may be approaching technological obsolescence.
- Elec 06 Proximity Access Control – Modernize components of the proximity access control system, as required.

### Mechanical

- Mech 07 Sanitary and Mech 08 Storm Drainage – Camera scoping and jet-flushing of sanitary and storm drainage lines throughout the building.
- Mech 02 and 04 Domestic Water Distribution Piping – The existing domestic water distribution system is projected to be nearing the end of its expected service life. A comprehensive review of the domestic water distribution system should be completed to confirm the existing conditions and refine the renewal forecast.

### Elevator

- Elev 01 Traction Elevator – Plan for the modernization of the elevator. In general, renewal projects associated with the elevator tend to be completed on a preventative basis, to reduce the risk of break downs, and unreliable operation. A comprehensive review by the Strata's elevator maintenance

contractor or elevator consultant is suggested to confirm the existing conditions and refine the potential renewal year.

## **2023 to 2025**

### Electrical

- Elec 03 Interior Light Fixtures – Replace interior light fixtures, as required, for aesthetic purposes or technological obsolescence.

### Mechanical

- Anticipate a comprehensive replacement of the domestic water distribution system in the building, depending on the findings of the plumbing assessment. The Assets would include:
  - Mech 02 & 04 Domestic Water Distribution Piping
  - Mech 05 Domestic Recirculation Pumps
  - Mech 09 DHW Storage Tanks
  - Mech 10 & 12 Valves
- Mech 17 Ductless Split Air Conditioning System – Replacement of components of the split air conditioning system, as required.

## **2026 to 2029**

### Building Enclosure

- Anticipate a comprehensive renewal of the existing roof membrane, depending on the findings of the roof condition assessment recommended in 2022. The Assets would include:
  - Encl 01 Inverted Membrane Roof with Ballast
  - Encl 02 & 03 SBS Membrane Roof
  - Encl 04 Roof Hatches
  - Site 02 Wood Planters
  - Site 03 Wood Fencing
  - Site 05 Irrigation System
- Anticipate a cyclical replacement of exterior doors throughout the building, based on its forecasted expected service life. The Assets would include:
  - Encl 11 Steel Swing Doors
  - Encl 12 Aluminum Swing Doors
  - Encl 13 Lobby Door Assembly
  - Encl 17 Sectional Overhead Door

### Mechanical

- Mech 21 Make-up Air Unit – Cyclical replacement of the make-up air unit is forecasted based on its expected service life. The Strata should consult with the mechanical maintenance contractor to confirm its existing condition and refine the renewal year.

- Mech 23 Trash Compactor – Anticipate replacement of the trash compactor based on its forecasted expected service life.

#### Elevator

- Elev 02 Elevator Cab and Hoistway – The elevator operating and signal fixtures, door operators, and cab interior is forecasted for replacement based on its expected service life. Alternatively, the Owners may consider replacing the elevator cab and hoistway in conjunction with the elevator machines.

#### Fire Safety

- Fire 01 & 04 Pressurization/Smoke Control Dampers and Fire and Jockey Pumps – Anticipate replacing or modernizing the smoke control dampers and fire and jockey pumps, as required due to technological obsolescence. The Strata should contact their fire safety maintenance contractor to confirm the age and dependability of the equipment and confirm upcoming renewal requirements.

#### Interior Finishes

- Interior renovations are completed to refurbish the interior common areas and are typically renewed at the Owners' discretion. The Assets would include:
  - Finish 04 Painted Concrete Floors
  - Finish 06 Ceramic Floors
  - Finish 07 Interior Painting
  - Finish 09 Carpentry and Millwork

### 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 ( $\pm 50\%$ ) 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)	\$ 324,644
→ 25% of the operating budget	\$ 81,161
→ 10% of the operating budget	\$ 32,464
2019/2020 CRF opening balance	\$ 341,674
2019/2020 CRF contribution	\$ 38,000
Does the CRF balance exceed 25% of the operating budget?	Yes
Does the CRF contribution exceed 10% of the operating budget?	Yes

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 of all sections combined. 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:

- **Previous (2013/2014)**. The CRF allocation that was approved by the Owners at the time of the previous Depreciation Report.

- **Current (2019/2020).** The CRF allocation that was approved by the Owners at the 2019 AGM. The current allocation is also known as the Status Quo.
- **Alternative.** An increase from the Status Quo. Alternative is an approximate increase of 150% of the current contribution with an annual 3 % increase thereafter. The Alternative is just one of many possible scenarios for a new funding level in the next fiscal year.
- **Progressive.** This is the annual contribution that would need to be set aside, commencing in the first fiscal year of this Report, to ensure that the reserve balance is sufficient to eliminate or bring special levies over a 30-year period to a minimum. With “Progressive” reserve allocation, older Stratas with underfunded reserves may still require some special levies at some point in their Strategic Plan. The "Progressive" reserve contribution is an optimum target that a Strata Corporation could use as a guide.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS				
	PREVIOUS (2013/2014)	CURRENT (2019/2020)	ALTERNATIVE	PROGRESSIVE RESERVE
Annual CRF allocation	\$14,522	\$38,000	Starting at \$60,000 +	\$162,000
Annual CRF increase	0%	0%	3%	0%
Percent of progressive reserve	9%	23%	37% +	100%
CRF contribution per unit of unit entitlement			Starting at	
Per month	\$0.03	\$0.07	\$0.11 +	\$0.31
Per year	\$0.33	\$0.87	\$1.37 +	\$3.70
CRF contribution per average strata lot			Starting at	
Per month	\$16	\$41	\$64 +	\$173
Per year	\$192	\$492	\$768 +	\$2,076
Approximate number of special levies (over 30 years)	27	22	6	3
Approximate value of special levies (over 30 years)	\$4.8M	\$4.1M	\$2.4M	\$0.6M
Minimum Closing Balance	\$5,000			
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 Previous (2013/2014) Funding Scenario

The first scenario is based on the previous level of funding reported by the Owners in 2013, and carried forward into the current fiscal year.

TABLE 6.3 PREVIOUS (2013/2014) FUNDING SCENARIO: CASH FLOW TABLE							
FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	\$341,674	\$14,522	\$0	\$6,833	\$0	\$2,000	\$361,029
2021	\$361,029	\$14,522	\$0	\$7,221	\$252,790	\$2,000	\$127,982
2022	\$127,982	\$14,522	\$97,776	\$2,560	\$235,840	\$2,000	\$5,000
2023	\$5,000	\$14,522	\$21,278	\$100	\$33,900	\$2,000	\$5,000
2024	\$5,000	\$14,522	\$0	\$100	\$8,140	\$2,000	\$9,482
2025	\$9,482	\$14,522	\$758,306	\$190	\$775,500	\$2,000	\$5,000
2026	\$5,000	\$14,522	\$6,198	\$100	\$18,820	\$2,000	\$5,000
2027	\$5,000	\$14,522	\$613,878	\$100	\$626,500	\$2,000	\$5,000
2028	\$5,000	\$14,522	\$13,108	\$100	\$25,730	\$2,000	\$5,000
2029	\$5,000	\$14,522	\$47,178	\$100	\$59,800	\$2,000	\$5,000

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.

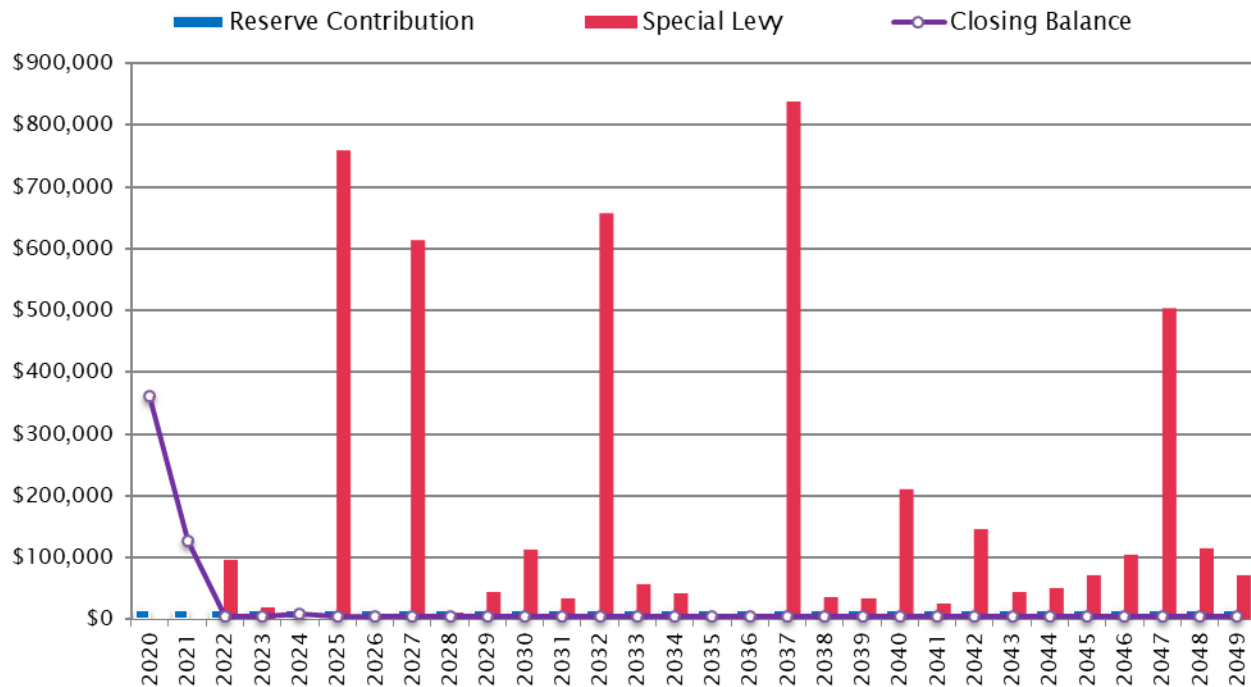


Figure 6.1 CRF balance, contribution and special levies based on the previous funding.

## 6.4 Current (2019/2020) Funding Scenario

The Current Funding Scenario is based on the CRF contribution approved by the Owners at the 2019 AGM. The scenario is based on a fixed annual CRF contribution (no increases).

TABLE 6.4 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	\$341,674	\$38,000	\$0	\$6,833	\$0	\$2,000	\$384,507
2021	\$384,507	\$38,000	\$0	\$7,690	\$252,790	\$2,000	\$175,408
2022	\$175,408	\$38,000	\$25,924	\$3,508	\$235,840	\$2,000	\$5,000
2023	\$5,000	\$38,000	\$0	\$100	\$33,900	\$2,000	\$7,200
2024	\$7,200	\$38,000	\$0	\$144	\$8,140	\$2,000	\$35,204
2025	\$35,204	\$38,000	\$708,592	\$704	\$775,500	\$2,000	\$5,000
2026	\$5,000	\$38,000	\$0	\$100	\$18,820	\$2,000	\$22,280
2027	\$22,280	\$38,000	\$572,774	\$446	\$626,500	\$2,000	\$5,000
2028	\$5,000	\$38,000	\$0	\$100	\$25,730	\$2,000	\$15,370
2029	\$15,370	\$38,000	\$13,123	\$307	\$59,800	\$2,000	\$5,000

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

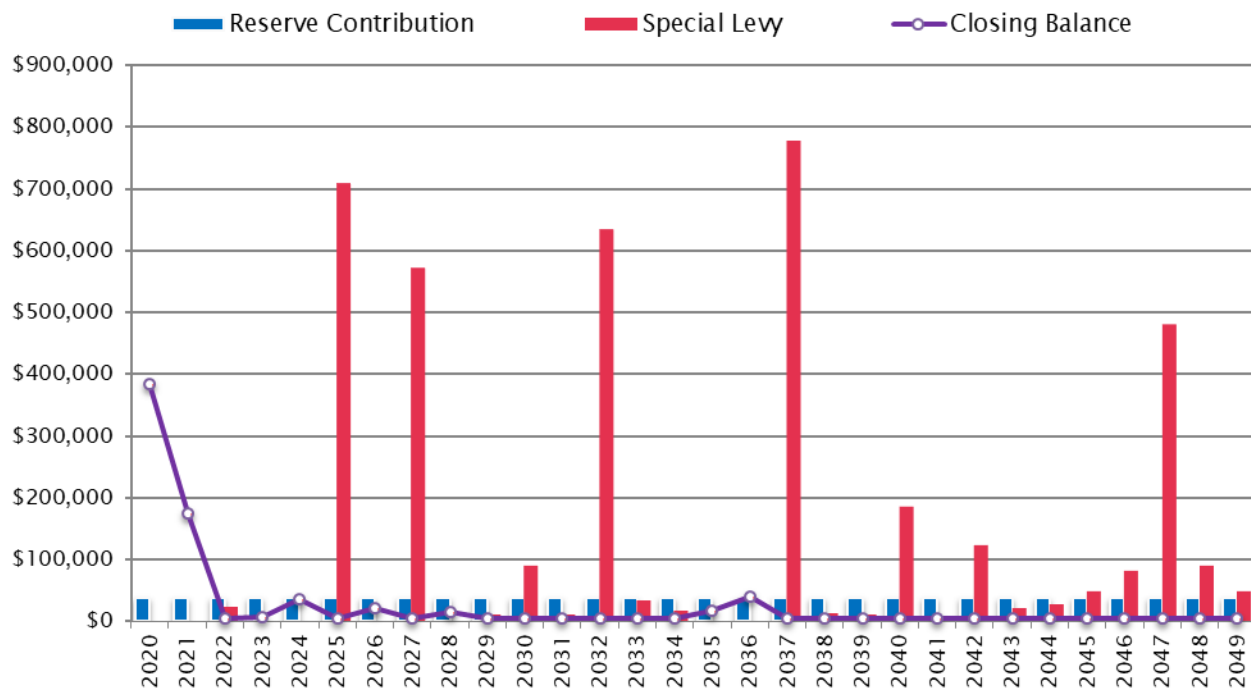


Figure 6.2 CRF balance, contribution, and special levies based on the current funding.

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

## 6.5 Alternative Funding Scenario

Alternative Funding Scenario is based on an approximate 150% increase of the current CRF contribution with an annual increase of three percent (3%).

TABLE 6.5 ALTERNATIVE FUNDING SCENARIO: CASH FLOW TABLE							
FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2020	\$341,674	\$60,000	\$0	\$6,833	\$0	\$2,000	\$406,507
2021	\$406,507	\$61,800	\$0	\$8,130	\$252,790	\$2,000	\$221,648
2022	\$221,648	\$63,654	\$0	\$4,433	\$235,840	\$2,000	\$51,895
2023	\$51,895	\$65,564	\$0	\$1,038	\$33,900	\$2,000	\$82,596
2024	\$82,596	\$67,531	\$0	\$1,652	\$8,140	\$2,000	\$141,639
2025	\$141,639	\$69,556	\$568,472	\$2,833	\$775,500	\$2,000	\$5,000
2026	\$5,000	\$71,643	\$0	\$100	\$18,820	\$2,000	\$55,923
2027	\$55,923	\$73,792	\$502,666	\$1,118	\$626,500	\$2,000	\$5,000
2028	\$5,000	\$76,006	\$0	\$100	\$25,730	\$2,000	\$53,376
2029	\$53,376	\$78,286	\$0	\$1,068	\$59,800	\$2,000	\$70,930

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

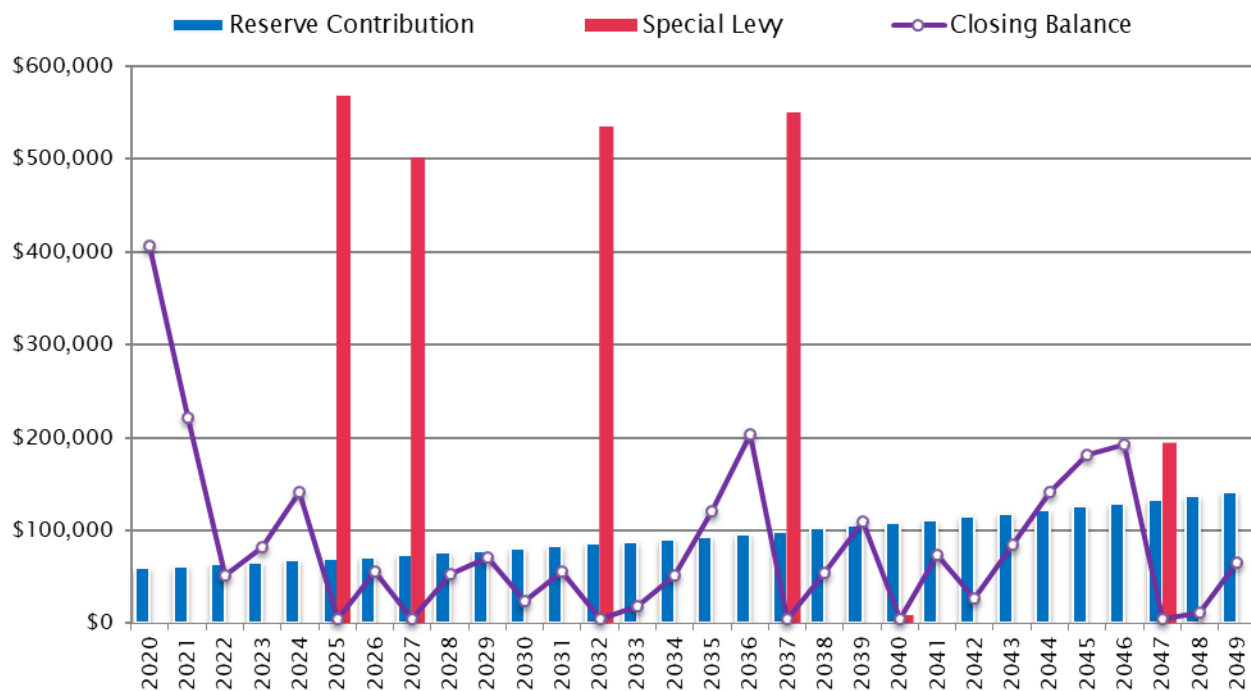


Figure 6.3 CRF balance, contribution, and special levies based on Alternative.

## 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	\$341,674	\$162,000	\$0	\$6,833	\$0	\$2,000	\$508,507
2021	\$508,507	\$162,000	\$0	\$10,170	\$252,790	\$2,000	\$425,888
2022	\$425,888	\$162,000	\$0	\$8,518	\$235,840	\$2,000	\$358,565
2023	\$358,565	\$162,000	\$0	\$7,171	\$33,900	\$2,000	\$491,837
2024	\$491,837	\$162,000	\$0	\$9,837	\$8,140	\$2,000	\$653,533
2025	\$653,533	\$162,000	\$0	\$13,071	\$775,500	\$2,000	\$51,104
2026	\$51,104	\$162,000	\$0	\$1,022	\$18,820	\$2,000	\$193,306
2027	\$193,306	\$162,000	\$274,328	\$3,866	\$626,500	\$2,000	\$5,000
2028	\$5,000	\$162,000	\$0	\$100	\$25,730	\$2,000	\$139,370
2029	\$139,370	\$162,000	\$0	\$2,787	\$59,800	\$2,000	\$242,357

The Progressive Reserve would offset smaller special levies. However, because of the timing of anticipated renewals projects, a fixed annual contribution will not eliminate all special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

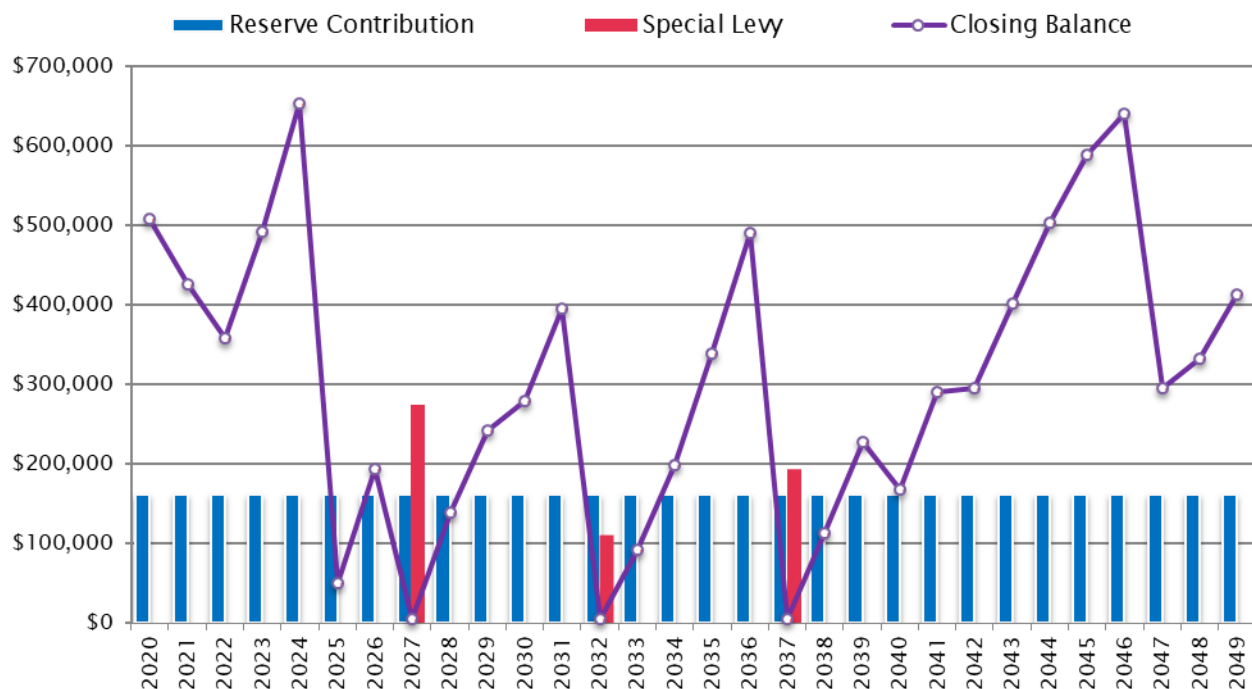


Figure 6.4 CRF balance, contribution, and special levies based on a Progressive Reserve calculation.

## 7 Next Steps

The Depreciation Report Update identifies the possible major maintenance and renewals expenditures that The Murchies 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.

The Murchies is a 108 year old building (as of 2020), and several Assets, such as the existing roof membrane, domestic hot water distribution systems (plumbing), and the elevator will likely need to be renewed in the next 10 years. Other capital expenditures that occur over the next 10 years relate to the major maintenance of the Assets, such as drainage cleaning and repainting and localized repairs of various claddings. 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 seven years since the initial Depreciation Report was issued, The Murchies 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*

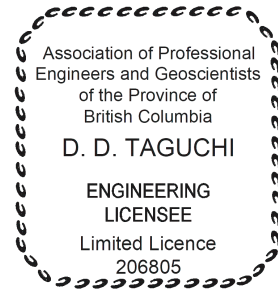
- **Project Planning.** Review the information in Section 5.2, and begin planning for projects, including commissioning assessments, requesting information, and preparing construction budgets, well in advance of the forecasted date of renewal. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- **Major Maintenance Planning.** Review Appendix H for a detailed checklist of forecasted major maintenance activities and renewals on an annual basis.
- **Record Keeping.** Continue to record 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 the Report and update information obtained from assessments, investigations, and quotations.
- **Building Enclosure Condition Assessment.** Conduct a Condition Assessment of the building enclosure prior to or in conjunction with the update to the Depreciation Report in three years' time.
- **Piping Condition Assessment or Evaluation.** Conduct a Condition Assessment of the piping prior to or in conjunction with the update to the Depreciation Report in three years' time. The condition assessment will confirm the estimated remaining service lives of piping. Update the Report with these findings and recommendations, as may be required.

- **Roof Condition Assessment or Evaluation.** Conduct a Condition Assessment of the existing roof membrane prior to or in conjunction with the update to the Depreciation Report in three years' time. The condition assessment will confirm the estimated remaining service lives of the roof membrane. Update the Report with these findings and recommendations as may be required.
- **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** ( $\pm 10-15\%$ ): 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** ( $\pm 15-25\%$ ): 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** ( $\pm 25-40\%$ ): 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** ( $\pm 50\%$ ): 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**



**The Murchies**  
Asset Inventory

**Enclosure**

**Roofs & Decks**

**Encl 01 - Inverted Membrane Roof with Ballast (Common)**



**Location**

Roof of rooftop service room.

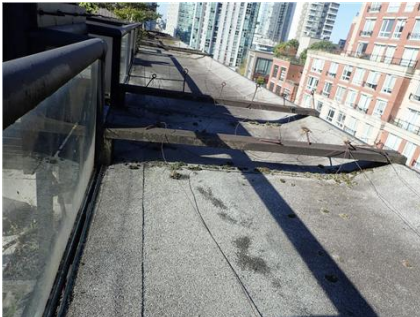
**Description**

Inverted roof with waterproofing membrane, insulation, filter cloth, and stone ballast.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Encl 02 - SBS Membrane Roof (Common)**



**Location**

Roof perimeter.

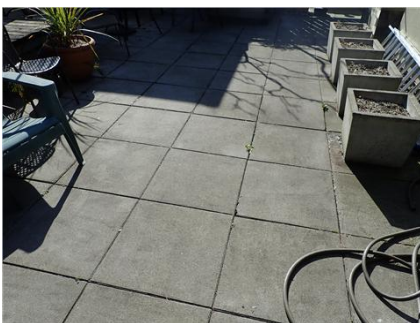
**Description**

SBS waterproof membrane is fully exposed to the exterior environment.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 13  
Next Renewal Year: 2027

**Encl 03 - SBS Membrane Roof with Concrete Pavers (Common)**



**Location**

Rooftop and deck.

**Description**

SBS membrane waterproofing overlaid with concrete pavers.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Skylight**

**Encl 04 - Roof Hatches (Common)**



**Location**

Deck access for 5th floor suites.

**Description**

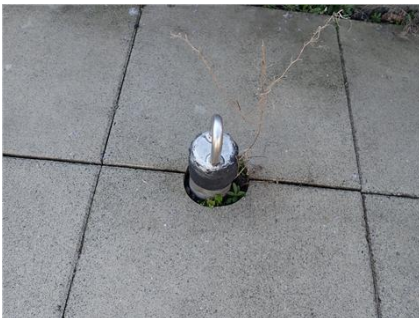
Roof hatches on raised curbs with perimeter flashing, glazing, and perimeter sealant.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Fall Protection**

**Encl 05 - Fall Protection Equipment (Common)**



**Location**

Rooftop decks

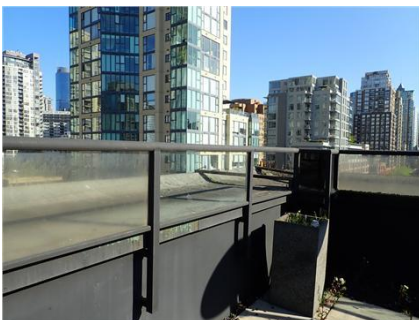
**Description**

Safety anchoring system for work on exterior walls and roofs.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Encl 06 - Glass and Metal Guardrails (Common)**



**Location**

Rooftop decks.

**Description**

Metal guardrails with glass infills.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Walls**

**Encl 07 - Stucco Wall (Common)**



**Location**

Exterior walls of the rooftop service rooms.

**Description**

Acrylic coated stucco applied directly over exterior sheathing membrane.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Encl 08 - Coated Concrete Wall (Common)**



**Location**

North, east, and south elevations, up to 5th floor and rooftop stairwell.

**Description**

Elastomeric coating applied to poured-in-place, exposed architectural concrete wall assembly.

**Information**

Service Life:	75
Installed Year:	1997
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2072

**Glazing Systems**

**Encl 09 - Aluminum Storefront (Common)**



**Location**

North and south elevation ground levels.

**Description**

Aluminum framed, storefront system with insulating glazing units, and outswing door operators.

**Information**

Service Life:	40
Installed Year:	1997
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2037

**Encl 10 - Wood Framed Windows (Common)**



**Location**

All elevations up to 5th floor and storefront on ground floor south elevation.

**Description**

Heritage wood framed, windows with double insulating glazing units, and casement operators. Major repairs (stripped down to bare wood, repaired, and repainted) in 2011.

**Information**

Service Life:	35
Installed Year:	1997
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2032

**Doors**

**Encl 11 - Steel Swing Door (Common)**



**Location**

Throughout the ground level of north, south and west elevations of the building.

**Description**

Swing door, hollow steel slab, no glazing.

**Information**

Service Life:	25
Installed Year:	1997
Chronological Age:	23
Effective Age:	18
Next Renewal Year:	2027

**Encl 12 - Aluminum Swing Doors (Common)**



**Location**

South elevations on ground floor.

**Description**

Aluminum swing door with insulating glazing unit.

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 18  
Next Renewal Year: 2027

**Encl 13 - Lobby Door Assembly (Common)**



**Location**

North elevation on ground floor.

**Description**

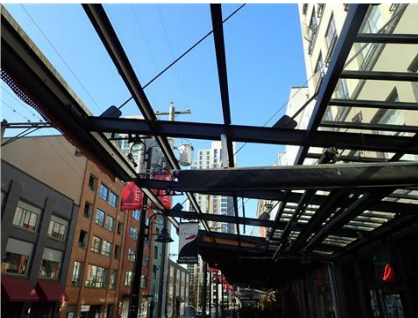
Outswing aluminum-framed doors with fixed IGU's and low-profile thresholds with electric strike and hardware.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 13  
Next Renewal Year: 2027

**Canopies**

**Encl 14 - Metal Canopy (Common)**



**Location**

South elevation, above commercial units.

**Description**

Canopy, metal framing supporting sheet metal.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Encl 15 - Metal & Glass Canopy (Common)**



**Location**

North and south elevation on ground floor.

**Description**

Canopy, metal framing supporting single glazing.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Parking Garage**

**Encl 16 - Slab on Grade (Common)**



**Location**

Parking garage.

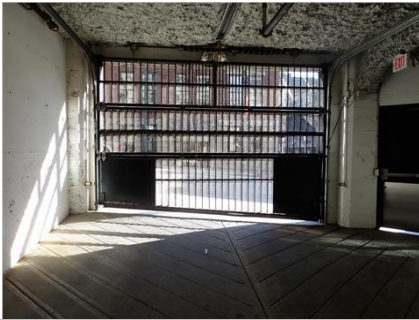
**Description**

Concrete slab on grade.

**Information**

Service Life: 75  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2072

**Encl 17 - Sectional Overhead Door - Metal (Common)**



**Location**

Ground level of east elevation.

**Description**

Pre-finished metal sectional overhead single-car garage door.

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 18  
Next Renewal Year: 2027

**General & Inspections**

**Encl 18 - General & Inspections (Common)**



**Location**

All elevations and all levels of the building.

**Description**

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

**Information**

Service Life: 75  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2072

**Encl 19 - Sealant (Common)**



**Location**

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

**Description**

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

**Information**

Service Life: 10  
Installed Year: 2011  
Chronological Age: 9  
Effective Age: 8  
Next Renewal Year: 2022

**Features**

**Encl 20 - Flowerbox Platforms (Common)**



**Location**

All elevations at every window.

**Description**

Painted flowerbox platforms at each window.

**Information**

Service Life:	40
Installed Year:	1997
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2037

**Encl 21 - Miscellaneous Architectural Features (Common)**



**Location**

5th floor roof level.

**Description**

Miscellaneous exterior and interior components, such as decorative columns, cornices, wall plaques etc.

**Information**

Service Life:	40
Installed Year:	2000
Chronological Age:	20
Effective Age:	20
Next Renewal Year:	2040

**Electrical**

**Power Supply**

**Elec 01 - Distribution Transformers (Common)**



**Location**

Electrical room in parking garage.

**Description**

Federal Pioneer 112.5 kVA, Square D 300 ANN kVA, 3 phase, dry-type, with Nema enclosure, coil and vibration isolators that provide power to receptacles and low voltage loads.

**Information**

Service Life:	40
Installed Year:	1997
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2037

**Distribution**

**Elec 02 - Electrical Distribution (Common)**



**Location**

Electrical room in parking garage.

**Description**

Federal Pioneer, 600 and 1200 kVA distribution switchgear, panelboards, breakers and wiring to several local sub-panels and mechanical loads.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Light Fixtures**

**Elec 03 - Exterior Light Fixtures (Common)**



**Location**

Rooftop and ground floor of all elevations

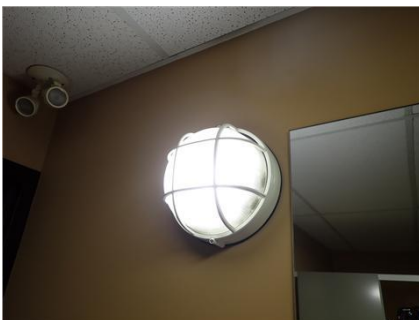
**Description**

Wall pot lighting. Halogen lamp types for exterior indirect applications.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 17  
Next Renewal Year: 2023

**Elec 04 - Interior Light Fixtures (R and C)**



**Location**

All common area rooms, parking garage, hallways, and throughout the building.

**Description**

A variety of fixture types, including fixed surface and recessed. A variety of lamp types, including T8 fluorescent, compact fluorescent, halogen, incandescent, LED, etc. for interior direct, indirect and accent lighting applications. It is our understanding the interior lights on the 5th floor was replaced with LED in 2019.

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 22  
Next Renewal Year: 2023

**Security**

**Elec 05 - Enterphone System (R)**



**Location**

North elevation near lobby doors.

**Description**

Viscount Enterphone 2000, surface mounted, enterphone panels with associated key pads and display panels.

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2022

**Elec 06 - Proximity Access Control (R)**



**Location**

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

**Description**

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

**Information**

Service Life: 12  
Installed Year: 2010  
Chronological Age: 10  
Effective Age: 10  
Next Renewal Year: 2022

**Mechanical**

**Controls and End Devices**

**Mech 01 - Gas Detection - Parking Garage (Common)**



**Location**

Mounted to column in the parking garage

**Description**

Armstrong, AMC 1030 electronic sensing 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: 2005  
Chronological Age: 15  
Effective Age: 9  
Next Renewal Year: 2021

**Plumbing & Drainage**

**Mech 02 - Domestic Water Distribution (Commercial)**



**Location**

Connected to fixtures throughout.

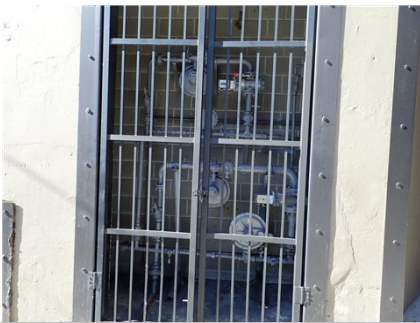
**Description**

Mixture of K and L copper for vertical/horizontal mains system and copper piping within the units

**Information**

Service Life: 28  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2025

**Mech 03 - Piping - Gas Distribution (Common)**



**Location**

Throughout the building, connected to appliances.

**Description**

Gas distribution system consisting of threaded sch 40 steel piping.

**Information**

Service Life: 50  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2047

**Mech 04 - Domestic Water Distribution (R)**



**Location**

Connected to fixtures throughout the building.

**Description**

Mixture of K and L copper for vertical/horizontal mains system and copper and braided piping within the suites. 5th floor water distribution piping was replaced in 2011, other floors are to be replaced in the near future.

**Information**

Service Life: 28  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2025

**Mech 05 - Pumps - Domestic Recirculation (Common)**



**Location**

Mechanical room on rooftop.

**Description**

Armstrong, fractional HP, pipe-mounted bronze body domestic hot water recirculation pumps.

**Information**

Service Life: 10  
Installed Year: 2010  
Chronological Age: 10  
Effective Age: 5  
Next Renewal Year: 2025

**Mech 06 - Domestic Hot Water Expansion Tank (Common)**



**Location**

Mechanical room on rooftop.

**Description**

Amtrol Therm-X-Trol, pipe mounted diaphragm expansion tank for domestic water system.

**Information**

Service Life: 20  
Installed Year: 2017  
Chronological Age: 3  
Effective Age: 3  
Next Renewal Year: 2037

**Mech 07 - Sanitary Drainage Collection (Common)**



**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: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2047

**Mech 08 - Storm Drainage Collection (Common)**



**Location**

Roofs, decks, and parking garage.

**Description**

Roof drains, trench drains, catch basins and associated piping systems for rainwater runoff.

**Information**

Service Life: 50  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2047

**Mech 09 - Tanks - DHW Storage (R)**



**Location**

Mechanical room on rooftop.

**Description**

Rheem glass-lined hot water storage tank connected to domestic water heating system.

**Information**

Service Life: 8  
Installed Year: 2017  
Chronological Age: 3  
Effective Age: 3  
Next Renewal Year: 2025

**Mech 10 - Valves - Plumbing Flow Control and Directional (Common)**



**Location**

Mechanical room on rooftop and sprinkler room in parking garage.

**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: 1997  
Chronological Age: 23  
Effective Age: 15  
Next Renewal Year: 2025

**Mech 11 - Domestic Water Heaters (R)**



**Location**

Mechanical room on rooftop.

**Description**

Raypak, 334,000 BTU input, natural gas fired domestic water heaters, model WH3-0330A, for domestic hot water for plumbing fixtures in the suites.

**Information**

Service Life: 12  
Installed Year: 2020  
Chronological Age: 0  
Effective Age: 0  
Next Renewal Year: 2032

**Mech 12 - Cross Connection & Backflow Prevention (Common)**



**Location**

Sprinkler room in parking garage.

**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: 1997  
Chronological Age: 23  
Effective Age: 15  
Next Renewal Year: 2025

**Mech 13 - Fixtures - Toilets and Urinals (C)**



**Location**

Commercial washrooms.

**Description**

Floor and wall mounted toilets and urinals.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 15  
Next Renewal Year: 2025

**Mech 14 - Fixtures - Taps & Sinks (C)**



**Location**

Janitor closet and washrooms.

**Description**

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

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 20  
Next Renewal Year: 2025

**Mech 15 - Hytec Domestic Water Treatment Equipment [PLACEHOLDER]**



**Location**

Mechanical room.

**Description**

Hytec Aquasoft pH control system including treatment tanks, filters, chemical dosers, metering pumps and other associated equipment to provide treatment for potable water system.

**Information**

Service Life: 3  
Installed Year: 2013  
Chronological Age: 7  
Effective Age: 2  
Next Renewal Year: 2021

**Mech 16 - Domestic Hot Water Tank - Electric (Commercial)**



**Location**

Ceiling of commercial washroom.

**Description**

Electric domestic hot water tank.

**Information**

Service Life: 5  
Installed Year: 2019  
Chronological Age: 1  
Effective Age: 1  
Next Renewal Year: 2024

**Heating & Cooling**

**Mech 17 - Ductless Split System A/C (C)**



**Location**

Parking garage.

**Description**

Carrier condensing units on a ductless split system for air conditioning to commercial units. Wall and ceiling mounted indoor units, with remote and wall mounted controllers. It is our understanding four of the condensing units were replaced in 2015.

**Information**

Service Life: 15  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 10  
Next Renewal Year: 2025

**Mech 18 - Electric Cadet Heaters (Common)**



**Location**

Residential lobby and service rooms.

**Description**

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

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 15  
Next Renewal Year: 2025

**Mech 19 - Electric Baseboards (Common)**



**Location**

In the stairwells, service rooms, and various other strategic locations.

**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: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Mech 20 - Tank - Fuel Oil Storage (Common)**



**Location**

Parkade.

**Description**

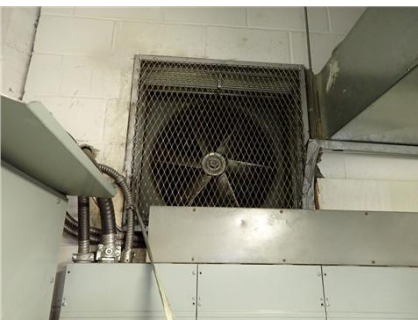
Diesel storage tank in building, connected to the fire pump.

**Information**

Service Life: 15  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 8  
Next Renewal Year: 2027

**Ventilation and Air-conditioning**

**Mech 21 - General Exhaust Fans (Common)**



**Location**

Electrical room, elevator machine room, rooftop, and other service areas.

**Description**

Direct drive fans, ceiling, and cabinet fans.

**Information**

Service Life: 12  
Installed Year: 2000  
Chronological Age: 20  
Effective Age: 7  
Next Renewal Year: 2025

**Mech 22 - Make up Air Unit (R)**



**Location**

Rooftop of mechanical room.

**Description**

Engineered Air DJ-60-0, 220,000 min. BTUH input, 550,000 max. BTUH, rooftop unit, belt-driven, centrifugal fan with natural gas fired heating to supply tempered make-up air to the interior spaces.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 13  
Next Renewal Year: 2027

**Other**

**Mech 23 - Overhead Gate Motors (Common)**



**Location**

Parking garage entrance at east elevation.

**Description**

Liftmaster, 1/2 HP AC motor controlled by an electric operator.

**Information**

Service Life: 10  
Installed Year: 2019  
Chronological Age: 1  
Effective Age: 1  
Next Renewal Year: 2029

**Mech 24 - Trash Compactor (Common)**



**Location**

Parking garage.

**Description**

Horizontal hydraulic ram compactor.

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 13  
Next Renewal Year: 2027

**Elevator**

**Traction**

**Elev 01 - Traction Elevator, Side-mount Geared (R)**



**Location**

Elevator machine room at the roof level

**Description**

One (1) Richmond Elevator Maintenance Ltd. Geared sidemount traction elevator; Virginia MVFC PLC controls; Baldor Vector Variable Voltage Variable Frequency drive motor; Imperial motor, Hollister Whitney machine; 2500 lbs capacity; 200 fpm rated

**Information**

Service Life: 24  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2021

speed.

**Car Interiors**

**Elev 02 - Elevator Cabs & Hoistway (R)**



**Location**

Elevator cab and travelling hoistway

**Description**

Single speed side opening doors; Dupar US89 car and hall pushbuttons; one (1) car operating panel; In-car LED position indicator and lantern; ECI-1000 door operator; Formula Safescreen infrared door protection; Stainless steel doors, header and return; Plastic laminate walls and reveals; Egg crate ceiling; Tile flooring; Tubular stainless steel handrail on all non-access walls; firefighter's emergency operation; No standby power provision; Hands-free voice communication device; No seismic provision.

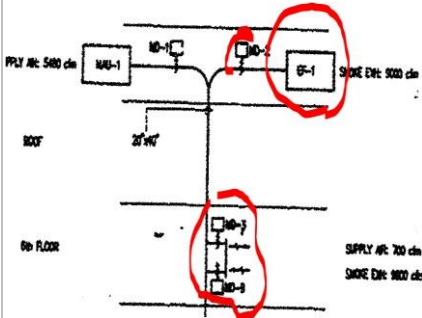
**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Fire Safety**

**Fire Safety**

**Fire 01 - Pressurization/Smoke Control Dampers (Common)**



**Location**

Common corridors and roof.

**Description**

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

**Information**

Service Life: 20  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 13  
Next Renewal Year: 2027

**Controls**

**Fire 02 - Fire Alarm Panel (Common)**



**Location**

Residential lobby.

**Description**

Microprocessor and supervised unit with graphic annunciator.

**Information**

Service Life: 20  
Installed Year: 2013  
Chronological Age: 7  
Effective Age: 7  
Next Renewal Year: 2033

**Detection**

**Fire 03 - Fire Detection & Alarm (Common)**



**Location**

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

**Description**

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

**Information**

Service Life: 20  
Installed Year: 2013  
Chronological Age: 7  
Effective Age: 7  
Next Renewal Year: 2033

**Suppression**

**Fire 04 - Fire & Jockey Pumps (Common)**



**Location**

Sprinkler room in parking garage.

**Description**

Motor control centre connected to 20.3 HP diesel fire pump and 1/2 HP jockey pump, which work in tandem to supply water flow and pressure to the sprinkler system and standpipe system.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Fire 05 - Dry Sprinkler Compressor (Common)**



**Location**

Sprinkler room in parking garage.

**Description**

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

**Information**

Service Life: 19  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 18  
Next Renewal Year: 2021

**Fire 06 - Portable Fire Extinguishers (Common)**



**Location**

Mounted to walls in various strategic locations throughout the building.

**Description**

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

**Information**

Service Life: 24  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2021

**Fire 07 - Sprinkler Systems - Dry (Common)**



**Location**

Throughout the parking garage.

**Description**

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

**Information**

Service Life: 100  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2097

**Fire 08 - Sprinkler Valve Assemblies - Dry (Common)**



**Location**

Valves in sprinkler room in parking garage.

**Description**

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

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Fire 09 - Sprinklers & Standpipe - Wet (Common)**



**Location**

Throughout the building, valve in sprinkler room in parking garage.

**Description**

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

**Information**

Service Life: 100  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2097

**Egress**

**Fire 10 - Emergency Egress Equipment (Common)**



**Location**

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

**Description**

Unit battery packs; metal and plastic exit signs.

**Information**

Service Life: 20  
Installed Year: 2013  
Chronological Age: 7  
Effective Age: 12  
Next Renewal Year: 2028

**Interior Finishes**

**Floors**

**Finish 01 - Porcelain Floor Tile Stairs and Landing (Common)**



**Location**

South entrance stairwell.

**Description**

Porcelain floor tile on thin set mortar with grout, cove base and interface thresholds with adjoining floor finishes. South stairwell landing and stairs includes anti-slip tape.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Finish 02 - Porcelain Floor Tile Ramp (R and C)**



**Location**

Residential lobby and commercial washrooms.

**Description**

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

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Finish 03 - Stone Floor Tile (C)**



**Location**

Commercial lobby.

**Description**

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

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Finish 04 - Painted Concrete Flooring (Common and R)**



**Location**

Residential lobby, vestibules, stairwell treads, and elevator machine room.

**Description**

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

**Information**

Service Life: 8  
Installed Year: 2009  
Chronological Age: 11  
Effective Age: -1  
Next Renewal Year: 2029

**Finish 05 - Sheet Carpet Flooring (R)**



**Location**

Hallways.

**Description**

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

**Information**

Service Life: 12  
Installed Year: 2019  
Chronological Age: 1  
Effective Age: 1  
Next Renewal Year: 2031

**Walls**

**Finish 06 - Ceramic Tile (C)**



**Location**

Commercial washrooms.

**Description**

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

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 21  
Next Renewal Year: 2029

**Finish 07 - Interior Painting (R and C)**



**Location**

Hallways, lobbies, and common areas.

**Description**

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

**Information**

Service Life: 10  
Installed Year: 2019  
Chronological Age: 1  
Effective Age: 1  
Next Renewal Year: 2029

**Ceilings**

**Finish 08 - Acoustic Ceiling Tile (C)**



**Location**

Commercial washrooms.

**Description**

Suspended grid of metal T channels with infill acoustic tiles that form a drop ceiling.

**Information**

Service Life: 50  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2047

**Architectural Woodwork**

**Finish 09 - Carpentry & Millwork (C)**



**Location**

Washroom cabinets.

**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: 1997  
Chronological Age: 23  
Effective Age: 21  
Next Renewal Year: 2029

**Finish 10 - Baseboard, Molding, and Casing (R and C)**



**Location**

Common area corridors.

**Description**

Linear components constructed out of painted wood. Includes synthetic cove at wall to floor interface.

**Information**

Service Life: 40  
Installed Year: 2019  
Chronological Age: 1  
Effective Age: 1  
Next Renewal Year: 2059

**Furnishings**

**Finish 11 - Aluminum Storefront (C)**



**Location**

Commercial lobby.

**Description**

Aluminum framed, storefront system with insulating glazing units, and door operators.

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Finish 12 - Interior Swing Door (Common)**



**Location**

Stairwells, hallways, lobbies and other miscellaneous locations.

**Description**

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

**Information**

Service Life: 40  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2037

**Amenities**

**Equipment**

**Amen 01 - Computer Equipment (Common)**



**Location**

Electrical room on ground floor.

**Description**

Computer, monitor, printer, keyboard and associated electronic devices required for general operations and management of the facility.

**Information**

Service Life: 6  
Installed Year: 2010  
Chronological Age: 10  
Effective Age: 3  
Next Renewal Year: 2023

**Amen 02 - Outdoor Barbecue (R)**



**Location**

Rooftop deck.

**Description**

Propane BBQ grill.

**Information**

Service Life: 10  
Installed Year: 2008  
Chronological Age: 12  
Effective Age: 3  
Next Renewal Year: 2027

**Specialties**

**Amen 03 - Washroom Partitions (Commercial)**



**Location**

Commercial washroom.

**Description**

Privacy panels and miscellaneous hardware fittings such as pilaster, panel, door, anchors, hinges, latches and brackets.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Furnishings**

**Amen 04 - Exterior Furniture & Accessories (R)**



**Location**

Rooftop deck.

**Description**

Plastic, glass, and metal furniture with fabric covering, paintings, ornaments, and other miscellaneous accessories. Outdoor furnishings and in suite furnishings are included separately.

**Information**

Service Life: 15  
Installed Year: 2005  
Chronological Age: 15  
Effective Age: 8  
Next Renewal Year: 2027

**Amen 05 - Central Mailbox (Common)**



**Location**

Residential and commercial lobby.

**Description**

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

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Amen 06 - Public Signage (Common)**



**Location**

Lobby entrance and other strategic interior locations.

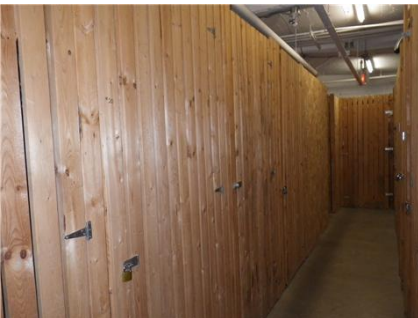
**Description**

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

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2022

**Amen 07 - Wood Storage Locker (R)**



**Location**

Storage rooms in basement and rooftop.

**Description**

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

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 20  
Next Renewal Year: 2030

**Sitework**

**Hard Landscaping**

**Site 01 - Interlocking Unit Paving (COV) [PLACEHOLDER]**



**Location**

South elevation on ground floor.

**Description**

Masonry unit pavers, combination of chip seal joint filler and jointing sand, bedding sand, compacted gravel base. Property of City of Vancouver.

**Information**

Service Life: 30  
Installed Year: 1992  
Chronological Age: 28  
Effective Age: 28  
Next Renewal Year: 2022

**Site 02 - Wood Planters (R)**



**Location**

Rooftop.

**Description**

Heavy timber wood planters.

**Information**

Service Life: 30  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2027

**Site 03 - Wood Fencing (R)**



**Location**

Rooftop.

**Description**

Cedar fence with 4x4 posts set in concrete, 2x4 rails and 1x6 vertical boards; gates with hardware.

**Information**

Service Life: 25  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 18  
Next Renewal Year: 2027

**Soft Landscaping**

**Site 04 - Soft Landscaping (R)**



**Location**

Throughout the rooftop.

**Description**

Shrubs, perennials and trees.

**Information**

Service Life: 35  
Installed Year: 1997  
Chronological Age: 23  
Effective Age: 23  
Next Renewal Year: 2032

**Site 05 - Irrigation System (R)**



**Location**

Rooftop mechanical room.

**Description**

Rainbird ESP-4Si, controller with time clock, network of PVC pipes, valves, and irrigation heads distributed around the 'soft landscaping.

**Information**

Service Life:	15
Installed Year:	1997
Chronological Age:	23
Effective Age:	8
Next Renewal Year:	2027

# **Appendix C**

## **Asset Service Life Summary**



## The Murchies

### Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Encl 01	Inverted Membrane Roof with Ballast (Common)	23	7
Encl 02	SBS Membrane Roof (Common)	23	7
Encl 03	SBS Membrane Roof with Concrete Pavers (Common)	23	7
Encl 04	Roof Hatches (Common)	23	7
Encl 05	Fall Protection Equipment (Common)	23	17
Encl 06	Glass and Metal Guardrails (Common)	23	17
Encl 07	Stucco Wall (Common)	23	17
Encl 08	Coated Concrete Wall (Common)	23	52
Encl 09	Aluminum Storefront (Common)	23	17
Encl 10	Wood Framed Windows (Common)	23	12
Encl 11	Steel Swing Door (Common)	23	7
Encl 12	Aluminum Swing Doors (Common)	23	7
Encl 13	Lobby Door Assembly (Common)	23	7
Encl 14	Metal Canopy (Common)	23	17
Encl 15	Metal & Glass Canopy (Common)	23	17
Encl 16	Slab on Grade (Common)	23	52
Encl 17	Sectional Overhead Door - Metal (Common)	23	7
Encl 18	General & Inspections (Common)	23	52
Encl 19	Sealant (Common)	9	2
Encl 20	Flowerbox Platforms (Common)	23	17
Encl 21	Miscellaneous Architectural Features (Common)	20	20
Elec 01	Distribution Transformers (Common)	23	17
Elec 02	Electrical Distribution (Common)	23	17
Elec 03	Exterior Light Fixtures (Common)	23	3
Elec 04	Interior Light Fixtures (R and C)	23	3
Elec 05	Enterphone System (R)	23	2
Elec 06	Proximity Access Control (R)	10	2
Mech 01	Gas Detection - Parking Garage (Common)	15	1
Mech 02	Domestic Water Distribution (Commercial)	23	5
Mech 03	Piping - Gas Distribution (Common)	23	27
Mech 04	Domestic Water Distribution (R)	23	5
Mech 05	Pumps - Domestic Recirculation (Common)	10	5
Mech 06	Domestic Hot Water Expansion Tank (Common)	3	17
Mech 07	Sanitary Drainage Collection (Common)	23	27
Mech 08	Storm Drainage Collection (Common)	23	27
Mech 09	Tanks - DHW Storage (R)	3	5
Mech 10	Valves - Plumbing Flow Control and Directional	23	5

	(Common)		
Mech 11	Domestic Water Heaters (R)	0	12
Mech 12	Cross Connection & Backflow Prevention (Common)	23	5
Mech 13	Fixtures - Toilets and Urinals (C)	23	5
Mech 14	Fixtures - Taps & Sinks (C)	23	5
Mech 15	Hytec Domestic Water Treatment Equipment [PLACEHOLDER]	7	1
Mech 16	Domestic Hot Water Tank - Electric (Commercial)	1	4
Mech 17	Ductless Split System A/C (C)	23	5
Mech 18	Electric Cadet Heaters (Common)	23	5
Mech 19	Electric Baseboards (Common)	23	17
Mech 20	Tank - Fuel Oil Storage (Common)	23	7
Mech 21	General Exhaust Fans (Common)	20	5
Mech 22	Make up Air Unit (R)	23	7
Mech 23	Overhead Gate Motors (Common)	1	9
Mech 24	Trash Compactor (Common)	23	7
Elev 01	Traction Elevator, Side-mount Geared (R)	23	1
Elev 02	Elevator Cabs & Hoistway (R)	23	7
Fire 01	Pressurization/Smoke Control Dampers (Common)	23	7
Fire 02	Fire Alarm Panel (Common)	7	13
Fire 03	Fire Detection & Alarm (Common)	7	13
Fire 04	Fire & Jockey Pumps (Common)	23	7
Fire 05	Dry Sprinkler Compressor (Common)	23	1
Fire 06	Portable Fire Extinguishers (Common)	23	1
Fire 07	Sprinkler Systems - Dry (Common)	23	77
Fire 08	Sprinkler Valve Assemblies - Dry (Common)	23	17
Fire 09	Sprinklers & Standpipe - Wet (Common)	23	77
Fire 10	Emergency Egress Equipment (Common)	7	8
Finish 01	Porcelain Floor Tile Stairs and Landing (Common)	23	17
Finish 02	Porcelain Floor Tile Ramp (R and C)	23	17
Finish 03	Stone Floor Tile (C)	23	17
Finish 04	Painted Concrete Flooring (Common and R)	11	9
Finish 05	Sheet Carpet Flooring (R)	1	11
Finish 06	Ceramic Tile (C)	23	9
Finish 07	Interior Painting (R and C)	1	9
Finish 08	Acoustic Ceiling Tile (C)	23	27
Finish 09	Carpentry & Millwork (C)	23	9
Finish 10	Baseboard, Molding, and Casing (R and C)	1	39
Finish 11	Aluminum Storefront (C)	23	17
Finish 12	Interior Swing Door (Common)	23	17
Amen 01	Computer Equipment (Common)	10	3

Amen 02	Outdoor Barbecue (R)	12	<input type="checkbox"/>	7	<input type="checkbox"/>
Amen 03	Washroom Partitions (Commercial)	23	<input type="checkbox"/>	7	<input type="checkbox"/>
Amen 04	Exterior Furniture & Accessories (R)	15	<input type="checkbox"/>	7	<input type="checkbox"/>
Amen 05	Central Mailbox (Common)	23	<input type="checkbox"/>	7	<input type="checkbox"/>
Amen 06	Public Signage (Common)	23	<input type="checkbox"/>	2	<input type="checkbox"/>
Amen 07	Wood Storage Locker (R)	23	<input type="checkbox"/>	10	<input type="checkbox"/>
Site 01	Interlocking Unit Paving (COV) [PLACEHOLDER]	28	<input type="checkbox"/>	2	<input type="checkbox"/>
Site 02	Wood Planters (R)	23	<input type="checkbox"/>	7	<input type="checkbox"/>
Site 03	Wood Fencing (R)	23	<input type="checkbox"/>	7	<input type="checkbox"/>
Site 04	Soft Landscaping (R)	23	<input type="checkbox"/>	12	<input type="checkbox"/>
Site 05	Irrigation System (R)	23	<input type="checkbox"/>	7	<input type="checkbox"/>



# **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**

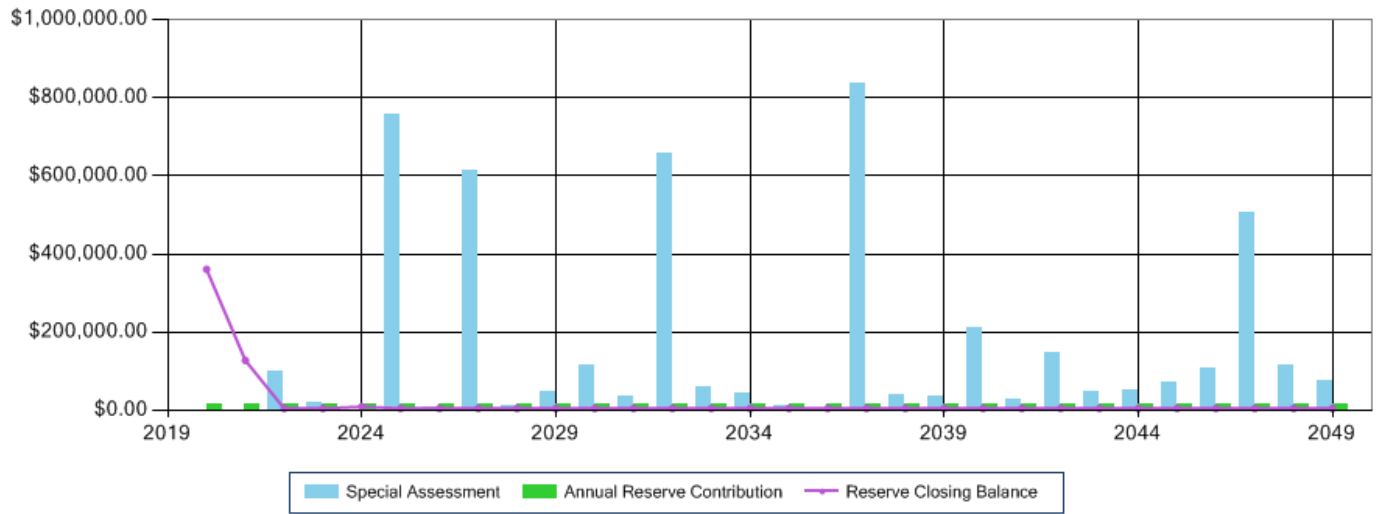




Name	2019/2020 - Fixed annual funding of \$14,522 (Previous)
Type	Basic
Regarding	The Murchies
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	78

Init Catchup Cost	\$0
Operating Budget	\$324,644
Starting Reserve Balance	\$341,674
Reserve Contribution Threshold	\$500,000
Contribution Below Threshold	\$14,522
Contribution Above Threshold	\$14,522
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	\$16

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	\$341,674	\$14,522	\$0	\$6,833	\$0	\$2,000	\$0	\$361,029	18.33 %
2021	\$361,029	\$14,522	\$0	\$7,221	\$252,790	\$2,000	\$0	\$127,982	6.74 %
2022	\$127,982	\$14,522	\$97,776	\$2,560	\$235,840	\$2,000	\$0	\$5,000	0.27 %
2023	\$5,000	\$14,522	\$21,278	\$100	\$33,900	\$2,000	\$0	\$5,000	0.25 %
2024	\$5,000	\$14,522	\$0	\$100	\$8,140	\$2,000	\$0	\$9,482	0.43 %
2025	\$9,482	\$14,522	\$758,306	\$190	\$775,500	\$2,000	\$0	\$5,000	0.32 %
2026	\$5,000	\$14,522	\$6,198	\$100	\$18,820	\$2,000	\$0	\$5,000	0.29 %
2027	\$5,000	\$14,522	\$613,878	\$100	\$626,500	\$2,000	\$0	\$5,000	0.41 %
2028	\$5,000	\$14,522	\$13,108	\$100	\$25,730	\$2,000	\$0	\$5,000	0.37 %
2029	\$5,000	\$14,522	\$47,178	\$100	\$59,800	\$2,000	\$0	\$5,000	0.35 %
2030	\$5,000	\$14,522	\$114,688	\$100	\$127,310	\$2,000	\$0	\$5,000	0.35 %
2031	\$5,000	\$14,522	\$36,918	\$100	\$49,540	\$2,000	\$0	\$5,000	0.33 %
2032	\$5,000	\$14,522	\$657,608	\$100	\$670,230	\$2,000	\$0	\$5,000	0.51 %
2033	\$5,000	\$14,522	\$59,778	\$100	\$72,400	\$2,000	\$0	\$5,000	0.48 %
2034	\$5,000	\$14,522	\$43,838	\$100	\$56,460	\$2,000	\$0	\$5,000	0.45 %
2035	\$5,000	\$14,522	\$10,478	\$100	\$23,100	\$2,000	\$0	\$5,000	0.41 %
2036	\$5,000	\$14,522	\$1,898	\$100	\$14,520	\$2,000	\$0	\$5,000	0.38 %
2037	\$5,000	\$14,522	\$837,278	\$100	\$849,900	\$2,000	\$0	\$5,000	0.84 %
2038	\$5,000	\$14,522	\$38,278	\$100	\$50,900	\$2,000	\$0	\$5,000	0.77 %
2039	\$5,000	\$14,522	\$36,208	\$100	\$48,830	\$2,000	\$0	\$5,000	0.71 %
2040	\$5,000	\$14,522	\$211,578	\$100	\$224,200	\$2,000	\$0	\$5,000	0.85 %
2041	\$5,000	\$14,522	\$28,358	\$100	\$40,980	\$2,000	\$0	\$5,000	0.77 %
2042	\$5,000	\$14,522	\$148,308	\$100	\$160,930	\$2,000	\$0	\$5,000	0.84 %
2043	\$5,000	\$14,522	\$46,968	\$100	\$59,590	\$2,000	\$0	\$5,000	0.80 %
2044	\$5,000	\$14,522	\$52,778	\$100	\$65,400	\$2,000	\$0	\$5,000	0.76 %
2045	\$5,000	\$14,522	\$73,298	\$100	\$85,920	\$2,000	\$0	\$5,000	0.75 %
2046	\$5,000	\$14,522	\$107,318	\$100	\$119,940	\$2,000	\$0	\$5,000	0.80 %
2047	\$5,000	\$14,522	\$505,228	\$100	\$517,850	\$2,000	\$0	\$5,000	2.89 %
2048	\$5,000	\$14,522	\$115,978	\$100	\$128,600	\$2,000	\$0	\$5,000	6.75 %
2049	\$5,000	\$14,522	\$73,868	\$100	\$86,490	\$2,000	\$0	\$5,000	100.00 %
		\$435,660	\$4,758,373		\$5,490,110				

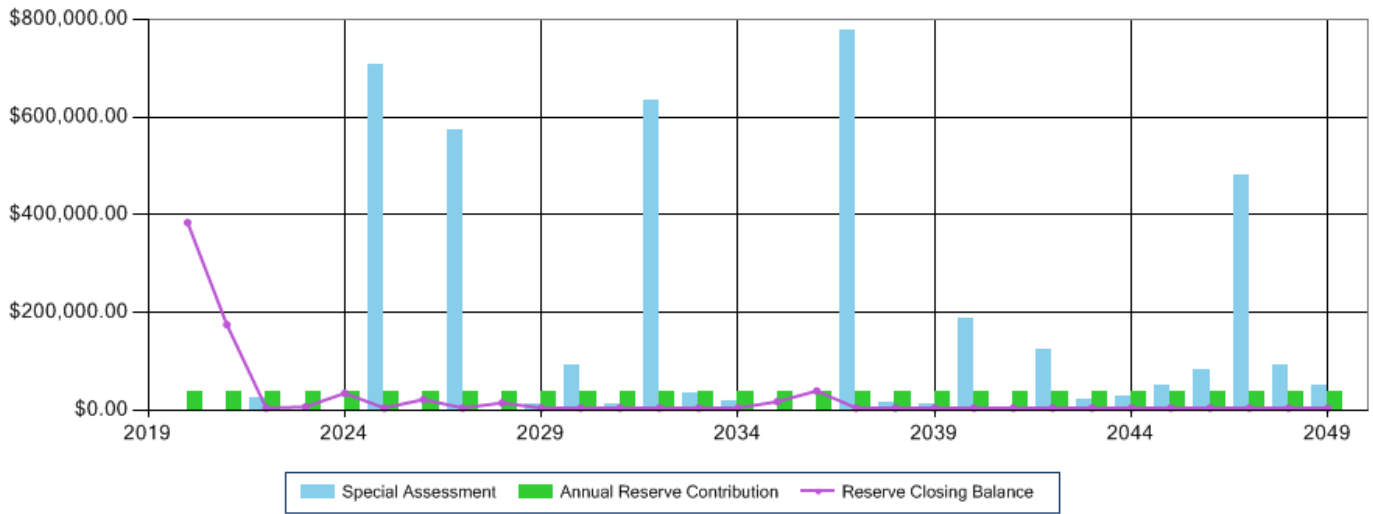




Name	2019/2020 - Fixed annual funding of \$38,000 (Current)
Type	Basic
Regarding	The Murchies
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	78

Init Catchup Cost	\$0
Operating Budget	\$324,644
Starting Reserve Balance	\$341,674
Reserve Contribution Threshold	\$500,000
Contribution Below Threshold	\$38,000
Contribution Above Threshold	\$38,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	\$41

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	\$341,674	\$38,000	\$0	\$6,833	\$0	\$2,000	\$0	\$384,507	19.52 %
2021	\$384,507	\$38,000	\$0	\$7,690	\$252,790	\$2,000	\$0	\$175,408	9.24 %
2022	\$175,408	\$38,000	\$25,924	\$3,508	\$235,840	\$2,000	\$0	\$5,000	0.27 %
2023	\$5,000	\$38,000	\$0	\$100	\$33,900	\$2,000	\$0	\$7,200	0.36 %
2024	\$7,200	\$38,000	\$0	\$144	\$8,140	\$2,000	\$0	\$35,204	1.63 %
2025	\$35,204	\$38,000	\$708,592	\$704	\$775,500	\$2,000	\$0	\$5,000	0.32 %
2026	\$5,000	\$38,000	\$0	\$100	\$18,820	\$2,000	\$0	\$22,280	1.31 %
2027	\$22,280	\$38,000	\$572,774	\$446	\$626,500	\$2,000	\$0	\$5,000	0.41 %
2028	\$5,000	\$38,000	\$0	\$100	\$25,730	\$2,000	\$0	\$15,370	1.16 %
2029	\$15,370	\$38,000	\$13,123	\$307	\$59,800	\$2,000	\$0	\$5,000	0.35 %
2030	\$5,000	\$38,000	\$91,210	\$100	\$127,310	\$2,000	\$0	\$5,000	0.35 %
2031	\$5,000	\$38,000	\$13,440	\$100	\$49,540	\$2,000	\$0	\$5,000	0.33 %
2032	\$5,000	\$38,000	\$634,130	\$100	\$670,230	\$2,000	\$0	\$5,000	0.51 %
2033	\$5,000	\$38,000	\$36,300	\$100	\$72,400	\$2,000	\$0	\$5,000	0.48 %
2034	\$5,000	\$38,000	\$20,360	\$100	\$56,460	\$2,000	\$0	\$5,000	0.45 %
2035	\$5,000	\$38,000	\$0	\$100	\$23,100	\$2,000	\$0	\$18,000	1.50 %
2036	\$18,000	\$38,000	\$0	\$360	\$14,520	\$2,000	\$0	\$39,840	3.03 %
2037	\$39,840	\$38,000	\$778,263	\$797	\$849,900	\$2,000	\$0	\$5,000	0.84 %
2038	\$5,000	\$38,000	\$14,800	\$100	\$50,900	\$2,000	\$0	\$5,000	0.77 %
2039	\$5,000	\$38,000	\$12,730	\$100	\$48,830	\$2,000	\$0	\$5,000	0.71 %
2040	\$5,000	\$38,000	\$188,100	\$100	\$224,200	\$2,000	\$0	\$5,000	0.85 %
2041	\$5,000	\$38,000	\$4,880	\$100	\$40,980	\$2,000	\$0	\$5,000	0.77 %
2042	\$5,000	\$38,000	\$124,830	\$100	\$160,930	\$2,000	\$0	\$5,000	0.84 %
2043	\$5,000	\$38,000	\$23,490	\$100	\$59,590	\$2,000	\$0	\$5,000	0.80 %
2044	\$5,000	\$38,000	\$29,300	\$100	\$65,400	\$2,000	\$0	\$5,000	0.76 %
2045	\$5,000	\$38,000	\$49,820	\$100	\$85,920	\$2,000	\$0	\$5,000	0.75 %
2046	\$5,000	\$38,000	\$83,840	\$100	\$119,940	\$2,000	\$0	\$5,000	0.80 %
2047	\$5,000	\$38,000	\$481,750	\$100	\$517,850	\$2,000	\$0	\$5,000	2.89 %
2048	\$5,000	\$38,000	\$92,500	\$100	\$128,600	\$2,000	\$0	\$5,000	6.75 %
2049	\$5,000	\$38,000	\$50,390	\$100	\$86,490	\$2,000	\$0	\$5,000	100.00 %
		\$1,140,000	\$4,050,546		\$5,490,110				

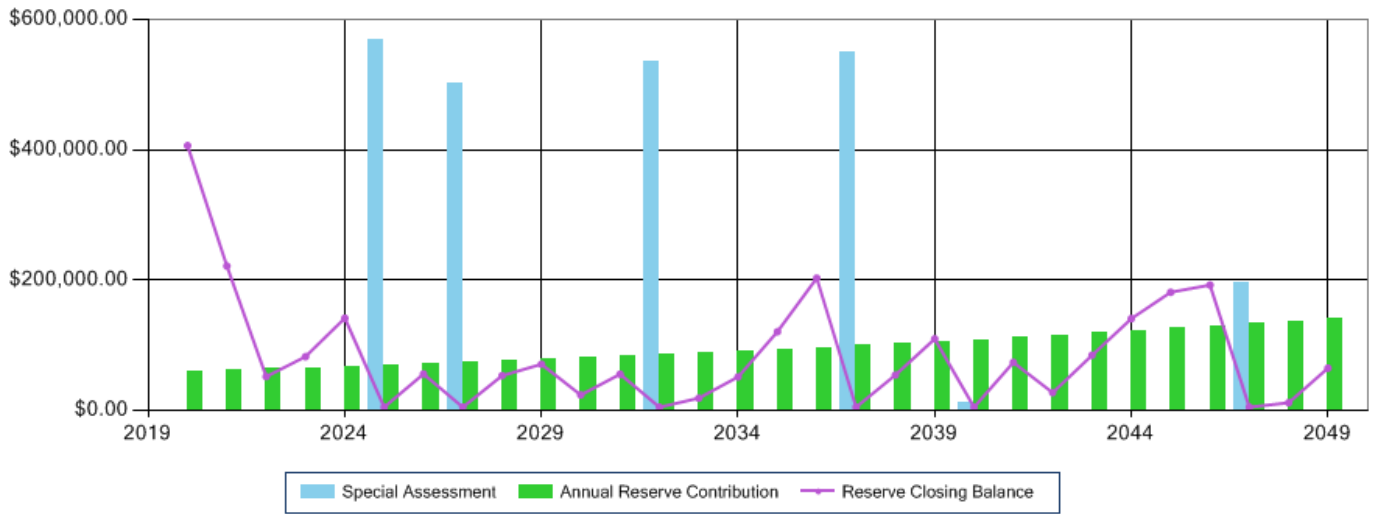




Name	2019/2020 - Annual funding of \$60,000 w. 3% increase (Alternative)
Type	Basic
Regarding	The Murchies
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	78

Init Catchup Cost	\$0
Operating Budget	\$324,644
Starting Reserve Balance	\$341,674
Reserve Contribution Threshold	\$500,000
Contribution Below Threshold	\$60,000
Contribution Above Threshold	\$60,000
Reserve Contribution Increase	3.00 %
Monthly Avg. Unit Contribution	\$64

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	\$341,674	\$60,000	\$0	\$6,833	\$0	\$2,000	\$0	\$406,507	20.64 %
2021	\$406,507	\$61,800	\$0	\$8,130	\$252,790	\$2,000	\$0	\$221,648	11.68 %
2022	\$221,648	\$63,654	\$0	\$4,433	\$235,840	\$2,000	\$0	\$51,895	2.82 %
2023	\$51,895	\$65,564	\$0	\$1,038	\$33,900	\$2,000	\$0	\$82,596	4.16 %
2024	\$82,596	\$67,531	\$0	\$1,652	\$8,140	\$2,000	\$0	\$141,639	6.56 %
2025	\$141,639	\$69,556	\$568,472	\$2,833	\$775,500	\$2,000	\$0	\$5,000	0.32 %
2026	\$5,000	\$71,643	\$0	\$100	\$18,820	\$2,000	\$0	\$55,923	3.30 %
2027	\$55,923	\$73,792	\$502,666	\$1,118	\$626,500	\$2,000	\$0	\$5,000	0.41 %
2028	\$5,000	\$76,006	\$0	\$100	\$25,730	\$2,000	\$0	\$53,376	4.05 %
2029	\$53,376	\$78,286	\$0	\$1,068	\$59,800	\$2,000	\$0	\$70,930	5.06 %
2030	\$70,930	\$80,635	\$0	\$1,419	\$127,310	\$2,000	\$0	\$23,674	1.66 %
2031	\$23,674	\$83,054	\$0	\$473	\$49,540	\$2,000	\$0	\$55,661	3.70 %
2032	\$55,661	\$85,546	\$534,910	\$1,113	\$670,230	\$2,000	\$0	\$5,000	0.51 %
2033	\$5,000	\$88,112	\$0	\$100	\$72,400	\$2,000	\$0	\$18,812	1.84 %
2034	\$18,812	\$90,755	\$0	\$376	\$56,460	\$2,000	\$0	\$51,484	4.72 %
2035	\$51,484	\$93,478	\$0	\$1,030	\$23,100	\$2,000	\$0	\$120,891	10.12 %
2036	\$120,891	\$96,282	\$0	\$2,418	\$14,520	\$2,000	\$0	\$203,071	15.48 %
2037	\$203,071	\$99,171	\$550,596	\$4,061	\$849,900	\$2,000	\$0	\$5,000	0.84 %
2038	\$5,000	\$102,146	\$0	\$100	\$50,900	\$2,000	\$0	\$54,346	8.42 %
2039	\$54,346	\$105,210	\$0	\$1,087	\$48,830	\$2,000	\$0	\$109,813	15.64 %
2040	\$109,813	\$108,367	\$10,824	\$2,196	\$224,200	\$2,000	\$0	\$5,000	0.85 %
2041	\$5,000	\$111,618	\$0	\$100	\$40,980	\$2,000	\$0	\$73,738	11.39 %
2042	\$73,738	\$114,966	\$0	\$1,475	\$160,930	\$2,000	\$0	\$27,249	4.62 %
2043	\$27,249	\$118,415	\$0	\$545	\$59,590	\$2,000	\$0	\$84,619	13.58 %
2044	\$84,619	\$121,968	\$0	\$1,692	\$65,400	\$2,000	\$0	\$140,879	21.47 %
2045	\$140,879	\$125,627	\$0	\$2,818	\$85,920	\$2,000	\$0	\$181,403	27.48 %
2046	\$181,403	\$129,395	\$0	\$3,628	\$119,940	\$2,000	\$0	\$192,486	30.79 %
2047	\$192,486	\$133,277	\$195,237	\$3,850	\$517,850	\$2,000	\$0	\$5,000	2.89 %
2048	\$5,000	\$137,276	\$0	\$100	\$128,600	\$2,000	\$0	\$11,776	15.91 %
2049	\$11,776	\$141,394	\$0	\$236	\$86,490	\$2,000	\$0	\$64,915	100.00 %
		\$2,854,524	\$2,362,705		\$5,490,110				





Name	2019/2020 - Fixed annual funding of \$162,000 (Progressive)
Type	Basic
Regarding	The Murchies
Start Year	2020
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	\$2,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	78

Init Catchup Cost	\$0
Operating Budget	\$324,644
Starting Reserve Balance	\$341,674
Reserve Contribution Threshold	\$500,000
Contribution Below Threshold	\$162,000
Contribution Above Threshold	\$162,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	\$173

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2020	\$341,674	\$162,000	\$0	\$6,833	\$0	\$2,000	\$0	\$508,507	25.82 %
2021	\$508,507	\$162,000	\$0	\$10,170	\$252,790	\$2,000	\$0	\$425,888	22.45 %
2022	\$425,888	\$162,000	\$0	\$8,518	\$235,840	\$2,000	\$0	\$358,565	19.51 %
2023	\$358,565	\$162,000	\$0	\$7,171	\$33,900	\$2,000	\$0	\$491,837	24.81 %
2024	\$491,837	\$162,000	\$0	\$9,837	\$8,140	\$2,000	\$0	\$653,533	30.28 %
2025	\$653,533	\$162,000	\$0	\$13,071	\$775,500	\$2,000	\$0	\$51,104	3.28 %
2026	\$51,104	\$162,000	\$0	\$1,022	\$18,820	\$2,000	\$0	\$193,306	11.41 %
2027	\$193,306	\$162,000	\$274,328	\$3,866	\$626,500	\$2,000	\$0	\$5,000	0.41 %
2028	\$5,000	\$162,000	\$0	\$100	\$25,730	\$2,000	\$0	\$139,370	10.58 %
2029	\$139,370	\$162,000	\$0	\$2,787	\$59,800	\$2,000	\$0	\$242,357	17.31 %
2030	\$242,357	\$162,000	\$0	\$4,847	\$127,310	\$2,000	\$0	\$279,895	19.73 %
2031	\$279,895	\$162,000	\$0	\$5,598	\$49,540	\$2,000	\$0	\$395,952	26.32 %
2032	\$395,952	\$162,000	\$111,358	\$7,919	\$670,230	\$2,000	\$0	\$5,000	0.51 %
2033	\$5,000	\$162,000	\$0	\$100	\$72,400	\$2,000	\$0	\$92,700	9.07 %
2034	\$92,700	\$162,000	\$0	\$1,854	\$56,460	\$2,000	\$0	\$198,094	18.17 %
2035	\$198,094	\$162,000	\$0	\$3,962	\$23,100	\$2,000	\$0	\$338,956	28.38 %
2036	\$338,956	\$162,000	\$0	\$6,779	\$14,520	\$2,000	\$0	\$491,215	37.46 %
2037	\$491,215	\$162,000	\$193,861	\$9,824	\$849,900	\$2,000	\$0	\$5,000	0.84 %
2038	\$5,000	\$162,000	\$0	\$100	\$50,900	\$2,000	\$0	\$114,200	17.70 %
2039	\$114,200	\$162,000	\$0	\$2,284	\$48,830	\$2,000	\$0	\$227,654	32.42 %
2040	\$227,654	\$162,000	\$0	\$4,553	\$224,200	\$2,000	\$0	\$168,007	28.76 %
2041	\$168,007	\$162,000	\$0	\$3,360	\$40,980	\$2,000	\$0	\$290,387	44.88 %
2042	\$290,387	\$162,000	\$0	\$5,808	\$160,930	\$2,000	\$0	\$295,265	50.12 %
2043	\$295,265	\$162,000	\$0	\$5,905	\$59,590	\$2,000	\$0	\$401,580	64.45 %
2044	\$401,580	\$162,000	\$0	\$8,032	\$65,400	\$2,000	\$0	\$504,212	76.86 %
2045	\$504,212	\$162,000	\$0	\$10,084	\$85,920	\$2,000	\$0	\$588,376	89.14 %
2046	\$588,376	\$162,000	\$0	\$11,768	\$119,940	\$2,000	\$0	\$640,204	102.43 %
2047	\$640,204	\$162,000	\$0	\$12,804	\$517,850	\$2,000	\$0	\$295,158	170.61 %
2048	\$295,158	\$162,000	\$0	\$5,903	\$128,600	\$2,000	\$0	\$332,461	449.27 %
2049	\$332,461	\$162,000	\$0	\$6,649	\$86,490	\$2,000	\$0	\$412,620	100.00 %
		\$4,860,000	\$579,547		\$5,490,110				



# **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

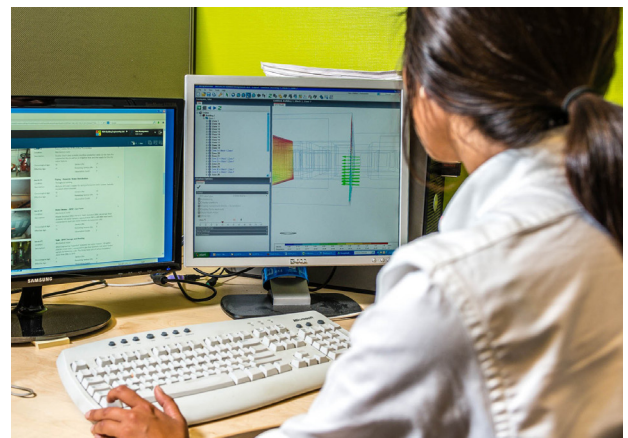
A Depreciation Report is a long-range financial planning tool. It's used to identify funding requirements for costs associated with future repair, renewal, and replacement projects. The report establishes where you need to focus resources and is a good place to start developing your roadMaP.

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.



## About Us



**Mark Will** | B.A. Econ.

**Managing Principal, Vancouver Regional Manager**

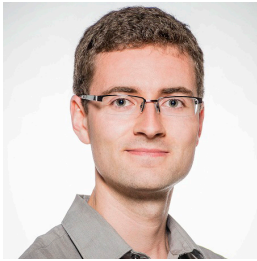
- B.A., Economics
- Has worked in project management since 1997
- Member of the Board of Directors, Condominium Home Owner's Association (CHOA)
- Member of Professional Association of Managing Agents (PAMA)



**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 preparation 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 Technicians 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



**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**



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

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-2020 Expiry 02-May-2021

#### 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  
 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-2020 Expiry 02-May-2021

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  
 THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY**

Ref. No. 320008417786

CERTIFICATE OF INSURANCE

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.

Dated : 08-May-2020

*Aon Reed Stenhouse Inc*

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**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**  
THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY

# Appendix H

## Strategic Plan



**The Murchies Strategic Plan**

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
<b>ENCLOSURE</b>																																					
<b>ROOFS &amp; DECKS</b>																																					
Encl 01	J01	Locally remove ballast to visually review the surface of the underlying membrane, paying close attention to all penetration locations for signs of distress, such as ridges, cracks, and delamination. Review to include sealants and flashings.	2 Yrs	\$0	2024	\$0	•											•		•		•		•		•		•		•		•		•		•	
Encl 01	J02	Locally repair membrane and associated component as required. [Refer to SBS membrane warranty if applicable.]	2 Yrs	\$0	2024	\$0	•											•		•		•		•		•		•		•		•		•		•	
Encl 01	J03	Review condition of roof, associated components, service penetrations and interfaces.	5 Yrs	\$0	2023	\$0											•					•					•										
Encl 01	R01	Replace roof membrane assembly and associated components, such as drains and flashing. Ballast may be salvagable.	20 Yrs	\$18,750	2038	\$28,000					•																										
Encl 02	J01	Locally repaint flashings.	15 Yrs	\$0	2033	\$0	•																														
Encl 02	R01	Replace deteriorated sealants and mastics and repair perimeter stripping as required.	5 Yrs	\$0	2023	\$0											•					•					•										
Encl 02	R02	Replace 2-ply SBS conventional roof assembly and associated components.	20 Yrs	\$32,500	2038	\$48,000					•																										
Encl 03	J01	Clean traffic surface aesthetic purposes. [Costs borne by unit owners].	2 Yrs	\$0	2018	\$0							•		•				•		•		•		•		•		•		•		•		•		•
Encl 03	J02	Remove pavers at selected locations and visually review the surface of the underlying membrane for signs of distress, particularly at penetrations.	2 Yrs	\$0	2018	\$0							•		•				•		•		•		•		•		•		•		•		•		•
Encl 03	J03	Review traffic surface for signs of distress.	2 Yrs	\$0	2018	\$0							•		•				•		•		•		•		•		•		•		•		•		•
Encl 03	J04	Locally repaint flashings as required.	10 Yrs	\$0	2032	\$0						•															•										
Encl 03	R01	Replace deteriorated sealants and mastics as required.	5 Yrs	\$0	2021	\$0										•						•					•										
Encl 03	R02	Replace roof membrane and associated components, such as flashing.	25 Yrs	\$180,000	2022	\$190,000											•																				

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
<b>ENCLOSURE</b>																																						
<b>SKYLIGHT</b>																																						
Encl 04	J01	Inspect roof hatches for signs of distress, such as missing or aged sealant, corrosion, cracked domes and water infiltration.	3 Yrs	\$0	2019	\$0								•						•		•				•									•			
Encl 04	J02	Inspect exterior sealant and gaskets at roof hatches for signs of distress, such as cracking, wear and debonding. Carry out localized repairs as required.	3 Yrs	\$0	2019	\$0								•						•		•				•									•			
Encl 04	J03	Provide paint touch up to roof hatch frames, as required.	5 Yrs	\$1,000	2021	\$1,100									•						•						•											
Encl 04	J04	Inspect weep holes of roof hatches to ensure that they are free draining. Clean as required.	5 Yrs	\$0	2021	\$0									•						•						•											
Encl 04	R01	Replace gaskets at roof hatches, as required.	10 Yrs	\$0	2032	\$0	•																				•											
Encl 04	R02	Replace roof hatches, sealants and associated flashings.	20 Yrs	\$15,000	2022	\$16,000										•																						
<b>FALL PROTECTION</b>																																						
Encl 05	J01	Review metal components for signs of distress, such as impact damage, misalignment, deformation, corrosion and open joints.	5 Yrs	\$1,500	2021	\$1,600									•						•						•											
Encl 05	J02	Conduct load tests on anchors.	5 Yrs	\$0	2021	\$0									•						•						•											
Encl 05	R01	Replace components of fall protection system, as required.	25 Yrs	\$34,800	2022	\$38,000										•																						
Encl 06	R01	Repaint exterior guardrails.	8 Yrs	\$5,000	2026	\$5,900	•													•																		
Encl 06	R02	Replace exterior guardrails.	40 Yrs	\$13,500	2037	\$20,000																											•					
<b>WALLS</b>																																						
Encl 07	J01	Clean exterior stucco surfaces to remove atmospheric dirt, vegetative growth and other stains. Extent of work and frequency depends on environmental exposure conditions.	4 Yrs	\$1,000	2021	\$1,100									•					•						•									•			
Encl 07	J02	Inspect stucco for signs of distress, such as cracks, staining, vegetation growth, and delaminating or peeling of finish coat.	2 Yrs	\$0	2018	\$0							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Encl 07	J03	Inspect exterior sealant. Repair as required.	2 Yrs	\$0	2018	\$0							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Encl 07	J04	Locally repaint flashing, as required.	15 Yrs	\$1,000	2033	\$1,300	•																					•										
Encl 07	R01	Clean and recoat acrylic stucco finish, as required.	8 Yrs	\$3,360	2020	\$3,500								•								•																
Encl 07	R02	Replace exterior sealant at stucco walls. [Cost included with Exterior Sealant Asset]	10 Yrs	\$0	2028	\$0						•										•																
Encl 07	R03	Replace stucco cladding 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 replacment.	40 Yrs	\$56,000	2037	\$82,000																											•					
Encl 08	J01	Clean exterior coated concrete wall surfaces, using water hose and soft brush from the top of the building down. A mild solution of Trisodium Phosphate (TSP) can be used to remove stubborn staining. Power washing equipment should be used with care at joints and interfaces.	4 Yrs	\$5,000	2021	\$5,300									•					•						•									•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
<b>ENCLOSURE</b>																																						
Encl 08	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. Rout cracks, seal joint with sealant and re-coat, as required. Review reinforcing steel for corrosion in damaged concrete areas. Repair concrete reinforcing steel. Contact consultant to review large cracks and significant areas of spalling.	5 Yrs	\$0	2021	\$0									•					•																•		
Encl 08	R01	Replace exterior sealant at coated concrete walls, as required.	10 Yrs	\$0	2030	\$0																		•												•		
Encl 08	R02	Reapplication of the elastomeric coating together with preparation of the concrete substrate.	8 Yrs	\$50,000	2020	\$52,000								•								•																
<b>GLAZING SYSTEMS</b>																																						
Encl 09	J01	Clean all exterior surfaces such as frame and spandrel panels.	5 Yrs	\$0	2021	\$0									•					•					•													
Encl 09	J02	Replace insulating glazing units (IGUs) when condensation or misting between panes of glass can be observed.	2 Yrs	\$250	2018	\$250							•		•		•		•		•			•		•		•		•				•		•		
Encl 09	J03	Inspect storefront glazing system for signs of distress, such as cracked glass, misaligned panels, water ingress, missing or aged sealant, or dislodged gaskets.	3 Yrs	\$0	2019	\$0							•				•		•				•		•			•							•			
Encl 09	R01	Replace exterior sealant at storefront glazing system as required [Cost included with exterior sealant assembly].	10 Yrs	\$0	2020	\$0								•										•														
Encl 09	R02	Replace storefront window system.	40 Yrs	\$30,000	2037	\$44,000																																
Encl 10	J01	Review representative sample of exterior sealant at wood framed windows. Carry out localized repairs, as required.	3 Yrs	\$0	2019	\$0							•				•		•				•		•			•								•		
Encl 10	J02	Install cap bead over glazing tape on exterior of windows.	15 Yrs	\$0	2047	\$0				•																												
Encl 10	R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	\$2,350	2018	\$2,400							•		•		•		•		•			•		•		•		•					•			
Encl 10	R02	Repaint wood framed windows.	8 Yrs	\$53,400	2020	\$56,000									•								•													•		
Encl 10	R03	Replace exterior sealant at wood framed windows, as required. [Costs included with exterior sealant assembly]	10 Yrs	\$0	2020	\$0									•									•														
Encl 10	R04	Replace or refurbish wood windows.	35 Yrs	\$352,500	2032	\$470,000																					•											
<b>DOORS</b>																																						
Encl 11	J01	Repaint door and frame. [applicable if metal or wood, but not aluminum]	5 Yrs	\$0	2021	\$0									•							•				•												
Encl 11	J02	Inspect doors for deteriorated finishes, gaskets, seals, mitre joints, broken glass, condensation, and water leakage. Review frames and panels for chalking and evidence of corrosion. Repair as required.	5 Yrs	\$0	2021	\$0									•							•				•												
Encl 11	R01	Replace exterior sealant at door perimeter, as required. [Costs included with exterior sealant assembly].	10 Yrs	\$0	2032	\$0							•													•												
Encl 11	R02	Replace metal swing doors in high traffic locations, as required.	25 Yrs	\$8,000	2022	\$8,700											•																					
Encl 12	J01	Install cap bead over glazing tape on exterior of doors.	15 Yrs	\$0	2037	\$0				•																												
Encl 12	J02	Inspect doors for deteriorated finishes, gaskets, seals, mitre joints, broken glass, condensation, and water leakage. Review frames and panels for chalking and evidence of corrosion. Repair as required.	5 Yrs	\$0	2021	\$0									•							•				•												

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
<b>ENCLOSURE</b>																																					
Encl 12	R01	Replace exterior sealant at door perimeter, as required. [Costs included with exterior sealant assembly].	10 Yrs	\$0	2020	\$0									•																						
Encl 12	R02	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	\$0	2018	\$0						•		•				•		•		•		•		•		•		•		•		•			
Encl 12	R03	Replace swing doors in high traffic locations, as required.	25 Yrs	\$1,000	2022	\$1,100											•																				
Encl 13	J01	Conduct 1-year warranty review in sufficient time prior to expiration of warranty period on lobby door assemblies. Prepare list of any deficiencies for correction.	Annually	\$0	2013	\$0	•																														
Encl 13	R01	Replace exterior sealant. Cost included with Exterior Sealant asset.	10 Yrs	\$0	2027	\$0																•															
Encl 13	R02	Replace weather seals.	10 Yrs	\$250	2027	\$300																•															
Encl 13	R03	Replace lobby door assemblies.	20 Yrs	\$4,000	2038	\$5,900						•																								•	
<b>CANOPIES</b>																																					
Encl 14	R01	Repaint exposed metal frame and shedding surface of canopy assemblies.	8 Yrs	\$5,000	2020	\$5,200									•																						
Encl 14	R02	Replace exterior sealant at metal canopies, as required.[Cost included with exterior sealant assembly]	10 Yrs	\$0	2028	\$0						•																									
Encl 14	R03	Replace metal canopy assemblies.	40 Yrs	\$80,000	2037	\$120,000																															
Encl 15	R01	Locally repaint exposed metal frame canopy assemblies.	8 Yrs	\$1,000	2020	\$1,000									•																						
Encl 15	R02	Replace exterior sealant at metal and glass canopies, as required.[Cost included with exterior sealant assembly]	10 Yrs	\$0	2020	\$0									•																						
Encl 15	R03	Replace metal and glass canopy assembly.	40 Yrs	\$8,000	2037	\$12,000																															
<b>PARKING GARAGE</b>																																					
Encl 16	R01	Prepare surface and re-apply concrete sealer.	5 Yrs	\$0	2021	\$0																															
Encl 16	R02	Re-apply all thermoplastic traffic and safety demarcation markings.	10 Yrs	\$800	2028	\$980																															
Encl 16	R03	Replace concrete slab.	75 Yrs	\$0	2072	\$0																															
<b>GENERAL &amp; INSPECTIONS</b>																																					
Encl 17	J01	Inspect suite interiors for signs of moisture related problems. Inspect thermostats and humidistat to ensure operational and set at appropriate levels. Repair or replace as required.	2 Yrs	\$0	2018	\$0							•		•																						
Encl 17	J02	Review operations of suite interior exhaust fans. Cost included in interior suite review.	2 Yrs	\$0	2018	\$0							•		•																						
Encl 17	J03	Repaint dryer, kitchen and bathroom exhaust vents as required.	10 Yrs	\$0	2020	\$0									•																						
Encl 17	J04	Update Depreciation Report	3 Yrs	\$5,000	2019	\$5,100								•																							
Encl 17	R01	Replace various types of exhaust vents. Cost included in wall assembly replacement.	40 Yrs	\$15,600	2037	\$23,000																															
Encl 18	J01	Examine condition of sealant and undertake localized repairs or replacement as required.	3 Yrs	\$0	2019	\$0								•																							



Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
<b>ELECTRICAL</b>																																						
<b>LIGHT FIXTURES</b>																																						
Elec 03	J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures or lighting controls to optimize light levels and energy costs.	3 Yrs	\$0	2019	\$0								•			•			•																		
Elec 03	R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	6 Yrs	\$0	2024	\$0	•												•																			
Elec 03	R02	Cyclical group replacement of lamps in exterior lighting fixtures. A set of lamps is replaced at a scheduled time.	3 Yrs	\$0	2019	\$0								•						•																		
Elec 03	R03	Cyclical cleaning of exterior light fixtures. Use cleaning agents suited to fixture type.	10 Yrs	\$0	2020	\$0									•																							
Elec 03	R04	Cyclical replacement of electronic ballasts.	10 Yrs	\$0	2020	\$0									•																							
Elec 03	R05	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	20 Yrs	\$3,000	2038	\$4,500								•																								
Elec 04	J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures, lighting controls or interior finishes (e.g. painting) to optimize light levels and energy costs.	3 Yrs	\$0	2019	\$0								•						•																		
Elec 04	R01	Cyclical group replacement of lamps in interior lighting fixtures. A set of lamps are replaced at a scheduled time.	3 Yrs	\$0	2019	\$0								•						•																		
Elec 04	R02	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	6 Yrs	\$0	2024	\$0	•													•																		
Elec 04	R03	Cyclical cleaning of interior light fixtures. Use cleaning agents suited to fixture type.	10 Yrs	\$0	2020	\$0									•																							
Elec 04	R04	Cyclical replacement of electronic ballasts.	10 Yrs	\$0	2020	\$0									•																							
Elec 04	R05	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	25 Yrs	\$10,000	2021	\$11,000										•																						
<b>SECURITY</b>																																						
Elec 05	R01	Replace enterphone panels, excluding field wiring.	25 Yrs	\$6,000	2022	\$6,500																																
Elec 06	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 06	R02	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	12 Yrs	\$30,000	2022	\$32,000																																
Elec 07	R01	Service the multiplex unit, update software as required. [PLACEHOLDER]	5 Yrs	\$0	2022	\$0																																
Elec 07	R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence. [PLACEHOLDER]	14 Yrs	\$0	2025	\$0																																

MECHANICAL																				
CONTROLS AND END DEVICES																				
Mech 01	R01	Cyclical replacement of gas detection sensors.	5 Yrs	\$900	2021	\$960														
PLUMBING & DRAINAGE																				
Mech 02	R01	Cyclical replacement of electric hot water reheat tank.	5 Yrs	\$1,000	2021	\$1,100														
Mech 03	J01	Check that pipe hangars are properly fastened.	5 Yrs	\$0	2023	\$0														
Mech 03	J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	5 Yrs	\$0	2023	\$0														
Mech 03	J03	Check integrity of all soldered pipe connections and couplings.	5 Yrs	\$0	2023	\$0														
Mech 03	R01	Replace components of domestic plumbing distribution system, including domestic valves.	28 Yrs	\$102,600	2025	\$120,000														
Mech 04	R01	Cyclical replacement of fittings and valves, as required.	20 Yrs	\$13,250	2047	\$24,000														
Mech 05	J01	Check that pipe hangars are properly fastened.	5 Yrs	\$0	2021	\$0														
Mech 05	J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	5 Yrs	\$0	2021	\$0														
Mech 05	J03	Check integrity of all soldered pipe connections and couplings.	5 Yrs	\$0	2021	\$0														
Mech 05	R01	Council advised that they will bring forward to the AGM regarding the plan to install Hytec System to mitigate further deterioration of the domestic water piping.	8 Yrs	\$10,000	2021	\$11,000														
Mech 05	R02	Replace components of domestic plumbing distribution system, including domestic valves.	28 Yrs	\$371,700	2046	\$650,000														
Mech 06	J01	Inspect brushes and remove brush dust from motor.	2 Yrs	\$0	2018	\$0														
Mech 06	R01	Cyclical replacement of recirculating pumps, as required.	8 Yrs	\$3,000	2020	\$3,100														
Mech 07	R01	Cyclical replacement of hot water expansion tanks, as required.	20 Yrs	\$1,500	2030	\$1,900														
Mech 08	J01	Insert video cameras into main lines to conduct pipe inspection.	5 Yrs	\$3,000	2021	\$3,200														
Mech 08	J02	Auger lateral drain lines.	10 Yrs	\$3,000	2020	\$3,100														
Mech 08	R01	Repair components of sanitary drainage distribution system, as required.	50 Yrs	\$25,000	2047	\$44,000														
Mech 09	R01	Repair and/replace components of storm water drainage distribution system, as required.	40 Yrs	\$30,000	2047	\$53,000														
Mech 10	J01	Dismantle, inspect and clean tube bundle on immersion heating tanks.	5 Yrs	\$0	2021	\$0														
Mech 10	J02	Replace anode rods in hot water heaters.	5 Yrs	\$0	2021	\$0														
Mech 10	R01	Replacement of domestic hot water storage tanks.	8 Yrs	\$5,000	2026	\$5,900														
Mech 11	R01	Cyclical replacement of valves, as required.	20 Yrs	\$6,000	2038	\$8,900														
Mech 12	R01	Cyclical replacement of various components of domestic hot water storage tanks, such as burners, controls, etc.	5 Yrs	\$0	2021	\$0														
Mech 12	R02	Replace domestic hot water heaters or upgrade to condensing boilers.	12 Yrs	\$14,000	2030	\$18,000														
Mech 13	R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	10 Yrs	\$6,000	2028	\$7,300														
Mech 14	J01	Replace wax/foam gaskets on toilet bowls.	10 Yrs	\$0	2020	\$0														



Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
<b>MECHANICAL</b>																																					
Mech 24	J01	Conduct 1-year warranty review in sufficient time prior to expiration of warranty period on trash compactor. Prepare list of any deficiencies for correction. (Cost included in the general section.)	Annually	\$0	2013	\$0		•																													
Mech 24	R01	Replace hydraulic pumps.	10 Yrs	\$0	2020	\$0									•																						
Mech 24	R02	Replace compactor hoses.	10 Yrs	\$0	2020	\$0									•																						
Mech 24	R03	Replace trash compactor.	20 Yrs	\$15,000	2038	\$22,000																															

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
<b>ELEVATOR</b>																																					
<b>TRACTION</b>																																					
Elev 01	J01	Check and test the overload devices.	2 Yrs	\$0	2018	\$0							•		•		•		•		•		•		•		•		•		•		•		•		
Elev 01	J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	2 Yrs	\$0	2018	\$0							•		•		•		•		•		•		•		•		•		•		•		•		
Elev 01	J03	Conduct full load performance test.	2 Yrs	\$0	2018	\$0							•		•		•		•		•		•		•		•		•		•		•		•		
Elev 01	R01	Replace elevator drive.	15 Yrs	\$15,000	2027	\$36,000			•													•															
Elev 01	R02	Replace elevator hoist ropes.	19 Yrs	\$20,000	2037	\$29,000				•																											
Elev 01	R03	Replace elevator geared machines, controls, drives.	50 Yrs	\$110,000	2020	\$110,000									•																						
<b>CAR INTERIORS</b>																																					
Elev 02	R01	Replace elevator operating and signal fixtures, door operator, upgrade cab interior.	15 Yrs	\$40,000	2020	\$42,000									•																						

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
<b>FIRE SAFETY</b>																																					
<b>CONTROLS</b>																																					
Fire 01	J01	Replace battery packs for fire alarm control panels.	5 Yrs	\$400	2021	\$420										•																					
Fire 01	R01	Replace battery packs.	5 Yrs	\$250	2021	\$270										•																					
Fire 01	R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	20 Yrs	\$20,000	2038	\$30,000							•																								
<b>DETECTION</b>																																					
Fire 02	R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	20 Yrs	\$37,500	2038	\$56,000							•																								
<b>SUPPRESSION</b>																																					
Fire 03	R01	Replace smoke exhaust fans.	25 Yrs	\$5,000	2022	\$5,400																															





Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
<b>INTERIOR FINISHES</b>																																						
Finish 11	J01	Lubricate door hinges. Frequency will depend on traffic wear and environmental exposure conditions.	3 Yrs	\$0	2019	\$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	2021	\$0									•					•					•					•					•			
Finish 11	J03	Repaint door and frame in high-traffic locations as required.	8 Yrs	\$0	2026	\$0					•										•						•											
Finish 11	J04	Rekey master door cylinders and issue new master keys to facility staff.	5 Yrs	\$0	2021	\$0									•						•					•									•			
Finish 11	R01	Cyclical replacement of interior swing door in high traffic locations, as required.	20 Yrs	\$0	2020	\$0									•																				•			
Finish 11	R02	Cyclical replacement of interior swing door in low traffic/exposure locations, as required.	40 Yrs	\$48,000	2037	\$70,000																													•			
<b>HOUSEKEEPING</b>																																						
Finish 12	R01	Update and replace cleaning equipment, as required.	10 Yrs	\$3,000	2028	\$3,700																													•			
<b>AMENITIES</b>																																						
<b>EQUIPMENT</b>																																						
Amen 01	R01	Replace components of electronic equipment.	6 Yrs	\$3,000	2024	\$3,400					•								•						•													
Amen 02	J01	Conduct 1-year warranty review in sufficient time prior to expiration of warranty period on outdoor barbecue. Prepare list of any deficiencies for correction.	Annually	\$0	2013	\$0		•																														
Amen 02	R01	Replace barbecue equipment.	10 Yrs	\$2,000	2018	\$2,000							•										•												•			
<b>SPECIALTIES</b>																																						
Amen 03	J01	Conduct 1-year warranty review in sufficient time prior to expiration of warranty period on toilet partitions. Prepare list of any deficiencies for correction.	Annually	\$0	2015	\$0		•		•																												
Amen 03	R01	Replace washroom partitions and associated hardware.	30 Yrs	\$1,000	2027	\$1,200																	•															
<b>FURNISHINGS</b>																																						
Amen 04	R01	Replace furnishings in common areas, as required.	15 Yrs	\$20,000	2020	\$21,000									•																				•			
Amen 05	J01	Lubricate locks and hinges.	2 Yrs	\$0	2018	\$0							•		•		•		•		•		•		•		•		•		•		•		•			
Amen 05	J02	Rekey cylinder on master lock.	5 Yrs	\$0	2021	\$0									•						•				•					•					•			
Amen 05	R01	Replace central mail boxes as required.	30 Yrs	\$12,000	2027	\$14,000																	•															
Amen 06	R01	Replace damaged and outdated signage, as required.	25 Yrs	\$6,000	2022	\$6,500											•																					
Amen 07	R01	Reconstruct wood storage lockers, as required.	30 Yrs	\$2,000	2027	\$2,400																	•															

SITWORK																											
HARD LANDSCAPING																											
Site 01	R01	Replace interlocking paving, as required. [PLACEHOLDER]	30 Yrs	\$0	2022	\$0																					
Site 02	R01	Rebuild sections of retaining walls and curbs.	30 Yrs	\$60,000	2027	\$72,000																					
Site 03	J01	Lubricate hinges on fence gate.	2 Yrs	\$0	2018	\$0																					
Site 03	R01	Repaint portions of wood fencing, as required.	10 Yrs	\$375	2020	\$390																					
Site 03	R02	Replace wood perimeter fencing.	25 Yrs	\$10,500	2022	\$11,000																					
SOFT LANDSCAPING																											
Site 04	J01	Pre-emergent application (Feb & Sep).	2 Yrs	\$0	2018	\$0																					
Site 04	R01	Renovate sections of the soft landscaping, as required.	35 Yrs	\$600	2032	\$790																					
Site 05	J01	Replace the back-up battery in the timer/controller.	2 Yrs	\$0	2018	\$0																					
Site 05	R01	Cylical replacement of components of irrigation sprinkler system, as required.	15 Yrs	\$5,000	2033	\$6,700																					
Site 06	R01	Update and replace groundskeeping equipment, as required.	25 Yrs	\$1,500	2025	\$1,700																					

