Depreciation Report Update – R1 | Project R-03436.092

888 Beach Avenue, 1500 Hornby Street, 1501 Howe Street, and 888 Beach Avenue, Vancouver, BC

To: The Owners, Strata Plan LMS712
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Site Visit: October 24, 2022
Submitted: July 5, 2023 by
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1 Introduction

RDH Building Science Inc. (RDH) was retained by The Owners, Strata Plan LMS712 (Owners) to prepare a Depreciation Report Update (the Report) for the residential complex known as 888 Beach Avenue, which is located at the following addresses in Vancouver, BC:

- Beach Tower: 1500 Hornby Street
- Ocean Tower: 1501 Howe Street
- Garden Tower: 888 Beach Avenue

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, boilers, and paving).

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

This Report is an update to the Depreciation Report Update issued on September 10, 2019. As part of our work for this Report, a site visit was completed on October 24, 2022. The financial data is based on the 2023 fiscal year. A draft Report was distributed to the Strata Council and Strata Management on May 31, 2023. A revised draft Report was issued on June 9, 2023. Feedback from the Strata Council was incorporated into the Report, and the finalized Report was issued on June 27, 2023. A meeting with Strata Council to discuss the report was completed on July 4, 2023 and the revised finalized Report was issued on July 5, 2023.

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

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

2 888 Beach Avenue

888 Beach is a mixed-use complex comprised of three high-rise buildings, 26 townhouse units, and four commercial strata lots. The complex is typically of cast-in-place concrete construction with steel stud in-fill walls. The complex is situated over a 4-storey, below-grade parkade. The complex features a central courtyard with a water feature at Level 2.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical distribution, communications, and security equipment), mechanical (heating, cooling, and plumbing), elevators, fire safety (sprinklers, fire detection, and egress equipment), interior finishes, amenities, and site work. The Assets within each system are described in detail in Appendix B.

Key physical parameters of 888 Beach Avenue are summarized in Table 2.1, Figure 2.1, and Figure 2.2 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

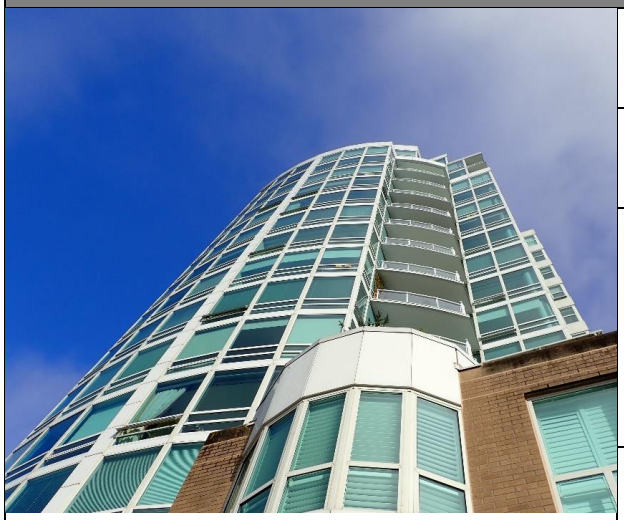

Figure 2.1 South elevation photograph of Ocean Tower.

Date of first occupancy (approximate)	1992
Gross floor area, including the parkade (ft²)	669,300
Stories above-grade	
→ Beach Tower	33
→ Ocean Tower	18
→ Garden Tower	9
→ Townhouses	3
Total number of strata lots	259
→ Residential	255
→ Commercial	4

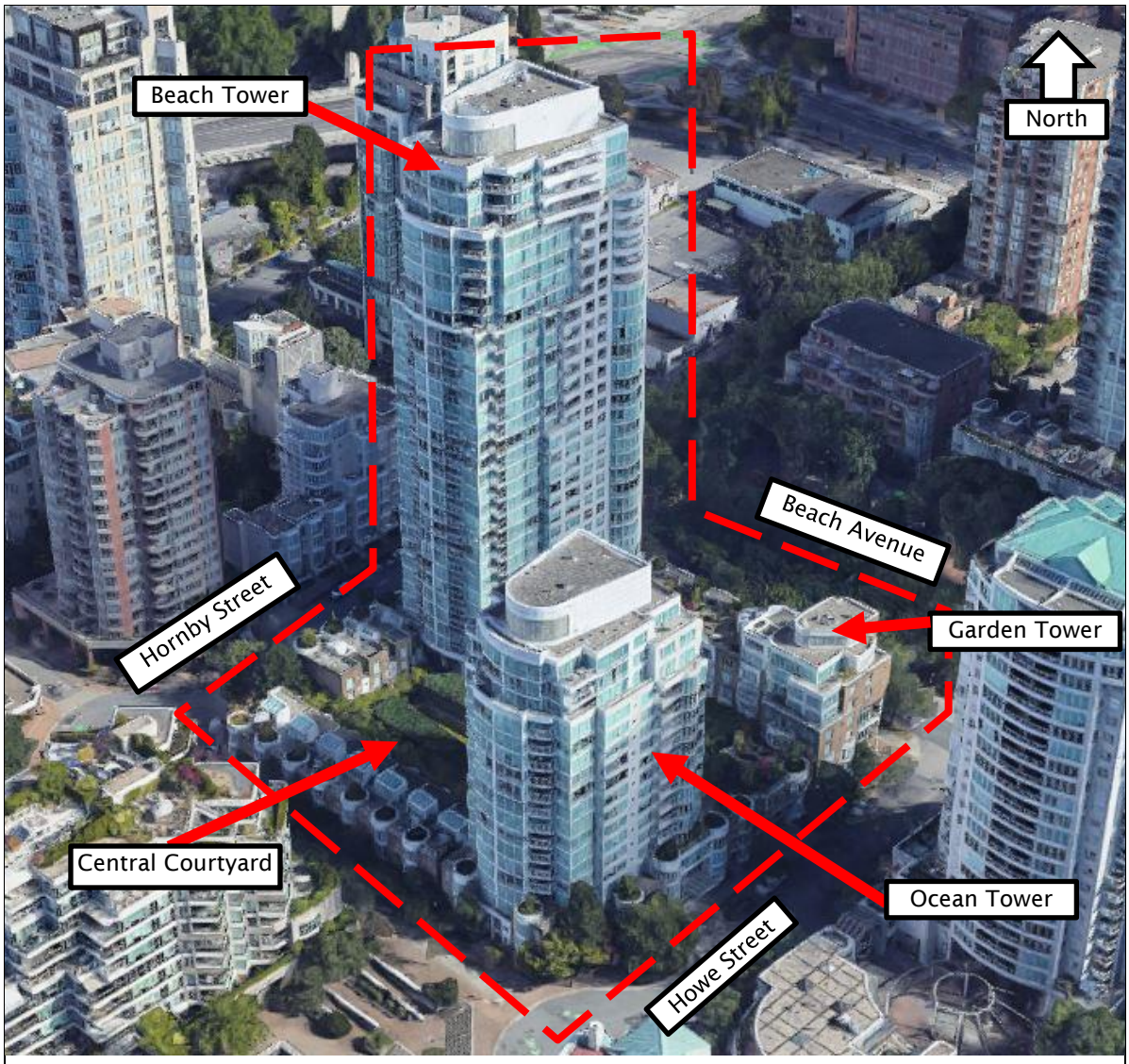

Figure 2.2 Aerial photograph of 888 Beach Avenue (©Google 2022).

3 Assessments

The Report combines two distinct types of analysis: a *physical assessment,* and a *financial assessment.* The assessments are used to determine what the Owners possess, what condition the Assets are in, what the Owners are responsible for, and the *capital costs* associated with the Assets.

The process of preparing a Depreciation Report Update is summarized in Figure 3.1 below:

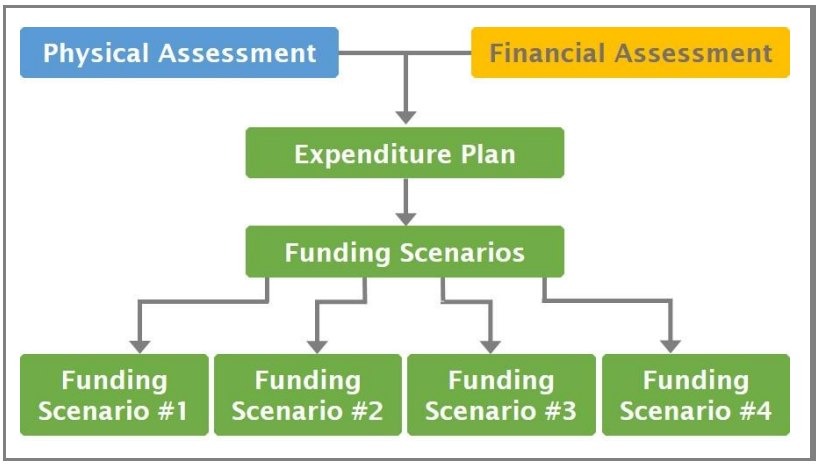

Figure 3.1

Depreciation Report Update process.

Funding models are built based on the Strategic Plan (30 years).

The following sections provide a brief overview of the physical assessment and financial assessment.

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 Owners are 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 Owners possess and must repair and maintain. The Asset Inventory is included as an appendix to this Report.

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

The evaluation is typically based on:

- → A review of historical documentation, such as meeting 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). 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 Owners; the original drawings; and any previous investigation reports commissioned by the Owners. It is expected that the Owners will need more detailed reviews as Assets approach the end of their service lives. A summary of the Asset service lives is provided in the appendices of this Report. Allowances for additional reviews or investigations are included, as appropriate. Recommendations taken from any additional reviews should be incorporated into future Report updates.

As part of the physical assessment, RDH compiled a history of completed projects by reviewing the documents provided by the Strata and interviewing Strata Corporation representatives. The history is summarized in Table 3.1 below. In addition, Figure 3.2 denotes the history of roof renewals completed. The history of renewals establishes the chronological age of the Assets while the history of major maintenance may affect the effective age of the Assets.

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY (AS OF 2012)

Building Enclosure

- → 2023 (to be completed) – Replace the original podium waterproofing membrane and associated components in the central courtyard. Please refer to Figure 3.2 below for a summary of all roof renewals completed at the complex over the years.
- → 2023 – Repainted and repaired the metal frame canopies
- → 2022 – Replaced the podium membrane at the perimeter of the complex
- → 2020 – Replaced the davit arm equipment
- → 2020 – Replaced the overhead parkade Gate #4
- → 2010-2022 – Targeted renewal of various roof and deck membranes
- → 2019 – Locally replaced the podium membrane at the main entrance of Ocean Tower and patio at Townhouse 7
- → 2019 – Replaced the patio doors at the townhouses
- → 2019 – Renewed the sealant at the townhouse brick walls (courtyard and street facing)
- → 2018 – Locally replaced the courtyard and planter membrane (Townhouses 6-11)
- → 2018 – Renewed all the balcony membranes at Ocean Tower and various elevation balconies at Garden Tower south
- → 2018 – Renewed the balcony guardrails at Ocean Tower and various elevation guardrails at Garden Tower south
- → 2018 – Renewed the sealant at composite panels and balconies at Ocean and Garden Towers
- → 2018 – Applied the sealant at all window frame and insulating glazing units (IGUs) interfaces at the townhouses
- → 2018 – Installed the corrugated metal panel cladding over the EIFS panel cladding in select areas on the Ocean Tower roof
- → 2017 – Replaced the main entry swing doors at the townhouses
- → 2017 – Replaced the overhead parkade at Gate #1

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY (AS OF 2012)
→ 2015 – Locally replaced the aluminum glazed guardrails at Ocean Tower → 2013 – Renewed several metal clad swing doors with fibreglass swing doors at Townhouse Units 5-11 and 23-26 leading to the patio → 2013 – Renewed all the balcony membranes at Beach and Garden Towers → 2013 – Renewed the balcony guardrails at Beach Tower → 2012 – Applied the sealant at all window frame to IGU interfaces at Beach, Garden, and Ocean Towers → 2011-2012 – Renewed the sealant at composite panels to balconies at Beach Towers → As required (annually) – Replaced failed IGUs
Electrical → 2022 – Installed two EV chargers at Level P3 → 2020 – Installed coloured LED lights on the rooftop of each tower → 2019 – Replaced the exterior lighting at the roof top of each tower → 2019 – Installed automatic door openers at the main and Level P1 entrances of each tower → 2017 – Modernized the enterphone and fob controls → 2017 – Replaced 13 security cameras in the lobbies → 2014 – Replaced the parkade lights with LED → As required - Inspect and clean the electrical vault
Mechanical → 2023 – Replaced the make-up air unit at the rooftop of Beach Tower → 2023 – Refurbished the make-up air unit at Level P1 of Beach Tower → 2023 – Replaced the sump pump controls at Level P4 → 2023 – Commissioned a domestic water distribution piping assessment by McCuaig and Associates Engineering Ltd. (McCuaig) → 2022 – Replaced the domestic hot water expansion tanks in Ocean and Garden Towers → 2022 – Locally repaired/replaced portions of the sanitary drainage piping → 2022 – Replaced the gas meter adjacent to the Garden Tower entrance → 2021 – Replaced the make-up air unit at the rooftop of Ocean Tower → 2020 – Replaced the heat exchanger in Ocean Tower → 2019 – Replaced the domestic hot water boiler in Beach Tower → 2019 – Replaced various valves in Beach Tower → 2019 – Installed the new VFD booster pump → 2018 – Replaced the indoor air handler unit in Ocean Tower

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY (AS OF 2012)
→ 2018 – Locally replaced various plumbing fixtures → 2018 – Replaced all of the domestic hot water storage tanks → 2018 – Replaced four sump pumps in Garden and Beach Towers → 2018 – Locally replaced a section of hot water recirculation lines between Levels 3 and 8 at Ocean Towers → 2018 – Installed the AC in the main electrical room and smaller mechanical rooms in the parkade → 2017 – Replaced the domestic hot water expansion tanks in Beach Tower → 2017 – Cleaned and inspected the sanitary and storm lines → 2017 – Installed the hallway make-up air unit in Garden Tower → 2016 – Replaced the booster pumps in Ocean Tower → 2015 – Replaced the hot water circulation lines on one elevation of Beach Tower → 2015 – Replaced select valves in the mechanical rooms → 2014 – Reviewed the domestic water distribution system (McCuaig) → 2013 – Replaced the main hot water supply riser in Garden Tower → 2012 – Replaced the roof top boilers in Beach and Ocean Towers → As required – Replaced gas detection devices
Elevator → 2018 – Commissioned an elevator review from KJA Consultants Inc. → 2017 – Installed/replaced the HDLM heavy door operators, infrared door safety edges, car operating panels, hall fixtures, brake cables, and new camera travel cables → 2017 – Replaced the elevator interiors → 2017 – Installed six Internet Protocol (IP) HD cameras in elevators
Fire Safety → 2023 – Replaced the amplifiers for the fire annunciators in each tower → 2017 – Locally replaced the smoke detectors → 2016 – Replaced the fire panel outside of Beach Tower → 2014 – Replaced the fire extinguisher
Interior Finishes → 2017 – Repainted all the common areas → 2017 – Refinished the marble floors and columns in the lobbies → 2017 – Replaced the hardwood floor in Beach Tower → 2015 – Locally replaced the carpet in the lobbies

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY (AS OF 2012)
→ 2013 – Replaced the gym flooring → 2013 – Re-waterproofed select service room floors
Amenities → 2021 – Installed the new bike cage in the below-grade parkade → 2018 – Repaired the tractor → 2017 – Re-plastered the pool → 2017/2013 – Replaced the sauna heater → 2017 – Replaced the furniture in the lobbies → 2016 – Replaced the gym equipment
Sitework → 2023 – Recoated exterior railings and handrails → 2022 – Replaced the ceramic tiles at the townhouse entry stairs → 2017 – Replaced the planting around the exterior pond

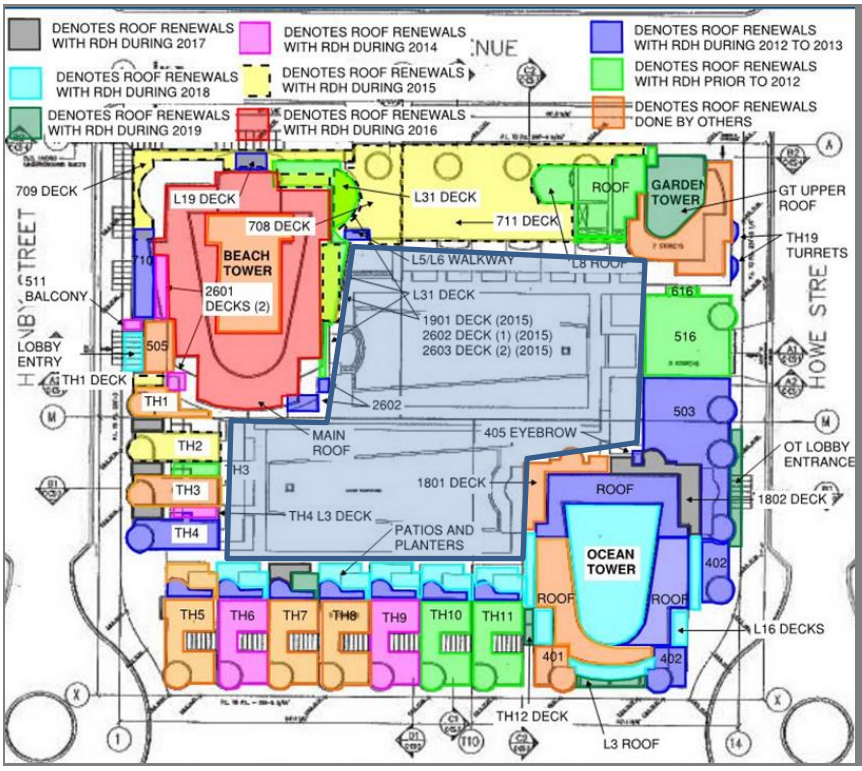

Figure 3.2

Roof replacement to-date.

Blue highlight in the centre of the drawing denotes the podium waterproofing membrane in the main courtyard scheduled to be completed in 2023.

On October 24, 2022, 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 Report 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 3.2 includes examples of some observations made during the review.

TABLE 3.2 OBSERVATIONS BY SYSTEM	
SYSTEM	OBSERVATION
Building Enclosure	→ The replacement of the original podium waterproofing membrane in the main courtyard was in progress at the time of our site visit. For the purpose of this Report, the podium waterproofing membrane renewal will be considered complete in 2023.
Mechanical	→ There are various existing natural gas fired mechanical equipment. As the City of Vancouver is aiming to phase out natural gas by 2030, some mechanical equipment may require electrification at the time of renewal. Please contact us if you have questions on options of how to approach this.
Elevator	→ It is our understanding the Owners are planning to modernize the elevators throughout the complex in 2024.

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 (3% per year) to the current costs.

The future value of Major Maintenance and Renewals costs can be compared against the building reproduction cost. The building reproduction cost is the cost to reproduce the 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 3.3 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.3 KEY FINANCIAL PARAMETERS		
PARAMETER	PREVIOUS REPORT (2018)	UPDATE REPORT (2023)
Fiscal year end	December 31	
Building reproduction cost	$122,590,000	$156,000,000
Operating budget (excluding CRF contribution)	$2,257,540	$2,551,000
Annual CRF contribution	$717,000	$457,000
→ CRF		$32,000
→ Structural Fund		$425,000

TABLE 3.3 KEY FINANCIAL PARAMETERS		
PARAMETER	PREVIOUS REPORT (2018)	UPDATE REPORT (2023)
Opening Balance of the CRF	$1,492,432	$1,601,536*
→ CRF		$672,982
→ Structural Fund		$915,983
→ Interior Refurbishment		$2,716
→ Membrane Replacement		$776
→ EV Charging		$9,079

**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 2023 fiscal year.*

The Report includes 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 Report funding models and calculations.

Capital costs can be distributed into three general categories:

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

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

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

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

Costs are considered *Class D* estimates (±50%), as defined by the Engineers and Geoscientists of British Columbia (EGBC), or unless noted otherwise. Unless otherwise noted, soft costs, such as consulting fees and contingency allowances are not included, because these costs are highly dependent on the scope of work for a particular project. Scopes of work for specific projects should be developed well in advance so that project budgets, including soft costs, can be refined.

The current value of many Major Maintenance and Renewal activities is calculated by multiplying the quantity of an Asset by standard unit rates (for example, the cost per square foot or cost per linear foot). Quantities are measured from original construction documents and visual observations on-site. The unit rates are based on historical information, construction trends, information from contractors, and other sources, as appropriate. Unit rates will fluctuate over time. Basic unit rates are adjusted for the relative complexity of the property. A detailed list of activities and their associated costs are available through the appendices of this Report.

Costing Caveats

The capital costs given in the Report 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 happens well in advance of predicted work to allow time to plan for the funding of the soft costs.

4 Expenditures

There are two main types of activities that relate to expenditures:

- *Renewal* refers to the replacement or refurbishment of an Asset at the end of its useful service life.
- *Maintenance* refers to activities that preserve the Assets, to ensure the Assets will last their predicted service lives and perform as expected.
  - *Major Maintenance* refers to maintenance that occurs at intervals greater than one year, for example, every 18 months, two years, five years. 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 Report funding models, as required by the Strata Property Act. Costs associated with Minor Maintenance are included in the Owners' 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	$2,400,000	$2,800,000	$35,000,000	$58,000,000
Electrical	$1,100,000	$1,300,000	$1,600,000	$2,300,000
Mechanical	$4,300,000	$4,900,000	$6,700,000	$9,500,000
Elevator	$2,000,000	$2,100,000	$4,200,000	$6,800,000
Fire Safety	$500,000	$540,000	$1,700,000	$2,800,000
Interior Finishes	$530,000	$650,000	$1,000,000	$1,500,000
Amenities	$120,000	$150,000	$240,000	$380,000
Sitework	$32,000	$39,000	$210,000	$360,000
Building Total	**$10,982,000**	**$12,479,000**	**$50,650,000**	**$81,640,000**

Approximately 20% of the Owners' 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.

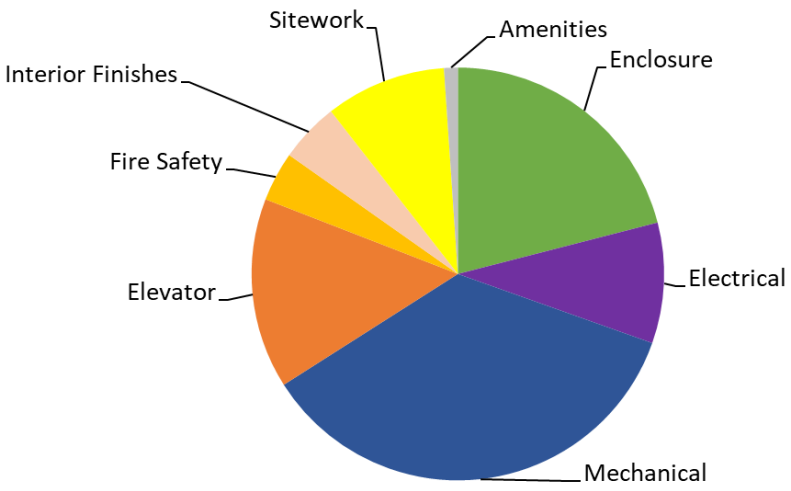

Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

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 CYD, and costs including inflation rates, expressed in FYD are available to the 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 blue bars represent the estimated value of capital costs.

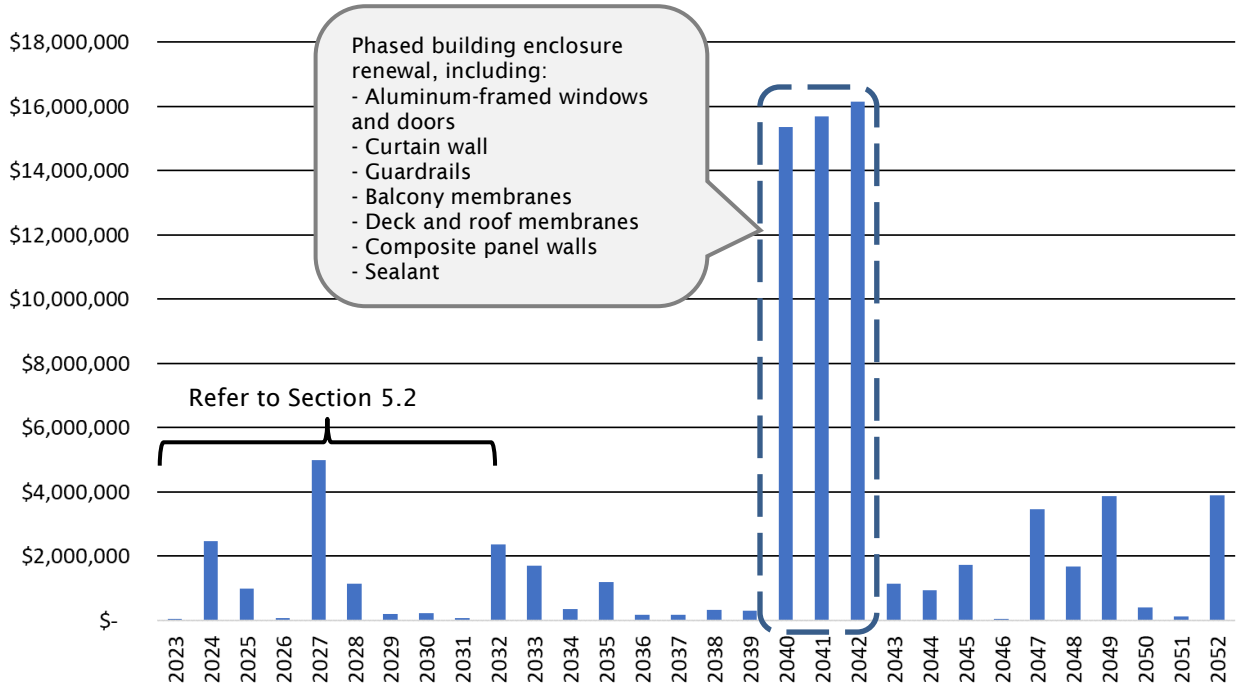

Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different Major Maintenance and Renewal activities, each with different values. Detailed information about each year, including a description of the Maintenance and Renewal activities and estimated costs, is available in the appendices.

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 Owners can anticipate changes to the Strategic Plan with each update of the 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 5-Year Tactical Plan; however, a 10-Year Plan allows the Owners to see a wider range of projects.

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

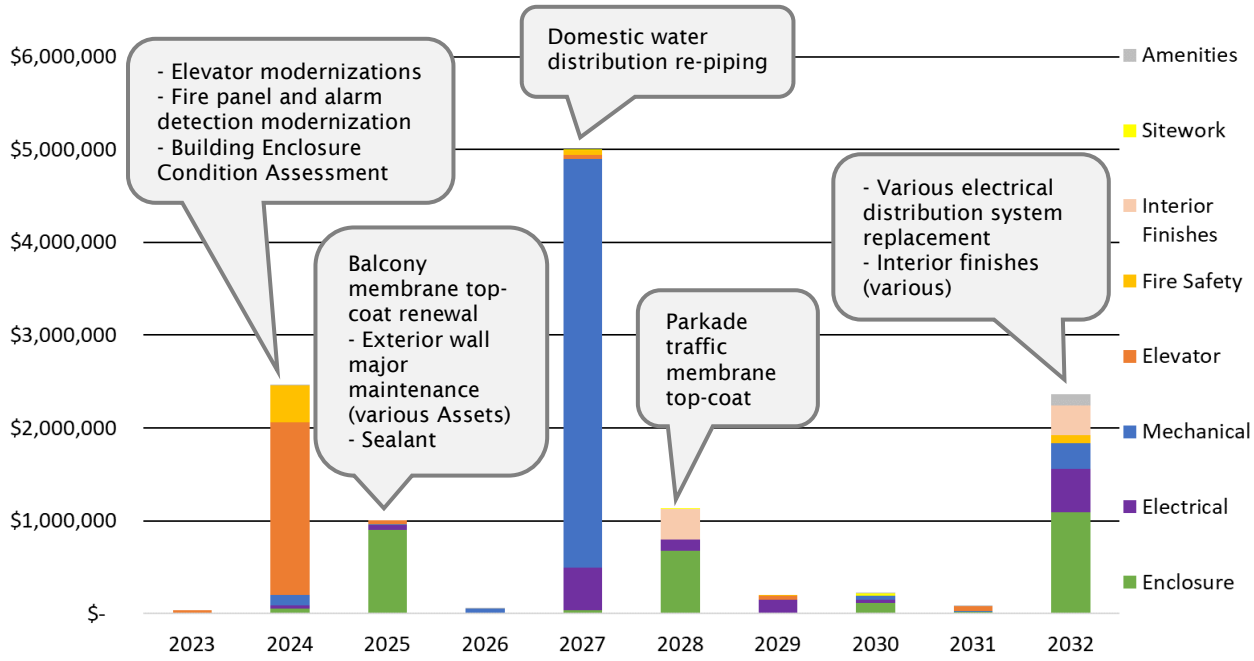

Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

The Tactical Plan above represents one of many possible approaches to planning Major Maintenance and Renewal activities. The Owners 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 Owners and may be reflected in updates to the Report.

To help the Owners start the project planning process, some of the events forecast for the next 10 years are listed below. The list below is not comprehensive; all Major Maintenance and Renewals activities are included in Appendix B. The list focuses on significant renewals, major maintenance events, assessments, and repairs that are needed to ensure the Assets achieve their full service life.

Building Enclosure

→ Commission a Building Enclosure Condition Assessment (BECA). The BECA would provide the Owners with detail on the existing conditions of the building enclosure Assets, such as the exterior cladding, sealant, original windows and doors, and parkade traffic bearing membrane. The BECA should be

completed in advance of the various building enclosure renewals to assist with the planning process. The BECA is forecasted near the start of the Tactical Plan, following the upcoming deck renewals.

- Depending on the findings of the BECA, the Owners should anticipate renewal of the urethane balcony membrane top-coat, as they typically becomes worn from occupant use and weathering. Various exterior wall major maintenance events have also been forecasted to be bundled with the balcony renewals, including sealant renewals.
- Similar to the balcony membranes, the Owners will likely require repair or localized renewal of the traffic membrane top-coat at high traffic areas in the below-grade parkade.

Electrical

- Engage an electrical consultant to establish and implement inspection, cleaning, and maintenance requirements, including thermographic survey protocol. Refine replacement scope, timing, and cost for major electrical power and distribution Assets. This is typically completed on a 5-year cycle. Some affected Assets include:
  - Unit Substation
  - Distribution Transformer
  - Electrical Distribution
- Anticipate the replacement of various components of the electrical distribution system, forecasted at the end of the Tactical Plan.

Mechanical

- Jetflush or auger drainage piping Assets and insert video cameras into the main lines to conduct pipe inspection (typically completed on a 5- to 10-year cycle). Some affected Assets include:
  - Sanitary Drainage
  - Perimeter Drainage
  - Storm Drainage
- Based on the findings of the piping condition assessment from McCuaig, the Owners should plan for the re-piping of the domestic water distribution system. The domestic water distribution re-piping is forecasted for the middle of the Tactical Plan. In addition, the Owners may consider localized re-piping of the hydronic distribution system in conjunction with the domestic water distribution re-piping.

Elevators

- Plan for the modernization of the elevators. In general, renewal projects associated with elevators tend to be completed on a preventative basis, to reduce the risk of breakdowns, and unreliable operation. The modernization of the elevators is forecasted for 2024.

Ongoing Mechanical, Electrical & Fire Safety

Many of the complex's mechanical, electrical, and fire safety Assets are assessed on an ongoing basis as a part of maintenance contracts. Major Maintenance and Renewal expenses pertaining to these Asset categories have been indicated throughout the 10-Year Plan. It should be noted that these have been included for the purposes of cost forecasting; however, the exact timing, the dependability of the

equipment, and the upcoming renewal requirements should be considered by the appropriate maintenance contractor. The specific activities can be seen in the appendices.

Interior Finishes

→ Interior renovations are completed to refurbish the interior common areas and are typically renewed at the Owners' discretion. The interior renovations are forecasted for 2028.

5.3 Project Implementation

The projects identified in the previous section represent a preliminary step that is only intended to help the Owners identify, prioritize, and plan projects. Most significant renewal projects identified in the Report will subsequently go through four basic steps before implementing the work: Assessment, Design, Documentation, and Quotation (Figure 5.3).

→ 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.

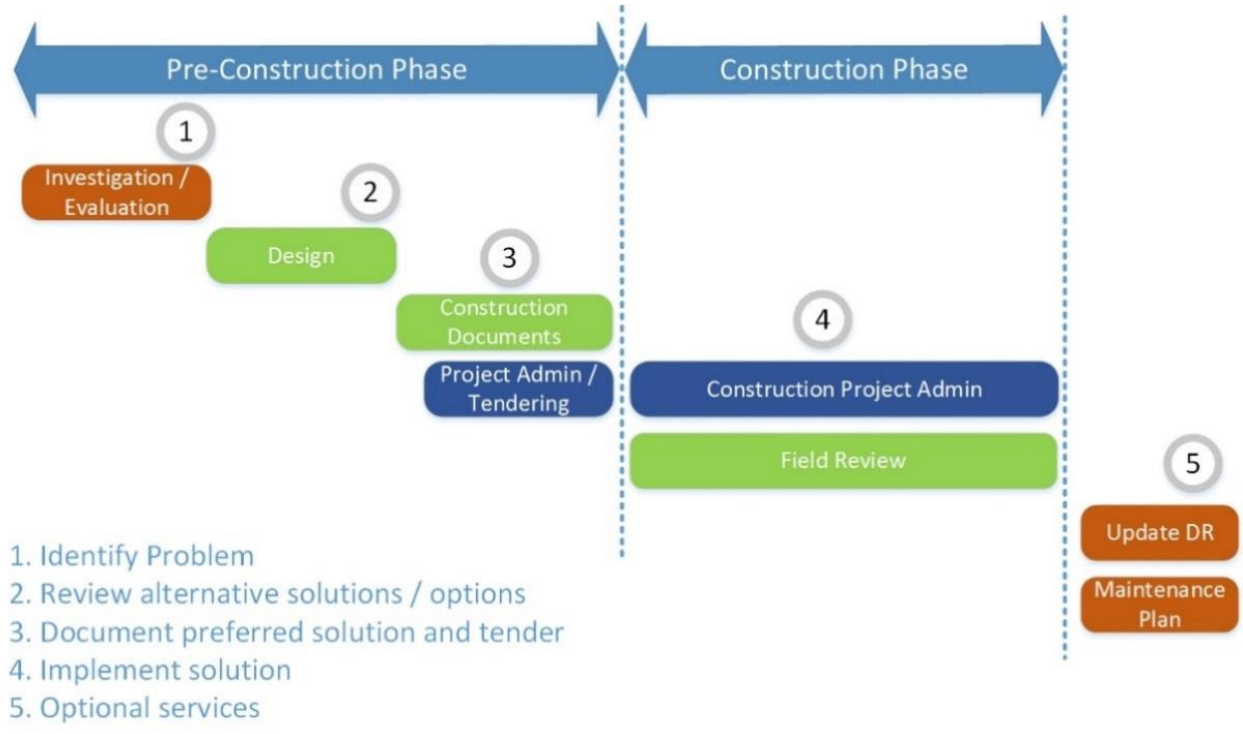

Figure 5.3 Typical phases and sub-phases associated with implementation of a renewal project.

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

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

- *Targeted Projects*. These projects are localized to particular portions of the building. Different exposure conditions and wear patterns may require that only some sections of the building require renewal at one point in time.
- *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 Owners 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 Owners to leverage economies of scale and lower the overall costs, improve the quality of the work, and incorporate upgrades.

The scope of the Report 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 CRF are presented.

The Owners 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, BC Reg 43/2000, Ch. 6.1. (Figure 6.1), dictates that if the CRF closing balance at the end of the fiscal year is less than 25% of the operating budget for the fiscal year that just ended, then the Owners must contribute the lesser of:

- → Ten percent (10%) of the total amount budgeted for the contribution to the operating fund for the current fiscal year, or
- → The amount required to bring the CRF to at least 25% of the total amount budgeted for the contribution to the operating fund for the current fiscal year.

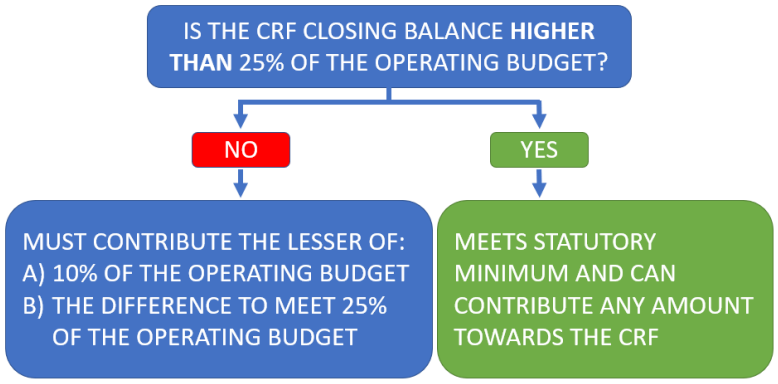

Figure 6.1

Contributions to the CRF per the Strata Property Act Regulations, BC Reg 43/2000, Ch. 6.1.

Table 6.1 below shows the calculation to confirm the Owners meets the minimum requirements set out in the Strata Property Act Regulation.

TABLE 6.1 MINIMUM FUNDING REQUIREMENT CALCULATION

PARAMETER	VALUE
2023 operating budget (excluding CRF contribution)	$ 2,551,000
→ 25% of the operating budget	$ 637,750
→ 10% of the operating budget	$ 255,100
2023 CRF opening balance	$ 1,601,536
2023 CRF Contribution	$ 457,000
Does the CRF balance exceed 25% of the operating budget?	Yes
Does the CRF contribution exceed 10% of the operating budget?	Yes

Although the Owners exceed 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. It is the Report Update, not the operating fund, which provides information about the longer-term repair, maintenance, and replacement costs for the Owners.

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 CRF impact the number and size of special levies. The actual size and timing of special levies will be affected by how the Strata Corporation chooses to implement the renewal projects.

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

- → ***Current (2022).*** The CRF allocation that was approved by the Owners at the last AGM.
- → ***Alternative #1.*** This funding scenario is based on the Current annual CRF contribution of $457,000 and continues with a 5% annual increase thereafter.
- → ***Alternative #2.*** An increase from the Current funding scenario. This funding scenario is based on an initial annual CRF contribution of $500,000 and continues with a 5% annual increase thereafter. The Alternative Funding Scenarios are just two of many possible scenarios for the Owners' consideration.
- → ***Progressive.*** This is the annual contribution that would need to be set aside, commencing in the first fiscal year of this Report, to ensure that the reserve balance is sufficient to eliminate or bring special levies over a 30-year period to a minimum. With "Progressive" reserve allocation, older Strata Corporations with underfunded reserves may still require some special levies at some point in their Strategic Plan. The "Progressive" reserve contribution is an optimum target that a Strata Corporation could use as a guide.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	CURRENT (2023)	ALTERNATIVE #1	ALTERNATIVE #2	PROGRESSIVE RESERVE
Annual CRF allocation	$457,000	Starting at $457,000+	Starting at $500,000+	$2,142,000
Annual CRF increase	0%	5%	5%	0%
Percent of Progressive reserve	21%	21%+	23%+	100%
CRF contribution per average strata lot		Starting at	Starting at	
Per month	$147	$147+	$161+	$689
Per year	$1,764	$1,764+	$1,931+	$8,270
Approximate number of special levies (over 30 years)	17	12	9	2
Approximate value of special levies (over 30 years)	$66M	$50.1M	$47.7M	$15.8M
Minimum Closing Balance	$255,000			
Assumed Inflation Rate	3%			
Assumed Interest Rate	2%			

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

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

6.3 Current (2023) Funding Scenario

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

TABLE 6.3 CURRENT (2023) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$1,601,536	$457,000	$0	$32,031	$36,000	$2,054,567
2024	$2,054,567	$457,000	$146,142	$41,091	$2,443,800	$255,000
2025	$255,000	$457,000	$540,830	$5,100	$1,002,930	$255,000
2026	$255,000	$457,000	$0	$5,100	$64,000	$653,100
2027	$653,100	$457,000	$4,105,138	$13,062	$4,973,300	$255,000
2028	$255,000	$457,000	$668,280	$5,100	$1,130,380	$255,000
2029	$255,000	$457,000	$0	$5,100	$193,700	$523,400
2030	$523,400	$457,000	$0	$10,468	$217,100	$773,768
2031	$773,768	$457,000	$0	$15,475	$77,330	$1,168,913
2032	$1,168,913	$457,000	$967,708	$23,378	$2,362,000	$255,000

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

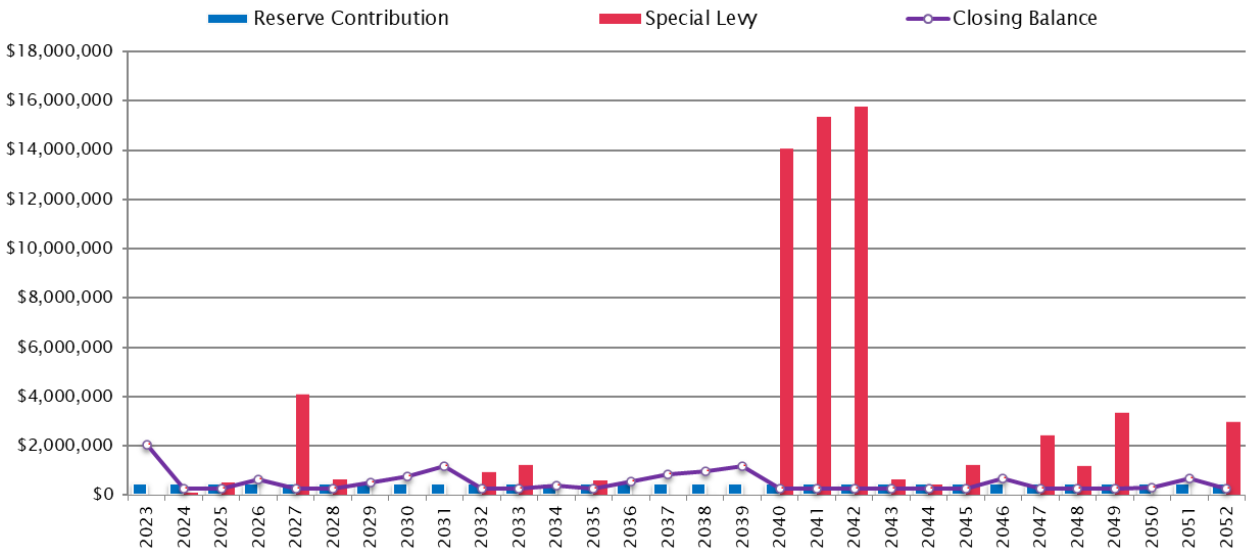

Figure 6.2 CRF balance, contribution, and special levies based on the Current funding.

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

6.4 Alternative Funding Scenario #1

Alternative Funding Scenario #1 is based on the Current CRF contribution of $457,000, with a 5% annual increase.

TABLE 6.4 ALTERNATIVE FUNDING SCENARIO #1: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$1,601,536	$457,000	$0	$32,031	$36,000	$2,054,567
2024	$2,054,567	$479,850	$123,292	$41,091	$2,443,800	$255,000
2025	$255,000	$503,843	$493,988	$5,100	$1,002,930	$255,000
2026	$255,000	$529,035	$0	$5,100	$64,000	$725,135
2027	$725,135	$555,486	$3,933,176	$14,503	$4,973,300	$255,000
2028	$255,000	$583,261	$542,019	$5,100	$1,130,380	$255,000
2029	$255,000	$612,424	$0	$5,100	$193,700	$678,824
2030	$678,824	$643,045	$0	$13,576	$217,100	$1,118,345
2031	$1,118,345	$675,197	$0	$22,367	$77,330	$1,738,579
2032	$1,738,579	$708,957	$134,692	$34,772	$2,362,000	$255,000

Alternative Funding Scenario #1 eliminates some of the smaller levies, but it is not adequate to offset all the special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

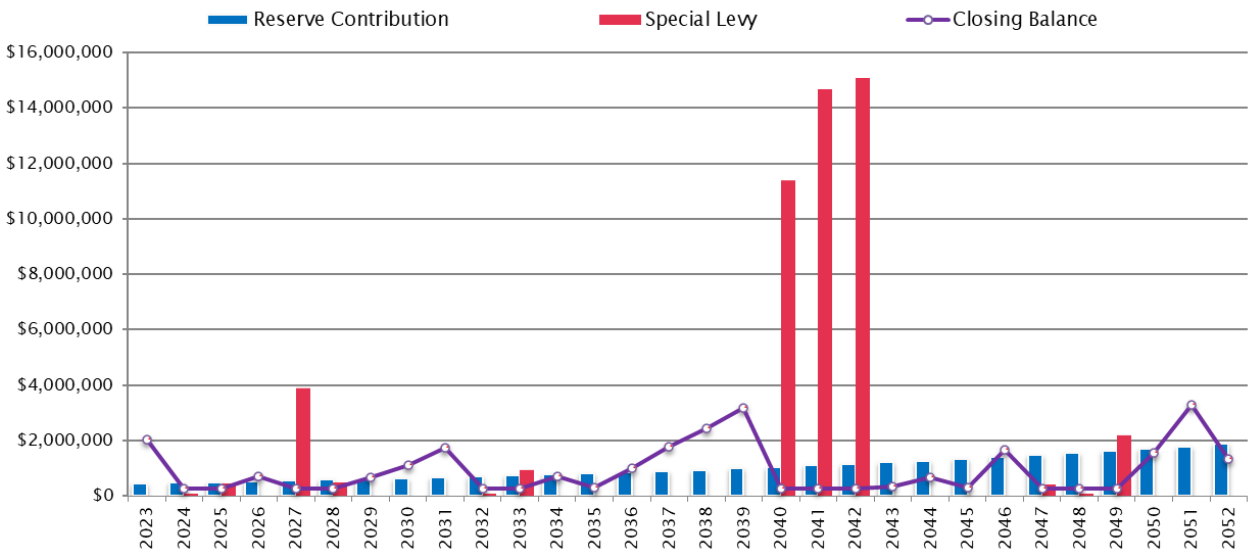

Figure 6.3 CRF balance, contribution, and special levies based on Alternative #1.

6.5 Alternative Funding Scenario #2

Alternative Funding Scenario #2 is based on an initial annual CRF contribution of $500,000 with a 5% annual increase. The initial annual contribution is approximately a $50,000 increase of the Current contribution.

TABLE 6.5 ALTERNATIVE FUNDING SCENARIO #2: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$1,601,536	$500,000	$0	$32,031	$36,000	$2,097,567
2024	$2,097,567	$525,000	$34,282	$41,951	$2,443,800	$255,000
2025	$255,000	$551,250	$446,580	$5,100	$1,002,930	$255,000
2026	$255,000	$578,813	$0	$5,100	$64,000	$774,913
2027	$774,913	$607,753	$3,830,136	$15,498	$4,973,300	$255,000
2028	$255,000	$638,141	$487,139	$5,100	$1,130,380	$255,000
2029	$255,000	$670,048	$0	$5,100	$193,700	$736,448
2030	$736,448	$703,550	$0	$14,729	$217,100	$1,237,627
2031	$1,237,627	$738,728	$0	$24,753	$77,330	$1,923,777
2032	$1,923,777	$775,664	$0	$38,476	$2,362,000	$375,917

Alternative Funding Scenario #2 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.

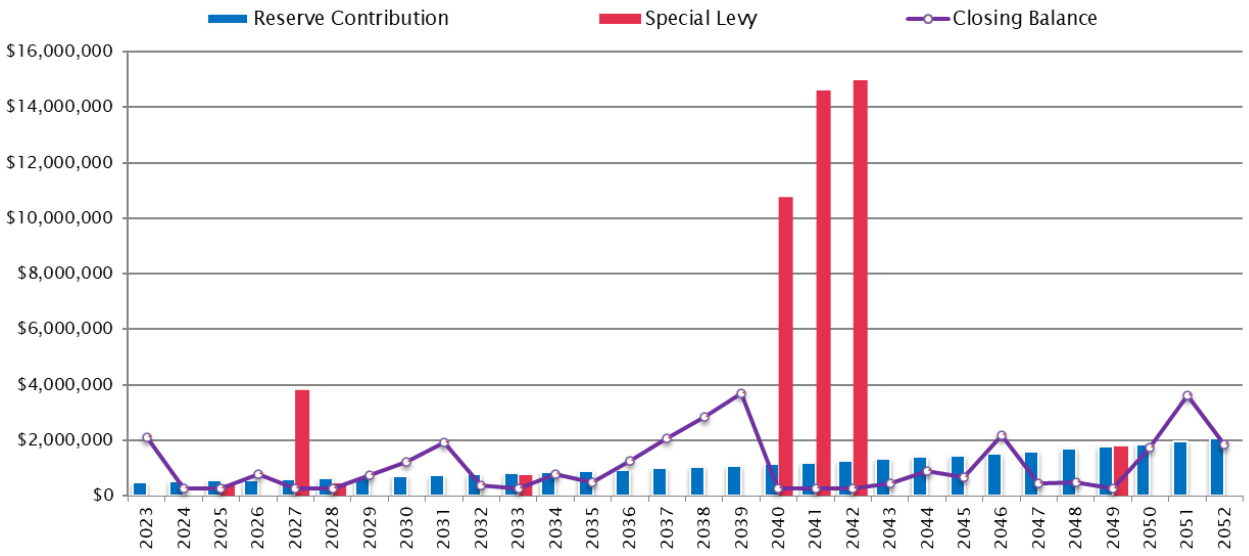

Figure 6.4 CRF balance, contribution, and special levies based on Alternative #2.

6.6 Progressive Funding Scenario

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

TABLE 6.6 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$1,601,536	$2,142,000	$0	$32,031	$36,000	$3,739,567
2024	$3,739,567	$2,142,000	$0	$74,791	$2,443,800	$3,512,558
2025	$3,512,558	$2,142,000	$0	$70,251	$1,002,930	$4,721,879
2026	$4,721,879	$2,142,000	$0	$94,438	$64,000	$6,894,317
2027	$6,894,317	$2,142,000	$0	$137,886	$4,973,300	$4,200,903
2028	$4,200,903	$2,142,000	$0	$84,018	$1,130,380	$5,296,541
2029	$5,296,541	$2,142,000	$0	$105,931	$193,700	$7,350,772
2030	$7,350,772	$2,142,000	$0	$147,015	$217,100	$9,422,687
2031	$9,422,687	$2,142,000	$0	$188,454	$77,330	$11,675,811
2032	$11,675,811	$2,142,000	$0	$233,516	$2,362,000	$11,689,327

The Progressive reserve would eliminate all except for two 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.

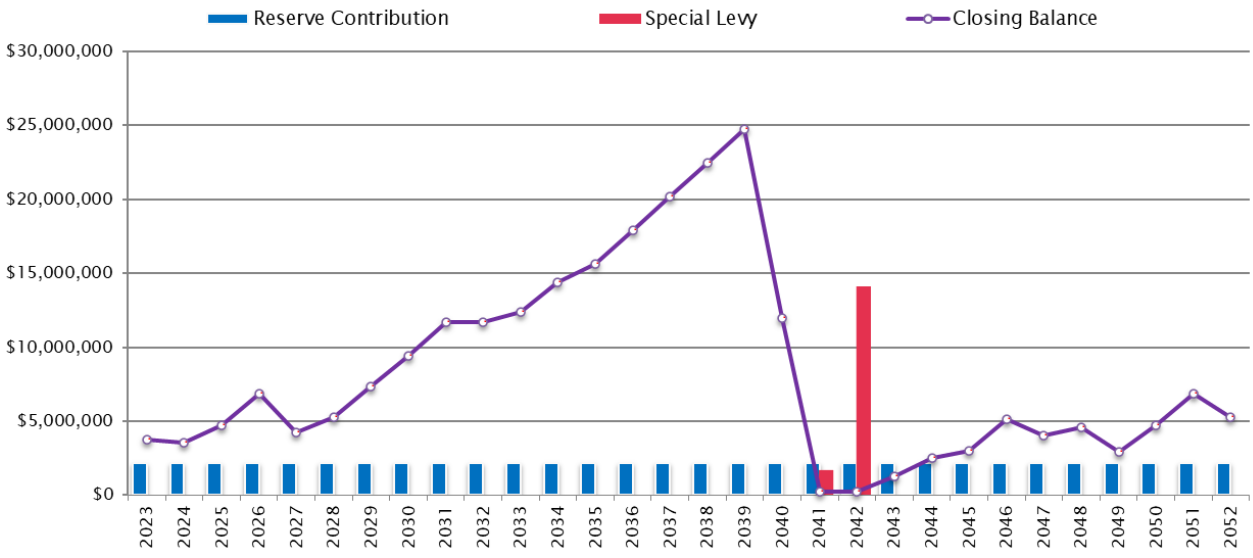

Figure 6.5 CRF balance, contribution, and special levies based on a Progressive reserve calculation.

7 Next Steps

The Report identifies the possible Major Maintenance and Renewal expenditures that 888 Beach Avenue may encounter over the next 30 years. Estimated timelines have been provided to assist the Owners with the planning process; however, the Report should be considered a first step when planning for renewals. Funding scenarios have been developed to provide the Owners with an objective basis for determining appropriate CRF contributions.

888 Beach Avenue is a 31-year-old complex (as of 2023), and most expenditures that occur over the next 10 years relate to the major maintenance of the Assets, such as repainting and localized repair of various claddings, balcony urethane and traffic bearing membrane top-coat renewal, and sealant renewal. As the Report is limited to visual review, the Owners would benefit from completing a BECA, forecasted near the start of the Tactical Plan, to review the concealed physical conditions of the original Assets and refine the capital expenditure forecasts accordingly.

In addition, Assets, such as fire safety equipment and elevators may also require renewal within the next 10 years. Similar to the building enclosure system, it is recommended that the Owners consider additional investigations of these systems to confirm renewal requirements, particularly for the life safety Assets, such as the fire safety equipment, and update the renewal forecast accordingly.

Other expenditures that occur over the next 10 years relate to the maintenance of Assets, such as cleaning and inspecting the drainage and electrical equipment, as well as the cyclical renewal of aging and high-use mechanical equipment. The Owners should continue to be diligent in performing maintenance tasks so Assets may achieve their full service life. It is unlikely that the Owners can avoid special levies in this time period; however, there may be opportunities to reduce the scope of work needed or otherwise manage projects to alleviate the financial impact on individual Owners.

In preparation for future renewals, the Owners should continue to build up their CRF, while continuing to perform maintenance of several Assets. By continuing to save early for anticipated large expenditures, the Owners will benefit from accrued interest and financial preparedness, while minimizing the number of special levies.

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

Recommendations

- → **Project Planning.** Review the information in Section 5.2, and begin planning for significant projects, including commissioning condition 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 Appendices B and C 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.
- → **Climate Action Plan.** Consider a comprehensive review of the complex's needs and the likely impacts of climate change at that location. RDH would work with the Owners to devise this plan into a series of stages that are achievable with funds available and leave the complex climate-ready before the 2050

deadline. The Climate Action Plan would be mapped out against what is known about forthcoming government requirements.

- → **Contingency Reserve Fund (CRF) Planning.** On a yearly basis, review and update the CRF funding strategy based on the estimated forecasts presented in the Report and update information obtained from assessments, investigations, and quotation.
- → **Building Enclosure Condition Assessment (BECA)**. Conduct a BECA of the building enclosure prior to or in conjunction with the update to the Depreciation Report in three years' time. The BECA should inform the renewal timing of balcony and parkade membranes and sealant.
- → **Further Investigations.** Conduct additional condition assessments/investigations, as required to refine the data, and confirm assumptions.
- → **Updates.** Plan for an update to the Report in three years' time. On a yearly basis, the Strata Corporation should review and update their CRF funding strategy based on the estimated forecasts presented in the Report.

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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

888 Beach Avenue
Asset Inventory with Keep-Up Costing

STRUCT 01 - CONCRETE FOUNDATION

Location

Below-grade concrete parkade.

Description

Concrete slab-on-grade.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Concrete foundation is durable and is not deemed to be a renewal asset.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

STRUCT 02 - CONCRETE WALLS AND COLUMNS

Location

Throughout the complex.

Description

Reinforced concrete walls and columns supporting floor and roof structures.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Concrete walls and columns are durable and are not deemed to be renewable assets.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

STRUCT 03 - CIP CONCRETE SUSPENDED SLABS

Location

Throughout the building.

Description

Concrete suspended slabs, with conventional reinforcing.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Concrete slabs are durable and are not deemed to be renewable assets.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 01 - PROTECTED SBS MEMBRANE DECKS AND ROOFS (IRMA ASSEMBLY) WITH TRAFFIC-BEARING SURFACE OR BALLAST

Location

Renewed townhouse/tower roofs and decks.

Description

SBS membrane overlaid with insulation, protection board, soft landscaping, and/or pavers, ballast, etc. as a traffic-bearing surface. Targeted roof and deck membrane replacements have been completed over the years, and the renewals of these areas are shown as components of this asset.

Planning Information

Service Life:	30
Installed Year:	2010
Chronological Age:	13
Next Renewal Year:	2040
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace roof membrane assembly and associated components from 2012-2014 renewals.	Renew Component	0	30 Yrs	2041	Square Foot	$50	9,000	100 %	150 %	$675,000
R02	Replace roof membrane assembly and associated components from 2015-2018 renewals.	Renew Component	0	30 Yrs	2042	Square Foot	$50	9,000	100 %	150 %	$675,000
R03	Replace roof membrane assemblies and associated components from all previous renewals completed prior to 2012.	Renew Assembly	0	30 Yrs	2040	Square Foot	$50	3,000	100 %	150 %	$225,000

ENCL 02 - PROTECTED SHEET APPLIED RUBBER WATERPROOFING MEMBRANE

Location

Portions of Garden, Ocean, and Beach Tower roofs and decks.

Description

Sheet applied reinforced membrane overlaid with combination of drainage mat, insulation, pavers and/or ballast. The roof at Beach Tower was replaced in 2016, Ocean Tower in 2013 and 2018, and Garden Tower in 2019. A blended install year of 2018 is used.

Planning Information

Service Life:	30
Installed Year:	2018
Chronological Age:	5
Next Renewal Year:	2048
Effective Age:	5

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace roof membrane assembly and associated components.	Renew Assembly	0	30 Yrs	2048	Square Foot	$40	3,000	100 %	150 %	$180,000

ENCL 03 - PROTECTED SBS PODIUM WATERPROOFING MEMBRANE

Location

Interior courtyard common areas, original townhouse decks, and pond areas.

Description

Sheet applied reinforced membrane overlaid with combination of drainage mat, insulation, pavers and/or landscaping overburden. A portion of the podium membrane on the exterior of Beach Tower was replaced in 2018. Several townhouse planters and decks on the podium have been replaced since 2012. The podium membrane has recently been replaced (2019) outside of Ocean Tower lobby as well as the patio membrane at Townhouse 7.

Planning Information

Service Life:	30
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2053
Effective Age:	0

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace renewed podium areas at townhouse podium decks and planters. Some of the pavers and overburden may be salvageable.	Renew Component	0	30 Yrs	2052	Square Foot	$110	5,360	100 %	150 %	$884,400
R02	Replace podium membrane assembly and associated components. Some of the pavers and overburden may be salvageable.	Renew Assembly	0	30 Yrs	2053	Square Foot	$110	21,440	80 %	150 %	$2,830,080

ENCL 04 - STUCCO CLAD SOFFIT

Location

Underside of balconies, walkway soffits, and select overhangs.

Description

Stucco cladding over supporting structure.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Clean and renew acrylic stucco finish coat as required.	Renew Component	0	10 Yrs	2025	Hundred Square Foot	$180	201	25 %	100 %	$9,045
R02	Replace stucco clad soffit and associated components.	Renew Assembly	0	40 Yrs	2032	Square Foot	$25	20,100	100 %	100 %	$502,500

ENCL 05 - ANCHOR FALL PROTECTION EQUIPMENT

Location

Tower roofs and decks.

Description

Safety anchoring system to complete various work and maintenance on the exterior of the complex.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace components of fall protection system, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$30,000	1	100 %	100 %	$30,000

ENCL 06 - GUARDRAIL GLAZED ALUMINUM

Location

Balcony, deck, and walkway perimeters.

Description

Aluminum posts and glass infill panels functioning as a protective barrier at the open sides of stairs, landings, balconies, decks, raised walkways or other locations to prevent accidental falls from one level to another. Localized replacement of aluminum-framed glazed guardrails were completed at Ocean Tower in 2015.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace or re-certify exterior guardrails in conjunction with balcony and deck replacements at Beach Tower.	Renew Component	0	40 Yrs	2040	Linear Foot	$90	6,900	40 %	100 %	$248,400
R02	Replace or re-certify exterior guardrails in conjunction with balcony and deck replacements at Ocean and Garden Towers.	Renew Component	0	40 Yrs	2041	Linear Foot	$90	6,900	40 %	100 %	$248,400
R03	Replace or re-certify original exterior guardrails in conjunction with remaining balcony, deck, and walkway replacements.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$90	6,900	20 %	100 %	$124,200

ENCL 07 - GUARDRAIL ALUMINUM

Location

Courtyard.

Description

Aluminum posts and pickets functioning as a protective barrier at the open sides of stairs, landings, balconies, decks, raised walkways or other locations to prevent accidental falls from one level to another. The exterior railings and handrails were recoated in 2023.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	21

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace or re-certify exterior guardrails in conjunction with the podium replacement.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$60	2,900	100 %	100 %	$174,000

ENCL 08 - DAVIT BASES AND ANCHOR FALL PROTECTION EQUIPMENT

Location

Beach Tower main roof.

Description

Safety anchoring system for work on exterior walls and roofs. Fall protection equipment and davits are checked annually.

Planning Information

Service Life:	40
Installed Year:	2020
Chronological Age:	3
Next Renewal Year:	2060
Effective Age:	3

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace components of fall protection system, as required.	Renew Assembly	0	40 Yrs	2060	Allowance	$20,000	1	100 %	100 %	$20,000

ENCL 09 - CLAY MASONRY VENEER WALL

Location

All elevations of townhouses and lower levels of towers.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Locally repoint mortar joints in clay masonry veneer wall, as required.	Maintenance Level 2	0	5 Yrs	2025	Square Foot	$8	27,400	10 %	100 %	$21,920

R01	Phase 3: Replace sections of clay masonry veneer cladding along with associated flashing and sealants as required.	Renew Component	0	40 Yrs	2042	Square Foot	$60	27,400	33 %	120 %	$651,024
R02	Phase 2: Replace sections of clay masonry veneer cladding along with associated flashing and sealants as required.	Renew Component	0	40 Yrs	2041	Square Foot	$60	27,400	33 %	120 %	$651,024
R03	Phase 1: Replace sections of clay masonry veneer cladding along with associated flashing and sealants as required.	Renew Assembly	0	40 Yrs	2040	Square Foot	$60	27,400	33 %	120 %	$651,024

ENCL 10 - COMPOSITE METAL PANEL WALL

Location

All elevations of towers.

Description

Metal panel system with integral framing and anchorage to create a cavity over a sheathing membrane.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2040
Effective Age: 23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Review all metal finishes. Touch up paint as required (cost includes corrugated metal panel walls).	Maintenance Level 2	0	2 Yrs	2025	Each	$10,000	1	100 %	100 %	$10,000
R01	Phase 3: Replace metal panels along with associated flashing, vents, and sealants.	Renew Component	0	40 Yrs	2042	Square Foot	$75	73,800	33 %	120 %	$2,191,860
R02	Phase 2: Replace metal panels along with associated flashing, vents, and sealants.	Renew Component	0	40 Yrs	2041	Square Foot	$75	73,800	33 %	120 %	$2,191,860
R03	Phase 1: Replace metal panels along with associated flashing, vents, and sealants.	Renew Assembly	0	40 Yrs	2040	Square Foot	$75	73,800	33 %	120 %	$2,191,860

ENCL 11 - CONCRETE WALL

Location

All elevations of towers and select elevations of townhouses.

Description

Coated poured-in-place architectural concrete wall. Re-coating and repair of concrete walls are shown as a component of this asset.

Planning Information

Service Life: 75
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2067
Effective Age: 31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repair of delaminated or spalled concrete should be carried out prior to recoating.	Maintenance Level 1	0	5 Yrs	2025	Square Foot	$150	500	5 %	100 %	$3,750

R01	Reapplication of the protective coating as required, including preparation of the concrete substrate.	Renew Component	5	5 Yrs	2025	Square Foot	$4.50	5,000	100 %	120 %	$27,000
R02	Concrete wall is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	Renew Assembly	0	75 Yrs	2067	Square Foot	$0	0	100 %	100 %	$0

ENCL 12 - PROFILED SHEET METAL CLADDING WALL

Location

Rooftop parapet walls and Mechanical room enclosures at Ocean, Beach, and Garden Towers.

Description

Prefinished steel cladding fastened with framing and anchorage system, exposed fasteners. Select areas on Ocean tower had new corrugated metal panels installed over EIFS cladding during the 2018 maintenance plan.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phase 3: Replace sheet metal cladding along with associated flashing and sealants.	Renew Component	0	40 Yrs	2042	Allowance	$150,000	1	33 %	120 %	$59,400
R02	Phase 2: Replace sheet metal cladding along with associated flashing and sealants.	Renew Component	0	40 Yrs	2041	Allowance	$150,000	1	33 %	120 %	$59,400
R03	Phase 1: Replace sheet metal cladding along with associated flashing and sealants.	Renew Assembly	0	40 Yrs	2040	Allowance	$150,000	1	33 %	120 %	$59,400

ENCL 13 - ALUMINUM FRAMED WINDOW

Location

All elevations towers and townhouses.

Description

Aluminum framed, non-thermally broken windows with double insulating glazing units, and awning operators. Windows are arranged in either punched and strip window configurations. Approximately 30% of all IGU's have been replaced, and are replaced annually, as needed. Sealant was installed at all mitre joints, transitions in the aluminum frames as well as between IGUs and frames in the complex as part of a maintenance plan between 2012 and 2018.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	10	2 Yrs	2024	Square Foot	$50	102,800	0 %	100 %	$0
R01	Phase 3: Replace aluminum framed windows and associated components.	Renew Component	0	40 Yrs	2042	Square Foot	$115	102,800	33 %	100 %	$3,901,260
R02	Phase 2: Replace aluminum framed windows and associated components.	Renew Component	0	40 Yrs	2041	Square Foot	$115	102,800	33 %	100 %	$3,901,260
R03	Phase 1: Replace aluminum framed windows and associated components.	Renew Assembly	0	40 Yrs	2040	Square Foot	$115	102,800	33 %	100 %	$3,901,260

ENCL 14 - PRESSURE CAP SKYLIGHT

Location

South elevation townhouse roofs.

Description

Aluminum pressure plate skylight system with double glazed insulating glazing units.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2040
Effective Age: 23

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace pressure cap skylight and associated components.	Renew Assembly	0	40 Yrs	2040	Square Foot	$250	710	100 %	100 %	$177,500

ENCL 15 - GLASS BLOCK WINDOW

Location

Select locations on the lower levels of the north and south elevations, including the California walkways, and the rooftop of Garden Tower.

Description

Glass block windows.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2040
Effective Age: 23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repoint mortar joints in glass block windows and complete localized repairs, as required.	Maintenance Level 2	0	5 Yrs	2025	Square Foot	$10	3,600	20 %	120 %	$8,640
R01	Phase 2: Replace glass block windows.	Renew Component	0	40 Yrs	2041	Square Foot	$78	3,600	33 %	100 %	$92,664
R02	Phase 3: Replace glass block windows.	Renew Component	0	40 Yrs	2042	Square Foot	$78	3,600	33 %	100 %	$92,664
R03	Phase 1: Replace glass block windows.	Renew Assembly	0	40 Yrs	2040	Square Foot	$78	3,600	33 %	100 %	$92,664

ENCL 16 - CURTAIN WALL - STICK CAPPED

Location

Ground floor common areas.

Description

Curtain wall, stick built assembly, capped 4 sides, with double insulating glazing units.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phase 3: Replace or refurbish curtain wall assembly.	Renew Component	0	40 Yrs	2042	Square Foot	$140	1,900	33 %	100 %	$87,780
R02	Phase 2: Replace or refurbish curtain wall assembly.	Renew Component	0	40 Yrs	2041	Square Foot	$140	1,900	33 %	100 %	$87,780
R03	Phase 1: Replace or refurbish curtain wall assembly.	Renew Assembly	0	40 Yrs	2040	Square Foot	$140	1,900	33 %	100 %	$87,780

ENCL 17 - ALUMINUM STOREFRONT

Location

Ground floor commercial areas and townhouse roof top windows adjacent to skylights.

Description

Aluminum framed, non-thermally broken, storefront system with insulating glazing units, and no operators.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phase 3: Replace storefront window system.	Renew Component	0	40 Yrs	2042	Square Foot	$100	1,600	33 %	100 %	$52,800
R02	Phase 2: Replace storefront window system.	Renew Component	0	40 Yrs	2041	Square Foot	$100	1,600	33 %	100 %	$52,800
R03	Phase 1: Replace storefront window system.	Renew Assembly	0	40 Yrs	2040	Square Foot	$100	1,600	33 %	100 %	$52,800

ENCL 18 - ALUMINUM FRAMED GLAZED SWING DOOR

Location

Lobby and commercial space access doors.

Description

Aluminum frame swing door with insulated glazing units. Replacement of seven (7) automatic door openers have been completed (2019) at lobby entrances and P1 parkade entrances.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phase 2: Replace aluminum frame swing doors.	Renew Component	0	30 Yrs	2041	Each	$4,000	16	33 %	100 %	$21,120
R02	Phase 3: Replace aluminum frame swing doors.	Renew Component	0	30 Yrs	2042	Each	$4,000	16	33 %	100 %	$21,120
R03	Phase 1: Replace aluminum frame swing doors.	Renew Assembly	0	30 Yrs	2040	Each	$4,000	16	33 %	100 %	$21,120

ENCL 19 - ALUMINUM FRAMED SLIDING GLASS DOOR

Location

Suite balcony and deck access doors.

Description

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

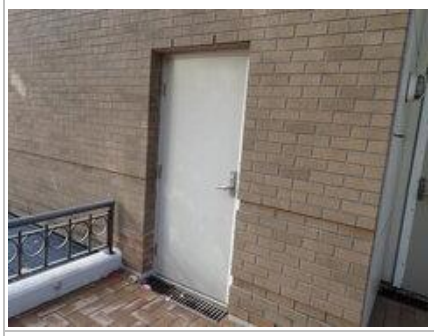
Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phase 3: Replace sliding glass doors and associated components.	Renew Component	0	30 Yrs	2042	Each	$5,000	398	33 %	120 %	$788,040
R02	Phase 2: Replace sliding glass doors and associated components.	Renew Component	0	30 Yrs	2041	Each	$5,000	398	33 %	120 %	$788,040
R03	Phase 1: Replace sliding glass doors and associated components.	Renew Assembly	0	30 Yrs	2040	Each	$5,000	398	33 %	120 %	$788,040

ENCL 20 - STEEL SWING DOOR



Location

Parkade and stairwell exit doors.

Description

Hollow steel slab swing doors.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint steel door finish.	Renew Component	0	8 Yrs	2030	Each	$500	13	100 %	100 %	$6,500
R02	Replace steel swing doors and frames.	Renew Assembly	0	25 Yrs	2025	Each	$2,500	13	100 %	100 %	$32,500

ENCL 21 - METAL CLAD SWING DOOR

Location

Townhouse courtyard single and double swing doors.

Description

Metal clad wood frame swing door with insulating glazing units. Various metal swing doors have been replaced over the years, as required.

Planning Information

Service Life:	25
Installed Year:	2019
Chronological Age:	4
Next Renewal Year:	2044
Effective Age:	4

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace metal clad swing doors.	Renew Assembly	0	25 Yrs	2044	Each	$1,500	30	100 %	100 %	$45,000

ENCL 22 - TOWNHOUSE SWING DOOR

Location

Townhouse and other miscellaneous exterior entry doors.

Description

Fibreglass swing doors.

Planning Information

Service Life:	25
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2042
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint wood door and frame finish.	Renew Component	0	6 Yrs	2025	Each	$200	35	100 %	100 %	$7,000

R02	Replace newer (2014) wood swing doors.	Renew Component	0	25 Yrs	2039	Each	$3,000	10	100 %	100 %	$30,000
R03	Replace wood swing doors.	Renew Assembly	0	25 Yrs	2042	Each	$3,000	25	100 %	100 %	$75,000

ENCL 23 - FIBERGLASS FRAME GLAZED SWING DOOR

Location

Select single and double townhouse doors (T5-T11 and T23-26).

Description

Fiberglass frame swing doors with insulating glazing units. Doors are being replaced with fibreglass framed doors, as required.

Planning Information

Service Life:	25
Installed Year:	2013
Chronological Age:	10
Next Renewal Year:	2040
Effective Age:	8

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace fiberglass frame glazed swing door.	Renew Assembly	0	25 Yrs	2040	Each	$4,000	20	100 %	100 %	$80,000

ENCL 24 - EXPOSED URETHANE BALCONY MEMBRANE - CONCRETE SUBSTRATE

Location

Balconies.

Description

Liquid applied urethane membrane applied over concrete balcony. The term ‘balcony’ refers to an exterior horizontal surface that is intended for pedestrian use, but which projects from the building such that it is not located over occupied space.

Planning Information

Service Life:	25
Installed Year:	2012
Chronological Age:	11
Next Renewal Year:	2040
Effective Age:	8

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repair locally damaged and delaminated balcony membrane prior to re-application of top coat.	Maintenance Level 3	0	10 Yrs	2025	Square Foot	$20	16,900	5 %	150 %	$25,350
R01	Prepare and re-apply membrane top coat, as required.	Renew Component	0	10 Yrs	2025	Square Foot	$8	16,900	100 %	150 %	$202,800
R02	Replace exposed urethane balcony membrane and associated components on Ocean and Garden Towers.	Renew Component	0	25 Yrs	2041	Square Foot	$24	6,800	100 %	200 %	$326,400
R03	Replace exposed urethane balcony membrane and associated components on Beach Tower.	Renew Assembly	0	25 Yrs	2040	Square Foot	$24	10,100	100 %	200 %	$484,800

ENCL 25 - TILED CALIFORNIA WALKWAYS AND REMAINING ORIGINAL BALCONIES

Location

California walkways between Beach Tower and Garden Tower along the north elevation townhouses and the remaining original townhouse balconies.

Description

Tiles on thin-set mortar applied to concrete balcony surface. Select locations appear to have a urethane based waterproofing membrane located under the tiles.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2028
Effective Age:	15

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace balcony tiled finish, including new waterproofing.	Renew Assembly	0	20 Yrs	2028	Square Foot	$60	2,000	100 %	200 %	$240,000

ENCL 26 - METAL FRAME AND GLASS CANOPY

Location

Tower lobby doors and commercial space entry doors.

Description

Canopy constructed with metal framing and single glazing. The metal frames were recoated and the glass was removed and resealed in 2023.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2040
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint exposed metal frame of canopy assemblies.	Renew Component	0	20 Yrs	2061	Hundred Square Foot	$500	11	100 %	100 %	$5,500
R02	Phase 2: Replace metal and glass canopy assembly.	Renew Component	0	40 Yrs	2041	Square Foot	$140	1,100	33 %	100 %	$50,820
R03	Phase 3: Replace metal and glass canopy assembly.	Renew Component	0	40 Yrs	2042	Square Foot	$140	1,100	33 %	100 %	$50,820
R04	Phase 1: Replace metal and glass canopy assembly.	Renew Assembly	0	40 Yrs	2040	Square Foot	$200	1,100	33 %	100 %	$72,600

ENCL 27 - OPEN-GRID OVERHEAD PARKADE GATE

Location

Parkade entrances.

Description

Pre-finished metal grid overhead gate with motor drive and hardware for underground parkade. One gate was replaced in 2013.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2028
Effective Age:	20

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	0	12 Yrs	2028	Square Foot	$35	420	50 %	100 %	$7,350

ENCL 28 - SLAB-ON-GRADE

Location

Parkade Level P1.

Description

Concrete slab on grade.

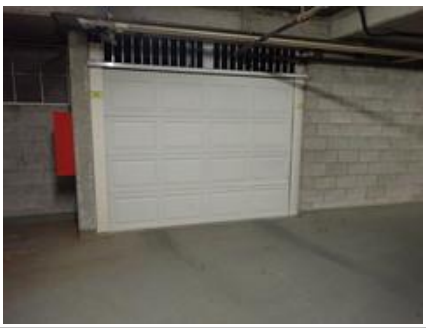
Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Concrete slab is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 29 - SECTIONAL OVERHEAD DOOR - METAL



Location

Townhouse garages.

Description

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

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2028
Effective Age:	20

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	0	25 Yrs	2028	Each	$2,000	12	100 %	100 %	$24,000

ENCL 30 - PARKING SLAB WITH TRAFFIC-BEARING MEMBRANE

Location

Suspended slabs within the parkade; Levels P1-P3.

Description

Traffic-bearing membrane on concrete parkade suspended floor slabs. Traffic bearing membrane was installed from 2004-2008.

Planning Information

Service Life:	25
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2033
Effective Age:	15

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-apply traffic demarcation striping and directional signage as required. Frequency will depend on traffic volume and other factors (cost includes slab on grade).	Maintenance Level 1	0	5 Yrs	2028	Allowance	$8,000	1	100 %	100 %	$8,000
J02	Repair damaged and delaminated membrane prior to re-application of top coat.	Maintenance Level 3	0	10 Yrs	2028	Square Foot	$8	169,300	5 %	120 %	$81,264
R01	Re-apply membrane top coat in high traffic areas (e.g. drive aisles).	Renew Component	0	10 Yrs	2028	Square Foot	$5	169,300	25 %	100 %	$211,625
R02	Prepare concrete surface and re-apply traffic-bearing membrane.	Renew Component	0	25 Yrs	2058	Square Foot	$12	169,300	50 %	100 %	$1,015,800
R03	Prepare concrete surface and re-apply traffic-bearing membrane.	Renew Assembly	0	25 Yrs	2033	Square Foot	$12	169,300	50 %	100 %	$1,015,800

ENCL 31 - SEALANT

Location

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

Description

Sealant of various types(predominantly silicone) located at joints between building enclosure assemblies, as well as around components and penetrations within building enclosure assemblies. Sealant renewals occurred between 2012 and 2019, 2015 was used as a blended year for the age of the sealant. Sealant at Townhouse exterior walls (courtyard and street facing) renewed in 2019.

Planning Information

Service Life:	20
Installed Year:	2015
Chronological Age:	8
Next Renewal Year:	2040
Effective Age:	3

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Locally replace sealants at interfaces between building enclosure assemblies, as required.	Renew Component	0	10 Yrs	2025	Square Foot	$4	104,600	100 %	120 %	$502,080

R02	Phase 3: Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	Renew Component	0	20 Yrs	2042	Square Foot	$4	104,600	33 %	120 %	$165,686.40
R03	Phase 2: Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	Renew Component	0	20 Yrs	2041	Square Foot	$4	104,600	33 %	120 %	$165,686.40
R04	Phase 1: Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	Renew Assembly	0	20 Yrs	2040	Square Foot	$4	104,600	33 %	120 %	$165,686.40

ENCL 32 - GENERAL & INSPECTIONS

Location

Throughout the site.

Description

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

Planning Information

Service Life: 75
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2067
Effective Age: 31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Update depreciation report.	Maintenance Level 3	15	3 Yrs	2026	Allowance	$0	0	100 %	100 %	$0
J02	Perform full condition assessment of all enclosure systems.	Assessment	15	6 Yrs	2024	Allowance	$25,000	1	100 %	100 %	$25,000
R01	This is not a renewable asset.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ELEC 01 - DISTRIBUTION TRANSFORMER

Location

All electrical rooms in parkade.

Description

Federal Pioneer along with other manufacturer transformers ranging from 45 kVa to 600kVa, 3 phase, dry-type, coil, and core units with vibration dampers and NEMA enclosures.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2032
Effective Age: 31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Clean away dust and other detritus. Vacuuming is the recommended method for cleaning. Special attention should be given to cooling ducts within the winding. Low pressure dry air can be used if care is taken to avoid driving the contamination into insulation.	Maintenance Level 3	0	3 Yrs	2024		$500	0	100 %	100 %	$0
R01	Conduct infrared thermography and ultrasonic scanning tests on distribution transformers. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	Renew Component	0	5 Yrs	2024	Allowance	$2,000	1	100 %	100 %	$2,000
R02	Cyclical replacement of distributions transformers as required.	Renew Assembly	0	20 Yrs	2032	Each	$10,000	12	50 %	100 %	$60,000

ELEC 02 - EMERGENCY GENERATOR

Location

Emergency generator room.

Description

Kohler, 500KW, 600KVA, 3 phase, 347/600V, 1800 rpm, diesel AC generator with a separate fuel tank to provide power.

Planning Information

Service Life:	35
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace generator hoses.	Renew Component	0	10 Yrs	2024	Allowance	$1,500	0	100 %	100 %	$0
R02	Rebuild emergency generator, as required.	Renew Component	0	17 Yrs	2024	Allowance	$15,000	1	100 %	100 %	$15,000
R03	Replace generator battery packs.	Renew Component	0	4 Yrs	2024	Each	$300	0	100 %	100 %	$0
R04	Replace emergency generator and transfer switch.	Renew Assembly	0	35 Yrs	2027	Each	$120,000	1	100 %	100 %	$120,000

ELEC 03 - UNIT SUBSTATION

Location

Main electrical room.

Description

Federal Pioneer, 150KV, 120/208V & 347/600V, 3 phase, dry type transformer; main breaker, load break switches and metering compartments contained within dual radial unit substation to provide primary electrical service.

Planning Information

Service Life:	35
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Service shutdown event. Inspect, clean, and maintain all unit substation equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	Maintenance Level 3	0	5 Yrs	2024	Allowance	$5,000	1	100 %	100 %	$5,000
J02	Lubricate all moving contacts.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J03	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).	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J04	Calibrate electrical relays to match documented (or utility company) settings.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J05	Prior to cleaning verify nameplate information; check insulator chips, cracks, and tracking; inspect lightning arrestors and visually inspect contacts and bus.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J06	Verify that unit substation grounding network is adequate to ensure safety during work and while equipment is in operation.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J07	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	Maintenance Level 3	0	5 Yrs	2024		$1,000	0	100 %	100 %	$0
R01	Replace unit substation equipment.	Renew Assembly	0	35 Yrs	2027	Each	$280,000	1	100 %	100 %	$280,000

ELEC 04 - TANK - FUEL OIL STORAGE

Location

Emergency generator room.

Description

Steel single wall fuel storage tank adjacent to the emergency generator, connected to genset. Tank is approximately 720L based on the previous depreciation report by Halsall and Associates.

Planning Information

Service Life:	15
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	14

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of oil storage tank (and addition of secondary containment).	Renew Assembly	0	15 Yrs	2024	Each	$10,000	1	100 %	100 %	$10,000

ELEC 05 - ELECTRIC VEHICLE CHARGING STATION

Location

Below-grade parkade Level P3.

Description

Electric vehicle charging station.

Planning Information

Service Life:	15
Installed Year:	2022
Chronological Age:	1
Next Renewal Year:	2037
Effective Age:	1

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace charging modules	Renew Assembly	0	15 Yrs	2037	Each	$2,500	2	100 %	100 %	$5,000

ELEC 06 - ELECTRICAL DISTRIBUTION

Location

All electrical rooms in parkade.

Description

Federal Pioneer 2500A, 347/600V (in main electrical room), 1200A 120/208V (in smaller electrical rooms), 3 phase switchgear units; downstream switchboards, panelboards, breakers, switches, disconnects and wiring to mechanical, lighting and power loads throughout the building [and to individual suites through BC Hydro owned metering devices].

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0

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.	Renew Component	0	5 Yrs	2024	Allowance	$3,000	1	100 %	100 %	$3,000
R02	Cyclical replacement of components of the electrical distribution equipment, as required.	Renew Assembly	0	40 Yrs	2032	Per Building	$100,000	3	100 %	100 %	$300,000

ELEC 07 - EXTERIOR LIGHT FIXTURES

Location

Mounted to walls, and soffits, and throughout the complex.

Description

A variety of fixture types, including wall, pole and post mounted, street, pathway, and recessed soffit pot lighting. A variety of lamp types, including fluorescent, compact fluorescent, halogen, incandescent, LED, etc. for exterior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers, and photocells. Lighting at the tops of each tower was replaced in 2019.

Planning Information

Service Life:	20
Installed Year:	2000
Chronological Age:	23
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	0	6 Yrs	2024	Allowance	$800	0	100 %	100 %	$0
R02	Cyclical replacement of electronic ballasts and bulbs	Renew Component	0	10 Yrs	2024	Each	$15	450	70 %	100 %	$4,725
R03	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	0	20 Yrs	2025	Each	$100	450	100 %	100 %	$45,000

ELEC 08 - INTERIOR LIGHT FIXTURES

Location

All common areas throughout the building.

Description

A variety of fixture types, including fixed surface (pendant, track, and sconce) and recessed (pot, troffer, and cove). A variety of lamp types, including fluorescent, compact fluorescent, halogen, incandescent, LED, etc. for interior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers, dimmers, and photocells. Replacement of bulbs and ballasts is currently occurring on an as needed basis. Installed new coloured LED lights at the rooftop of each tower in 2020.

Planning Information

Service Life:	20
Installed Year:	2000
Chronological Age:	23
Next Renewal Year:	2028
Effective Age:	15

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	0	6 Yrs	2024	Allowance	$800	0	100 %	100 %	$0
R02	Cyclical replacement of electronic ballasts.	Renew Component	0	10 Yrs	2024	Each	$15	0	70 %	100 %	$0
R03	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	0	20 Yrs	2028	Each	$150	700	100 %	100 %	$105,000

ELEC 09 - INTERIOR LIGHT FIXTURES - PARKADE

Location

Parkade.

Description

Primarily LED 4ft fixtures evenly spaced throughout the parkade. Select T8 fluorescent lamps may still exist.

Planning Information

Service Life:	20
Installed Year:	2014
Chronological Age:	9
Next Renewal Year:	2034
Effective Age:	9

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	0	6 Yrs	2024	Allowance	$800	0	100 %	100 %	$0
R02	Cyclical replacement of electronic ballasts.	Renew Component	0	10 Yrs	2024	Each	$15	0	70 %	100 %	$0

R03	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	0	20 Yrs	2034	Each	$150	500	100 %	100 %	$75,000

ELEC 10 - ENTERPHONE SYSTEM

Location

Lobby entrances and front of parkade gate.

Description

Flush mounted, enterphone panels with associated key pads and display panels.

Planning Information

Service Life:	25
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2042
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace enterphone panels, excluding field wiring.	Renew Assembly	0	25 Yrs	2042	Each	$6,000	7	100 %	100 %	$42,000

ELEC 11 - PROXIMITY ACCESS CONTROL

Location

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

Description

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

Planning Information

Service Life:	12
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2029
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Install or modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	0	15 Yrs	2029	Per Suite	$400	259	100 %	100 %	$103,600

ELEC 12 - SECURITY SURVEILLANCE

Location

Strategically located throughout the complex.

Description

Cameras, multiplexer, monitors, and storage media to deter and track activity on and within building premises. Additional cameras were installed in 2017.

Planning Information

Service Life:	14
Installed Year:	2016
Chronological Age:	7
Next Renewal Year:	2030
Effective Age:	7

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Service the multiplex unit, update software as required.	Renew Component	0	5 Yrs	2025	Allowance	$5,000	0	100 %	100 %	$0
R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	0	14 Yrs	2030	Allowance	$30,000	1	100 %	100 %	$30,000

MECH 01 - CONTROLS - BOILER ELECTRONIC

Location

Rooftop and parkade mechanical rooms with boilers.

Description

Electronic control panel to optimize boiler operation and efficiency.

Planning Information

Service Life:	15
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	14

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of sensors and other field devices, as required.	Renew Component	0	3 Yrs	2024		$2,000	0	100 %	100 %	$0
R02	Replace boiler control, as required.	Renew Assembly	0	15 Yrs	2024	Allowance	$10,000	1	100 %	100 %	$10,000

MECH 02 - CONTROLS - ELECTRONIC ACTUATORS

Location

Mechanical rooms throughout the complex.

Description

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

Planning Information

Service Life:	10
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	9

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of electronic actuator controls, as required.	Renew Assembly	0	10 Yrs	2024	Allowance	$3,000	1	100 %	100 %	$3,000

MECH 03 - CONTROLS - HVAC INSTRUMENTATION

Location

Common areas and service rooms throughout the building.

Description

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

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	0	3 Yrs	2025	Allowance	$500	1	100 %	100 %	$500

MECH 04 - GAS DETECTION - PARKADE

Location

Mounted to columns throughout the parkade.

Description

Armstrong AMC-1022 electronic sensing devices for detection of dangerous gases, carbon monoxide (CO), (propane), and (combustible fuels) produced by vehicles and to activate the exhaust fans accordingly.

Planning Information

Service Life:	10
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	8

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of gas detection sensors.	Renew Assembly	0	5 Yrs	2025	Allowance	$3,000	1	50 %	100 %	$1,500

MECH 05 - PIPING - DOMESTIC WATER DISTRIBUTION

Location

Connected to fixtures throughout the building.

Description

K and L copper piping for vertical/horizontal mains system and distribution piping within the suites. Soldered connections. The hot water supply riser and recirculation riser in Garden Tower were replaced in 2013 and 2008 respectively. Hot water recirculation lines were replaced in Beach Tower in 2015 on one elevation. Hot water recirculation lines were replaced in Ocean Tower in 2018 between floors 3 and 8 on one elevation.

Planning Information

Service Life:	28
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	Assessment	0	20 Yrs	2047	Allowance	$12,500	1	100 %	100 %	$12,500
R01	Replace components of domestic plumbing distribution system, including domestic valves. Extent and timing of renewal will be dependent on the third-party testing of the domestic water distribution piping recommended in tactical plan.	Renew Assembly	0	28 Yrs	2027	Per Suite	$10,000	259	100 %	100 %	$2,590,000

MECH 06 - PUMP - DOMESTIC WATER BOOSTER

Location

Sprinkler rooms under Ocean and Beach Towers.

Description

Franklin Electric duplex system with 2 HP lead pump, 1/2 HP lag pump (Ocean Tower). One booster pump was replaced in March 2019 with a new VFD pump. The domestic booster pump at Beach Tower was replaced in 2016.

Planning Information

Service Life:	14
Installed Year:	2016
Chronological Age:	7
Next Renewal Year:	2030
Effective Age:	7

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
R01	Replace motor bearings, pump bearings and seals. Inspect mounts and housing, repair as required.	Renew Component	0	7 Yrs	2024	Allowance	$5,000	1	100 %	100 %	$5,000
R02	Replace domestic booster pumps and motor control panel in Ocean Tower.	Renew Component	0	14 Yrs	2030	Each	$5,000	2	100 %	100 %	$10,000
R03	Replace domestic booster pumps and motor control panel in Beach Tower.	Renew Assembly	0	14 Yrs	2030	Each	$5,000	2	100 %	100 %	$10,000

MECH 07 - TANK - EXPANSION -DHW - DIAPHRAGM

Location

Parkade Mechanical room under Beach Tower.

Description

Amtrol floor mounted diaphragm expansion tanks for domestic water system. The expansion tank at Beach Tower was replaced in 2018. The expansion tank at Ocean/ Garden Tower was replaced in 2022.

Planning Information

Service Life: 20
Installed Year: 2018
Chronological Age: 5
Next Renewal Year: 2038
Effective Age: 5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of buffer tanks, as required.	Renew Assembly	0	20 Yrs	2038	Each	$1,500	3	100 %	100 %	$4,500

MECH 08 - VALVES - CROSS CONNECTION & BACKFLOW PREVENTION

Location

Sprinkler rooms under Beach and Ocean Towers.

Description

Various types and sizes of backflow prevention valves, including vacuum breakers, double check, reduced pressure valves on systems. Various valves are replaced as required. Various valves were replaced in 2017 at Ocean Tower and in 2020 at Beach Tower.

Planning Information

Service Life: 20
Installed Year: 2017
Chronological Age: 6
Next Renewal Year: 2037
Effective Age: 6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	Renew Assembly	0	20 Yrs	2037	Allowance	$10,000	1	100 %	100 %	$10,000

MECH 09 - VALVES - PLUMBING FLOW CONTROL AND DIRECTIONAL

Location

Mechanical rooms on rooftops and in the parkade.

Description

Various types and sizes of valves, including pressure reducing valves, isolation valves, two-way and three-way valves, circuit flow control valves and check valves to regulate the flow of water through domestic plumbing systems. Select valves were replaced in 2015.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of valves, as required.	Renew Assembly	0	20 Yrs	2032	Allowance	$6,000	1	100 %	100 %	$6,000

MECH 10 - BOILER - DHW - HEATING - GAS FIRED

Location

Mechanical room on parkade Level P2 under Beach Tower.

Description

IBC coppertube natural gas fired, domestic service hot water heater. Direct vent/chimney. Water heaters are connected to storage tanks. The domestic hot water boiler at Beach Tower was replaced in 2019.

Planning Information

Service Life:	14
Installed Year:	2019
Chronological Age:	4
Next Renewal Year:	2033
Effective Age:	4

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Tighten electrode mounting clamp.	Maintenance Level 3	0	2 Yrs	2026		$0	0	100 %	100 %	$0
J02	Replace sacrificial anodes in storage tanks.	Maintenance Level 3	0	2 Yrs	2026		$600	0	100 %	100 %	$0
J03	Replace nozzle assembly.	Maintenance Level 3	0	5 Yrs	2029		$100	0	100 %	100 %	$0
R01	Cyclical replacement of gas fired domestic hot water heaters.	Renew Assembly	0	14 Yrs	2033	Allowance	$17,000	3	100 %	100 %	$51,000

MECH 11 - DRAINAGE - SANITARY

Location

Connected to waste fixtures throughout the building.

Description

Cast iron piping, p-traps, and fittings, with mechanical joints. Localized repairs/ replacement of the sanitary drainage piping was completed in 2022.

Planning Information

Service Life:	50
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2042
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	0	5 Yrs	2024		$3,000	1	100 %	100 %	$3,000
J02	Jetflush/auger lateral drain lines.	Maintenance Level 3	0	10 Yrs	2024		$4,000	1	100 %	100 %	$4,000
R01	Repair components of sanitary drainage collection system, as required.	Renew Assembly	0	50 Yrs	2042	Allowance	$30,000	1	100 %	100 %	$30,000

MECH 12 - DRAINAGE - STORM - INTERNAL

Location

Throughout the building.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions. Jet flush or auger to suit.	Maintenance Level 2	0	5 Yrs	2025	Allowance	$5,000	1	100 %	100 %	$5,000
R01	Repair and/or replace components of storm water drainage collection system, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$40,000	1	100 %	100 %	$40,000

MECH 13 - FIXTURES - TOILETS/SINKS/SHOWERS

Location

Pool common area washrooms.

Description

Floor or wall mounted bathroom fixtures.

Planning Information

Service Life:	20
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2037
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of bathroom fixtures, as required.	Renew Assembly	0	20 Yrs	2037	Allowance	$5,000	1	100 %	100 %	$5,000

MECH 14 - PUMP - DHW - CIRCULATION AND RECIRCULATION

Location

Mechanical rooms and spaces throughout the complex.

Description

Various manufacturer 1/2 HP, pipe-mounted bronze body domestic hot water circulation pumps. Circulating hot water from boilers to tanks and recirculating hot water from system. Pumps are periodically replaced or repaired on an as needed basis. Age of asset is blended based on dates of pumps installed during the site review.

Planning Information

Service Life:	10
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2025
Effective Age:	8

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of recirculating pumps, as required.	Renew Assembly	0	8 Yrs	2025	Allowance	$5,000	1	100 %	100 %	$5,000

MECH 15 - PUMPS - SANITARY LIFT AND CONTROL PANEL

Location

Parkade Level P4.

Description

Northwest Tech-Con Systems Ltd, Duplex, 2-2.5 HP, sump pumps and control panels for sanitary lift/drainage. Replaced the controls in 2023.

Planning Information

Service Life:	15
Installed Year:	2018
Chronological Age:	5
Next Renewal Year:	2033
Effective Age:	5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Overhaul sanitary sump pumps.	Renew Component	0	5 Yrs	2024		$2,000	0	100 %	100 %	$0
R02	Cyclical replacement of sump pumps.	Renew Assembly	0	15 Yrs	2033	Each	$4,000	2	100 %	100 %	$8,000

MECH 16 - PUMPS - STORM LIFT AND CONTROL PANEL

Location

Parkade Level P4.

Description

Northwest Tech-Con Systems Ltd, Duplex, 2-2.5 HP, sump pumps and control panels for storm lift/drainage. Replaced the controls in 2023.

Planning Information

Service Life: 15
Installed Year: 2018
Chronological Age: 5
Next Renewal Year: 2033
Effective Age: 5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Overhaul storm sump pumps.	Renew Component	0	5 Yrs	2024		$2,000	0	100 %	100 %	$0
R02	Cyclic replacement of sump pump storm lift and control panels.	Renew Assembly	0	15 Yrs	2033	Each	$4,000	3	100 %	100 %	$12,000

MECH 17 - TANK - DHW - STORAGE (AND DHW HEATING)

Location

Parkade and rooftop mechanical rooms for each tower.

Description

Lochnivar glass-lined 200 gallon hot water storage tanks connected to domestic boiler system.

Planning Information

Service Life: 8
Installed Year: 2018
Chronological Age: 5
Next Renewal Year: 2026
Effective Age: 5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace anode rods in hot water heaters.	Maintenance Level 3	0	5 Yrs	2024		$300	0	100 %	100 %	$0
R01	(Cyclical) replacement of domestic hot water storage tanks.	Renew Assembly	0	8 Yrs	2026	Each	$6,500	15	50 %	100 %	$48,750

MECH 18 - PIPING - GAS DISTRIBUTION

Location

Connected to gas fixtures throughout the complex.

Description

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

Planning Information

Service Life:	50
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2042
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of fittings and valves, as required.	Renew Assembly	0	20 Yrs	2042	Gross Floor Area	$0.50	440,200	30 %	100 %	$66,030

MECH 19 - BOILER - HYDRONIC - GAS FIRED

Location

Rooftop mechanical rooms in Beach and Ocean Towers.

Description

Mighty Therm natural gas fired hot water boilers, atmospherically vented.

Planning Information

Service Life:	20
Installed Year:	2012
Chronological Age:	11
Next Renewal Year:	2032
Effective Age:	11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclic replacement of heating boilers, as required.	Renew Assembly	0	20 Yrs	2032	Each	$20,000	8	100 %	100 %	$160,000

MECH 20 - CHEMICAL TREATMENT EQUIPMENT

Location

Mechanical room on parkade Level P2 in Beach Tower.

Description

Pot feeder with chemicals, metering pumps and other associated equipment to provide corrosion protection to boilers, loops, and piping.

Planning Information

Service Life:	8
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	7

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of components of water treatment equipment.	Renew Assembly	0	8 Yrs	2024	Allowance	$2,000	1	100 %	100 %	$2,000

MECH 21 - HEAT EXCHANGER - BRAZED PLATE

Location

Mechanical room on parkade Level P2 in Beach Tower.

Description

Brazed plate heat exchangers to separate secondary plumbing systems from the main heating loop.

Planning Information

Service Life:	20
Installed Year:	2018
Chronological Age:	5
Next Renewal Year:	2038
Effective Age:	5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace plate type heat exchangers.	Renew Assembly	0	20 Yrs	2038	Each	$2,000	2	100 %	100 %	$4,000

MECH 22 - PIPING - HYDRONIC LOOP

Location

Rooftop and parkade mechanical rooms in all Towers.

Description

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

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	26

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of piping, valves and trim, as required.	Renew Assembly	0	20 Yrs	2027	Square Foot	$3	440,200	100 %	100 %	$1,320,600

MECH 23 - TANK - EXPANSION - HYDRONIC - DIAPHRAGM

Location

Rooftop mechanical room in Garden Tower.

Description

Amtrol floor mounted diaphragm expansion tank for hydronic heating system.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	16

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclic replacement of diaphragm heating expansion tanks, as required.	Renew Assembly	0	20 Yrs	2027	Each	$1,500	1	100 %	100 %	$1,500

MECH 24 - VALVES - HVAC FLOW CONTROL AND DIRECTIONAL

Location

Rooftop and parkade mechanical rooms.

Description

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

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	16

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of valves, as required.	Renew Assembly	0	20 Yrs	2027	Allowance	$6,000	1	40 %	100 %	$2,400

MECH 25 - A/C SPLIT SYSTEM

Location

Parkade Levels P1 and P2.

Description

Mitsubishi Electrical R410a condensing split system for air conditioning to electrical rooms. wall mounted indoor units, with wall mounted controllers.

Planning Information

Service Life:	15
Installed Year:	2018
Chronological Age:	5
Next Renewal Year:	2033
Effective Age:	5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of components of split system AC as required.	Renew Assembly	0	15 Yrs	2033	Allowance	$10,000	1	100 %	100 %	$10,000

MECH 26 - GAS CHIMNEY VENT - WALL TYPE

Location

Exterior of suites where fireplaces have been installed.

Description

Gas appliance vent with approved collars, fittings, vent terminal, and guard. Select vents were replaced in 2014 as part of targeted repairs.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace wall cap and guard. May require fabrication or restoration due to obsolete replacement parts. Must integrate with listed firebox assembly.	Renew Assembly	0	12 Yrs	2024	Allowance	$5,000	1	100 %	100 %	$5,000

MECH 27 - BASEBOARD - ELECTRIC

Location

Strategically placed throughout the complex.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of electric baseboard heaters, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$10,000	1	50 %	100 %	$5,000

MECH 28 - EXHAUST FAN - PARKADE - PROPELLOR

Location

Corners of the parkade on all levels.

Description

Belt driven propellor exhaust fan mounted in exterior wall.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	Renew Component	0	3 Yrs	2024		$500	0	100 %	100 %	$0
R02	Rebuild of fan, as required.	Renew Assembly	0	20 Yrs	2024	Each	$1,000	16	100 %	100 %	$16,000

MECH 29 - EXHAUST FAN - SMALL SERVICE - CABINET

Location

Mechanical, electrical, and storage rooms throughout the parkade and common areas.

Description

Various direct drive fans, ceiling and cabinet fans, and centrifugal inline blower fans.

Planning Information

Service Life:	12
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	Renew Assembly	0	3 Yrs	2024	Allowance	$1,500	1	100 %	100 %	$1,500

MECH 30 - INDOOR AIR HANDLER - GAS FIRED

Location

Rooftop mechanical rooms in Beach and Ocean Towers.

Description

Engineered Air 10,100 (9,500 in Beach Tower) CFM indoor unit, belt-driven, centrifugal fan with natural gas fired (600,000 BTU max) heating to supply tempered make-up air to the interior spaces.

Planning Information

Service Life:	20
Installed Year:	2018
Chronological Age:	5
Next Renewal Year:	2038
Effective Age:	5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	0	5 Yrs	2024		$0	0	100 %	100 %	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	0	8 Yrs	2030		$2,000	0	100 %	100 %	$0
R02	Cyclical rebuild or replacement of the make-up air unit in Beach Tower.	Renew Component	0	20 Yrs	2043	Each	$110,000	1	100 %	100 %	$110,000
R03	Cyclical rebuild or replacement of the make-up air unit at Ocean Tower.	Renew Assembly	0	20 Yrs	2038	Each	$66,000	1	100 %	100 %	$66,000

MECH 31 - MAKE UP AIR UNIT - INDOOR - GAS FIRED

Location

Rooftop mechanical room in Garden Tower.

Description

Engineered Air 1,400 CFM indoor unit, belt-driven, centrifugal fan with natural gas fired (125,000 BTU max) heating to supply tempered make-up air to the interior spaces.

Planning Information

Service Life:	25
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2042
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	0	2 Yrs	2025		$0	0	100 %	100 %	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	0	5 Yrs	2025		$0	0	100 %	100 %	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	0	8 Yrs	2025		$2,000	0	100 %	100 %	$0
R02	Cyclical rebuild or replacement of make-up air units.	Renew Assembly	0	25 Yrs	2042	Each	$30,000	1	100 %	100 %	$30,000

MECH 32 - DEHUMIDIFYING POOL HEATER

Location

Mechanical room on parkade Level P2 under Beach Tower.

Description

Zephyr dehumidifying pool heater and air handling package, nominal 2,800 cfm capacity, belt-driven, centrifugal fans, for circulating and drying air to the interior pool spaces and heating the pool water.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical rebuild or replacement of dehumidification unit.	Renew Assembly	0	20 Yrs	2024	Each	$35,000	1	100 %	100 %	$35,000

MECH 33 - AIR HANDLER - MAKE UP AIR UNIT

Location

Mechanical room on parkade Level P2 below Beach Tower.

Description

Indoor air handler, with a heating coil from the adjacent boilers (refer to previous Halsall Depreciation Report for more information), to supply make-up air to the interior of the building. Refurbished the makeup air unit in 2023.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	0	2 Yrs	2025		$0	0	100 %	100 %	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	0	5 Yrs	2025		$0	0	100 %	100 %	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	0	8 Yrs	2030		$2,000	0	100 %	100 %	$0
R02	Rebuild air make-up units.	Renew Assembly	0	20 Yrs	2024	Each	$5,000	1	100 %	100 %	$5,000

MECH 34 - OVERHEAD GATE MOTOR

Location

Parkade ramps.

Description

Various 1/2 HP AC motor and door operator mechanism. Door not included in this asset.

Planning Information

Service Life:	7
Installed Year:	2020
Chronological Age:	3
Next Renewal Year:	2027
Effective Age:	3

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace motor and drive unit.	Renew Assembly	0	3 Yrs	2027	Each	$2,500	4	25 %	100 %	$2,500

MECH 35 - TRASH CHUTE

Location

Tower hallway vestibules.

Description

Trash Chute in each of the Towers.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	29

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace sections of the trash chute, as required.	Renew Assembly	0	30 Yrs	2024	Allowance	$20,000	1	100 %	100 %	$20,000

ELEV 01 - GEARED TRACTION, OVERHEAD

Location

Elevator rooms on the top floor of each tower.

Description

Overhead traction elevators; Dover solid state/relay controls; Leroy Somer motor generator drives; Dover geared machines; PE1, PE3, PE5, PE6: 2000 lbs. capacity; PE2, PE4: 2500 lbs. capacity; 400 fpm rated speed.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	0	2 Yrs	2023	Lump Sum	$6,000	6	100 %	100 %	$36,000

J02	Review condition of the elevator and update contingency plan as needed.	Assessment	0	3 Yrs	2025		$0	0	100 %	100 %	$0
R01	Replace elevator machines, controls and drive systems.	Renew Assembly	0	25 Yrs	2024	Each	$240,000	6	100 %	100 %	$1,440,000

ELEV 02 - HANDICAP LIFT

Location

Pool stairwell.

Description

Mechanical lift platform to allow wheel chair access to upper level.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace handicap lift.	Renew Assembly	0	20 Yrs	2024		$75,000	1	100 %	100 %	$75,000

ELEV 03 - ELEVATOR CABS & HOISTWAY

Location

Elevator cabs and travelling hoistways.

Description

PE1, PE2, PE3, PE5, PE6: Single speed side opening doors; PE4: Single speed centre opening doors; Stainless steel car and hall pushbuttons; One (1) or two (2) stainless steel car operating panel per elevator depending on elevator; Infrared door protection; Dover door operators; Stainless steel cab doors and front return; Plastic laminate panelled walls with stainless steel reveals on side and rear walls; Stainless steel ceiling with LED lighting; tile flooring; firefighters' emergency operation; standby power provisions, hands-free voice communication.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace cab interior finishes.	Renew Component	0	25 Yrs	2048	Each	$20,000	6	100 %	100 %	$120,000
R02	Replace elevator operating & signal fixtures, door operator, door detector, (to be completed in conjunction with asset 1).	Renew Assembly	0	25 Yrs	2024	Each	$45,000	6	100 %	100 %	$270,000

FIRE 01 - PRESSURIZATION/SMOKE CONTROL DAMPERS

Location

Bottom level and top level of Beach and Ocean Tower stairwells.

Description

Motorized smoke dampers with fans for control of building pressure and smoke in a building. Fans range from 3,000-6,500 CFM.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace damper operators and seals.	Renew Assembly	0	20 Yrs	2024	Each	$2,000	3	100 %	100 %	$6,000

FIRE 02 - FIRE ALARM PANEL - ADDRESSABLE

Location

Main lobbies of the 3 towers, parkade gate entry, and Parkade Level P1.

Description

Simplex 4100 supervised units with annunciator and LED light display. Exterior panel near Beach Tower was replaced in 2016. All fire panel interior components were upgraded in 2010 based on the 2013 depreciation report by Halsall. The amplifiers for the fire annunciators in each tower were replaced in 2023.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace battery packs for fire alarm control panels.	Maintenance Level 3	0	5 Yrs	2024	Each	$400	4	100 %	100 %	$1,600
R01	Replace battery packs.	Renew Component	0	5 Yrs	2024	Each	$250	4	100 %	100 %	$1,000
R02	Replace fire alarm annunciator panel, excluding field wiring and field devices near the north elevation parkade entry gate.	Renew Component	0	30 Yrs	2036	Allowance	$30,000	1	100 %	100 %	$30,000
R03	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	Renew Assembly	0	30 Yrs	2024	Per Building	$60,000	3	100 %	100 %	$180,000

FIRE 03 - FIRE DETECTION & ALARM

Location

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

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. Smoke detectors are replaced on an as needed basis. A number of detectors were replaced in 2017.

Planning Information

Service Life:	10
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	9

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	Renew Assembly	0	10 Yrs	2024	Allowance	$100,000	1	100 %	100 %	$100,000

FIRE 04 - DRY SPRINKLER COMPRESSOR

Location

Sprinkler room under Ocean Tower.

Description

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

Planning Information

Service Life:	14
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace fire sprinkler compressor.	Renew Assembly	0	14 Yrs	2024	Each	$2,000	1	100 %	100 %	$2,000

FIRE 05 - SPRINKLER & STANDPIPE - WET

Location

Mounted to ceilings and walls throughout the common areas, hallways, and suites.

Description

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

Planning Information

Service Life:	100
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2092
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	0	20 Yrs	2024	Allowance	$2,500	1	100 %	100 %	$2,500
R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	Renew Component	20	5 Yrs	2027	Square Foot	$1	440,200	10 %	100 %	$44,020
R03	Replace all heads, or submit representative sample of heads for testing by a recognized testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Component	50	10 Yrs	2042	Square Foot	$0.30	440,200	100 %	100 %	$132,060
R04	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	Renew Assembly	0	100 Yrs	2092	Square Foot	$1	440,200	100 %	100 %	$440,200

FIRE 06 - FIRE & JOCKEY PUMP

Location

Sprinkler room under Ocean Tower.

Description

Motor control centre connected to 60HP fire pump and 3 HP jockey pump, which work in tandem to supply water flow and pressure to the sprinkler system and standpipe system.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	29

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Conduct flow test.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
R01	Replace jockey pump.	Renew Component	0	12 Yrs	2024		$2,000	1	100 %	100 %	$2,000
R02	Rebuild fire pump.	Renew Component	0	15 Yrs	2039		$5,000	1	100 %	100 %	$5,000
R03	Replace fire pump and motor control centre.	Renew Assembly	0	30 Yrs	2024	Each	$27,000	1	100 %	100 %	$27,000

FIRE 07 - PORTABLE FIRE EXTINGUISHER

Location

Mounted to walls in various strategic locations throughout the buildings.

Description

Wall mounted, manually operated, 5lbs and 10lbs ABC type, pressurized vessels for controlled discharge of chemicals to extinguish small fires. Extinguishers are replaced on an as needed basis.

Planning Information

Service Life:	24
Installed Year:	2014
Chronological Age:	9
Next Renewal Year:	2038
Effective Age:	9

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Conduct hydrotest on fire extinguishers.	Maintenance Level 3	0	12 Yrs	2026		$2,000	0	100 %	100 %	$0
R01	Cyclical replacement of fire extinguishers.	Renew Assembly	0	12 Yrs	2038	Each	$200	100	40 %	100 %	$8,000

FIRE 08 - SPRINKLER SYSTEM - DRY

Location

Throughout the parkade and unconditioned mechanical space.

Description

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

Planning Information

Service Life:	60
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2052
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Sprinkler Piping - Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	0	5 Yrs	2024	Allowance	$500	0	100 %	100 %	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	0	5 Yrs	2024	Allowance	$500	0	100 %	100 %	$0
R01	Replace all heads, or submit representative sample of heads for testing by recognized testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Component	50	10 Yrs	2042	Square Foot	$0.30	229,100	100 %	100 %	$68,730
R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains, etc. as required.	Renew Component	0	5 Yrs	2027	Square Foot	$0.25	229,100	2 %	100 %	$1,145.50
R03	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	Renew Assembly	0	60 Yrs	2052	Square Foot	$1	229,100	100 %	100 %	$229,100

FIRE 09 - SPRINKLER VALVE ASSEMBLY - DRY

Location

Sprinkler room under Ocean Tower.

Description

Gem dry sprinkler valves (x4), trim and gauges, steel piping.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	0	20 Yrs	2024		$2,500	0	100 %	100 %	$0
R02	Replace gaskets in dry sprinkler valves.	Renew Component	0	20 Yrs	2024		$600	0	100 %	100 %	$0
R03	Rebuild dry sprinkler valves.	Renew Component	0	20 Yrs	2024	Allowance	$4,000	1	100 %	100 %	$4,000
R04	Replace sprinkler valves, as required.	Renew Assembly	0	40 Yrs	2032	Each	$3,000	4	100 %	100 %	$12,000

FIRE 10 - FIRE HOSE CABINET

Location

Below grade parkade.

Description

Fire hose cabinet, wall mounted with swinging glass door, complete with angle valve, fire hose, and wrench

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace fire hoses.	Renew Assembly	0	40 Yrs	2032	Each	$1,000	6	100 %	100 %	$6,000

FIRE 11 - EMERGENCY EGRESS EQUIPMENT

Location

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

Description

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

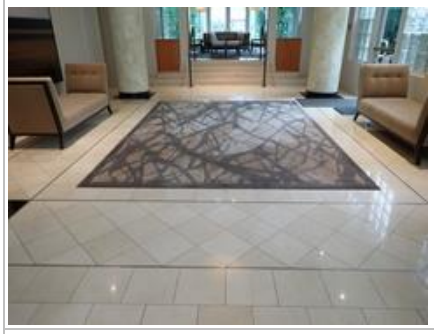
Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	19

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of batteries and lamps in DC battery packs.	Renew Component	0	5 Yrs	2024		$200	0	100 %	100 %	$0
R02	Cyclical replacement of exit signs.	Renew Assembly	0	15 Yrs	2024	Each	$150	400	100 %	100 %	$60,000

FINISH 01 - MARBLE FLOOR TILE



Location

Tower lobbies.

Description

Marble floor tile on thin set mortar with grout. All marble floors in the complex were refinished and restored in 2017.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew porcelain tile floor.	Renew Assembly	0	40 Yrs	2032	Square Foot	$22	4,000	100 %	100 %	$88,000

FINISH 02 - RESILIENT SHEET FLOORING

Location

Fitness room.

Description

Vinyl tile or vinyl sheet adhered to the substrate.

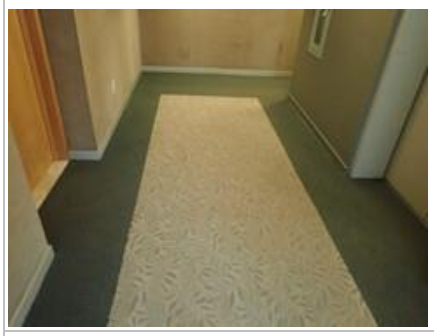
Planning Information

Service Life:	20
Installed Year:	2013
Chronological Age:	10
Next Renewal Year:	2033
Effective Age:	10

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace resilient flooring.	Renew Assembly	0	20 Yrs	2033	Square Foot	$10	710	100 %	100 %	$7,100

FINISH 03 - SHEET CARPET - GLUED DOWN



Location

Common corridors.

Description

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

Planning Information

Service Life:	15
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2028
Effective Age:	10

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew carpet.	Renew Assembly	0	15 Yrs	2028	Square Foot	$8	16,300	100 %	100 %	$130,400

FINISH 04 - CERAMIC FLOOR TILE

Location

Parkade lobbies, pool area.

Description

Cut stone floor tile on thin set mortar with grout.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew tile floors in pool area and washrooms.	Renew Component	0	40 Yrs	2072	Square Foot	$15	3,500	100 %	100 %	$52,500
R02	Renew stone floor tile in parkade vestibules, as required.	Renew Assembly	0	40 Yrs	2032	Square Foot	$15	2,200	100 %	100 %	$33,000

FINISH 05 - WOOD FLOORING

Location

Library and meeting room areas in Beach and Ocean Towers.

Description

Wood laminate flooring.

Planning Information

Service Life:	20
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2037
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace wood flooring, as required (Beach Tower).	Renew Component	0	20 Yrs	2042	Square Foot	$13	325	100 %	100 %	$4,225

R02	Replace wood flooring, as required (Ocean Tower).	Renew Assembly	0	20 Yrs	2037	Square Foot	$13	325	100 %	100 %	$4,225

FINISH 06 - PAINTED CONCRETE FLOORING

Location

Service rooms and stairwells throughout the complex.

Description

Paint on exposed concrete floor surfaces. Elastomeric waterproofing membrane has been applied to several of the service rooms in the complex. Three service rooms were re-waterproofed with new elastomeric waterproofing membrane in 2013. This asset also includes painting of the steel staircase in the pool room.

Planning Information

Service Life:	8
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2028
Effective Age:	3

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint concrete floor surfaces. Repaint faded stair tread safety markings, as required.	Renew Assembly	0	8 Yrs	2028	Square Foot	$12	3,000	100 %	100 %	$36,000

FINISH 07 - MARBLE COLUMNS

Location

Tower lobbies.

Description

Faux marble columns.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew faux marble columns, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$10,000	1	100 %	100 %	$10,000

FINISH 08 - FABRIC WALL COVERING

Location

Common corridors.

Description

Decorative fabric sheet wall covering adhered to a gypsum wallboard substrate.

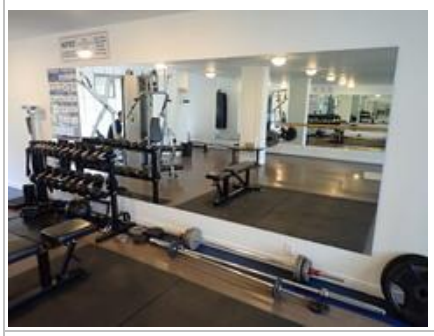
Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2028
Effective Age:	20

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace fabric wall covering.	Renew Assembly	0	25 Yrs	2028	Square Foot	$6	17,400	100 %	100 %	$104,400

FINISH 09 - MIRROR



Location

Fitness room.

Description

Mirrored glass with structural fasteners to the substrate.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace mirrored wall, as required.	Renew Assembly	0	40 Yrs	2032	Square Foot	$30	290	100 %	100 %	$8,700

FINISH 10 - TILED WALL

Location

Pool area bathrooms.

Description

Stone mortared to substrate or installed using structural fasteners. Refurbishment of bathrooms planned in 2019-2020.

Planning Information

Service Life:	35
Installed Year:	2020
Chronological Age:	3
Next Renewal Year:	2055
Effective Age:	3

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace sections of stone wall finish, as required.	Renew Assembly	0	35 Yrs	2055	Square Foot	$18	580	100 %	100 %	$10,440

FINISH 11 - PAINT

Location

Common corridors and amenity spaces.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard and mill work trim details. Paint is touched up annually.

Planning Information

Service Life:	15
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2033
Effective Age:	5

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Locally repaint interior wall in high traffic area, as required.	Renew Component	0	5 Yrs	2028	Hundred Square Foot	$125	433	25 %	100 %	$13,531.25
R02	Repaint wall surface including preparation of substrate.	Renew Assembly	0	15 Yrs	2033	Hundred Square Foot	$150	433	100 %	100 %	$64,950

FINISH 12 - WOOD PANELING

Location

Tower lobbies.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace wood paneling.	Renew Assembly	0	40 Yrs	2032	Square Foot	$7	2,800	100 %	100 %	$19,600

FINISH 13 - BASEBOARD, MOLDING, AND CASING

Location

Common corridors and amenity spaces.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Replace sections of damaged baseboard, molding, and casing, as required.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$6	7,500	20 %	100 %	$9,000

FINISH 14 - CARPENTRY AND MILLWORK

Location

Beach and Ocean Tower libraries and meeting areas.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace damaged components of carpentry and millwork, as required.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$120	80	100 %	100 %	$9,600

FINISH 15 - INTERIOR SWING DOOR - GENERAL

Location

All common area and interior service doors throughout the towers and townhouse buildings.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Locally replace interior swing door as required.	Renew Assembly	0	15 Yrs	2032	Each	$500	699	20 %	100 %	$69,900

AMEN 01 - COMPUTER EQUIPMENT

Location

Beach Tower lobby and Ocean Tower office/meeting room.

Description

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

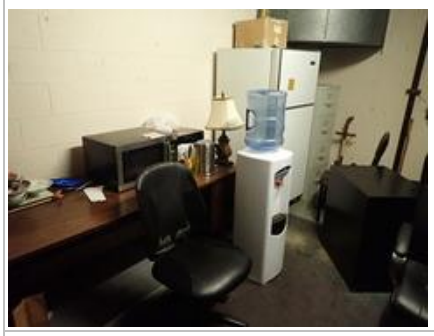
Planning Information

Service Life:	6
Installed Year:	2016
Chronological Age:	7
Next Renewal Year:	2024
Effective Age:	5

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace components of electronic equipment.	Renew Assembly	0	6 Yrs	2024	System	$3,000	1	100 %	100 %	$3,000

AMEN 02 - DOMESTIC APPLIANCES



Location

Mechanical space with maintenance staff area on Parkade Level P1.

Description

Refrigerators, water cooler, and microwave oven of miscellaneous brands.

Planning Information

Service Life:	15
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	14

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace domestic appliances.	Renew Assembly	0	15 Yrs	2024	Allowance	$3,000	1	100 %	100 %	$3,000

AMEN 03 - FITNESS EQUIPMENT

Location

Gym in Beach Tower.

Description

Various fitness machines and equipment including, rowing machines, weight machines, free weights, treadmills, ellipitcals, stationary bikes, and a stairmaster.

Planning Information

Service Life:	10
Installed Year:	2016
Chronological Age:	7
Next Renewal Year:	2026
Effective Age:	7

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace components of fitness equipment, as required.	Renew Assembly	0	10 Yrs	2026	Allowance	$20,000	1	50 %	100 %	$10,000

AMEN 04 - METAL SCREEN STORAGE LOCKER

Location

Below grade parkade.

Description

Painted metal screen storage lockers with steel framing and hardware.

Planning Information

Service Life:	25
Installed Year:	2021
Chronological Age:	2
Next Renewal Year:	2046
Effective Age:	2

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Locally repair metal storage lockers, as required.	Renew Assembly	0	25 Yrs	2046	Allowance	$1,500	1	100 %	100 %	$1,500

AMEN 05 - CENTRAL MAILBOXES

Location

Tower lobbies.

Description

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

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace central mail boxes as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$30,000	1	100 %	100 %	$30,000

AMEN 06 - OFFICE FURNITURE

Location

Tower lobbies and amenity areas.

Description

Desk, chairs, tables, couches, etc. Select items were not replaced as part of the 2017 lobby renovations and may need replacement sooner than indicated.

Planning Information

Service Life:	15
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2032
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace Office furniture and associated component.	Renew Assembly	0	15 Yrs	2032	Allowance	$50,000	1	100 %	100 %	$50,000

AMEN 07 - PUBLIC SIGNAGE

Location

Mounted to walls throughout the complex and parkade.

Description

Variety of permanently displayed information placards in the common areas of the building. Various signage replaced as required. New public signage installed in 2020.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace damaged and outdated signage, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$10,000	1	100 %	100 %	$10,000

AMEN 08 - DRY SAUNA

Location

Beach Tower pool area.

Description

Wood paneling, wood benches, wood door, electric heater, and timer control.

Planning Information

Service Life:	20
Installed Year:	2013
Chronological Age:	10
Next Renewal Year:	2033
Effective Age:	10

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace heating element.	Renew Component	0	7 Yrs	2024	Each	$2,000	1	100 %	100 %	$2,000
R02	Refurbish sauna interior finish and element.	Renew Assembly	0	20 Yrs	2033	Each	$10,000	1	100 %	100 %	$10,000

AMEN 09 - POOL/SPA TANK

Location

Pool room in Beach Tower.

Description

Reinforced concrete/ shotcrete for tank lined with marcite (high density plaster), ceramic tile and grout trim. Pool tile refinished in 2019.

Planning Information

Service Life:	30
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2047
Effective Age:	6

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Refinish interior surface of pool and spa tank.	Renew Assembly	0	30 Yrs	2047	Each	$18,000	1	100 %	100 %	$18,000

AMEN 10 - POOL CIRCULATION & SANITATION

Location

Mechanical room.

Description

Filter, circulation, pumps, piping, chemical feeders, and other components to distribute sanitized water to the pool and spas.

Planning Information

Service Life:	15
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2032
Effective Age:	6

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of pool circulation and sanitation equipment, as required.	Renew Assembly	0	15 Yrs	2032	Allowance	$5,000	1	100 %	100 %	$5,000

SITE 01 - INTERLOCKING UNIT PAVING WALKWAY

Location

Walkways and patios.

Description

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

Planning Information

Service Life:	40
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2063
Effective Age:	0

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace interlocking pavers at time of podium renewal as required.	Renew Assembly	0	40 Yrs	2063	Square Foot	$25	12,500	100 %	150 %	$468,750

SITE 02 - WATER FEATURE

Location

Interior Courtyard

Description

Pond to retain water including liner, tiles, concrete topping.

Planning Information

Service Life:	15
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2038
Effective Age:	0

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of pond liner.	Renew Assembly	0	15 Yrs	2038	Square Foot	$12	2,500	100 %	200 %	$60,000

SITE 03 - WATER FEATURE CIRCULATION & FILTRATION

Location

Pool water filtration system on Parkade Level P1.

Description

Submersible recirculating pump, distribution piping, valves, and filtration for water treatment.

Planning Information

Service Life:	10
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2033
Effective Age:	0

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of components of circulation & filtration system.	Renew Assembly	0	10 Yrs	2033	Allowance	$5,000	1	100 %	100 %	$5,000

SITE 04 - GLASS BLOCK PRIVACY SCREENS

Location

Between townhouse patios in courtyard.

Description

Glass block windows with concrete structural support.

Planning Information

Service Life:	30
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2053
Effective Age:	0

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace glass block privacy screens.	Renew Assembly	0	30 Yrs	2053	Square Foot	$78	800	100 %	100 %	$62,400

SITE 05 - OUTDOOR FURNITURE

Location

Random locations throughout the interior courtyard.

Description

Miscellaneous outdoor furniture such as benches and tables.

Planning Information

Service Life:	5
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2028
Effective Age:	0

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint outdoor furnishing, as required.	Renew Component	0	5 Yrs	2027	Allowance	$2,000	1	50 %	100 %	$1,000
R02	Replace outdoor furniture, as required.	Renew Assembly	0	5 Yrs	2028	Allowance	$10,000	1	100 %	100 %	$10,000

SITE 06 - PAVING DRIVEWAY

Location

Parkade entrance.

Description

Poured in place concrete paving.

Planning Information

Service Life:	40
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2063
Effective Age:	0

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace poured in place concrete paving for podium renewal as required.	Renew Assembly	0	40 Yrs	2063	Square Foot	$12	1,700	100 %	100 %	$20,400

SITE 07 - GROUNDS-KEEPING EQUIPMENT

Location

Parkade Level P1.

Description

John Deere x720 tractor for moving garbage bins. Major repairs completed in 2018. Tractor assumed to have been purchased in 2010.

Planning Information

Service Life:	20
Installed Year:	2010
Chronological Age:	13
Next Renewal Year:	2030
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace groundskeeping equipment, as required.	Renew Assembly	0	20 Yrs	2030	Allowance	$20,000	1	100 %	100 %	$20,000

SITE 08 - CERAMIC TILE

Location

Townhouse exterior entry stairs.

Description

Tile on mortar bed and substrate with grout and sealant at interfaces. Front step tiles have already been replaced on TH5-13.

Planning Information

Service Life:	25
Installed Year:	2022
Chronological Age:	1
Next Renewal Year:	2047
Effective Age:	1

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace tiles previously renewed circa 2013.	Renew Component	0	25 Yrs	2038	Square Foot	$30	600	100 %	100 %	$18,000
R02	Replacement of original tiles.	Renew Assembly	0	25 Yrs	2047	Square Foot	$30	1,000	100 %	100 %	$30,000

SITE 09 - IRRIGATION SYSTEM

Location

Sprinklers throughout interior courtyard area with a controller on Parkade Level P1.

Description

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

Planning Information

Service Life:	20
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2053
Effective Age:	-10

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of components of irrigation sprinkler system, as required.	Renew Assembly	0	30 Yrs	2053	Allowance	$40,000	1	100 %	100 %	$40,000

SITE 10 - SOFT LANDSCAPING

Location

Interior Courtyard.

Description

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

Planning Information

Service Life:	30
Installed Year:	2023
Chronological Age:	0
Next Renewal Year:	2053
Effective Age:	0

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renovate sections of the soft landscaping, as required.	Renew Assembly	0	30 Yrs	2053	Square Foot	$10	10,100	100 %	100 %	$101,000

Appendix C

10-Year Tactical Plan

888 Beach Avenue

10 Year Costing - 2023 through 2032

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2023						
Elevator						
Elev 01 - Geared Traction, Overhead						
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	2 Yrs	2023	$36,000	$36,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2024						
Enclosure						
Encl 13 - Aluminum Framed Window						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	2 Yrs	2024	$0	$0
Encl 32 - General & Inspections						
J02	Perform full condition assessment of all enclosure systems.	Assessment	6 Yrs	2024	$25,000	$26,000
Electrical						
Elec 01 - Distribution Transformer						
J01	Clean away dust and other detritus. Vacuuming is the recommended method for cleaning. Special attention should be given to cooling ducts within the winding. Low pressure dry air can be used if care is taken to avoid driving the contamination into insulation.	Maintenance Level 3	3 Yrs	2024	$0	$0
R01	Conduct infrared thermography and ultrasonic scanning tests on distribution transformers. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	Renew Component	5 Yrs	2024	$2,000	$2,100
Elec 02 - Emergency Generator						
R01	Replace generator hoses.	Renew Component	10 Yrs	2024	$0	$0
R02	Rebuild emergency generator, as required.	Renew Component	17 Yrs	2024	$15,000	$15,000
R03	Replace generator battery packs.	Renew Component	4 Yrs	2024	$0	$0
Elec 03 - Unit Substation						
J01	Service shutdown event. Inspect, clean, and maintain all unit substation equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	Maintenance Level 3	5 Yrs	2024	$5,000	$5,200
J02	Lubricate all moving contacts.	Maintenance Level 3	5 Yrs	2024	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J03	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).	Maintenance Level 3	5 Yrs	2024	$0	$0
J04	Calibrate electrical relays to match documented (or utility company) settings.	Maintenance Level 3	5 Yrs	2024	$0	$0
J05	Prior to cleaning verify nameplate information; check insulator chips, cracks, and tracking; inspect lightning arrestors and visually inspect contacts and bus.	Maintenance Level 3	5 Yrs	2024	$0	$0
J06	Verify that unit substation grounding network is adequate to ensure safety during work and while equipment is in operation.	Maintenance Level 3	5 Yrs	2024	$0	$0
J07	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	Maintenance Level 3	5 Yrs	2024	$0	$0
Elec 04 - Tank - Fuel Oil Storage						
R01	Replacement of oil storage tank (and addition of secondary containment).	Renew Assembly	15 Yrs	2024	$10,000	$10,000
Elec 06 - Electrical Distribution						
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	2 Yrs	2024	$0	$0
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	2 Yrs	2024	$0	$0
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.	Renew Component	5 Yrs	2024	$3,000	$3,100
Elec 07 - Exterior Light Fixtures						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2024	$0	$0
R02	Cyclical replacement of electronic ballasts and bulbs	Renew Component	10 Yrs	2024	$4,725	$4,900
Elec 08 - Interior Light Fixtures						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2024	$0	$0
R02	Cyclical replacement of electronic ballasts.	Renew Component	10 Yrs	2024	$0	$0
Elec 09 - Interior Light Fixtures - Parkade						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2024	$0	$0
R02	Cyclical replacement of electronic ballasts.	Renew Component	10 Yrs	2024	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mechanical						
Mech 01 - Controls - Boiler Electronic						
R01	Cyclical replacement of sensors and other field devices, as required.	Renew Component	3 Yrs	2024	$0	$0
R02	Replace boiler control, as required.	Renew Assembly	15 Yrs	2024	$10,000	$10,000
Mech 02 - Controls - Electronic Actuators						
R01	Cyclical replacement of electronic actuator controls, as required.	Renew Assembly	10 Yrs	2024	$3,000	$3,100
Mech 05 - Piping - Domestic Water Distribution						
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	5 Yrs	2024	$0	$0
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	5 Yrs	2024	$0	$0
Mech 06 - Pump - Domestic Water Booster						
J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	2 Yrs	2024	$0	$0
R01	Replace motor bearings, pump bearings and seals. Inspect mounts and housing, repair as required.	Renew Component	7 Yrs	2024	$5,000	$5,200
Mech 11 - Drainage - Sanitary						
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	5 Yrs	2024	$3,000	$3,100
J02	Jetflush/auger lateral drain lines.	Maintenance Level 3	10 Yrs	2024	$4,000	$4,100
Mech 15 - Pumps - Sanitary Lift and Control Panel						
R01	Overhaul sanitary sump pumps.	Renew Component	5 Yrs	2024	$0	$0
Mech 16 - Pumps - Storm Lift and Control Panel						
R01	Overhaul storm sump pumps.	Renew Component	5 Yrs	2024	$0	$0
Mech 17 - Tank - DHW - Storage (and DHW Heating)						
J01	Replace anode rods in hot water heaters.	Maintenance Level 3	5 Yrs	2024	$0	$0
Mech 20 - Chemical Treatment Equipment						
R01	Cyclical replacement of components of water treatment equipment.	Renew Assembly	8 Yrs	2024	$2,000	$2,100
Mech 26 - Gas Chimney Vent - Wall type						
R01	Replace wall cap and guard. May require fabrication or restoration due to obsolete replacement parts. Must integrate with listed firebox assembly.	Renew Assembly	12 Yrs	2024	$5,000	$5,200
Mech 28 - Exhaust Fan - Parkade - Propellor						
R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	Renew Component	3 Yrs	2024	$0	$0
R02	Rebuild of fan, as required.	Renew Assembly	20 Yrs	2024	$16,000	$16,000
Mech 29 - Exhaust Fan - Small Service - Cabinet						
R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	Renew Assembly	3 Yrs	2024	$1,500	$1,500
Mech 30 - Indoor Air Handler - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2024	$0	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2024	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mech 32 - Dehumidifying Pool Heater						
R01	Cyclical rebuild or replacement of dehumidification unit.	Renew Assembly	20 Yrs	2024	$35,000	$36,000
Mech 33 - Air Handler - Make Up Air Unit						
R02	Rebuild air make-up units.	Renew Assembly	20 Yrs	2024	$5,000	$5,200
Mech 35 - Trash Chute						
R01	Replace sections of the trash chute, as required.	Renew Assembly	30 Yrs	2024	$20,000	$21,000
Elevator						
Elev 01 - Geared Traction, Overhead						
R01	Replace elevator machines, controls and drive systems.	Renew Assembly	25 Yrs	2024	$1,440,000	$1,500,000
Elev 02 - Handicap Lift						
R01	Replace handicap lift.	Renew Assembly	20 Yrs	2024	$75,000	$77,000
Elev 03 - Elevator Cabs & Hoistway						
R02	Replace elevator operating & signal fixtures, door operator, door detector, (to be completed in conjunction with asset 1).	Renew Assembly	25 Yrs	2024	$270,000	$280,000
Fire Safety						
Fire 01 - Pressurization/Smoke Control Dampers						
R01	Replace damper operators and seals.	Renew Assembly	20 Yrs	2024	$6,000	$6,200
Fire 02 - Fire Alarm Panel - Addressable						
J01	Replace battery packs for fire alarm control panels.	Maintenance Level 3	5 Yrs	2024	$1,600	$1,600
R01	Replace battery packs.	Renew Component	5 Yrs	2024	$1,000	$1,000
R03	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	Renew Assembly	30 Yrs	2024	$180,000	$190,000
Fire 03 - Fire Detection & Alarm						
R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	Renew Assembly	10 Yrs	2024	$100,000	$100,000
Fire 04 - Dry Sprinkler Compressor						
R01	Replace fire sprinkler compressor.	Renew Assembly	14 Yrs	2024	$2,000	$2,100
Fire 05 - Sprinkler & Standpipe - Wet						
J01	Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2024	$0	$0
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	20 Yrs	2024	$2,500	$2,600
Fire 06 - Fire & Jockey Pump						
J01	Conduct flow test.	Maintenance Level 3	5 Yrs	2024	$0	$0
R01	Replace jockey pump.	Renew Component	12 Yrs	2024	$2,000	$2,100
R03	Replace fire pump and motor control centre.	Renew Assembly	30 Yrs	2024	$27,000	$28,000
Fire 08 - Sprinkler System - Dry						
J01	Sprinkler Piping - Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2024	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Fire 09 - Sprinkler Valve Assembly - Dry						
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	20 Yrs	2024	$0	$0
R02	Replace gaskets in dry sprinkler valves.	Renew Component	20 Yrs	2024	$0	$0
R03	Rebuild dry sprinkler valves.	Renew Component	20 Yrs	2024	$4,000	$4,100
Fire 11 - Emergency Egress Equipment						
R01	Cyclical replacement of batteries and lamps in DC battery packs.	Renew Component	5 Yrs	2024	$0	$0
R02	Cyclical replacement of exit signs.	Renew Assembly	15 Yrs	2024	$60,000	$62,000
Amenities						
Amen 01 - Computer Equipment						
R01	Replace components of electronic equipment.	Renew Assembly	6 Yrs	2024	$3,000	$3,100
Amen 02 - Domestic Appliances						
R01	Replace domestic appliances.	Renew Assembly	15 Yrs	2024	$3,000	$3,100
Amen 08 - Dry Sauna						
R01	Replace heating element.	Renew Component	7 Yrs	2024	$2,000	$2,100

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2025						
Enclosure						
Encl 04 - Stucco Clad Soffit						
R01	Clean and renew acrylic stucco finish coat as required.	Renew Component	10 Yrs	2025	$9,045	$9,600
Encl 09 - Clay Masonry Veneer Wall						
J01	Locally repoint mortar joints in clay masonry veneer wall, as required.	Maintenance Level 2	5 Yrs	2025	$21,920	$23,000
Encl 10 - Composite Metal Panel Wall						
J01	Review all metal finishes. Touch up paint as required (cost includes corrugated metal panel walls).	Maintenance Level 2	2 Yrs	2025	$10,000	$11,000
Encl 11 - Concrete Wall						
J01	Repair of delaminated or spalled concrete should be carried out prior to recoating.	Maintenance Level 1	5 Yrs	2025	$3,750	$4,000
R01	Reapplication of the protective coating as required, including preparation of the concrete substrate.	Renew Component	5 Yrs	2025	$27,000	$29,000
Encl 15 - Glass Block Window						
J01	Repoint mortar joints in glass block windows and complete localized repairs, as required.	Maintenance Level 2	5 Yrs	2025	$8,640	$9,200
Encl 20 - Steel Swing Door						
R02	Replace steel swing doors and frames.	Renew Assembly	25 Yrs	2025	$32,500	$34,000
Encl 22 - Townhouse Swing Door						
R01	Repaint wood door and frame finish.	Renew Component	6 Yrs	2025	$7,000	$7,400
Encl 24 - Exposed Urethane Balcony Membrane - Concrete Substrate						
J01	Repair locally damaged and delaminated balcony membrane prior to re-application of top coat.	Maintenance Level 3	10 Yrs	2025	$25,350	$27,000
R01	Prepare and re-apply membrane top coat, as required.	Renew Component	10 Yrs	2025	$202,800	$220,000
Encl 31 - Sealant						
R01	Locally replace sealants at interfaces between building enclosure assemblies, as required.	Renew Component	10 Yrs	2025	$502,080	$530,000
Electrical						
Elec 07 - Exterior Light Fixtures						
R03	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	20 Yrs	2025	$45,000	$48,000
Elec 12 - Security Surveillance						
R01	Service the multiplex unit, update software as required.	Renew Component	5 Yrs	2025	$0	$0
Mechanical						
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2025	$500	$530
Mech 04 - Gas Detection - Parkade						
R01	Cyclical replacement of gas detection sensors.	Renew Assembly	5 Yrs	2025	$1,500	$1,600

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mech 12 - Drainage - Storm - Internal						
J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions. Jet flush or auger to suit.	Maintenance Level 2	5 Yrs	2025	$5,000	$5,300
Mech 14 - Pump - DHW - Circulation and Recirculation						
R01	Cyclical replacement of recirculating pumps, as required.	Renew Assembly	8 Yrs	2025	$5,000	$5,300
Mech 31 - Make Up Air Unit - Indoor - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2025	$0	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2025	$0	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	8 Yrs	2025	$0	$0
Mech 33 - Air Handler - Make Up Air Unit						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2025	$0	$0
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2025	$0	$0
Elevator						
Elev 01 - Geared Traction, Overhead						
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	2 Yrs	2025	$36,000	$38,000
J02	Review condition of the elevator and update contingency plan as needed.	Assessment	3 Yrs	2025	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2026						
Enclosure						
Encl 13 - Aluminum Framed Window						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	2 Yrs	2026	$0	$0
Encl 32 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2026	$0	$0
Electrical						
Elec 06 - Electrical Distribution						
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	2 Yrs	2026	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	2 Yrs	2026	$0	$0
Mechanical						
Mech 06 - Pump - Domestic Water Booster						
J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	2 Yrs	2026	$0	$0
Mech 10 - Boiler - DHW - Heating - Gas Fired						
J01	Tighten electrode mounting clamp.	Maintenance Level 3	2 Yrs	2026	$0	$0
J02	Replace sacrificial anodes in storage tanks.	Maintenance Level 3	2 Yrs	2026	$0	$0
Mech 17 - Tank - DHW - Storage (and DHW Heating)						
R01	(Cyclical) replacement of domestic hot water storage tanks.	Renew Assembly	8 Yrs	2026	$48,750	$53,000
Mech 30 - Indoor Air Handler - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2026	$0	$0
Fire Safety						
Fire 07 - Portable Fire Extinguisher						
J01	Conduct hydrotest on fire extinguishers.	Maintenance Level 3	12 Yrs	2026	$0	$0
Amenities						
Amen 03 - Fitness Equipment						
R01	Replace components of fitness equipment, as required.	Renew Assembly	10 Yrs	2026	$10,000	$11,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2027						
Enclosure						
Encl 10 - Composite Metal Panel Wall						
J01	Review all metal finishes. Touch up paint as required (cost includes corrugated metal panel walls).	Maintenance Level 2	2 Yrs	2027	$10,000	$11,000
Electrical						
Elec 01 - Distribution Transformer						
J01	Clean away dust and other detritus. Vacuuming is the recommended method for cleaning. Special attention should be given to cooling ducts within the winding. Low pressure dry air can be used if care is taken to avoid driving the contamination into insulation.	Maintenance Level 3	3 Yrs	2027	$0	$0
Elec 02 - Emergency Generator						
R04	Replace emergency generator and transfer switch.	Renew Assembly	35 Yrs	2027	$120,000	$140,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Elec 03 - Unit Substation						
R01	Replace unit substation equipment.	Renew Assembly	35 Yrs	2027	$280,000	$320,000
Mechanical						
Mech 01 - Controls - Boiler Electronic						
R01	Cyclical replacement of sensors and other field devices, as required.	Renew Component	3 Yrs	2027	$0	$0
Mech 05 - Piping - Domestic Water Distribution						
R01	Replace components of domestic plumbing distribution system, including domestic valves. Extent and timing of renewal will be dependent on the third-party testing of the domestic water distribution piping recommended in tactical plan.	Renew Assembly	28 Yrs	2027	$2,590,000	$2,900,000
Mech 22 - Piping - Hydronic Loop						
R01	Cyclical replacement of piping, valves and trim, as required.	Renew Assembly	20 Yrs	2027	$1,320,600	$1,500,000
Mech 23 - Tank - Expansion - Hydronic - Diaphragm						
R01	Cyclic replacement of diaphragm heating expansion tanks, as required.	Renew Assembly	20 Yrs	2027	$1,500	$1,700
Mech 24 - Valves - HVAC Flow Control and Directional						
R01	Cyclical replacement of valves, as required.	Renew Assembly	20 Yrs	2027	$2,400	$2,700
Mech 28 - Exhaust Fan - Parkade - Propellor						
R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	Renew Component	3 Yrs	2027	$0	$0
Mech 29 - Exhaust Fan - Small Service - Cabinet						
R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	Renew Assembly	3 Yrs	2027	$1,500	$1,700
Mech 31 - Make Up Air Unit - Indoor - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2027	$0	$0
Mech 33 - Air Handler - Make Up Air Unit						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2027	$0	$0
Mech 34 - Overhead Gate Motor						
R01	Replace motor and drive unit.	Renew Assembly	3 Yrs	2027	$2,500	$2,800
Elevator						
Elev 01 - Geared Traction, Overhead						
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	2 Yrs	2027	$36,000	$41,000
Fire Safety						
Fire 05 - Sprinkler & Standpipe - Wet						
R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	Renew Component	5 Yrs	2027	$44,020	$50,000
Fire 08 - Sprinkler System - Dry						
R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains, etc. as required.	Renew Component	5 Yrs	2027	$1,145.50	$1,300

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Sitework						
Site 05 - Outdoor Furniture						
R01	Repaint outdoor furnishing, as required.	Renew Component	5 Yrs	2027	$1,000	$1,100

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2028						
Enclosure						
Encl 13 - Aluminum Framed Window						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	2 Yrs	2028	$0	$0
Encl 25 - Tiled California Walkways and Remaining Original Balconies						
R01	Replace balcony tiled finish, including new waterproofing.	Renew Assembly	20 Yrs	2028	$240,000	$280,000
Encl 27 - Open-grid Overhead Parkade Gate						
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	12 Yrs	2028	$7,350	$8,500
Encl 29 - Sectional Overhead Door - Metal						
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	25 Yrs	2028	$24,000	$28,000
Encl 30 - Parking Slab with Traffic-bearing Membrane						
J01	Re-apply traffic demarcation striping and directional signage as required. Frequency will depend on traffic volume and other factors (cost includes slab on grade).	Maintenance Level 1	5 Yrs	2028	$8,000	$9,300
J02	Repair damaged and delaminated membrane prior to re-application of top coat.	Maintenance Level 3	10 Yrs	2028	$81,264	$94,000
R01	Re-apply membrane top coat in high traffic areas (e.g. drive aisles).	Renew Component	10 Yrs	2028	$211,625	$250,000
Electrical						
Elec 02 - Emergency Generator						
R03	Replace generator battery packs.	Renew Component	4 Yrs	2028	$0	$0
Elec 06 - Electrical Distribution						
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	2 Yrs	2028	$0	$0
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	2 Yrs	2028	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Elec 08 - Interior Light Fixtures						
R03	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	20 Yrs	2028	$105,000	$120,000
Mechanical						
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2028	$500	$580
Mech 06 - Pump - Domestic Water Booster						
J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	2 Yrs	2028	$0	$0
Mech 10 - Boiler - DHW - Heating - Gas Fired						
J01	Tighten electrode mounting clamp.	Maintenance Level 3	2 Yrs	2028	$0	$0
J02	Replace sacrificial anodes in storage tanks.	Maintenance Level 3	2 Yrs	2028	$0	$0
Mech 30 - Indoor Air Handler - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2028	$0	$0
Elevator						
Elev 01 - Geared Traction, Overhead						
J02	Review condition of the elevator and update contingency plan as needed.	Assessment	3 Yrs	2028	$0	$0
Interior Finishes						
Finish 03 - Sheet Carpet - Glued Down						
R01	Renew carpet.	Renew Assembly	15 Yrs	2028	$130,400	$150,000
Finish 06 - Painted Concrete Flooring						
R01	Repaint concrete floor surfaces. Repaint faded stair tread safety markings, as required.	Renew Assembly	8 Yrs	2028	$36,000	$42,000
Finish 08 - Fabric Wall Covering						
R01	Replace fabric wall covering.	Renew Assembly	25 Yrs	2028	$104,400	$120,000
Finish 11 - Paint						
R01	Locally repaint interior wall in high traffic area, as required.	Renew Component	5 Yrs	2028	$13,531.25	$16,000
Sitework						
Site 05 - Outdoor Furniture						
R02	Replace outdoor furniture, as required.	Renew Assembly	5 Yrs	2028	$10,000	$12,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2029						
Enclosure						
Encl 10 - Composite Metal Panel Wall						
J01	Review all metal finishes. Touch up paint as required (cost includes corrugated metal panel walls).	Maintenance Level 2	2 Yrs	2029	$10,000	$12,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Encl 32 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2029	$0	$0
Electrical						
Elec 01 - Distribution Transformer						
R01	Conduct infrared thermography and ultrasonic scanning tests on distribution transformers. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated with maintenance activities.	Renew Component	5 Yrs	2029	$2,000	$2,400
Elec 03 - Unit Substation						
J01	Service shutdown event. Inspect, clean, and maintain all unit substation equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	Maintenance Level 3	5 Yrs	2029	$5,000	$6,000
J02	Lubricate all moving contacts.	Maintenance Level 3	5 Yrs	2029	$0	$0
J03	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).	Maintenance Level 3	5 Yrs	2029	$0	$0
J04	Calibrate electrical relays to match documented (or utility company) settings.	Maintenance Level 3	5 Yrs	2029	$0	$0
J05	Prior to cleaning verify nameplate information; check insulator chips, cracks, and tracking; inspect lightning arrestors and visually inspect contacts and bus.	Maintenance Level 3	5 Yrs	2029	$0	$0
J06	Verify that unit substation grounding network is adequate to ensure safety during work and while equipment is in operation.	Maintenance Level 3	5 Yrs	2029	$0	$0
J07	Check tightness and torque all electrical connections. To be coordinated with 5-year system shutdown and cleaning.	Maintenance Level 3	5 Yrs	2029	$0	$0
Elec 06 - Electrical Distribution						
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.	Renew Component	5 Yrs	2029	$3,000	$3,600
Elec 11 - Proximity Access Control						
R01	Install or modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	15 Yrs	2029	$103,600	$120,000
Mechanical						
Mech 05 - Piping - Domestic Water Distribution						
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	5 Yrs	2029	$0	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	5 Yrs	2029	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	5 Yrs	2029	$0	$0
Mech 10 - Boiler - DHW - Heating - Gas Fired						
J03	Replace nozzle assembly.	Maintenance Level 3	5 Yrs	2029	$0	$0
Mech 11 - Drainage - Sanitary						
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	5 Yrs	2029	$3,000	$3,600
Mech 15 - Pumps - Sanitary Lift and Control Panel						
R01	Overhaul sanitary sump pumps.	Renew Component	5 Yrs	2029	$0	$0
Mech 16 - Pumps - Storm Lift and Control Panel						
R01	Overhaul storm sump pumps.	Renew Component	5 Yrs	2029	$0	$0
Mech 17 - Tank - DHW - Storage (and DHW Heating)						
J01	Replace anode rods in hot water heaters.	Maintenance Level 3	5 Yrs	2029	$0	$0
Mech 30 - Indoor Air Handler - Gas Fired						
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2029	$0	$0
Mech 31 - Make Up Air Unit - Indoor - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2029	$0	$0
Mech 33 - Air Handler - Make Up Air Unit						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2029	$0	$0
Elevator						
Elev 01 - Geared Traction, Overhead						
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	2 Yrs	2029	$36,000	$43,000
Fire Safety						
Fire 02 - Fire Alarm Panel - Addressable						
J01	Replace battery packs for fire alarm control panels.	Maintenance Level 3	5 Yrs	2029	$1,600	$1,900
R01	Replace battery packs.	Renew Component	5 Yrs	2029	$1,000	$1,200
Fire 05 - Sprinkler & Standpipe - Wet						
J01	Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	5 Yrs	2029	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2029	$0	$0
Fire 06 - Fire & Jockey Pump						
J01	Conduct flow test.	Maintenance Level 3	5 Yrs	2029	$0	$0
Fire 08 - Sprinkler System - Dry						
J01	Sprinkler Piping - Conduct flow test and pipe line condition (flushing) test to NFPA25.	Maintenance Level 3	5 Yrs	2029	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2029	$0	$0
Fire 11 - Emergency Egress Equipment						
R01	Cyclical replacement of batteries and lamps in DC battery packs.	Renew Component	5 Yrs	2029	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2030						
Enclosure						
Encl 09 - Clay Masonry Veneer Wall						
J01	Locally repoint mortar joints in clay masonry veneer wall, as required.	Maintenance Level 2	5 Yrs	2030	$21,920	$27,000
Encl 11 - Concrete Wall						
J01	Repair of delaminated or spalled concrete should be carried out prior to recoating.	Maintenance Level 1	5 Yrs	2030	$3,750	$4,600
R01	Reapplication of the protective coating as required, including preparation of the concrete substrate.	Renew Component	5 Yrs	2030	$27,000	$33,000
Encl 13 - Aluminum Framed Window						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	2 Yrs	2030	$0	$0
Encl 15 - Glass Block Window						
J01	Repoint mortar joints in glass block windows and complete localized repairs, as required.	Maintenance Level 2	5 Yrs	2030	$8,640	$11,000
Encl 20 - Steel Swing Door						
R01	Repaint steel door finish.	Renew Component	8 Yrs	2030	$6,500	$8,000
Encl 32 - General & Inspections						
J02	Perform full condition assessment of all enclosure systems.	Assessment	6 Yrs	2030	$25,000	$31,000
Electrical						
Elec 01 - Distribution Transformer						
J01	Clean away dust and other detritus. Vacuuming is the recommended method for cleaning. Special attention should be given to cooling ducts within the winding. Low pressure dry air can be used if care is taken to avoid driving the contamination into insulation.	Maintenance Level 3	3 Yrs	2030	$0	$0
Elec 06 - Electrical Distribution						
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	2 Yrs	2030	$0	$0
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	2 Yrs	2030	$0	$0
Elec 07 - Exterior Light Fixtures						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2030	$0	$0
Elec 08 - Interior Light Fixtures						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2030	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Elec 09 - Interior Light Fixtures - Parkade						
R01	Cyclical replacement of lighting controls (timers, motion sensors, etc.) as required.	Renew Component	6 Yrs	2030	$0	$0
Elec 12 - Security Surveillance						
R01	Service the multiplex unit, update software as required.	Renew Component	5 Yrs	2030	$0	$0
R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	14 Yrs	2030	$30,000	$37,000
Mechanical						
Mech 01 - Controls - Boiler Electronic						
R01	Cyclical replacement of sensors and other field devices, as required.	Renew Component	3 Yrs	2030	$0	$0
Mech 04 - Gas Detection - Parkade						
R01	Cyclical replacement of gas detection sensors.	Renew Assembly	5 Yrs	2030	$1,500	$1,800
Mech 06 - Pump - Domestic Water Booster						
J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	2 Yrs	2030	$0	$0
R02	Replace domestic booster pumps and motor control panel in Ocean Tower.	Renew Component	14 Yrs	2030	$10,000	$12,000
R03	Replace domestic booster pumps and motor control panel in Beach Tower.	Renew Assembly	14 Yrs	2030	$10,000	$12,000
Mech 10 - Boiler - DHW - Heating - Gas Fired						
J01	Tighten electrode mounting clamp.	Maintenance Level 3	2 Yrs	2030	$0	$0
J02	Replace sacrificial anodes in storage tanks.	Maintenance Level 3	2 Yrs	2030	$0	$0
Mech 12 - Drainage - Storm - Internal						
J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions. Jet flush or auger to suit.	Maintenance Level 2	5 Yrs	2030	$5,000	$6,100
Mech 28 - Exhaust Fan - Parkade - Propellor						
R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	Renew Component	3 Yrs	2030	$0	$0
Mech 29 - Exhaust Fan - Small Service - Cabinet						
R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	Renew Assembly	3 Yrs	2030	$1,500	$1,800
Mech 30 - Indoor Air Handler - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2030	$0	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	8 Yrs	2030	$0	$0
Mech 31 - Make Up Air Unit - Indoor - Gas Fired						
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2030	$0	$0
Mech 33 - Air Handler - Make Up Air Unit						
J02	Conduct measurements and assessment of indoor air quality (IAQ) to ensure that desirable levels are being attained.	Assessment	5 Yrs	2030	$0	$0
R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	Renew Component	8 Yrs	2030	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mech 34 - Overhead Gate Motor						
R01	Replace motor and drive unit.	Renew Assembly	3 Yrs	2030	$2,500	$3,100
Amenities						
Amen 01 - Computer Equipment						
R01	Replace components of electronic equipment.	Renew Assembly	6 Yrs	2030	$3,000	$3,700
Sitework						
Site 07 - Grounds-keeping Equipment						
R01	Replace groundskeeping equipment, as required.	Renew Assembly	20 Yrs	2030	$20,000	$25,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2031						
Enclosure						
Encl 10 - Composite Metal Panel Wall						
J01	Review all metal finishes. Touch up paint as required (cost includes corrugated metal panel walls).	Maintenance Level 2	2 Yrs	2031	$10,000	$13,000
Encl 22 - Townhouse Swing Door						
R01	Repaint wood door and frame finish.	Renew Component	6 Yrs	2031	$7,000	$8,900
Mechanical						
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2031	$500	$630
Mech 06 - Pump - Domestic Water Booster						
R01	Replace motor bearings, pump bearings and seals. Inspect mounts and housing, repair as required.	Renew Component	7 Yrs	2031	$5,000	$6,300
Mech 31 - Make Up Air Unit - Indoor - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2031	$0	$0
Mech 33 - Air Handler - Make Up Air Unit						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2031	$0	$0
Elevator						
Elev 01 - Geared Traction, Overhead						
J01	Perform regular maintenance and testing per Maintenance Control Program	Maintenance Level 3	2 Yrs	2031	$36,000	$46,000
J02	Review condition of the elevator and update contingency plan as needed.	Assessment	3 Yrs	2031	$0	$0
Amenities						
Amen 08 - Dry Sauna						
R01	Replace heating element.	Renew Component	7 Yrs	2031	$2,000	$2,500

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2032						
Enclosure						
Encl 04 - Stucco Clad Soffit						
R02	Replace stucco clad soffit and associated components.	Renew Assembly	40 Yrs	2032	$502,500	$660,000
Encl 05 - Anchor Fall Protection Equipment						
R01	Replace components of fall protection system, as required.	Renew Assembly	40 Yrs	2032	$30,000	$39,000
Encl 06 - Guardrail Glazed Aluminum						
R03	Replace or re-certify original exterior guardrails in conjunction with remaining balcony, deck, and walkway replacements.	Renew Assembly	40 Yrs	2032	$124,200	$160,000
Encl 07 - Guardrail Aluminum						
R01	Replace or re-certify exterior guardrails in conjunction with the podium replacement.	Renew Assembly	40 Yrs	2032	$174,000	$230,000
Encl 13 - Aluminum Framed Window						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass (cost incorporates replacement of IGU's at all window asset types as required). IGU replacements are completed annually, paid from the Structural Fund and CRF (part of the annual operating budget). Therefore the annual cost is excluded from the Depreciation Report.	Maintenance Level 3	2 Yrs	2032	$0	$0
Encl 32 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2032	$0	$0
Electrical						
Elec 01 - Distribution Transformer						
R02	Cyclical replacement of distributions transformers as required.	Renew Assembly	20 Yrs	2032	$60,000	$78,000
Elec 02 - Emergency Generator						
R03	Replace generator battery packs.	Renew Component	4 Yrs	2032	$0	$0
Elec 06 - Electrical Distribution						
J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	Maintenance Level 3	2 Yrs	2032	$0	$0
J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	Maintenance Level 3	2 Yrs	2032	$0	$0
R02	Cyclical replacement of components of the electrical distribution equipment, as required.	Renew Assembly	40 Yrs	2032	$300,000	$390,000
Mechanical						
Mech 06 - Pump - Domestic Water Booster						
J01	Inspect brushes and remove brush dust from motor.	Maintenance Level 3	2 Yrs	2032	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mech 09 - Valves - Plumbing Flow Control and Directional						
R01	Cyclical replacement of valves, as required.	Renew Assembly	20 Yrs	2032	$6,000	$7,800
Mech 10 - Boiler - DHW - Heating - Gas Fired						
J01	Tighten electrode mounting clamp.	Maintenance Level 3	2 Yrs	2032	$0	$0
J02	Replace sacrificial anodes in storage tanks.	Maintenance Level 3	2 Yrs	2032	$0	$0
Mech 12 - Drainage - Storm - Internal						
R01	Repair and/or replace components of storm water drainage collection system, as required.	Renew Assembly	40 Yrs	2032	$40,000	$52,000
Mech 19 - Boiler - Hydronic - Gas Fired						
R01	Cyclic replacement of heating boilers, as required.	Renew Assembly	20 Yrs	2032	$160,000	$210,000
Mech 20 - Chemical Treatment Equipment						
R01	Cyclical replacement of components of water treatment equipment.	Renew Assembly	8 Yrs	2032	$2,000	$2,600
Mech 27 - Baseboard - Electric						
R01	Cyclical replacement of electric baseboard heaters, as required.	Renew Assembly	40 Yrs	2032	$5,000	$6,500
Mech 30 - Indoor Air Handler - Gas Fired						
J01	Motor mount - Inspect for damage, cracks, or corrosion.	Maintenance Level 2	2 Yrs	2032	$0	$0
Fire Safety						
Fire 05 - Sprinkler & Standpipe - Wet						
R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	Renew Component	5 Yrs	2032	$44,020	$57,000
Fire 08 - Sprinkler System - Dry						
R02	Replace damaged sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains, etc. as required.	Renew Component	5 Yrs	2032	$1,145.50	$1,500
Fire 09 - Sprinkler Valve Assembly - Dry						
R04	Replace sprinkler valves, as required.	Renew Assembly	40 Yrs	2032	$12,000	$16,000
Fire 10 - Fire Hose Cabinet						
R01	Replace fire hoses.	Renew Assembly	40 Yrs	2032	$6,000	$7,800
Interior Finishes						
Finish 01 - Marble Floor Tile						
R01	Renew porcelain tile floor.	Renew Assembly	40 Yrs	2032	$88,000	$110,000
Finish 04 - Ceramic Floor Tile						
R02	Renew stone floor tile in parkade vestibules, as required.	Renew Assembly	40 Yrs	2032	$33,000	$43,000
Finish 07 - Marble Columns						
R01	Renew faux marble columns, as required.	Renew Assembly	40 Yrs	2032	$10,000	$13,000
Finish 09 - Mirror						
R01	Replace mirrored wall, as required.	Renew Assembly	40 Yrs	2032	$8,700	$11,000
Finish 12 - Wood Paneling						
R01	Replace wood paneling.	Renew Assembly	40 Yrs	2032	$19,600	$26,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Finish 13 - Baseboard, Molding, and Casing						
R01	Replace sections of damaged baseboard, molding, and casing, as required.	Renew Assembly	40 Yrs	2032	$9,000	$12,000
Finish 14 - Carpentry and Millwork						
R01	Replace damaged components of carpentry and millwork, as required.	Renew Assembly	40 Yrs	2032	$9,600	$13,000
Finish 15 - Interior Swing Door - General						
R01	Locally replace interior swing door as required.	Renew Assembly	15 Yrs	2032	$69,900	$91,000
Amenities						
Amen 05 - Central Mailboxes						
R01	Replace central mail boxes as required.	Renew Assembly	40 Yrs	2032	$30,000	$39,000
Amen 06 - Office Furniture						
R01	Replace Office furniture and associated component.	Renew Assembly	15 Yrs	2032	$50,000	$65,000
Amen 07 - Public Signage						
R01	Replace damaged and outdated signage, as required.	Renew Assembly	40 Yrs	2032	$10,000	$13,000
Amen 10 - Pool Circulation & Sanitation						
R01	Cyclical replacement of pool circulation and sanitation equipment, as required.	Renew Assembly	15 Yrs	2032	$5,000	$6,500
Sitework						
Site 05 - Outdoor Furniture						
R01	Repaint outdoor furnishing, as required.	Renew Component	5 Yrs	2032	$1,000	$1,300

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

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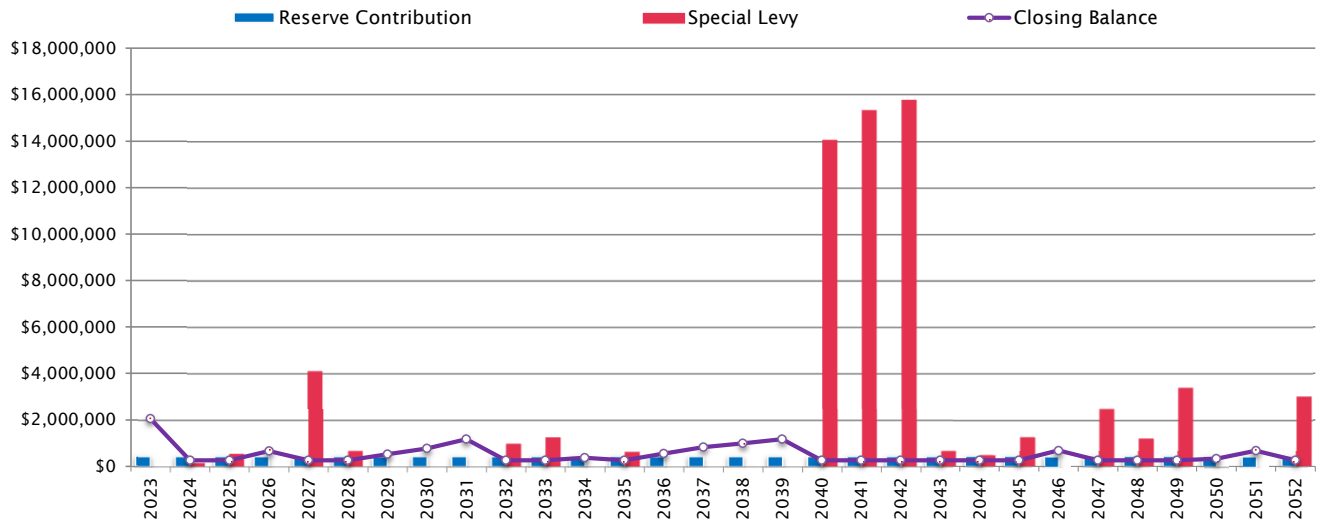
Current Funding Model

888 Beach Avenue

Fixed Annual Contribution of $457,000		Starting Reserve Balance	$1,601,536
Building	888 Beach Avenue	Minimum Closing Balance	$255,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$457,000
Planning Horizon	**30**	Reserve Contribution Increase	0.0%
Number of Units	# 259	Monthly Avg. Unit Contribution	$147

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$1,601,536	$457,000	$0	$32,031	$36,000	$2,054,567
2024	$2,054,567	$457,000	$146,142	$41,091	$2,443,800	$255,000
2025	$255,000	$457,000	$540,830	$5,100	$1,002,930	$255,000
2026	$255,000	$457,000	$0	$5,100	$64,000	$653,100
2027	$653,100	$457,000	$4,105,138	$13,062	$4,973,300	$255,000
2028	$255,000	$457,000	$668,280	$5,100	$1,130,380	$255,000
2029	$255,000	$457,000	$0	$5,100	$193,700	$523,400
2030	$523,400	$457,000	$0	$10,468	$217,100	$773,768
2031	$773,768	$457,000	$0	$15,475	$77,330	$1,168,913
2032	$1,168,913	$457,000	$967,708	$23,378	$2,362,000	$255,000
2033	$255,000	$457,000	$1,249,200	$5,100	$1,711,300	$255,000
2034	$255,000	$457,000	$0	$5,100	$345,590	$371,510
2035	$371,510	$457,000	$625,560	$7,430	$1,206,500	$255,000
2036	$255,000	$457,000	$0	$5,100	$169,500	$547,600
2037	$547,600	$457,000	$0	$10,952	$186,560	$828,992
2038	$828,992	$457,000	$0	$16,580	$316,100	$986,472
2039	$986,472	$457,000	$0	$19,729	$294,200	$1,169,001
2040	$1,169,001	$457,000	$14,047,049	$23,380	$15,441,430	$255,000
2041	$255,000	$457,000	$15,333,400	$5,100	$15,795,500	$255,000
2042	$255,000	$457,000	$15,782,400	$5,100	$16,244,500	$255,000
2043	$255,000	$457,000	$669,800	$5,100	$1,131,900	$255,000
2044	$255,000	$457,000	$481,200	$5,100	$943,300	$255,000
2045	$255,000	$457,000	$1,258,900	$5,100	$1,721,000	$255,000
2046	$255,000	$457,000	$0	$5,100	$36,990	$680,110
2047	$680,110	$457,000	$2,475,588	$13,602	$3,371,300	$255,000
2048	$255,000	$457,000	$1,213,900	$5,100	$1,676,000	$255,000
2049	$255,000	$457,000	$3,379,000	$5,100	$3,841,100	$255,000
2050	$255,000	$457,000	$0	$5,100	$394,600	$322,500
2051	$322,500	$457,000	$0	$6,450	$114,100	$671,850
2052	$671,850	$457,000	$3,011,613	$13,437	$3,898,900	$255,000
		$13,710,000	$65,955,708	$328,666	$81,340,910	



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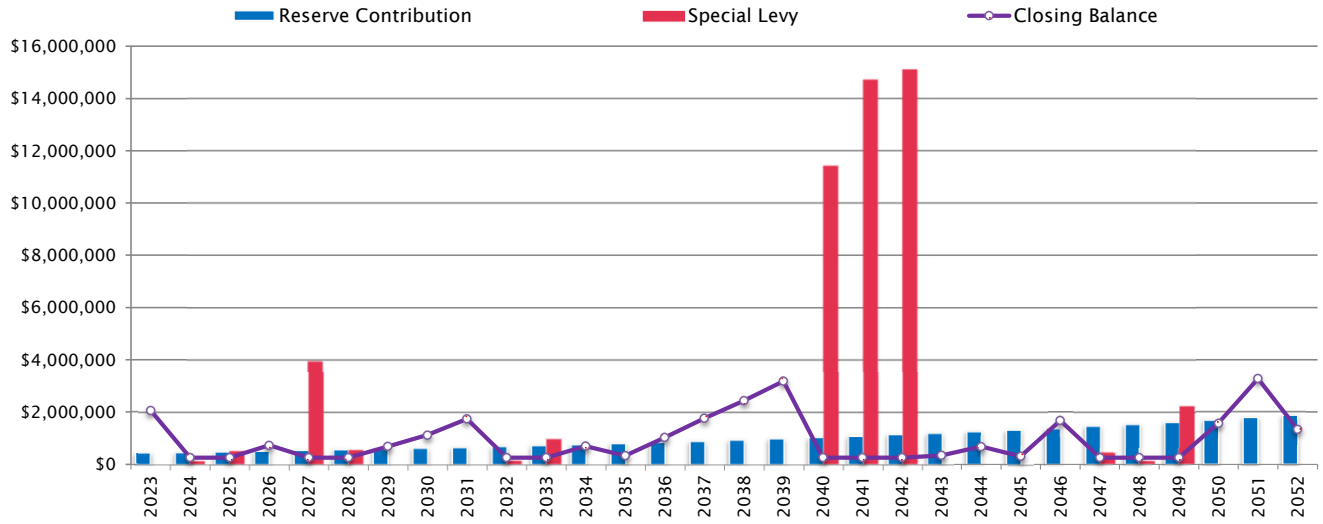
Alternative #1 Funding Model

888 Beach Avenue

Increasing Annual Contribution, Starting at $457,000 + 5%		Starting Reserve Balance	$1,601,536
Building	888 Beach Avenue	Minimum Closing Balance	$255,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$457,000
Planning Horizon	30	Reserve Contribution Increase	5.0%
Number of Units	# 259	Monthly Avg. Unit Contribution	$147

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$1,601,536	$457,000	$0	$32,031	$36,000	$2,054,567
2024	$2,054,567	$479,850	$123,292	$41,091	$2,443,800	$255,000
2025	$255,000	$503,843	$493,988	$5,100	$1,002,930	$255,000
2026	$255,000	$529,035	$0	$5,100	$64,000	$725,135
2027	$725,135	$555,486	$3,933,176	$14,503	$4,973,300	$255,000
2028	$255,000	$583,261	$542,019	$5,100	$1,130,380	$255,000
2029	$255,000	$612,424	$0	$5,100	$193,700	$678,824
2030	$678,824	$643,045	$0	$13,576	$217,100	$1,118,345
2031	$1,118,345	$675,197	$0	$22,367	$77,330	$1,738,579
2032	$1,738,579	$708,957	$134,692	$34,772	$2,362,000	$255,000
2033	$255,000	$744,405	$961,795	$5,100	$1,711,300	$255,000
2034	$255,000	$781,625	$0	$5,100	$345,590	$696,135
2035	$696,135	$820,706	$0	$13,923	$1,206,500	$324,264
2036	$324,264	$861,742	$0	$6,485	$169,500	$1,022,991
2037	$1,022,991	$904,829	$0	$20,460	$186,560	$1,761,720
2038	$1,761,720	$950,070	$0	$35,234	$316,100	$2,430,924
2039	$2,430,924	$997,574	$0	$48,618	$294,200	$3,182,916
2040	$3,182,916	$1,047,452	$11,402,403	$63,658	$15,441,430	$255,000
2041	$255,000	$1,099,825	$14,690,575	$5,100	$15,795,500	$255,000
2042	$255,000	$1,154,816	$15,084,584	$5,100	$16,244,500	$255,000
2043	$255,000	$1,212,557	$0	$5,100	$1,131,900	$340,757
2044	$340,757	$1,273,185	$0	$6,815	$943,300	$677,457
2045	$677,457	$1,336,844	$0	$13,549	$1,721,000	$306,850
2046	$306,850	$1,403,686	$0	$6,137	$36,990	$1,679,684
2047	$1,679,684	$1,473,871	$439,152	$33,594	$3,371,300	$255,000
2048	$255,000	$1,547,564	$123,336	$5,100	$1,676,000	$255,000
2049	$255,000	$1,624,942	$2,211,058	$5,100	$3,841,100	$255,000
2050	$255,000	$1,706,190	$0	$5,100	$394,600	$1,571,690
2051	$1,571,690	$1,791,499	$0	$31,434	$114,100	$3,280,522
2052	$3,280,522	$1,881,074	$0	$65,610	$3,898,900	$1,328,307
		$30,362,553	$50,140,070	$565,058	$81,340,910	



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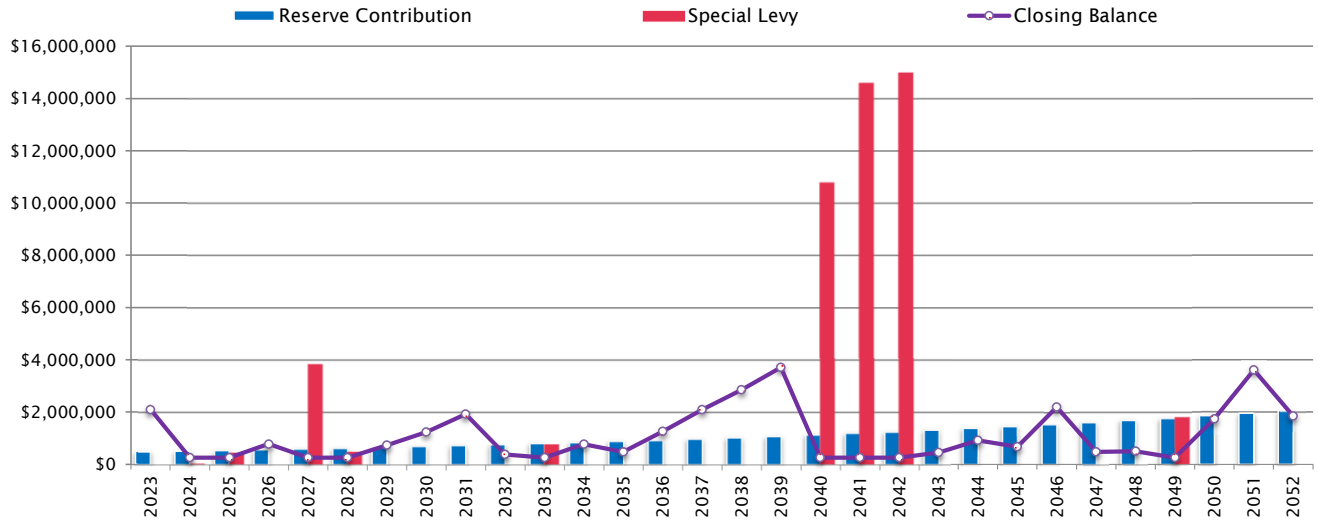
Alternative #2 Funding Model

888 Beach Avenue

Increasing Annual Contribution, Starting at $500,000 + 5%		Starting Reserve Balance	$1,601,536
Building	888 Beach Avenue	Minimum Closing Balance	$255,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$500,000
Planning Horizon	30	Reserve Contribution Increase	5.0%
Number of Units	# 259	Monthly Avg. Unit Contribution	$161

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$1,601,536	$500,000	$0	$32,031	$36,000	$2,097,567
2024	$2,097,567	$525,000	$34,282	$41,951	$2,443,800	$255,000
2025	$255,000	$551,250	$446,580	$5,100	$1,002,930	$255,000
2026	$255,000	$578,813	$0	$5,100	$64,000	$774,913
2027	$774,913	$607,753	$3,830,136	$15,498	$4,973,300	$255,000
2028	$255,000	$638,141	$487,139	$5,100	$1,130,380	$255,000
2029	$255,000	$670,048	$0	$5,100	$193,700	$736,448
2030	$736,448	$703,550	$0	$14,729	$217,100	$1,237,627
2031	$1,237,627	$738,728	$0	$24,753	$77,330	$1,923,777
2032	$1,923,777	$775,664	$0	$38,476	$2,362,000	$375,917
2033	$375,917	$814,447	$768,417	$7,518	$1,711,300	$255,000
2034	$255,000	$855,170	$0	$5,100	$345,590	$769,680
2035	$769,680	$897,928	$0	$15,394	$1,206,500	$476,501
2036	$476,501	$942,825	$0	$9,530	$169,500	$1,259,356
2037	$1,259,356	$989,966	$0	$25,187	$186,560	$2,087,949
2038	$2,087,949	$1,039,464	$0	$41,759	$316,100	$2,853,072
2039	$2,853,072	$1,091,437	$0	$57,061	$294,200	$3,707,371
2040	$3,707,371	$1,146,009	$10,768,903	$74,147	$15,441,430	$255,000
2041	$255,000	$1,203,310	$14,587,090	$5,100	$15,795,500	$255,000
2042	$255,000	$1,263,475	$14,975,925	$5,100	$16,244,500	$255,000
2043	$255,000	$1,326,649	$0	$5,100	$1,131,900	$454,849
2044	$454,849	$1,392,981	$0	$9,097	$943,300	$913,627
2045	$913,627	$1,462,630	$0	$18,273	$1,721,000	$673,530
2046	$673,530	$1,535,762	$0	$13,471	$36,990	$2,185,773
2047	$2,185,773	$1,612,550	$0	$43,715	$3,371,300	$470,738
2048	$470,738	$1,693,177	$0	$9,415	$1,676,000	$497,330
2049	$497,330	$1,777,836	$1,810,987	$9,947	$3,841,100	$255,000
2050	$255,000	$1,866,728	$0	$5,100	$394,600	$1,732,228
2051	$1,732,228	$1,960,065	$0	$34,645	$114,100	$3,612,837
2052	$3,612,837	$2,058,068	$0	$72,257	$3,898,900	$1,844,262
		$33,219,424	$47,709,460	$654,753	$81,340,910	



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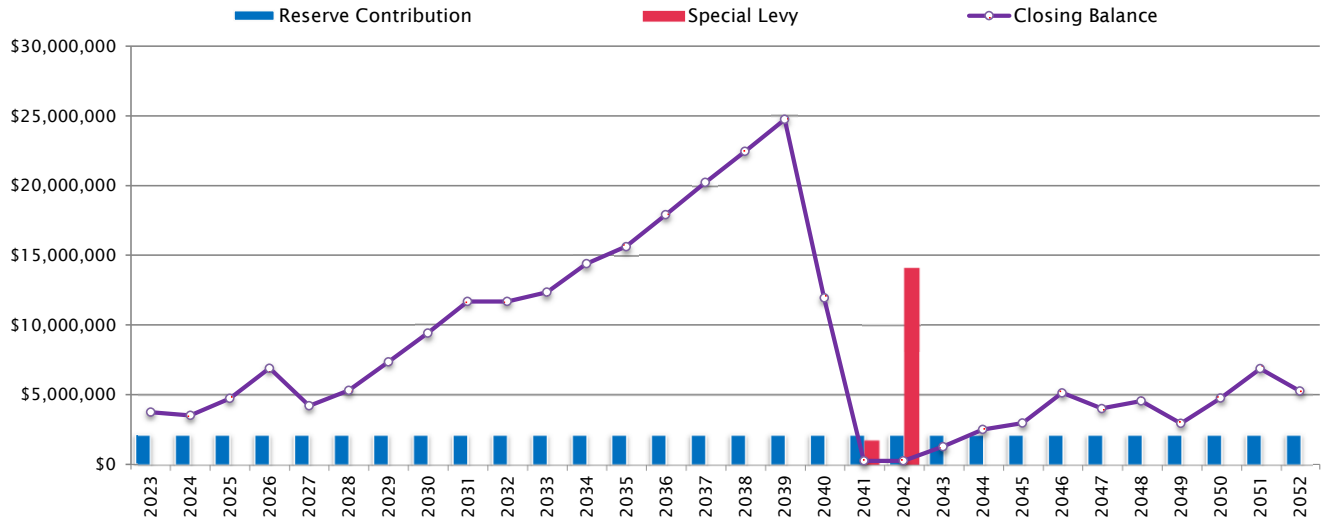
Progressive Funding Model

888 Beach Avenue

Fixed Annual Contribution of $2,142,000		Starting Reserve Balance	$1,601,536
Building	888 Beach Avenue	Minimum Closing Balance	$255,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$2,142,000
Planning Horizon	30	Reserve Contribution Increase	0.0%
Number of Units	# 259	Monthly Avg. Unit Contribution	$689

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$1,601,536	$2,142,000	$0	$32,031	$36,000	$3,739,567
2024	$3,739,567	$2,142,000	$0	$74,791	$2,443,800	$3,512,558
2025	$3,512,558	$2,142,000	$0	$70,251	$1,002,930	$4,721,879
2026	$4,721,879	$2,142,000	$0	$94,438	$64,000	$6,894,317
2027	$6,894,317	$2,142,000	$0	$137,886	$4,973,300	$4,200,903
2028	$4,200,903	$2,142,000	$0	$84,018	$1,130,380	$5,296,541
2029	$5,296,541	$2,142,000	$0	$105,931	$193,700	$7,350,772
2030	$7,350,772	$2,142,000	$0	$147,015	$217,100	$9,422,687
2031	$9,422,687	$2,142,000	$0	$188,454	$77,330	$11,675,811
2032	$11,675,811	$2,142,000	$0	$233,516	$2,362,000	$11,689,327
2033	$11,689,327	$2,142,000	$0	$233,787	$1,711,300	$12,353,814
2034	$12,353,814	$2,142,000	$0	$247,076	$345,590	$14,397,300
2035	$14,397,300	$2,142,000	$0	$287,946	$1,206,500	$15,620,746
2036	$15,620,746	$2,142,000	$0	$312,415	$169,500	$17,905,661
2037	$17,905,661	$2,142,000	$0	$358,113	$186,560	$20,219,214
2038	$20,219,214	$2,142,000	$0	$404,384	$316,100	$22,449,499
2039	$22,449,499	$2,142,000	$0	$448,990	$294,200	$24,746,289
2040	$24,746,289	$2,142,000	$0	$494,926	$15,441,430	$11,941,784
2041	$11,941,784	$2,142,000	$1,727,880	$238,836	$15,795,500	$255,000
2042	$255,000	$2,142,000	$14,097,400	$5,100	$16,244,500	$255,000
2043	$255,000	$2,142,000	$0	$5,100	$1,131,900	$1,270,200
2044	$1,270,200	$2,142,000	$0	$25,404	$943,300	$2,494,304
2045	$2,494,304	$2,142,000	$0	$49,886	$1,721,000	$2,965,190
2046	$2,965,190	$2,142,000	$0	$59,304	$36,990	$5,129,504
2047	$5,129,504	$2,142,000	$0	$102,590	$3,371,300	$4,002,794
2048	$4,002,794	$2,142,000	$0	$80,056	$1,676,000	$4,548,850
2049	$4,548,850	$2,142,000	$0	$90,977	$3,841,100	$2,940,727
2050	$2,940,727	$2,142,000	$0	$58,815	$394,600	$4,746,941
2051	$4,746,941	$2,142,000	$0	$94,939	$114,100	$6,869,780
2052	$6,869,780	$2,142,000	$0	$137,396	$3,898,900	$5,250,276
		$64,260,000	$15,825,280	$4,904,370	$81,340,910	



Appendix F

RDH Qualifications

Maintenance and Planning (MaP)

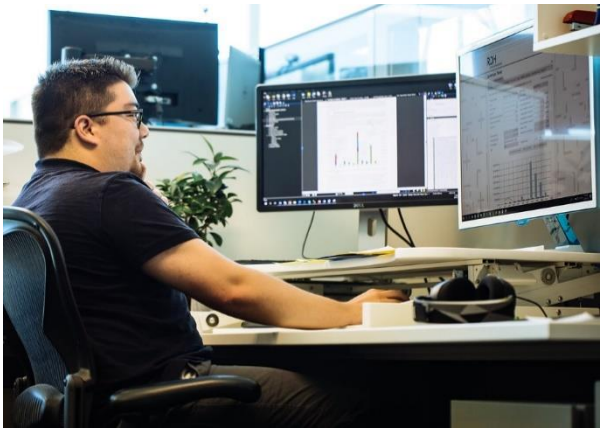
Our Maintenance and Planning (MaP) group works with your owner group to plan and develop strategies for the long- and short-term needs of your building—everything from roof maintenance to boiler replacement. As the acronym suggests, our services are designed so that we can provide you with a comprehensive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



Principals

Mark Will | B.A. Econ.
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

Associates and Project Managers

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

Jesse Listoen | Dipl.T.
Associate, Estimator

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- Has 5+ years experience in maintenance and planning consulting
- Has been involved in the preparation of 70+ Depreciation Reports

Josh Chambers | RSE, RRO
Associate, Project Manager

- B.Tech., Construction Management Program
- Red Seal Endorsement (RSE), Industry Training Authority
- Registered Roof Observer (RRO), Roof Consultants Institute Inc.
- Has worked in maintenance and planning consulting since 2021
- Joined RDH as a Building Science Technologist in 2015

Len Sakuragi | P.Eng.
Associate, Building Science Engineer

- → B.A.Sc., Mechanical Engineering
- → Has worked in maintenance and planning consulting since 2020
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Michael Grummett | P.Eng.
Associate, Building Science Engineer

- → B.Eng., Structural Engineering
- → Has worked in maintenance and planning consulting since 2015
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Robyn Edgar | P.Eng.
Associate, Building Science Engineer

- → Associate Certificate (hons), Project Management
- → B.A.Sc. (with Distinction), Civil Engineering
- → Has worked in maintenance and planning consulting since 2019
- → Has 10 years of building science experience
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Technical Staff

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

Joseph Hildebrandt | B.A.Sc., EIT
Building Science Engineer (EIT)

- → B.A.Sc., Mechanical Engineering (Thermofluids Option)
- → Has worked in maintenance and planning consulting since 2020

Joshua Villanueva | Dipl.T.

Building Science Technologist

→ Diploma in Architectural and Building Technology
→ Has worked in maintenance and planning consulting since 2021

Preston Wu | Dipl.T.

Building Science Technologist

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

Riley Doyle | B.A.Sc., EIT

Building Science Engineer (EIT)

→ B.A.Sc., Mechanical Engineering
→ Has worked in maintenance and planning consulting since 2022

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

Aurelie Stoeckel
Project Assistant

- → Master's degree in Management
- → Prepares Maintenance and Planning estimates and proposals

Lyka Alodaga
Project Assistant

- → Certificate, Administrative Professional
- → Has worked in administration within engineering/architectural firms since 2018

Vanessa Jumawan
Maintenance and Planning Coordinator

- → Has worked in administration within engineering/architecture since 2008
- → Maintenance and Planning Proposal Coordinator, prepares Maintenance and Planning estimates and proposals

Software Support and Programmer

Matthew Branch | P.Eng.
Software Developer

- → B.Sc., Civil Engineering
- → Registered Professional Engineer, Engineers and Geoscientists of BC
- → 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
- → Worked in administration within engineering/architecture firms since 2004

Appendix G

Insurance Certificate

Ref. No. 320009865364

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 #	8850746-04		
Effective	01-Jul-2023	**Expiry**	01-Jul-2024
Limits of Liability	Bodily Injury & Property Damage, Each Occurrence $1,000,000 Products and Completed Operations, Aggregate $2,000,000 Non-Owned Automobile Liability $1,000,000 Legal Liability for Damage to Hired Automobiles $100,000 Policy may be subject to a general aggregate and other aggregates where applicable		
Architects & Engineers Professional Liability	**Insurer**	Lloyd's Underwriters	
Policy #	PSDEF2200249		
Effective	01-Jul-2023	**Expiry**	01-Jul-2024
	Per Claim $1,000,000 Policy Term Aggregate $2,000,000		

Terms and / or Additional Coverage

Commercial General Liability includes:
General Aggregate: $2,000,000

THE POLICY CONTAINS A CLAUSE THAT MAY LIMIT THE AMOUNT PAYABLE
OR, IN THE CASE OF AUTOMOBILE INSURANCE,
THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE
THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY

AON

Ref. No. 320009865364

CERTIFICATE OF INSURANCE

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

Dated : 30-June-2023

Aon Reed Stenhouse Inc

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

THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE
THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY

AON