2021 Depreciation Report Update
for
The Metropolitan
5885 Olive Avenue, Burnaby

Prepared For:
The Owners, Strata Plan NW 3355
c/o FirstService Residential
700 – 200 Granville Street
Vancouver, BC V6C 1S4

Attention: Beverly Kapush,
Senior Strata Manager

Prepared By:
Sense Engineering Ltd.
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Shahriar Nabipour, B.A.Sc., EIT

June 29, 2020

Sense's Project No. 20vA001A

sense engineering

EXECUTIVE SUMMARY

The Metropolitan consists of a 25-storey building with a total of 132 residential suites, constructed over a three level parking garage. Amenities include a recreation centre, indoor pool, hot tub, sauna, and meeting room. Construction of the complex was completed circa 1991.

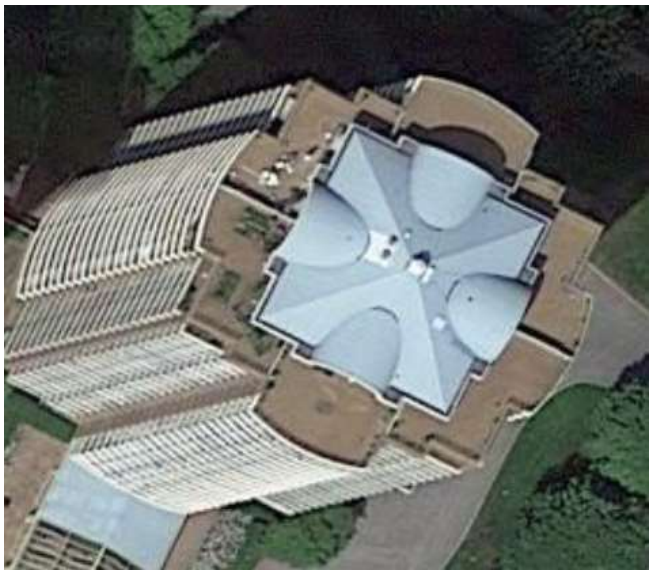


Figure 1: The Metropolitan, aerial image (image via Google)

The property and building have been reasonably well maintained over the years. Significant work completed in recent years includes:

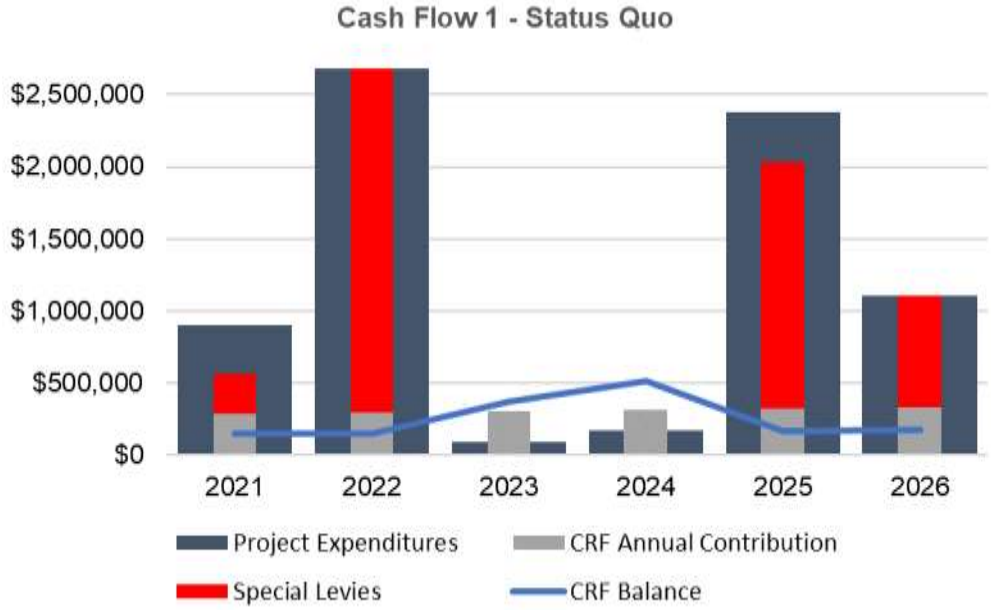
- Exterior wall repairs;
- Exterior window repairs;
- Targeted roof deck repairs;
- Fire alarm control panel replacement;
- Hydronic heating boiler replacement;
- Domestic water heat exchanger replacement; and
- Domestic water distribution piping replacement.

You will note that there are recommended projects and investigations in the next three years, i.e., before the next update to this Depreciation Report. These projects are summarized on the following page.

2021 $902,450	1.4 Parking Garage Evaluate Condition of the Parking Garage – $8,000 2.2 Exterior Windows, Balcony, Roof Deck, and Patio Doors Window Water Testing and Trial Repairs – $19,000 2.4 Roofing and Skylights Remaining PH-3 and PH-6 Targeted Roof Deck Repairs – $77,000 Entrance Canopy and Pool Area Investigation and Repair Allowance – $119,000 4.1 FF&E (Furniture, Fixtures, and Equipment) Refurbish Elevator Cabs – $40,000 5.1 Site Features and Paving Leak Investigation and Repair at North-East Concrete Stairs – $20,000 8.1 General Electrical Evaluation – $5,000 9.1 Elevators Modernize Elevator Controls – $490,000 Fire Alarm Upgrades and Electrical Work – $115,000 12.1 Depreciation Reports 2021 Depreciation Report Update – $9,450
2022 $2,681,090	1.1 Structural Frame Evaluate Condition of the Post-Tensioning (PT) System – $20,600 1.4 Parking Garage Locally Repair Suspended Slab Concrete and Install a Waterproofing System – $587,100 Allowance for Crystalline Waterproofing and/or Injection-Type Repairs to the Foundation Walls and Garage Roof Slab – $8,240 2.2 Exterior Windows, Balcony, Roof Deck, and Patio Doors Window Repairs – $1,040,300 2.4 Roofing and Skylights Replace Roof Decks and Penthouse Roof Level Stucco Walls – $952,750 5.1 Site Features and Paving Re-paint Metal Trellises – $10,300 7.2 Domestic Water Piping/Valves Replace Booster Pump Set and Associated Controls – $61,800
2023 $95,481	3.3 Suppression Suppression System Repair Allowance – $10,609 Replace Fire Pump – $53,045 6.1 General Overhaul Air Handling Unit (Phased, one unit per year) – $15,914 7.3 Drainage Drainage Repair Allowance – $15,914

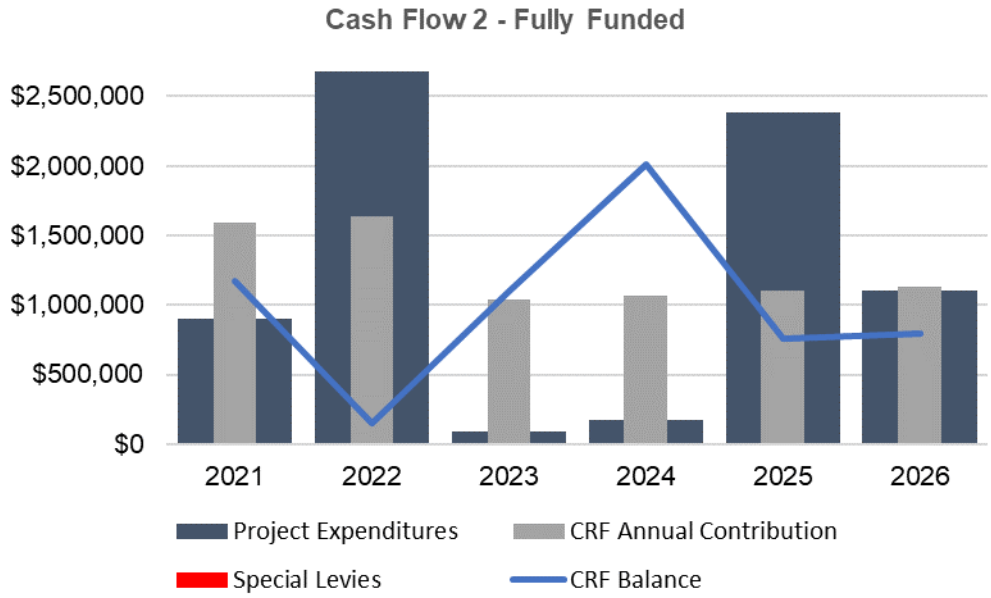
Our analysis shows that an increase to the Contingency Reserve Fund is required above current contribution levels to meet future anticipated expenditures. The following tables show six-year snapshots of three possible funding scenarios. Full expenditure and cash flow tables are included in Appendices C to E.

Cash Flow Analysis 1 - Status Quo: This funding scenario shows contributions to the Contingency Reserve Fund at the same level as is presently being contributed. This shows that there are several years where the amount in the Reserve Fund will not be sufficient to cover the costs of required repairs and renewals and the resultant amount of the Special Levy, in that particular year, that will be required in order to cover costs. See below for the first six year snap shot of this scenario, see Appendix C for both 10 year and full 30 year presentation tables and graphs.



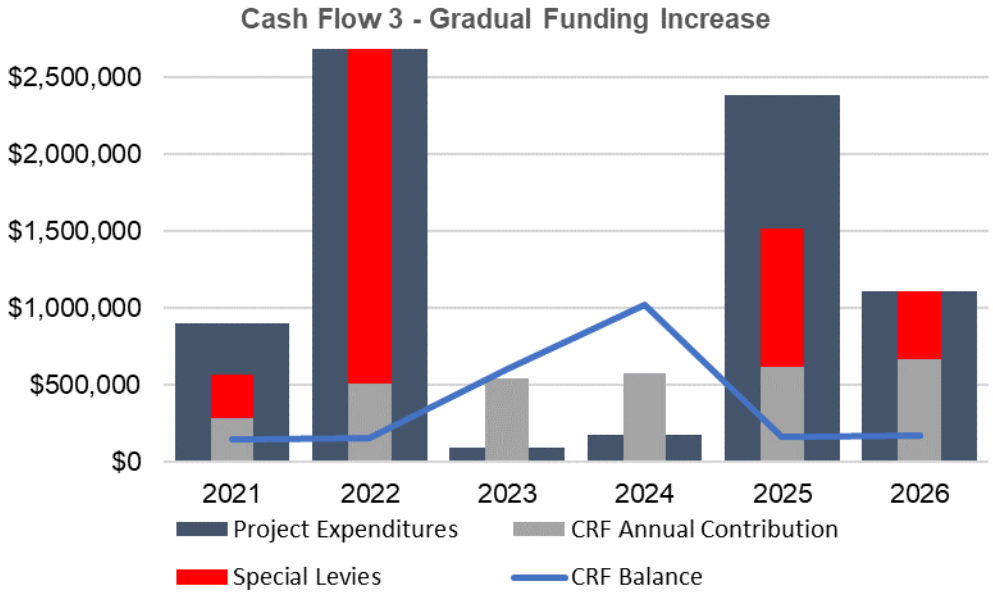
Year	2021	2022	2023	2024	2025	2026
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**
CRF Annual Contribution	**$290,000**	**$298,700**	**$307,661**	**$316,891**	**$326,398**	**$336,189**
Special Levies	**$278,665**	**$2,383,760**	**$0**	**$0**	**$1,704,207**	**$772,459**
CRF Balance	**$150,000**	**$154,500**	**$369,904**	**$515,101**	**$168,826**	**$173,891**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**

Cash Flow Analysis 2 - Fully Funded (No Special Levies): This funding scenario shows an immediate increase in contributions to the Contingency Reserve Fund in order to cover the cost of future repairs and replacements with no Special Levies. Following this increase, annual contributions would only be increased by the amount of inflation. See below for the first six year snap shot of this scenario, see Appendix D for both 10 year and full 30 year presentation tables and graphs.



Year	2021	2022	2023	2024	2025	2026
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**
CRF Annual Contribution	**$1,589,394**	**$1,637,076**	**$1,038,179**	**$1,069,324**	**$1,101,404**	**$1,134,446**
Special Levies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$1,177,789**	**$154,501**	**$1,104,392**	**$2,013,490**	**$757,278**	**$798,389**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**

Cash Flow Analysis 3 - Gradual Funding Increase: This funding scenario shows an immediate increase in contributions to the Contingency Reserve Fund, followed by gradual increases in contributions and special levies for large expenditure years, so as not to overly burden the existing Owners; but, also to eventually (after 2037) bring the contributions to a level where the Reserve Fund is fully funded and annual contributions only needing to be increased by the amount of inflation. You will note that initial contribution amounts will be less than in the scenario of Cash Flow Analysis 2, but more in later years. See below for the first six year snap shot of this scenario, see Appendix E for both 10 year and full 30 year presentation tables and graphs.



Year	2021	2022	2023	2024	2025	2026
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**
CRF Annual Contribution	**$290,000**	**$507,500**	**$543,025**	**$581,037**	**$621,709**	**$665,229**
Special Levies	**$278,665**	**$2,173,826**	**$0**	**$0**	**$897,620**	**$441,632**
CRF Balance	**$150,000**	**$154,500**	**$606,546**	**$1,019,702**	**$168,826**	**$173,891**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**

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APPENDICES

1.0 INTRODUCTION

The Owners of Strata Plan NW 3355 retained *Sense Engineering* to prepare this 2021 Depreciation Report Update for The Metropolitan at 5885 Olive Avenue in Burnaby.

This report satisfies the requirements of the BC *Strata Property Act* and Regulations.

2.0 DESCRIPTION OF THE STRATA CORPORATION

The Metropolitan consists of a 25-storey building with a total of 132 residential suites, constructed over a three level parking garage. Amenities include a recreation centre, indoor pool, hot tub, sauna, and meeting room. Construction of the complex was completed circa 1991.

The Strata Corporation's present fiscal year runs from May 1 to April 30. For the purposes of this report the 2021 Fiscal Year runs from May 1, 2020 to April 30, 2021.

Figure 1: Main building entrance.

Figure 2: Typical site features and paving.

Figure 3: Main entrance lobby.

Figure 4: Garage entrance.

Our interpretation of the Strata Bylaws and how we understand the Strata Corporation to be operating are that the following property assets (building components and systems) are the common assets which must be addressed as part of this Depreciation Report Update:

- Structural frame, including exclusive use balconies;
- Roofs, including exclusive use roof decks;
- Exterior cladding, windows, and doors;
- Interior finishes in common areas;
- Site finishes;
- Common mechanical, electrical, and plumbing facilities; and
- Through-wall exhaust vents serving the gas fireplaces in the penthouse suites.

We understand that components and systems which are not common assets and are the responsibility of the individual owners include:

- Interior suite finishes;
- In-suite-specific plumbing and electrical fixtures and associated piping and wiring; and
- Fireplace inserts in the penthouse suites.

Modifications have been made to some Exclusive Use Common Areas by the individual unit Owners. We understand that the responsibility to maintain, repair or replace any such modification, including removal and replacement of any such modifications to facilitate repairs to, or replacement of, Common Property, will be at the sole responsibility, and at the cost, of the individual unit owners. Known modifications include owner-installed flooring at several balconies and penthouse level roof decks.

3.0 SENSE'S SCOPE OF WORK

3.1 BC *Strata Property Act* and Regulation Requirements

As per the BC *Strata Property Act* and Regulations:

> "Depreciation report updates help strata corporations plan for the repair, maintenance and replacement of common property, limited common property and common assets over a 30 year period.
>
> The report must contain:
>
> - A physical inventory of the common property and assets.
> - Anticipated maintenance, repair and replacement costs for common expenses projected over 30 years.
> - A financial forecasting section with at least three cash flow funding models.
>
> Depreciation report updates provide useful information to strata lot owners, prospective purchasers, mortgage providers and insurance companies."

Our Depreciation Report Update provides information satisfying the above requirements. In response to other requirements of the Regulations:

- The employees at *Sense Engineering* have prepared Depreciation-type reports across Canada since the early ’90s, and our Team is familiar with virtually all building systems, failure mechanisms, and required maintenance, repair and replacement needs.

- *Sense Engineering* was retained by the Strata Corporation, and at the time of writing this report, no employees of *Sense Engineering* have any ownership interest (present or prospective) in the Strata Corporation or its management company, thereby solely providing independent 3rd party consulting services to the Strata Corporation.

- *Sense Engineering* carries $5,000,000 in errors and omissions insurance.

Our intent in preparing this Depreciation Report Update for the Strata Corporation was to:

- meet the requirements of the BC *Strata Property Act* and Regulations,
- make the report easy to understand and be a useful document to assist in managing the building, and
- include a sensible plan for managing costs to maintain, repair and renew the building over both the short and long term.

3.2 Preparation and Site Review

As part of our review and preparation of this report, we:

- Reviewed the information made available (see Appendix F) and had discussions with Beverly Kapush (Senior Strata Manager) and Philip Zhang (Site Manager) to:

  - verify which components of the Strata Corporation are common assets;
  - understand the general construction of the building and property;
  - understand the type and level of maintenance and repairs carried out in the past and planned for the future; and
  - understand the financial status of the Strata Corporation.

- Ted Denniston, AScT, LEED AP, and Shahriar Nabipour, B.A.Sc., EIT, visited the site on February 12, 2020 and visually reviewed representative samples of the common assets to make an assessment of existing conditions. As part of this review, we:

  - made observations of common assets from the ground, accessible roofs, suites (see below), and common and service areas; and
  - gained access to suites 406, 1104, 1504, 2201, and PH-3.

  There was no access to the elevator pits or hoistways, so these areas were not reviewed.

- Brennan Vollering, M.A.Sc., P.Eng., LEED AP reviewed this report.

4.0 PROJECTED CONTINGENCY RESERVE FUND EXPENDITURES

Using the information gathered, we created an inventory of common assets of the Strata Corporation and the anticipated years and cost for their related major repairs and replacement.

The estimated timing of repair/replacement projects is based on typical service lives, adjusting for current conditions and past performance history. We assume good maintenance practices are followed. Actual timing can vary depending on many factors, including the frequency or intensity of future building maintenance. Under strict maintenance regimens, the timing of repairs and renewal projects could possibly extend beyond what is presented in this report. Conversely, should essential and timely maintenance is not carried out, the timing of repairs and renewal projects could possibly occur years sooner than what is presented in this report.

As per the *Strata Property Act*, the Depreciation Report Update includes anticipated maintenance, repair and replacement costs for common expenses that usually occur less often than once a year. In general, any repair or renewal project greater than $5,000 has been captured and included in the Depreciation Report Update. Smaller repairs and replacement work, routine building maintenance items, or items that we understand would typically be addressed as part of regular maintenance using funds from the operating budget (based on how the Strata is currently operating) have not been included in the report. However, we have included items where significant programs of maintenance are required to defer future repair or renewal projects, or one-time maintenance projects to catch-up on deferred maintenance were deemed to be required.

Cost estimates shown are inflated and include contingencies (typically 10 to 20%) and allowances for design/project management (5 to 15%), where appropriate. GST (5%) has also been included.

5.0 FINANCIAL ANALYSIS AND ASSUMPTIONS

As per the BC *Strata Property Act* Regulations, the Contingency Reserve Fund expenditures were projected over a 30-year period to develop various funding scenarios that accommodates future anticipated repair/replacement needs. There are repair and replacement projects which will be required beyond the 30-year window of this report, and in future updates to your Depreciation Report these projects will eventually come into play and affect the future funding requirements of the Contingency Reserve Fund. These effects may be either negative or positive.

Our analysis shows that an increase to the Contingency Reserve Fund is required above current contribution levels to meet future anticipated expenditures. The 30-year expenditure table and three possible funding scenarios in the form of cash flows tables are included in Appendices B to E.

Our financial analysis includes the following assumptions:

Fiscal Year End:	April 30th
Reserve Fund Starting Balance (on May 1st, 2020):	$477,413 Based on financial information provided
2021 Contribution to Reserve:	$290,000 Based on the December 2019 financial statement
Minimum Balance:	$150,000
Annual Interest Rate:	1.0%
Inflation Rate:	3.0%

Notes:

We have used a minimum balance of $150,000 in our cash flow analysis for 2021, increasing yearly to match inflation. This is based roughly on $1,000 per suite. The minimum balance is the minimum value that the Contingency Reserve Fund would ever reach. The minimum balance could be $0, or something higher. Although the *Strata Property Act* or Regulations presently do not require a minimum balance above $0, it would be prudent to set a higher minimum balance to help safeguard against certain situations, such as:

a. Components performing worse than expected;
b. Unexpected problems or conditions; or
c. New requirements becoming necessary as a result of changes in Codes or local Bylaws

The inflation rate of 3.0% is based on weighted historical construction indices for the Vancouver area, and an interest rate of 1.0% based on historical investment returns for strata corporations of this type and the current investment opportunities available in the marketplace.

6.0 LIMITATIONS

No party other than the Client shall rely on the Consultant's work without the express written consent of the Consultant (*Sense Engineering Ltd.*). The scope of work and related responsibilities are defined in the Consultant's proposal and Conditions of Assignment. Any use which a third party makes of this work, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Decisions made, or actions taken as a result of our work shall be the responsibility of the parties directly involved in the decisions or actions. Any third party user of this report specifically denies any right to any claims, whether in contract, tort and/or any other cause of action in law, against the Consultant (including Sub-Consultants, their officers, agents and employees).

The work reflects the best judgement of the Consultant in light of the information reviewed by them at the time of preparation. Unless otherwise agreed in writing by the Consultant, it shall not be used to express or imply warranty as to the fitness of the property for a particular purpose. This is not a certification of compliance with past or present regulations. No portion of this report may be used as a separate entity; it is written to be read in its entirety.

This work does not wholly eliminate uncertainty regarding the potential for existing or future costs, hazards or losses in connection with a property. No physical or destructive testing and no design calculations have been performed unless specifically recorded. Conditions existing, but not recorded, were not apparent given the level of study undertaken. Only conditions actually seen during examination of representative samples can be said to have been appraised and comments on the balance of the conditions are assumptions based upon extrapolation. We can perform further investigation(s) on items of concern, if so directed.

Only the specific information identified has been reviewed. The Consultant is not obligated to identify mistakes or insufficiencies in the information obtained from the various sources or to verify the accuracy of the information.

The Consultant was not to investigate or provide advice, and is not investigating or providing advice, about pollutants, contaminants or hazardous materials.

The Client and other users of this report expressly deny any right to any claim, including personal injury claims, which may arise out of pollutants, contaminants or hazardous materials, including but not limited to asbestos, mould, mildew or other fungus.

Projected project expenditure figures are our opinion of a probable current dollar value of the work and are provided for approximate budget purposes only. Accurate figures can only be obtained by establishing a scope of work and receiving quotes from suitable contractors.

Time frames given for undertaking work represent our opinion of when to budget for the work. Failure of the item, or the optimum repair/replacement process, may vary from our estimate.

As per our conditions of assignment pertaining to this project: The liability of *Sense Engineering* is limited to the Client in Contract and Tort to ten times the fee paid and the time period for any claim shall be for a period of two (2) years from the date of issuance of the report. The Client expressly agrees that the individuals engaged by the Consultant shall have no personal liability to the Client in respect of a claim, whether in contract, tort and/or any other cause of action in law. The Client expressly agrees that it will bring no proceedings and take no action in any court of law against any of the individuals in their personal capacity.

7.0 CLOSURE

Should you have any questions, please feel free to contact us at the numbers below.

Yours truly,

Shahriar Nabipour, B.A.Sc., EIT
Project Manager (604) 518-6195
Sense Engineering Ltd.

Ted Denniston, AScT, LEED AP
Project Principal (778) 869-3035
Sense Engineering Ltd.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
B. G. VOLLERING
2020-06-29

Brennan Vollering, M.A.Sc., P.Eng, LEED AP
Project Principal (604) 365-3664
Sense Engineering Ltd.

APPENDIX A – COMMON ASSETS

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1. STRUCTURE

1.1 STRUCTURAL FRAME

BRIEF DESCRIPTION:

The building structure is concrete-framed with cast-in-place reinforced concrete slabs, supported by reinforced concrete columns and walls. Structural drawings indicate that the above-grade floor slabs (from the 2nd floor up) have post-tensioning (PT). The PT is shown to be encased in a continuous extruded sheathing (e.g., polyethylene tubing) and filled with a non-shrink, rust inhibiting grease.

The lowest level of the parking garage (P3 level) has a 5" concrete slab-on-grade.

The below-grade foundation walls are cast-in-place concrete. The structural drawings indicate that the building is primarily founded on concrete strip and pad footings.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the structural frame of the building.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Most of the structural components are concealed from view. We noted no evidence of unusual settlement, displacement, or structural cracking in the areas reviewed.

The interior portions of the structure are generally protected from weather and are not expected to require major repair within the term of this report. Expected repairs to structural elements exposed to weather are discussed in other sections of this report.

Post-tensioned slabs incorporate high-strength cables placed in concrete under high tension. In some types of systems, the cables (and in particular, the anchor ends) are vulnerable to corrosion, either from moisture introduced at the time of construction and/or through exposure to water leakage over the life of the structure.

Photo 1: Typical structure in the parking garage.

Based on the structural drawings, we understand the PT system installed is a fully encapsulated/extruded system which means the cables are coated in protective grease and encapsulated in a tight-fitting plastic sheathing during the manufacturing process. However, this has not been confirmed. Extruded systems are more robust and resistant to deterioration than earlier stuffed systems, though early generations of extruded systems are sometimes susceptible to deterioration at anchorage locations.

Because the PT cables are under high tension, cable failure can be sudden and potentially result in significant loss of structural capacity. For this reason, and because we cannot confirm the type of system and the condition of the PT cables, the projected expenditures include for an initial evaluation and testing of the cables, including exposing the PT anchors and test openings to check the construction and condition of the cables. Pending the results of this, the projected expenditures do not include for any repairs. However, should problems become apparent, the evaluation scope may need to be expanded, repairs may be required, and/or additional evaluations may be required in the future. Future updates to the Depreciation Report should consider PT evaluation findings and additional project expenditures included for, if required.

This building is located in an area with a relatively high risk of strong seismic activity. *Sense Engineering* has not completed a structural analysis to confirm whether the building meets current earthquake resistance requirements. Upgrading to meet current Code requirements is not mandatory, so we have not included a projected expenditure for any structural retrofits. However, retrofits could be required if there is a major loss to the building, e.g., due to a fire or flood, or if a major renovation is carried out in the future.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Evaluate Condition of the Post-Tensioning (PT) System	$20,000	2022 2037	15

1. STRUCTURE

1.2 BALCONIES

BRIEF DESCRIPTION:

There are balconies on the east, south, and west elevations of the building. The balconies are formed by cantilevered extensions of the concrete floor slabs. According to the structural drawings, the balconies appear to be reinforced with PT cables embedded in the concrete slabs (see the *Structural Frame* section of this report for further discussion and projected expenditures related to the PT).

Based on our site review and review of the drawings made available, the top surfaces of balconies are typically protected by a liquid applied coating. Many suites have installed tiles over the balconies, which do not appear to be original to the building.

Balcony guards consist of aluminum posts and rails with glass infill panels. The guards are typically secured to the inner face of concrete parapet walls. Adjoining balconies are typically separated by glass block walls.

Internal area drains and overflow scuppers provide drainage for the balconies.

There are also roof decks (similar to balconies but located over conditioned space) at the 23rd and PH (24th) floors of the building. Refer to the *Roofing and Skylights* section of this report for further discussion and projected expenditures related to the roof decks.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

Date(s) Unknown:	Likely re-waterproofed balconies since initial construction.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Based on our site review and the findings of the Building Enclosure Evaluation Report completed by *Sense Engineering* in 2020, we noted the following regarding the balconies:

Photo 2: Typical balconies.

- Worn and failed membrane at balconies where the membrane is exposed.
- Some water leakage through balcony slabs; however, minimal amounts of visible concrete damage.
- Missing balcony drain covers resulting and a risk of blockage which can lead to water ponding or flooding on the balconies.
- Corrosion staining from the base of metal chairs (placed to support reinforcing steel and post-tensioning cables during construction) on some balcony soffits. Corrosion of the chairs is not a structural concern but may be an aesthetic issue for the residents.

The concrete balcony slabs require waterproofing to reduce the potential for leakage through the concrete and related deterioration. The waterproofing and paint materials will require periodic restoration in order to maintain protection of the concrete and embedded steel reinforcing and PT.

As per the recommendations provided in the Building Enclosure Evaluation Report, the projected expenditures include for re-waterproofing the top surface of the balconies, including local repairs to the concrete structure and re-painting of balcony soffits. Tile flooring, where installed by individual Owners, will require removal prior to re-waterproofing. The project cost shown includes an allowance to remove balcony tile flooring. The timing of balcony repairs matches the building envelope evaluation timing, which was deferred to allow other, more pressing, envelope repairs to occur first.

The balcony parapet walls will be re-painted as part of the periodic balcony re-waterproofing projects.

Subsequent to the initial repairs outlined above, a balcony evaluation is recommended prior to the next program of repairs to better determine the extent of repairs required, develop an appropriate scope, and to advise the Strata on more accurate projected expenditures, project timing, and potential phasing. Pending results from the balcony evaluation, the projected expenditures include for re-coating the top surface of the balconies, including local repairs to the concrete and re-painting of the balcony soffits. We assume that any local areas requiring repair in the interim will be carried out as part of maintenance out of operating budgets.

As the building structure is post-tensioned, it is important to maintain protection over the concrete to minimize the risk of future leakage and damage to the post-tensioning cables embedded in the slabs. It appears that the balcony slabs have been exposed for some time, due to failure of the membrane at many balcony locations. The Strata should have the post-tensioning system reviewed to better understand the current condition of the building structure. Please refer to the *Structural Frame* section of this report for further discussion and projected expenditures related to the post-tensioning system.

Technically (unlike steel and wood guards), the aluminum and glass balcony guards could be maintained for the life of the building with local repair and re-coating. However, we assume that the guards will eventually be replaced for aesthetic reasons after about 50 years. Therefore, the projected expenditures include for replacement of the guards. The expenditures assume that the guards will be replaced at the same time as balcony repair and re-waterproofing work to reduce access and mobilization costs. This project also includes for replacement of the roof deck guards.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Re-waterproof Balconies, including Local Concrete Repairs and Re-painting Balcony Soffits and Parapet Walls	$1,100,000	2025	N/A
Evaluate Condition of the Balconies	$8,000	2039	15
Re-coat and Re-paint Balconies, including Local Concrete Repairs	$550,000	2040	15
Replace Balcony and Roof Deck Guards	$790,000	2040	50

1. STRUCTURE

1.3 SUSPENDED ACCESS

BRIEF DESCRIPTION:

The building has a permanent tie-back anchor system to permit suspended access to the exterior walls, windows, balconies, and roof decks.

A roof anchor drawing is posted by the entrance to the main roof. The drawing was prepared by Atlas Anchor Systems (BC) Ltd., is dated June 14, 1999 and signed by B.W. Robinson, P.Eng. Based on the latest suspended access and fall protection system inspection report, the building is equipped with the following suspended access anchors and equipment:

- 24 through-bolt wall anchors; and
- 32 adhesive wall anchors.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the suspended access system.

PRESENT CONDITIONS AND RECOMMENDATIONS:

No major concerns were reported by management or in the latest annual inspection report made available (dated November 29, 2018).

The system relies on through-bolted and adhesive anchors. All anchors are required to be annually inspected and the adhesive anchors load-tested every five years. According to the inspection report provided, the next load test for the adhesive anchors is due in November of 2023.

We assume that inspection and load testing of the anchors, and minor repairs arising from the inspection and testing will be carried out as part of regular maintenance, using funds from the operating budgets.

Based on the absence of major concerns to date, capital expenditures are not expected within the term of this report.

Photo 3: Typical adhesive wall anchor.

1. STRUCTURE

1.4 PARKING GARAGE

BRIEF DESCRIPTION:

There is a three-level, conventionally reinforced underground parking garage. The garage is accessed by an exterior suspended entrance ramp at the north-east side of the property. There are interlocking concrete pavers on the top surface of the entrance ramp. The architectural drawings indicate that there is a waterproofing membrane between the exposed interlocking pavers and structural slab beneath.

The lowest level of the parking garage (P3 level) has a concrete slab-on-grade. The suspended slabs within the parking garage (P1 and P2 levels) have conventionally reinforced concrete slabs. The suspended slabs are not protected by a waterproofing membrane.

The garage extends beyond the footprint of the building on all sides, forming a buried roof slab. The garage roof slab is covered by paved driveways, walkways, landscaping, and site features (refer to the *Site Features and Paving* section of this report for further discussion).

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the parking garage.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Suspended Slabs

We noted evidence of past and active leakage on the underside of the suspended slabs at several locations. We also noted a few locations of locally deteriorated concrete at some slab topside areas.

Photo 4: Parking garage.

There is no waterproofing system installed on the top surface of the suspended slabs. The suspended slabs should be waterproofed to protect the concrete and mitigate further leakage into the parking areas below. Water leakage through the suspended slabs can induce corrosion of the reinforcing steel embedded within the concrete which can result in deterioration of the concrete (as starting to be seen in the garage) and associated costly repairs. We recommend completing an evaluation of the parking garage to determine the extent of required repairs, including the extent of corrosion of reinforcing steel embedded in the slabs, and to advise on repair strategies, potential phasing, and related costs. Pending the findings of the evaluation, the projected expenditures include for concrete repairs followed by waterproofing of the suspended slabs. The projected expenditures also include for future programs of re-waterproofing the suspended slabs to ensure the integrity of the waterproofing system.

The waterproofing membrane under the interlocking pavers at the top surface of the parking garage entrance ramp will also require periodic replacement to protect the concrete and prevent leakage through the concrete slab. The projected expenditures include for re-waterproofing the garage entrance ramp, including removal and reinstatement of the interlocking pavers at the top surface. The timing and phasing of this project will be based on performance and tolerance to leakage and should be further considered as part of future updates to the Depreciation Report.

Garage Roof Slab

The waterproofing membrane on the garage roof slab is believed to be original to the building, and therefore about 29 years old.

Buried waterproofing membranes under landscaped areas typically have a service life of around 30 to 35 years. These life expectancies assume proper materials were installed at the time of construction and proper application procedures were followed. There are some locations of past and potentially active leakage within the parking garage, which may be associated with the roof slab waterproofing and/or perimeter foundation walls (see below). Given the age of the garage roof slab and extent of previous leakage, consideration should be given to replacing the garage roof slab waterproofing in the coming years.

Pending the results of the garage evaluation, the projected expenditures include for phased replacement of the garage roof slab waterproofing.

Garage Perimeter Foundation Walls

There is evidence of past leakage and related repairs at cracks in the exterior walls of the parking garage at several locations. Given the extent of leakage to date, the projected expenditures include a periodic allowance for crystalline waterproofing and/or injection-type repairs to address future or reoccurring leakage. These repair allowances should be considered for leaks associated with the foundation walls and garage roof slabs.

Slab-on-Grade

There are some cracks in the concrete slab-on-grade. However, we noted no excessive cracking or differential settlement that would suggest there are sub-grade problems. As the cracking is not affecting use, we have not included projected expenditure for repair.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Evaluate Condition of the Parking Garage	$8,000	2021 2033 2045	12
Locally Repair Suspended Slab Concrete and Install a Waterproofing System	$570,000	2022	N/A
Re-waterproof Suspended Slab Waterproofing	$210,000	2034 2046	12
Re-waterproof Parking Garage Entrance Ramp	$120,000	2025	35
Allowance for Crystalline Waterproofing and/or Injection-Type Repairs to the Foundation Walls and Garage Roof Slab	$8,000	2022 2032 2037 2042 2047	5
Re-waterproof Garage Roof Slab (Phased over two years)	$760,000	2025 2026	35

2. BUILDING ENVELOPE

2.1 EXTERIOR WALLS

BRIEF DESCRIPTION:

The exterior walls are clad in a combination of:

- Cast-in-place concrete
- Brick veneer
- Stucco

Based on the 2020 Building Enclosure Evaluation Report and the original architectural drawings provided, the exterior walls are typically constructed as follows (from the exterior to the interior):

Photo 5: Typical exterior walls.

Concrete Walls

- Concrete wall with acrylic finish;
- Steel stud framing;
- Batt insulation in stud spaces;
- Vapour barrier; and
- Interior drywall.

Brick Veneer

- 100mm brick veneer with brick ties;
- 25mm air space;
- Building paper;
- 13mm gypsum sheathing;
- Structural steel studs;
- Batt insulation in stud spaces;
- Vapour barrier; and
- Interior drywall.

The masonry is typically constructed in a running-bond pattern (bricks run horizontally and offset from rows below). The masonry is vertically supported by steel shelf angles. The method of lateral connection is unknown. There are weep holes located at the base of masonry panels for drainage and venting of air space.

Stucco

- Stucco with acrylic finish;
- Metal lath;
- 2 layers of building paper;
- 13mm gypsum sheathing;
- Structural steel studs;
- Batt insulation in stud spaces;
- Vapour retarder; and
- Interior drywall.

The exterior concrete walls are designed as a face-sealed system, meaning that any incidental water that passes through or around the cladding has no ability to drain. The exterior of these walls is intended to be watertight to perform satisfactorily.

The brick clad walls are designed as a drained system, meaning that the outer surface does not need to be perfectly watertight to perform satisfactorily. Drainage cavities and secondary moisture barriers have been incorporated to drain water which penetrates through the face back to the exterior.

The stucco clad exterior walls appear to be designed as a concealed barrier system, meaning that there is a secondary water-resistive barrier behind the face of the cladding. However, concealed barrier systems do not incorporate an air space behind the cladding, which significantly limits drainage and drying of any incidental water that passes through or around the cladding. The exterior of these walls is also intended to be watertight to perform satisfactorily.

Joints at the perimeter of windows and doors are typically sealed with caulking.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2012: Completed various exterior wall repairs, including caulking replacement and re-painting, at a total reported cost of $525,277, as indicated in the previous Depreciation Report. The scope of work completed was not clearly specified.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Based on our site review and the findings of the 2020 Building Enclosure Evaluation Report, we noted the following regarding the exterior walls:

- There is localized water-filled blistering of textured acrylic coating on the concrete walls.
- There are stucco blisters at the penthouse level main roof parapet walls.
- Exposed bricks at upper roof deck parapet walls appear to be absorbing and allowing water behind the cladding, resulting in moss growth and staining on the brick caps.
- Back sloped wall flashings at penthouse roof decks is holding water against walls and doors.
- Some of the weep holes within the brick veneer cladding have been sealed with caulking.
- There are sheet metal flashings at each floor level over the brick veneer at some elevations. It is unclear if the flashings were installed as part of previous repair work or as part of preventative maintenance.
- There are some localized areas of cracked brick veneer under the balcony slab edges.

Repair of localized water-filled blistering at the concrete curb walls under window areas is budgeted for as part of the upcoming window repair project in 2022 (refer to the *Exterior Windows, Balcony, Roof Deck, and Patio Doors* section of this report for further discussion and projected expenditures).

Repair of the stucco blisters at penthouse level main roof parapet walls, exposed brick at upper roof deck parapet walls, and back sloped flashings at upper penthouse roof deck sliding doors is budgeted for as part of upcoming roof deck repair and replacement projects (see the *Roofing and Skylights* section of this report for further discussion and projected expenditures).

The acrylic finish on the stucco and concrete walls will require periodic re-painting to protect the cladding from deterioration and maintain aesthetics. Based on the recommendations provided in the 2020 Building Enclosure Evaluation Report, the projected expenditures include for a periodic program of exterior wall repairs, starting in 2027. The repair program will include exterior wall cleaning, concrete and finish repairs, and re-painting of all concrete and stucco walls.

The brick veneer cladding will require periodic maintenance, including replacing locally cracked bricks and repointing mortar joints, in order to reduce the potential for leakage into the building and maintain aesthetics. Local repairs to the brick veneer cladding are included in the periodic exterior wall repair projects. With diligent repair/maintenance, general replacement of the brick veneer cladding is not expected within the term of this report.

We understand that some of the sheet metal flashings over the brick veneer will be removed to determine why the flashings were installed. Results of this investigation should be included in the finalized version of this Depreciation Report. In the meantime, should the Strata come across any previous repair documentation, please forward the documents for our review so that any relevant information may be included in the Depreciation Report.

We have assumed a full typical service life for the stucco cladding, which requires that the cladding be maintained and any damaged areas diligently repaired, when required. Stucco cladding can have a service life of up to 45 years, if properly built and maintained; however, the construction of the stucco walls is prone concealed damage of drywall sheathing and steel studs if walls are not diligently maintained. Given the age of the building, the projected expenditures include for eventual replacement of the stucco cladding with a new drained stucco cladding assembly. General replacement of the exterior concrete walls is not expected within the term of this report.

The projected expenditures also include for periodic evaluations of the exterior walls, in the years prior to repair projects, to assist in identifying repair needs, associated costs and potential phasing options.

We assume that any other repairs in the interim to address local leakage or deterioration will be carried out as part of maintenance using funds from operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Repair Exterior Walls, including Exterior Wall Cleaning, Concrete and Finish Repairs, Re-painting of Concrete and Stucco Walls, and Local Masonry Repairs	$505,000	2027	N/A
Evaluate Condition of the Exterior Walls	$8,000	2035	N/A
Replace Stucco Cladding, including Concrete and Finish Repairs, Re-painting of Concrete Walls, and Local Masonry Repairs	$960,000	2036 2037	45

2. BUILDING ENVELOPE

2.2 EXTERIOR WINDOWS, BALCONY, ROOF DECK, AND PATIO DOORS

BRIEF DESCRIPTION:

There are windows on all elevations of the building and at the perimeter of the pool area.

There are aluminum-framed punched windows with both fixed and operable double-glazed insulating glass units (IGUs). Operable windows are either casement or horizontal sliding type. Casement windows typically have gasket-type weatherstripping and the horizontal sliding windows typically have fibrous pile and plastic fin type weatherstripping. The windows are exterior glazed, meaning that the glazing is installed into the frames from the outside of the building.

There are aluminum-framed storefront glazing systems fronting the main entrance of the building and at the perimeter of the pool area.

Balcony, roof deck, and patio doors consist of a combination of aluminum-framed sliding doors with IGUs and wood-framed swing doors with IGUs. The sliding doors typically have fibrous pile and plastic fin type weatherstripping and the swing doors typically have gasket type weatherstripping.

Photo 6: Typical punched windows.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2010:	Completed window repairs/replacement at a reported cost of $60,000, as indicated in the previous Depreciation Report.
2019:	Replaced 321 failed IGUs, 72 sets of hinges, and 2 handles, at a reported cost of $142,974, as indicated in the documents provided.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Several suites have water leakage through window framing, evidenced by the amount of pooling water sitting in the condensation tracks of the window frames, and staining and wetting on the interior finishes and window frames. Based on our site review and the findings of the 2020 Building Enclosure Evaluation Report, we noted the following regarding the exterior windows and doors:

- Caulking at and around windows is aging and beginning to fail at several locations, which may be contributing to leakage at the windows.
- Shrinking exterior gaskets and open window joints may be contributing to leakage through windows.
- The presence and consistency of window drain holes varies throughout the window assemblies.
- Operable window sashes do not close tightly at several locations.

- Some suites have condensation on window framing and IGUs.
- Interior glazing seals around the perimeter of the IGUs have either shrunk or are falling out of the window frames.
- Failed caulking and open joints at the PH-3 upper roof deck arched window is causing active leakage into the suite.
- The sliding doors throughout the building are typically well sheltered and performing adequately.
- Wood swing doors are not suitable for high-rise construction as they are not built to withstand the wind pressures that high buildings are typically exposed to. Furthermore, wood doors do not comply with the combustibility requirements of high-rise construction. Furthermore, wood framed doors tend to deteriorate quickly when exposed to wind driven rainfall environments, like high-rise buildings.

Given the extent of issues with the windows at the building, we recommend completing systematic water testing at two sample window locations in order to identify the sources causing active water ingress and to develop a repair plan. The projected expenditures include for this testing at the cost and timing recommended in the Building Enclosure Evaluation Report.

Pending the results of the testing, the projected expenditures include for localized repairs to the windows. This project also budgets for the repair of localized water-filled blisters on concrete curb walls (below windows only), routing and sealing of cracks in concrete curb walls (below windows only), caulking replacement at windows, exterior window gasket replacement, window drainage modifications, operable window adjustment, and failed IGU replacement, where required. The timing, cost, and scope of this project is based on the Building Enclosure Evaluation Report.

There have been several failed IGUs at the building throughout the years. IGU failures can be expected to start escalating in frequency after about 10 to 15 years of service. Subsequent to the window repair project in 2022, the projected expenditures include for a biennial program of replacement of failed IGUs. Failure rates and locations should be closely monitored, and projected expenditures and timing modified as part of future updates to the Depreciation Report.

We expect that weatherstripping and window/door hardware will be replaced on an as-needed basis funded out of operating budgets.

Based on age, replacement of the exterior windows, storefront glazing (including doors), balcony, roof deck, and patio doors is expected within the term of this report. Therefore, the projected expenditures include for phased replacement. This project is timed to occur in conjunction with the exterior wall cladding replacement project to reduce access and mobilization costs and ensure proper tie-in of the waterproofing and air barrier assemblies.

We assume that any individual windows and doors requiring replacement prior to general replacement will be carried out as-needed as maintenance out of operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Window Water Testing and Trial Repairs	$19,000	2021	N/A
Window Repairs	$1,010,000	2022	N/A
Replace Failed IGUs	$20,000	2024 2026 2028 2030 2032 2034	2
Replace Exterior Windows, Storefront Glazing (including Doors), Balcony, Roof Deck, and Patio Doors (Phased over two years)	$3,075,000	2036 2037	45

2. BUILDING ENVELOPE

2.3 EXTERIOR DOORS

BRIEF DESCRIPTION:

Exterior doors include the following:

- *Main Entrance Doors:* Aluminum-framed double swing doors with glass inserts. These doors are integrated within the aluminum storefront glazing system.
- *Pool Area Doors:* Three sets of aluminum-framed double swing doors with glass inserts, and four sets of two-sash sliding glass doors with glass inserts. These doors are integrated within the aluminum storefront glazing system.
- *Parking Garage:* Metal picket overhead door at the main entrance to the parking garage. The residential parking area is separated from the visitor parking area by another metal picket overhead door.
- *Exit Doors:* Steel doors in metal frames.

The balcony, roof deck, and patio doors are discussed in the *Exterior Windows, Balcony, Roof Deck, and Patio Doors* section of this report.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

Date(s) Unknown:	Replaced the overhead garage doors, as noted on site.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We were not made aware of any significant issues with the exterior doors. We noted condensation on the interior side of the single pane swing doors at the pool area. This condensation is formed as humid air from the pool area settles on the cold surface of the glass panes. Excess condensation on these doors will require regular cleaning in order to reduce the risk of mold growth. We assume that the door will be replaced, when required, as part of ongoing maintenance using funds from operating budgets.

Photo 7: Main building entrance doors.

The projected expenditures include for replacement of the overhead garage doors to and within the parking garage.

The main building entrance doors and doors around the pool area will be replaced as part of the general exterior window and door replacement project (see the *Exterior Windows, Balcony, Roof Deck, and Patio Doors* for further discussion and projected expenditures).

The remaining doors are few in number and less expensive to replace, and therefore, we assume that these doors will be repaired or replaced on an as-needed basis funded out of operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Main Overhead Garage Door	$8,000	2035	25
Replace Residential Overhead Garage Door	$8,000	2025 2050	25

2. BUILDING ENVELOPE

2.4 ROOFING AND SKYLIGHTS

BRIEF DESCRIPTION:

Roof areas at the property include (from the top, down):

- Sloped metal roofing above the upper level penthouse suites;
- PH and 23rd level roof decks;
- 3rd floor roof deck;
- Roofs over the front entrance canopy; and
- Roofs over the pool area.

Based on our site review and the drawings provided, the roofs are constructed as follows (from the top, down):

Sloped Metal Roofing

- Pre-finished sheet metal cladding;
- 7/8" 20-gauge furring channels;
- 1½" steel deck and support structure;
- R-12 spray insulation on underside of steel deck; and
- 5/8" type x gypsum wall board.

Roof Over Entrance Canopy

- Stone ballast;
- Protection board;
- Waterproof membrane;
- ½" exterior drywall; and
- 3" steel deck.

Roof Over South End of Pool Area

- Stone ballast;
- Rigid insulation;
- Waterproof membrane;
- ½" gypsum sheathing; and
- 1½" steel deck.

Drainage for the sloped metal roofing is provided by concealed gutters. The gutters are protected with an EPDM (ethylene propylene diene terpolymer) membrane. There are stucco clad walls on the outside of the gutters.

Photo 8: Sloped metal roofing.

Photo 9: Roofs over the main entrance canopy.

Based on roof openings made as part of the Building Enclosure Evaluation, the roof decks are constructed as follows (from the top, down):

- Concrete pavers;
- 3½" rigid insulation;
- Drainage mat;
- Asphalt modified polyurethane liquid applied membrane; and
- Concrete slab.

Roof deck guards consist of aluminum posts and rails with glass infill panels. The guards are typically secured to the inner face of concrete parapet curb walls. Adjoining roof decks are typically separated by glass block walls.

Drainage for the protected roofs and roof decks is typically provided by internal area drains.

Roof perimeters typically have prefinished metal flashings.

There are glazed aluminum-framed skylights above the entrance canopy and pool area.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2012: Repaired roof at a reported cost of $125,000, as indicated in the previous Depreciation Report. The scope of work completed was not clearly specified.

2020: Completed targeted roof deck, parapet wall, masonry cladding, and window repairs to alleviate leakage, at a total reported cost of $145,800 as indicated in the documents provided. These repairs were ongoing at the time of writing this report.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Based on our site review and the findings of the 2020 Building Enclosure Evaluation Report, we noted the following regarding the roofs and roof decks:

- Leakage into PH-3 and PH-6 living rooms is the result of water being absorbed by the brick cladding and poor roof deck membrane upturn detailing onto the brick cladding.
- Roof deck waterproofing membrane is generally blistered at roof opening locations.
- There is an active leak at the south-west corner in the pool area.
- Sloped metal roofing appears to be performing adequately.
- Entrance canopy roofs appear to be leaking, causing stucco blistering and staining on the soffits.

Repairs to alleviate leakage into PH-3 and PH-6 were underway at the time of writing this report. We understand this project began and was partially paid for in the 2020 fiscal year, which is not included within the term of this report. However, since the remainder of the project will be completed and paid for in the 2021 fiscal year (i.e., within the term of this report), the projected expenditures include for the remaining roof deck repairs at PH-3 and PH-6.

The roof deck membrane is generally blistered and not well bonded throughout the roof decks. The waterproofing installed at the roof decks is an asphalt modified polyurethane waterproofing, which is known to allow osmotic flow through the waterproofing resulting in water-filled blisters and failure of the system. These membrane defects will likely allow water to leak into the post-tensioned concrete roof slab and increase the risk for further structural damage. Despite completing localized repairs, we expect that local problems are likely to continue. Given the current condition of the roof decks and as per the recommendations provided in the 2020 Building Enclosure Evaluation Report, the projected expenditures include for replacement of the roof deck waterproofing. This project also includes for replacement of the stucco cladding at penthouse roof level parapet walls.

Further investigation is required to determine the source(s) of water leakage through the roofs over the entrance canopy and pool area. As per the recommendations in the 2020 Building Enclosure Evaluation Report, the projected expenditures include for the investigation and repair of leakage at these locations. The timing and cost of this project is based on the Building Enclosure Evaluation Report.

Protected roof assemblies, such as at the roof decks, roofs over the entrance canopy, and roof at the south end of the pool area, tend to have a serviceable life of about 25 years before requiring replacement. Subsequent to upcoming roof deck repair and replacement and protected roof repairs (at the entrance canopy and pool area), the projected expenditures include for periodic replacement of the protected roof assemblies and roof decks.

Metal roofs tend to have a 40 year life expectancy. Given the performance of the metal roofs to date, and assuming proactive maintenance is carried out, the roofs should be able to be maintained to achieve their anticipated service lives (possibly more). However, conditions and timing of replacement should be monitored and considered as part of future updates to the Depreciation Report.

The projected expenditures include for replacement of the sloped metal roofing throughout the property, as well as replacement of the waterproofing at the concealed roof gutters.

See the *Balconies* section of this report for further discussion related to the roof deck guards.

We were not made aware of any significant issues with the aluminum-framed skylights at the property. We assume that replacement of any broken glazing units will be carried out on an as-needed basis out of operating budgets. The projected expenditures include for periodic replacement of the aluminum skylights above the entrance canopy and pool area.

The projected expenditures also include for evaluations of the roofs and skylights to better assess the need for and scope of repairs/replacement and reconsider budgets based on roofing prices at the time, which can fluctuate significantly from year to year. Pending the findings of the projected evaluations, and the actual performance of the roofs and skylights, timing of roof and skylight replacement can be adjusted accordingly.

We assume that annual maintenance and associated minor repairs to the roofs and roof decks will be funded from operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Remaining PH-3 and PH-6 Targeted Roof Deck Repairs	$77,000	2021	N/A
Replace Roof Decks and Penthouse Roof Level Stucco Walls	$925,000	2022	N/A
Replace Roof Decks	$815,000	2047	25
Entrance Canopy and Pool Area Investigation and Repair Allowance	$119,000	2021	N/A
Evaluate Condition of the Roofs and Skylights	$8,000	2027 2046	N/A
Replace Protected Roofs Over the Entrance Canopy and Pool Area	$70,000	2028	25
Replace Metal Roofs	$390,000	2031	40
Re-waterproof Metal Roof Gutters	$20,000	2031	20
Replace Skylights Over Entrance Canopy and Pool Area	$460,000	2031	40

3. FIRE SAFETY

3.1 GENERAL

BRIEF DESCRIPTION:

The building is protected by a Mircom FX-2000 fire alarm system. A dry sprinkler system serves the parking garage, garage-level service and storage rooms, and the pool area and recreation centre amenity areas. A generator provides emergency power to the building. Refer to the following sections of this report for further discussion on the fire alarm, suppression, and emergency power systems.

Fire separations are generally formed by rated drywall assemblies, cast-in-place concrete and concrete block walls, and concrete floor slabs. Egress from the building is provided by stairwells and fire exit doors.

3. FIRE SAFETY

3.2 DETECTION / ALARM

BRIEF DESCRIPTION:

The building is equipped with a single-stage Mircom FX-2000 fire alarm system. The fire alarm control panel is located in the main entrance lobby of the building, and the fire alarm breaker panel is located in the P1 level Electrical Room.

The fire alarm system monitors smoke and heat detectors located throughout the building, supervised valves in the suppression systems, and manual pull stations at exits. Signaling devices (speakers) are located throughout the building.

Each suite has a number of hard-wired smoke alarms that locally sound within the suite. Suites are also equipped with hard-wired heat detectors.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2012: Replaced smoke detectors at a reported cost of approximately $10,000, as indicated in the previous Depreciation Report.

2015: Replaced the fire alarm control panel at a reported cost of $53,200, as indicated in the previous Depreciation Report.

2020: Completed various repairs to the fire alarm detection and suppression systems as outlined in the 2019 Deficiency Quotation prepared by Mircom Engineered Systems, at a total reported cost of $5,475.

Photo 10: Fire alarm control panel.

PRESENT CONDITIONS AND RECOMMENDATIONS:

The fire alarm detection system is currently serviced by Mircom Engineered Systems. The latest annual inspection report (dated December 23, 2019) indicates that there are five faulty heat detectors and three faulty smoke alarms in various suites that require replacement, four faulty smoke alarms in common areas requiring replacement, and 122 Edwards 280 series heat detectors throughout the building that have been recalled by Health Canada. Based on the sign back received on the 2019 Deficiency Quotation, we understand that appropriate repairs will likely be carried out within the 2020 fiscal year, and thus, not within the term of this report. Therefore, no projected expenditures have been included.

We assume that future repairs and replacement of individual components/devices, as identified to be required by ongoing inspections, are expected to be funded from the operating budget.

Projected expenditures include for eventual replacement of the fire alarm control panel. The projected expenditure assumes that the panel will be replaced with a similar, compatible system, re-using the majority of the existing field devices and wiring. Replacement timing will be dependent on performance of the system and the service contractor's ability to continue to find replacement parts. The replacement cost will be dependent on what components of the system require replacement and what upgrades are necessary to meet current Codes requirements at the time and should be revaluated as part of future updates to the Depreciation Report.

Elevator upgrades/modernization may trigger mandatory (and costly) upgrades to the fire alarm system to meet the current elevator code. Prior to replacing the fire alarm panel, the Strata should confirm with a building official, the BC Safety Authority, and/or fire/electrical/code consultants whether additional work (with regards to the fire alarm system) will be needed to meet the current elevator code and plan accordingly, in order to avoid additional/redundant costs when it comes time for elevator upgrades/modernization. Please refer to the *Elevators* section of this report for further discussion and projected expenditures.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Fire Alarm Control Panel	$65,000	2035	20

3. FIRE SAFETY

3.3 SUPPRESSION

BRIEF DESCRIPTION:

Suppression systems for the building include:

- Dry sprinkler system serving the parking garage, garage-level service and storage rooms, and the pool and recreation centre amenity areas;
- Standpipe system serving fire hose cabinets at each floor level; and
- Portable fire extinguishers throughout the building.

A combined incoming water service splits to supply the domestic and fire suppression systems. The incoming service and main fire suppression equipment are located in the Water Entry Room at the P2 level. The wet suppression system is served by a 75 hp fire pump and 1.5 hp jockey pump. The jockey pump is connected to the sprinkler system and is intended to maintain pressure in the fire protection piping system so that pressure drops from the operation of a single fire sprinkler and will be sensed by the fire pump automatic controller, causing the fire pump to start, and provide compensating higher pressure to the sprinkler system risers. There is also a fractional horsepower air compressor for the dry system.

Fire department Siamese connections are located by a concrete site wall at the north-east side of the property.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2020: Completed various repairs to the fire alarm detection and suppression systems as outlined in the 2019 Deficiency Quotation prepared by Mircom Engineered Systems, at a total reported cost of $5,475.

Photo 11: Fire suppression equipment.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Mircom Engineered Systems presently maintains the fire suppression systems. The latest annual inspection report (dated December 23, 2019) indicates that five ABC fire extinguishers are due for six year service and 23 75-foot fire hoses require replacement. Based on the sign back received on the 2019 Deficiency Quotation, we understand that appropriate repairs will likely be carried out within the 2020 fiscal year, and thus, not within the term of this report. Therefore, no projected expenditures have been included.

Repairs to some individual components should be expected (e.g., hoses, valves, piping, sprinkler heads, etc.). We assume this work, as well as other minor repairs identified by annual testing and the testing itself, will be managed as a maintenance expense funded out of operating budgets.

The projected expenditures include a periodic allowance to address more significant problems which may arise as the system ages, such as replacing portions of the sprinkler piping and other suppression system components. Required repairs should be closely tracked, and projected expenditures and timing of the projected expenditure allowance should be modified as required as part of future updates to the Depreciation Report.

After 50 years of service, components of the dry sprinkler system must be removed for testing. Depending on the results of the testing, the system can either be left for another 10 years before re-testing, or repair/replacement work may be required. Should there be known leaks at the time of required testing, replacement of heads and some piping will likely be required. As 50 years is within the term of this report and there are presently no known concerns, the projected expenditures provide an allowance for testing but not replacement. Performance of the systems should be monitored and considered as part of future updates to the Depreciation Report, and replacement projects brought into the report as and when deemed necessary.

The projected expenditures include for replacement of the fire pump.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Suppression System Repair Allowance	$10,000	2023 2030 2037 2044	7
50 Year (and every 10 years thereafter) Testing of Suppression Systems	$8,000	2041	10
Replace Fire Pump	$50,000	2023 2048	25

3. FIRE SAFETY

3.4 EMERGENCY POWER

BRIEF DESCRIPTION:

Emergency power is provided by a diesel-fired Simpower (model UCS34) generator located within an enclosure at the north side of the property. The generator provides power through an automatic transfer switch to supply essential systems (exit signs, emergency lighting, fire alarm systems, elevators, etc.). The transfer switch is rated at 400A and is located in the P1 level Electrical Room. There is also a fuel storage tank located at the north side of the property, next to the generator.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the emergency power system.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We understand that Power-West Industries Ltd. presently maintains the emergency power generator. We were not made aware of any significant issues with the generator, and none were noted on the generator log sheet after the most recent annual load test (dated December 12, 2019). According to the log sheet, the unit had logged 192.5 hours of operation after the most recent load test.

The generator is currently about 29 years old. With age, performance typically degrades to the point where it cannot meet the full load requirements and a major overhaul or replacement is required. Major manufacturers will typically not support older equipment, and we cannot predict how long replacement parts will remain available. Based on the age of the unit, the projected expenditures include to replace the generator, transfer switch, and diesel storage tank.

Photo 12: Emergency generator enclosure.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Generator, Automatic Transfer Switch, and Diesel Storage Tank	$175,000	2026	35

4. INTERIOR

4.1 FF&E (FURNITURE, FIXTURES, AND EQUIPMENT)

BRIEF DESCRIPTION:

The common areas are finished as follows:

- *Main Entrance Lobby:* Tile flooring, painted walls, and a painted textured ceiling. Furniture includes sofas and tables. There are also built-in metal mailboxes.
- *Corridors:* Carpet flooring, a combination of painted and wallpapered walls, and a painted stipple finished ceiling. Some levels have a suspended T-bar ceiling in lieu of a painted stipple finished ceiling.
- *Stairwells:* Painted concrete floors, walls, and ceilings. There are prefinished metal handrails throughout.
- *Amenity Corridor:* Tile flooring with carpet inlay at the centre of the corridor, painted walls, and a painted stipple finished ceiling.
- *Recreation Centre:* Carpet flooring, a combination of painted and mirrored walls, and a suspended T-bar ceiling. Equipment includes two ellipticals, two treadmills, one bike, one universal machine, one leg press machine, three benches, and a weight rack.
- *Male and Female Washrooms:* Tiled flooring and walls and a painted ceiling. There are ceramic toilets and laminate vanity. There are also metal lockers.
- *Pool and Hot Tub:* There is an indoor pool and hot tub in the building. The pool deck is tiled and there are a combination of painted and tiled walls. The ceiling consists of sloped glazing units. The pool has a gunite shell finish with tile accents and the hot tub is fully tiled. The pool and hot tub are likely waterproofed beneath the finishes.

Photo 13: Main entrance lobby.

Photo 14: Indoor pool.

The pool and hot tub are heated by two shell and tube heat exchangers that are connected to the hydronic heating loop. There are also two sand filters, two chlorinators, two 2 hp pumps, two 1 hp pumps, and one fractional horsepower pump serving the pool and hot tub. Equipment serving the pool and hot tub is located in the P1 level Pool Mechanical Room.

- *Sauna:* Concrete floor, wood walls, ceiling, and benches. There is an electric sauna heater.

- *Meeting Room:* Carpet flooring, painted walls, and a painted stipple finished ceiling. There is a kitchenette with a single basin sink, laminate countertops and cupboards. Furniture includes a meeting table and several chairs.
- *Manager's Office:* Carpet flooring, painted walls, and a painted stipple finished ceiling. Furniture includes a desk and several chairs.
- *P1 Corridor:* Tile flooring, painted walls, and a painted stipple finished ceiling.
- *Below-Grade Elevator Lobbies:* Vinyl tile flooring and painted concrete walls and ceiling.
- *Parking Garage:* Painted concrete columns and walls.
- *Service and Storage Rooms:* Typically bare concrete floors, walls, and ceilings. Storage rooms have wood slat lockers.
- *Elevator Cabs:* Tile flooring and laminate wall and ceiling panels.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2008:	Replaced corridor carpet flooring at a reported cost of $44,320, as indicated in the previous Depreciation Report.
2008:	Upgraded the main entrance lobby at a reported cost of $15,529, as indicated in the previous Depreciation Report.
2009/2010:	Re-painted the 9th, 10th, and 11th floor corridors, as indicated in the previous Depreciation Report.
2011:	Repaired pool flooring tiles at a reported cost of $3,920, as indicated in the previous Depreciation Report.
2012:	Updated recreation centre at a reported cost of $26,353 and replaced exercise equipment with second hand equipment at a reported cost of $13,664, as indicated in the previous Depreciation Report.

PRESENT CONDITIONS AND RECOMMENDATIONS:

The common area finishes are generally in good condition. We did not note any areas of excessive wear or tear in the areas reviewed.

The timing and scope of interior finish renewal generally depends on owner objectives. We assume that minor renovations of less finished areas and replacement of minor equipment (e.g., pool and hot tub sand filters, circulation pumps, etc.) will be carried out using funds from operating budgets. The projected expenditures include for renovations of the significantly finished areas. Renovation timing and costs can vary significantly depending on desires of the Strata. The projected expenditures included assume similar quality finishes to existing. The projected expenditures included also assume that wallpapered sections of the common corridors will be removed during the next renovation project, and the wall areas painted to match the other sections of the corridors (i.e., wallpaper will not be reinstated in the common corridors).

The projected expenditures also include for replacement of the heat exchangers serving the pool and hot tub.

There is also a Caretaker's Suite that is currently being rented out. Access was not provided to this suite; however, we assume that any repair, replacement, or renovation required for this suite will be completed on an as-needed basis using funds from operating budgets. Therefore, no projected expenditures have been included.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Refurbish Main Entrance Lobby	$25,000	2033	25
Refurbish Corridors, including Carpet Replacement	$175,000	2028 2048	20
Paint Stairwells	$30,000	2029	25
Refurbish Amenity Corridor	$20,000	2030 2050	20
Refurbish Recreation Centre	$30,000	2032	20
Replace Exercise Equipment (Phased, 33% per phase)	$7,000	2027 2032 2037 2042 2047	5
Renovate Male and Female Washrooms	$20,000	2025 2045	20
Refurbish Pool and Hot Tub Area	$60,000	2024 2044	20
Refinish Pool Shell	$30,000	2024 2044	20
Refinish Hot Tub Shell	$15,000	2024 2044	20
Replace Pool and Hot Tub Heat Exchangers	$20,000	2025 2050	25
Refurbish Sauna	$15,000	2024 2044	20
Refurbish Meeting Room	$10,000	2029 2049	20
Refurbish Manager's Office	$10,000	2029 2049	20
Renovate P1 Corridor	$15,000	2029 2049	20
Refurbish Below-Grade Elevator Lobbies	$15,000	2030 2050	20
Re-paint Parking Garage	$50,000	2030	25
Refurbish Elevator Cabs	$40,000	2021 2046	25

5. SITE

5.1 SITE FEATURES AND PAVING

BRIEF DESCRIPTION:

Site features and paving include the following:

- *Landscaping:* There are a variety of shrubs, trees, and other plantings throughout the property. There is an in-ground irrigation system for the landscaped areas.
- *Concrete Planters:* There are cast-in-place concrete walls forming planters throughout the property.
- *Brick Walls:* There are brick walls throughout the property.
- *Site Guards and Gate:* There are metal picket-style guards throughout the site at locations of elevation change. There is a metal swing gate between two brick clad piers at the east side of the property.
- *Trellises:* There are several metal trellises above the gravel walkway at the south side of the property.
- *Fencing:* There is wood panel fencing typically at the perimeter of patios. There is wood lattice fencing around the outdoor emergency generator.
- *Bench:* There is a garden bench at the east side of the property.
- *Bike Rack:* There is a metal bike rack mounted to the brick wall near the main entrance of the building.
- *Concrete Stairs:* There are cast-in-place concrete stairs throughout the property.
- *Driveway:* There are interlocking concrete pavers at the driveway at the east side of the property, at the parking area at the south side of the property, and at the parking garage entrance ramp at the north-east side of the property.
- *Walkways:* There are interlocking pavers or gravel at walkways throughout the property.

Photo 15: Typical site features and paving.

- *Patios:* There are interlocking concrete pavers at patios.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2011/2012:	Partially repaired or replaced wood fencing throughout property, as indicated in the previous Depreciation Report.

PRESENT CONDITIONS AND RECOMMENDATIONS:

The site features generally appear to be in good condition.

We assume that landscaping will continue to be managed using funds from operating budgets. Similarly, we assume that local repairs to the concrete planters, brick walls, site guards, gate, fencing, trellises, and unit paver driveways and walkways will be carried out as-needed as part of maintenance funded out of operating budgets.

The majority of site features and paving at the property will be replaced as part of the garage roof slab re-waterproofing project (refer to the *Parking Garage* section of this report for further discussion and projected expenditures).

Some of the unit paved walkways, parking area, and concrete stairs are not located above the garage roof slab, and thus, will not be replaced as part of the garage roof slab re-waterproofing project. However, these locations are typically in good condition and we do not anticipate the need for replacement or renewal within the term of this report. With that said, conditions should be monitored, and replacement projects brought into future updates to the Depreciation Report, if required.

The metal trellises are also not located above the garage roof slab. Furthermore, we noted that the metal trellises are beginning to corrode. These trellises will require periodic re-painting to maintain aesthetic, followed by eventual replacement. Therefore, the projected expenditures include for re-painting and eventual replacement.

The projected expenditures include for repairs and re-painting/re-staining of the wood fencing throughout the site subsequent to replacement as part of the garage roof slab re-waterproofing project.

We understand that there is active leakage into the P1 level north-east stairwell. Water may be travelling through cracks and/or unprotected joints in the exterior concrete stairs and down into the P1 level below. We recommend completing a leak investigation at this location to determine the source of leakage, and pending the results of the investigation, completing repairs as required. The projected expenditures include for this leak investigation and localized repair.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Re-paint Metal Trellises	$10,000	2022	30
Replace Metal Trellises	$25,000	2037	30
Re-paint/Re-stain Wood Fencing, including Local Repairs	$20,000	2040	15
Leak Investigation and Repair at North-East Concrete Stairs	$20,000	2021	N/A

6. HVAC

6.1 GENERAL

BRIEF DESCRIPTION:

The suites, common areas, and service and storage rooms are typically heated by electric baseboard heaters. Supplemental heat for the six penthouse suites is provided by gas fireplaces. The gas fireplaces typically exhaust through the exterior walls.

There is no central cooling to the building.

There are three air handling units (AHUs) that supply fresh air to the corridors and common areas of the building. Based on the drawings provided and confirmed where possible by our site observations, the air handling units at the building include the following:

- *AHU-1*: The pool area is ventilated by an indoor air handling unit located in the P1 level Mechanical Room. This unit was manufactured by Mark Hot Inc.
- *AHU-2*: The recreation centre is ventilated by an indoor air handling unit located in the ceiling space of the recreation centre. Access to this unit was not available.
- *AHU-3*: The common corridors are ventilated by an indoor air handling unit located in a service room adjacent to the roof-top Mechanical Room. This unit was manufactured by Mark Hot Inc.

The air handling units at the property also provide heating via hydronic heating coils. Hot water for these heating coils is generated by two gas-fired boilers manufactured by LAARS (Magnatherm Model: MGH1600NXXAX2). According to the data plates, each boiler has an input heating capacity of 1,600,000 BTUH and an output heating capacity of 1,510,000 BTUH, for a thermal efficiency of 95%. There are two 1 hp pumps serving the boilers and two 2 hp pumps serving the hydronic heating loop. There are also several expansion tanks serving the hydronic heating loop. Equipment serving the hydronic heating system is located in the roof-top mechanical room.

Photo 16: Hydronic heating boilers.

Photo 17: Roof-top air handling unit and supply fan.

There is an axial-type supply fan located in the service room adjacent to the roof-top Mechanical Room. According to the mechanical drawings, this unit serves as an emergency supply fan and has a supply capacity of 30,265 CFM.

There are individual force-flow unit heaters serving various service and storage rooms throughout the property.

Suite bathrooms and kitchens are ventilated by individual exhaust fan units, which typically vent through balcony soffits or the exterior walls.

There are individual supply/exhaust fans for various service and storage rooms.

According to the mechanical drawings, there are a total of five wall-mounted propeller type exhaust fans serving the parking garage (one on P3, two on P2, and two on P1). The fans are controlled by an Armstrong gas monitoring system.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

~2017:	Replaced the hydronic heating boilers, as noted on site.
2019:	Re-waterproofed the roof-top Mechanical Room at a reported cost of approximately $8,000.

PRESENT CONDITIONS AND RECOMMENDATIONS:

Elafon Mechanical Ltd. presently maintains the HVAC systems at the building. We were not made aware of any significant issues with the HVAC systems. The latest Preventative Maintenance Report prepared by Elafon Mechanical Ltd. in 2020 indicates that the roof-top AHU-3 has a worn drive sheave, the elevator machine room intake damper and exhaust fan are very weak, one of the heating pumps in the roof-top mechanical room has no power at startup and requires further investigation, and a 3-way mixing valve for AHU-2 has failed and is running manually. We assume that current and future repairs and replacement of individual components/devices, as identified to be required by ongoing inspections, are expected to be funded from the operating budget.

The electric baseboard heaters, exhaust fans, and related controls in the suites are the responsibility of the individual suite owners.

We assume that the baseboard heaters in the common areas and service and storage rooms will be repaired and replaced on an as-needed basis from operating budgets.

We were not made aware of any other issues with the air handling units. Air handling units have a standard service life of about 25 to 35 years. However, they can last much longer with good maintenance as many of the internal components can be changed without replacing the units outright. Given that the units are all indoors, we expect that they will be maintained indefinitely by replacing individual components. The projected expenditures include for periodic overhauls of the air handling units, which would typically include replacing any major internal components (i.e., heat exchangers, heating coils, blowers, etc.). We assume that routine maintenance and minor repair of the units will continue to be carried out as part of routine maintenance funded from operating budgets.

The projected expenditures also include for periodic overhauls of the roof-top supply fan unit.

Although the boilers are relatively new and the system is presently performing well, the projected expenditures include for an overhaul of the boilers, followed by eventual replacement. Overhauling occurs at about the half-life of the boilers and helps ensure a full/longer service life before replacement of the units are required. This typically includes taking the boilers apart, replacing the burners, heat exchangers, and/or gaskets, and then rebuilding the boilers.

The heating water distribution piping is mostly concealed behind interior finishes, so the type of piping is unknown. In addition, the condition of the internal pipe walls cannot be determined without destructive cut tests or ultrasonic testing. With diligent regular maintenance and proper water treatment, these systems can often last the life of the building without any significant capital repairs. The system includes a chemical pot feeder which provides water treatment in order to improve longevity of the piping. Given the reported absence of major concerns to date and presence of chemical water treatment, general replacement of the hydronic distribution piping is not expected within the term of this report. We assume issues with the piping, including localized leaks and valve replacements, will be managed as part of regular maintenance, using funds from operating budgets.

We assume that the chemical pot feeder, circulation pumps, and expansion tanks that serve the boilers and hydronic heating system will be repaired and replaced on an as-needed basis at costs below the threshold of this report, and therefore, no projected expenditures have been included.

We also assume that the force-flow unit heaters and individual supply and exhaust fans will be repaired and replaced as part of regular maintenance funded from operating budgets.

The projected expenditures include for eventual re-waterproofing of the roof-top Mechanical Room.

The garage exhaust fans can often be maintained by repairing or replacing individual parts without the need to replace the entire unit for many years. We do not expect broad scale replacement of these fans and assume that they will be replaced on an as-needed individual basis, as part of regular maintenance using funds from the operating budget. We also assume that gas detection sensors and smaller supply/exhaust fans will be replaced on an individual, as-needed basis, as part of routine maintenance.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Overhaul Air Handling Unit (Phased, one unit per year)	$15,000	2023 2024 2025 2038 2039 2040	15
Overhaul Roof-Top Supply Fan	$15,000	2025 2040	15
Overhaul Hydronic Heating Boilers	$25,000	2032	30
Replace Hydronic Heating Boilers	$150,000	2047	30
Re-waterproof Mechanical Room	$10,000	2049	30

7. PLUMBING

7.1 DOMESTIC HOT WATER

BRIEF DESCRIPTION:

Hot water generated by the hydronic boilers runs through two brazed plate heat exchangers located in the roof-top Mechanical Room. These heat exchangers transfer heat from the hydronic heating loop to the domestic hot water loop in order to generate hot water for the building. Based on our site observations, these heat exchangers are manufactured by Advanced Industrial Components Inc. (AIC).

Domestic hot water is stored in three HTP stainless-steel storage tanks located in the roof-top Mechanical Room. Each tank has a storage capacity of 119 US gallons.

According to the drawings provided and confirmed where possible by our site observations, there are several fractional horsepower recirculating pumps serving the heat exchangers, domestic water storage tanks, and domestic water distribution zones.

There are three electric hot water re-heat tanks on the second floor.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

Date(s) Unknown:	Replacement of various circulating and recirculating pumps, as noted on site.
2013:	Replaced the domestic hot water storage tanks at a reported cost of $25,949, as indicated in the previous Depreciation Report.
2018:	Replaced both of the plate-frame heat exchangers serving the domestic hot water system, as noted on site.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We were not made aware of any significant issues with the domestic hot water systems.

Photo 18: Typical brazed plate heat exchanger.

Photo 19: Domestic hot water storage tanks.

The projected expenditures include for periodic replacement of the hydronic to domestic hot water brazed plate heat exchangers and hot water storage tanks at the end of their typical service lives. The actual timing of projects will depend on the performance of the systems.

We assume that routine maintenance, local repair and replacement of smaller components (e.g., smaller circulation and recirculation pumps, expansion tanks, valves, re-heat tanks, etc.) will be carried out on an as-needed basis as part of routine maintenance funded from operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Brazed Plate Heat Exchangers	$25,000	2043	25
Replace Hot Water Storage Tanks	$30,000	2025 2037 2049	12

7. PLUMBING

7.2 DOMESTIC WATER PIPING/VALVES

BRIEF DESCRIPTION:

A combined 8" incoming water service enters the building in the P2 level Water Entry Room. The water service then splits to supply the domestic water and fire suppression systems for the building. There are backflow preventers installed on the fire suppression line (6"), domestic water line (6"), and irrigation line (2"). There is a smaller backflow preventer installed on the boiler make-up feed ($^3/_4$").

The domestic water distribution system for the building is divided into two zones (upper and lower zones). According to the domestic water re-pipe drawings, domestic water is distributed throughout the building via a set of main risers connected to cold supply headers on levels P2, P1, 11, and 23, hot supply headers on levels P1, 11, and 23, and hot recirculation headers on levels P1, 2, and 11.

According to the drawings provided and where seen in mechanical rooms, the main distribution piping is a combination of copper, ductile iron, and PEX (crosslinked polyethylene). Larger diameter main supply risers are typically ductile iron, smaller diameter (suite) risers, horizontal headers, and branch piping into suites are typically PEX. Copper piping was noted in the mechanical rooms.

A duplex booster pump set (i.e., two pumps) with associated controls serves the domestic water distribution system by boosting water up to the roof-top mechanical room. The pumps are rated at 10 hp and 25 hp, and are located in the P2 level Water Entry Room.

There are pressure reducing valve (PRV) stations that reduce water pressure prior to distribution.

There are fractional horsepower circulation pumps serving the domestic water system at the different zones.

Photo 20: Combined water entry.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2011: Replaced the domestic water distribution piping, and fire suppression and domestic water line backflow preventers at a total reported cost of approximately $1,491,798, as indicated in the documents provided.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We were not made aware of any major issues with the domestic water piping and valves.

Ductile iron piping is regarded in the industry to be durable, corrosion-resistant, reliable, and having a long service life. If properly maintained, ductile iron piping can last the life of the building, and therefore we have not included for replacement within the term of this report. With that said, performance (as in any system) will be based on quality of installation and should be monitored, and projects brought into future updates of the Depreciation Report, as and when needed.

The majority of the domestic water distribution piping throughout the building is PEX. The lifespan of PEX piping can vary based on frequency of use, water quality, and water temperature. Most PEX piping on the market comes with a 25-year warranty (or longer). Although PEX piping has not readily been on the market in Canada for 25 years, PEX has been extensively used in Europe and the USA, giving it a 50-year track record of strong performance and reliability. Based on this, we have not included for replacement of the PEX piping within the term of this report. However, performance will be based on quality of the installation. Performance of the system should also be monitored, and projects brought into future updates of the Depreciation Report as and when needed.

We assume that the in-suite PEX piping is the sole responsibility of the individual suite owners, and therefore, no projected expenditures have been included.

Based on our understanding of the domestic water re-pipe drawings, the extent of copper piping within the building is minimal. Therefore, we expect that any remaining copper piping can be replaced on an ongoing, as-needed basis, using funds from operating budgets.

The projected expenditures include for replacement of the larger backflow preventers. We assume that small pumps, valves, backflow preventers, etc. will be replaced on an as-needed basis using funds from operating budgets. We also assume that maintenance and periodic repair/replacement of the PRV stations will be completed on an as-needed basis as part of regular maintenance funded from operating budgets.

The projected expenditures also include for replacement of the duplex booster pump set, including the controls. We assume that periodic repairs or rebuilding of the pumps can be completed as part of ongoing maintenance funded from operating budgets.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Booster Pump Set and Associated Controls	$60,000	2022 2047	25
Replace Fire Suppression Line Backflow Preventer	$20,000	2036	25
Replace Domestic Water Line Backflow Preventer	$20,000	2036	25

7. PLUMBING

7.3 DRAINAGE

BRIEF DESCRIPTION:

Drainage systems include the following:

- *Roofs and Roof Decks:* Internal area drains.
- *Parking Garage:* Internal area drains on the suspended slab levels and catch basins on the lowest level of the garage. There is a trench drain at the bottom of the parking garage entrance ramp.
- *Sanitary Drainage:* Type of piping unknown.
- *Site:* Bi-level drains over the garage roof slab.

There are two sump pits on the P3 level. There is one duplex storm sump pump set (i.e., two pumps) and one duplex sanitary sump pump set. The pits are equipped with high-water-level alarms.

The type of buried storm drainage piping could not be confirmed.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the drainage systems.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We were not made aware of any significant issues with the drainage systems.

We assume that sump pumps will be replaced on an individual, as-needed basis, funded out of operating budgets.

The condition of the buried and concealed piping cannot be evaluated visually. We recommend that drains be flushed and scoped routinely. This maximizes the service life of the piping and helps identify repair needs. We assume this will be done as part of ongoing maintenance funded from operating budgets.

Photo 21: Parking garage trench drain.

The projected expenditures include for periodic repairs that will inevitably be required. Actual repairs and related costs should be closely tracked, and budgets modified to suit, in future updates to the Depreciation Report.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Drainage Repair Allowance	$15,000	2023 2030 2037 2044	7

8. ELECTRICAL

8.1 GENERAL

BRIEF DESCRIPTION:

Electricity is supplied to the property by BC Hydro via underground services.

The incoming service is rated for 12.47kV and enters a high-voltage switchgear unit located in the P1 level Electrical Room. According to the data plate, the switchgear unit is rated for 600A, 15kV, three-phase, three-wire.

The service is fed from the high-voltage switchgear unit to a 1500kVA dry transformer that steps the power down to 120/208V. The transformer then feeds a 5500A, 120/208V, three-phase, four-wire switchgear unit. Electricity from this switchgear is supplied to meter centres, house equipment, and the emergency distribution system. Based on our site observations, there are three more switchgear units serving the electrical distribution system. The switchgear units are rated at 4500A, 3000A, and 1200A.

According to the electrical drawings and confirmed where possible by our site observations, power for the emergency distribution system is stepped up by three air-cooled transformers that increase the voltage from 120/208V to 600V at specific locations. The transformers are rated at 45kVA, 45kVA, and 300kVA.

Suites have a circuit-breaker-type panel and are typically provided a 150A service, where seen.

We were not able to confirm the type of wiring throughout the building; however, we assume that copper wiring is installed throughout.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the electrical system.

Photo 22: Electrical equipment.

PRESENT CONDITIONS AND RECOMMENDATIONS:

No problems with electrical performance or capacity were reported.

Major electrical equipment has an average service life of 40 to 50 years or more. The building is of an age where capital expenditures are likely to be needed within the term of this report, but the scope and timing of such work is difficult to predict. Based on the age of the building, the projected expenditures provide allowances to start replacing components, including the main transformer and switchgear units. The timing, extent, and costs related to this work should be further reviewed as the project timing approaches and considered as part of future updates to the Depreciation Report.

The incoming service to the building is only 12.47kV. We understand that BC Hydro has started upgrading incoming services to 24.94kV in all municipalities. The timing of this is unclear, but for The Metropolitan when the service is upgraded it will likely mean that mandatory upgrades and/or new equipment will be required to accommodate dual voltage (12.47kV/24.94kV), which will be at the cost of the Strata. The projected expenditures include for an evaluation of the existing service, equipment, and BC Hydro requirements by an electrical specialist. Pending the results of this evaluation, projected expenditures will likely be required to be included in future updates to the Depreciation Report.

Smaller transformers, disconnects, panels and minor repairs are expected to be managed as a maintenance expense funded out of operating budgets.

We recommend that all electrical panels and major equipment be thermally scanned every few years to identify hot spots that require repair. The scans and related repairs found to be needed (minor tightening, etc.) are assumed to be an operating expense.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Electrical Evaluation	$5,000	2021	N/A
Electrical Distribution System Repair Allowance (Phased, 25% per year)	$25,000	2040 2041 2042 2043	50
Replace 1500kVA Transformer	$200,000	2041	50
Replace Step Up Transformers	$40,000	2041	50
Replace Switchgears	$400,000	2041	50

8. ELECTRICAL

8.2 LIGHTING

BRIEF DESCRIPTION:

Lighting systems include the following:

- *Main Entrance Lobby:* Typically pot lights with compact fluorescent lamps.
- *Corridors:* Typically ceiling-mounted fixtures (lamp type unknown).
- *Stairwells:* Typically ceiling-mounted strip fluorescent fixtures (lamp type unknown).
- *Recreation Centre:* Typically pot lights (lamp type unknown).
- *Male and Female Washrooms:* Typically pot lights (lamp type unknown).
- *Pool and Hot Tub:* Ceiling-suspended fixtures typically with compact fluorescent lamps.
- *Meeting Room:* Typically ceiling-mounted strip fluorescent fixtures (lamp type unknown).
- *Manager's Office:* Typically ceiling-mounted strip fluorescent fixtures (lamp type unknown).
- *P1 Corridor:* Typically ceiling-mounted strip fluorescent fixtures (lamp type unknown).
- *Below-Grade Elevator Lobbies:* Ceiling-mounted strip fluorescent fixtures typically with T8 lamps.
- *Parking Garage:* Ceiling-mounted strip fluorescent fixtures typically with T8 lamps.
- *Service and Storage Rooms:* Ceiling-mounted strip fluorescent fixtures typically with T12 lamps.
- *Exterior:* Pot lights with compact fluorescent lamps and wall-mounted fixtures with incandescent lamps at the entrance awnings. Wall-mounted fixtures at balconies (lamp type unknown). A combination of bollards and light poles along the paved walkways and throughout the landscaped areas (lamp types unknown).

Photo 23: Typical ceiling-mounted strip fixture.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

2012: Upgraded exterior lighting fixtures at a reported cost of $16,058, as indicated in the previous Depreciation Report.

PRESENT CONDITIONS AND RECOMMENDATIONS:

The lighting fixtures, where reviewed, are in serviceable condition. Current interior lighting levels appeared to meet minimum by-law requirements. Exterior lighting levels were not measured as our review was completed during daylight.

The projected expenditures include for periodic upgrades of the common area lighting fixtures. Detailed lighting audits should be completed to provide an accurate scope of replacement work, taking into account any potential incentive programs available, which can be carried out by many lighting suppliers/installers.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Upgrade Interior and Exterior Lighting Fixtures	$30,000	2025 2045	20

9. CONVEYANCE

9.1 ELEVATORS

BRIEF DESCRIPTION:

There are two overhead, geared, traction-type elevators that serve the building. The elevators were manufactured by Northern-West Elevators Ltd. and have infrared door detectors.

The elevators are equipped with firefighter's emergency recall functionality.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

~2019: Replaced elevator door detectors, as noted on site.

PRESENT CONDITIONS AND RECOMMENDATIONS:

The elevators are presently maintained under a comprehensive maintenance contract with ThyssenKrupp.

GUNN Consultants Inc. completed a third-party condition assessment of the elevators at the building in 2019, which assessed the present condition of equipment and the remaining service life and need for upgrades of various components. Based on the condition assessment report, we understand that the elevators are in acceptable condition for their age and use, and although components are generally well maintained, they are near the end of their reliable lifespans. The inspection report also noted several maintenance deficiencies, which we understand should be corrected by the service contractor at no cost to the Strata.

Photo 24: Elevator equipment.

Modernization of traction elevator controls is typically required after 25 to 30 years of service. Based on the recommendations provided in the condition assessment report, the projected expenditures include for complete modernization of the elevators. Modernization will include replacement of the present controller with a microprocessor-based controller, replacement of the drive system with a solid-state drive, fixture replacement and refurbishment or replacement of the geared machine and motor. Project budget and timing is based on the estimates provided in the condition assessment report and include a 15% contingency as recommended in the report.

Elevator upgrades/modernization may trigger mandatory (and costly) modifications, replacement, and/or additions to the fire alarm system to meet the current code requirements at the time of modernization. Therefore, the projected expenditures include for fire alarm upgrades and electrical work at the cost provided in the condition assessment report. The project cost includes a 15% contingency, as recommended in the report.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Modernize Elevator Controls	$490,000	2021	30
Fire Alarm Upgrades and Electrical Work	$115,000	2021	30

10. WASTE

10.1 GENERAL

BRIEF DESCRIPTION:

Garbage, organic waste, and recycling containers are typically located in the P1 level Garbage and Recycling Room. There are also additional garbage containers located at the north end of the P1 level.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

No significant capital projects were reported to have been completed in relation to the waste systems.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We assume that all of the garbage, organic waste, and recycling containers are the responsibility of the current service contractors (and/or City), so the projected expenditures do not include for their replacement.

Photo 25: Garbage and Recycling Room.

11. SECURITY SYSTEMS

11.1 GENERAL

BRIEF DESCRIPTION:

The building has the following security and access control systems:

- Enterphone 2000 panel at the main entrance to the building.
- CCTV system with 14 cameras at entrances and high-risk areas and monitoring equipment in the Manager's Office and P2 level Telephone Room.
- Access control key fob systems with readers at various building entrances and at the P1, P2, and P3 level elevator lobbies.

MAINTENANCE, REPAIR AND RENEWAL HISTORY:

Date(s) Unknown:	Installed CCTV and access key fob systems throughout the property, as noted on site.
2012:	Replaced the enterphone panel with a refurbished unit at a reported cost of $2,878, as indicated in the previous Depreciation Report.

PRESENT CONDITIONS AND RECOMMENDATIONS:

We were not made aware of any issues with the security systems.

Renewal of, or upgrades to, security and access control systems are relatively discretionary items, and largely dependent on owner objectives. We assume that maintenance and repair of the systems, as well as replacement of individual components of the CCTV and fob systems, will be carried out on an as-needed basis as part of maintenance funded out of the operating budgets.

The projected expenditures include for eventual full replacement of the systems. Replacement timing is somewhat discretionary if the systems are still functioning. The timing of replacement should be re-considered closer to the replacement year.

Photo 26: Enterphone panel.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
Replace Enterphone Panel	$5,000	2027 2047	20
Replace CCTV System	$50,000	2032	20
Replace Fob Access System	$20,000	2032	20

12. CONSULTING SERVICES

12.1 DEPRECIATION REPORTS

BRIEF DESCRIPTION:

Since Depreciation Reports are defined and mandated by the *Strata Property Act*, the projected expenditures include for this Depreciation Report Update as well as future updates to this Depreciation Report.

CAPITAL PROJECTS:

Description	Present Cost	Timing (Year)	Cycle (Years)
2021 Depreciation Report Update	$9,450	2021	N/A
Future Depreciation Report Updates	$7,100	2024 2027 2030 2033 2036 2039 2042 2045 2048	3

Projected Expenditures

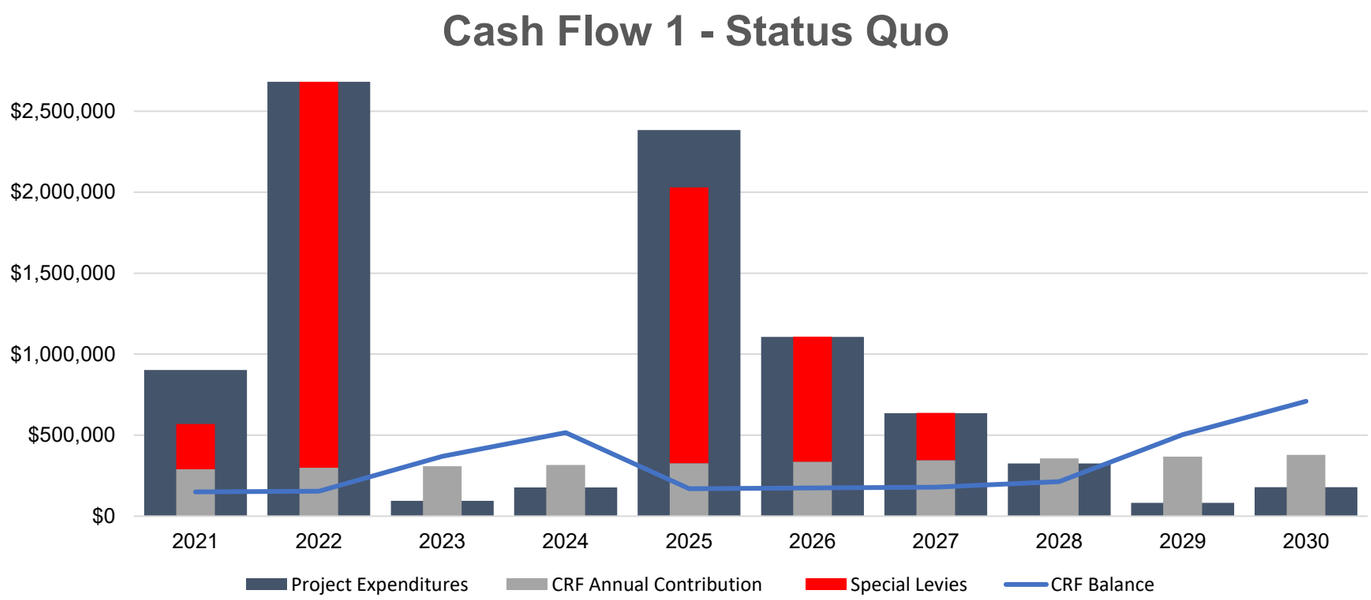
Inflation Rate (%) = 3.0%
Analysis Timeframe (yrs) = 10

Item No.	Component	Project Description	Present Cost	Occurrences	Cycle	Projected Expenditures 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	**STRUCTURE**														
1.1	Structural Frame	Evaluate Condition of the Post-Tensioning (PT) System	$20,000	2022, 2037	15		$20,600								
1.2	Balconies	Re-waterproof Balconies, including Local Concrete Repairs and Re-painting Balcony Soffits and Parapet Walls	$1,100,000	2025	N/A					$1,238,060					
		Evaluate Condition of the Balconies	$8,000	2039	15										
		Re-coat and Re-paint Balconies, including Local Concrete Repairs	$550,000	2040	15										
		Replace Balcony and Roof Deck Guards	$790,000	2040	50										
1.4	Parking Garage	Evaluate Condition of the Parking Garage	$8,000	2021, 2033, 2045	12	$8,000									
		Locally Repair Suspended Slab Concrete and Install a Waterproofing System	$570,000	2022	N/A		$587,100								
		Re-waterproof Suspended Slab Waterproofing	$210,000	2034, 2046	12										
		Re-waterproof Parking Garage Entrance Ramp	$120,000	2025	35					$135,061					
		Allowance for Crystalline Waterproofing and/or Injection-Type Repairs to the Foundation Walls and Garage Roof Slab	$8,000	2022, 2032, 2037, 2042, 2047	5		$8,240								
		Re-waterproof Garage Roof Slab (Phased over two years)	$760,000	2025, 2026	35					$855,387	$881,048				
2	**BUILDING ENVELOPE**														
2.1	Exterior Walls	Repair Exterior Walls, including Exterior Wall Cleaning, Concrete and Finish Repairs, Re-painting of Concrete and Stucco Walls, and Local Masonry Repairs	$505,000	2027	N/A							$602,996			
		Evaluate Condition of the Exterior Walls	$8,000	2035	N/A										
		Replace Stucco Cladding, including Concrete and Finish Repairs, Re-painting of Concrete Walls, and Local Masonry Repairs	$960,000	2036, 2037	45										
2.2	Exterior Windows, Balcony, Roof Deck, and Patio Doors	Window Water Testing and Trial Repairs	$19,000	2021	N/A	$19,000									
		Window Repairs	$1,010,000	2022	N/A		$1,040,300								
		Replace Failed IGUs	$20,000	2024, 2026, 2028, 2030, 2032, 2034	2				$21,855		$23,185		$24,597		$26,095
		Replace Exterior Windows, Storefront Glazing (including Doors), Balcony, Roof Deck, and Patio Doors (Phased over two years)	$3,075,000	2036, 2037	45										
2.3	Exterior Doors	Replace Main Overhead Garage Door	$8,000	2035	25										
		Replace Residential Overhead Garage Door	$8,000	2025, 2050	25					$9,004					
2.4	Roofing and Skylights	Remaining PH-3 and PH-6 Targeted Roof Deck Repairs	$77,000	2021	N/A	$77,000									
		Replace Roof Decks and Penthouse Roof Level Stucco Walls	$925,000	2022	N/A		$952,750								
		Replace Roof Decks	$815,000	2047	25										
		Entrance Canopy and Pool Area Investigation and Repair Allowance	$119,000	2021	N/A	$119,000									
		Evaluate Condition of the Roofs and Skylights	$8,000	2027, 2046	N/A							$9,552			
		Replace Protected Roofs Over the Entrance Canopy and Pool Area	$70,000	2028	25								$86,091		
		Replace Metal Roofs	$390,000	2031	40										
		Re-waterproof Metal Roof Gutters	$20,000	2031	20										
		Replace Skylights Over Entrance Canopy and Pool Area	$460,000	2031	40										
3	**FIRE SAFETY**														
3.2	Detection / Alarm	Replace Fire Alarm Control Panel	$65,000	2035	20										
3.3	Suppression	Suppression System Repair Allowance	$10,000	2023, 2030, 2037, 2044	7			$10,609							$13,048
		50 Year (and every 10 years thereafter) Testing of Suppression Systems	$8,000	2041	10										
		Replace Fire Pump	$50,000	2023, 2048	25			$53,045							
3.4	Emergency Power	Replace Generator, Automatic Transfer Switch, and Diesel Storage Tank	$175,000	2026	35						$202,873				
4	**INTERIOR**														
4.1	FF&E (Furniture, Fixtures, and Equipment)	Refurbish Main Entrance Lobby	$25,000	2033	25										
		Refurbish Corridors, including Carpet Replacement	$175,000	2028, 2048	20								$215,228		
		Paint Stairwells	$30,000	2029	25									$38,003	
		Refurbish Amenity Corridor	$20,000	2030, 2050	20										$26,095
		Refurbish Recreation Centre	$30,000	2032	20										
		Replace Exercise Equipment (Phased, 33% per phase)	$7,000	2027, 2032, 2037, 2042, 2047	5							$8,358			
		Renovate Male and Female Washrooms	$20,000	2025, 2045	20					$22,510					
		Refurbish Pool and Hot Tub Area	$60,000	2024, 2044	20				$65,564						
		Refinish Pool Shell	$30,000	2024, 2044	20				$32,782						
		Refinish Hot Tub Shell	$15,000	2024, 2044	20				$16,391						
		Replace Pool and Hot Tub Heat Exchangers	$20,000	2025, 2050	25					$22,510					
		Refurbish Sauna	$15,000	2024, 2044	20				$16,391						
		Refurbish Meeting Room	$10,000	2029, 2049	20									$12,668	
		Refurbish Manager's Office	$10,000	2029, 2049	20									$12,668	
		Renovate P1 Corridor	$15,000	2029, 2049	20									$19,002	
		Refurbish Below-Grade Elevator Lobbies	$15,000	2030, 2050	20										$19,572
		Re-paint Parking Garage	$50,000	2030	25										$65,239
		Refurbish Elevator Cabs	$40,000	2021, 2046	25	$40,000									
5	**SITE**														
5.1	Site Features and Paving	Re-paint Metal Trellises	$10,000	2022	30		$10,300								
		Replace Metal Trellises	$25,000	2037	30										
		Re-paint/Re-stain Wood Fencing, including Local Repairs	$20,000	2040	15										
		Leak Investigation and Repair at North-East Concrete Stairs	$20,000	2021	N/A	$20,000									
6	**HVAC**														
6.1	General	Overhaul Air Handling Unit (Phased, one unit per year)	$15,000	2023, 2024, 2025, 2038, 2039, 2040	15			$15,914	$16,391	$16,883					
		Overhaul Roof-Top Supply Fan	$15,000	2025, 2040	15					$16,883					
		Overhaul Hydronic Heating Boilers	$25,000	2032	30										
		Replace Hydronic Heating Boilers	$150,000	2047	30										
		Re-waterproof Mechanical Room	$10,000	2049	30										
7	**PLUMBING**														
7.1	Domestic Hot Water	Replace Brazed Plate Heat Exchangers	$25,000	2043	25										
		Replace Hot Water Storage Tanks	$30,000	2025, 2037, 2049	12					$33,765					
7.2	Domestic Water Piping/Valves	Replace Booster Pump Set and Associated Controls	$60,000	2022, 2047	25		$61,800								
		Replace Fire Suppression Line Backflow Preventer	$20,000	2036	25										
		Replace Domestic Water Line Backflow Preventer	$20,000	2036	25										
7.3	Drainage	Drainage Repair Allowance	$15,000	2023, 2030, 2037, 2044	7			$15,914							$19,572
8	**ELECTRICAL**														
8.1	General	Electrical Evaluation	$5,000	2021	N/A	$5,000									
		Electrical Distribution System Repair Allowance (Phased, 25% per year)	$25,000	2040, 2041, 2042, 2043	50										
		Replace 1500kVA Transformer	$200,000	2041	50										
		Replace Step Up Transformers	$40,000	2041	50										
		Replace Switchgears	$400,000	2041	50										
8.2	Lighting	Upgrade Interior and Exterior Lighting Fixtures	$30,000	2025, 2045	20					$33,765					
9	**CONVEYANCE**														
9.1	Elevators	Modernize Elevator Controls	$490,000	2021	30	$490,000									
		Fire Alarm Upgrades and Electrical Work	$115,000	2021	30	$115,000									
11	**SECURITY SYSTEMS**														
11.1	General	Replace Enterphone Panel	$5,000	2027, 2047	20							$5,970			
		Replace CCTV System	$50,000	2032	20										
		Replace Fob Access System	$20,000	2032	20										
12	**CONSULTING SERVICES**														
12.1	Depreciation Reports	2021 Depreciation Report Update	$9,450	2021	N/A	$9,450									
		Future Depreciation Report Updates	$7,100	2024, 2027, 2030, 2033, 2036, 2039, 2042, 2045, 2048	3				$7,758			$8,478			$9,264
					Total:	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**

Projected Expenditures

Inflation Rate (%) = 3.0%
Analysis Timeframe (yrs) = 30

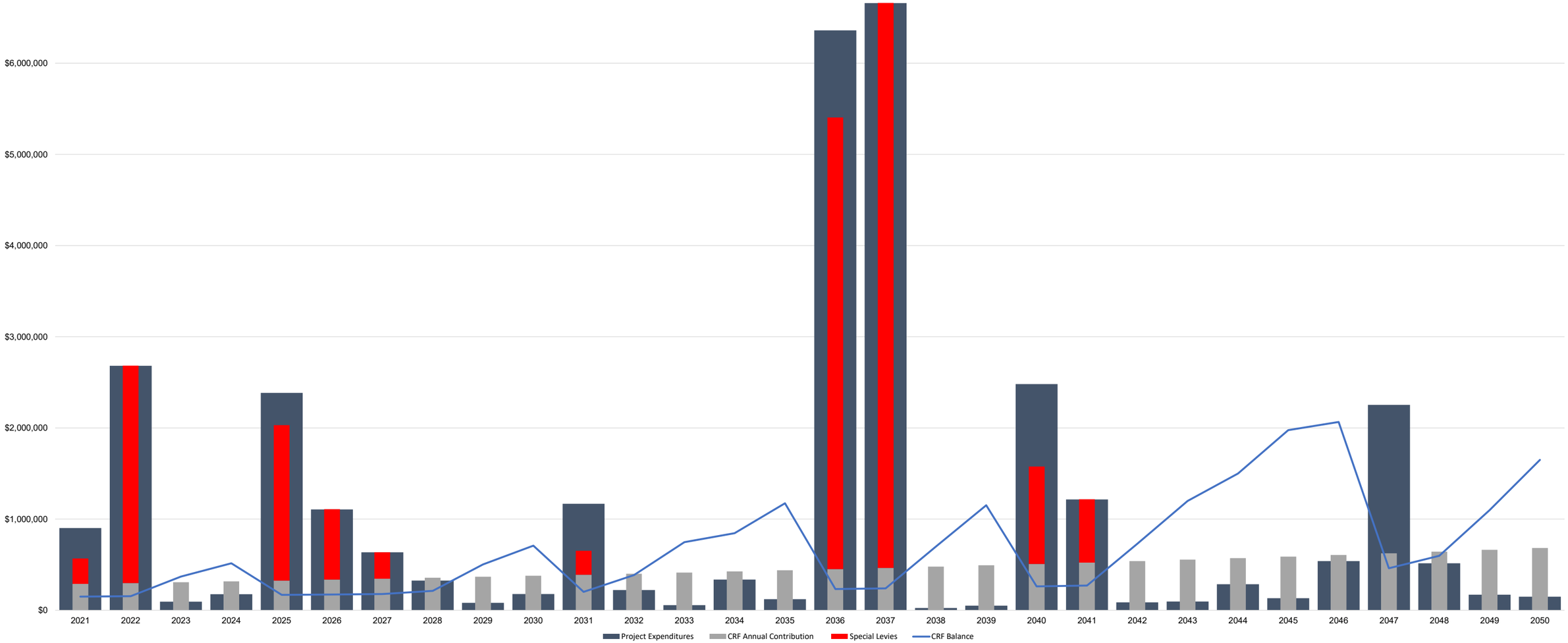
Item No.	Component	Project Description	Present Cost	Occurrences	Cycle	Projected Expenditures 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
1	**STRUCTURE**																																		
1.1	Structural Frame	Evaluate Condition of the Post-Tensioning (PT) System	$20,000	2022, 2037	15		$20,600															$32,094														
1.2	Balconies	Re-waterproof Balconies, including Local Concrete Repairs and Re-painting Balcony Soffits and Parapet Walls	$1,100,000	2025	N/A					$1,238,060																									
		Evaluate Condition of the Balconies	$8,000	2039	15																			$13,619												
		Re-coat and Re-paint Balconies, including Local Concrete Repairs	$550,000	2040	15																				$964,428											
		Replace Balcony and Roof Deck Guards	$790,000	2040	50																				$1,385,270											
1.4	Parking Garage	Evaluate Condition of the Parking Garage	$8,000	2021, 2033, 2045	12	$8,000												$11,406												$16,262						
		Locally Repair Suspended Slab Concrete and Install a Waterproofing System	$570,000	2022	N/A		$587,100																													
		Re-waterproof Suspended Slab Waterproofing	$210,000	2034, 2046	12														$308,392												$439,693					
		Re-waterproof Parking Garage Entrance Ramp	$120,000	2025	35					$135,061																										
		Allowance for Crystalline Waterproofing and/or Injection-Type Repairs to the Foundation Walls and Garage Roof Slab	$8,000	2022, 2032, 2037, 2042, 2047	5		$8,240										$11,074					$12,838					$14,882						$17,253			
		Re-waterproof Garage Roof Slab (Phased over two years)	$760,000	2025, 2026	35					$855,387	$881,048																									
2	**BUILDING ENVELOPE**																																		
2.1	Exterior Walls	Repair Exterior Walls, including Exterior Wall Cleaning, Concrete and Finish Repairs, Re-painting of Concrete and Stucco Walls, and Local Masonry Repairs	$505,000	2027	N/A							$602,996																								
		Evaluate Condition of the Exterior Walls	$8,000	2035	N/A															$12,101																
		Replace Stucco Cladding, including Concrete and Finish Repairs, Re-painting of Concrete Walls, and Local Masonry Repairs	$960,000	2036, 2037	45																$1,495,649	$1,540,518														
2.2	Exterior Windows, Balcony, Roof Deck, and Patio Doors	Window Water Testing and Trial Repairs	$19,000	2021	N/A	$19,000																														
		Window Repairs	$1,010,000	2022	N/A		$1,040,300																													
		Replace Failed IGUs	$20,000	2024, 2026, 2028, 2030, 2032, 2034	2				$21,855		$23,185		$24,597		$26,095		$27,685		$29,371																		
		Replace Exterior Windows, Storefront Glazing (including Doors), Balcony, Roof Deck, and Patio Doors (Phased over two years)	$3,075,000	2036, 2037	45																$4,790,750	$4,934,472														
2.3	Exterior Doors	Replace Main Overhead Garage Door	$8,000	2035	25															$12,101																
		Replace Residential Overhead Garage Door	$8,000	2025, 2050	25					$9,004																										$18,853
2.4	Roofing and Skylights	Remaining PH-3 and PH-6 Targeted Roof Deck Repairs	$77,000	2021	N/A	$77,000																														
		Replace Roof Decks and Penthouse Roof Level Stucco Walls	$925,000	2022	N/A		$952,750																													
		Replace Roof Decks	$815,000	2047	25																												$1,757,622			
		Entrance Canopy and Pool Area Investigation and Repair Allowance	$119,000	2021	N/A	$119,000																														
		Evaluate Condition of the Roofs and Skylights	$8,000	2027, 2046	N/A							$9,552																								
		Replace Protected Roofs Over the Entrance Canopy and Pool Area	$70,000	2028	25								$86,091																		$16,750					
		Replace Metal Roofs	$390,000	2031	40											$524,127																				
		Re-waterproof Metal Roof Gutters	$20,000	2031	20											$26,878																				
		Replace Skylights Over Entrance Canopy and Pool Area	$460,000	2031	40											$618,202																				
3	**FIRE SAFETY**																																		
3.2	Detection / Alarm	Replace Fire Alarm Control Panel	$65,000	2035	20															$98,318																
3.3	Suppression	Suppression System Repair Allowance	$10,000	2023, 2030, 2037, 2044	7			$10,609							$13,048							$16,047								$19,736						
		50 Year (and every 10 years thereafter) Testing of Suppression Systems	$8,000	2041	10																					$14,449									
		Replace Fire Pump	$50,000	2023, 2048	25			$53,045																											$111,064	
3.4	Emergency Power	Replace Generator, Automatic Transfer Switch, and Diesel Storage Tank	$175,000	2026	35						$202,873																									
4	**INTERIOR**																																		
4.1	FF&E (Furniture, Fixtures, and Equipment)	Refurbish Main Entrance Lobby	$25,000	2033	25													$35,644																		
		Refurbish Corridors, including Carpet Replacement	$175,000	2028, 2048	20								$215,228																						$388,726	
		Paint Stairwells	$30,000	2029	25									$38,003																						
		Refurbish Amenity Corridor	$20,000	2030, 2050	20										$26,095																					$47,131
		Refurbish Recreation Centre	$30,000	2032	20												$41,527																			
		Replace Exercise Equipment (Phased, 33% per phase)	$7,000	2027, 2032, 2037, 2042, 2047	5							$8,358					$9,690					$11,233					$13,022					$15,096				
		Renovate Male and Female Washrooms	$20,000	2025, 2045	20					$22,510																				$40,656						
		Refurbish Pool and Hot Tub Area	$60,000	2024, 2044	20				$65,564																				$118,415							
		Refinish Pool Shell	$30,000	2024, 2044	20				$32,782																				$59,208							
		Refinish Hot Tub Shell	$15,000	2024, 2044	20				$16,391																				$29,604							
		Replace Pool and Hot Tub Heat Exchangers	$20,000	2025, 2050	25					$22,510																										$47,131
		Refurbish Sauna	$15,000	2024, 2044	20				$16,391																				$29,604							
		Refurbish Meeting Room	$10,000	2029, 2049	20									$12,668																					$22,879	
		Refurbish Manager's Office	$10,000	2029, 2049	20									$12,668																					$22,879	
		Renovate P1 Corridor	$15,000	2029, 2049	20									$19,002																					$34,319	
		Refurbish Below-Grade Elevator Lobbies	$15,000	2030, 2050	20										$19,572																					$35,348
		Re-paint Parking Garage	$50,000	2030	25										$65,239																					
		Refurbish Elevator Cabs	$40,000	2021, 2046	25	$40,000																									$83,751					
5	**SITE**																																		
5.1	Site Features and Paving	Re-paint Metal Trellises	$10,000	2022	30		$10,300																													
		Replace Metal Trellises	$25,000	2037	30																	$40,118														
		Re-paint/Re-stain Wood Fencing, including Local Repairs	$20,000	2040	15																				$35,070											
		Leak Investigation and Repair at North-East Concrete Stairs	$20,000	2021	N/A	$20,000																														
6	**HVAC**																																		
6.1	General	Overhaul Air Handling Unit (Phased, one unit per year)	$15,000	2023, 2024, 2025, 2038, 2039, 2040	15			$15,914	$16,391	$16,883														$24,793	$25,536	$26,303											
		Overhaul Roof-Top Supply Fan	$15,000	2025, 2040	15					$16,883															$26,303											
		Overhaul Hydronic Heating Boilers	$25,000	2032	30												$34,606																			
		Replace Hydronic Heating Boilers	$150,000	2047	30																										$323,489					
		Re-waterproof Mechanical Room	$10,000	2049	30																													$22,879		
7	**PLUMBING**																																		
7.1	Domestic Hot Water	Replace Brazed Plate Heat Exchangers	$25,000	2043	25																							$47,903								
		Replace Hot Water Storage Tanks	$30,000	2025, 2037, 2049	12					$33,765												$48,141														$68,638
7.2	Domestic Water Piping/Valves	Replace Booster Pump Set and Associated Controls	$60,000	2022, 2047	25		$61,800																										$129,395		
		Replace Fire Suppression Line Backflow Preventer	$20,000	2036	25																$31,159														
		Replace Domestic Water Line Backflow Preventer	$20,000	2036	25																$31,159														
7.3	Drainage	Drainage Repair Allowance	$15,000	2023, 2030, 2037, 2044	7			$15,914							$19,572							$24,071								$29,604						
8	**ELECTRICAL**																																		
8.1	General	Electrical Evaluation	$5,000	2021	N/A	$5,000																														
		Electrical Distribution System Repair Allowance (Phased, 25% per year)	$25,000	2040, 2041, 2042, 2043	50																				$43,838	$45,153	$46,507	$47,903							
		Replace 1500kVA Transformer	$200,000	2041	50																					$361,222									
		Replace Step Up Transformers	$40,000	2041	50																					$72,244									
		Replace Switchgears	$400,000	2041	50																					$722,444									
8.2	Lighting	Upgrade Interior and Exterior Lighting Fixtures	$30,000	2025, 2045	20					$33,765																				$60,984						
9	**CONVEYANCE**																																		
9.1	Elevators	Modernize Elevator Controls	$490,000	2021	30	$490,000																														
		Fire Alarm Upgrades and Electrical Work	$115,000	2021	30	$115,000																														
11	**SECURITY SYSTEMS**																																		
11.1	General	Replace Enterphone Panel	$5,000	2027, 2047	20							$5,970																					$10,783			
		Replace CCTV System	$50,000	2032	20												$69,212																			
		Replace Fob Access System	$20,000	2032	20												$27,685																			
12	**CONSULTING SERVICES**																																		
12.1	Depreciation Reports	2021 Depreciation Report Update	$9,450	2021	N/A	$9,450																														
		Future Depreciation Report Updates	$7,100	2024, 2027, 2030, 2033, 2036, 2039, 2042, 2045, 2048	3				$7,758			$8,478			$9,264			$10,123			$11,062			$12,087			$13,208			$14,433			$15,771			
					Total:	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**	**$1,169,207**	**$221,477**	**$57,173**	**$337,763**	**$122,520**	**$6,359,779**	**$6,659,532**	**$24,793**	**$51,243**	**$2,481,211**	**$1,215,513**	**$87,620**	**$95,805**	**$286,170**	**$132,335**	**$540,195**	**$2,253,638**	**$515,561**	**$171,595**	**$148,464**



1st Year Minimum Balance =	**$150,000**
Starting Balance =	**$477,413**
1st Year Contribution =	**$290,000**
Contribution Increase Rate =	**3.0%**
Interest Rate =	**1.0%**
Inflation Rate =	**3.0%**

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**
CRF Annual Contribution	**$290,000**	**$298,700**	**$307,661**	**$316,891**	**$326,398**	**$336,189**	**$346,275**	**$356,663**	**$367,363**	**$378,384**
Special Levies	**$278,665**	**$2,383,760**	**$0**	**$0**	**$1,704,207**	**$772,459**	**$290,668**	**$0**	**$0**	**$0**
CRF Balance	**$150,000**	**$154,500**	**$369,904**	**$515,101**	**$168,826**	**$173,891**	**$179,108**	**$213,592**	**$502,757**	**$709,363**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**

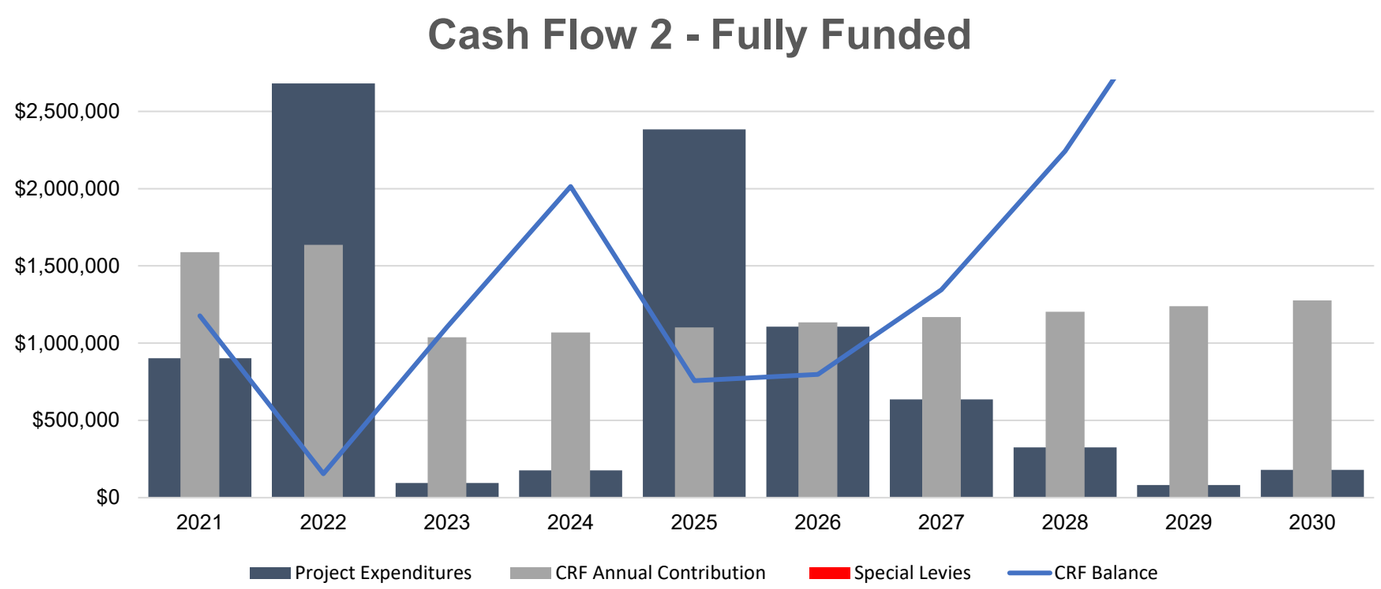
Cash Flow 1 - Status Quo



1st Year Minimum Balance = **$150,000**
Starting Balance = **$477,413**
1st Year Contribution = **$290,000**
Contribution Increase Rate = **3.0%**
Interest Rate = **1.0%**
Inflation Rate = **3.0%**

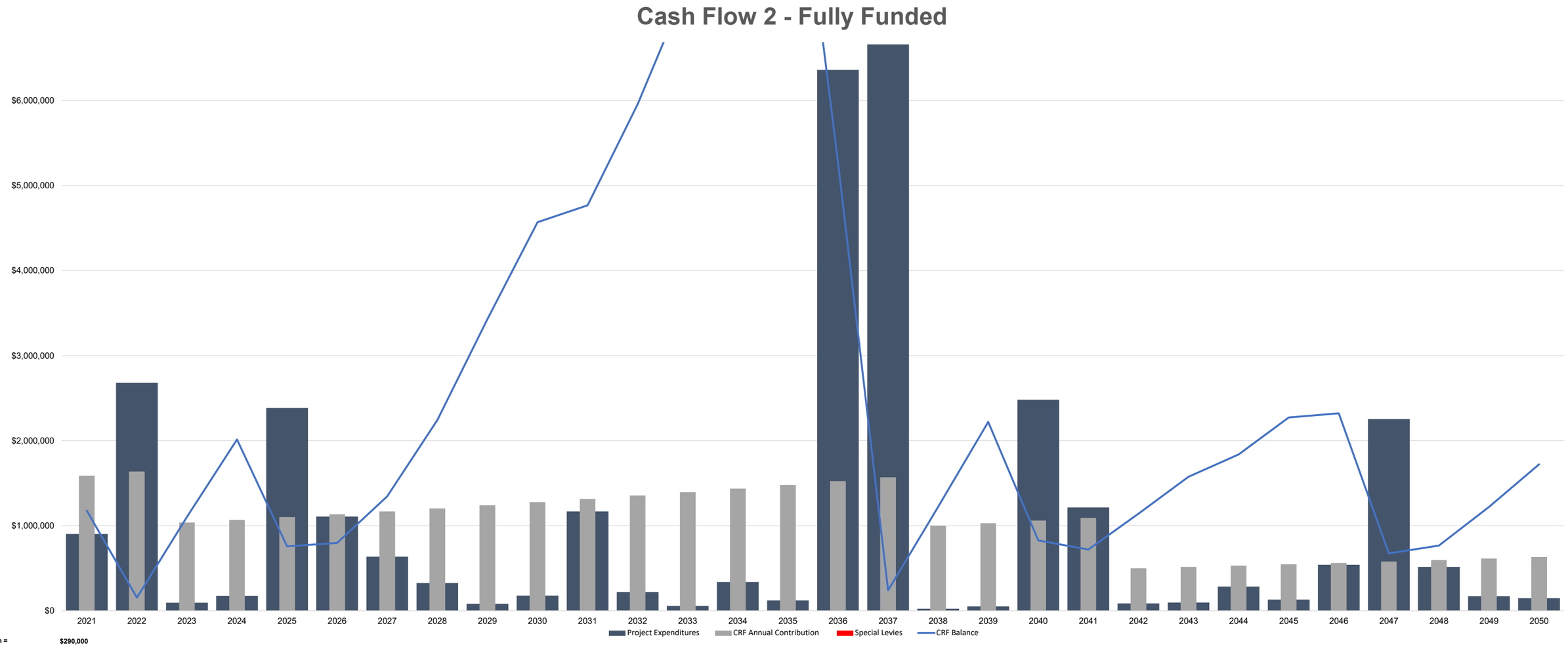
Notes:
- No interest is collected from special levies as it is assumed funds will be collected just before expenditures.
- Project expenditures occur at the end of the year allowing interest to be acrued on the CRF balance.
- CRF balances are for end of year.

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**	**$1,169,207**	**$221,477**	**$57,173**	**$337,763**	**$122,520**	**$6,359,779**	**$6,659,532**	**$24,793**	**$51,243**	**$2,481,211**	**$1,215,513**	**$87,620**	**$95,805**	**$286,170**	**$132,335**	**$540,195**	**$2,253,638**	**$515,561**	**$171,595**	**$148,464**
CRF Annual Contribution	**$290,000**	**$298,700**	**$307,661**	**$316,891**	**$326,398**	**$336,189**	**$346,275**	**$356,663**	**$367,363**	**$378,384**	**$389,736**	**$401,428**	**$413,471**	**$425,875**	**$438,651**	**$451,811**	**$465,365**	**$479,326**	**$493,706**	**$508,517**	**$523,772**	**$539,485**	**$555,670**	**$572,340**	**$589,510**	**$607,196**	**$625,411**	**$644,174**	**$663,499**	**$683,404**
Special Levies	**$278,665**	**$2,383,760**	**$0**	**$0**	**$1,704,207**	**$772,459**	**$290,668**	**$0**	**$0**	**$0**	**$262,452**	**$0**	**$0**	**$0**	**$0**	**$4,954,304**	**$6,196,302**	**$0**	**$0**	**$1,068,939**	**$694,143**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$150,000**	**$154,500**	**$369,904**	**$515,101**	**$168,826**	**$173,891**	**$179,108**	**$213,592**	**$502,757**	**$709,363**	**$201,587**	**$385,744**	**$748,163**	**$846,105**	**$1,173,120**	**$233,695**	**$240,706**	**$700,261**	**$1,152,441**	**$263,026**	**$270,917**	**$728,435**	**$1,198,637**	**$1,499,958**	**$1,975,405**	**$2,065,550**	**$461,472**	**$598,220**	**$1,099,739**	**$1,649,441**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**	**$201,587**	**$207,635**	**$213,864**	**$220,280**	**$226,888**	**$233,695**	**$240,706**	**$247,927**	**$255,365**	**$263,026**	**$270,917**	**$279,044**	**$287,416**	**$296,038**	**$304,919**	**$314,067**	**$323,489**	**$333,193**	**$343,189**	**$353,485**



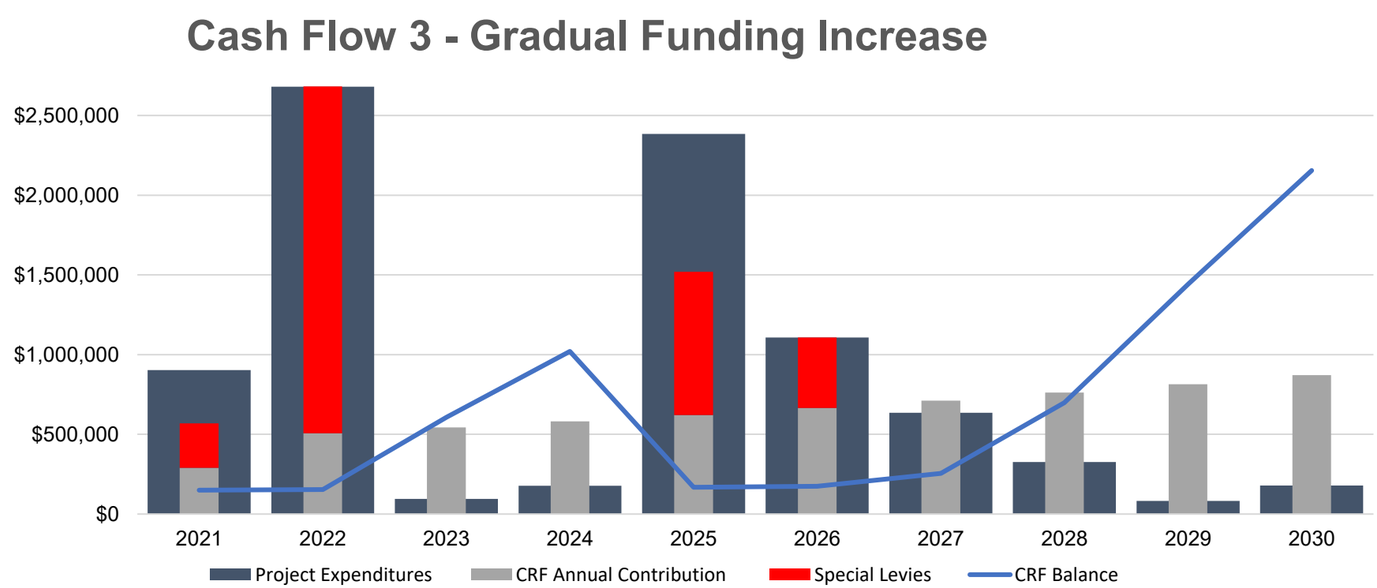
1st Year Minimum Balance =	**$150,000**	**1st Year of Revised Contribution (After Critical Year) =**	**2023**
Starting Balance =	**$477,413**	**Revised 1st Year Contribution =**	**$1,038,179**
Starting Contribution =	**$1,589,394**	**Revised Contribution Increase Rate =**	**3.0%**
Contribution Increase Rate =	**3.0%**		
Interest Rate =	**1.0%**		
Inflation Rate =	**3.0%**		

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**
CRF Annual Contribution	**$1,589,394**	**$1,637,076**	**$1,038,179**	**$1,069,324**	**$1,101,404**	**$1,134,446**	**$1,168,480**	**$1,203,534**	**$1,239,640**	**$1,276,829**
Special Levies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$1,177,789**	**$154,501**	**$1,104,392**	**$2,013,490**	**$757,278**	**$798,389**	**$1,345,882**	**$2,243,560**	**$3,430,134**	**$4,569,475**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**



1st Year Contribution =	**$290,000**							
1st Year Minimum Balance =	**$150,000**	**1st Year of Revised Contribution (After Critical Year) =**	**2023**	**1st Year of 2nd Revised Contribution (After Critical Year) =**	**2038**	**1st Year of 3rd Revised Contribution (After Critical Year) =**	**2042**	Notes: - This funding model assumes that contributions are large enough that there are no special levies.
Starting Balance =	**$477,413**	**Revised 1st Year Contribution =**	**$1,038,179**	**Revised 1st Year Contribution =**	**$1,000,000**	**Revised 1st Year Contribution =**	**$500,000**	- No interest is collected from special levies as it is assumed funds will be collected just before expenditures.
		Revised Contribution Increase Rate =	**3.0%**	**Revised Contribution Increase Rate =**	**3.0%**	**Revised Contribution Increase Rate =**	**3.0%**	- Project expenditures occur at the end of the year allowing interest to be acrued on the CRF balance.
Contribution Increase Rate =	**3.0%**							- CRF balances are for end of year.
Interest Rate =	**1.0%**							
Inflation Rate =	**3.0%**							

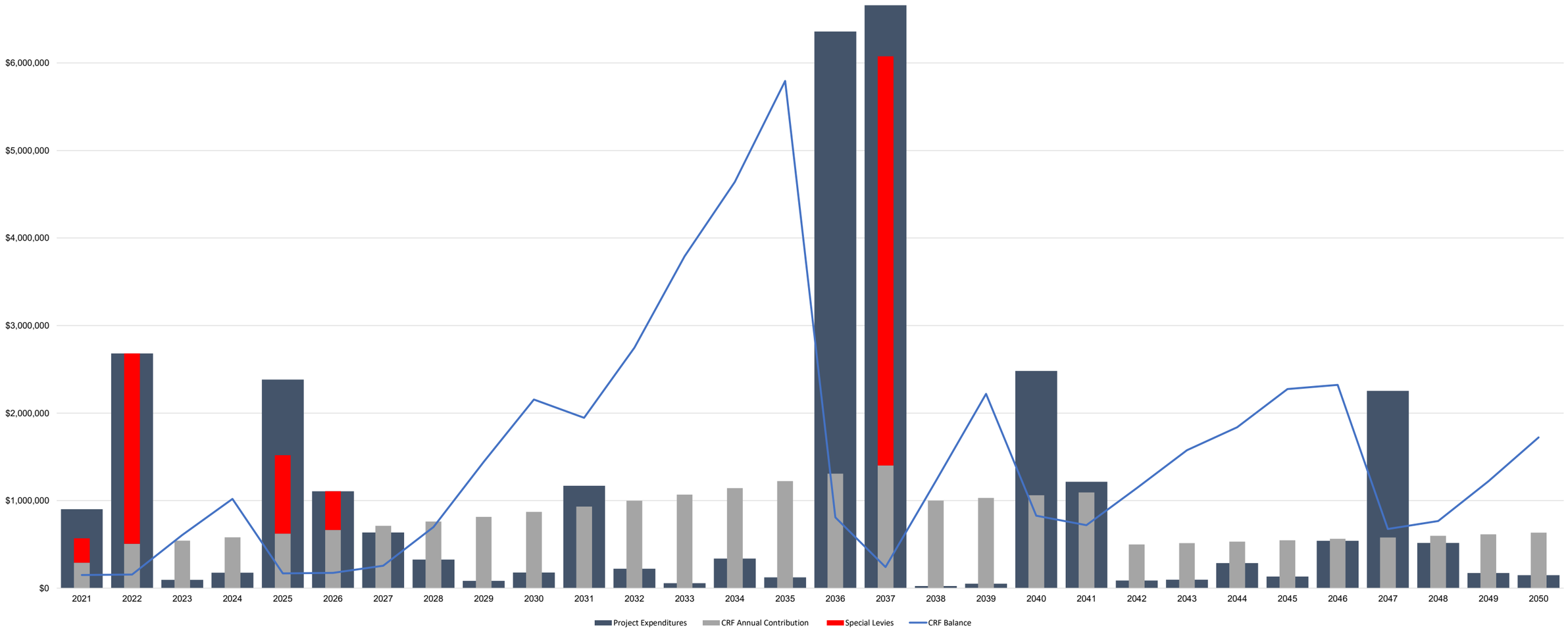
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**	**$1,169,207**	**$221,477**	**$57,173**	**$337,763**	**$122,520**	**$6,359,779**	**$6,659,532**	**$24,793**	**$51,243**	**$2,481,211**	**$1,215,513**	**$87,620**	**$95,805**	**$286,170**	**$132,335**	**$540,195**	**$2,253,638**	**$515,561**	**$171,595**	**$148,464**
CRF Annual Contribution	**$1,589,394**	**$1,637,076**	**$1,038,179**	**$1,069,324**	**$1,101,404**	**$1,134,446**	**$1,168,480**	**$1,203,534**	**$1,239,640**	**$1,276,829**	**$1,315,134**	**$1,354,588**	**$1,395,226**	**$1,437,083**	**$1,480,195**	**$1,524,601**	**$1,570,339**	**$1,000,000**	**$1,030,000**	**$1,060,900**	**$1,092,727**	**$500,000**	**$515,000**	**$530,450**	**$546,364**	**$562,754**	**$579,637**	**$597,026**	**$614,937**	**$633,385**
Special Levies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$1,177,789**	**$154,501**	**$1,104,392**	**$2,013,490**	**$757,278**	**$798,389**	**$1,345,882**	**$2,243,560**	**$3,430,134**	**$4,569,475**	**$4,768,452**	**$5,956,826**	**$7,362,301**	**$8,543,391**	**$9,994,935**	**$5,268,449**	**$240,715**	**$1,223,774**	**$2,220,421**	**$828,180**	**$719,651**	**$1,141,977**	**$1,575,442**	**$1,838,431**	**$2,273,897**	**$2,322,358**	**$674,837**	**$766,325**	**$1,220,707**	**$1,721,333**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**	**$201,587**	**$207,635**	**$213,864**	**$220,280**	**$226,888**	**$233,695**	**$240,706**	**$247,927**	**$255,365**	**$263,026**	**$270,917**	**$279,044**	**$287,416**	**$296,038**	**$304,919**	**$314,067**	**$323,489**	**$333,193**	**$343,189**	**$353,485**



1st Year Minimum Balance =	**$150,000**	**1st Year Revised Contribution (After Critical Year) =**	**2023**
Starting Balance =	**$477,413**	**Revised 1st Year Contribution =**	**$543,025**
1st Year Contribution =	**$290,000**	**Revised Contribution Increase Rate =**	**7.0%**
Contribution Increase Rate =	**75.0%**		
Interest Rate =	**1.0%**		
Inflation Rate =	**3.0%**		

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**
CRF Annual Contribution	**$290,000**	**$507,500**	**$543,025**	**$581,037**	**$621,709**	**$665,229**	**$711,795**	**$761,621**	**$814,934**	**$871,979**
Special Levies	**$278,665**	**$2,173,826**	**$0**	**$0**	**$897,620**	**$441,632**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$150,000**	**$154,500**	**$606,546**	**$1,019,702**	**$168,826**	**$173,891**	**$255,945**	**$698,359**	**$1,442,396**	**$2,154,719**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**

Cash Flow 3 - Gradual Funding Increase



1st Year Minimum Balance =	**$150,000**	**1st Year Revised Contribution (After Critical Year) =**	**2023**	**1st Year of 2nd Revised Contribution (After Critical Year) =**	**2038**	**1st Year of 3rd Revised Contribution (After Critical Year) =**	**2042**
Starting Balance =	**$477,413**	**Revised 1st Year Contribution =**	**$543,025**	**Revised 1st Year Contribution =**	**$1,000,000**	**Revised 1st Year Contribution =**	**$500,000**
1st Year Contribution =	**$290,000**	**Revised Contribution Increase Rate =**	**7.0%**	**Revised Contribution Increase Rate =**	**3.0%**	**Revised Contribution Increase Rate =**	**3.0%**
Contribution Increase Rate =	**75.0%**						
Interest Rate =	**1.0%**						
Inflation Rate =	**3.0%**						

- This funding model incorporates customized funding objectives into a baseline funding model (i.e., this model assumes a minimum reserve balance and a lower dependency on special levies than Cash Flow 1).
- No interest is collected from special levies as it is assumed funds will be collected just before expenditures.
- Project expenditures occur at the end of the year allowing interest to be acrued on the CRF balance.
- CRF balances are for end of year.

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Project Expenditures	**$902,450**	**$2,681,090**	**$95,481**	**$177,131**	**$2,383,828**	**$1,107,107**	**$635,355**	**$325,917**	**$82,340**	**$178,884**	**$1,169,207**	**$221,477**	**$57,173**	**$337,763**	**$122,520**	**$6,359,779**	**$6,659,532**	**$24,793**	**$51,243**	**$2,481,211**	**$1,215,513**	**$87,620**	**$95,805**	**$286,170**	**$132,335**	**$540,195**	**$2,253,638**	**$515,561**	**$171,595**	**$148,464**
CRF Annual Contribution	**$290,000**	**$507,500**	**$543,025**	**$581,037**	**$621,709**	**$665,229**	**$711,795**	**$761,621**	**$814,934**	**$871,979**	**$933,018**	**$998,329**	**$1,068,212**	**$1,142,987**	**$1,222,996**	**$1,308,606**	**$1,400,209**	**$1,000,000**	**$1,030,000**	**$1,060,900**	**$1,092,727**	**$500,000**	**$515,000**	**$530,450**	**$546,364**	**$562,754**	**$579,637**	**$597,026**	**$614,937**	**$633,385**
Special Levies	**$278,665**	**$2,173,826**	**$0**	**$0**	**$897,620**	**$441,632**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$4,675,371**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
CRF Balance	**$150,000**	**$154,500**	**$606,546**	**$1,019,702**	**$168,826**	**$173,891**	**$255,945**	**$698,359**	**$1,442,396**	**$2,154,719**	**$1,945,245**	**$2,747,063**	**$3,791,503**	**$4,641,027**	**$5,794,772**	**$808,924**	**$240,706**	**$1,223,765**	**$2,220,412**	**$828,171**	**$719,642**	**$1,141,968**	**$1,575,433**	**$1,838,422**	**$2,273,888**	**$2,322,348**	**$674,827**	**$766,315**	**$1,220,697**	**$1,721,323**
Min Required CRF Balance	**$150,000**	**$154,500**	**$159,135**	**$163,909**	**$168,826**	**$173,891**	**$179,108**	**$184,481**	**$190,016**	**$195,716**	**$201,587**	**$207,635**	**$213,864**	**$220,280**	**$226,888**	**$233,695**	**$240,706**	**$247,927**	**$255,365**	**$263,026**	**$270,917**	**$279,044**	**$287,416**	**$296,038**	**$304,919**	**$314,067**	**$323,489**	**$333,193**	**$343,189**	**$353,485**

APPENDIX F – INFORMATION MADE AVAILABLE

The Strata Corporation made available various documents for our review, to assist in preparing this Depreciation Report Update, including:

- Various invoices, maintenance records and inspection reports, various dates;
- Building Envelope Investigation Report, prepared by Gordon Spratt & Associates Ltd., dated April 18, 1995;
- Maintenance and Reserve General Ledgers, for the dates of May 2008 - January 2020
- Bylaws, dated June 27, 2013;
- Depreciation Report, prepared by BFL Strata Protect Engineering, dated April 19, 2016;
- Financial statements for 2019, 2018, and a portion of 2017;
- Elevator Inspection Report Condition Assessment, prepared by Gunn Consultants Inc., dated January 2019;
- Thermography Inspection, prepared by PowerPros Electrical, dated May 13, 2019;
- General Service Agreement, prepared by Action Glass, dated July 12, 2019;
- Backflow Prevention Assembly Test Report, prepared by the City of Burnaby, dated September 16, 2019;
- Metropolitan Maintenance Contract Proposal, prepared by Elafon Mechanical Ltd., dated November 7, 2019; and
- Preventative Maintenance Report, prepared by Elafon Mechanical Ltd., dated May 2020.

The Strata Corporation also made various drawings available for our review, including:

- Architectural drawings prepared by Hamilton Doyle Architects, dated September 21, 1989;
- Structural drawings prepared by Read Jones Christoffersen Ltd., dated September 6, 1989;
- Plumbing drawings prepared by Sterling Cooper & Associates, dated February 23, 1990;
- Mechanical drawings prepared by Sterling Cooper & Associates, dated May 29, 1989;
- Electrical drawings prepared by Arnold Nemetz & Associates, dated October 20, 1989; and
- Domestic Water Re-Pipe drawings prepared by Brighter Mechanical Ltd., dated August 19, 2010.