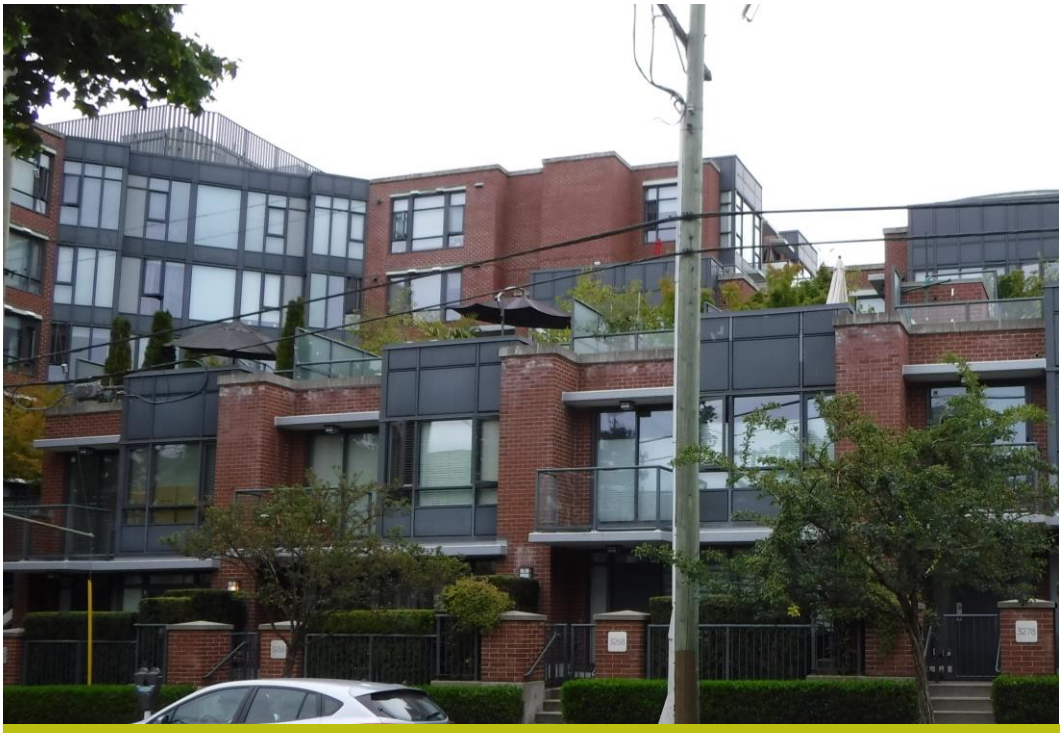
Second Depreciation Report Update | Final

Olive, 3228 Tupper Street, Vancouver, BC

Project 4951.038



To The Owners, Strata Plan BCS1871
c/o Mr. Von Bircic, Property Manager
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Site Visit: August 1, 2019
Submitted March 30, 2020 by
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Contents

Appendices

1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners, Strata Plan BCS1871 (the Owners) to prepare a Second Depreciation Report Update (the Report) for the residential and commercial complex known as The Olive, which is located at 3228 and 3238-3298 Tupper Street, Vancouver, BC. The Report considers the common property and limited common property components (the Assets) that the Strata Corporation is responsible to maintain, repair, and replace.

The Report is intended to help the Owners, the Strata Council, and the Management team make informed decisions about the allocation of resources to the common property Assets (such as roofs, windows, wall cladding, and balconies).

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 first Depreciation Report Update, which was issued on July 31, 2015. A site visit associated with this Report was completed on August 1, 2019 and the financial data is based on the 2018/2019 fiscal year. A draft Report was distributed to the Strata Council and Strata Management on October 25, 2019, and a presentation was held on January 23, 2020 to discuss the draft Report. Feedback from the Strata Council was incorporated into the final Report which was issued on March 30, 2020.

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

In addition to the Report, the supporting data is 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 has developed the interactive software tool to enable Owners to proactively manage their funding requirements and maintenance obligations, and a variety of other services in addition to the Report are available.

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

2 Olive

The Olive is a mixed use residential and commercial complex comprised of one six-storey midrise building located at 3228 Tupper Street, Vancouver, BC and an adjacent townhouse building located at 3238-3298 Tupper Street, Vancouver, BC. Both buildings are typically of cast-in-place concrete construction, built over a below-grade concrete parkade. The Olive also has an air space parcel agreement of which the residential portion is the air space parcel and the commercial portion is the Remainder.

The principal systems in the complex include the building enclosure (the separation of the interior from exterior space), electrical (the electrical, 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 Olive are summarized in Table 2.1, Figure 2.1, and Figure 2.2 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

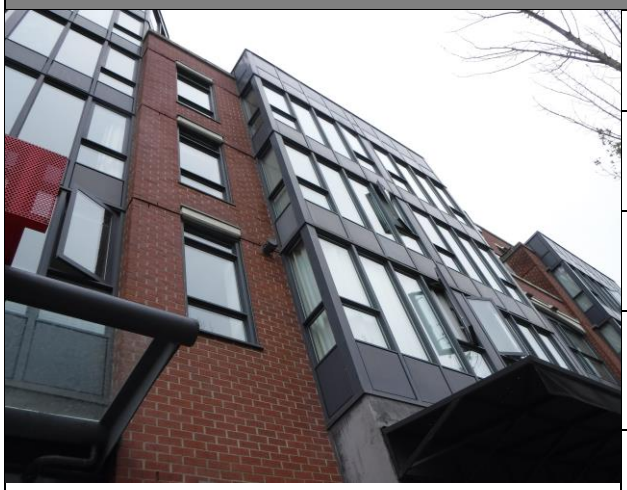

Figure 2.1 Partial east elevation photograph of Olive.

Approximate date of first occupancy	2006
Approximate gross floor area (ft²)	130,900
Total area of Unit Entitlement	8,102
Stories above grade	
→ Midrise Building	6
→ Townhouse Building	2
Total number of strata lots	
→ Midrise Suites	103
→ Townhouse Units	6
→ Total	109

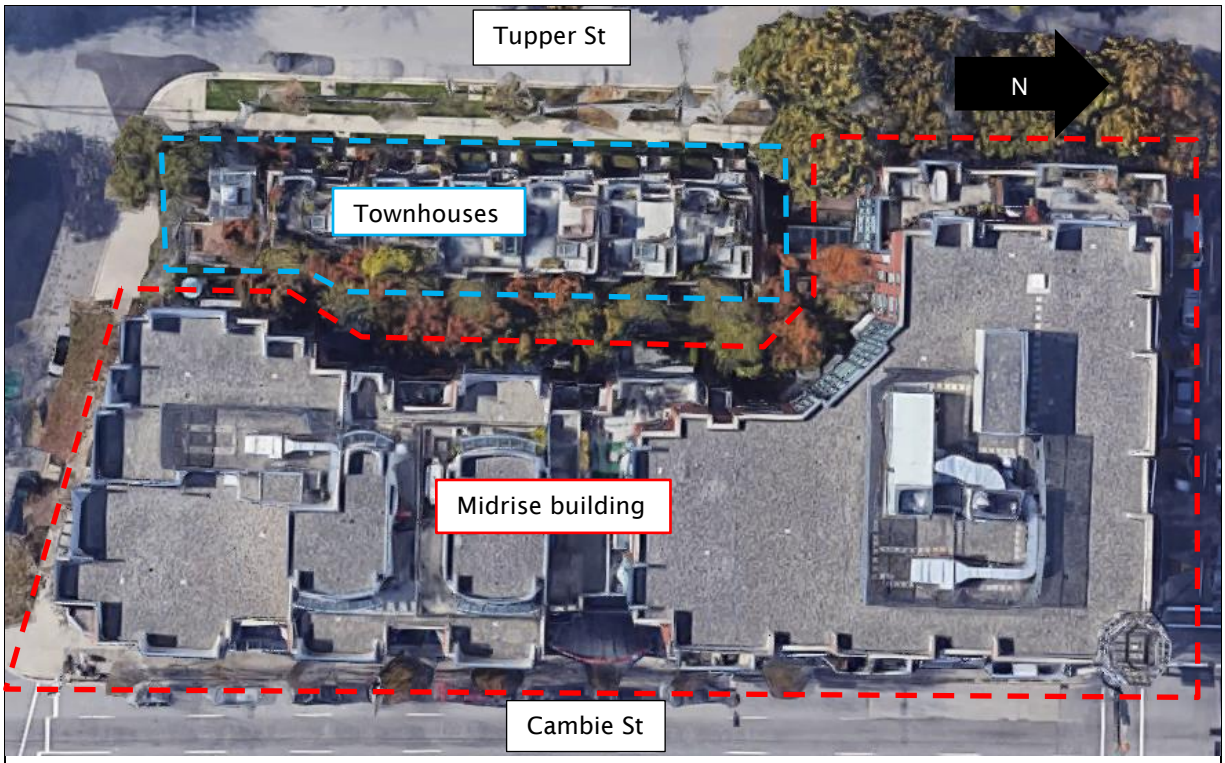

Figure 2.2 Aerial photograph of Olive (© 2019 Google).

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 Second Depreciation Report Update is summarized in Figure 3.1 below:

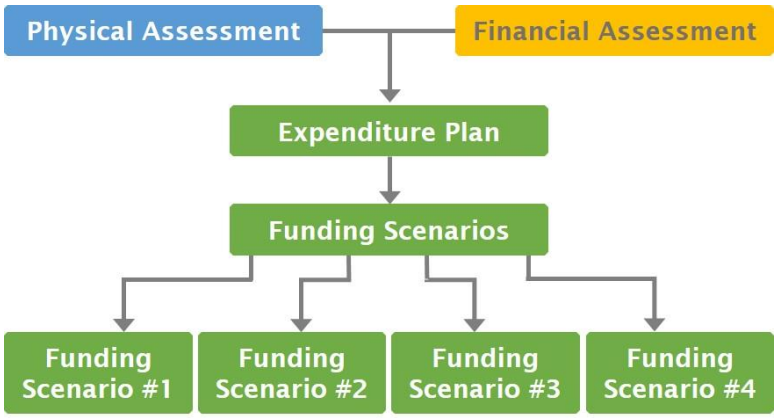

Figure 3.1

Depreciation Report Process

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

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

3.1 Physical Assessment

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

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

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
Encl 11 - Storefront Windows	→ Commercial units (Remainder)
Encl 19 - Storefront Doors	→ Commercial units (Remainder)
Encl 23 - Fabric Awnings	→ Commercial units (Remainder)

TABLE 3.1 SUMMARY OF PLACEHOLDER ASSETS	
ASSET	PARTY RESPONSIBLE FOR CAPITAL EXPENDITURES
Mech 23 - Outdoor Air Handler - Air Conditioning - Gas Heat	→ Commercial units (Remainder)
Elev 02 - Podium Elevator, Hydraulic Elevator Equipment	→ Commercial units (Remainder)
Elev 04 - Podium Elevator - Elevator Cabs and Hoistways	→ Commercial units (Remainder)

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

The evaluation is typically based on:

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

→ Discussions with Strata Corporation representatives,

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

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

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

The condition of some Assets may be concealed, for example, buried infrastructure, such as sanitary drainage lines or building enclosure Assets, such as behind the exterior wall 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
Building Enclosure → 2019 – Renewal of the coatings on metal elements of the canopies. → 2018 – Renewal of concrete eyebrow membranes and localized renewal of concrete balcony membranes.

→ 2018 – Localized renewal of sealant. → 2017 – Localized repairs to the low-sloped roof assembly on the mid-rise building. → 2014 – Localized repairs to the low-sloped roof assembly on the mid-rise building. → 2013 – Repainted localized areas of exterior surfaces. → 2012 – Repainted canopies at roof level and second floor on the mid-rise building. → As needed – Replacement of failed IGUs.
Electrical → 2016 – Cleaning of electrical room.
Mechanical → 2018 – Replacement of CO sensors. → 2016 – Replacement of sanitary sump pumps.
Fire Safety → 2012 – Replaced a failed fire panel.
Interior Finishes → 2013 – Installed carpet tiles in high traffic locations at floors two to six of the midrise building. → 2012/2013 – Repainted the interior common areas of the midrise building.

On August 1, 2019, a representative of RDH visited the site to visually review the Assets. In addition, a sub consultant (GUNN Consultants Inc.) reviewed the elevators. While the Second Depreciation Report Update does not constitute a maintenance review or condition assessment, some observations regarding the general condition, design, and construction of the Assets were made as part of the visual review. These observations were used to determine a reasonable estimated remaining service life of various Assets. Table 3.3 includes examples of some observations made during the review.

TABLE 3.3 OBSERVATIONS BY SYSTEM

SYSTEM	OBSERVATION
Building Enclosure	→ Sealant renewal is being considered for 2020. → Localized staining was observed on the metal spandrel panels. It is our understanding that methods for addressing the issue are currently being explored. Please refer to RDH's Localized Building Enclosure Review report, dated July 15, 2015, for further information specific to the spandrel panels. → Localized efflorescence was noted on the brick cladding. → Localized repairs (such as crack injections) were noted in the parkade.

3.2 Financial Assessment

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

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

The future value of major maintenance and renewal costs can be compared against the building reproduction cost. The building reproduction cost is the cost to reproduce the buildings 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 REPORT (2014/2015)	UPDATE REPORT (2018/2019)
Fiscal year end	July 31	July 31
Building reproduction cost	$25,810,400	$33,536,000
Operating budget (excluding CRF contribution)	$384,455	$425,451
Annual CRF contribution	$48,539	$56,395
Opening CRF Balance	$415,714	$529,863
Accumulated CRF Balance*	-	$636,636

**The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities. The opening CRF balance is reconciled as of the beginning of the 2018/2019 fiscal year. The accumulated CRF balance is reconciled as of April 30, 2019.*

The Olive also has an Air Space Parcel (ASP) agreement, and capital costs associated with several Assets are shared according to a cost sharing ratio. The Olive makes up the ASP portion of the agreement, while commercial units on the ground floor make up the Remainder portion. Some Assets in the Asset Inventory are likely the sole responsibility of the Remainder. To distinguish them they have been tagged "Remainder" in the Asset Inventory. Costs associated with Remainder Assets are excluded from this Report. Furthermore, of the costs that are shared between The Olive and the Remainder, only those born by The Olive are included in this Report. Ratios, summarized in Table 3.5 below, have been applied to the Assets to determine the proportion of cost allocated to The Olive. It should be noted that the ASP agreement and the strata plan are not sufficiently clear with regard to responsibilities for some of the Assets, such as the exterior cladding. The Report has included these items until such time that a legal opinion has been acquired and can be used to refine the proportional costs for The Olive. A sample of the approximate boundaries of the ASP agreement can be seen in Figure 3.2.

TABLE 3.5 DIVISION OF COSTS ASSOCIATED WITH COST SHARING		
ITEM	ASP	REMAINDER
Deck over parkade	83%	17%
Parkade traffic membrane	70%	30%
Exterior cladding	Undefined (assumed 100%)	Undefined (assumed 0%)
Elevators → Commercial (one podium elevator) → Residential (three midrise building elevators)	 0% 100%	 100% 0%
Fire safety	80%	20%
Sanitary sewage system	90%	10%
Storm drainage system	80%	20%
Service Rooms	80%	20%
Main water supply	100%	0%
Electrical cables and devices supplying the ASP	100%	0%
Life safety & emergency systems	80%	20%
Amenities	100%	0%
Sitework → Commercial pedestrian routes → Residential pedestrian routes	 0% 100%	 100% 0%

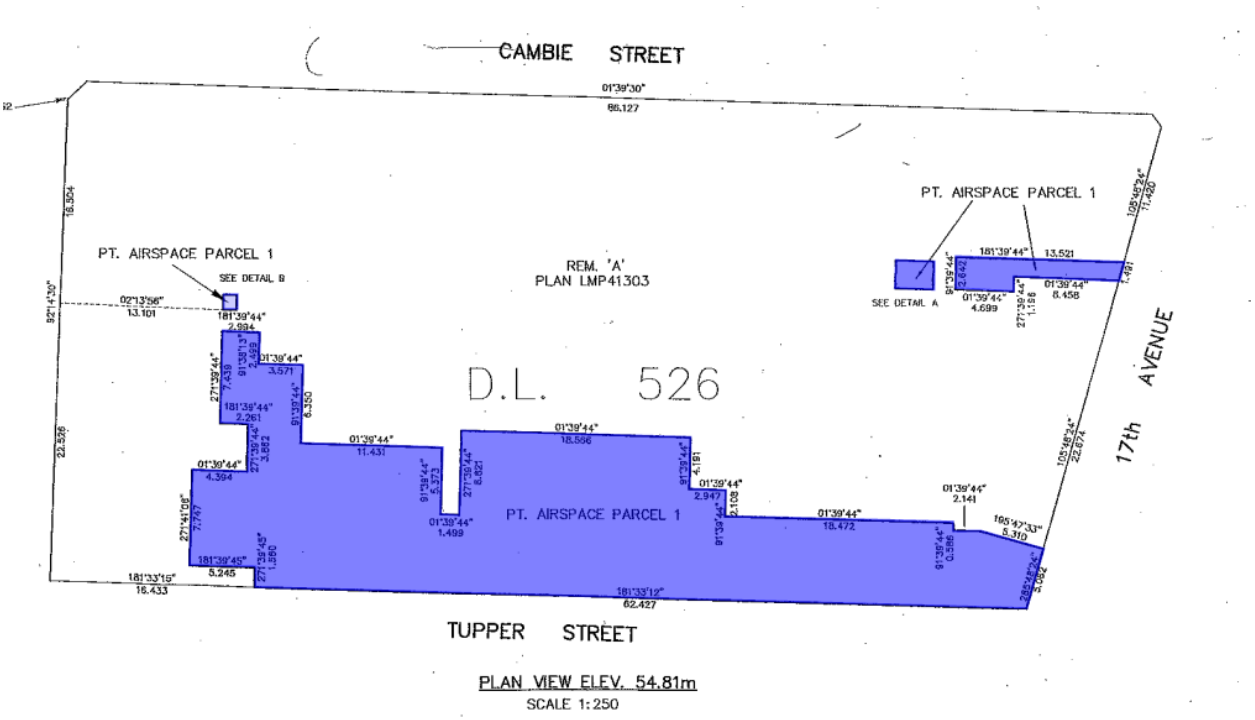

Figure 3.2 Strata plan showing a sample area of approximate boundaries of the Air Space Parcel agreement.

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

Capital costs can be distributed into three general categories:

→ *Catch-up costs*. The cost to complete any deferred maintenance and renewals.

→ *Keep-up costs*. The cost to complete planned cyclical maintenance and renewals.

→ *Get-ahead costs*. The cost to adapt, upgrade and improve.

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

Costs are considered *Class D* estimates (±50%), as defined by the Engineers and Geoscientists of British Columbia. 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 can be found in Appendix H of the Report, or available online through BAMS. Please contact the Strata Council or Strata Manager for additional information on how to access and view this information.

Costing Caveats

The capital costs given in the Second Depreciation Report Update provide a basic estimate for long term planning. They are intended to help guide priority setting and provide a clearer sense of timing. They are not suitable for planning specific projects, as they cannot account for project soft costs, such as taxes, grants, engineering or design, municipal permits, etc., or for project specific construction costs, such as access to the work (e.g. scaffold), contingencies, hazardous materials, disposal, project management, etc. Such costs cannot be estimated without more information, including a project scope and preliminary design work. Once a project reaches the planning stages, a reasonable assumption of soft costs should be made based on the actual needs of the project. It is recommended that this happen well in advance of predicted work to allow time to plan for the funding of the soft costs.

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

4.1 Major Maintenance and Renewal Expenditures

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

TABLE 4.1 CAPITAL EXPENDITURES SUMMARY BY SYSTEM

SYSTEM	10 YEAR CAPITAL COSTS (WITHOUT INFLATION)	10 YEAR CAPITAL COSTS (WITH INFLATION)	30 YEAR CAPITAL COSTS (WITHOUT INFLATION)	30 YEAR CAPITAL COSTS (WITH INFLATION)
Building Enclosure	$1,100,000	$1,200,000	$5,300,000	$7,600,000
Electrical	$94,000	$110,000	$430,000	$630,000
Mechanical	$320,000	$350,000	$1,400,000	$1,900,000
Elevator	$0	$0	$450,000	$570,000
Fire Safety	$140,000	$160,000	$300,000	$420,000
Interior Finishes	$120,000	$130,000	$360,000	$490,000
Amenities	$15,000	$16,000	$46,000	$62,000
Sitework	$45,000	$48,000	$320,000	$470,000
Building Total	**$1,834,000**	**$2,014,000**	**$8,606,000**	**$12,142,000**

Approximately 20% 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.

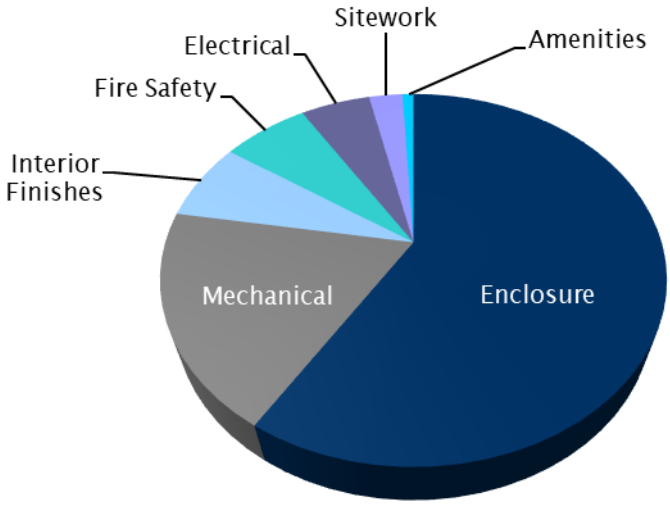

Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

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

5 Major Maintenance and Renewal Planning Horizons

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

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

5.1 Strategic Planning Horizon

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

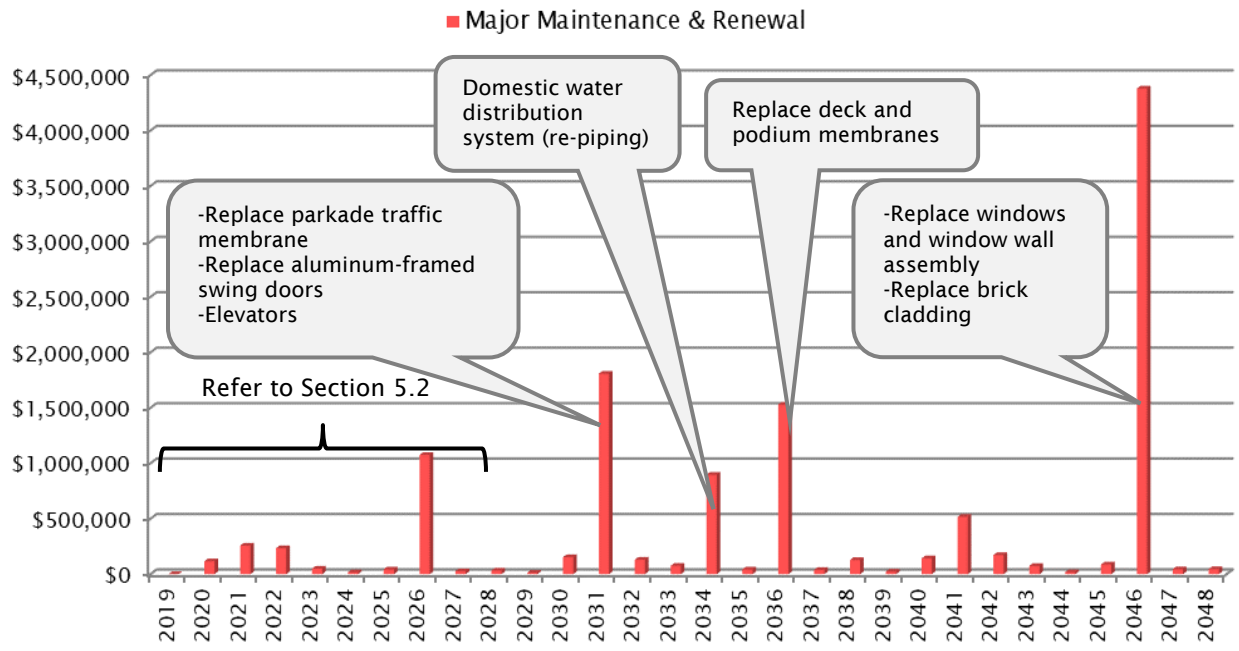

Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different major maintenance and renewal activities, each with different values. Detailed information about each year, including a description of the maintenance and renewal activities and estimated costs, is also available through the online version of the Report, available through BAMS (please contact the Strata Council for additional information).

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

5.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next 10 years (Figure 5.2). Commonly, building managers refer to a five-year tactical plan; however, a 10-year plan allows the Strata Corporation to see a wider range of projects.

The bars indicate the years in which an event (or bundle of events) is most likely to occur as well as the total magnitude of major maintenance and renewal costs for that year and the costs broken down by system. The costs associated to correct any warranty defects are not included. The soft costs associated with project implementation, such as site access, design, contract administration, are not included.

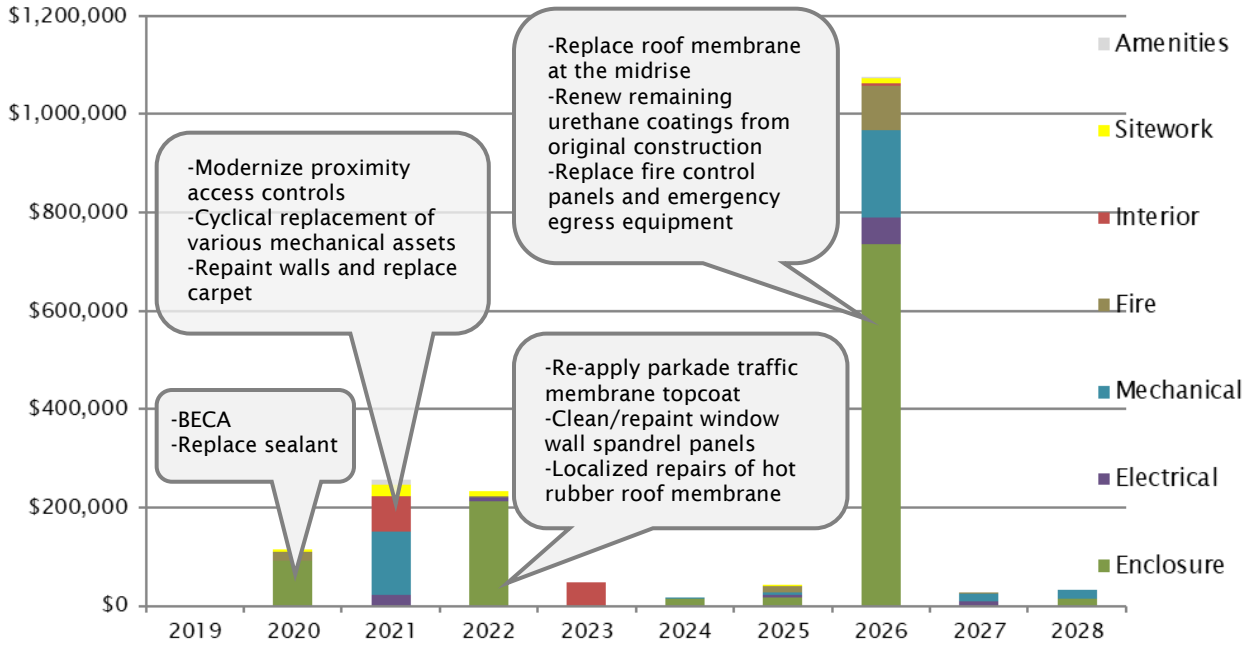

Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

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

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

2019 to 2021

Building Enclosure

- → Encl 30 General and Inspections – Commission a Building Enclosure Condition Assessment (BECA) to confirm the remaining service life of Assets, such as the roof membrane, parkade traffic membrane, and sealant. The assessment should be completed in advance of the various building enclosure renewals to assist with the planning process.
- → Encl 10 Window Wall – Cyclical replacement of insulating glazing units (IGUs), as required. An allowance has been included on a two-year cycle.
- → Encl 29 Exterior Sealant – Replace sealant at interfaces between building enclosure assemblies, and at penetrations.

Electrical

- → Elec 06 Proximity Access Control – Consider modernizing components of the proximity access control system due to technological obsolescence.

Mechanical

- → Mech 01 Controls – Direct Digital – Replace DDC central components.
- → Mech 09 & 10 DHW Boilers and Storage Tanks – Replace Domestic Hot Water (DHW) boiler controls and storage tanks.
- → Mech 13 & 14 Storm and Sanitary Drainage – Insert video cameras into the main lines to conduct pipe inspection and jetflush drainage Assets, as needed (camera inspection completed on a five-year cycle; cleaning on 10-year cycle).
- → Mech 15 & 16 Storm and Sanitary Sump Pumps – Cyclical replacement of sump pump lift and control panels, as required.
- → Mech 17 & 18 Air Conditioning and Fan Coil Units – Cyclical replacement of components of the split AC system.

Fire Safety

- → Fire 02 Fire Detection and Alarm – Cyclical replacement of heat detectors, smoke detectors, and related modules.

Interior Finishes

- → Finish 02 & 03 Painted Concrete and Carpet Flooring – Consider renewing concrete and carpet flooring.

Sitework

- → Site 09 Irrigation Sprinklers – Replace components of irrigation sprinkler system, as required.

2022 to 2024

Building Enclosure

- → Encl 02 Hot Rubber Roof Membrane – Localized repairs of roof membrane, as required.
- → Encl 07 Exterior Concrete Coatings – Recoat exterior concrete surfaces.
- → Encl 10 Window Wall – Clean and repaint spandrel panels, as required.

→ Encl 26 & 27 Parkade Traffic Membrane and Demarcation Lines – Renew traffic membrane top-coat and demarcation lines.

2025 to 2028

Building Enclosure

→ Encl 02 Hot Rubber Roof Membrane – Replace roof membrane and associated components at the midrise building.

→ Encl 21 Urethane Coatings – Renew remaining urethane membranes from original construction.

Electrical

→ Elec 03 & 04 Exterior and Interior Light Fixtures – Consider replacing light fixtures, as required.

Mechanical

→ Mech 12 Domestic Water Distribution – Comprehensive third-party testing and inspection of the copper domestic water distribution system.

→ Mech 09 DHW Boilers – Replace DHW boilers.

→ Mech 21 Make-up Air Units – Rebuild or replace make-up air units.

→ Mech 22 Parkade Ventilation Fans – Rebuild or replace parkade exhaust fans.

→ Mech 24 Trash Compactor – Replace trash compactor.

Fire Safety

→ Fire 01 & 09 Fire Control Panels and Emergency Egress Equipment – Anticipate replacing or modernizing the fire alarm panels, field devices, and emergency egress equipment, as required due to technological obsolescence. The Strata Corporation should contact their fire safety maintenance contractor to confirm the age and dependability of the equipment and confirm upcoming renewal requirements.

→ Fire 04 Dry Sprinkler Valve Assembly – Rebuild dry sprinkler valves.

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 Second Depreciation Report Update will subsequently go through four basic steps before implementing the work: Assessment, Design, Documentation, and Quotation.

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

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

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

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

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

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

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

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

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
2018/2019 operating budget (excluding CRF contribution)	$ 425,451
→ 25% of the operating budget	$ 106,363
→ 10% of the operating budget	$ 42,545
2017/2018 CRF closing balance	$ 529,863
2018/2019 CRF Contribution	$ 56,395
Will the CRF closing balance exceed 25% of the operating budget at the end of the fiscal year?	Yes
Does the CRF contribution exceed 10% of the operating budget?	Yes

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

6.2 Alternative Funding Scenarios

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

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

→ ***Previous (2015/2016)***. The CRF allocation that was approved by the Owners at the time of the previous Depreciation Report Update.

- → ***Current (2018/2019)***. The CRF allocation that was approved by the Owners at the 2018/2019 AGM. The current allocation is also known as the Status Quo.
- → ***Alternative***. A non-linear funding scenario that begins with an increase in contribution to $115,000 with a 3% annual increase in subsequent years. The Alternative is just one of many possible scenarios for a new funding level in the next fiscal year.
- → ***Progressive***. This is the annual contribution that would need to be set aside, commencing in the first fiscal year of this Report, to ensure that the reserve balance is sufficient to eliminate or bring special levies over a 30-year period to a minimum. With "Progressive" reserve allocation, older Stratas with underfunded reserves may still require some special levies at some point in their Strategic Plan. The "Progressive" reserve contribution is an optimum target that a Strata Corporation could use as a guide.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	PREVIOUS (2015/2016)	CURRENT (2018/2019)	ALTERNATIVE	PROGRESSIVE RESERVE
Annual CRF allocation	$48,539	$56,395	Starting at $115,000 +	$369,000
Annual CRF increase	0 %	0 %	3 %	0 %
Percent of progressive reserve	13 %	15 %	31 % +	100 %
CRF contribution per unit of unit entitlement			Starting at	
Per month	$0.50	$0.58	$1.18 +	$3.80
Per year	$5.99	$6.96	$14.19 +	$45.54
CRF contribution per average strata lot			Starting at	
Per month	$37	$43	$88 +	$282
Per year	$445	$517	$1,055 +	$3,385
Approximate number of special levies (over 30 years)	13	11	5	0
Approximate value of special levies (over 30 years)	$9.3M	$9.0M	$5.5M	$0.0M
Minimum Closing Balance	$10,000			
Assumed Inflation Rate	2%			
Assumed Interest Rate	2%			

The following sections of the Report provide more detailed information about each funding scenario, 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 (2015/2016) Funding Scenario

The Previous Funding Scenario is based on a fixed annual CRF contribution approved by the Owners at the 2015/2016 AGM.

TABLE 6.3 PREVIOUS FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2019	$636,636	$48,539	$0	$12,733	$0	$0	$697,908
2020	$697,908	$48,539	$0	$13,958	$112,300	$0	$648,105
2021	$648,105	$48,539	$0	$12,962	$252,024	$0	$457,582
2022	$457,582	$48,539	$0	$9,152	$200,114	$0	$315,159
2023	$315,159	$48,539	$0	$6,303	$49,000	$0	$321,001
2024	$321,001	$48,539	$0	$6,420	$15,885	$0	$360,075
2025	$360,075	$48,539	$0	$7,201	$36,900	$0	$378,915
2026	$378,915	$48,539	$625,807	$7,578	$1,050,840	$0	$10,000
2027	$10,000	$48,539	$0	$200	$24,745	$0	$33,994
2028	$33,994	$48,539	$0	$680	$29,210	$0	$54,003

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.

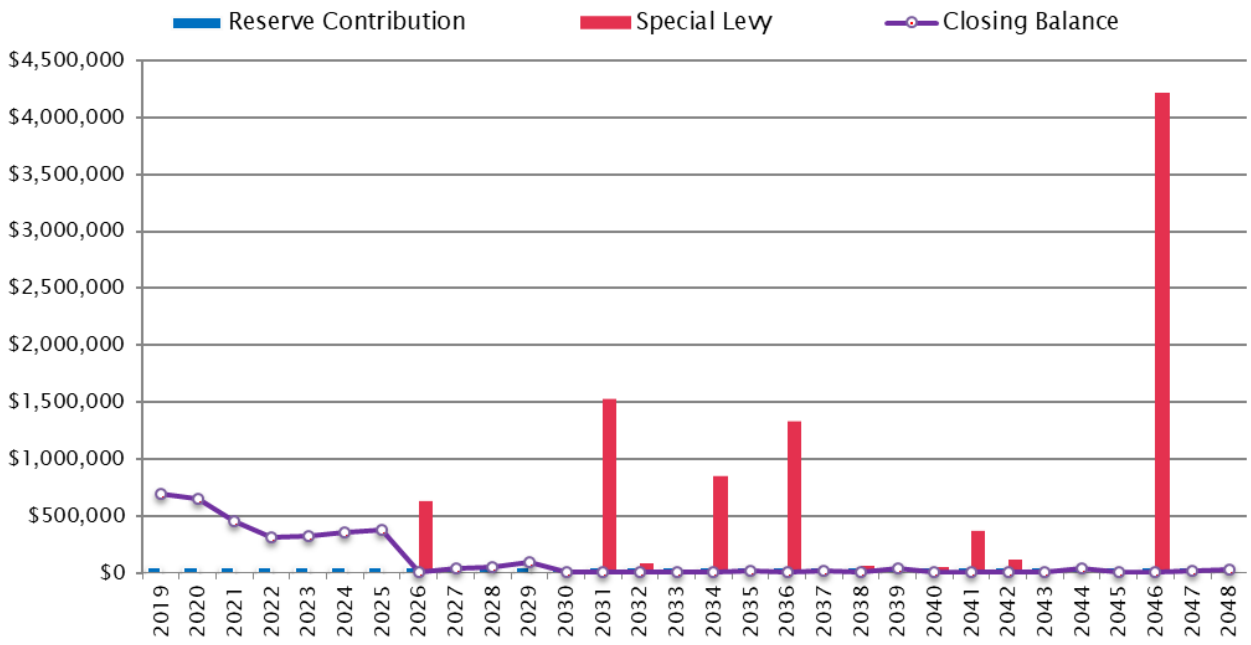

Figure 6.1 CRF balance, contribution, and special levies based on Previous funding.

6.4 Current (2018/2019) Funding Scenario

The Current Funding Scenario is based on the CRF contribution approved by the Owners at the 2018/2019 AGM. The scenario is based on a fixed annual CRF contribution (no increases).

TABLE 6.4 CURRENT FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2019	$636,636	$56,395	$0	$12,733	$0	$0	$705,764
2020	$705,764	$56,395	$0	$14,115	$112,300	$0	$663,974
2021	$663,974	$56,395	$0	$13,279	$252,024	$0	$481,625
2022	$481,625	$56,395	$0	$9,632	$200,114	$0	$347,538
2023	$347,538	$56,395	$0	$6,951	$49,000	$0	$361,884
2024	$361,884	$56,395	$0	$7,238	$15,885	$0	$409,631
2025	$409,631	$56,395	$0	$8,193	$36,900	$0	$437,319
2026	$437,319	$56,395	$558,380	$8,746	$1,050,840	$0	$10,000
2027	$10,000	$56,395	$0	$200	$24,745	$0	$41,850
2028	$41,850	$56,395	$0	$837	$29,210	$0	$69,872

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.

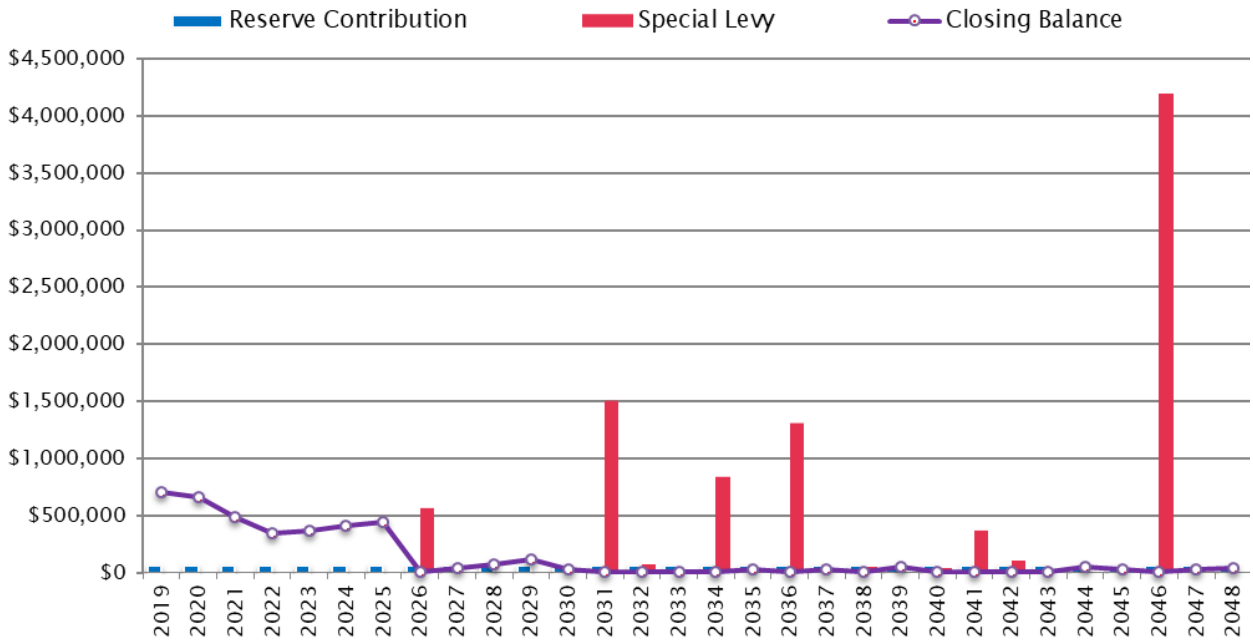

Figure 6.2 CRF balance, contribution, and special levies based on the Current funding.

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

The Alternative Funding Scenario is based on an initial annual CRF contribution of $115,000, with a 3% annual increase.

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
2019	$636,636	$115,000	$0	$12,733	$0	$0	$764,369
2020	$764,369	$118,450	$0	$15,287	$112,300	$0	$785,806
2021	$785,806	$122,003	$0	$15,716	$252,024	$0	$671,502
2022	$671,502	$125,664	$0	$13,430	$200,114	$0	$610,481
2023	$610,481	$129,433	$0	$12,210	$49,000	$0	$703,125
2024	$703,125	$133,317	$0	$14,062	$15,885	$0	$834,619
2025	$834,619	$137,316	$0	$16,692	$36,900	$0	$951,727
2026	$951,727	$141,435	$0	$19,035	$1,050,840	$0	$61,357
2027	$61,357	$145,679	$0	$1,227	$24,745	$0	$183,518
2028	$183,518	$150,049	$0	$3,670	$29,210	$0	$308,027

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

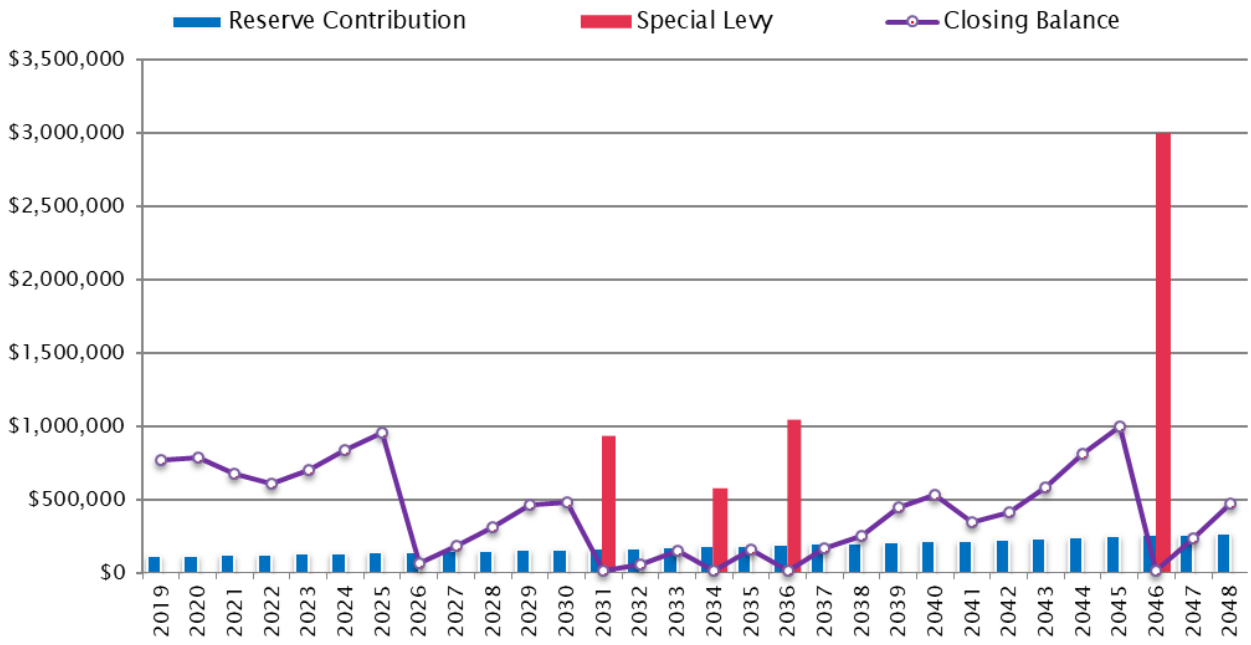

Figure 6.3 CRF balance, contribution, and special levies based on the Alternative funding.

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
2019	$636,636	$369,000	$0	$12,733	$0	$0	$1,018,369
2020	$1,018,369	$369,000	$0	$20,367	$112,300	$0	$1,295,436
2021	$1,295,436	$369,000	$0	$25,909	$252,024	$0	$1,438,321
2022	$1,438,321	$369,000	$0	$28,766	$200,114	$0	$1,635,973
2023	$1,635,973	$369,000	$0	$32,719	$49,000	$0	$1,988,693
2024	$1,988,693	$369,000	$0	$39,774	$15,885	$0	$2,381,582
2025	$2,381,582	$369,000	$0	$47,632	$36,900	$0	$2,761,313
2026	$2,761,313	$369,000	$0	$55,226	$1,050,840	$0	$2,134,700
2027	$2,134,700	$369,000	$0	$42,694	$24,745	$0	$2,521,649
2028	$2,521,649	$369,000	$0	$50,433	$29,210	$0	$2,911,872

The Progressive Reserve would offset smaller special levies. However, because of the timing of anticipated renewal 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.

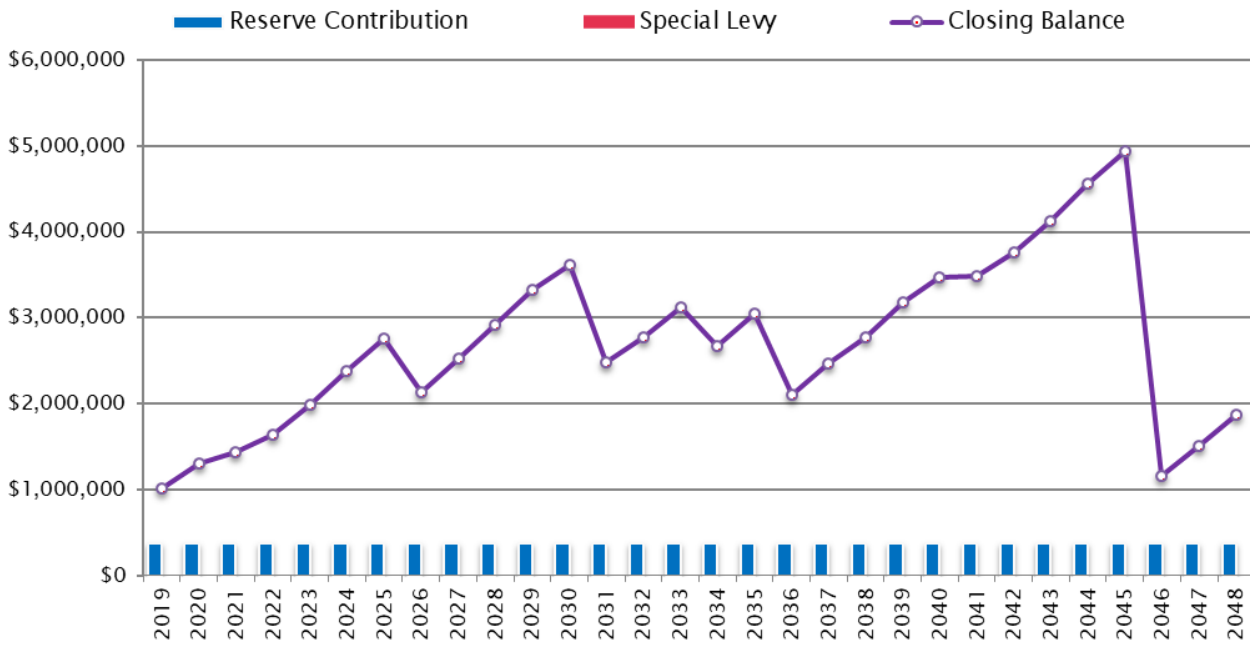

Figure 6.4 CRF balance, contribution, and special levies based on a Progressive Reserve calculation.

7 Next Steps

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

The Olive is a 13 year old complex (as of 2019), and some Assets, such as the roof membrane, exterior sealant, and parkade traffic membrane may require renewal in the next 10 years. It is recommended that the Owners commission a Building Enclosure Condition Assessment (BECA) to verify the condition of these Assets and refine the timing and scope of the renewals. Undertaking a design report is also suggested to refine the potential scope of work and renewal cost estimates.

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

Recommendations

- **Building Enclosure Condition Assessment:** Conduct a Condition Assessment of the building enclosure prior to or in conjunction with the next update to the Depreciation Report in three years' time. The condition assessment should assist in refining the renewals forecast.
- **Project Planning:** Review the information in Section 5.2, and begin planning for significant projects, including commissioning assessments, requesting information, and preparing construction budgets, well in advance of the forecasted date of renewal. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- **Major Maintenance Planning:** Review Appendix H for a detailed checklist of forecasted major maintenance activities and renewals on an annual basis.
- **Record keeping:** Continue to record significant renewals, repairs, and maintenance activities. These records will be used to improve the forecast at the time of the next Depreciation Report Update.
- **CRF Planning:** On a yearly basis, review and update the CRF funding strategy based on the estimated forecasts presented in this Report and update information obtained from assessments, investigations, and quotations.
- **Further Investigations:** Conduct additional condition assessments/investigations, as required, to refine the data and confirm assumptions.
- **Updates:** Plan for an update to the Depreciation Report in three years' time.

Yours truly,

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Appendix A

Glossary of Terms

Glossary

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

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

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

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

Classes of Cost Estimates – Until a project is actually constructed, a cost estimate represents the best judgement of the professional according to their experience and knowledge and the information available at the time. Its completeness and accuracy is influenced by many factors, including the project status and development stage. Estimates have a limited life and are subject to inflation and fluctuating market conditions. The precision of cost estimating is categorized into the following four classes and are as defined in guidelines prepared by the Association of Professional Engineers and Geoscientists of B.C. The percentage figures in parentheses refer to the level of precision or reliability of the cost estimates.

- → **Class A Estimate** (±10-15%): A detailed estimate based on quantity take-offs from final drawings and specifications. It is used to evaluate tenders or as a basis of cost control during day-labour construction.
- → **Class B Estimate** (±15-25%): An estimate prepared after site investigations and studies have been completed, and the major systems defined. It is based on a project brief and preliminary design. It is used for obtaining effective project approval and for budgetary control.
- → **Class C Estimate** (±25-40%): An estimate prepared with limited site information and based on probable conditions affecting the project. It represents the summation of all identifiable project elemental costs and is used for program planning, to establish a more specific definition of client needs and to obtain preliminary project approval.
- → **Class D Estimate** (±50%): A preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client's broad requirements. This overall cost estimate may be derived from lump sum or unit costs for a similar project. It may be used in developing long term capital plans and for preliminary discussion of proposed capital projects.

Closing Balance – Alternatively referred to as the Starting Balance. The balance of funds remaining in the reserve account at the end of a fiscal period (Fiscal year end, calendar year or study period). The Closing Balance becomes the Opening Balance for the subsequent fiscal period.

Contingency Costs – An allowance for unexpected or unforeseen costs that may impact monies required for projects to maintain or replace assets. (Not to be confused with costs of Renewal or Major Maintenance projects which are paid for out of the Reserve Fund (otherwise known the Contingency Reserve Fund.)

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

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

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

Funding Model – A mathematical model used to establish an appropriate funding level for sustaining the assets in a building. Running a number of scenarios out of the funding model using different parameters (such as inflation rates and interest rates) can serve as a sensitivity analysis to determine the financial impact of different funding levels.

Future Dollars – The projected cost of future asset renewal projects, which accounts for inflation and escalation factors.

Get Ahead Costs – These are costs associated with adaptation of the building to counter the forces of retirement associated with different forms of obsolescence, such as:

- → Functional obsolescence
- → Legal obsolescence
- → Style obsolescence

Some of the costs in this category are discretionary spending that result in either a change or an improvement to the existing strata building. This category includes projects to alter the physical plant for changes in use, codes and standards. Some typical examples include:

- → Energy retrofits
- → Code retrofits
- → Hazardous material abatement
- → Barrier free access retrofits
- → Seismic Upgrades

Keep-up Costs – The monies required for renewal projects as each asset reaches the end of its useful service life. If an asset is not replaced at the end of its useful service life

and is kept in operation, through targeted repairs, then these costs get reclassified into the "catch-up" category.

Major Maintenance – Any maintenance work for common expenses that usually occurs less often than once a year or that do not usually occur. Major maintenance provides for the preservation of assets to ensure that they achieve their full intended service life.

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

Opening Balance – Alternatively referred to as the Starting Balance. The amount of money in an account at the beginning of a fiscal period. Opening balances are derived from the balance sheet and are used in cash flow calculations in the Funding Model.

Operating Costs – Frequently recurring expenses that arise during the course of a single fiscal year and are paid from the operating budget as opposed to the Reserve Fund.

Operational Plan/Horizon (1 year) – The annual operating period encompasses one fiscal cycle (12 months). The Reserve Contribution in the operating budget should reflect the majority of the projects in the Tactical Plan (5 years) and ideally should also contemplate elements of the Strategic Plan (30 years).

Percent Funded – The ratio, at a particular point of time (typically the beginning of the fiscal year), of the actual or projected Reserve Fund balance to the accrued Reserve Fund balance, expressed as a percentage. For example: If the 100% funded balance is $100,000 and there is $76,000 in the Reserve Fund, the Reserve Fund is 76% funded.

Since funds can typically be allocated from one asset to another with ease, this parameter has no real meaning on an individual reserve component basis. The purpose of this parameter is to identify the relative strength or weakness of the entire Reserve Fund at a particular point in time. The value of this parameter is to provide a more stable measure of Reserve Fund strength, since cash in reserve may mean very different things to different governing bodies or Owner groups.

- → **Poor Level.** When the Percent Funded falls to 0% - 30%, the current reserves may be considered to be at a 'poor' level. At this funding level, Special Levies are common. This is also commonly known as the Unfunded or Special Levy Model. The Owner Group does not have a Reserve Fund balance that will cover expected renewal costs and the only recourse is to raise funds by Special Levies to cover those costs when they become due.
- → **Fair Level.** If the Percent Funded level is 31 to 70% then the current reserve may be considered to be in a mid-range level.
- → **Good Level.** If the Percent Funded level is 70% or higher this is likely to be considered 'strong' because cash flow problems are rare.

Renewal – The replacement of an Asset as it reaches the end of its useful service life.

Renewal Cost – The cost required to replace an Asset, which is paid from the Reserve Fund, Special Levy or combination thereof.

Reserve Contribution – See Annual Contribution.

Reserve Fund – Also known as the Contingency Reserve Fund (CRF). The account in which the accumulated Annual Contributions are deposited and from which costs are withdrawn for Renewal projects and Major Maintenance projects.

Reserve Income – The interest earned from investing the money deposited in the Reserve Fund.

Reserve Study – Also referred to as a Reserve Fund Study or Depreciation Report in BC.

- → A long-range financial planning tool that identifies the current status of the Owners' Reserve Fund and recommends a stable and equitable funding plan to offset the costs of anticipated future major expenditures associated with replacement of the assets and major maintenance.
- → The purpose of the Reserve Study is to provide a plan for appropriate funding for renewal and major maintenance work.
- → While Reserve Studies provide analysis of the timing, costs and funding for renewal projects, they should ideally be supported by a maintenance plan that assists the Owners to plan for maintenance activities so that assets achieve their predicted service lives.

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

Special Levy – Also referred to as a "Special Assessment". A financial levy to be paid by the Owner group to finance large-scale projects for major maintenance, repairs, renewal and rehabilitation of an asset, which occur as result of a shortfall in available funds and requires special decision making and approval procedures. A Reserve Study contains funding scenarios that assist the Owners in long-range financial planning.

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

Strategic Horizon – The longest of the three planning horizons, which typically covers the full study period of 30 years and identifies the long-term needs of the assets.

Style Obsolescence – When an asset is no longer desirable because it has fallen out of popular fashion, its style is obsolete. Some assets, particularly interior furnishings, reflect fashion cycles and can become out-dated.

Tactical Plan/Horizon – A period of planning for asset Renewal projects and Major Maintenance projects, which typically extends five years from the current year.

Appendix B

Asset Inventory

Olive
Asset Inventory

Enclosure

Roofs & Decks

Encl 01 - Metal Roofs

Location

Sloped townhouse roofs.

Description

Pre-finished standing seam metal roof panels.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Encl 02 - Hot Rubber Roof Membrane

Location

Main roof of the midrise building.

Description

Liquid-applied, fully reinforced membrane overlaid with combination of drainage mat, insulation, and gravel ballast. Localized repairs were completed in 2017. A separate component has been created that makes allowances for additional potential localized repairs, as identified in the 2015 Localized Building Enclosure Review Report.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	19
Next Renewal Year:	2026

Encl 03 - 2-Ply SBS Conventional Roof

Location

Roof of mechanical enclosure on north roof.

Description

Two plies of manufactured modified bitumen sheet membrane. The membrane is exposed and the top ply is protected by embedded granules and cap flashings with standing seams.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Encl 04 - Podium & Deck Waterproofing

Location

Courtyard at level 2; all decks at east and west elevations of the midrise building; and at townhouse roof decks. Also at landscaped areas in front of the townhouse units.

Description

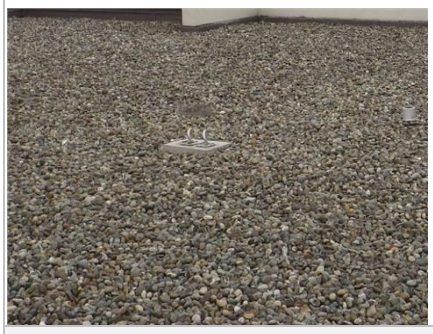
Liquid-applied, fully reinforced membrane overlaid with combination of drainage mat, insulation, pavers and/or landscaping overburden.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Fall Protection

Encl 05 - Fall Protection Equipment



Location

Main roof of the midrise building.

Description

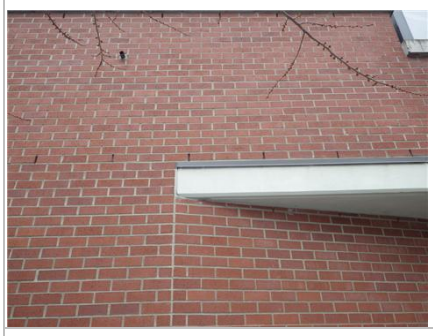
Safety anchoring system for work on exterior walls and roofs.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Walls

Encl 06 - Brick Masonry Walls



Location

Each level on all elevations of the main building and the townhouse buildings.

Description

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

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Encl 07 - Exterior Concrete Coatings

Location

Exterior face of parapet walls, base of at-grade and level 2 foundations, interior and exterior of stairwell at southwest elevation, mechanical enclosure on north roof.

Description

Cast-in-place concrete walls with an exterior coating finish.

Information

Service Life:	10
Installed Year:	2006
Chronological Age:	14
Effective Age:	8
Next Renewal Year:	2022

Windows

Encl 08 - Glass Block Windows

Location

South elevation at ground level.

Description

Glass block windows with a metal angle frame.

Information

Service Life:	35
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2041

Encl 09 - Windows

Location

Throughout the midrise building.

Description

Aluminum framed, thermally broken, with sealed insulated glazing units manufactured by Allan Windows. Some windows have casement or awning type operable vents.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Encl 10 - Window Wall

Location

All elevations of the midrise building and west elevation of the townhouses.

Description

Aluminum framed, thermally broken, with insulated glazing units (IGUs). Some windows have casement or awning type operable vents. Metal spandrel panels are located at concrete slab levels.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Encl 11 - Storefront Windows [Remainder] [PLACEHOLDER]

Location

North, east and south elevations at ground level.

Description

Aluminum framed, thermally broken, with insulated glazing units manufactured by US Aluminum. Information from Building Envelope Maintenance Manual prepared by Spratt Emanuel Engineering Ltd.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Doors

Encl 12 - Steel Rollup Door

Location

Garbage room in parking garage on P2 level across from parking stall 24.

Description

Pre-finished steel rollup door.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 13 - Aluminum Frame Swing Doors

Location

Balconies and decks throughout the midrise building and townhouses.

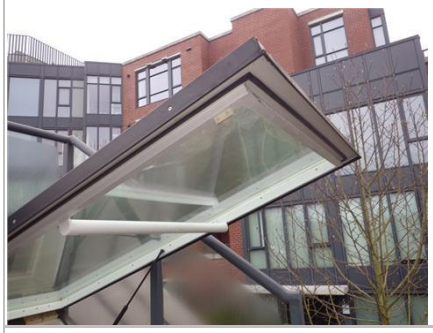
Description

Aluminum framed doors with tempered glazing units for pedestrian access into building.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 14 - Roof Access Hatch



Location

Townhouse roof decks.

Description

Awning type deck access hatch with flat panel insulated glazing units and aluminum frames.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Encl 15 - Wood Swing Doors

Location

Townhouse entrances.

Description

Exterior wood-framed swing doors for access to townhouse units.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 16 - Aluminum Sliding Doors

Location

Balconies and decks on east, south and west elevations, levels 2 to 6 of the midrise building.

Description

Aluminum framed sliding door with insulated glazing units. A separate component has been added to this asset that makes allowances for the localized replacement of IGUs, as required.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 17 - Metal Clad Service & Entry Doors

Location

Service access doors to commercial space, exterior exit stairs, exit doors to courtyard, and irrigation room.

Description

Exterior metal doors in pressed-steel frames.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 18 - Lobby Door Assembly

Location

Entrance at west elevation, ground level.

Description

Commercial glazing system with closers and electric strike. 100A series Alumicor, narrow stile, double glazed.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 19 - Storefront Doors [Remainder] [PLACEHOLDER]

Location

At-grade along north, south and east elevations.

Description

Main pedestrian point of entry to the building comprised of storefront aluminum frame with insulated glazing units.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Balconies

Encl 20 - Aluminum & Glass Privacy Screens

Location

Between balconies and decks on all elevations of the midrise building and townhouses.

Description

Etched glass and metal frame privacy screens.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Encl 21 - Balcony and Eyebrow Urethane Membrane

Location

Balconies and eyebrows on north, east and west elevations, levels 2 to 6 of the midrise building. Also at the townhouse balconies and eyebrows.

Description

Liquid applied urethane membrane applied to concrete surfaces. Top coat on balconies is seeded with sand to render non-slip, traffic-bearing surface. In 2018, all eyebrow membranes renewed and localized balcony membranes renewed.

Information

Service Life:	20
Installed Year:	2018
Chronological Age:	2
Effective Age:	2
Next Renewal Year:	2038

Encl 22 - Guardrails

Location

Balcony and deck perimeters.

Description

Top and face mounted, aluminum framed guardrails with glass infill panels.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Canopies

Encl 23 - Fabric Awnings [Remainder] [PLACEHOLDER]

Location

Above the ground floor storefront windows along east elevation of the midrise building.

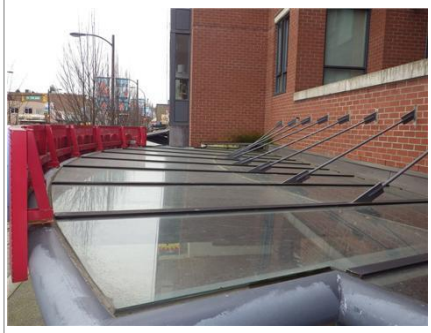
Description

Fabric over painted steel frames.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Encl 24 - Metal & Glass Canopies



Location

Above lobby entrances at east and west elevations, above storefront windows at south elevation, above concrete stairwell at southwest elevation, above common courtyard exit doors on level 2 and above decks on level 5 penthouse units.

Description

Metal framed canopy with glass panels. Glass is 12 mm clear tempered with laminated interlayer. Metal frames repainted in 2019.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

At and Below Grade

Encl 25 - At-grade Waterproofing

Location

Surrounding building at-grade on all elevations.

Description

Waterproof membrane on concrete walls, protected by soil.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Parking Garage

Encl 26 - Parkade Traffic Membrane

Location

Parkade levels P1 and P2, ending at parking stall R-66.

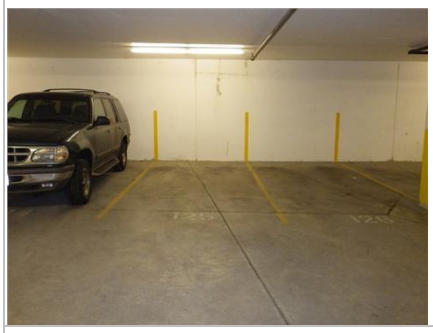
Description

Urethane traffic coating comprised of base coat, intermediate coat and top coat with traffic markings. Separate components have been created for this asset that make allowances for the repair and renewal of the membrane in high traffic locations. The next event year above refers to the complete replacement of the membrane.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Encl 27 - Parkade Traffic Demarcation Lines



Location

Parkade levels P2 to P3, beginning at parking stall R-66.

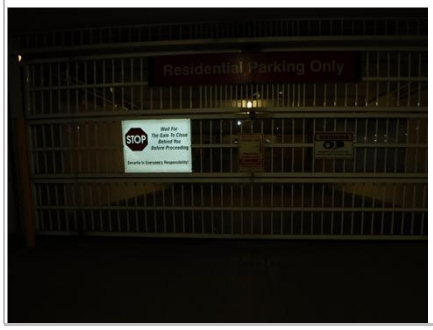
Description

Painted traffic markings in the parkade.

Information

Service Life:	10
Installed Year:	2006
Chronological Age:	14
Effective Age:	8
Next Renewal Year:	2022

Encl 28 - Open-grid Overhead Parkade Gate



Location

Residential parkade entrance.

Description

Pre-finished metal grid overhead gate for underground parkade.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

General & Inspections

Encl 29 - Exterior Sealant

Location

Interfaces and service penetrations at the exterior walls, roofs, windows, doors and other building enclosure locations.

Description

A flexible material used to seal a gap between two surfaces to prevent leakage of water and air. Localized sealant renewal occurred in conjunction with membrane renewal in 2018. Sealant replacement is being considered for 2020.

Information

Service Life:	10
Installed Year:	2006
Chronological Age:	14
Effective Age:	10
Next Renewal Year:	2020

Encl 30 - General & Inspections

Location

All elevations and all levels of the building.

Description

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

Information

Service Life:	75
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2081

Electrical

Power Supply

Elec 01 - Unit Substation

Location

P1 main electrical room.

Description

Siemens 1750 KVA, 12.47KV/120/208V, 3 phase, dry type transformer; 5000A main breaker and 80A load break switch contained within unit substation. Information from Olive electrical drawings. Electrical room cleaned in 2017 and infrared thermography completed in 2018.

Information

Service Life:	35
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2041

Distribution

Elec 02 - Electrical Distribution

Location

P1 main electrical room.

Description

Siemens 6000A 120/208V, 3 phase switchgear unit; downstream panelboards, breakers, switches and wiring to mechanical, lighting and power loads throughout the building and to individual suites through BC Hydro owned metering devices. Information from Olive electrical drawings.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Light Fixtures

Elec 03 - Exterior Light Fixtures

Location

Mounted to exterior walls at balconies and soffits.

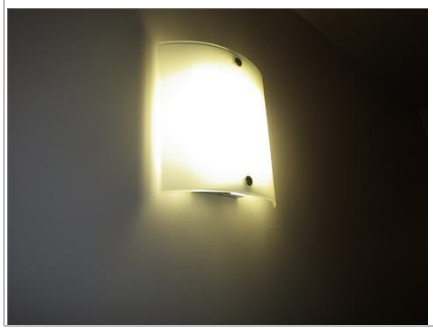
Description

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

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Elec 04 - Interior Lighting Components



Location

All common areas.

Description

A variety of fixture and lamp types, including T8 fluorescents, compact fluorescents, metal halides, pot lights, uplighting and wall sconces.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Security

Elec 05 - Enterphone System

Location

Beside west elevation lobby door at ground level.

Description

Surface mounted telephone entry panels with associated key pads, display panels.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Elec 06 - Proximity Access Control

Location

Mounted in lobbies, elevator cabs and vestibules; outside storage rooms and equipment service rooms; beside exterior perimeter doors and security gates.

Description

Keyscan door control panel, network communication boards, backup batteries, proxpoint mini readers, RTE board, electric strikes, conduit, cable and connectors.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Elec 07 - Security Surveillance

Location

Mounted strategically throughout parking garage and lobby. Multiplxor in telephone room adjacent to parking stall 52 on P1 level.

Description

Cameras, multiplexer, monitors and media to deter and track activities at perimeter access points and interior circulation routes. Replaced in 2017.

Information

Service Life:	14
Installed Year:	2017
Chronological Age:	3
Effective Age:	3
Next Renewal Year:	2031

Mechanical

Controls and End Devices

Mech 01 - Controls - Direct Digital

Location

Mechanical room adjacent to parking stall R-79 on P2 level.

Description

Honeywell T775 panels to control heating, air-conditioning, domestic hot water system and boilers etc.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 02 - Heat Tracing

Location

Above main entrance ramp to parking garage.

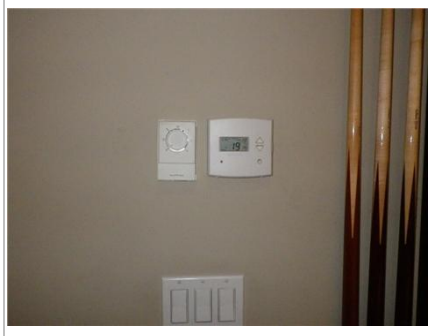
Description

Digitrace 910 series heat trace controller for sprinkler system and self regulating heater cable with parallel circuit heater strip and outer thermoplastic elastomer jacket for pipe freeze protection on fire sprinkler system.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 03 - HVAC Instrumentation



Location

Common areas and service rooms.

Description

Broan and Norton line voltage thermostats, Ther-in-52A programmable thermostats, flow gauges, thermometers, metering equipment, gauges, and other field devices to monitor and regulate pressure and temperature in the HVAC and plumbing distribution systems.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 04 - Parking Garage Gas Detection

Location

Mounted to columns throughout parking garage.

Description

Vulcain VA201T series integral solid state electronic sensing devices for detection of dangerous gases, such as carbon monoxide (CO), propane and gasoline, produced by vehicles and to activate the exhaust fans accordingly. Replaced in 2018.

Information

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

Plumbing & Drainage

Mech 05 - Valves & Cross Connection

Location

Mechanical room adjacent to parking stall R-12 on P2 level.

Description

Various types and sizes of valves, including pressure reducing valves, including backflow preventers, isolation valves and check valves to regulate the flow of water through domestic systems.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Mech 06 - Domestic Hot Water - Expansion Tanks

Location

Mechanical room adjacent to parking stall R-79 on P2 level.

Description

Floor mounted diaphragm expansion tank on domestic water system. Replaced in 2017.

Information

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

Mech 07 - Fixtures - Taps & Sinks

Location

Olive room, janitor's room, parking garage, around exterior at-grade.

Description

Kindred kitchen skin, Eurolux hand basin, Fiat janitor sink, hose bibs and other plumbing supply fixtures.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Mech 08 - Fixtures - Toilet

Location

Olive room.

Description

Gerber floor mounted toilet.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Mech 09 - DHW Boilers

Location

Mechanical room adjacent to parking stall R-79 on P2 level.

Description

RBI 8900 series, natural gas fired, 630,000 BTU input; circulation pumps connected to series of DHW storage tanks.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Mech 10 - DHW Storage Tanks

Location

Mechanical room adjacent to parking stall R-79 on P2 level.

Description

Rheem Ruud glass, 115 US gallon tank, connected to domestic boilers.

Information

Service Life:	10
Installed Year:	2006
Chronological Age:	14
Effective Age:	9
Next Renewal Year:	2021

Mech 11 - Domestic Circulation and Recirculation Pumps

Location

Mechanical room adjacent to parking stall R-79 on P2 level.

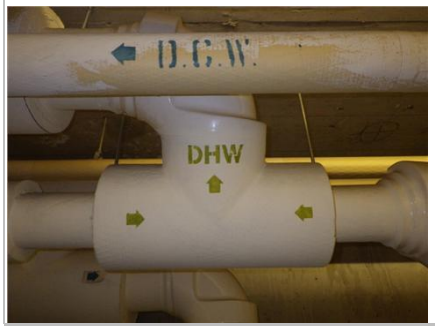
Description

B&G 1/3 horsepower, hot water circulation and recirculation pumps. One unit replaced in 2018.

Information

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

Mech 12 - Domestic Water Distribution



Location

Throughout building.

Description

Mixture of copper for vertical system and PEX piping within the suites. Information from Olive mechanical drawings.

Information

Service Life:	28
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2034

Mech 13 - Sanitary Drainage Collection

Location

Throughout building.

Description

P-traps, typically cast iron piping with mechanical joints. Connected to waste fixtures.

Information

Service Life:	50
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2056

Mech 14 - Storm Drainage Collection

Location

Roofs, decks, balconies, at grade perimeter.

Description

Roof drains, parking drains, trench drains, catch basins and associated piping systems for rainwater runoff and any other clear water drainage such as condensate.

Information

Service Life:	50
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2056

Mech 15 - Sump Pumps - Storm

Location

Across from parking stall R-130 on P3 level.

Description

Northwest duplex, 1.5 horsepower, high head vortex submersible storm sump pumps. Plad duplex control.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 16 - Sump Pumps - Sanitary

Location

Storage room H, adjacent to parking stall R-108 on P3 level.

Description

Northwest, Dupelx, 1 HP, sewage sump pumps and control panels for sanitary. Replaced in 2016.

Information

Service Life:	15
Installed Year:	2016
Chronological Age:	4
Effective Age:	4
Next Renewal Year:	2031

Heating & Cooling

Mech 17 - Air Conditioning

Location

Above parking stall R-86 on P2 level and adjacent to parking stall C-1 on P1 level.

Description

Trane condensing units, TWE060A3, and associated horizontal fan coil units for air conditioning in P1 electrical room. Trane air-to-air heat pumps, TWA036A3, and associated horizontal fan coil units.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 18 - Fan Coil Units

Location

Wall adjacent parking stall C-87 on P1 level.

Description

Condensing units and ceiling suspended fan coil units on a ducted system for air conditioning.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Mech 19 - Electric Baseboards

Location

Lobby, storage rooms, equipment service rooms.

Description

Chromalox, standard grade, wall mounted, electric convector baseboard heaters with electrical fins for localized radiant space heating and integral thermostat control. Information from Olive electrical drawings.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Ventilation and Air-conditioning

Mech 20 - General Exhaust Fans

Location

Olive room washroom, equipment service rooms, storage rooms, garbage room.

Description

Broan, Dehli, Penn, Reversomatic, Tjernlund and Circul-aire, propeller, direct drive ceiling fan, belt drive centrifugal inline blower and stairwell pressurization fans. Information from Mechanical drawings.

Information

Service Life:	12
Installed Year:	2006
Chronological Age:	14
Effective Age:	11
Next Renewal Year:	2021

Mech 21 - Make up Air Units

Location

North and south main roofs.

Description

Engineered Air, 600,000 and 400,000 BTU input, supply capacities 8380 and 5400 CFM, belt-driven, centrifugal fans to supply tempered fresh air and make-up air to the interior of the building.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Mech 22 - Parkade Ventilation Fans

Location

Throughout parking garage.

Description

Bailey, 2 speed, ceiling hung, belt driven, tube axial, supply fans and exhaust fans.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Mech 23 - Outdoor Air Handler - Air Conditioning - Gas Heat [Remainder] [PLACEHOLDER]

Location

North roof of the midrise building.

Description

Intellipak outdoor packaged rooftop gas-fired air-conditioning unit. Centrifugal fan with direct expansion cooling to supply conditioned ventilation air to the commercial space.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Other

Mech 24 - Trash Compactor

Location

Garbage room adjacent to parking stall 24 on P2 level.

Description

Universal Handling Equipment Company, horizontal hydraulic ram compactor.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Mech 25 - Trash Chute

Location

Garbage room at each floor.

Description

24" diameter, minimum 16 gauge sheet metal enclosure to discharge solid waste to garbage compactor, enclosed within garbage rooms with 1 hour fire rated doors and 2 hour fire rated steel stud shaft wall.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Mech 26 - Overhead Gate Motors

Location

Residential parking garage entrance.

Description

Elite 1/2 HP AC motor and Liftmaster electric operator.

Information

Service Life:	7
Installed Year:	2014
Chronological Age:	6
Effective Age:	6
Next Renewal Year:	2021

Elevator

Traction

Elev 01 - North and South Tower Basement Traction Elevators

Location

Elevator machine rooms at basement level.

Description

Two (2) geared basement traction elevators; Virginia programmable logic and relay controls; variable voltage variable frequency drive systems; Hollister Whitney geared machines; 2,500 lbs.; 300 fpm rated speed.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Hydraulic

Elev 02 - Podium Hydraulic Elevator [PLACEHOLDER]

Location

Elevator machine room at basement.

Description

Roped hydraulic passenger elevator; RAM Manufacturing Ltd. Programmable logic and Relay control system; ELMO submersed pump unit; EECO control valve; 2,500 lbs. capacity; 100 fpm rated speed.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Car Interiors

Elev 03 - North and South Tower Elevator Cabs and Hoistways

Location

Elevator cab interiors, fixtures, and hoistways.

Description

Single speed side opening door; one (1) car operating panel with stainless steel pushbuttons; infrared light curtain door protection; E.C.I door operators; stainless steel door panels, frame, header, reveals and ceiling; plastic laminate wall panels; tile flooring, stainless steel tubular handrails on all non-access walls, hands-free voice communication device, seismic provisions.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Elev 04 - Podium Elevator Cab and Hoistway [PLACEHOLDER]

Location

Elevator cab interior, fixture, and hoistway.

Description

Single speed side opening door; one (1) car operating panel with stainless steel pushbuttons; infrared light curtain door protection; Rear opening; E.C.I door operators; stainless steel door panels, frame, header, reveals and ceiling; plastic laminate wall panels; tile flooring, stainless steel tubular handrails on all non-access walls, hands-free voice communication device.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Fire Safety

Controls

Fire 01 - Fire Control Panels

Location

Adjacent to lobby entrance at west elevation.

Description

Edwards quick start conventional, multi-zone, solid state microprocessor and supervised unit with graphic annunciator and LCD display. A fire panel was replaced in 2012.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Detection

Fire 02 - Fire Detection & Alarm

Location

Strategically mounted to walls and ceiling throughout building.

Description

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

Information

Service Life:	10
Installed Year:	2006
Chronological Age:	14
Effective Age:	10
Next Renewal Year:	2020

Suppression

Fire 03 - Dry Sprinkler Compressor

Location

Mechanical room adjacent to parking stall R-12 on P2 level.

Description

Swan compressor to maintain the pressure of air in the dry fire sprinkler lines. Repaired in 2017.

Information

Service Life:	14
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2020

Fire 04 - Sprinkler Valve Assembly - Dry

Location

Mechanical room adjacent to parking stall 12 on P2 level.

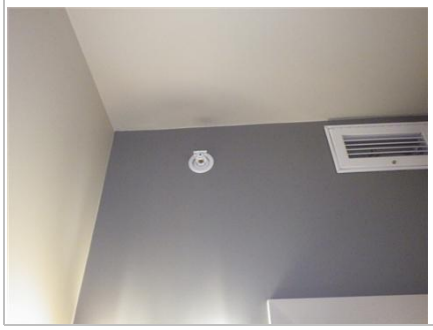
Description

Tyco 4" dry sprinkler valves, upright, pendant and sidewall sprinkler heads, steel piping.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Fire 05 - Sprinklers & Standpipe - Wet



Location

Throughout building.

Description

Quick response upright, pendant and sidewall sprinkler heads, distribution lines, firehouse valves. Information from Olive mechanical drawings.

Information

Service Life:	100
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2106

Fire 06 - Portable Fire Extinguishers

Location

Strategically mounted to walls throughout building.

Description

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

Information

Service Life:	24
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2030

Fire 07 - Sprinkler System - Dry

Location

Throughout the parkade.

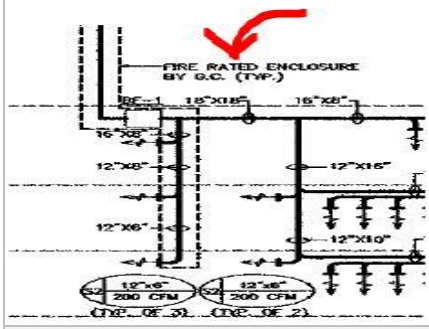
Description

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

Information

Service Life:	100
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2106

Fire 08 - Pressurization/Smoke Control



Location

P1 of the parkade and on the ground floor.

Description

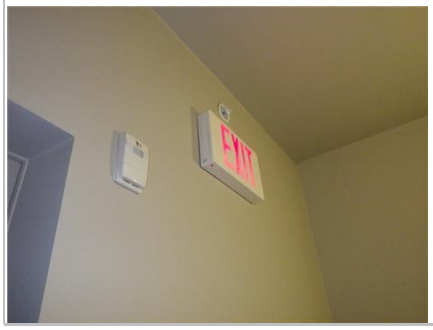
Smoke pressurization fans (no picture available).

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Egress

Fire 09 - Emergency Egress Equipment



Location

Strategically mounted to walls and ceilings throughout building.

Description

Edwards sealed unit battery packs; economy plastic exit signs.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Interior Finishes

Floors

Finish 01 - Tile Flooring

Location

Main lobby, elevator vestibules, and Olive room.

Description

Tile flooring on substrate with door thresholds and adjoining floor thresholds.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Finish 02 - Painted Concrete Flooring

Location

Stairwells, storage rooms, garbage chute rooms and equipment service rooms.

Description

Exposed concrete floors, painted in some locations to provide a cleaner finish. This flooring asset does not include the foundation, which is included with the structural system.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Finish 03 - Carpet Flooring

Location

Hallways and the common room.

Description

Synthetic, low level loop, textile floor covering laid on cushion over concrete substrate with seam binding and door thresholds.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Walls

Finish 04 - Interior Painting

Location

Main lobby, hallways and stairwells.

Description

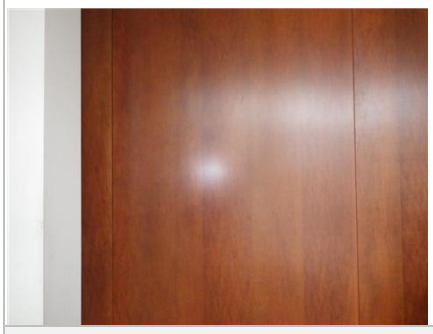
Primers and multiple pigmented coating finishes applied to interior gypsum wallboard and wood trim details. The Strata Corporation has taken a phased approach to repainting the interior areas. The installation year of 2013 represents the

Information

Service Life:	10
Installed Year:	2013
Chronological Age:	7
Effective Age:	7
Next Renewal Year:	2023

average installation age.

Finish 05 - Wood Paneling



Location

Lobby, opposite main entrance and above mailboxes.

Description

Wood panel finishing attached to underlying gypsum wallboard.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Architectural Woodwork

Finish 06 - Carpentry & Millwork

Location

Common room kitchenette and lobby of the midrise building.

Description

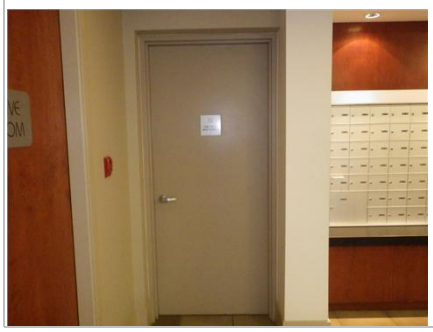
Wood handrails, shelves, door millwork, and the cabinets.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Furnishings

Finish 07 - Interior Swing Doors



Location

All common area and interior service doors throughout the building.

Description

Variety of in-swing and out swing solid wood core and hollow metal fire seperation swing doors hung in framed openings. Exterior doors are considered separately as part of the building enclosure system.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Amenities

Window Coverings

Amen 01 - Window Shades & Draperies

Location

Common room of midrise building.

Description

Window blinds consisting of head rails, lift cords, control cords.

Information

Service Life:	25
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2031

Furnishings

Amen 02 - Furniture & Accessories

Location

Lobby and common room of midrise building.

Description

Wood, fabric and metal furniture, paintings, ornaments, and other miscellaneous accessories. Outdoor furnishings are included separately and insuite furnishings are included separately.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Amen 03 - Central Mailboxes

Location

Lobby of the midrise building.

Description

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

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Amen 04 - Public Signage

Location

Various locations throughout the complex.

Description

Variety of permanently displayed information placardes in the public areas of the building, including plastic laminate.

Information

Service Life:	35
Installed Year:	2012
Chronological Age:	8
Effective Age:	8
Next Renewal Year:	2047

Suite

Amen 05 - Audio Visual Equipment

Location
Common room.

Description
Toshiba flatscreen TV.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Amen 06 - Pool Table

Location
Common room.

Description
Special Anniversary 8', Canada Billiard pool table, protective cover, pool cues and other miscellaneous accessories.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Amen 07 - Domestic Appliances

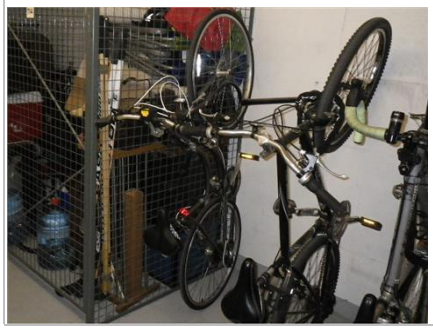
Location
Common room.

Description
Silhouette refrigerator.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Amen 08 - Bicycle Racks



Location
Adjacent to west lobby door and locker room in parkade.

Description
Floor and wall mounted vertical steel bicycle racks.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Amen 09 - Metal Storage Lockers

Location

In various locations throughout parkade.

Description

Metal framed and mesh general purpose storage lockers with swing door hardware.

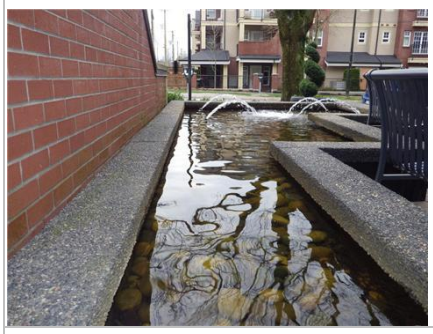
Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Sitework

Hard Landscaping

Site 01 - Water Feature



Location

Adjacent lobby entrance at west elevation on ground level.

Description

Aqua Spa Pack system and controls, ASP 9000, submersible recirculating pump, Hayward cartridge filter, pond liner, with compacted sub-grade, distribution piping, valves and controls.

Information

Service Life:	20
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2026

Site 02 - Playground Equipment

Location

Courtyard on level 2.

Description

Plastic playground equipment.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Site 03 - Concrete Paving

Location

Parkade entrance at ground level, south elevation.

Description

Poured in place concrete paving and compacted sub-grade.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Site 04 - Metal Fencing & Guardrails

Location

All elevations at level 2 courtyard and in the parkade.

Description

Top, side and face mounted aluminum framed guardrails with aluminum pickets.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Site 05 - Metal Screen Fencing

Location

Surrounding mechanical equipment at the southwest and northeast corners of the roof of the midrise building.

Description

Painted metal screen fencing with gate and decorative architectural structure.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2046

Site 06 - Planter Retaining Walls

Location

Ground level in front of townhouse units and at the level two courtyard.

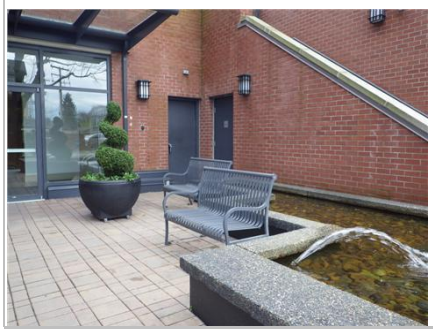
Description

Cast-in-place concrete retaining wall is not deemed to be a renewable asset.

Information

Service Life:	45
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2051

Site 07 - Site Furniture



Location

Adjacent to the west lobby entrance and level 2 courtyard.

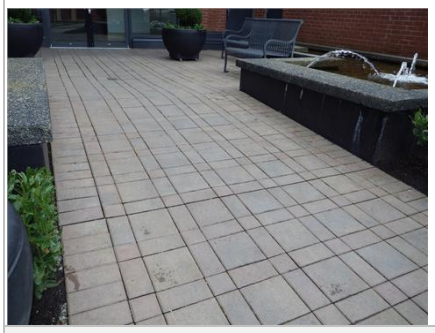
Description

Metal benches.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Site 08 - Unit Paving



Location

At-grade on west elevation at lobby entrance and level 2 courtyard.

Description

Concrete unit pavers.

Information

Service Life:	40
Installed Year:	2006
Chronological Age:	14
Effective Age:	24
Next Renewal Year:	2036

Soft Landscaping

Site 09 - Irrigation Sprinklers

Location

Mechanical room adjacent to lobby.

Description

Rainbird ESP modular controller and network of PVC pipes, valves, and irrigation heads buried amongst the exterior 'soft' landscaping.

Information

Service Life:	15
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2021

Site 10 - Soft Landscaping

Location

Along west elevation.

Description

Various forms of plant material, ground cover, shrubs, plants and trees. Also considered are growing medium such as soil.

Information

Service Life:	30
Installed Year:	2006
Chronological Age:	14
Effective Age:	14
Next Renewal Year:	2036

Appendix C

Asset Service Life Summary

RDH BUILDING SCIENCE

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

Making Buildings Better™

Olive

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Encl 01	Metal Roofs	14	26
Encl 02	Hot Rubber Roof Membrane	14	6
Encl 03	2-Ply SBS Conventional Roof	14	6
Encl 04	Podium & Deck Waterproofing	14	16
Encl 05	Fall Protection Equipment	14	26
Encl 06	Brick Masonry Walls	14	26
Encl 07	Exterior Concrete Coatings	14	2
Encl 08	Glass Block Windows	14	21
Encl 09	Windows	14	26
Encl 10	Window Wall	14	26
Encl 11	Storefront Windows [Remainder] [PLACEHOLDER]	14	26
Encl 12	Steel Rollup Door	14	11
Encl 13	Aluminum Frame Swing Doors	14	11
Encl 14	Roof Access Hatch	14	6
Encl 15	Wood Swing Doors	14	11
Encl 16	Aluminum Sliding Doors	14	11
Encl 17	Metal Clad Service & Entry Doors	14	11
Encl 18	Lobby Door Assembly	14	11
Encl 19	Storefront Doors [Remainder] [PLACEHOLDER]	14	11
Encl 20	Aluminum & Glass Privacy Screens	14	26
Encl 21	Balcony and Eyebrow Urethane Membrane	2	18
Encl 22	Guardrails	14	16
Encl 23	Fabric Awnings [Remainder] [PLACEHOLDER]	14	6
Encl 24	Metal & Glass Canopies	14	26
Encl 25	At-grade Waterproofing	14	26
Encl 26	Parkade Traffic Membrane	14	11
Encl 27	Parkade Traffic Demarcation Lines	14	2
Encl 28	Open-grid Overhead Parkade Gate	14	11
Encl 29	Exterior Sealant	14	0
Encl 30	General & Inspections	14	61
Elec 01	Unit Substation	14	21
Elec 02	Electrical Distribution	14	26
Elec 03	Exterior Light Fixtures	14	6
Elec 04	Interior Lighting Components	14	6
Elec 05	Enterphone System	14	11
Elec 06	Proximity Access Control	14	1
Elec 07	Security Surveillance	3	11
Mech 01	Controls - Direct Digital	14	1

Mech 02	Heat Tracing	14	1
Mech 03	HVAC Instrumentation	14	1
Mech 04	Parking Garage Gas Detection	2	8
Mech 05	Valves & Cross Connection	14	6
Mech 06	Domestic Hot Water - Expansion Tanks	3	17
Mech 07	Fixtures - Taps & Sinks	14	11
Mech 08	Fixtures - Toilet	14	16
Mech 09	DHW Boilers	14	6
Mech 10	DHW Storage Tanks	14	1
Mech 11	Domestic Circulation and Recirculation Pumps	2	8
Mech 12	Domestic Water Distribution	14	14
Mech 13	Sanitary Drainage Collection	14	36
Mech 14	Storm Drainage Collection	14	36
Mech 15	Sump Pumps - Storm	14	1
Mech 16	Sump Pumps - Sanitary	4	11
Mech 17	Air Conditioning	14	1
Mech 18	Fan Coil Units	14	1
Mech 19	Electric Baseboards	14	26
Mech 20	General Exhaust Fans	14	1
Mech 21	Make up Air Units	14	6
Mech 22	Parkade Ventilation Fans	14	6
Mech 23	Outdoor Air Handler - Air Conditioning - Gas Heat [Remainder] [PLACEHOLDER]	14	6
Mech 24	Trash Compactor	14	6
Mech 25	Trash Chute	14	16
Mech 26	Overhead Gate Motors	6	1
Elev 01	North and South Tower Basement Traction Elevators	14	11
Elev 02	Podium Hydraulic Elevator [PLACEHOLDER]	14	11
Elev 03	North and South Tower Elevator Cabs and Hoistways	14	11
Elev 04	Podium Elevator Cab and Hoistway [PLACEHOLDER]	14	11
Fire 01	Fire Control Panels	14	6
Fire 02	Fire Detection & Alarm	14	0
Fire 03	Dry Sprinkler Compressor	14	0
Fire 04	Sprinkler Valve Assembly - Dry	14	26
Fire 05	Sprinklers & Standpipe - Wet	14	86
Fire 06	Portable Fire Extinguishers	14	10
Fire 07	Sprinkler System - Dry	14	86
Fire 08	Pressurization/Smoke Control	14	26
Fire 09	Emergency Egress Equipment	14	6
Finish 01	Tile Flooring	14	26
Finish 02	Painted Concrete Flooring	14	1

Finish 03	Carpet Flooring	14	1
Finish 04	Interior Painting	7	3
Finish 05	Wood Paneling	14	16
Finish 06	Carpentry & Millwork	14	16
Finish 07	Interior Swing Doors	14	26
Amen 01	Window Shades & Draperies	14	11
Amen 02	Furniture & Accessories	14	1
Amen 03	Central Mailboxes	14	16
Amen 04	Public Signage	8	27
Amen 05	Audio Visual Equipment	14	1
Amen 06	Pool Table	14	6
Amen 07	Domestic Appliances	14	1
Amen 08	Bicycle Racks	14	16
Amen 09	Metal Storage Lockers	14	26
Site 01	Water Feature	14	6
Site 02	Playground Equipment	14	16
Site 03	Concrete Paving	14	26
Site 04	Metal Fencing & Guardrails	14	26
Site 05	Metal Screen Fencing	14	26
Site 06	Planter Retaining Walls	14	31
Site 07	Site Furniture	14	1
Site 08	Unit Paving	14	16
Site 09	Irrigation Sprinklers	14	1
Site 10	Soft Landscaping	14	16

Appendix D

Disclosures and Disclaimers

Disclosures and Disclaimers

Condition of the Assets

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

Cost Estimating for Assets

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

Maintenance of the Assets:

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

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

Specialist and Non-Specialist Reviews

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

Forecasting the Useful Service Life of Assets

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

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

Funding Models

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

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

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

Appendix E

Funding Scenario Cash Flow Tables

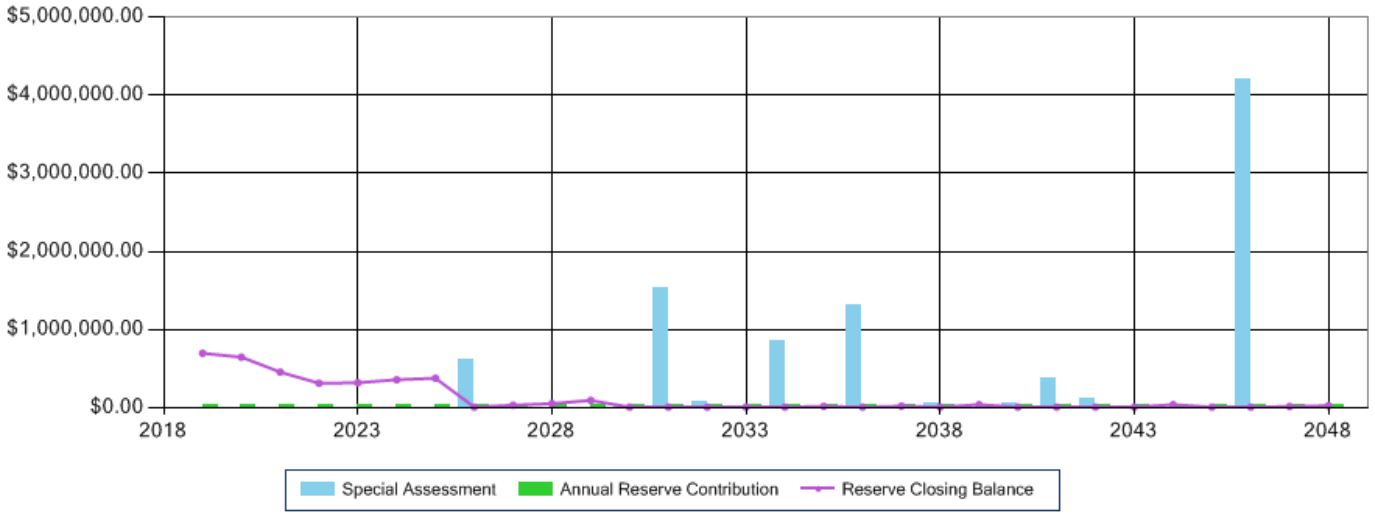
RDH
Making Buildings Better

Building - Funding Model
Olive

Name	A - 2018/2019 - Previous ($48,539)
Type	Basic
Regarding	Olive
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	109

Init Catchup Cost	$0
Operating Budget	$425,451
Starting Reserve Balance	$636,636
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$48,539
Contribution Above Threshold	$48,539
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$37

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$636,636	$48,539	$0	$12,733	$0	$0	$0	$697,908	26.72 %
2020	$697,908	$48,539	$0	$13,958	$112,300	$0	$0	$648,105	22.81 %
2021	$648,105	$48,539	$0	$12,962	$252,024	$0	$0	$457,582	15.55 %
2022	$457,582	$48,539	$0	$9,152	$200,114	$0	$0	$315,159	10.18 %
2023	$315,159	$48,539	$0	$6,303	$49,000	$0	$0	$321,001	9.43 %
2024	$321,001	$48,539	$0	$6,420	$15,885	$0	$0	$360,075	9.57 %
2025	$360,075	$48,539	$0	$7,201	$36,900	$0	$0	$378,915	9.22 %
2026	$378,915	$48,539	$625,807	$7,578	$1,050,840	$0	$0	$10,000	0.29 %
2027	$10,000	$48,539	$0	$200	$24,745	$0	$0	$33,994	0.90 %
2028	$33,994	$48,539	$0	$680	$29,210	$0	$0	$54,003	1.31 %
2029	$54,003	$48,539	$0	$1,080	$8,550	$0	$0	$95,072	2.11 %
2030	$95,072	$48,539	$10,022	$1,901	$145,534	$0	$0	$10,000	0.21 %
2031	$10,000	$48,539	$1,527,741	$200	$1,576,480	$0	$0	$10,000	0.28 %
2032	$10,000	$48,539	$77,829	$200	$126,568	$0	$0	$10,000	0.26 %
2033	$10,000	$48,539	$26,123	$200	$74,862	$0	$0	$10,000	0.24 %
2034	$10,000	$48,539	$847,341	$200	$896,080	$0	$0	$10,000	0.28 %
2035	$10,000	$48,539	$0	$200	$39,300	$0	$0	$19,439	0.51 %
2036	$19,439	$48,539	$1,321,663	$389	$1,380,030	$0	$0	$10,000	0.36 %
2037	$10,000	$48,539	$0	$200	$36,104	$0	$0	$22,635	0.76 %
2038	$22,635	$48,539	$62,573	$453	$124,200	$0	$0	$10,000	0.31 %
2039	$10,000	$48,539	$0	$200	$17,468	$0	$0	$41,271	1.21 %
2040	$41,271	$48,539	$54,365	$825	$135,000	$0	$0	$10,000	0.28 %
2041	$10,000	$48,539	$371,671	$200	$420,410	$0	$0	$10,000	0.29 %
2042	$10,000	$48,539	$117,698	$200	$166,437	$0	$0	$10,000	0.28 %
2043	$10,000	$48,539	$25,561	$200	$74,300	$0	$0	$10,000	0.26 %
2044	$10,000	$48,539	$0	$200	$18,000	$0	$0	$40,739	1.03 %
2045	$40,739	$48,539	$1,995	$815	$82,088	$0	$0	$10,000	0.24 %
2046	$10,000	$48,539	$4,202,571	$200	$4,251,310	$0	$0	$10,000	15.62 %
2047	$10,000	$48,539	$0	$200	$41,264	$0	$0	$17,475	52.95 %
2048	$17,475	$48,539	$0	$350	$39,723	$0	$0	$26,641	100.00 %
		$1,456,170	$9,272,960		$11,424,726				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Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

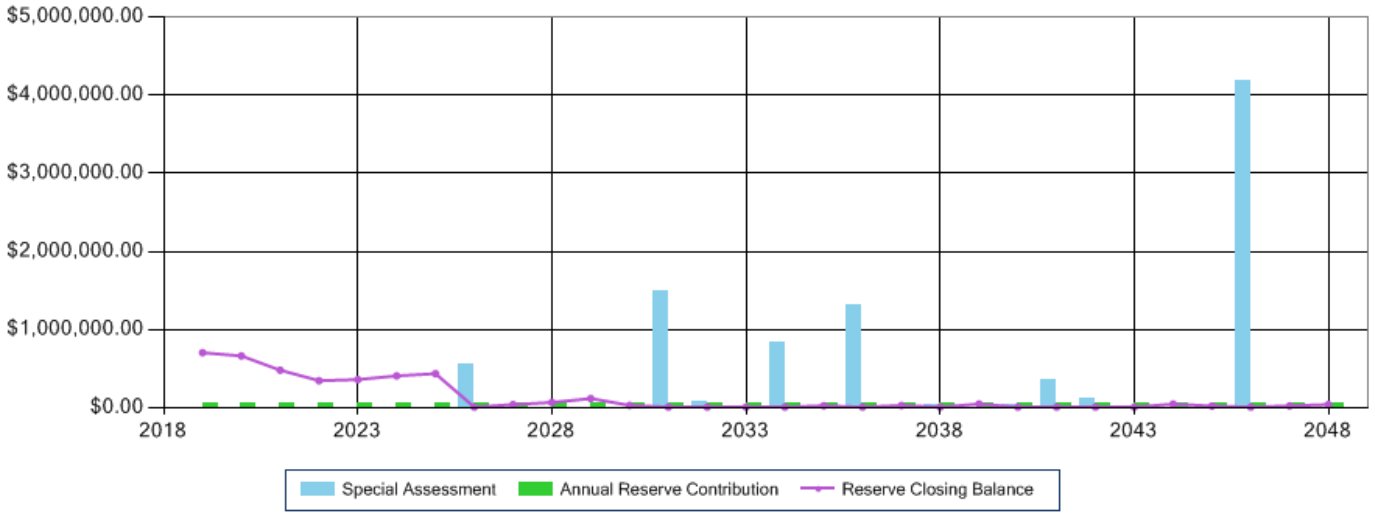
RDH
Making Buildings Better

Building - Funding Model
Olive

Name	B - 2018/2019 - Current ($56,395)
Type	Basic
Regarding	Olive
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	109

Init Catchup Cost	
Operating Budget	$425,451
Starting Reserve Balance	$636,636
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$56,395
Contribution Above Threshold	$56,395
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$43

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$636,636	$56,395	$0	$12,733	$0	$0	$0	$705,764	27.03 %
2020	$705,764	$56,395	$0	$14,115	$112,300	$0	$0	$663,974	23.37 %
2021	$663,974	$56,395	$0	$13,279	$252,024	$0	$0	$481,625	16.37 %
2022	$481,625	$56,395	$0	$9,632	$200,114	$0	$0	$347,538	11.23 %
2023	$347,538	$56,395	$0	$6,951	$49,000	$0	$0	$361,884	10.63 %
2024	$361,884	$56,395	$0	$7,238	$15,885	$0	$0	$409,631	10.89 %
2025	$409,631	$56,395	$0	$8,193	$36,900	$0	$0	$437,319	10.64 %
2026	$437,319	$56,395	$558,380	$8,746	$1,050,840	$0	$0	$10,000	0.29 %
2027	$10,000	$56,395	$0	$200	$24,745	$0	$0	$41,850	1.11 %
2028	$41,850	$56,395	$0	$837	$29,210	$0	$0	$69,872	1.69 %
2029	$69,872	$56,395	$0	$1,397	$8,550	$0	$0	$119,114	2.64 %
2030	$119,114	$56,395	$0	$2,382	$145,534	$0	$0	$32,358	0.67 %
2031	$32,358	$56,395	$1,497,080	$647	$1,576,480	$0	$0	$10,000	0.28 %
2032	$10,000	$56,395	$69,973	$200	$126,568	$0	$0	$10,000	0.26 %
2033	$10,000	$56,395	$18,267	$200	$74,862	$0	$0	$10,000	0.24 %
2034	$10,000	$56,395	$839,485	$200	$896,080	$0	$0	$10,000	0.28 %
2035	$10,000	$56,395	$0	$200	$39,300	$0	$0	$27,295	0.71 %
2036	$27,295	$56,395	$1,305,794	$546	$1,380,030	$0	$0	$10,000	0.36 %
2037	$10,000	$56,395	$0	$200	$36,104	$0	$0	$30,491	1.02 %
2038	$30,491	$56,395	$46,704	$610	$124,200	$0	$0	$10,000	0.31 %
2039	$10,000	$56,395	$0	$200	$17,468	$0	$0	$49,127	1.44 %
2040	$49,127	$56,395	$38,495	$983	$135,000	$0	$0	$10,000	0.28 %
2041	$10,000	$56,395	$363,815	$200	$420,410	$0	$0	$10,000	0.29 %
2042	$10,000	$56,395	$109,842	$200	$166,437	$0	$0	$10,000	0.28 %
2043	$10,000	$56,395	$17,705	$200	$74,300	$0	$0	$10,000	0.26 %
2044	$10,000	$56,395	$0	$200	$18,000	$0	$0	$48,595	1.22 %
2045	$48,595	$56,395	$0	$972	$82,088	$0	$0	$23,874	0.57 %
2046	$23,874	$56,395	$4,180,564	$477	$4,251,310	$0	$0	$10,000	15.62 %
2047	$10,000	$56,395	$0	$200	$41,264	$0	$0	$25,331	76.76 %
2048	$25,331	$56,395	$0	$507	$39,723	$0	$0	$42,510	100.00 %
		$1,691,850	$9,046,104		$11,424,726				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Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

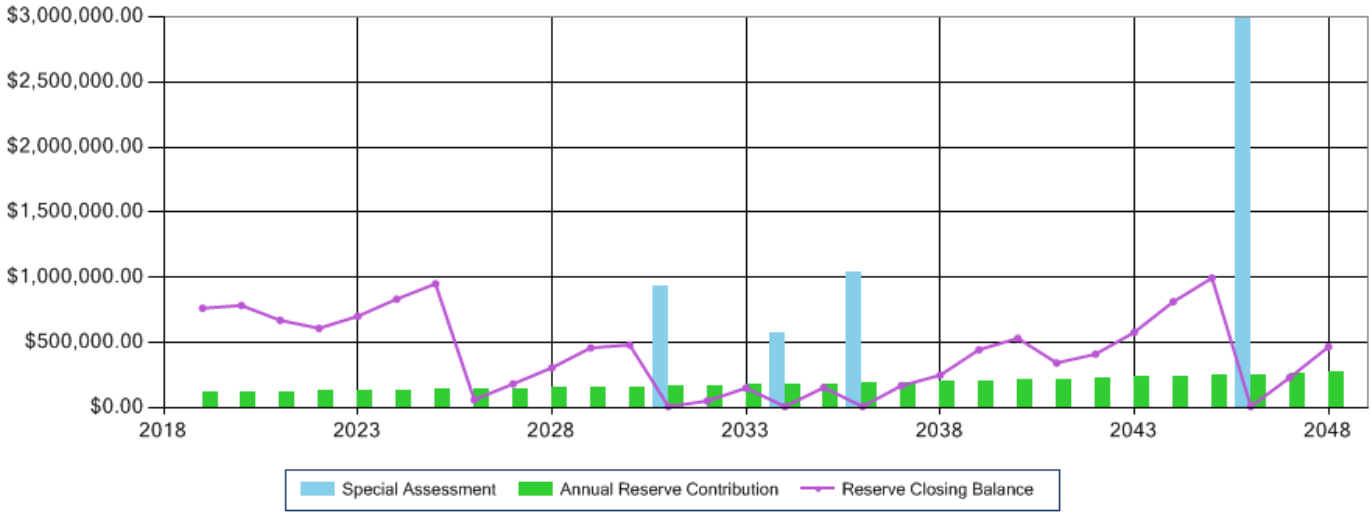
RDH
Making Buildings Better

Building - Funding Model
Olive

Name	C - 2018/2019 - Alternative ($115,000 +3%)
Type	Basic
Regarding	Olive
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	109

Init Catchup Cost	$0
Operating Budget	$425,451
Starting Reserve Balance	$636,636
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$115,000
Contribution Above Threshold	$115,000
Reserve Contribution Increase	3.00 %
Monthly Avg. Unit Contribution	$88

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$636,636	$115,000	$0	$12,733	$0	$0	$0	$764,369	29.27 %
2020	$764,369	$118,450	$0	$15,287	$112,300	$0	$0	$785,806	27.65 %
2021	$785,806	$122,003	$0	$15,716	$252,024	$0	$0	$671,502	22.83 %
2022	$671,502	$125,664	$0	$13,430	$200,114	$0	$0	$610,481	19.73 %
2023	$610,481	$129,433	$0	$12,210	$49,000	$0	$0	$703,125	20.65 %
2024	$703,125	$133,317	$0	$14,062	$15,885	$0	$0	$834,619	22.19 %
2025	$834,619	$137,316	$0	$16,692	$36,900	$0	$0	$951,727	23.16 %
2026	$951,727	$141,435	$0	$19,035	$1,050,840	$0	$0	$61,357	1.79 %
2027	$61,357	$145,679	$0	$1,227	$24,745	$0	$0	$183,518	4.87 %
2028	$183,518	$150,049	$0	$3,670	$29,210	$0	$0	$308,027	7.48 %
2029	$308,027	$154,550	$0	$6,161	$8,550	$0	$0	$460,188	10.22 %
2030	$460,188	$159,187	$0	$9,204	$145,534	$0	$0	$483,044	10.14 %
2031	$483,044	$163,962	$929,812	$9,661	$1,576,480	$0	$0	$10,000	0.28 %
2032	$10,000	$168,881	$0	$200	$126,568	$0	$0	$52,513	1.38 %
2033	$52,513	$173,948	$0	$1,050	$74,862	$0	$0	$152,649	3.75 %
2034	$152,649	$179,166	$571,212	$3,053	$896,080	$0	$0	$10,000	0.28 %
2035	$10,000	$184,541	$0	$200	$39,300	$0	$0	$155,441	4.08 %
2036	$155,441	$190,077	$1,041,403	$3,109	$1,380,030	$0	$0	$10,000	0.36 %
2037	$10,000	$195,780	$0	$200	$36,104	$0	$0	$169,876	5.71 %
2038	$169,876	$201,653	$0	$3,398	$124,200	$0	$0	$250,726	8.00 %
2039	$250,726	$207,703	$0	$5,015	$17,468	$0	$0	$445,976	13.11 %
2040	$445,976	$213,934	$0	$8,920	$135,000	$0	$0	$533,829	15.01 %
2041	$533,829	$220,352	$0	$10,677	$420,410	$0	$0	$344,447	10.07 %
2042	$344,447	$226,962	$0	$6,889	$166,437	$0	$0	$411,861	11.70 %
2043	$411,861	$233,771	$0	$8,237	$74,300	$0	$0	$579,570	15.63 %
2044	$579,570	$240,784	$0	$11,591	$18,000	$0	$0	$813,945	20.60 %
2045	$813,945	$248,008	$0	$16,279	$82,088	$0	$0	$996,144	24.12 %
2046	$996,144	$255,448	$2,989,795	$19,923	$4,251,310	$0	$0	$10,000	15.62 %
2047	$10,000	$263,111	$0	$200	$41,264	$0	$0	$232,047	703.17 %
2048	$232,047	$271,005	$0	$4,641	$39,723	$0	$0	$467,970	100.00 %
		$5,471,170	$5,532,222		$11,424,726				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Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

RDH
Making Buildings Better

Building - Funding Model
Olive

Name	D - 2018/2019 - Progressive ($369,000)
Type	Basic
Regarding	Olive
Start Year	2019
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$0
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	109

Init Catchup Cost	
Operating Budget	$425,451
Starting Reserve Balance	$636,636
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$369,000
Contribution Above Threshold	$369,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$282

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2019	$636,636	$369,000	$0	$12,733	$0	$0	$0	$1,018,369	39.00 %
2020	$1,018,369	$369,000	$0	$20,367	$112,300	$0	$0	$1,295,436	45.59 %
2021	$1,295,436	$369,000	$0	$25,909	$252,024	$0	$0	$1,438,321	48.90 %
2022	$1,438,321	$369,000	$0	$28,766	$200,114	$0	$0	$1,635,973	52.89 %
2023	$1,635,973	$369,000	$0	$32,719	$49,000	$0	$0	$1,988,693	58.42 %
2024	$1,988,693	$369,000	$0	$39,774	$15,885	$0	$0	$2,381,582	63.32 %
2025	$2,381,582	$369,000	$0	$47,632	$36,900	$0	$0	$2,761,313	67.21 %
2026	$2,761,313	$369,000	$0	$55,226	$1,050,840	$0	$0	$2,134,700	62.45 %
2027	$2,134,700	$369,000	$0	$42,694	$24,745	$0	$0	$2,521,649	67.02 %
2028	$2,521,649	$369,000	$0	$50,433	$29,210	$0	$0	$2,911,872	70.74 %
2029	$2,911,872	$369,000	$0	$58,237	$8,550	$0	$0	$3,330,559	73.97 %
2030	$3,330,559	$369,000	$0	$66,611	$145,534	$0	$0	$3,620,636	76.06 %
2031	$3,620,636	$369,000	$0	$72,413	$1,576,480	$0	$0	$2,485,569	69.78 %
2032	$2,485,569	$369,000	$0	$49,711	$126,568	$0	$0	$2,777,713	73.44 %
2033	$2,777,713	$369,000	$0	$55,554	$74,862	$0	$0	$3,127,405	76.99 %
2034	$3,127,405	$369,000	$0	$62,548	$896,080	$0	$0	$2,662,873	75.71 %
2035	$2,662,873	$369,000	$0	$53,257	$39,300	$0	$0	$3,045,830	79.98 %
2036	$3,045,830	$369,000	$0	$60,917	$1,380,030	$0	$0	$2,095,717	76.51 %
2037	$2,095,717	$369,000	$0	$41,914	$36,104	$0	$0	$2,470,527	83.04 %
2038	$2,470,527	$369,000	$0	$49,411	$124,200	$0	$0	$2,764,738	88.27 %
2039	$2,764,738	$369,000	$0	$55,295	$17,468	$0	$0	$3,171,564	93.25 %
2040	$3,171,564	$369,000	$0	$63,431	$135,000	$0	$0	$3,468,996	97.55 %
2041	$3,468,996	$369,000	$0	$69,380	$420,410	$0	$0	$3,486,966	101.95 %
2042	$3,486,966	$369,000	$0	$69,739	$166,437	$0	$0	$3,759,268	106.79 %
2043	$3,759,268	$369,000	$0	$75,185	$74,300	$0	$0	$4,129,153	111.38 %
2044	$4,129,153	$369,000	$0	$82,583	$18,000	$0	$0	$4,562,736	115.48 %
2045	$4,562,736	$369,000	$0	$91,255	$82,088	$0	$0	$4,940,903	119.66 %
2046	$4,940,903	$369,000	$0	$98,818	$4,251,310	$0	$0	$1,157,411	1,808.45 %
2047	$1,157,411	$369,000	$0	$23,148	$41,264	$0	$0	$1,508,295	4,570.59 %
2048	$1,508,295	$369,000	$0	$30,166	$39,723	$0	$0	$1,867,738	100.00 %
		$11,070,000	$0		$11,424,726				


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Annual Reserve Contribution
Reserve Closing Balance

Appendix F

RDH Qualifications

Maintenance and Planning (MaP)

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

RDH staff have broad practical experience assisting building owners with all aspects of planning for the long term stewardship of their building(s). Our reserve fund analysts, engineers, architects, and technologists have a wide variety of formal training—including building science, structural engineering, and mechanical engineering. We believe that by using a team approach, we can ensure an appropriate level of thoroughness and quality. We have prepared hundreds of Depreciation Reports and are recognized as industry leaders.

Depreciation Reports

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

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

Building Asset Management Software (BAMS)

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

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

RDH

About Us

RDH Qualifications

Mark Will | B.A. Econ.

Managing Principal, Vancouver Regional Manager

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

Jason Dunn | B.Arch.Sc., CCCA

Principal, Senior Project Manager

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

Jesse Listoen | Dipl.T.

Associate, Project Manager

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

Brandon Carreira | Dipl.T.

Project Manager

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

David Taguchi | Eng.L., RRO

Associate, Building Science Specialist

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

Alex Seto | Dipl.T.

Building Science Technologist

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

RDH Qualifications

Jackie Wong | Dipl.T.

Building Science Technologist

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

Talen Springer | EIT

Building Science Engineer (EIT)

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

Preston Wu | Dipl.T.

Maintenance and Planning Technologist

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

Cameron Skoglund | GradTech.

Maintenance and Planning Technologist

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

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

Building Science Technologist

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

Yan Marineau-Brachmann | B.A.Sc.

Building Science Engineer (EIT)

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

Administrators and Client Support

Vanessa Jumawan

Maintenance and Planning Coordinator

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

Anna Qiu

Maintenance and Planning Project Assistant

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

Software Support and Programmer

Matthew Branch | P.Eng.

Software Developer

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

Acknowledgements

Serge Desmarais | B.Arch. Architect AIBC, CP

Principal (In Memoriam), Senior Building Science Specialist

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

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

Appendix G

Insurance Certificate

Ref. No. 320008109489

CERTIFICATE OF INSURANCE

Aon Reed Stenhouse Inc.
401 West Georgia Street, Suite 1200
PO Box 3228 STN. TERMINAL
Vancouver BC V6B 3X8
tel 604-688-4442 *fax* 604-682-4026

Re: Evidence of Insurance:

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

Insurance as described herein has been arranged on behalf of the Insured named herein under the following policy(ies) and as more fully described by the terms, conditions, exclusions and provisions contained in the said policy(ies) and any endorsements attached thereto.

Insured

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

Coverage

Commercial General Liability

Insurer	Zurich Insurance Company Ltd		
Policy #	8850746		
Effective	02-May-2019	**Expiry**	02-May-2020
Limits of Liability	Bodily Injury & Property Damage, Each Occurrence $1,000,000 Products and Completed Operations, Aggregate $1,000,000 Non-Owned Automobile Liability $1,000,000 Tenant's Legal Liability - All Risks $1,000,000 Legal Liability for Damage to Hired Automobiles $100,000 Policy may be subject to a general aggregate and other aggregates where applicable		

Architects & Engineers Professional Liability

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

Terms and / or Additional Coverage

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

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

AON

Ref. No. 320008109489

CERTIFICATE OF INSURANCE

Commercial General Liability

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

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

Aon Reed Stenhouse Inc.

Dated : 10-May-2019
Issued By : McLean,Chris J.
Tel : 1-604-688-4442

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

AON

Appendix H

Strategic Plan

RDH BUILDING SCIENCE

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

Making Buildings Better™

Olive
Major Maintenance and Renewals Schedule

Accuracy of Budget Cost Estimates:

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

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																				
ROOFS & DECKS																																				
Encl 01	R03	Replace metal roof assemblies.	40 Yrs	$13,125	2046	$22,000																											•			
Encl 02	R02	Localized repairs of roof membrane.	5 Yrs	$25,000	2022	$27,000				•									•				•				•				•				
Encl 02	R03	Replace hot rubber roof membrane and associated components.	25 Yrs	$570,000	2026	$640,000							•																						
Encl 03	R01	Replace 2-ply SBS conventional roof assembly and associated components.	20 Yrs	$3,900	2026	$4,400							•																					•		
Encl 04	R01	Replace landscape deck waterproofing assembly.	30 Yrs	$600,000	2036	$840,000																	•													
FALL PROTECTION																																				
Encl 05	R01	Replace components of fall protection system, as required.	40 Yrs	$75,000	2046	$130,000																											•			
WALLS																																				
Encl 06	R01	Repoint mortar joints between masonry cladding as required.	20 Yrs	$10,000	2026	$11,000							•																						
Encl 06	R02	Replace sections of masonry assembly, as required.	40 Yrs	$458,250	2046	$780,000																											•			
Encl 07	R02	Recoat exterior concrete surfaces.	10 Yrs	$16,000	2022	$16,000				•										•									•						
WINDOWS																																				
Encl 08	R01	Repoint mortar joints between glass block windows, as required. Reapply sealer at grout joints on the interior and exterior of the glass block windows.	10 Yrs	$1,000	2022	$1,100		•		•										•															
Encl 08	R04	Replace glass block windows.	35 Yrs	$3,900	2041	$6,000																							•						
Encl 09	R01	Replace failed sealed insulated glazing units at windows. [Cost included in window wall asset]	2 Yrs	$0	2020	$0		•		•		•		•		•		•		•		•		•		•		•		•		•				•
Encl 09	R04	Replace windows.	40 Yrs	$264,810	2046	$450,000																											•			

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Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																					
Encl 10	J04	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass. [Refer to manufacturer's warranty if applicable.]	2 Yrs	$10,700	2020	$11,000		•		•		•		•		•		•		•		•		•		•		•		•		•				
Encl 10	R01	Clean or repaint spandrel panels, as required.	10 Yrs	$50,000	2022	$50,000				•										•										•						
Encl 10	R03	Replace window wall assembly.	40 Yrs	$1,043,250	2046	$1,800,000																												•		
Encl 11	R01	Replace failed sealed insulating glass units at storefront windows, as required. [PLACEHOLDER]	2 Yrs	$0	2018	$0																														
Encl 11	R03	Replace storefront windows. [PLACEHOLDER]	40 Yrs	$0	2046	$0																														
DOORS																																				
Encl 12	R01	Replacement of roll-up overhead door.	25 Yrs	$3,000	2031	$3,800													•																	
Encl 13	R01	Replace aluminum swing doors.	25 Yrs	$137,500	2031	$170,000													•																	
Encl 14	R04	Replace roof access hatches.	20 Yrs	$12,000	2026	$14,000								•																				•		
Encl 15	R01	Renew coating on exterior of wood swing doors.	8 Yrs	$1,000	2022	$1,000				•								•								•								•	
Encl 15	R03	Replace wood swing doors.	25 Yrs	$7,200	2031	$9,100													•																	
Encl 16	J02	Replace failed sealed insulating glass units (condensation or misting between glass) at sliding glass doors.	2 Yrs	$1,400	2020	$1,400		•		•		•		•		•		•				•		•		•		•		•		•				•
Encl 16	R02	Replace sliding glass doors.	25 Yrs	$125,000	2031	$160,000													•																	
Encl 17	R01	Replace metal clad service & entry doors.	25 Yrs	$8,000	2031	$10,000													•																	
Encl 18	R01	Replace lobby door assembly.	25 Yrs	$4,000	2031	$5,100													•																	
Encl 19	R03	Replace storefront door assemblies. [PLACEHOLDER]	25 Yrs	$0	2031	$0																														
BALCONIES																																				
Encl 20	R02	Replace aluminum and glass privacy screens.	40 Yrs	$14,250	2046	$24,000																												•		
Encl 21	J02	Prepare and re-apply membrane top coats.	10 Yrs	$6,250	2020	$6,400		•										•																		•
Encl 21	R02	Repair locally damaged and delaminated membrane prior to re-application of top coat.	10 Yrs	$5,000	2020	$5,000		•										•																		•
Encl 21	R03	Remove and reapply urethane membranes (Original)	20 Yrs	$22,500	2026	$26,000								•																						
Encl 21	R04	Remove and reapply urethane membranes (2018)	20 Yrs	$67,500	2038	$98,000																				•										
Encl 22	R01	Remove and re-install sections of guardrail in conjunction with balcony and deck waterproofing membrane renewal, including inspect and re-certify guardrail.	15 Yrs	$7,980	2026	$9,200								•																						
Encl 22	R02	Repaint guardrails, as required.	10 Yrs	$5,450	2020	$5,600		•										•																•		
Encl 22	R04	Replace exterior guardrails.	30 Yrs	$71,250	2036	$100,000																		•												
CANOPIES																																				
Encl 23	R03	Renew steel framework and fabric. [PLACEHOLDER]	20 Yrs	$0	2026	$0																														
Encl 24	R01	Repaint exposed structural steel on metal frame canopy assemblies.	10 Yrs	$6,000	2029	$7,300							•			•											•									
Encl 24	R03	Replace metal and glass canopy assemblies.	40 Yrs	$87,500	2046	$150,000																												•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ENCLOSURE																																					
PARKING GARAGE																																					
Encl 26	J02	Repair damaged and delaminated membrane prior to re-application of top coat.	10 Yrs	$20,000	2022	$20,000				•																			•								
Encl 26	R01	Re-apply membrane top coat in high traffic areas (e.g. drive aisles).	10 Yrs	$82,500	2022	$83,000				•																			•								
Encl 26	R03	Replace parking garage traffic membrane.	25 Yrs	$599,820	2031	$760,000													•																		
Encl 27	R01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume.	10 Yrs	$2,500	2022	$2,500				•										•										•							
Encl 28	J01	Locally touch up paint at overhead gate, as required.	2 Yrs	$0	2020	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 28	R02	Replacement of sectional overhead door and associated hardware.	25 Yrs	$6,000	2031	$7,600													•																		
GENERAL & INSPECTIONS																																					
Encl 29	R02	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan (2018).	10 Yrs	$16,250	2026	$18,000								•										•										•			
Encl 29	R03	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan (Original).	10 Yrs	$48,750	2020	$52,000		•										•										•								
Encl 30	J04	Review roof membranes and interfaces.	2 Yrs	$0	2020	$0		•																													
Encl 30	J05	Update depreciation report.	3 Yrs	$0	2022	$0				•			•			•			•			•			•			•			•			•			
Encl 30	J06	Perform full condition assessment of all enclosure systems.	5 Yrs	$10,000	2020	$10,000		•					•					•					•					•					•			
Encl 30	R01	This is not a renewable asset.	75 Yrs	$0	2081	$0																															

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELECTRICAL																																					
POWER SUPPLY																																					
Elec 01	J02	Perform mechanical tests in accordance with manufacturer guidelines to verify mechanical integrity of unit substation equipment and main secondary disconnects (e.g. check switches for correct operation and alignment; megger and verify equipment phase colours; inspect candles for damage or cracking, oil leakage and oil level for oil circuit breakers).	5 Yrs	$0	2022	$0				•					•					•					•					•					•			
Elec 01	J06	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	5 Yrs	$0	2022	$0				•					•					•					•					•					•			
Elec 01	R01	Clean and maintain all unit substation equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	5 Yrs	$3,000	2022	$3,100				•					•					•					•					•					•			
Elec 01	R02	Conduct infrared thermography and ultrasonic scanning tests on unit substation equipment. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	5 Yrs	$2,000	2022	$2,100				•					•					•					•					•					•			
Elec 01	R03	Replace unit substation equipment.	35 Yrs	$150,000	2041	$230,000																							•								

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELECTRICAL																																				
DISTRIBUTION																																				
Elec 02	R01	Conduct infrared thermography and ultrasonic scanning tests on all switchgear, distribution panels, cable and bus connections, and other critical equipment. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated prior to planned maintenance to identify areas that require immediate attention. Tests should be conducted on energized equipment during peak demand periods if possible.	5 Yrs	$3,000	2022	$3,200				•				•				•						•					•				•			
Elec 02	R02	Cyclical replacement of components of the electrical distribution equipment, as required.	40 Yrs	$60,000	2046	$100,000																											•			
LIGHT FIXTURES																																				
Elec 03	R05	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	20 Yrs	$11,000	2026	$13,000								•																			•			
Elec 04	R05	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	20 Yrs	$35,000	2026	$40,000								•																			•			
SECURITY																																				
Elec 05	R01	Replace enterphone panels, excluding field wiring.	25 Yrs	$6,000	2031	$7,600													•																	
Elec 06	R02	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	15 Yrs	$21,800	2021	$23,000			•															•												
Elec 07	R01	Service the multiplex unit, update software as required.	5 Yrs	$5,000	2025	$5,500							•					•						•					•							
Elec 07	R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	14 Yrs	$4,800	2031	$6,000													•														•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
CONTROLS AND END DEVICES																																				
Mech 01	R01	Cyclical replacement of sensors and other field devices, as required.	3 Yrs	$2,000	2024	$2,000						•			•			•			•			•			•			•			•			•
Mech 01	R02	Replace DDC central components.	15 Yrs	$20,000	2021	$21,000			•															•												
Mech 02	R01	Replace components of electric heat tracing cable, including control module and pipe insulation.	15 Yrs	$5,000	2021	$5,200			•															•												
Mech 03	R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	15 Yrs	$2,500	2021	$2,600			•															•												
Mech 04	R01	Cyclical replacement of gas detection sensors.	10 Yrs	$6,750	2028	$9,300										•										•										•
PLUMBING & DRAINAGE																																				
Mech 05	R01	Cyclical replacement of miscellaneous domestic valves, as required. Coordination with domestic repiping.	14 Yrs	$4,000	2025	$4,500							•														•									

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Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
Mech 05	R02	Cyclical replacement of valves, as required.	20 Yrs	$6,000	2026	$6,900								•																				•		
Mech 06	R01	Replace expansion tanks.	20 Yrs	$1,500	2037	$2,100																		•												
Mech 07	R01	Replacement of fixtures, as required.	25 Yrs	$5,000	2031	$6,300													•																	
Mech 08	R01	Replace toilet, as required.	30 Yrs	$1,000	2036	$1,400																		•												
Mech 09	R01	Replace draft inducer fan.	10 Yrs	$4,000	2036	$5,600																		•												
Mech 09	R02	Replace boiler controls.	15 Yrs	$10,000	2021	$10,000			•																				•							
Mech 09	R03	Replace boilers for domestic hot water system.	20 Yrs	$40,000	2026	$46,000								•																				•		
Mech 10	R01	Cyclical replacement of domestic hot water storage tanks.	10 Yrs	$10,500	2021	$11,000			•										•										•							
Mech 11	R01	Cyclical replacement of pumps, as required (2008 and 2011).	10 Yrs	$3,015	2021	$3,100			•										•										•							
Mech 11	R02	Cyclical replacement of pumps, as required (2018).	10 Yrs	$1,485	2028	$2,000										•										•										•
Mech 12	J01	Comprehensive third party testing and inspection of the copper domestic water distribution system.	10 Yrs	$10,000	2027	$12,000									•										•									•		
Mech 12	R01	Replace components of domestic plumbing distribution system, including domestic valves.	28 Yrs	$654,000	2034	$880,000																•														
Mech 13	J01	Insert video cameras into main lines to conduct pipe inspection.	5 Yrs	$3,000	2021	$3,100			•					•					•					•					•					•		
Mech 13	J02	Auger lateral drain lines.	10 Yrs	$4,000	2021	$4,200			•										•										•							
Mech 13	R01	Repair components of sanitary drainage distribution system, as required.	50 Yrs	$30,000	2056	$62,000																														
Mech 14	J01	Jetflush/auger lateral drain lines.	10 Yrs	$4,000	2021	$4,200			•										•										•							
Mech 14	J02	Insert video cameras into main lines to conduct pipe inspection.	5 Yrs	$3,000	2021	$3,100			•					•					•					•					•					•		
Mech 14	R01	Repair components of storm water drainage distribution system, as required.	50 Yrs	$40,000	2056	$83,000																														
Mech 15	R01	Overhaul storm sump pumps.	5 Yrs	$2,000	2026	$2,000								•					•										•					•		
Mech 15	R02	Replace sump pumps.	15 Yrs	$8,000	2021	$8,300			•															•												
Mech 16	R01	Overhaul sanitary sump pumps.	5 Yrs	$2,000	2021	$2,300			•					•					•					•					•					•		
Mech 16	R03	Replace sanitary sump pumps.	15 Yrs	$8,000	2031	$9,900													•															•		
HEATING & COOLING																																				
Mech 17	R01	Cyclical replacement of components of condensing units of the split system AC.	15 Yrs	$4,000	2021	$4,200			•															•												
Mech 18	R01	Replace fan coil units.	15 Yrs	$22,000	2021	$23,000			•															•												
Mech 19	R01	Cyclical replacement of electric baseboard heaters, as required.	40 Yrs	$2,250	2046	$3,800																												•		
VENTILATION AND AIR-CONDITIONING																																				
Mech 20	R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	12 Yrs	$8,400	2021	$8,400			•												•												•			
Mech 21	R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	8 Yrs	$4,000	2021	$4,000			•								•								•								•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
MECHANICAL																																				
Mech 21	R02	Rebuild air make-up units.	20 Yrs	$70,000	2026	$80,000								•																				•		
Mech 22	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$500	2021	$520			•			•			•			•			•			•			•			•			•			•
Mech 22	R02	Rebuild of supply and exhaust fans, as required.	20 Yrs	$15,000	2026	$17,000								•																				•		
Mech 23	R01	Cyclical rebuild or replacement of rooftop units. [PLACEHOLDER]	20 Yrs	$0	2026	$0																														
OTHER																																				
Mech 24	R01	Replace hydraulic pumps.	10 Yrs	$4,000	2021	$4,000			•										•										•							
Mech 24	R02	Replace compactor hoses.	10 Yrs	$1,500	2021	$1,500			•										•										•							
Mech 24	R03	Replace trash compactor.	20 Yrs	$15,000	2026	$17,000								•																				•		
Mech 25	R01	Replace sections of the trash chute, as required.	30 Yrs	$20,000	2036	$28,000																		•												
Mech 26	R01	Replace overhead door motors and operators, as required.	7 Yrs	$5,000	2021	$5,200			•							•							•						•							

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
ELEVATOR																																				
TRACTION																																				
Elev 01	J01	Check and test overload device.	2 Yrs	$0	2022	$0				•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	J02	Conduct full load performance test.	2 Yrs	$0	2022	$0				•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	R03	Replace elevator geared machines, controls and drive systems.	25 Yrs	$340,000	2031	$430,000													•																	
HYDRAULIC																																				
Elev 02	R01	Replace elevator controls, tank/pump unit and control valve. Note: Fire alarm upgrades may be required if this asset is implemented. The budget for fire alarm upgrade is not included in the estimate. [PLACEHOLDER]	25 Yrs	$0	2031	$0																															
CAR INTERIORS																																				
Elev 03	R01	Replace elevator operating and signal fixtures, upgrade cab interiors (to be completed in conjunction with asset 1).	25 Yrs	$110,000	2031	$140,000													•																	
Elev 04	R02	Replace elevator operating and signal fixtures, replace door operator, upgrade cab interior (to be completed in conjunction with asset 1). [PLACEHOLDER]	25 Yrs	$0	2031	$0																															

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048

FIRE SAFETY																																						
CONTROLS																																						
Fire 01	R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	20 Yrs	$25,000	2026	$29,000								•																				•				
DETECTION																																						
Fire 02	R01	Cyclical replacement of heat detectors, smoke detectors and related modules, excluding field wiring.	10 Yrs	$14,000	2020	$14,000		•										•										•										
SUPPRESSION																																						
Fire 03	R01	Replace fire sprinkler compressor.	14 Yrs	$2,000	2020	$2,000		•														•																•
Fire 04	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$7,500	2026	$8,600								•																				•				
Fire 04	R02	Replace gaskets in dry sprinkler valves.	20 Yrs	$2,400	2026	$2,800								•																				•				
Fire 04	R03	Rebuild dry sprinkler valves.	20 Yrs	$16,000	2026	$18,000								•																				•				
Fire 04	R04	Replace sprinkler valves, as required.	40 Yrs	$12,000	2046	$20,000																												•				
Fire 05	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$500	2022	$530				•					•					•					•					•					•			
Fire 05	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$500	2022	$530				•					•					•					•					•					•			
Fire 05	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$2,500	2026	$2,900								•																				•				
Fire 05	R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	5 Yrs	$0	2022	$0				•					•					•					•					•					•			
Fire 05	R03	Replace all heads, or submit representative sample of heads for testing by recognised testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction at the 50th anniversary, in accordance with NFPA 25.	10 Yrs	$39,000	2056	$81,000																																	
Fire 05	R04	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to sprinkler room.	100 Yrs	$130,000	2106	$0																																	
Fire 06	R01	Cyclical replacement of fire extinguishers.	12 Yrs	$2,400	2030	$3,000											•											•										
Fire 07	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$500	2022	$530				•					•					•					•					•					•			
Fire 07	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$500	2022	$530				•					•					•					•					•					•			
Fire 07	R01	Replace all heads, or submit representative sample of heads for testing by recognized testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	10 Yrs	$12,000	2056	$25,000																																	
Fire 07	R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains etc as required.	5 Yrs	$200	2022	$210				•					•					•					•					•					•			
Fire 07	R03	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	100 Yrs	$40,000	2106	$0																																	
Fire 08	R01	Replace smoke exhaust fans.	40 Yrs	$5,000	2046	$8,500																																•	
EGRESS																																						
Fire 09	R01	Cyclicacl replacement of batteries and lamps in DC battery packs.	5 Yrs	$12,800	2025	$14,000						•					•					•					•					•						

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
FIRE SAFETY																																				
Fire 09	R02	Cyclical replacement of LED exit signs.	20 Yrs	$24,000	2026	$28,000								•																				•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
INTERIOR FINISHES																																				
FLOORS																																				
Finish 01	R01	Replace porcelain tile flooring.	40 Yrs	$46,200	2046	$79,000																												•		
Finish 02	R02	Repaint concrete floor paint.	15 Yrs	$11,070	2021	$12,000			•															•												
Finish 03	R01	Replace carpet flooring in common hallways.	15 Yrs	$57,600	2021	$60,000			•															•												
WALLS																																				
Finish 04	R02	Repaint interior walls.	10 Yrs	$45,000	2023	$49,000					•										•										•					
Finish 05	R01	Replace wood veneer panels.	30 Yrs	$3,500	2036	$4,900																		•												
ARCHITECTURAL WOODWORK																																				
Finish 06	R01	Replace damaged components of carpentry and millwork, as required.	30 Yrs	$8,000	2036	$11,000																		•												
FURNISHINGS																																				
Finish 07	R01	Cyclical replacement of interior swing doors in high traffic locations, as required.	20 Yrs	$5,950	2026	$6,800								•																				•		
Finish 07	R02	Cyclical replacement of interior swing doors in low traffic/exposure locations, as required.	40 Yrs	$14,875	2046	$25,000																												•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
AMENITIES																																				
WINDOW COVERINGS																																				
Amen 01	R01	Cyclical replacement of window blinds and draperies within the suites, as required.	25 Yrs	$1,500	2031	$1,900													•																		
FURNISHINGS																																				
Amen 02	R01	Replace furnishings in common areas, as required.	15 Yrs	$10,000	2021	$10,000			•															•												
Amen 03	R01	Replace central mailboxes.	30 Yrs	$5,000	2036	$7,000																		•												
Amen 04	R01	Replace damaged and outdated signage, as required.	25 Yrs	$3,000	2047	$5,200																													•	
SUITE																																				
Amen 05	R01	Cyclical replacement and upgrade of components of audiovisual equipment, excluding field wiring, as required.	15 Yrs	$2,000	2021	$2,100			•															•												
Amen 06	R01	Replace pool table, as required.	20 Yrs	$2,500	2026	$2,900								•																				•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
AMENITIES																																				
Amen 07	R01	Replace domestic appliances.	15 Yrs	$500	2021	$520			•															•												
Amen 08	R01	Replace bicycle racks, as required.	30 Yrs	$1,200	2036	$1,700																		•												
Amen 09	R01	Reconstruct metal screen storage lockers, as required.	40 Yrs	$5,000	2046	$8,500																												•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
SITEWORK																																				
HARD LANDSCAPING																																				
Site 01	R02	Replace circulation and filtration pumps.	10 Yrs	$1,500	2025	$1,700							•										•										•			
Site 01	R03	Replace sand filter assembly.	25 Yrs	$2,500	2031	$3,200													•																	
Site 01	R04	Replace waterproof membrane assembly.	25 Yrs	$6,800	2020	$6,900		•																									•			
Site 01	R05	Replace components of circulation piping, valves and pumps.	20 Yrs	$7,500	2026	$8,600								•																				•		
Site 02	R01	Replace outdoor playground equipment.	30 Yrs	$2,000	2036	$2,800																		•												
Site 03	R01	Replace sections of concrete paving, as required.	40 Yrs	$12,600	2046	$22,000																												•		
Site 04	R01	Repaint site fencing, gates and guardrails, as required.	10 Yrs	$4,600	2022	$4,600				•										•										•						
Site 04	R03	Replace fencing, gates and guardrails, as required.	40 Yrs	$23,000	2046	$39,000																												•		
Site 05	R01	Repaint metal.	10 Yrs	$5,000	2022	$5,300				•										•										•						
Site 05	R02	Replace metal screen fencing.	40 Yrs	$55,000	2046	$94,000																												•		
Site 06	R01	Rebuild sections of retaining walls and curbs.	45 Yrs	$0	2051	$0																														
Site 07	R02	Replace outdoor site furniture, as required.	15 Yrs	$3,000	2021	$3,100			•															•												
Site 08	R01	Replace interlocking brick paving in coordination with the podium membrane (ENCL 04).	40 Yrs	$102,000	2036	$140,000																		•												
SOFT LANDSCAPING																																				
Site 09	R01	Replace components of irrigation sprinkler system, as required.	15 Yrs	$17,000	2021	$18,000			•															•												
Site 10	R01	Renovate sections of the soft landscaping, as required.	30 Yrs	$25,000	2036	$35,000																		•												