KELLER ENGINEERING

RESERVE FUND STUDY UPDATE WITH SITE VISIT
OTTAWA CARLETON CONDOMINIUM CORPORATION No. 553, OTTAWA, ONTARIO

File # 20594
July 15, 2021

Ottawa / Kingston / Calgary
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STUDY SUMMARY

A site inspection was performed on January 13, 2021 by:

- Steve Christison, P.Eng.., Keller Engineering (Structural & Architectural)
- Miguel Plano, P.Eng., Keller Engineering (Electrical & Mechanical)

Based on our visual examination of the property, it is our opinion that Ottawa-Carleton Condominium Corporation No. 553 is in generally satisfactory condition. A number of common elements will, however, require repairs or replacement over the 30-year horizon of this reserve fund study.

A virtual meeting was held on February 2, 2021 attended by the Board of Directors of OCCC 553, the Property Management, and Steve Christison, P.Eng. of Keller Engineering and the key common elements were reviewed]

Based on our fiscal analysis and best current estimate, it is recommended that annual reserve fund contributions of Ottawa Carleton Condominium Corporation No. 553 be increased to **$264,078** in fiscal year **2021/22, $312,932** in fiscal year **2022/23** and **$370,825** in fiscal year **2023/24.** Additionally, special assessments of **$800,000** will be required in fiscal years **2021/22, 2022/23, and 2023/24**. Increases in the annual contributions in fiscal year **2024/25** and all years thereafter are budgeted at **2.5% per year**, which is our assumed yearly construction cost increase. This funding plan, coupled with the special assessment, in our opinion, will provide adequate funds to carry out necessary repair work and will provide a surplus which will be required in later years to pay for major capital expenditures anticipated beyond the time period examined in this Reserve Fund Study.

<u>Repair / Replacement Work</u>
The following repair/replacement work will be funded from the reserve fund over the next few years:

- Landscaped Podium Waterproofing Repair
- Window & Patio Door Replacement
- Conventional Roofing System Overlay at Buildings A1, A2, and B
- Conventional Roofing System Repairs at Buildings C and D
- Sloped Metal Roof Repairs
- MUA Air Conditioner Condensers Replacement
- Exhaust Fans Replacement
- Domestic Water Backflow Preventer Installation
- Parking Garage Repairs
- CO Sensors Replacement
- Sanitary and Storm Pipes & Stacks Replacement
- Elevator Modernization
- Paver Walkways Repair
- Precast Concrete Interlocking Unit Retaining Wall Repair
- Balcony Railing Painting
- Interior Light Fixtures Replacement
- Exterior Light Fixtures Replacement
- Fire Alarm Sensors Replacement
- Battery Pack Units and Emergency Lights Replacement
- Forced Flow Electric Heaters Replacement
- CCTV Cameras Replacement
- Lobby Direct Expansion Air-Conditioner Units Replacement
- Direct Expansion Air-Conditioner Units & Refrigerant Lines Replacement
- Sump Pumps Replacement
- Garbage Chute Repairs
- Caulking Replacement
- Common Area Door Replacement
- Garage Door Replacement
- Conventional Roofing System Overlay at Building D

- Carpet Replacement

Future Work

The following items are not expected to require repair or replacement within the 30-year scope of this study; however, it is likely that work will be required in the future. Budgeting for these items will commence as they approach the 30-year scope of the Reserve Fund Study:

- Replacement of the EIFS System
- Replacement of the Masonry Veneer
- Replacement of Distribution, Storm, and Sanitary Piping

Steve Christison, P.Eng.

1.0 INTRODUCTION

1.1 Scope

The Board of Directors of Ottawa-Carleton Condominium Corporation No. 553 (OCCC 553) commissioned Keller Engineering to inspect the common elements of its condominium corporation in order to prepare the following Reserve Fund Study. The work included the review of civil, structural, architectural, mechanical, and electrical common elements. Note that only the common elements are addressed in this study. Mechanical and electrical systems and finishes within the boundaries of each unit are not part of the common elements unless specifically designated as common elements and as such, they are owner's responsibility.

In accordance with 'The Condominium Act, 1998', the purpose of this study is to determine whether the amount of money in the reserve fund and the amount of contributions collected by the Corporation are adequate to provide for the expected costs of major repairs and replacement of the common elements and assets of the Corporation. The Reserve Fund Study contains findings about the current conditions of the common elements, and it tabulates major capital expenditure predictions over the next 30 years.

This Reserve Fund Study satisfies the requirements of a Reserve Fund Study Update with Site Visit as outlined in Part IV of the Ontario Regulation 48/01, s. 28.

1.2 Description of Property

Ottawa-Carleton Condominium Corporation No. 553 is a 28-year old condominium complex consisting of four separate low-rise buildings/blocks which are between three and five storeys in height. The condominium complex contains 70 residential units. The property known as The Waterbrooke is located at 62 Donald Street, 995 North River Road, 997 North River Road, and 1 Columbus Avenue, in Ottawa, Ontario.

The structural system of the condominium buildings consists of reinforced concrete foundation and podium slab and standard wood framing above grade. The exterior is clad with exterior insulation finishing system at upper level popouts as well as brick masonry. The roofs of the condominium complex are protected with conventional membrane systems as well as sloped metal section. Fenestration are provided by vinyl and wood windows and doors.

A single-storey parking garage structure is located under the complex. The on-grade drivable surface is constructed of asphalt-on-grade. The exposed sections of the podium slab are protected with a waterproofing membrane covered by hard and soft landscaping.

Electrical feed is provided by a hydro vault with a 1,200A 600V main service to the buildings. A main disconnect switchgear and a series of fused disconnect switches, dry core transformers, and breaker panels provide electrical distribution throughout the buildings. Suites are individually metered with meter sockets located in electrical rooms. Emergency power is provided by battery pack units and emergency lights.

Security systems consist of a phone-based door entry system, a key fob system and security cameras.

The ventilation system consists of four electric packaged make-up air units with electric remote condensers for air conditioning, and multiple exhaust fans located throughout the buildings. Ventilation to the parking garage is provided by a series of mechanical damper] and exhaust fans and are activated by a carbon monoxide detection system.

Heating is provided by baseboard electric heaters, electric forced flow heaters and space heaters installed throughout the building. Cooling is provided by electric direct expansion air conditioner units.

Plumbing systems consist of cold-water risers and sanitary and storm water pipes and stacks.

The four hydraulic elevators provide access to floors 1 to 4.

Fire protection systems are comprised of a fire alarm panel, unlisted fire pump set, standpipes with fire hose cabinets and fire extinguishers installed throughout the building. Fire sprinklers are located in the parking garage.

Asphalt roadways lead to Blocks A, B and C and a parking area is located under Block D with access from Columbus Ave. Paver walkways are located at each unit patio as well as pathways through the complex, Unit retaining walls create boundaries for the ground floor unit patios.

1.3 References

Reference Materials were provided by Ms. Anne Burgoon, of Eastern Ontario Property Management Group, Property Manager for OCCC 553.

The following documents were available for review for the purpose of completing this study:

- Previous Reserve Fund Studies
  - Reserve Fund Study Update with Site Visit; dated Jul. 12, 2016 Keller Engineering
  - Reserve Fund Study Update without Site Visit; dated June 6, 2019; Keller Engineering
- Financial Statements
  - Unaudited Fiscal Year 2020; dated Oct. 22, 2020
  - Audit Fiscal Year 2019; dated Nov. 3, 2019
- Drawings
  - Architectural
  - Electrical
  - Planter and Exterior Details
- Heating Ventilating and Air Conditioning Systems Replacement Options Feasibility Study; dated Jan. 6, 2021; Keller Engineering
- Localized Sloped Metal Roofing Review; dated Aug. 20, 2020; Keller Engineering
- Sloped Metal Roof Condition Assessment; dated Jan. 4, 2021; Keller Engineering
- Roof Condition Assessment; dated Nov. 30, 2020; Keller Engineering
- Podium Condition Assessment; dated Jun. 22, 2021; Cleland Jardine Engineering Ltd.
- OCCC 553 – Aluminium Pipe Condition Assessment of the 3 other Buildings – Correspondence – May 21, 2021; Clean Water Works
- Declaration
- Declaration Amendment; dated Mar. 31, 2011

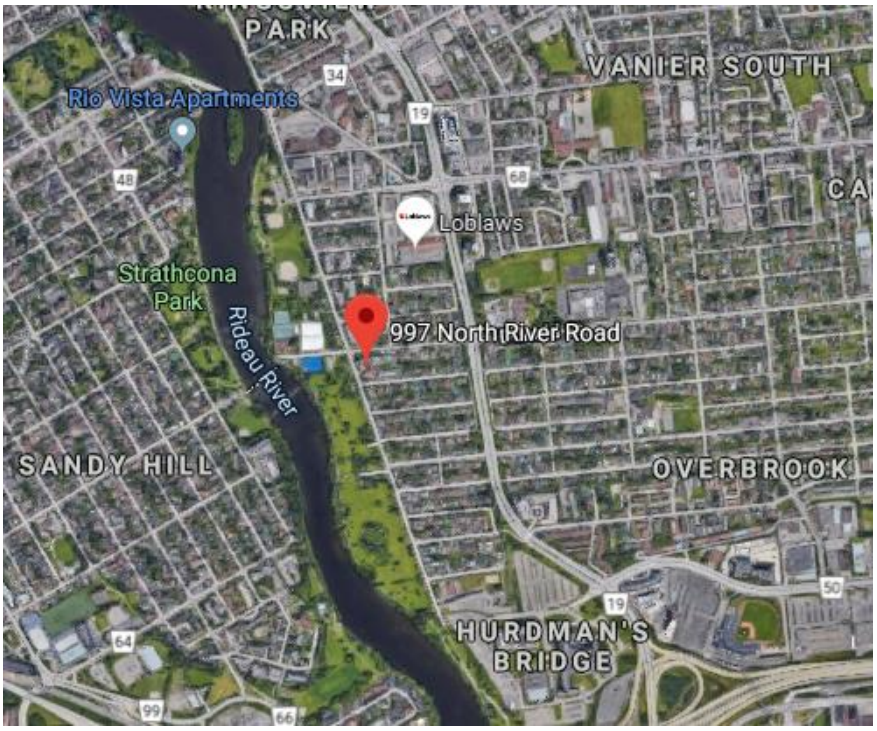

Figure 1: Location of OCCC 553

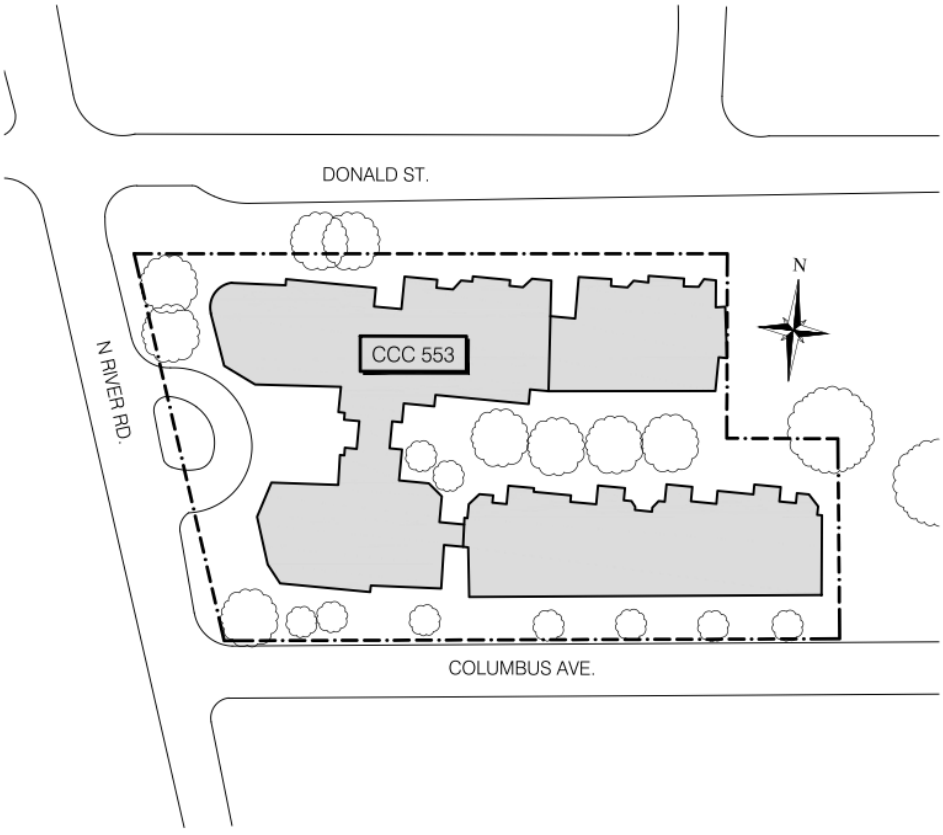

Figure 2: Key Plan

2.0 GENERAL INFORMATION

2.1 Determination of Repair/Replacement Costs

The procedures for determining repair/replacement costs of the common elements involve site inspections, quantity take-offs from drawings, cost estimations and a spreadsheet layout which are described in detail in this report.

TECHNICAL AUDIT

A Technical Audit is performed to assess the general condition of the common elements. This site work also provides the opportunity to determine the type of repair or replacement work that will be required for each common element as well as the time period when such work will likely be required.

COST ESTIMATION

Once the type and quantity of repair or replacement work are known, the costs associated with such work are estimated. Keller Engineering has developed an extensive listing of unit costs for a wide variety of repair and replacement work involving all civil, structural, architectural, and electrical elements that are typically included in Reserve Fund Studies. This listing was compiled using prices obtained from repair and replacement contracts in which Keller Engineering has been involved as well as from cost estimates provided by manufacturers, suppliers and contractors. For unique repair or replacement items, advice is generally obtained from a contractor with experience in the work of concern. In such cases, the contractor examines the work and prepares an estimate for our use in the Reserve Fund Study.

FORECASTING COSTS

Capital expenditures for repair and replacement of building components have been forecasted in current dollars and the most probable fiscal years when these expenditures will be required have been set out in this report. Adjustments for construction cost increases as well as earned interest are automatically made to the spreadsheet and, since the annual fees are to be revised in the current year, the recommended contributions are also determined in current dollars. Beyond the current year, it is the Board's responsibility to ensure that the reserve fund contributions are in line with those outlined in the spreadsheet.

When an expense will be incurred depends on a number of factors, such as:

i) The urgency of repair or replacement: Some building components, such as water supply, sanitary sewers or electricity distribution mains, must operate flawlessly at all times. Interruptions in their working condition cannot be tolerated and repair costs for these items cannot be deferred.

ii) The perceived importance of a repair or replacement: For example, caulking, paving or painting need not be addressed when the first blemishes appear. The Board of Directors has considerable freedom to delay or advance the time when funds will be spent on these non-essential types of repairs to suit the demand from owners and the financial constraints of the Corporation's budget.

In most cases, expenses for each common element have been budgeted for the specific fiscal year in which the repair or replacement will likely be required. If possible, repair or replacement of the common elements will usually be performed throughout the corporation during one year rather than spreading the repairs out over a few years as this is generally the most cost effective solution. For cases where repair or replacement of a building component is not required throughout the corporation at the same time, it may be more cost effective to phase the work over two or more years. Phasing the work may also be necessary due to a lack of reserve funds. A prudent manager would be expected to determine whether phasing the work is cost effective and have the work performed accordingly. Some of the expenses outlined in this Reserve Fund Study will occur early in the predicted time period, other expenses will be incurred later however the accumulated reserve fund should be sufficient to pay for all of these expenses as they come due.

It is within the Board's mandate to advance or defer non-essential repair contracts based on sound technical advice at the time of the scheduled repair.

ENGINEERING FEES

To ensure that major repair and replacement work at the condominium corporation is properly specified and performed, it is strongly recommended, that an experienced engineer be hired to provide professional assistance. Engaging the services of a professional engineer would ensure that the work is properly specified, tendered, and executed. Engineering fees related to the common element repairs will be paid out of the reserve fund. Accordingly, a suitable allowance for engineering fees has been included in the spreadsheet where it is likely that the Board will require professional assistance in implementing the work. Depending on the extent and complexity of the work, engineering fees can range between 5% and 15% of the value of the construction project.

2.2 Financial Plan

SPREADSHEET

The main purpose of the spreadsheet is to determine the annual reserve fund contributions required to ensure that there will be sufficient funds to pay for all foreseeable expenditures over the 30-year plan. To determine the total expenditures to be incurred in each fiscal year, the projected expenditures are entered into the spreadsheet, summed and adjusted for yearly construction cost increases.

INFLATION RATES

Over the past few years, the rate at which construction costs increase has varied significantly between -0.7% and 7.0%. An annual inflation rate of **2.5%** has been used in this report. This rate is based on annually published data by Statistics Canada relating to the construction price index for apartment buildings in the local region.

While the increase in construction costs will fluctuate from year to year, an annual rate of **2.5%** will likely provide a reasonable representation of how prices will increase over the next few years.

INTEREST RATES

For this Reserve Fund Study, a **2.5%** interest rate was assumed in calculating the annual contributions from interest earned on the reserve fund balance.

While actual inflation and interest rates may differ from those assumed for this report, the above rates, in combination, should be representative over the next few years.

DETERMINING CONTRIBUTION AMOUNTS

Trial values for the annual reserve fund contributions are entered into the spreadsheet and through an iterative process the most appropriate annual contributions are determined and used to establish the 30-year funding plan. The iterations account for annual expenditures, annual contributions from owners' monthly fees as well as contributions from investment interest earned on the unused balance of the reserve fund. As noted previously, these figures are adjusted to account for yearly construction cost increases prior to determining the recommended funding plan and the annual contributions are shown in the actual dollar values for each respective year.

The most appropriate contribution ensures that sufficient funds are accumulated in the reserve fund to cover all anticipated expenditures as they come due while leaving a surplus at the end of the study period. The size of the surplus depends greatly on the individual condominium and on the expenses that are to be incurred beyond the study period. Condominiums which are expected to incur large expenditures shortly beyond the study period should have a large surplus.

At the end of the spreadsheet, the remaining reserve fund is shown in current dollars to provide a better perspective of the fund balance at the end of the study period.

Reserve funds for condominiums must be adequately funded following each reserve fund study. The most accepted interpretation of adequate funding is that annual contributions remain constant and increasing only by inflation and that no special assessments are necessary.

As part of the changes to the Condominium Act, the Regulations of the Act are being revised. While the changes relating to reserve fund planning have yet to be implemented, we anticipate that the current recommendations will be implemented in the near future. The current recommendations include allowing condominiums to plan for an increase of the year-over-year total contributions above regular inflation for a period of 3 years upon completion of the reserve fund study.

Note, Keller Engineering projects expenses for a timeframe 10-years beyond 30-year plan. Financial plans will be presented that will meet the necessary funding requirements of both the 30-year plan and the period 10-years beyond. It is a common that a financial plan that only meets the 30-year period will not be sufficient to prevent a deficit occurring in the 10-years beyond the scope of the study. The Board of Directors may elect to proceed with a funding plan which exhibits a deficit beyond the 30-year plan with the knowledge that a significant increase to the contributions may be required upon time of the next Reserve Fund Study.

In accordance with the Condominium Act and the associated Regulations, Reserve Fund Study Updates must be conducted every 3 years. These updates will allow for adjustments to interest rates, construction cost increases, and/or the funding plan, due to any unforeseen costs incurred over the 3-year period. Prices for future reserve fund studies are for budgeting purposes only and do not constitute a fee proposal for future services.

3.0 ASSUMPTION AND LIMITATIONS

The accuracy of the discussions, conclusions and cost information contained in this study is limited to the extent of information available at this time. The condition assessment of the common elements is based upon visual examination only. Neither destructive testing nor performance monitoring were conducted.

Life expectancy projections for the common elements assume that the corporation will provide satisfactory and timely periodic maintenance. The study does not make allowances for the effects of rare events such as flood, fire, lightning, explosions, earthquakes etc.

Costing has been based on the work being performed using a procurement process that includes multiple bids. Further costing is based on the work being procured during normal procurement periods for each type of work and does not account for premiums that can be added to the cost to perform the work in short notice or in periods of high demand. Unless requested by the Board, all costs assume that the Contractor performing the work will have full access to the work site for the entire duration of the project and no special considerations have been provided to allow continual use or access of the work area by the unit owners.

Future cost projections for the repair or replacement of common element items is based on a set inflation rate taken as an average of past years' construction price index, which is provided by Statistics Canada. As market value increases may vary annually, it is difficult to determine the percentage increase on an item by item basis. Therefore, the most accurate projection is provided by reviewing the previous year's average of the entire construction industry and extrapolated over the life span of the study.

It is assumed that the expected performance standards and appearance correspond to the current norm. Furthermore, housing industry averages and manufacturers' published data on component life expectancy apply to this condominium corporation.

4.0 APPENDICES

4.1 Spreadsheet for Major Repair and Replacement

As described in Section 2: General Information, the purpose of the spreadsheet is to determine the annual reserve fund contributions required to ensure that there will be sufficient funds to pay for all foreseeable expenditures over the next thirty years.

4.2 Management Planning Table

The Management Planning Table included in Appendix B. provides managers and Board members with a list of expected major expenses and their likely occurrence. The information contained in this table is presented elsewhere in the text of this study and is summarized here for convenience.

4.3 Notice of Future Funding (Formerly Form 15)

The Notice of Future Funding of the Reserve Fund is included in Appendix C. This notice contains a summary of the Reserve Fund Study as well as the proposed plan for future funding. Copies of this notice are to be sent to each of the unit owners to give notice and make them aware of the proposed plan.

Within 120 days of receiving the study, it is the responsibility of the Board of Directors in consort with the Corporation's property management and financial advisors, to review the Reserve Fund Study and propose a plan for future funding of the reserve fund which the Board determines will ensure that the fund will be adequate for the purpose for which it was established.

5.0 TECHNICAL AUDIT AND COSTING

The following sections include a brief technical discussion of the major building components common to the condominium corporation, approximate quantities involved, life expectancy, repair and replacement costs as well as the fiscal years in which work is anticipated.

All items have been ranked on a scale from poor to satisfactory. The rankings are as follows:

- Satisfactory – The condominium complex component exhibits little to no deterioration and is expected to last or exceed its estimated full life cycle assuming regular maintenance and no change to its general environment.
- Fair – The condominium complex component is serviceable although there is evidence of collective degradation or deficient operation. Repairs may be required within the next 5 years.
- Poor – The condominium complex component is either at the end of its life cycle or there is the potential for imminent failure. In the circumstance, the condominium complex component may be inoperative or exhibit total failure and immediate repairs or replacement may be required.

5.1 Architectural/Structural/Civil

5.1.1 Site Services

UNDERGROUND SERVICES

The underground services which include sanitary and storm water piping systems, water supply lines and electrical services are situated beneath the condominium complex. These systems will typically last the life of condominium complex without requiring replacement, however, generally major repairs will be required after 40 to 50 years of service.

The underground services were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the systems are in satisfactory condition. We do not anticipate replacement or major repairs will be required during the 30-year planning period of this study.

The sewer system should not be ignored under the assumption that it will operate flawlessly at all times. Periodic inspection of the sewers by a qualified inspection company should be performed to ensure all systems are functioning properly and should be cleaned as required. The occasional sewer repairs that may arise should be paid out of the reserve fund, however no funds are budgeted for these repairs because it is impossible to predict what costs will be incurred, if any.

We recommend the following work be anticipated and funded:

.A Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that camera inspections and sewer cleaning be performed ever 5 and 10 years respectably, using funds from the operating budget

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5.1.2 Parking Garage

PARKING GARAGE STRUCTURE

The parking garage structure is constructed of reinforced concrete walls. The parking garage structure will typically last the life of the complex; however, significant repairs usually required after 30 years of service.

The parking garage structure was installed as part of the original construction; as such is 28 years old. The parking garage structure is in overall satisfactory condition; however, concrete delamination was noted at localized concrete columns.

According to the Podium Condition Assessment dated June 22, 2021 by Cleland Jardine Engineering Ltd, the parking garage requires additional maintenance over the noted concrete delamination. This work includes:

- allowances for breakthrough, soffit and vertical surface concrete repairs
- replacement and refurbishment of guard rails
- replacement of on-grade drains and trench drains
- resloping of the area around the switch room
- new doors at the switch room door

The Cleland report recommends the following funding plan for the garage:

- 1 Year - $23,730
- 5-7 Years - $133,623

We recommend the following work be anticipated and funded:

.A **$23,730** has been budgeted in fiscal year **2021/22** to complete the work as detailed within the Cleland Jardin Podium Condition Assessment Report

.B **$133,623** has been budgeted in fiscal year **2026/27** to complete the work as detailed within the Cleland Jardin Podium Condition Assessment Report

.C In order to ensure funds are available to perform isolated repairs when required, an allowance of **$25,000** has been made in fiscal year **2042/43** and **every 15 years thereafter**

.D Although costs are not included in this study, as it does not constitute a major repair or replacement, we recommend that a comprehensive investigation of the parking garage be performed prior to any major repairs. Funds for this investigation have been included in the applicable allowances

Parking Garage Repair Allowance	
Quantity	Allowance
Cost	$23,730
Year(s)	2021/22
Cost	$133,623
Year(s)	2026/27
Cost	$25,000
Year(s)	2042/43

PODIUM SLAB COVERED WITH LANDSCAPING

The landscaped covered podium is located in the inner courtyard between all 4 buildings and is protected by a waterproofing membrane. The waterproofing under the landscaping has a typical service life of 20-35 years.

The waterproofing under the landscaping was installed as part of the original construction; as such is 28 years old. While no active leaks were noted during our inspection, Keller noted multiple areas of previous crack injection repairs and evidence of previous water infiltration through the podium soffit. While no active leaks were observed, based on the age of the membrane as well as the evidence of previous water infiltration, we expect the membrane is in fair condition.

According to the Podium Condition Assessment dated June 22, 2021 by Cleland Jardine Engineering Ltd, the podium waterproofing requires additional maintenance to extend it's service life. The condition assessment recommends the following funding plan:

- 2020/21 - $11,300
- 2023/24 - $11,300
- 2026/27 - $11,300
- 2030/31 - $1,288,794

Generally minor concrete repairs will be required upon replacement of the waterproofing membrane and an allowance for these repairs have been included in the costs for replacement.

We recommend the following work be anticipated and funded:

.E **$11,300** has been budgeted in fiscal years **2020/21, 2023/24, and 2026/27** to complete the work as detailed within the Cleland Jardin Podium Condition Assessment Report

.F **$1,288,794** has been budgeted in fiscal year **2030/31** to complete the work as detailed within the Cleland Jardin Podium Condition Assessment Report

Landscaped Podium Waterproofing Repairs	
Quantity	Allowance
Cost	$11,300
Year(s)	2020/21, 2023/24 2026/27

Landscaped Podium Waterproofing Replacement	
Quantity	1025m^2
Cost	$1,288,794
Year(s)	2030/31

Figure 5.1.2.a View of Podium Deck

Figure 5.1.2.b Showing previous water infiltration and crack injection

5.1.3 Asphalt Pavement

ASPHALT ROADWAYS AND PARKING AREAS

Asphalt pavement roadways are located off of North River Road, Columbus Ave. and Donald St as well as a parking lot is located under Block D. Asphalt pavement has a typical service life of 15-20 years.

Asphalt Roadway & Parking Areas Resurfacing	
Quantity	635m^2
Cost	$57,000
Year(s)	2025/26

The asphalt pavement was installed as part of the original construction; as such is 28 years old. The asphalt pavement is in satisfactory condition with no major defects observed. We estimate asphalt resurfacing will be required in the next 5-10 years. A subsequent asphalt resurfacing will be required in 20 years, following the initial replacement.

Resurfacing of the asphalt pavement is generally performed when an asphalt overlay alone will adversely affect levels and drainage, and because cracking and settlement in the existing pavement will not allow for an overlay to provide a lasting repair. The resurfacing process will involve the removal of the existing asphalt pavement and fine grading and compaction of the existing sub-base prior to reinstatement of the new asphalt overlay.

Full reconstruction of asphalt surfaces is generally performed when the second renewal becomes necessary (i.e. after about 40-50 years of service). Complete reconstruction involves the removal of existing asphalt pavement as well as the existing sub-base. New sub-base materials are then implemented and compacted, prior to the reinstatement of a new asphalt overlay. This is often required instead of resurfacing due to pavement sub-base deterioration.

We recommend the following work be anticipated and funded:

.A A resurfacing of the asphalt pavement is estimated to cost **$57,000** and this work has been budgeted in fiscal year **2025/26 and every 25 years thereafter**

.B To maintain the condition of the asphalt pavement between resurfacing cycles, crack and rut repairs and asphalt patching should be performed on a regular basis using funds from the operating budget

ASPHALT PAVEMENT-ON-GRADE

Asphalt pavement has been installed as the driveable service within the parking garage. Asphalt pavement installed in a parking garage have typical service life of 25-45 years.

Asphalt Pavement-on-Grade – Repair Allowance	
Quantity	2470m^2
Cost	$30,000
Year(s)	2037/38, 2047/48

The asphalt pavement was installed as part of the original construction; as such are 28 years old. The asphalt pavement is in satisfactory condition with no major defects observed. We estimate replacement of the asphalt pavement will be required in the next 10-20 years.

We recommend the following work be anticipated and funded:

.C In order to ensure funds are available to perform isolated repairs when required, an allowance of **$30,000** has been made in fiscal year **2037/38 and every 10 years thereafter**

.D To maintain the condition of the asphalt pavement between resurfacing cycles, crack and rut repairs and asphalt patching

should be performed on a regular basis using funds from the operating budget

5.1.4 Pavers

PRECAST PAVER WALKWAYS AND PATIO

The interlocking pavers are used as pathways to the entrances to the lowrise buildings as well as the ground floor patios. Paver walkways have also been installed on the courtyard podium area. Pavers have a typical service life of 30-50 years.

The on-grade pavers installed as part of the original construction; as such are 28 years old. The pavers are in fair-to-satisfactory as localized areas of spalled units as well large areas of settlement were observed. Periodic replacement and resetting of localized areas should be performed as required.

The podium pavers installed as part of the original construction; as such are 28 years old. The pavers are in fair-to-satisfactory as localized areas of spalled units as well large areas of settlement were observed. Replacement of the pavers will be completed in conjunction with the replacement of the podium waterproofing.

We recommend the following work be anticipated and funded:

.A In order to ensure funds are available to perform isolated resetting and replacement when required, an allowance of **$5,000** has been made in fiscal year **2022/23** and **every 10 years thereafter excluding years of full replacement**

.B Replacement of the on-grade paver walkways and patios is estimated to cost **$50,000** and this work has been budgeted in fiscal year **2042/43**

.C Costs for replacement of the pavers have been included with the replacement of the podium membrane

.D Minor resetting of the pavers should be performed as required using funds from the operating budget

Paver Walkways - Repairs	
Quantity	310m^2
Cost	$5,000
Year(s)	2022/23, 2032/33

Paver Walkways - Replacement	
Quantity	310m^2
Cost	$50,000
Year(s)	2042/43

Figure 5.1.4.a Localized damaged units

Figure 5.1.4.b Localized settlement

5.1.5 Exterior Concrete

CONCRETE CURBS

Cast-in-place concrete curbs surround the asphalt roadways. Concrete curbs have a typical service life 30-40 years.

Concrete Curbs	
Quantity	340m
Cost (Replace)	$40,000
Year(s)	2025/26
Cost (Repair)	$8,000
Year(s)	beyond 2049/50

The concrete curbs were installed as part of the original construction; as such are 28 years old. The concrete curbs are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 5-10 years. This work has been scheduled to coincide with the asphalt pavement work.

We recommend the following work be anticipated and funded:

.A Replacement of the concrete curbs is estimated to cost **$40,000** and this work has been budgeted in fiscal year **2025/26**

.B In order to ensure funds are available to perform isolated repairs when required, an allowance of **$8,000** has been made **beyond the 30-year planning period** of this study

.C Minor repairs of the concrete curbs should be performed as required using funds from the operating budget

CONCRETE SIDEWALKS

Cast-in-place concrete sidewalk located in the drive lane off of North River Road and Donald Street. Concrete sidewalks have a typical service life 30-40 years.

Concrete Sidewalks	
Quantity	155m^2
Cost	$65,000
Year(s)	2025/26

The concrete sidewalks were installed as part of the original construction; as such are 28 years old. The concrete sidewalks are in fair-to-satisfactory condition with cracked and settled panels observed. We estimate replacement will be required in the next 5-10 years. This work has been scheduled to coincide with the asphalt pavement work.

We recommend the following work be anticipated and funded:

.D Replacement of the concrete sidewalk is estimated to cost **$65,000** and this work has been budgeted in fiscal year **2025/26**, in conjunction with the asphalt resurfacing

.E Minor repairs of the concrete curbs should be performed as required using funds from the operating budget

5.1.6 Landscaping

LANDSCAPED GROUNDS

The landscaped grounds, concrete planters, and trees, surround the condominium complex property as well are located on the podium deck. The landscaped grounds will typically last the life of the complex; however, a significant overhaul will occur with the replacement of the podium waterproofing membrane.

No major modifications are suspected to have been performed since the original construction. The landscaped ground is in satisfactory condition with no major defects observed. Significant landscaping renewal will be required in the next 5-10 years in conjunction with the podium waterproofing replacement.

We recommend the following work be anticipated and funded:

.A Costs of the replacement of the landscaping on the podium has been included with the replacement of the podium membrane
.B Minor repairs of the landscaping should be performed as required using funds from the operating budget

5.1.7 Retaining Walls

PRECAST CONCRETE INTERLOCKING UNIT RETAINING WALLS

Precast concrete interlocking unit retaining walls form the boundaries of the unit patios. This wall system has a typical service life of 30-40 years.

The precast concrete interlocking unit retaining wall are suspected to have been installed as part of the original construction; as such is 28 years old. The precast concrete interlocking unit retaining walls are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 15-20 years

We recommend the following work be anticipated and funded:

.A In order to ensure funds are available to perform isolated repairs when required, an allowance of **$5,000** has been made in fiscal year **2022/23** and **every 10 years thereafter**
.B Complete replacement of the retaining walls is estimated to cost **$75,000** and this work has been budgeted in fiscal year **2042/43**
.C Minor resetting of sections of the retaining wall should be performed, as required, using funds from the operating budget

Precast Concrete Interlocking Unit Retaining Wall Repair Allowance	
Quantity	Allowance
Cost	$5,000
Year(s)	2022/23, 2032/33

Precast Concrete Interlocking Unit Retaining Wall	
Quantity	125m
Cost	$75,000
Year(s)	2042/43

5.1.8 Foundation Walls

CONCRETE FOUNDATION WALLS

The cast-in-place concrete foundation walls support the 4 low-rise buildings. The foundation walls will typically last the life of the complex.

The foundation walls were installed as part of the original construction; as such are 28 years old. The foundation walls are in satisfactory condition with no major defects observed. We do not anticipate major repairs will be required during the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.A Minor concrete repairs of the foundation walls should be performed as required using funds from the operating budget

5.1.9 Balconies

WOOD BALCONY STRUCTURE

The balcony structures are constructed of wood beams and joists and plywood sheathing are protected by a roofing membrane system.. The balcony structures have a typical service life of 30-40 years.

The balconies were installed as part of the original construction; as such are 28 years old; however, repairs were preformed in conjunction with the membrane replacement. Based on that there have been no reported

leaks as well as that the balconies are protected with a roofing membrane, it is expected that the balconies are in satisfactory condition. We do not anticipate replacement will be required during the 30-year planning period of this study; however, repairs are expected to be required at the time of membrane replacement.

We recommend the following work be anticipated and funded:

.A Costs for the repairs to the wood structure has been included with the replacement of the balcony membranes

DECKING

Wood decking covers the balcony structures Wood decking has a typical service life 20-25 years.

The decking is suspected to have been replaced in 2009 through 2013; as such is between 7 and 11 years old. The decking at the units inspection are in satisfactory condition with no major defects observed. As the balconies are relatively protected from the elements, we expect that the balconies will have an extended service life. We estimate replacement will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.B Costs of the replacement of the decking on the balconies has been included with the replacement of the balcony membranes

.C Minor repairs of the decking should be performed, as required, using funds from the operating budget

WATERPROOFING MEMBRANE

The wood balconies are protected with a two-ply modified bitumen membrane. The waterproofing membrane has a typical service life of 15-25 years.

Balcony Waterproofing Membrane Replacement	
Quantity	430m^2
Cost	$350,000
Year(s)	2034/35-2037/38

The waterproofing were reportedly replaced in 2009 through 2013; as such is between 7 and 11 years old. Based on its current age as well as the fact that the membranes are relatively protected, we expect the balcony membrane systems are in satisfactory condition. We estimate replacement will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.D Replacement of the waterproofing membrane is estimated to cost **$350,000** and this work has been budgeted **over a 4-year period beginning** in fiscal year **2034/35**

BALCONY RAILINGS

The steel picket railings are located at the balcony edges. The railings have a typical service life of 30-40 years.

Balcony Railings	
Quantity	300m
Cost	$90,000
Year(s)	2034/35-2037/38

The railings were installed as part of the original construction; as such are 28 years old. The railings are in overall satisfactory condition; however, minor corrosion was noted. Minor paint touch-ups should be preformed on the railings to extend the life of the item. We estimate replacement will be required in the next 10-15 years. This work should be completed in conjunction with the balcony membrane replacement.

Balcony Railing Paint	
Quantity	Allowance
Cost	$6,000
Year(s)	2022/23, 2028/29

We recommend the following work be anticipated and funded:

.E Replacement of the balcony railings is estimated to cost **$90,000** and this work has been budgeted over a 4-year period beginning in fiscal year **2034/35**

.F In order to ensure funds are available to perform touch-ups of the railings until time of replacement, an allowance of **$6,000** has been provided in **2022/23 and 2028/29.** No funds are allocated upon completion of the replacement of the railings as it is expected a low cost maintenance produce will be used in their replacement.

5.1.10 Masonry

MASONRY VENEER

A masonry brick veneer is installed as the primary cladding of the building. The masonry veneer will typically last the life of the complex; however, significant repairs usually required after 30 years of service.

Masonry Veneer Repair Allowance	
Quantity	Allowance
Cost	$18,000
Year(s)	2025/26, 2033/34 2041/42, 2049/50

The masonry veneer was installed as part of the original construction; as such is 28 years old. The masonry veneer is in overall satisfactory condition; however; minor areas of localized cracking as well as widespread cracking of the concrete window sills was observed. We do not anticipate replacement of the masonry veneer will be required during the 30-year planning period of this study; however, we expect repairs including isolated repointing and unit replacement, will be required within the scope of this study.

In general, regular masonry veneer repairs and maintenance, such as mortar repointing and isolated brick replacements, should be performed at approximately 10 to 12 year intervals to prolong the service life of the brick.

We recommend the following work be anticipated and funded:

.A In order to ensure funds are available to perform isolated repairs when required, an allowance of **$18,000** has been made in fiscal year **2025/26** and **every 8 years thereafter**

.B Minor repairs of the masonry should be performed, as required, using funds from the operating budget

5.1.11 Exterior Insulation & Finish System (EIFS)

EXTERIOR INSULATION & FINISH SYSTEM

The EIFS is installed on the upper levels of the buildings. This system typically consists of a cementitious basecoat and acrylic granular finish coating applied over a rigid insulation-type panel of various thicknesses, which is either mechanically fastened or adhered to the wall. The EIFS has a typical service life of 50-60 years; however, significant repairs are usually required after 25-30 years of service.

EIFS Recoating	
Quantity	1000m^2
Cost	$155,000
Year(s)	2028/29, 2043/44

The installation of EIFS was completed in 2012 and as such is 9 years old. The EIFS is in satisfactory condition as no cracking, delamination or water infiltration was observed or reported; however, staining was noted under the majority of windows and missing head flashings were noted above many windows and doors. Installation details were not

EIFS Replacement	
Quantity	1000m^2
Cost	$675,000
Year(s)	beyond 2049/50

reviewed as part of the reserve fund study; however, based on previous inspections of adjacent components that tie into the EIFS, it is assumed that the system is a rain screen system. Based on our visual review of the window details from ground level, it is assumed that the staining observed is likely caused by poor flashing detailing during the construction of the EIFS. These poor details in combination with a light coloured finish coat lead to much more visible water staining on the top coat finish. Recoating of the EIFS will be required to remove the appearance of the staining. A review of the flashing details should be performed as part of this work to determine if they can be improved without major modifications to existing EIFS. Assuming that a proper rain screen system was installed during the installation of EIFS, we do not anticipate a full-scale replacement of the system will be required within the 30-year scope of this study.

We recommend the following work be anticipated and funded:

.A Recoating of the EIFS and modification of the flashing is estimated to cost **$155,000** and this work has been budgeted in fiscal year **2028/29 and every 15 years thereafter until time of replacement**

.B Replacement of the EIFS is estimated to cost **$675,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.C Minor repairs of the EIFS should be performed, as required, using funds from the operating budget

Figure 5.1.11.a Typical missing head flashing at balcony doors or windows.

Figure 5.1.11.a Typical staining noted at windows. Note poor sill flashing detail

5.1.12 Caulking

SEALANT

The caulking is located at the window and door openings, the masonry control joints, roof flashings and EIFS. The caulking has a typical service life of 10-12 years.

The caulking varies in age as the windows and doors have been replaced over 5-year period and is still ongoing. Further, caulking was installed as part of the roofing work completed over the past 3 years and the installation of the EIFS 9 years ago. As seen from the roof, the unit inspected as well the ground level, the condition of the caulking varies greatly as areas of hard caulking was noted as well as split caulking in newer areas of installed caulking. Further, the older areas of caulking are expected to be replaced in conjunction with the replacement of the remaining windows and doors. Based on the wide range of the condition of the caulking, a full scale replacement of the caulking is not expected to be performed; therefore, we recommend continual replacement of poor caulking be required in 5 year periods.

When caulking is replaced only high quality materials should be used and all old caulking should be removed before applying the new caulking. Caulking should be inspected regularly, and the necessary repair work carried out by a qualified contractor. Minor repairs should be paid for out of the operating budget

We recommend the following work be anticipated and funded:

.A In order to ensure funds are available to perform caulking when required, an allowance of **$60,000** has been made in fiscal year **2023/24** and **every 5 years thereafter**

.B Minor repairs of the caulking should be performed, as required, using funds from the operating budget

Caulking	
Quantity	Allowance
Cost	$60,000
Year(s)	2023/24, 2028/29 2033/34, 2038/39 2043/44, 2048/49

Figure 5.1.12.a Typical split caulking

5.1.13 Windows & Balcony Doors

WINDOWS & BALCONY DOORS

The vinyl framed windows and sliding and swing doors provide the primary fenestration for the building. The windows have a typical service life of 30-40 years

According to the information provided, the Corporation is in the process of completing the replacement of the unit windows and balcony doors that originally began in 2015/16. The following work has been scheduled and completed. This work includes full replacement of the windows, patio doors and the Juliet doors at all buildings:

- 2015/16 – Partial Window Replacement
- 2016/17 – Partial Windows and Partial Patio Doors Replacement
- 2017/18 – Partial Windows and Remaining Patio Doors Replacement
- 2018/19 – Remaining Operable Windows and Juliet Doors - $100,000
- 2019/20 – Nil
- 2020/21 – Partial Street Level Fixed Windows
- 2021/22 – Remaining Street Level Fixed Windows and Balcony Swing Doors & Ground Level Suite Exterior Front Entry Doors

Upon completion of the work above, it is not expected that further replacement will be required within the 30-year scope of this study.

We recommend the following work be anticipated and funded:

■ Window & Patio Door Replacement	
. Cost	$11,600
. Year(s)	2020/21
. Cost	$143,000
. Year(s)	2021/22

■ Window Replacement	
. Cost	$516,000
. Year(s)	beyond 2049/50

■ Balcony Juliet and Entry Door Replacement	
. Cost	$285,000
. Year(s)	beyond 2049/50

.A As per the information provided, a budget of **$11,600** has been provided in fiscal year **2020/21** for replacement of partial balcony swing doors

.B As per the information provided, a budget of **$143,000** has been provided in fiscal year **2021/22** for replacement of the remaining street level fixed windows balcony swing doors & ground level suite exterior front entry doors

.C Replacement of all windows is estimated to cost **$516,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.D Replacement of all sliding and swing unit balcony doors is estimated to cost **$285,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.E Minor repairs including replacement of hardware, screens, weatherstripping and isolated thermopanes should be performed, as required, using funds from the operating budget

SKYLIGHTS

The skylights have a typical service life of 20-25 years.

Skylight Replacement	
Quantity	42
Cost	$72,000
Year(s)	2040/41

The skylights were replaced in fiscal year 2016/17, 2017/18 and 2018/19; as such are 2-4 years old. The skylights are in fair-to-satisfactory condition as moisture was noted between the panes at the majority of the skylights. Repairs to the skylights should be preformed during the recommended roofing roof. We estimate replacement will be required in the next 15-20 years, in conjunction with the subsequent replacement of the roofs.

Typically, skylights are required to be removed in order replace the skylight curb roof membrane flashing. As such, the skylights should be replaced as part of the roofing replacement.

We recommend the following work be anticipated and funded:

.F Allowances for the repair of the skylights has been included within the 2020/21 and 2024/25 roofing work

.G Replacement of the skylights is estimated to cost **$72,000** and this work has been budgeted in fiscal year **2040/41**

.H Minor repairs such as the replacement of failed glazing seals should be performed, as required, using funds from the operating budget

Figure 5.1.13.a Failed skylight seal

5.1.14 Doors

LOWRISE MAIN ENTRANCE WOOD DOORS

The main exterior entrance doors to the 4 lowrises are located off the podium deck and consist of outer door with glass insert as well as a vestibule door with glass insert and sidelite. The main entrance doors have a typical service life of 25 to 30 years.

Entrance Door Replacement	
Quantity	8
Cost	$24,000
Year(s)	2029/30

The main entrance doors at the 4 low rise buildings were installed as part of the original construction; as such are 28 years old. We estimate replacement will be required in the next 5-10 years.

Generally main entrance doors have a shorter service than other doors due to their exterior exposure and high traffic use.

We recommend the following work be anticipated and funded:

.A Replacement of the main entrance doors at the lowrise buildings are estimated to cost **$24,000** and this work has been budgeted in fiscal year **2029/30**

.B Minor repairs of the main entrance doors should be performed, as required, using funds from the operating budget

GROUND LEVEL SUITE EXTERIOR ENTRANCE DOORS

The ground level suite exterior front entry doors provide the main entry point for ground level suites. The ground level suite front entry doors have a typical service life of 25 to 30 years.

According to the information provided, the replacement of these doors have been included in the 2021/22 window/door replacement program.

We recommend the following work be anticipated and funded:

.C Costs of the replacement of the ground level suite exterior front entry doors has been included with the window replacement schedule

.D Minor replacement and repairs of the front entrance doors should be performed, as required, using funds from the operating budget

COMMON AREA & UNIT ENTRY DOORS

The common area doors are located at entrances of stairwells, in common rooms and corridors, at emergency exits, in the garage, at entrances to mechanical rooms and other common areas as well as the upper unit entry doors. The common area doors have a varying service life depending on usage and exposure.

Common Area Door Replacement	
Quantity	Allowance
Cost	$8,000
Year(s)	2024/25, 2029/30 2034/35, 2039/40 2044/45, 2049/50

The common area doors were installed as part of the original construction; as such are 28 years old. The common area doors are in satisfactory condition with no major defects observed. We do not anticipate full replacement will be required during the 30-year planning period of this study; however, isolated major repairs or replacements will be required periodically.

We recommend the following work be anticipated and funded:

.E In order to ensure funds are available to perform isolated repairs and replacements when required, an allowance of **$8,000** has been made in fiscal year **2024/25** and **every 5 years thereafter**

.F Minor repairs of the common area doors should be performed, as required, using funds from the operating budget

GARAGE DOORS

The garage doors are located on the north and south ends of the garage.

Garage Door Replacement	
Quantity	2
Cost	$15,000
Year(s)	2024/25, 2044/45

The garage doors are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 5 years.

We recommend the following work be anticipated and funded:

.G Replacement of the garage doors is estimated to cost **$15,000** and this work has been budgeted in fiscal year **2024/25 and every 20 years thereafter**

.H Minor repairs of the garage doors should be performed, as required, using funds from the operating budget

5.1.15 Roofing Systems

CONVENTIONAL ROOFING SYSTEM

A conventional two-ply modified bitumen membrane (MBM) roofing system protects the 4 low rise buildings and consist of, protection boards, and hot applied layers of pre-manufactured roofing membranes. An MBM roofing system has a typical service life of 20-25 years.

Conventional Roofing System Overlay – Building A1	
Quantity	428m^2
Cost	$85,000
Year(s)	2020/21

As per the 2020 OCCC 553 – Roof Condition Assessment, the roofs of OCCC 553 are split into 5 sections with the following dates of work

- 62 Donald Street (Block A1) – Replaced in 2020

- 62 Donald Street (Block A2) – Replaced in 2020
- 995 North River Road (Block B) – Replaced in 2018
- 997 North River Road (Block C) – Replaced in 2017
- 1 Columbus Avenue (Block D) – Original to the building

The Roof Condition Assessment was performed after the Corporation commissioned a consultant (Keller Engineering) to oversee the final phase of roof work to be completed at Block D. Keller first expressed concerns upon review of the scope of work for Block D and then recommended an extensive investigation of the work completed at Blocks A1, A2, B and C after a visual review of the work completed to date.

A general summary of this report can be found below:

- The recently completed roof overlays/replacements were generally poorly executed as such as the reliable service life were significantly reduced
- Widespread defects including the following were noted at all replaced roofs
  - Overheating of membrane resulting in excessive bleed out, charring and weakening of the membrane
  - White residue on the bleed out due to overheating
  - Incorrect lapping of the base and cap sheets at roof penetrations
  - Unsealed tie-ins to penetrations
  - Burned and scorched parapet membrane flashing
  - Incorrectly installed metal flashings
  - Metal flashings in contact with cap sheet
  - Incorrect drain bowls used resulting in poor-in
  - Boot prints resulting in exposed membrane
  - Poor bonds between the new protection board and the existing roofing systems that were overlaid
- The manufacturer had no record of warranties for any of the replaced roofs
- Blocks A1 and A2 risk catastrophic failure due to uplift forces

Based on the above, the roof condition assessment recommended the following work be performed immediately:

- Block A1: Removal of the recently completed overlay to the original MBM roofing system and the installation of a new overlay
- Block A2: Removal of the recently completed overlay to the original 4-ply BUR/gravel system and the installation of a new overlay
- Block B: Removal of the recently completed overlay to the original roof membrane and the installation of a new overlay
- Block C: Testing and Widespread Repairs
- Block D: Widespread repairs

In addition, it was further recommended that Block D be completely overlaid 5 years after completion of the repairs.

Conventional Roofing System Overlay – Building A2	
Quantity	395m^2
Cost	$66,000
Year(s)	2020/21

Conventional Roofing System Overlay – Building B	
Quantity	532m^2
Cost	$115,000
Year(s)	2020/21

Conventional Roofing System Repairs – Building C	
Quantity	Allowance
Cost	$18,000
Year(s)	2020/21

Conventional Roofing System Repairs – Building D	
Quantity	Allowance
Cost	$10,000
Year(s)	2020/21

Conventional Roofing System Overlay – Building D	
Quantity	545m^2
Cost	$180,000
Year(s)	2024/25

Conventional Roofing System Replacement – Building A1	
Quantity	428m^2
Cost	$118,000
Year(s)	2040/41

Conventional Roofing System Replacement – Building A2	
Quantity	395m^2
Cost	$109,000
Year(s)	2040/41

Due to the weight of the roofing system, it is expected that a second overlay of the roof will not be able to be completed due to the additional applied loads and as such, we recommend a full replacement at each roof be completed 20 years after the new overlay.

During the reserve fund inspection, it was noted that access ladder to the roofing system from Building B was not adequately anchored to the existing building structure and further the roof hatch has been orientated in a manner that you can not exit the space in a safe manner. Modifications to the hatch system as well as to the ladder are recommended to be completed in conjunction with the work being completed at Block B.

We recommend the following work be anticipated and funded:

.A An overlay of the Block A1 roof is estimated to cost **$85,000** and this work has been budgeted in fiscal year **2020/21**
.B An overlay of the Block A2 roof is estimated to cost **$66,000** and this work has been budgeted in fiscal year 2020/21
.C An overlay of the Block B roof is estimated to cost **$115,000** and this work has been budgeted in fiscal year **2020/21**
.D In order for funds to be available to perform testing and widespread repair at Block C, an allowance of **$18,000** has been provided in fiscal year **2020/21**
.E In order for funds to be available to perform testing and widespread repair at Block D, an allowance of **$10,000** has been provided in fiscal year **2020/21**
.F An overlay of the Block D roof is estimated to cost **$180,000** and this work has been budgeted in fiscal year **2024/25**
.G Complete replacement of Block A1 is estimated to cost **$118,000** and this work is scheduled in fiscal year **2040/41**
.H Complete replacement of Block A2 is estimated to cost **$109,000** and this work is scheduled in fiscal year **2040/41**
.I Complete replacement of Block B is estimated to cost **$146,000** and this work is scheduled in fiscal year **2040/41**
.J Complete replacement of Block C is estimated to cost **$155,000** and this work is scheduled in fiscal year **2040/41**
.K Complete replacement of Block D is estimated to cost **$150,000** and this work is scheduled in fiscal year **2044/45**
.L Minor repairs of the roofing system should be performed, as required, using funds from the operating budget

■

Conventional Roofing System Replacement – Building B	
Quantity	532m^2
Cost	$146,000
Year(s)	2040/41

■

Conventional Roofing System Replacement – Building C	
Quantity	560m^2
Cost	$155,000
Year(s)	2040/41

■

Conventional Roofing System Replacement – Building D	
Quantity	544
Cost	$150,000
Year(s)	2045/46

Figure 5.1.15.a Over torched membrane

Figure 5.1.15.b Over torched membrane

Figure 5.1.15.c Roof access ladder. Hatch pointed in wrong direction

Figure 5.1.15.d Access ladder missing anchorage points

METAL ROOFS

Sloped metals protect the upper sections of roof. Metal roofs have a typical service life of 40-50 years.

As per the 2020 OCCC 553 – Roof Condition Assessment, the roofs of OCCC 553, the metal roofs are generally in satisfactory condition; however, the following defects were noted.

- Widespread rust and faded paint
- Cracked and hard caulking
- Neoprene gasketed fasteners are rusting and the gaskets are cracking
- Exposed self-adhesive membrane was visible at the eave of the recently replaced roof
- Defects at the chimney flashings

The Roof Condition Assessment recommended the following work be completed

- 2021

Sloped Metal Roof Repairs	
Quantity	Allowance
Cost	$18,000
Year(s)	2020/21

Sloped Metal Roof Repairs	
Quantity	560m^2
Cost	$60,000
Year(s)	2024/25

Sloped Metal Roofing Replacement	
Quantity	500m^2
Cost	$115,000
Year(s)	2040/41

  - Remove and replace all caulking
  - Remove and replace localized chimney saddles that are not able to be adequately cleaned to accept new caulking
  - Replace fasteners on an as-required basis
  - Remove and replace the 2-ply MBM roof membrane on the chimneys
  - Remove and dispose of the exposed membrane on the new sloped metal roof
- 5-8 years
  - Sand down the existing coating to expose the existing metal
  - Prime and paint the exposed metal with a suitable paint product
  - Replace all fasteners

Full replacement of the metal roofs will be required 20 years after the refurbishment work

We recommend the following work be anticipated and funded:

.M In order for funds to be available to perform the 2021 work, an allowance of **$18,000** has been provided in fiscal year **2020/21**

.N In order for funds to be available to perform the 2021 work, an allowance of **$60,000** has been provided in fiscal year **2024/25**

.O Full replacement of the metal roofs is estimated to cost **$115,000** and this work has been budgeted in fiscal year **2040/41**

5.1.16 Common Corridors

PAINTED WALLS

The stucco finish drywall walls are painted in the main corridors and stairwells of the complex. Painted walls have a typical service life of 10-15 years prior to becoming aesthetically unpleasing.

The painted walls at all buildings and on all levels is in satisfactory condition; however, localized wall and ceiling cracking was noted at each building. We estimate painting will be required in the next 5-10 years.

We recommend the following work be anticipated and funded:

.A Repainting of the walls is estimated to cost **$60,000** and this work has been budgeted over a **2-year period beginning** in fiscal year **2029/30** and **every 10 years thereafter**

.B Minor patch repairs should be performed, as required, using funds from the operating budget

Corridor Paint	
Quantity	2220m^2
Cost	$60,000
Year(s)	2029/30-2030/31 2039/40-2040/41 2049/50-2050/51

Figure 5.1.16.a Typical cracking

Figure 5.1.16.b Typical cracking

CARPET

Carpet is installed on the floor in the main corridors and stairwells of the complex. Carpet has a typical service life of 10-15 years.

The carpet varies in age and condition as the corridors at each building have been replaced over the age of the complex with building C being the most recent whereas, the carpet in the stairwells appears to be original. Other than minor defects such as lifting carpet tiles observed in Building C, the carpet is generally in fair-to-satisfactory condition. Replacement of the carpets is expected in the next 5-10 years

Carpet	
Quantity	Allowance
Cost	$10,000
Year(s)	2024/25, 2029/30 2034/35, 2039/40 2044/45, 2049/50

We recommend the following work be anticipated and funded:

.C In order to ensure funds are available to perform replacements when required, an allowance of **$10,000** has been made in fiscal year **2024/25** and **every 5 years thereafter**

.D Minor repairs of the carpet should be performed, as required, using funds from the operating budget

Figure 5.1.16.c Varying condition of carpet in each building

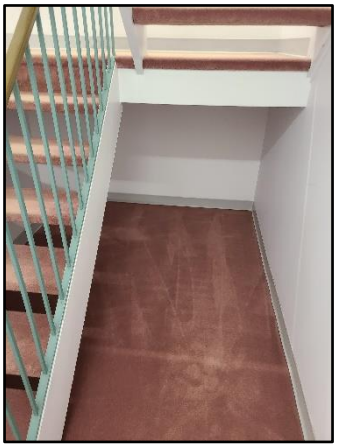

Figure 5.1.16.b Varying condition of carpet in each building

Figure 5.1.16.e Lifting tile in Building C

Figure 5.1.16.f Varying condition of carpet in each building

CERAMIC TILE FLOORING

Ceramic tile flooring is installed at the elevator vestibules as well as the condominium office. Ceramic tile flooring has a typical service life of 40-50 years prior to requiring replacement.

We do not anticipate replacement will be required during the 30-year planning period of this study

Ceramic Tile	
Quantity	150m^2
Cost	$35,000
Year(s)	beyond 2049/50

We recommend the following work be anticipated and funded:

.E Replacement of the ceramic tile flooring is estimated to cost **$35,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.F Minor repairs should be performed, as required, using funds from the operating budget

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5.2 Electrical

5.2.1 Electrical Distribution

MAIN HYDRO EQUIPMENT

The main hydro equipment consists of primary transformers, load break switches and 15,000V breakers located in the main hydro vault. The primary transformers are owned and maintained by Hydro Ottawa. The associated load breaks switches and main breakers are owned by the condominium. Main hydro equipment has a typical service life of 45-50 years.

Hydro Vault Equipment Replacement	
Quantity	1
Cost	$100,000
Year(s)	2037/38

The main hydro equipment was installed as part of the original construction; as such is 28 years old. Based on its current age, we expect the main hydro equipment is in satisfactory condition. We estimate replacement will be required in the next 15-20 years.

To extend the life of the equipment and ensure that operates at all times, we recommend that the vault be subjected to regular testing and maintenance as required by Hydro Ottawa. This work would include hi-potential (hipot) and Doble(TM) testing, secondary injection and trip

testing of all overload, loss of phase and ground fault relays as well as cleaning, tightening, and testing of all equipment. The results of the hipot and Doble testing will indicate when major equipment replacement is necessary as well as what partial re-builds and replacements may be performed to extend the life of the equipment. This work should only be performed by electrical service companies specializing in medium and high voltage switchgear maintenance. It may be required to revise the equipment replacement schedule depending on the findings of the electrical test.

We recommend the following work be anticipated and funded:

.A A rough order of magnitude for the replacement or overhaul of the main hydro equipment is estimated to cost **$100,000** and this work has been budgeted in fiscal year **2037/38**

.B Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that electrical vault maintenance and testing be performed in the intervals required by Hydro Ottawa, using funds from the operating budget

MAIN DISCONNECT SWITCHGEAR

The 1,200A, 600V main disconnect switchgear located in the main electrical room protects and isolates the main electrical feed into the building. Main disconnect switchgear has a typical service life of 40-45 years.

Main Disconnect Switchgear	
Quantity	1
Cost	$180,000
Year(s)	2032/33

The main disconnect switchgear was installed as part of the original construction; as such is 28 years old. The main disconnect switchgear is in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 10-15 years.

We recommend that a company skilled in electrical distribution equipment maintenance be hired to open, inspect, test, clean and torque the boards, and that infrared thermography be performed on switches, panels, disconnects, transformers, and starters to determine “hot spots” on a regular basis. A qualified electrician should be employed to open and close panels and to correct immediate concerns during this inspection. The results of this inspection and testing will provide a much more accurate estimate of when the electric equipment will have to be repaired and/or replaced. This will require that the power to the building be shut off for 8 to 12 hours.

Note: The Electrical Room is being used as a storage space and access to panels and switches is being blocked by the stored items. Materials, supplies, and trash left in electrical rooms often block access, are a source for accidents, and pose potential fire hazards. Allowing any objects to be left near electrical panels violates the Ontario Electrical Safety Code:

> RULE 2-308 states “a minimum working space of 1 metre with secure footing shall be provided and maintained about electrical equipment… enclosed in metal.”

RULE 2-312 further requires “working space around electrical equipment shall not be used for storage and shall be kept clear of obstruction.”

In order to comply with the Ontario Electrical Safety code, all items not related to the electrical maintenance (parts and tools) of the equipment in the electrical room should be removed.

We recommend the following work be anticipated and funded:

.C Replacement of the main disconnect switchgear is estimated to cost **$180,000** and this work has been budgeted in fiscal year **2032/33**

.D Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend periodic maintenance and infrared thermography be performed on the electrical system every 5 years, using funds from the operating budget

METERING SOCKETS

The metering sockets located in the electrical rooms within the building provide individual electrical metering to the suites. Metering sockets have a typical service life of 45-50 years.

Metering Sockets	
Quantity	70
Cost	$125,000
Year(s)	2037/38

The metering sockets were installed as part of the original construction; as such are 28 years old. The metering sockets are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 15-20 years.

We recommend the following work be anticipated and funded:

.E Replacement of the metering sockets is estimated to cost **$125,000** and this work has been budgeted in fiscal year **2037/38**

DISTRIBUTION BREAKER PANELS

The 120/240V distribution breaker panels installed in electrical rooms throughout the building divide electrical power feed into subsidiary circuits. Moulded case circuit breakers contained within provide circuit overload protection. Breaker panels have a typical service life of 40-45 years.

120/240 Volt Electrical Distribution Breaker Panels	
Quantity	6
Cost	$45,000
Year(s)	2032/33

The 120/240V breaker panels and circuit breakers were installed as part of the original construction; as such are 28 years old. The distribution breaker panels and moulded case breakers are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.F Replacement of the 120/240V breaker panels and moulded case breakers is estimated to cost **$45,000** and this work has been budgeted in fiscal year **2032/33**

FUSED DISCONNECT SWITCHES

The 600V fused disconnect switches installed in electrical rooms, mechanical rooms, and throughout the garage provide electrical power

feed and overload protection to individual pieces of equipment. Fused disconnect switches have a typical service life of 40-45 years.

Fused Disconnect Switches	
Quantity	Allowance
Cost	$18,000
Year(s)	2032/33

The fused disconnect switches were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the fused disconnect switches are in satisfactory condition. We estimate replacement will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.G Replacement of the fused disconnect switches is estimated to cost **$18,000** and this work has been budgeted in fiscal year **2032/33**

DRY CORE TRANSFORMERS

The dry core transformers ranging from 30kVA to 200kVA located in the electrical rooms throughout the building reduce the voltage of the electrical feed. Dry core transformers have a typical service life of 35-40 years.

Dry Core Transformers	
Quantity	10
Cost	$130,000
Year(s)	2027/28-2030/31

The dry core transformers were installed as part of the original construction; as such are 28 years old. The dry core transformers are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 5-10 years.

We recommend the following work be anticipated and funded:

.H Replacement or overhaul of the dry core transformers is estimated to cost **$130,000** and this work has been budgeted over a **4-year period beginning** in fiscal year **2027/28**

5.2.2 Lighting

INTERIOR LIGHT FIXTURES

The interior light fixtures are located throughout the common areas of the building and inside the parking garage. Interior light fixtures have a varying service life depending on usage and environmental conditions.

Interior Light Fixtures	
Quantity	Allowance
Cost	$5,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

The interior light fixtures are suspected to have been installed as part of the original construction; as such are 28 years old. The interior light fixtures vary from fair-to-satisfactory condition with no major defects observed. We expect isolated light fixture replacement will be required within the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.A Due to the varying condition and service life of the interior light fixtures, isolated replacements need only be completed as required. For budgeting purposes, an allowance of **$5,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

EXTERIOR LIGHT FIXTURES

The exterior light fixtures are located throughout the condominium complex. Exterior light fixtures have a varying service life depending on usage and environmental conditions.

The exterior light fixtures are of different vintages. The exterior light fixtures vary from fair-to-satisfactory condition with no major defects observed. We expect isolated light fixture replacement will be required within the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.B Due to the varying service life of the exterior light fixtures, isolated replacements need only be completed as required. For budgeting purposes, an allowance of **$5,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

Exterior Light Fixtures	
Quantity	Allowance
Cost	$5,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

5.2.3 Fire Alarm System

FIRE ALARM PANEL

The Mircom fire alarm panel installed in the main entrance vestibule of building A and the remote annunciators installed in the main entrance vestibule of the other buildings provide monitoring of the fire alarm sensors. Fire alarm panels have a typical service life of 25-30 years. Fire alarm wiring has a typical service life of 50-55 years.

Fire Alarm System	
Quantity	1
Cost	$125,000
Year(s)	2047/48

The fire alarm panels were replaced in 2017; as such is 4 years old. The fire alarm panels are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 20-25 years.

The fire alarm wiring is suspected to have been installed as part of the original construction; as such is 28 years old. Based on its current age, we expect the fire alarm wiring is in satisfactory condition. We estimate replacement will be required in the next 20-25 years.

Fire Alarm Partial Rewiring	
Quantity	Allowance
Cost	$200,000
Year(s)	2047/48

We recommend the following work be anticipated and funded:

.A Replacement of the fire alarm panels is estimated to cost **$125,000** and this work has been budgeted in fiscal year **2047/48**

.B In order to ensure funds are available to perform a partial rewiring of the fire alarm system when required, an allowance of **$200,000** has been made in fiscal year **2047/48**

.C Although costs are not included in this study, as they do not constitute a major repair or replacement, the ULC 536 test of the fire alarm system is required on an annual basis, using funds from the operating budget

FIRE ALARM SENSORS

The smoke detectors and heat sensors located in the common areas throughout the building provide monitoring for the fire alarm system. Smoke detectors and heat sensors have a typical service life of 5-10 years.

Fire Alarm Sensors	
Quantity	Allowance
Cost	$8,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

The smoke detectors and heat sensors are suspected to have been replaced on an as-needed basis. We expect the smoke detectors and heat sensors are in fair-to-satisfactory condition. We estimate isolated replacement will be required in the next 5 years.

We recommend the following work be anticipated and funded:

.D Due to the varying service life of the smoke detectors and heat sensors, isolated replacement need only be completed as required. For budgeting purposes, an allowance of **$8,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

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5.2.4 Emergency Power System

BATTERY PACK UNITS

The battery pack units located throughout the building provide emergency power for emergency lights and exit signs. Battery pack units have a varying service life depending on usage.

The battery pack units and emergency lights are suspected to have been installed as part of the original construction; as such are 28 years old. The battery pack units and emergency lights are in fair condition. We expect isolated replacement of the battery pack units will be required within the 30-year planning period of this study.

It is recommended that a regular maintenance program for the battery packs be carried out, including battery replacement as required and as per manufacturer's recommendations, to ensure that the system remains in active working condition all times.

We recommend the following work be anticipated and funded:

.A Due to the varying service life of the battery pack units and emergency lights, isolated replacement need only be completed as required. For budgeting purposes, an allowance of **$4,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

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Battery Pack Units and Emergency Lights	
Quantity	Allowance
Cost	$4,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

Figure 5.2.4.a Battery pack units and emergency lights

5.2.5 Electrical Heating Systems

BASEBOARD ELECTRIC HEATERS

The baseboard electric heaters located in common areas throughout the buildings provide heating to these areas. Baseboard electric heaters have a typical service life of 40-45 years.

The baseboard electric heaters are of different vintages. Based on their current age, we expect the baseboard electric heaters are in satisfactory condition. We expect isolated replacement will be required within the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.A Full scale replacement of the baseboard electric heaters should not be required during the span of this study, and consequently, no funds have been allocated for fixture replacement. When individual baseboard electric heaters require replacement, the costs should be paid for out of the operating budget

FORCED FLOW ELECTRIC HEATERS

The forced flow electric heaters located in the entryways and stairwells, and water entry room provide heating to these areas. Forced flow electric heaters have a typical service life of 25-30 years.

Forced Flow Electric Heaters	
Quantity	Allowance
Cost	$5,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

The forced flow electric heaters were installed as part of the original construction; as such are 28 years old or have been replaced on as-needed basis. The forced flow electric heaters are fair-to-satisfactory condition. We expect isolated replacement will be required within the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.B Due to the varying condition service life of the forced flow electric heaters, isolated repairs need only be completed as required. For budgeting purposes, an allowance of **$5,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

Figure 5.2.5.a Original forced flow heater

ELECTRIC UNIT HEATERS

The electric unit heaters located in parking garage provide heating to these areas. Electric unit heaters have a typical service life of 25-30 years which can vary greatly depending on usage and environmental conditions.

The electric unit heaters were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the electric unit heaters are in fair condition. The electric unit heaters have reached the end of their useful service life and should be replaced in the near future.

During our inspection it was noted that the garage unit heaters were turned off. The heaters should be turned on and set to maintain 15c to protect the sprinklers and pipes from freezing, especially when the garage ventilation system is activated.

We recommend the following work be anticipated and funded:

.C Replacement of the electric unit heaters is estimated to cost **$15,000** and this work has been budgeted in fiscal year **2022/23** and **2027/28**

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Electric Unit Heaters	
Quantity	9
Cost	$16,000
Year(s)	2022/23, 2027/28

Figure 5.2.5.c Unit heater

5.2.6 Security Systems

DOOR ENTRY SYSTEM

The Door Guard phone-based door entry system consists of access panels located in the main entrance vestibules and back doors, of each building to provide visitor access to the buildings. Door entry systems have a typical service life of 20-25 years.

Door Entry System	
Quantity	4
Cost	$20,000
Year(s)	2028/29, 2048/49

The door entry system was replaced in 2009; as such is 11 years old. The door entry system is in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 5-10 years.

We recommend the following work be anticipated and funded:

.A Replacement of the door entry system is estimated to cost **$20,000** and this work has been budgeted in fiscal year **2028/29** and **every 20 years thereafter**

KEY FOB SYSTEM

The CDVI key fob system consists of a main controller and fob readers in the main entrance vestibule, parking garage access, and emergency exits. Key fob systems have a typical service life of 15-20 years.

Key Fob System	
Quantity	1
Cost	$20,000
Year(s)	2033/34, 2048/49

The key fob system was replaced in 2019; as such is 2 years old. The key fob system is in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.B Replacement of the key fob system is estimated to cost **$20,000** and this work has been budgeted in fiscal year **2033/34** and **every 15 years thereafter**

.C Minor repairs of the key fob system should be performed, as required, using funds from the operating budget

CCTV SYSTEM

The CCTV system consists of a DVR and screen located in the office and monitors 7 cameras located in the parking garage, and the exterior of the building. CCTV DVR monitoring stations have a typical service life of 15-20 years. CCTV cameras have a typical service life of 5-10 years.

CCTV Monitoring Station	
Quantity	1
Cost	$5,000
Year(s)	2033/34, 2048/49

The CCTV monitoring station is suspected to have been installed in 2019. The CCTV monitoring station is in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 10-15 years.

CCTV Cameras	
Quantity	Allowance
Cost	$4,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

The CCTV cameras are suspected to have been installed in the last 5 years. Based on their current age, we expect the CCTV cameras are in satisfactory condition. We estimate replacement will be required in the next 5-10 years.

We recommend the following work be anticipated and funded:

.D Replacement of the CCTV monitoring station is estimated to cost **$5,000** and this work has been budgeted in fiscal year **2033/34** and **every 15 years thereafter**

.E Replacement of the CCTV cameras is estimated to cost **$4,000** and this work has been budgeted in fiscal year **2022/23** and **every 10 years thereafter**

5.3 Mechanical

5.3.1 Ventilation System

MAKE-UP AIR UNITS

The packaged Engineered Air 800cfm, 1,200cfm and 1,600cfm make-up air units with electric coils and equipped with cooling coils and electric 4-Ton, 5-Ton and 7-Ton R-22 remote condensers. The make-up air units are located on the rooftop provide fresh air to the building, pressurize the building, and prevent odour transfer between units. Electric make-up air units have a typical service life of 25-30 years. Air-conditioner condensers units have a typical service life of 15-20 years.

Make-up Air Units	
Quantity	4
Cost	$130,000
Year(s)	2043/44

MUA Air Conditioner Condensers	
Quantity	4
Cost	$30,000
Year(s)	2020/21, 2035/36

The make-up air units were replaced between 2017-2019; as such are 2-5 years old. The make-up air units are in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 20-25 years.

The make-up air air-conditioner condensers were installed as part of the original construction and re-used when the make-up air units were replaced; as such are 28 years old. Based on their current age, we expect the make-up air air-conditioner condensers are in poor condition. The make-up air air-conditioner condensers have exceeded the end of their u useful service life, and due to a ban on repairs on R-22 refrigerant, this equipment and should be replaced in the near future.

We recommend the following work be anticipated and funded:

.A Replacement of the make-up air units is estimated to cost **$130,000** and this work has been budgeted in fiscal year **2043/44**

.B Replacement of the make-up air air-conditioner condensers is estimated to cost **$30,000** and this work has been budgeted in fiscal year **2020/21** and **every 15 years thereafter**

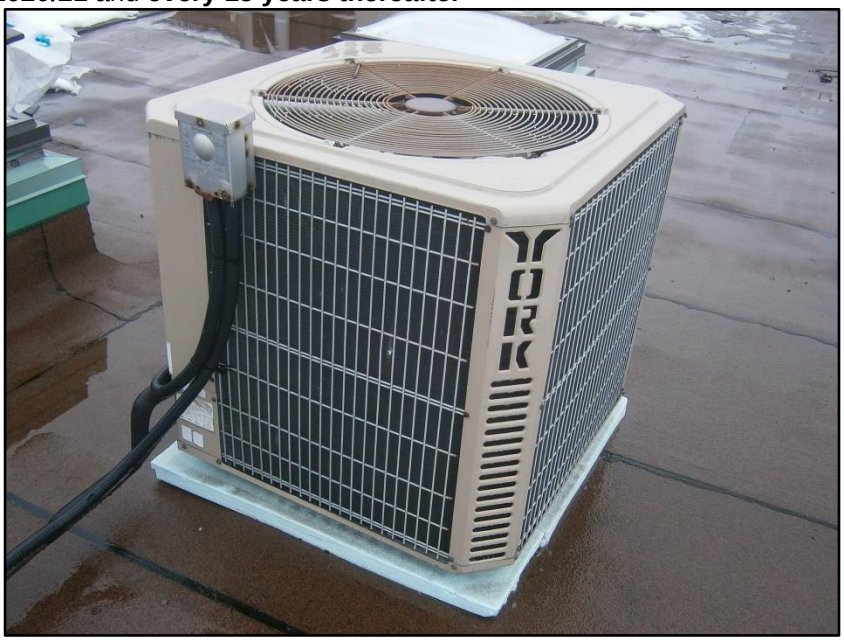

Figure 5.3.1.a Make-up air air-conditioner condenser

EXHAUST FANS

The multiple exhaust fans located in the electrical rooms, electrical vault, locker rooms, garbage rooms, elevator machine rooms, and other common areas provide ventilation and temperature control. Exhaust fans have a typical service life of 25-35 years which can vary greatly depending on usage and environmental conditions.

Exhaust Fans	
Quantity	Allowance
Cost	$5,000
Year(s)	2020/21, 2025/26, 2030/31, 2035/36, 2040/41, 2045/46

The exhaust fans are of different vintages, but many appear to date from the original construction of the building. The exhaust fans vary from poor-to-satisfactory condition. We expect isolated replacement will be required within the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.C Due to the varying service life of the exhaust fans, isolated replacement need only be completed as required. For budgeting purposes, an allowance of **$5,000** has been made in fiscal year **2020/21** and **every 5 years thereafter** to ensure funds are available when the work is required

GARAGE VENTILATION

The parking garage exhaust fans and motorized dampers for the parking garage ventilation are activated by the gas detection system. Parking garage exhaust fans and motorized dampers have a typical service life of 30-35 years.

Parking Garage Exhaust Fans	
Quantity	2
Cost	$15,000
Year(s)	2031/32

The parking garage exhaust fans were installed as part of the original construction; as such are 28 years old. The parking garage exhaust fans

are in satisfactory condition with minor wear observed for their age. We estimate replacement will be required in the next 10-15 years.

Parking Garage Motorized Dampers	
Quantity	1
Cost	$15,000
Year(s)	2031/32

The motorized dampers were installed as part of the original construction; as such are 28 years old. The motorized dampers are in satisfactory condition with no major defects observed with minor wear observed for their age. We estimate replacement or overhaul will be required in the next 10-15 years.

We recommend the following work be anticipated and funded:

.D Replacement of the garage exhaust fans is estimated to cost **$15,000** and this work has been budgeted in fiscal year **2031/32**

.E Replacement or overhaul of the motorized dampers is estimated to cost **$15,000** and this work has been budgeted in fiscal year **2031/32**

GARAGE GAS MONITORING SYSTEM

The QEL gas monitoring controller monitors three CO sensors located in the parking garage controlling the operation of the parking garage ventilation equipment. Gas monitoring controllers have a typical service life of 15-20 years. CO sensors have a typical service life of 5-7 years.

Gas Monitoring Controller	
Quantity	1
Cost	$5,000
Year(s)	2031/32, 2046/47

The gas monitoring controller was replaced in the last 5 years. The gas monitoring controller is in satisfactory condition with no major defects observed. We estimate replacement will be required in the next 10-15 years.

CO Sensors	
Quantity	Allowance
Cost	$2,000
Year(s)	2021/22, 2026/27 2031/32, 2036/37 2041/42, 2046/47

The CO sensors are suspected to have been replaced in the last 5 years, however, however no testing and calibration record stickers were noted on the equipment. We expect the CO sensors are in fair-to-satisfactory condition. We estimate isolated replacement will be required in the next 5 years.

Calibration and testing by a qualified service technician of the CO sensors must occur every 6-12 months.

We recommend the following work be anticipated and funded:

.F Replacement of the gas monitoring controller is estimated to cost **$5,000** and this work has been budgeted in fiscal year **2031/32** and **every 15 years thereafter**

.G Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that testing and calibration of the gas monitoring system be performed every 6-12 months, using funds from the operating budget

.H Due to the varying condition of the CO sensors, replacement need only be completed as required. For budgeting purposes, an allowance of **$2,000** has been made in fiscal year **2021/22** and **every 5 years thereafter** to ensure funds are available when the work is required

5.3.2 Heating & A/C Systems

DIRECT EXPANSION AIR-CONDITIONER UNITS

The direct expansion split air-conditioner units charged with R22 refrigerant provide cooling for the lobbies and the individual suites. The unit condensers are located on the rooftop. According to the declaration, ownership and maintenance of the refrigerant pipes and condensers serving the suites are the responsibility of the condominium. The fan units inside the suites and evaporator coil are the responsibility of the individual suite owner. Direct expansion air-conditioner units have a typical service life of 15-20 years.

Lobby Direct Expansion Air-conditioner Units	
Quantity	4
Cost	$50,000
Year(s)	2022/23, 2042/43

The air-conditioner units serving the lobbies were installed as part of the original construction; as such are 28 years old. Based on its current age, we expect the lobby air-conditioner units are in poor condition. The lobby air-conditioner units have exceeded the end of their useful service life, and since R22 equipment has limited repair potential, they should be replaced in the near future.

Direct Expansion Air-conditioner Units & Refrigerant Lines	
Quantity	70
Cost	$1,305,000
Year(s)	2022/23-2024/25

The air-conditioner unit serving the individual suites were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the suite air-conditioner units are in poor condition. The suite air-conditioner units have exceeded the end of their useful service life, and since R22 equipment has limited repair potential, they should be replaced in the near future.

Direct Expansion Air-conditioner Units (Condensers Only)	
Quantity	70
Cost	$420,000
Year(s)	2042/43-2044/45

Due to the obsolescence of R22 refrigerant and equipment, and the incompatibility and specifications of the new refrigerants with the old equipment, the refrigeration lines serving the air conditioner units will need to be replaced when units are replaced. No costs have been allocated for the fan units or evaporator coils as there are the unit owner's responsibility. It is assumed the refrigerant lines would be re-used at the time of the subsequent replacement; however, it is impossible to predict if the current refrigerants will be available or if future refrigerants will be compatible with the refrigerant piping.

A feasibility study into the replacement of these systems was conducted in 2020 and the budgets below take this report into account

We recommend the following work be anticipated and funded:

.A Replacement of the lobby air-conditioner units and refrigerant lines is estimated to cost **$50,000** and this work has been budgeted in fiscal year **2022/23** and **every 20 years thereafter**

.B Replacement of the suite air-conditioner unit condensers and refrigerant lines is estimated to cost **$1,300,000** and this work has been budgeted **over a 3-year period** beginning in fiscal year **2022/23** and **every 20 years thereafter**

.C Subsequent replacement of the suite air-conditioner unit condensers is estimated to cost **$420,000** and this work has been budgeted **over a 3-year period** beginning in fiscal year **2042/43** and **every 20 years thereafter**

Figure 5.3.2.b Suite air-conditioner condensers

5.3.3 Plumbing Systems

PLUMBING SYSTEMS

The plumbing systems are comprised of domestic cold water distribution pipes and risers, and sanitary and storm pipes and stacks installed throughout the building. The plumbing systems have a typical service life of 60-80 years.

The domestic cold water distribution pipes and risers were installed as part of the original construction; as such are 28 years old. No issues have been reported and based on their current age, we expect the domestic cold water distribution pipes and risers are in satisfactory condition. We do not anticipate replacement or major repairs will be required during the 30-year planning period of this study.

The sanitary and storm pipes are suspected to have been installed as part of the original construction; as such are 28 years old. The exposed sanitary pipes in the parking garage and suite stacks above 3" are aluminum pipes with cast iron fittings. Pipes below 3" diameter are copper pipes and fittings. Aluminum sanitary pipes are thin walled and relatively soft, and due to the sewage flow tend to erode and fail over time. It was reported that two aluminum pipe stacks have failed and needed replacement. Based on their current age, and an aluminum pipe failure, we expect the sanitary and storm pipes are in poor-to-fair condition. It is unknown if the aluminum pipe is present underground. We estimate continued replacement of the aluminum sanitary pipes will be required over the span of this report until all aluminum pipe has been replaced.

The City of Ottawa is mandating the installation of backflow devices throughout the city. Currently OCCC 553 has a backflow preventer installed in the fire suppression system, but not the domestic water system, and as such one will need to be installed in the near future.

Domestic Cold Water Distribution and Risers	
Quantity	Allowance
Cost	$400,000
Year(s)	Beyond 2049/50

Sanitary and Storm Pipes & Stacks	
Quantity	Allowance
Cost	$150,000
Year(s)	2021/22, 2026/27 2031/32, 2036/37 2041/42, 2046/47

Domestic Water Backflow Preventer	
Quantity	Allowance
Cost	$10,000
Year(s)	2020/21

We recommend the following work be anticipated and funded:

.A A rough order of magnitude for the replacement of the domestic cold water distribution pipes and risers is estimated to cost **$400,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.B Minor repairs of the domestic cold water distribution pipes and risers should be performed, as required, using funds from the operating budget

.C Due to the varying condition of the sanitary pipes and stacks and the presence of aluminum piping, replacement need only be completed as required. For budgeting purposes, an allowance of **$150,00** has been made in fiscal year **2021/22** and **every 5 years thereafter** to ensure funds are available when the work is required

.D Minor repairs of the sanitary and storm pipes should be performed, as required, using funds from the operating budget

.E Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that camera inspection and flushing of the sanitary pipes and stacks be performed every 5-10 years, using funds from the operating budget

.F Installation of the domestic water backflow preventer is estimated to cost **$10,000** and an allowance for this work has been budgeted in fiscal year **2020/21**

Figure 5.3.3.c Aluminum sanitary pipes in the parking garage

5.3.4 Sump Pumps

SUMP PUMPS

The elevator shaft pit sump pumps and pump controllers are located in their respective pit in the parking garage to pump wastewater from the lower levels of the building to the city sewer. Sump pumps have a typical service life of 10-15 years which can vary greatly depending on usage.

The sump pumps are suspected to have been replaced on as needed basis and their age could not be determined. We expect the sump pumps are in fair-to-satisfactory condition. The sump pumps could not be visually inspected. We estimate replacement will be required in the next 5 years.

We recommend the following work be anticipated and funded:

.A Due to the varying condition and service life of the sump pumps, isolated repairs need only be completed as required. For budgeting purposes, an allowance of **$3,000** has been made in fiscal year **2022/23** and **every 5 years thereafter** to ensure funds are available when the work is required

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Sump Pumps	
Quantity	Allowance
Cost	$3,000
Year(s)	2022/23, 2027/28 2032/33, 2037/38 2042/43, 2047/48

5.3.5 Elevators

ELEVATORS

The Dover hydraulic elevators installed in the buildings provide access to floors 1 to 4. The elevator mechanical rooms are located on level 1 in the parking garage. Hydraulic elevators have a typical service life of 25-30 years. Elevator cab interiors have a typical service life of 25-30 years and are renewed for aesthetic purposes.

The elevators were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the elevators are in fair condition. The elevators have reached the end of their useful service life, which means replacement parts will become more difficult and expensive to procure, therefore they should be modernized in the near future.

Periodically, the Technical Standards and Safety Authority dictates remedial work that must be carried out on various types of elevators and is mandatory.

We recommend the following work be anticipated and funded:

.A Replacement of the elevator control systems and cab interiors is estimated to cost **$919,000** and this work has been budgeted **over a 4-year period** beginning in fiscal year **2021/22**

.B In order to ensure funds are available to perform potential mandatory TSSA upgrades, an allowance of **$7,000** has been made in fiscal year **2025/26** and **every 5 years thereafter**

■

Elevator Control Modernization	
Quantity	4
Cost	$919,000
Year(s)	2021/22-2024/25 2047/48-2050/51

■

TSSA Elevator Contingency Allowance	
Quantity	Allowance
Cost	$7,000
Year(s)	2025/26, 2030/31 2035/36, 2040/41 2045/46

Figure 5.3.5.a Hydraulic elevator machine

5.3.6 Fire Protection Systems

FIRE PROTECTION SYSTEMS

The fire protection system consists of fire extinguishers and fire hose cabinets installed throughout the buildings. Fire protection systems have a varying service life.

The fire protection systems are inspected annually and are replaced on an as-needed basis. We expect the fire protection systems are in satisfactory condition. We anticipate isolated repairs and replacement of individual components will be required during the 30-year planning period of this study.

Annual inspection and maintenance has been performed and should be continued to ensure that the fire protection system remains in active working condition at all times.

We recommend the following work be anticipated and funded:

.A Repairs and maintenance of the fire protection system should be performed, as required, using funds from the operating budget

.B Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that annual inspection and testing be performed, using funds from the operating budget

FIRE PUMP

The Taco 300USgpm, 15HP unlisted fire pump, jockey pump and pump controller, located in the pump room beside the parking garage ramp provide water to the standpipes and fire hose cabinets in the building. Fire pumps have a typical service life of 30-35 years.

Fire Pumps	
Quantity	1
Cost	$15,000
Year(s)	2046/47

The fire pump, jockey pump and controller were replaced in 2017; as such are 4 years old. The fire pumps are in satisfactory condition. We estimate replacement will be required in the next 25-30 years.

We noted that the standpipe residual pressure is 120psi, and the fire pump is an unlisted pump with a head of 120ft.hd. As OBC requires a standpipe residual pressure of 65psi and any fire pump with a head higher than 93ft.hd needs to be a listed pump, we recommend that a study be performed on the fire suppression system to review that is code compliant and properly sized for the application. The results of this study may require additional work which could require modifications to the funding plan.

We recommend the following work be anticipated and funded:

.C Replacement of the fire pumps is estimated to cost **$15,000** and this work has been budgeted in fiscal year **2046/47**

.D Although costs are not included in this study, as they do not constitute a major repair or replacement, we recommend that study on the fire pump and fires suppression system be performed for code compliance, using funds from the operating budget

SPRINKLER HEADS

The automatic sprinkler heads installed in the parking garage provide fire protection to the building. The sprinkler heads need to be replaced or tested and re-certified every 50 years.

Sprinkler Heads	
Quantity	Allowance
Cost	$70,000
Year(s)	2042/43

The sprinkler heads were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the sprinkler heads are in satisfactory condition. We estimate replacement will be required in the next 20-25 years.

We recommend the following work be anticipated and funded:

.E A rough order of magnitude for the replacement of the sprinkler heads is estimated to cost **$70,000** and this work has been budgeted in fiscal year **2042/43**

STANDPIPES AND SPRINKLER PIPES

The standpipes and sprinkler pipes are comprised of steel installed throughout the condominium. The standpipes and sprinkler systems have a typical service life of 60-80 years which can vary greatly depending on environmental conditions.

Standpipes	
Quantity	Allowance
Cost	$160,000
Year(s)	Beyond 2049/50

The standpipes were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the standpipes are in satisfactory condition. We do not anticipate replacement or major repairs will be required during the 30-year planning period of this study.

Sprinkler Pipes	
Quantity	Allowance
Cost	$110,000
Year(s)	Beyond 2049/50

The sprinkler pipes were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the sprinkler pipes are in satisfactory condition. We do not anticipate replacement or major repairs will be required during the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.F A rough order of magnitude for the replacement of the standpipes is estimated to cost **$160,000** and this work has been budgeted **beyond the 30-year planning period** of this study

.G Minor repairs of the standpipes should be performed, as required, using funds from the operating budget

5.3.7 Site Maintenance Equipment

GARBAGE CHUTE

The garbage chutes in the buildings services all floors for garbage disposal. The garbage chutes have a typical service life of 60-80 years which can vary greatly depending on environmental conditions.

The garbage chutes were installed as part of the original construction; as such are 28 years old. Based on their current age, we expect the garbage chutes are in satisfactory condition. We do not anticipate replacement or major repairs will be required during the 30-year planning period of this study.

We recommend the following work be anticipated and funded:

.A A rough order of magnitude for the replacement of the garbage chute is estimated to cost **$160,000** and this work has been budgeted beyond **the 30-year planning period** of this study

.B In order to ensure funds are available to perform repairs of the garbage chute when required, an allowance of **$16,000** has been made in fiscal year **2022/23** and **every 15 years thereafter**

Garbage Chute Replacement	
Quantity	Allowance
Cost	$160,000
Year(s)	Beyond 2049/50

Garbage Chute Repair Allowance	
Quantity	Allowance
Cost	$16,000
Year(s)	2022/23, 2037/38

APPENDIX A: SPREADSHEET FOR MAJOR REPAIR AND REPLACEMENT COSTS

OCCC 553: Spreadsheet For Major Repair & Replacement Costs, Fiscal Years 2020/21 to 2049/50

AGE OF COMPLEX		28 Years	29 Years	30 Years	31 Years	32 Years	33 Years	34 Years	35 Years	36 Years	37 Years	38 Years	39 Years	40 Years	41 Years	42 Years	43 Years
REPAIR/REPLACEMENT ITEMS		2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36
5.1	**CIVIL, ARCHITECTURAL**																
5.1.1	**Site Services**																
5.1.2	**Parking Garage**	$11,300	$23,730		$11,300			$144,923				$1,288,794					
5.1.3	**Asphalt Pavement**						$57,000										
5.1.4	**Pavers**			$5,000										$5,000			
5.1.5	**Exterior Concrete**						$105,000										
5.1.6	**Landscaping**																
5.1.7	**Retaining Walls**			$5,000										$5,000			
5.1.8	**Foundation Walls**																
5.1.9	**Balconies**			$6,000						$6,000						$110,000	$110,000
5.1.10	**Masonry**						$18,000								$18,000		
5.1.11	**Exterior Insulation & Finish System**									$155,000							
5.1.12	**Caulking**				$60,000					$60,000					$60,000		
5.1.13	**Windows & Balcony Doors**	$11,600	$143,000														
5.1.14	**Doors**					$23,000					$32,000					$8,000	
5.1.15	**Roofing Systems**	$312,000				$240,000											
5.1.16	**Common Corridors**					$10,000					$40,000	$30,000				$10,000	
5.2	**ELECTRICAL SYSTEMS**																
5.2.1	**Electrical Distribution**								$32,500	$32,500	$32,500	$32,500		$243,000			
5.2.2	**Lighting**			$10,000					$10,000					$10,000			
5.2.3	**Fire Alarm System**			$8,000					$8,000					$8,000			
5.2.4	**Emergency Power System**			$4,000					$4,000					$4,000			
5.2.5	**Electrical Heating System**			$21,000					$21,000					$5,000			
5.2.6	**Security System**			$4,000					$4,000	$20,000				$4,000	$25,000		
5.3	**MECHANICAL SYSTEMS**																
5.3.1	**Ventilation System**	$35,000	$2,000				$5,000	$2,000				$5,000	$37,000				$35,000
5.3.2	**Heating & A/C System**			$485,000	$435,000	$435,000											
5.3.3	**Plumbing System**	$10,000	$150,000					$150,000					$150,000				
5.3.4	**Sump Pumps**			$3,000					$3,000					$3,000			
5.3.5	**Elevators**		$229,750	$229,750	$229,750	$229,750	$7,000					$7,000					$7,000
5.3.6	**Fire Protection System**																
5.3.7	**Site Maintenance Equipment**			$16,000													
	GENERAL																
	Reserve Fund Study Update	$6,300			$4,300			$6,300			$4,300			$6,300			$4,300
YEARLY EXPENDITURE TOTALS		$386,200	$548,480	$796,750	$740,350	$937,750	$192,000	$303,223	$82,500	$273,500	$108,800	$1,363,294	$187,000	$293,300	$103,000	$128,000	$156,300
EXPENDITURES INCL. INFLATION		$386,200	$562,192	$837,085	$797,276	$1,035,101	$217,230	$351,646	$98,067	$333,233	$135,876	$1,745,132	$245,360	$394,456	$141,987	$180,861	$226,369
CONTRIBUTIONS FROM FEES		$222,851	$264,078	$312,932	$370,825	$380,096	$389,598	$399,338	$409,321	$419,554	$430,043	$440,794	$451,814	$463,110	$474,687	$486,554	$498,718
ADDITIONAL CONTRIBUTIONS			$800,000	$800,000	$800,000												
INTEREST CONTRIBUTIONS		$0	$1,616	$7,942	$16,755	$10,683	$15,140	$16,590	$24,661	$27,307	$35,213	$3,351	$8,458	$10,245	$18,674	$26,634	$33,957
REMAINING RESERVE FUND		$94,778	$598,280	$882,068	$1,272,372	$628,050	$815,558	$879,840	$1,215,756	$1,329,384	$1,658,764	$357,778	$572,690	$651,588	$1,002,963	$1,335,291	$1,641,597

ESTIMATED RESERVE FUND = $258,127 September 30, 2020

CURRENT ANNUAL CONTRIBUTIONS = $222,851 October 1, 2020

FUTURE ANNUAL CONTRIBUTIONS = $264,078 October 1, 2021

ANN. INCREASE IN CONTRIBUTIONS = 16.0 % ABOVE INFLATION PER YEAR FOR 3 YEARS, STARTING IN THE FISCAL YEAR 2021/22

SPECIAL ASSESSMENT = $ 800,000 PER YEAR FOR 3 YEARS, STARTING IN THE FISCAL YEAR 2021/22

NOTES:

1) Interest contributions for each year are calculated at the midpoint of the fiscal year and assume that all expenditures have occurred and 50% of contributions have been collected. A fixed interest rate of 2.5% is used in the calculation

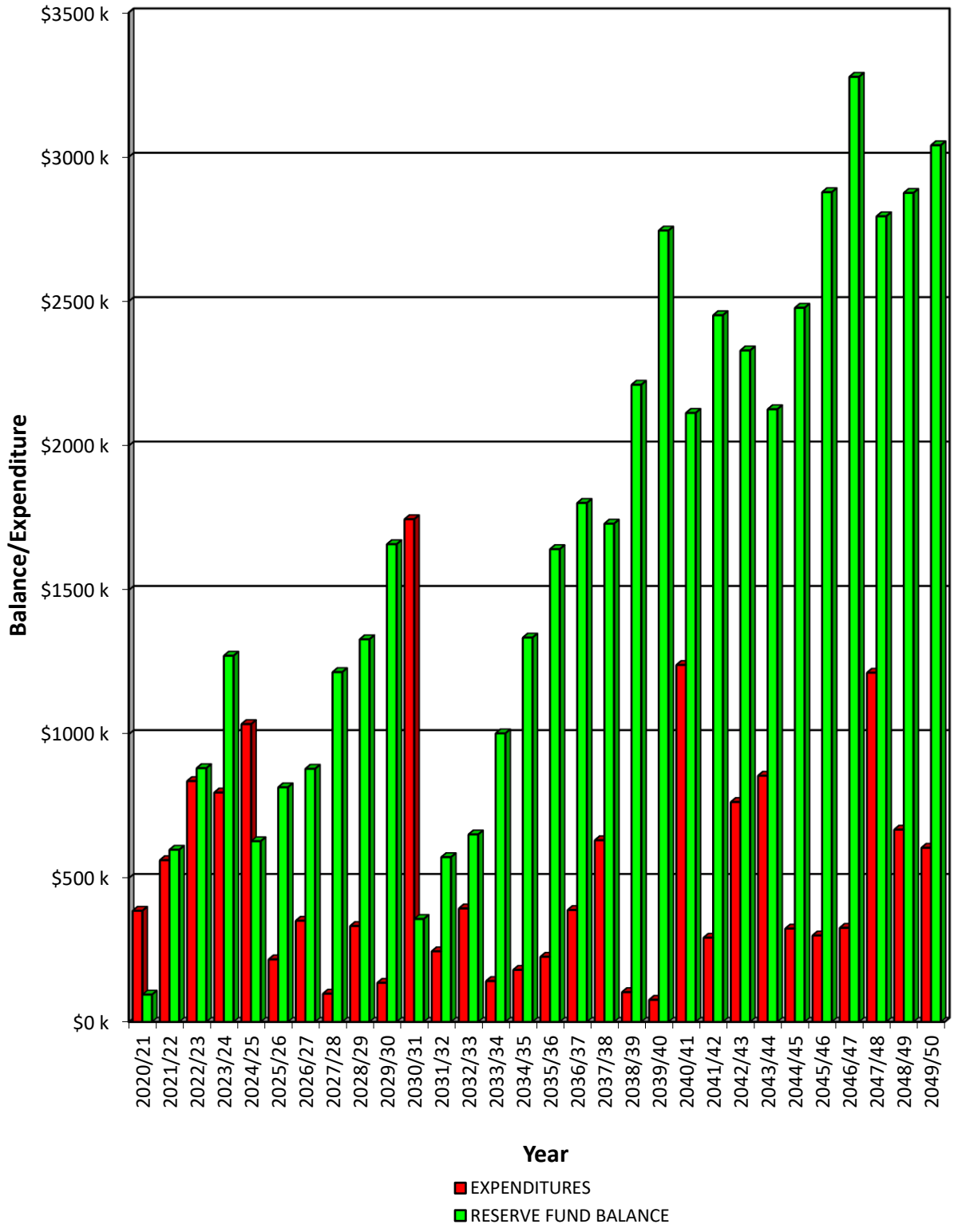
2) Estimates for expenditures include HST and, where appropriate, engineering fees.

44 Years	45 Years	46 Years	47 Years	48 Years	49 Years	50 Years	51 Years	52 Years	53 Years	54 Years	55 Years	56 Years	57 Years		AGE OF COMPLEX	
2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	TOTALS	REPAIR/REPLACEMENT ITEMS	
															5.1	CIVIL, ARCHITECTURAL
														$0	5.1.1	Site Services
						$25,000								$1,505,047	5.1.2	Parking Garage
	$30,000										$30,000			$117,000	5.1.3	Asphalt Pavement
						$50,000								$60,000	5.1.4	Pavers
														$105,000	5.1.5	Exterior Concrete
														$0	5.1.6	Landscaping
						$75,000								$85,000	5.1.7	Retaining Walls
														$0	5.1.8	Foundation Walls
$110,000	$110,000													$452,000	5.1.9	Balconies
					$18,000								$18,000	$72,000	5.1.10	Masonry
							$155,000							$310,000	5.1.11	Exterior Insulation & Finish System
		$60,000					$60,000					$60,000		$360,000	5.1.12	Caulking
				$72,000										$226,600	5.1.13	Windows & Balcony Doors
			$8,000					$23,000					$8,000	$102,000	5.1.14	Doors
				$643,000					$150,000					$1,345,000	5.1.15	Roofing Systems
			$40,000	$30,000				$10,000					$40,000	$210,000	5.1.16	Common Corridors
															5.2	ELECTRICAL SYSTEMS
	$225,000													$598,000	5.2.1	Electrical Distribution
	$10,000					$10,000					$10,000			$60,000	5.2.2	Lighting
	$8,000					$8,000					$333,000			$373,000	5.2.3	Fire Alarm System
	$4,000					$4,000					$4,000			$24,000	5.2.4	Emergency Power System
	$5,000					$5,000					$5,000			$62,000	5.2.5	Electrical Heating System
	$4,000					$4,000					$4,000	$45,000		$114,000	5.2.6	Security System
															5.3	MECHANICAL SYSTEMS
$2,000				$5,000	$2,000		$130,000		$5,000	$7,000				$272,000	5.3.1	Ventilation System
						$190,000	$140,000	$140,000						$1,825,000	5.3.2	Heating & A/C System
$150,000					$150,000					$150,000				$910,000	5.3.3	Plumbing System
	$3,000					$3,000					$3,000			$18,000	5.3.4	Sump Pumps
				$7,000					$7,000		$229,750	$229,750	$229,750	$1,643,250	5.3.5	Elevators
						$70,000				$15,000				$85,000	5.3.6	Fire Protection System
	$16,000													$32,000	5.3.7	Site Maintenance Equipment
															$0	GENERAL
		$6,300			$4,300			$6,300			$4,300			$53,000		Reserve Fund Study Update
$262,000	$415,000	$66,300	$48,000	$757,000	$174,300	$444,000	$485,000	$179,300	$162,000	$172,000	$623,050	$334,750	$295,750	$11,018,897	YEARLY EXPENDITURE TOTALS	
$388,940	$631,472	$103,405	$76,735	$1,240,433	$292,751	$764,378	$855,836	$324,305	$300,339	$326,850	$1,213,577	$668,327	$605,225	$15,480,643	EXPENDITURES INCL. INFLATION	
$511,186	$523,966	$537,065	$550,492	$564,254	$578,360	$592,819	$607,640	$622,831	$638,402	$654,362	$670,721	$687,489	$704,676	$14,858,576	CONTRIBUTIONS FROM FEES	
														$2,400,000	ADDITIONAL CONTRIBUTIONS	
$37,706	$35,802	$47,374	$60,235	$44,664	$52,745	$49,594	$44,443	$52,828	$62,405	$71,954	$59,977	$61,745	$65,560	$1,004,257	INTEREST CONTRIBUTIONS	
$1,801,549	$1,729,845	$2,210,879	$2,744,870	$2,113,356	$2,451,710	$2,329,745	$2,125,992	$2,477,345	$2,877,813	$3,277,278	$2,794,398	$2,875,306	$3,040,317	$3,040,317	REMAINING RESERVE FUND	
										REMAINING RESERVE FUND IN 2021 DOLLARS					$1,485,685		

3) Inflation assumed to be at an average rate of 2.5% over the time frame examined above.

KELLER ENGINEERING

OCCC 553 - Reserve Fund Annual Expenditures/Closing Balance



APPENDIX B:
MANAGEMENT
PLANNING
TABLE

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
28	2020/21	5.1.2 Landscaped Podium Waterproofing Repair Allowance	$11,300		
		5.1.13 Window & Patio Door Replacement	$11,600		
		5.1.15 Conventional Roofing System Overlay - Building A1	$85,000		
		5.1.15 Conventional Roofing System Overlay - Building A2	$66,000		
		5.1.15 Conventional Roofing System Overlay - Building B	$115,000		
		5.1.15 Conventional Roofing System Repairs - Building C	$18,000		
		5.1.15 Conventional Roofing System Repairs - Building D	$10,000		
		5.1.15 Sloped Metal Roof Repairs	$18,000		
		5.3.1 MUA Air Conditioner Condensers Replacement	$30,000		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.3 Domestic Water Backflow Preventer Installation	$10,000		
		Reserve Fund Study Update with Site Visit	$6,300		
				$386,200	$386,200
29	2021/22	5.1.2 Parking Garage Repair Allowance	$23,730		
		5.1.13 Window & Patio Door Replacement	$143,000		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
		5.3.5 Elevator Modernization	$229,750		
				$548,480	$562,192

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
30	2022/23	5.1.4 Paver Walkways - Repair Allowance	$5,000		
		5.1.7 Precast Concrete Interlocking Unit Retaining Wall Repair Allowan	$5,000		
		5.1.9 Balcony Railing Paint Allowance	$6,000		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.5 Electric Unit Heaters Replacement	$16,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.2 Lobby Direct Expansion Air-Conditioner Untis Replacement	$50,000		
		5.3.2 Direct Expansion Air-Conditioner Units & Refrigerant Lines	$435,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
		5.3.5 Elevator Modernization	$229,750		
		5.3.7 Garbage Chute Repair Allowance	$16,000		
				$796,750	$837,085
31	2023/24	5.1.2 Landscaped Podium Waterproofing Repair Allowance	$11,300		
		5.1.12 Cualking Replacement Allowance	$60,000		
		5.3.2 Direct Expansion Air-Conditioner Units & Refrigerant Lines	$435,000		
		5.3.5 Elevator Modernization	$229,750		
		Reserve Fund Study Update without Site Visit	$4,300		
				$740,350	$797,276
32	2024/25	5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.14 Garage Door Replacement	$15,000		
		5.1.15 Conventional Roofing System Overlay - Building D	$180,000		
		5.1.15 Sloped Metal Roof Repairs	$60,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
		5.3.2 Direct Expansion Air-Conditioner Units & Refrigerant Lines	$435,000		
		5.3.5 Elevator Modernization	$229,750		
				$937,750	$1,035,101

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
33	2025/26	5.1.3 Asphalt Roadway & Parking Areas Resurfacing	$57,000		
		5.1.5 Concrete Curbs Replacement	$40,000		
		5.1.5 Concrete Sidewalks Replacement	$65,000		
		5.1.10 Masonry Veneer Repair Allowance	$18,000		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.5 TSSA Elevator Contingency Allowance	$7,000		
				$192,000	$217,230
34	2026/27	5.1.2 Parking Garage Repair Allowance	$133,623		
		5.1.2 Landscaped Podium Waterproofing Repair Allowance	$11,300		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
		Reserve Fund Study Update with Site Visit	$6,300		
				$303,223	$351,646
35	2027/28	5.2.1 Dry Core Transformers Replacement	$32,500		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.5 Electric Unit Heaters Replacement	$16,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
				$82,500	$98,067
36	2028/29	5.1.9 Balcony Railing Paint Allowance	$6,000		
		5.1.11 EIFS Recoating	$155,000		
		5.1.12 Cualking Replacement Allowance	$60,000		
		5.2.1 Dry Core Transformers Replacement	$32,500		
		5.2.6 Door Entry System Replacement	$20,000		
				$273,500	$333,233

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
37	2029/30	5.1.14 Entrance Door Replacement	$24,000		
		5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.16 Corridor Painting	$30,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
		5.2.1 Dry Core Transformers Replacement	$32,500		
		Reserve Fund Study Update without Site Visit	$4,300		
				$108,800	$135,876
38	2030/31	5.2.1 Landscaped Podium Waterproofing Replacement	$1,288,794		
		5.1.16 Corridor Painting	$30,000		
		5.2.1 Dry Core Transformers Replacement	$32,500		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.5 TSSA Elevator Contingency Allowance	$7,000		
				$1,363,294	$1,745,132
39	2031/32	5.3.1 Parking Garage Exhaust Fans Replacement	$15,000		
		5.3.1 Parking Garage Motorized Dampers Replacement	$15,000		
		5.3.1 Gas Monitoring Controller Replacement	$5,000		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
				$187,000	$245,360

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
40	2032/33	5.1.4 Paver Walkways - Repair Allowance	$5,000		
		5.1.7 Precast Concrete Interlocking Unit Retaining Wall Repair Allowan	$5,000		
		5.2.1 Main Disconnect Switchgear Replacement	$180,000		
		5.2.1 120/240 Volt Electrical Distribution Breaker Panels Replacement	$45,000		
		5.2.1 Fused Disconnect Switches Replacement	$18,000		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
		Reserve Fund Study Update with Site Visit	$6,300		
				$293,300	$394,456
41	2033/34	5.1.10 Masonry Veneer Repair Allowance	$18,000		
		5.1.12 Cualking Replacement Allowance	$60,000		
		5.2.6 Key Fob System Replacement	$20,000		
		5.2.6 CCTV Monitoring Station Replacement	$5,000		
				$103,000	$141,987
42	2034/35	5.1.9 Balcony Waterproofing Replacement	$87,500		
		5.1.9 Balcony Railings Replacement	$22,500		
		5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
				$128,000	$180,861
43	2035/36	5.1.9 Balcony Waterproofing Replacement	$87,500		
		5.1.9 Balcony Railings Replacement	$22,500		
		5.3.1 MUA Air Conditioner Condensers Replacement	$30,000		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.5 TSSA Elevator Contingency Allowance	$7,000		
		Reserve Fund Study Update without Site Visit	$4,300		
				$156,300	$226,369

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
44	2036/37	5.1.9 Balcony Waterproofing Replacement	$87,500		
		5.1.9 Balcony Railings Replacement	$22,500		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
				$262,000	$388,940
45	2037/38	5.1.3 Asphalt Pavement-on-Grade Repair Allowance	$30,000		
		5.1.9 Balcony Waterproofing Replacement	$87,500		
		5.1.9 Balcony Railings Replacement	$22,500		
		5.2.1 Hydro Vault Equipment Replacement	$100,000		
		5.2.1 Metering Sockets Replacement	$125,000		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
		5.3.7 Garbage Chute Repair Allowance	$16,000		
				$415,000	$631,472
46	2038/39	5.1.12 Cualking Replacement Allowance	$60,000		
		Reserve Fund Study Update with Site Visit	$6,300		
				$66,300	$103,405
47	2039/40	5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.16 Corridor Painting	$30,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
				$48,000	$76,735

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
48	2040/41	5.1.13 Skylights Replacement	$72,000		
		5.1.15 Conventional Roofing System Replacement - Building A1	$118,000		
		5.1.15 Conventional Roofing System Replacement - Building A2	$109,000		
		5.1.15 Conventional Roofing System Replacement - Building B	$146,000		
		5.1.15 Conventional Roofing System Replacement - Building C	$155,000		
		5.1.15 Sloped Metal Roofing Replacement	$115,000		
		5.1.16 Corridor Painting	$30,000		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.5 TSSA Elevator Contingency Allowance	$7,000		
				$757,000	$1,240,433
49	2041/42	5.1.10 Masonry Veneer Repair Allowance	$18,000		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
		Reserve Fund Study Update without Site Visit	$4,300		
				$174,300	$292,751
50	2042/43	5.1.2 Parking Garage Repair Allowance	$25,000		
		5.1.4 Paver Walkways Replacement	$50,000		
		5.1.7 Precast Concrete Interlocking Retaining Wall Replacement	$75,000		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.2 Lobby Direct Expansion Air-Conditioner Untis Replacement	$50,000		
		5.3.2 Direct Expansion Air-Conditioner Units (Condensers Only)	$140,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
		5.3.6 Sprinkler Heads Replacement	$70,000		
				$444,000	$764,378

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
51	2043/44	5.1.11 EIFS Recoating	$155,000		
		5.1.12 Cualking Replacement Allowance	$60,000		
		5.3.1 Make-up Air Units Replacement	$130,000		
		5.3.2 Direct Expansion Air-Conditioner Units (Condensers Only)	$140,000		
				$485,000	$855,836
52	2044/45	5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.14 Garage Door Replacement	$15,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
		5.3.2 Direct Expansion Air-Conditioner Units (Condensers Only)	$140,000		
		Reserve Fund Study Update with Site Visit	$6,300		
				$179,300	$324,305
53	2045/46	5.1.15 Conventional Roofing System Replacement - Building D	$150,000		
		5.3.1 Exhaust Fans Replacement Allowance	$5,000		
		5.3.5 TSSA Elevator Contingency Allowance	$7,000		
				$162,000	$300,339
54	2046/47	5.3.1 Gas Monitoring Controller Replacement	$5,000		
		5.3.1 CO Sensors Replacement Allowance	$2,000		
		5.3.3 Sanitary and Storm Pipes & Stacks Replacement Allowance	$150,000		
		5.3.6 Fire Pumps Replacement	$15,000		
				$172,000	$326,850

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

OCCC 553 : Annual Major Repair & Replacement Work, Fiscal Years 2020/21 to 2049/50

Year		Description of Work	Cost	Yearly Total	Inflated Yearly Total
55	2047/48	5.1.3 Asphalt Pavement-on-Grade Repair Allowance	$30,000		
		5.2.2 Interior Light Fixtures Replacement Allowance	$5,000		
		5.2.2 Exterior Light Fixtures Replacement Allowance	$5,000		
		5.2.3 Fire Alarm System Replacement	$125,000		
		5.2.3 Fire Alarm Partial Rewiring	$200,000		
		5.2.3 Fire Alarm Sensors Replacement Allowance	$8,000		
		5.2.4 Battery Pack Units and Emergency Lights Replacement Allowanc	$4,000		
		5.2.5 Forced Flow Electric Heaters Replacement Allowance	$5,000		
		5.2.6 CCTV Cameras Replacement Allowance	$4,000		
		5.3.4 Sump Pumps Replacement Allowance	$3,000		
		5.3.5 Elevator Modernization	$229,750		
		Reserve Fund Study Update without Site Visit	$4,300		
				$623,050	$1,213,577
56	2048/49	5.1.12 Cualking Replacement Allowance	$60,000		
		5.2.6 Door Entry System Replacement	$20,000		
		5.2.6 Key Fob System Replacement	$20,000		
		5.2.6 CCTV Monitoring Station Replacement	$5,000		
		5.3.5 Elevator Modernization	$229,750		
				$334,750	$668,327
57	2049/50	5.1.10 Masonry Veneer Repair Allowance	$18,000		
		5.1.14 Common Area Door Replacement Allowance	$8,000		
		5.1.16 Corridor Painting	$30,000		
		5.1.16 Carpet Replacement Allowance	$10,000		
		5.3.5 Elevator Modernization	$229,750		
				$295,750	$605,225

Notes:
1) Estimates for expenditures include HST and, where applicable, engineering fees.
2) Inflation assumed to be at an average of 2.5 % over the time frame examined above.

APPENDIX C: NOTICE OF FUTURE FUNDING OF RESERVE FUND

NOTICE OF FUTURE FUNDING OF THE RESERVE FUND

(under *subsection 94 (9)* of the *Condominium Act, 1998*)

TO: All Owners of Ottawa Carleton Condominium Corporation No. 553

The Board has received and reviewed a Class 2 - Update with Site Inspection Reserve Fund Study dated July 15, 2021, prepared by Keller Engineering, and has proposed a plan for the future funding of the reserve fund that the Board of Directors has determined will ensure that, in accordance with the regulations made under the Condominium Act, 1998, the reserve fund will be adequate for the major repair and replacement of the common elements and assets of the corporation.

This notice contains:

1. A summary of the reserve fund study.
2. A summary of the proposed funding plan.
3. A statement indicating the areas, if any, in which the proposed funding plan differs from the reserve fund study.

At the present time the average contribution per unit per month to the reserve fund is $265.30. Based on the proposed funding plan, the average increase in contribution per unit per month will be $49.08 in fiscal year 2021/22, $58.16 in fiscal year 2022/23, and $68.92 in fiscal year 2023/24. In addition, an average special assessment per unit of $11,428.57 per unit per year will be required in fiscal year 2021/22, $11,428.57 will be required in fiscal year 2022/23, and $11,428.57 will be required in fiscal year 2023/24.

The proposed funding plan will be implemented on or before October 1, 2021.

Dated this _____ day of _____, 2021.

OTTAWA CARLETON CONDOMINIUM CORPORATION NO. 553

_____
, Director

_____
, Director

SUMMARY OF RESERVE FUND STUDY

The following is a summary of the Class 2 - Update with Site Inspection dated July 15, 2021, prepared by Keller Engineering for Ottawa Carleton Condominium Corporation No. 553 (known as the 'Reserve Fund Study').

Subsection 94 (1) of the *Condominium Act, 1998*, requires the corporation to conduct periodic studies to determine whether the amount of money in the reserve fund and the amount of contributions collected by the corporation are adequate to provide for the expected costs of major repair and replacement of the common elements and assets of the corporation. As a result, the corporation has obtained the Reserve Fund Study.

The estimated expenditures from the reserve fund for the next thirty (30) years are set out in the CASH FLOW TABLE. In this summary, the term 'annual contribution' means the total amount to be contributed each year to the reserve fund, exclusive of interest earned on the reserve fund. The recommended annual contribution for 2021/22 is $264,078, based on the estimated expenditures and the following:

Opening Balance of the Reserve Fund:	$ 258,127
Minimum Reserve Fund Balance during the projected period:	$ 94,778
Assumed Annual Inflation Rate for Reserve Fund Expenditures:	2.5%
Assumed Annual Interest Rate for interest earned on the Reserve Fund:	2.5%

The Reserve Fund Study can be examined by making a written request to the Board of Directors of Ottawa Carleton Condominium Corporation No. 553.

CASH FLOW TABLE

Opening Balance of the Reserve Fund:	$ 258,127
Current Annual Contributions:	$ 222,851
Minimum Reserve Fund Balance (as indicated in this table):	$ 94,778
Assumed Annual Inflation Rate for Reserve Fund Expenditures:	2.5%
Assumed Annual Interest Rate for interest on the Reserve Fund:	2.5%

Fiscal Year Ending	Opening Balance	Recommended Annual Total Contribution	Estimated Inflation Adjusted Expenditures	Estimated Interest Earned	Percentage Increase (Decrease) in Recommended Annual Total Contribution	Closing Balance
2020/21	$258,127	$222,851	$386,200	$0	3.0%	$94,778
2021/22	$94,778	$1,064,078	$562,192	$1,616	377.5%	$598,280
2022/23	$598,280	$1,112,932	$837,085	$7,942	4.6%	$882,068
2023/24	$882,068	$1,170,825	$797,276	$16,755	5.2%	$1,272,372
2024/25	$1,272,372	$380,096	$1,035,101	$10,683	-67.5%	$628,050
2025/26	$628,050	$389,598	$217,230	$15,140	2.5%	$815,558
2026/27	$815,558	$399,338	$351,646	$16,590	2.5%	$879,840
2027/28	$879,840	$409,321	$98,067	$24,661	2.5%	$1,215,756
2028/29	$1,215,756	$419,554	$333,233	$27,307	2.5%	$1,329,384
2029/30	$1,329,384	$430,043	$135,876	$35,213	2.5%	$1,658,764
2030/31	$1,658,764	$440,794	$1,745,132	$3,351	2.5%	$357,778
2031/32	$357,778	$451,814	$245,360	$8,458	2.5%	$572,690
2032/33	$572,690	$463,110	$394,456	$10,245	2.5%	$651,588
2033/34	$651,588	$474,687	$141,987	$18,674	2.5%	$1,002,963
2034/35	$1,002,963	$486,554	$180,861	$26,634	2.5%	$1,335,291
2035/36	$1,335,291	$498,718	$226,369	$33,957	2.5%	$1,641,597
2036/37	$1,641,597	$511,186	$388,940	$37,706	2.5%	$1,801,549
2037/38	$1,801,549	$523,966	$631,472	$35,802	2.5%	$1,729,845
2038/39	$1,729,845	$537,065	$103,405	$47,374	2.5%	$2,210,879
2039/40	$2,210,879	$550,492	$76,735	$60,235	2.5%	$2,744,870
2040/41	$2,744,870	$564,254	$1,240,433	$44,664	2.5%	$2,113,356
2041/42	$2,113,356	$578,360	$292,751	$52,745	2.5%	$2,451,710
2042/43	$2,451,710	$592,819	$764,378	$49,594	2.5%	$2,329,745
2043/44	$2,329,745	$607,640	$855,836	$44,443	2.5%	$2,125,992
2044/45	$2,125,992	$622,831	$324,305	$52,828	2.5%	$2,477,345
2045/46	$2,477,345	$638,402	$300,339	$62,405	2.5%	$2,877,813
2046/47	$2,877,813	$654,362	$326,850	$71,954	2.5%	$3,277,278
2047/48	$3,277,278	$670,721	$1,213,577	$59,977	2.5%	$2,794,398
2048/49	$2,794,398	$687,489	$668,327	$61,745	2.5%	$2,875,306
2049/50	$2,875,306	$704,676	$605,225	$65,560	2.5%	$3,040,317

SUMMARY OF PROPOSED PLAN FOR FUTURE FUNDING OF THE RESERVE FUND

The following is a summary of the board's proposed plan for the future funding of the reserve fund.

The Board of Ottawa Carleton Condominium Corporation No. 553 has reviewed the Class 2 - Update with Site Inspection dated July 15, 2021 prepared by Keller Engineering for the corporation (known as the 'Reserve Fund Study') and has proposed a plan for the future funding of the reserve fund that the Board has determined will ensure that, in accordance with the regulations made under the Condominium Act, 1998, the reserve fund will be adequate for the major repair and replacement of the common elements and assests of the corporation.

The Board has adopted the funding recommendations of the Reserve Fund Study and will implement them as set out in the CONTRIBUTION TABLE.

The annual contribution recommended under the proposed funding plan for fiscal year 2021/22 is $264,078, which represents an increase of 18.5% over the amount already budgeted.In addition, an additional contribution (e.g. special assessment, loan, operating budget surplus) of $800,000 has been included for fiscal year 2021/22.

The Proposed Plan for Future Funding of the Reserve Fund can be examined by making a written request to the Board of Directors of Ottawa Carleton Condominium Corporation No. 553.

CONTRIBUTION TABLE

Fiscal Year Ending	A Annual Contribution*	% Increase Over Previous Year	B Other Contribution (e.g. special assessment, loan)	A + B Total Contribution Each Year to Reserve Fund
2020/21	$222,851	3.0%	$0	$222,851
2021/22	$264,078	18.5%	$800,000	$1,064,078
2022/23	$312,932	18.5%	$800,000	$1,112,932
2023/24	$370,825	18.5%	$800,000	$1,170,825
2024/25	$380,096	2.5%	$0	$380,096
2025/26	$389,598	2.5%	$0	$389,598
2026/27	$399,338	2.5%	$0	$399,338
2027/28	$409,321	2.5%	$0	$409,321
2028/29	$419,554	2.5%	$0	$419,554
2029/30	$430,043	2.5%	$0	$430,043
2030/31	$440,794	2.5%	$0	$440,794
2031/32	$451,814	2.5%	$0	$451,814
2032/33	$463,110	2.5%	$0	$463,110
2033/34	$474,687	2.5%	$0	$474,687
2034/35	$486,554	2.5%	$0	$486,554
2035/36	$498,718	2.5%	$0	$498,718
2036/37	$511,186	2.5%	$0	$511,186
2037/38	$523,966	2.5%	$0	$523,966
2038/39	$537,065	2.5%	$0	$537,065
2039/40	$550,492	2.5%	$0	$550,492
2040/41	$564,254	2.5%	$0	$564,254
2041/42	$578,360	2.5%	$0	$578,360
2042/43	$592,819	2.5%	$0	$592,819
2043/44	$607,640	2.5%	$0	$607,640
2044/45	$622,831	2.5%	$0	$622,831
2045/46	$638,402	2.5%	$0	$638,402
2046/47	$654,362	2.5%	$0	$654,362
2047/48	$670,721	2.5%	$0	$670,721
2048/49	$687,489	2.5%	$0	$687,489
2049/50	$704,676	2.5%	$0	$704,676

* The term 'annual contribution' means the amount to be contributed each year to the reserve fund from the monthly common expenses

DIFFERENCES BETWEEN THE RESERVE FUND STUDY AND THE PROPOSED PLAN FOR FUTURE FUNDING OF THE RESERVE FUND

The Plan for Future Funding of the Reserve Fund proposed by the Board differs from the Reserve Fund in the following respects:

NIL