

RESERVE FUND STUDY

Victorian Estates

Dartmouth, NS.

Halifax County Condominium Corporation No. 241



SITE ASSESSMENT ON:

September 17th, 2018

DATE:

December 6th, 2018

BY:

Bluenose Engineering
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FOR:

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EXECUTIVE SUMMARY

A reserve fund study of Halifax County Condominium Corporation No. 241 (“the Condominium”) was conducted by Bluenose Engineering in 2018, at the request of Canmar Services (“the Property Manager”).

Victorian Estates is a medium-rise condominium in downtown Dartmouth, built in 2003. The building includes 44 residential units on four floors above an entrance and parking level. The entrance and parking level are concrete framed; residential floors and the roof are wood framed. The exterior walls include a brick exterior façade and vinyl-framed windows and doors.

The financial year of the Condominium is January 1st - December 31st. The financial statements indicate a reserve fund balance of \$471,438 at the start of the current financial year. Contributions to the reserve fund in the current financial year are budgeted to be \$68,000.

The site and building are in good condition overall.

The reserve fund study makes projections for future repairs or replacements: these are summarized by component in **Appendix Table A**. The projected expenditures are presented by year in **Table B** for each year of the evaluation period.

As shown in **Table A**, the most significant costs over the evaluation period are replacements of roofing, balconies, doors and windows, interior finishes and mechanical equipment. Most of these costs occur in the medium- or long-term.

Appendix Table C presents the projected annual expenditures, contributions and year-end balances over the evaluation period.

As shown in **Table C**, the recommended contribution in 2018 is \$68,000, as budgeted. The recommended contributions in Years 2 to 6 (2019 to 2023) is held at \$68,000. Contributions in future years are escalated 2% annually to reflect inflation.

The contributions are anticipated to provide a stable level of funding for the long-term upkeep of the condominium’s common elements, subject to the recommendations of future updates to the study.

(**Appendix Tables D to F** provide alternative cash flows and a master reserve fund spread sheet, as currently required by Condominium Regulations.)



LIMITING CONDITIONS

The information and opinions expressed in this report are solely for the benefit of the named client(s). The report may not be relied upon by any party other than that indicated without written consent of the named client(s) and the engineer.

This report summarizes the condition of the various items of the condominium's common elements and provides an opinion of long-term recapitalization costs. The quality of this information is limited by the extent of the property observed and information provided, as identified in the report. The information is provided specifically for decisions to be made by the condominium on its contributions to the reserve fund.

Any opinions presented herein are solely for the purposes stated in the report. The reader is cautioned not to read the opinions related to any condominium component or element of the report in isolation, or to base decisions or actions related to any condominium component on this report without carrying out appropriate investigations, project management and design.

No responsibility is assumed for legal surveys, soil tests, environmental assessments, detailed engineering calculations, quantity surveying or other activities unless required for the report and specifically identified as being a part of the report. Unless specifically identified otherwise, the report does not include an assessment of fire safety or barrier-free access. Bluenose Engineering and its sub-contractors' liability for any claim whatsoever arising in connection with this report shall be strictly limited to the fees received for service provided.

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INTRODUCTION

A reserve fund study of Halifax County Condominium Corporation No. 241 was conducted by Bluenose Engineering in September 2018, at the request of the Canmar Services. The report was prepared by Jim Fletcher, P.Eng.

The report summarizes the condition of the various items or components of the common elements of the condominium and provides an opinion of long-term recapitalization costs. The information is provided specifically for decisions to be made on managing the reserve fund and recommending contributions to the fund.

The study provides a budget for future expenditures; it does not, however, commit the condominium to these expenditures, or prevent other capital work from being carried out. It is recommended that the condominium conduct the appropriate project management, investigations and design prior to committing to the expenditures budgeted in this study.

SCOPE, METHODS, REFERENCES

1. Regulations and Definitions

CONDOMINIUM ACT

The Condominium Act, R.S., c. 85, last revised 2011 by NS Bill No. 38, provides requirements for the declaration and registration of Condominiums in Nova Scotia, and provides the framework for Condominium Corporations to manage the 'common elements', 'common expenses' and 'common interest' of condominium 'owners' - all as defined in the Act.

Section 31 of the Act defines financial provisions for 'common expenses and the Reserve Fund established by the corporation pursuant to subsection (1A)'. The Reserve Fund is described as follows:

(1A) The corporation shall establish and maintain a reserve fund for major repair and replacement of the common elements and assets of the corporation including, where applicable and without limiting the generality of the foregoing, roofs, exteriors of condominiums, roads, sidewalks, sewers, heating, electrical and plumbing systems, elevators, laundry, recreational and parking facilities.

Section 46 provides the framework for Regulations under the Act.



CONDOMINIUM REGULATIONS

The Condominium Regulations, last amended April 2015, include regulations regarding Reserve Fund Studies in Part K (Sections 77 to 81).

The Regulations include the following definitions:

- a) *“component” means an individual item that is included in the physical analysis portion of a reserve-fund study as described in subsection 79(2), and shall include an item*
 - i. *that is the responsibility of the corporation,*
 - ii. *for which major repair or replacement costs are anticipated to be incurred during its useful life,*
 - iii. *for which the costs of repair or replacement will not be covered as part of the annual operating or maintenance budget;*
- b) *“master reserve-fund spread sheet” means a spread sheet with calculations of the annual funding requirements for each component based on its remaining useful life, the basic annual contribution and the shortfall contribution options, but without an allowance for inflation or interest earned;*
- c) *“projected cash flow tables” means tables that demonstrate the effect of interest earned on investments and inflation of expenses and validate that a shortfall option will not jeopardize the funding plan;*
- d) *“reserve-fund study” means a study undertaken to determine a funding plan that adequately offsets expenditures for major repair or replacement of components;*
- e) *“remaining useful life” means the estimated time, in years, that a component can be expected to continue to serve its intended function.*

For existing condominiums with ten units or more, the Regulations require a comprehensive reserve fund study be carried out every ten years, and updates at five-year intervals or at any time that there is significant change to the assets of the corporation.

Comprehensive reserve fund studies include:

- ❖ An inventory of the Components of the Condominium’s Common Elements. The inventory is based on an on-site review; a review of the corporation’s architectural, electrical and mechanical plans; a review of the declaration and by-laws; a review of the corporation’s history with respect to the maintenance, replacement and repair of its components; and any planned changes to its components;
- ❖ An assessment of the remaining useful life, replacement cost, and the major maintenance and repairs related to each Component;
- ❖ A financial analysis of the Condominium’s reserve fund income and projected expenses, indicating the annual contribution required to be paid into the reserve fund to adequately offset expenditures for the major repair or replacement of the components.

Updates of reserve fund studies include:



- ❖ A site visit to update the component inventory and assessment of remaining useful life, replacement costs and major maintenance or repairs; and
- ❖ An update of the financial analysis.

In either case, the physical assessment is based on an on-site review of the major common area components, a review of drawings, previous inspection reports, complaints from occupants and maintenance records, and interviews with the property manager.

The complete Act and Regulations are available on-line at <https://nslegislature.ca/sites/default/files/legc/statutes/condominium.pdf> and https://www.novascotia.ca/just/regulations/regs/conregs.htm#TOC2_10, respectively.

2. Scope and Methods

The study was carried out in accordance with the Nova Scotia Condominium Act and Regulations.

The scope and methods for physical assessment are consistent with the American Society for Testing and Materials (ASTM) Standard E2018-15, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. The Guide sets standards for a walk-through survey by an observer, document reviews and interviews, and report preparation.

The quality of the assessment is limited by the extent of the property observed and the information gathered. The scope of the assessment and data received are outlined in the section **Reference Information** below.

Assumptions regarding the life expectancy of the Condominium's components and replacement costs are based on information provided by manufacturers, cost survey literature, and observations and experience with similar materials and systems.

A valuation period of 25 years was used for the purpose of this study. Where replacement is anticipated beyond the 25-year window, the report includes an assessment of potential repairs, partial replacement, and/or partial funding for the eventual complete replacement of the component. Some components of the Condominium (e.g., storm water piping) may be assessed as having an "indefinite" life expectancy as compared to the expected useful life of other components. Localized repairs may be required to these components; accordingly, contingency amounts or cyclical repair costs are recommended for these items.

Where budgets are provided for contingencies, allowances or cyclical repairs, the contingency amount is based on the probable cost of work which may occur at a given time, and the frequency reflects the estimated total long-term cost. The actual costs and timing may vary from those assessed in this study.

Generally, the costs presented in the physical assessment section of this report are current costs, regardless of when the activity may be required. Allowances for inflation are included



in the financial analysis.

Costs presented in this report include taxes payable by the Condominium for the component and all indirect costs of project management, design, etc..

Recapitalization cost items less than \$1,000 are generally not included.

The financial assessment identifies assumptions regarding inflation, interest, maintenance and affordability that were made in making the report; and details possible fund accumulation scenarios. The Regulations identify that the following optional scenarios for applying the interest earned on the fund be presented: interest is to be applied (i) into the fund, or (ii) to operations, or (iii) as a portion of the contributions to the fund.

Consultant qualifications are summarized at www.bluenoseengineering.com

3. Reference Information

SITE ASSESSMENT

A site assessment was conducted by Jim Fletcher, P.Eng. on September 17th, 2018, accompanied by Don Buck, Property Manager, Canmar Services.

The assessment included a visual examination of the site and the building exterior and interior common element areas.

Exterior common elements include the roof, the exterior walls, doors, windows and balconies. In general, the upper balconies were not accessed for assessment of these elements or the adjacent exterior doors and windows: budgets for these components are based on previous study reports and on information provided by the Property Manager. Also, the roof was not accessed for assessment: the report includes recommendations and budgets related to roofing which are discussed in the site assessment.

The interior common elements which were assessed included the interior parking area, common areas, service rooms, equipment and services, and a portion of the attic space.

DOCUMENTS REVIEWED

The following documents and/or information were made available by the Property Manager:

- HCCC#241 Financial Statements - December 31st, 2017; MNP LLP; May 7, 2018
- HCCC#241 Reserve Fund Study; Jim Fletcher Engineering; January 2014



PROPERTY DESCRIPTION

Victorian Estates is a medium-rise condominium in downtown Dartmouth, built in 2003. The building occupies most of the land parcel and is surrounded by Victoria Road, Ochterloney Street, Pine Street and Whebby Terrace. The building includes 44 residential units on four floors above an entrance and parking level. The entrance and parking level are concrete framed; residential floors and the roof are wood framed. The exterior walls include a brick exterior façade and vinyl-framed windows and doors.



Figure 1 - Victorian Estates and surroundings - 'birds-eye view' from south, courtesy Google Earth



PHYSICAL ASSESSMENT

1. Site

SITE DRAINAGE

The site slopes from the north-west downwards to the south-east. Drainage is by the building roof drains, infiltration and surface runoff at soft landscaping, and a grating and drain at the parking entrance.

Grades at the west corner and northwest side of the building are at or above the lowest course of brickwork, and without positive drainage away from the building (photo). The area is damp, but no moisture ingress is reported.

A budget for regrading this area, if required, is included with the site contingency allowance.



BURIED SERVICES

Buried services include a water supply main, and storm and sanitary sewers, all of which are connected to municipal systems at the street.

In general, the buried services are considered to have an indefinite useful life; any major repairs are budgeted in the **Site Contingency Allowance** below.

CONCRETE FLATWORK

Concrete flatwork includes concrete stairs and walkways at the main entrance, a sloped driveway at the parking entrance, and ten (10) ground floor patio slabs.

The flatwork is in good condition overall. Patio slabs on the northeast and southeast (Pine Street and Ochterloney) have been replaced, refurbished or leveled by injection grouting as required.

In general, the concrete flatwork is considered to have an indefinite useful life; any major repairs are budgeted in the **Site Contingency Allowance** below.



RETAINING WALLS

The site includes concrete retaining walls on three sides of the property and free-standing brick- or brick-clad walls adjacent to the main entrance. The concrete walls are coated with a cement-based coloured finish coating.

There are several vertical cracks in the retaining walls, which is consistent with observations in 2013¹. The concrete wall finish coating is in good condition overall due to repairs made in the past five years. The budgetary allowance of \$8,000 every six years for repairs which was recommended in 2013 is continued in this report.

Table A at the end of this report presents the quantities, unit costs and timing for refurbishments and replacements. The table includes the remaining life before action is required, and the expected useful life of the action. Where the activity is phased, the cost of each phase is shown in **Table A** and the years in which the cost is projected are shown in **Table B**. The budgeted cost (before inflation), timing and frequency of the action are summarized below.

(concrete walls - repair and paint: \$8,000; 2022; six-year cycle)

Concrete masonry units are used to stabilize grade slopes on three sides of the building. These retaining walls are in good condition with little evidence of deterioration or movement since their original construction. The walls are assessed to have an indefinite useful life. Any refurbishment budget is included in the **Site Contingency Allowance** below.

STEEL RAILINGS

The site includes steel railings on three sides, approximately 500 feet in total length. Most railings are mounted on concrete retaining walls.

The railings are in good condition overall but are susceptible to corrosion and loss of strength. It is recommended the on-going program of paint repair be continued, to include scraping where required and painting of all surfaces every 2-3 years.

(steel railings - repair and paint: \$10,000; 2019; three-year cycle)

FENCES

A wood fence extends along the north-west side of the property, the majority of which is the condominium's responsibility. The fence was replaced in 2018 and is in good condition. The fence is expected to have a useful life of 25 years. An allowance is included for replacement in 2042.

(wood fence - replacement allowance: \$20,000; 2042; 25-year cycle)

¹ HCCC#241 Reserve Fund Study; Jim Fletcher Engineering; January, 2014



SOFT LANDSCAPING

Soft landscaping includes grass areas and shrubs throughout the site. The landscaping is in good condition overall. A landscaping allowance is recommended for planting and trimming.

(landscaping - allowance: \$5,000; 2020; five-year cycle)

SITE CONTINGENCY ALLOWANCE

A site contingency allowance is recommended for smaller items and/or less predictable major repair costs. These may include repairs to buried services, concrete flatwork, unit masonry retaining walls, and other features.

(site – contingency allowance: \$5,000; 2021; four-year cycle)

2. Structures

The building has reinforced concrete foundations, retaining walls and first floor, and wood-framed walls, floors and roof framing. Balconies are wood joists cantilevered from the building frame.

CONCRETE FOUNDATIONS AND FIRST FLOOR

The foundations include concrete footings, retaining walls, columns and slab on grade. The first floor slab is an integral part of the concrete framing. The underside of the first floor, the interior of retaining walls, the slab on grade surface and exterior elements above grade were visible for assessment.

Where exposed, the structural concrete is in good condition overall. No evidence of excessive settlement or deflection of foundations was observed or reported. The slab on grade has minor wear after 15 years of service. The slab has several shrinkage cracks between expansion joints.

Any repairs that may be required are included in the **Structure – Contingency Allowance** below.

BUILDING FRAMING

Exterior walls are typically 2x6 wood frame construction with ½" plywood sheathing (photo – Aug. 2013). The roof has pre-engineered wood trusses and sheathing, with insulation supported on ceilings.

In general, the structure is in good condition overall with no evidence of excessive settlement,



deflection or vibration observed or reported. Properly maintained, the framing is assessed to have an indefinite useful life. Any repairs are included in the **Structure – Contingency Allowance** below.

BALCONIES

There are 33 balconies which are cantilevered from the building wood framing (photo) and one deck which is supported by the entrance canopy. The balconies have wood decks and framing, metal edge trim and soffits, and metal-framed glazed railings.



This study includes the balcony cladding and the railings of 11 patios as part of this common element.

The balconies are in good condition overall. Railings are expected to have a life of more than 50 years with routine annual inspection and replacement of components due to local damage. Metal cladding and soffits may have an average life of 40 years – some exhibit loss of paint coating and local damage currently. Decks are assessed to have an average life of 30 years. The service life of cantilevered wood is expected to vary with exposure to and retention of moisture. Local repairs were carried out to wood framing on the northeast elevation to shed water in the brick void in 2007-2008; no issues are reported currently.

A budgetary allowance is recommended based on the replacement of trim and soffit within ten years, and wood decks within 15 years. The budgets include local repairs and replacements to wood framing and railings as found during soffit and deck replacements. The actual scope and timing is to be planned based on more detailed observations closer to the time that the work is required.

(balcony soffits – replacement allowance: \$33,000; 2020, 2024, 2028; 25-year cycle)

(balcony decks – replacement allowance: \$66,000; 2032; 30-year cycle)

STRUCTURE – CONTINGENCY ALLOWANCE

A contingency allowance is recommended for repairs to wood framing which may be caused by water or insect damage, and for potential leak- or surface- repairs to concrete.

(structure – contingency allowance: \$4,000; 2020; five-year cycle)



3. Roofs

The roof systems include low-slope roofing with internal drains over the main building and the canopy and asphalt shingle mansards and dormers on all sides. The assessment of the roof is from aerial photos, satellite imagery, observation from ground level, and information gathered on performance and maintenance.

LOW SLOPE ROOFING

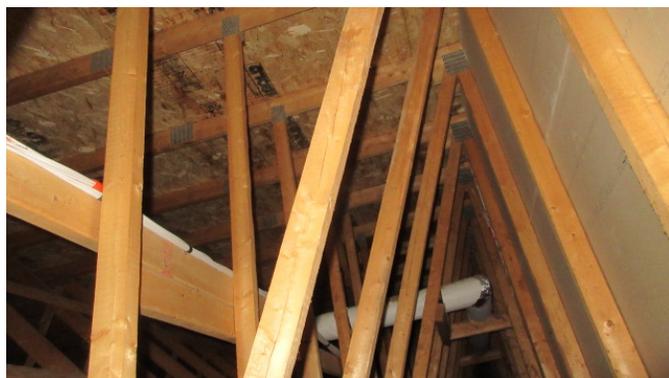
As shown in the satellite images in Figure 1 above and Figure 2 below, the main roof system includes a near-flat roofing membrane with little or no perimeter parapet and internal drains along the southwest-northeast axis of the building. The roof membrane is a two-ply modified bitumen system². The membrane is fastened and/or adhered to oriented strand board (OSB)



Figure 2 - Satellite image of roof, September 5th, 2015, courtesy Google Earth

sheathing, with pre-engineered wood trusses and ceiling insulation (photo).

Roof penetrations include roof vents and vents for a heat recovery ventilator. Three attic hatches were noted but no roof hatch was found. The satellite images indicate water is often retained along the centre of the roof.



² Reserve Fund Study HCCC#241; Jacques Whitford; June 2008



The durability of modified bitumen roofing varies considerably, and its replacement is one of the few major capital expenses for the condominium. Inspections are recommended every few years as a maintenance item, with records provided by the inspector for review in future updates to the reserve fund study.

Correctly installed, modified bitumen roofing has an expected useful life of 25 years or more. Subject to a roofing inspection, the roof assembly is considered to have a remaining useful life of 10 years. For budgeting purposes, replacement is anticipated in 2028.

As found in the winter of 2015, several roofs with internal drains experienced loading beyond the design standard to which they were designed due, largely, to snow accumulation combined with rainfall movement to and retention at ice-blocked drains. The lack of parapet and narrow width of building mitigate the probable accumulation of rainwater in conditions similar to those in 2015. However, a roof hatch would facilitate inspection, adding heat tracing if necessary, and monitoring.

The budget includes the addition of a roof hatch and replacement of perimeter flashing.

(building roof - replacement: \$240,000; 2028; 25-year cycle)

The canopy roof was replaced in the last five years. Repairs may be anticipated over the 25-year evaluation period and may be considered a maintenance item.

MANSARD SHINGLES

Mansard-style roofs surround the building at the fourth floor. The mansards are in fair condition: while the main areas of shingles are in good condition, several corner shingles are missing (photo) and edge flashings are deformed locally.



The budget proposed in 2013 for repairs and inspections every 3-5 years is carried in this report.

(mansard roof – inspections and repairs: \$12,000; 2018; five-year cycle)

The useful life of asphalt shingles at mansards varies considerably, e.g., 25-40 years, depending on materials, construction and exposure. A budgetary allowance is included for access and replacement of shingles of all mansards after 30 years of service.

(mansard roof – replacement allowance: \$90,000; 2033; 30-year cycle)



4. Exterior Walls

The typical exterior wall system includes clay unit brick veneer, air gap, air barrier, plywood sheathing, wood framing with batt insulation, vapour barrier and painted drywall.

BRICK VENEER

The exterior walls are primarily 'jumbo' clay brick masonry.

The brickwork is in good condition overall, with minimal evidence of cracking or wear of mortar joints and no deformation or irregularity noted.

The brick masonry and related concrete lintels at windows and doors is considered to have an indefinite remaining useful life.

A budgetary allowance is recommended to fund refurbishments when required.

(exterior brickwork – refurbishment allowance: \$10,000; 2020; ten-year cycle)

5. Exterior Doors and Windows

BUILDING ENTRY, EXIT AND SERVICE DOORS

The building entry includes aluminum-framed double doors and fixed glazing with matching interior vestibule doors. There are aluminum-framed single leaf doors with matching interior vestibule doors at two stair exits and one exit and an overhead door in the parking area.

The entry doors and stair exits are in good condition. Two exterior stair exits are replacement units; otherwise the doors are original to construction. A budget is included for replacement of all doors in 20 years after 35 years of service.

(building entry and exits – replacement allowance: \$32,000; 2038; 35-year cycle)

The overhead door is a replacement unit and is in good condition. The adjacent exit door is in fair condition with corrosion of the door and frame. A budget is included for the replacement of these doors based on a 20-year life for each door, starting with the exit door in 2023.

(garage doors – partial replacement: \$3,600; 2023; ten-year cycle)

UNIT BALCONY AND PATIO DOORS

The balconies and ground floor patios of all units are accessed by a total of 44 garden doors. Typically, the doors are vinyl-coated wood-framed units with vinyl-framed insulating glazing units (IGUs), installed in 2003.

Based on visual assessment and reports, the doors are in good condition overall. The doors



are assessed as having an average remaining useful life of 20 years. An allowance is recommended for the replacement of all doors between 2031 and 2046.

(balcony and patio doors – replacement: \$24,200; 2031 and 2036; 35 year cycle)

UNIT WINDOWS

There are approximately 160 windows and 40 lites. All are 'solid vinyl' framed insulated glazing units in vinyl frames.

In general, the windows are original to construction in 2003. The windows are reported to be, in good operating condition. Local issues with air and/or water leakage have been repaired in a few locations in the past five years.

The windows are assessed to have a remaining useful life beyond the evaluation period of 25 years. A budgetary allowance is recommended for incidental replacements based on 0.5% of the replacement cost of the total asset annually.

(unit windows – replacement allowance: \$1,500; annually)

CAULKING

The brick-to-window and brick-to-door caulking is critical to preserving the overall service life of the building. Caulking was in good condition overall where observed and is considered to have a remaining life of six years before inspection and repairs will be required.

It is recommended that all caulking be inspected and repaired where necessary every 7-10 years.

(caulking – inspection and repair: \$25,000; 2021; eight-year cycle)

6. Building Interiors

UNIT ENTRANCE AND COMMON ROOM DOORS

Entrance doors are wood hollow core doors in metal frames, with locksets and closers. The doors are generally original to the development. Doors and hardware are in good condition.

The remaining useful life of the unit entrance doors is beyond the evaluation period. An allowance is included in the **Interior Door Contingency Allowance** below for the replacement of individual doors and hardware as required.

STAIRWELL FIRE DOORS

There are passageway steel fire doors with wired glazing in metal frames to three stairwells at each level. The doors and hardware are original to the development and are in good condition.



The remaining useful life of the unit entrance doors is beyond the evaluation period. An allowance is included in the **Interior Door Contingency Allowance** below for the replacement of individual doors and hardware as required.

INTERIOR DOOR – CONTINGENCY ALLOWANCE

A budgetary allowance is included for unforeseen replacements of doors and hardware. The allowance is based on the replacement of 1.0% of the replacement cost of the doors and hardware annually.

(interior doors - contingency allowance: \$1,200; annually)

COMMON AREA FINISHES, 1st – 4th FLOORS

Interior common areas include corridors at all levels, lobbies and three stairwells. Floor finishes include carpet in corridors and stairwells, and ceramic tile at the main floor lobby. Walls are painted gypsum board and trim.

The common area finishes are in good condition overall. The original carpets were replaced in 2018 and painting was ongoing at the time of assessment. The lobby and entrance stair are original to construction and well maintained with minimal sign of wear.

Budgets are provided to replace carpets on a 16-year cycle and corridor painting every eight years; however, the actual timing is at the condominium's discretion.

*(interior finishes – replace carpet: \$63,000; 2034; 16-year cycle)
(corridor finishes – walls and ceilings: \$18,000; 2018; eight-year cycle)*

An allowance is included for refurbishments and updates at the condominium's discretion.

(lobby finishes - allowance: \$25,000; 2032; 30-year cycle)

COMMON AREA FINISHES – SERVICE ROOMS

Common areas include storage and service rooms and the garbage room. Finishes include minimal paintwork of concrete, concrete masonry and gypsum board walls, ceilings and floors.

All service rooms entered were in good condition. No issues are reported. In general, the finishes are serviceable and durable, and their upkeep is considered a maintenance item. A contingency allowance is included for repairs and for refreshing painting in garbage room.

(service room finishes - allowance: \$4,000; 2019; five-year cycle)



7. Interior Fixtures and Equipment

ELEVATOR

The building has an Otis hydraulic elevator with a 2500 lb. capacity, which accesses all five floor levels. The machine room is in the parking level.

The elevator was installed with original construction in 2003. Maintenance is contracted. No major upgrades have been required to date. The elevator is reported to be in good working condition.

The expected useful life of mechanical components, controls and cab interiors is 20-40 years, depending on the amount of use and other factors. Replacements are assessed to have a useful life of 30 years. A budgetary allowance is recommended for the replacement of the hydraulic fluid tank, and mechanical and controls refurbishments after 30 years of service. The cab is in good condition and is assessed to have a remaining life beyond the evaluation period.

An independent elevator condition assessment is recommended after 20 years of service and is recommended as part of the next update to the reserve fund study.

(elevator – replace controls: \$50,000; 2033; 30-year cycle)
(elevator – mechanical refurbishment: \$45,000; 2033; 30-year cycle)

FIXTURES AND FURNISHING

The entrance includes mail boxes and lobby furniture. These are in good condition; their upkeep is included as maintenance.

8. Mechanical Systems

PLUMBING

Plumbing systems include the water service entrance, hot and cold-water piping to and within the units, drains and plumbing ventilation. Back-flow prevention equipment is installed and maintained. A branch from the Domestic Cold Water main feeds the Domestic Hot Water; heating is indirectly by the boiler plant circulating the heating system water through heat exchange coils in six 120-gallon domestic hot water storage tanks.

No issue was identified with these systems. With an expected useful life of more than 50 years, no system refurbishment is expected to the plumbing service, distribution and venting piping systems or roof drainage system over the evaluation period. A contingency is recommended for refurbishments and is included in the **Mechanical Contingency Allowance** below. Plumbing equipment and fixtures in the units are the unit owners' responsibility.



Anticipated replacements to plumbing equipment include:

- Six Aero 120-USG storage heaters: estimated remaining service life 5-10 years
- DHW Circulating pumps: estimated remaining service life 5-10 years
- (Domestic Hot Water Tempering Valve: estimated remaining service life 5-10 years; below the evaluation threshold; may be included in the **Mechanical Contingency Allowance** below.)

(domestic hot water tanks - replacement: \$54,000; 2023; 25-year cycle)

(DHW Circulating pumps – replacement: \$3,000; 2023; 25-year cycle)

HEATING

The building is heated by a gas fired boiler plant which supplies heating system water to individual baseboard radiators in the units and common areas. The heating plant consists of two natural gas fired cast iron boilers connected into a common piping system with heating circulators pumping the heating water throughout the building. A separate circulator supplies heating water from the boiler plant to the domestic hot water storage tanks.

The boilers were installed with conversion to natural gas fuel in 2011. No problems were reported with the system.

The piping system is expected to last the life of the building provided that the heating system water receives regular chemical treatment.

Anticipated replacements include:

- Boiler #1 and Boiler #2, Camus 750,000Btu/h: estimated remaining service life 18 years
- Heating system 3-Way Valve. Estimated remaining service life 10 years
- Heating System circulating pumps. Estimated remaining service life 5-10 years

(boilers - replacement: \$60,000; 2036; 25-year cycle)

(heating system 3-way valve – replacement: \$7,200; 2028; 25-year cycle)

(heating system circulating pumps – replacement: \$6,000; 2023; 20-year cycle)

The common area heating includes unit heaters in the parking garage and baseboard heaters in stairwells. Refurbishments are included in the **Mechanical Contingency Allowance** below.

VENTILATION

Parking area emergency ventilation includes one fan which is controlled by gas sensors. The system is maintained and tested routinely and is reported to be in good working order.

Corridor ventilation is by a heat recovery unit located at the fifth floor, and distribution ductwork. No issues were reported. Overall, the equipment is considered to have an indefinite life. An allowance for refurbishment of controls, motor replacements and other minor capital items is included in the **Mechanical Contingency Allowance** below.



SPRINKLER SYSTEM

The building is protected by a wet pipe sprinkler system.

The system is inspected routinely and is reported to be in good condition. The system has an indefinite useful life, with occasional repairs anticipated and included in the **Mechanical Contingency Allowance** below.

MECHANICAL CONTINGENCY

A contingency allowance is recommended for less predictable major repairs to plumbing, heating, ventilation and sprinkler systems.

(mechanical – contingency allowance: \$3,000; 2022; five-year cycle)

9. Electrical Systems

POWER SUPPLY AND DISTRIBUTION

Power supply is underground to 600A 3-phase 4-wire switch in the Electrical Room. The unit and house meters are in the Electrical Room. Distribution wiring to and within each unit is the condominium's responsibility.

No issue was reported or observed. The system is assessed to have a remaining useful life beyond the evaluation period. Any repairs required over the evaluation period may be included in the **Electrical Allowance** below.

Electrical equipment in each unit, including the unit switch and circuit breaker panel, and heating, lighting and other electrical fixtures, are the responsibility of each unit owner.

LIGHTING

Corridor and lobby lighting include wall-mounted sconces, pot lights and ceiling-mounted fixtures. The garage and stairwells have fluorescent tube fixtures.

The interior lighting is in good condition overall. A budgetary allowance is included for the replacement of lighting with common area finishes, based on an expected useful life of 20-30 years and timing to match other corridor refurbishments, at the discretion of the condominium.

(interior lighting – replacements: \$12,000; 2026; 30-year cycle)

Emergency lighting and exit lights are in good condition overall; upkeep is included in the **Electrical Allowance** below.

Exterior lighting includes fixtures at balconies, the entrance and exits. Units were replaced recently and are in good condition. An allowance for replacements included in the **Electrical Allowance** below.



AUTOMATIC DOOR OPERATORS

Automatic door operators were added to all elevator lobby doors and the building entrance, circa 2016. The operators are in good condition. A budget is included for the replacement of drives and controls based on an average useful life of 20 years.

(door operators – replacement allowance: \$7,200; 2036; 20-year cycle)

ELECTRICAL/ELECTRONIC EQUIPMENT

The entrance is equipped with EST Quickstart series fire panel and an intercom system.

In general, the expected useful life of the electrical and electronic fire protection control equipment is approximately 30 years. The intercom was replaced recently and is not expected to require replacement during the evaluation period. The fire panel is original to construction in 2003: an allowance is included for replacement in 2033.

(fire protection controls – replacement allowance: \$7,500; 2033; 30-year cycle)

An electronic keying system was added in 2015 and is managed as a maintenance item.

Smoke detectors and other sensors throughout the building are budgeted to be replaced as an annual maintenance item or as part of the **Electrical Allowance** below.

ELECTRICAL ALLOWANCE

An allowance is recommended for refurbishments to distribution wiring, exterior and emergency lighting and fire alarm systems, and for unforeseen major repairs.

(electrical – allowance: \$3,000; 2020; five-year cycle)

10. General

EXPENSES – YEAR TO DATE

The major year-to-date expenses at the time of assessment include the replacement the wood fence on the northwest boundary and carpets throughout the building.

(expenses – year to date: \$50,000)

PROFESSIONAL FEES

Reserve fund study and update costs, engineering and project management are budgeted as general costs.

(engineering – reports: \$3,000; 2018; five-year cycle)



PROJECTED EXPENDITURES

TABLE A – SCHEDULE OF COMPONENTS AND CAPITAL REQUIREMENTS (PRESENT COST)

Appendix Table A presents a summary of components their capital requirements over the 25-year evaluation period.

Work item quantities are estimated by:

- LS lump sum
- Unit number of condominium units affected
- Item number of items included
- LF linear feet
- SF square foot

The table indicates the estimated present cost and year for the action, and the expected useful life or frequency of the cost.

The table also indicates the estimated total cost for each item over the evaluation period. This column provides an indication of the relative significance of each item in the long-term.

As shown in **Table A**, the most significant costs over the evaluation period are replacements of roofing, balconies, doors and windows, interior finishes and mechanical equipment. The majority of these costs occur in the medium- or long-term.

Cost Estimates

Unless otherwise noted, the costs are estimated as the current value regardless of when the activity is to be required.

All amounts include 15% Harmonized Sales Tax.

Estimate of Timing

The estimated timing of items of work are based on the assessed remaining useful life of the item. Remaining useful life is determined by visual assessment of the physical condition of the item, an assessment of the rate of deterioration, and assessment of the condition at which the item will require replacement or refurbishment. Estimates for the frequency of repetition of the item are based on published standards for expected useful life, industry experience, an assessment of the service condition at the site, and consultation with condominium and property managers.



TABLE B – PROJECTED EXPENDITURES

Appendix Table B presents the assessed cost for each item for each year of the evaluation period.

The table includes the effect of inflation.

Inflation

Future costs are calculated as the current cost factored by the inflation rate, compounded over the associated number of years.

An inflation rate of 1.70% is estimated from a review of the average yearly inflation rate (Consumer Price Index – All Items) for Nova Scotia over the past ten years, as tabulated below.

Year	Change in Consumer Price Index ³
2008	3.00
2009	-0.20
2010	2.16
2011	3.81
2012	1.96
2013	1.28
2014	1.66
2015	0.39
2016	1.24
2017	1.70
average	1.70

An inflation rate of 2.0% is used for the financial analysis.

³ Source: NS Finance <http://www.novascotia.ca/finance/statistics/topic.asp?fto=21u>



RESERVE FUND

RESERVE FUND STATUS

The financial year of the Condominium is January 1st - December 31st.

The financial statements indicate a reserve fund balance of \$471,438 at the start of the current financial year. Contributions to the reserve fund in the current financial year are budgeted to be \$68,000.

RESERVE FUND INTEREST RATE

Capital held in the reserve fund will earn interest.

An average rate of interest of 1.04% may be derived using the ten-year average of the bank rate and treasury bills issued by the Bank of Canada, as tabulated below.

Year	Bank rate (last Wed. of the month) ⁴	Treasury bill auction (av. yields – 3 month) ⁵
2008	3.21	4.60
2009	0.65	2.30
2010	0.58	0.32
2011	1.25	0.58
2012	1.25	0.91
2013	1.25	0.95
2014	1.25	0.97
2015	0.88	0.91
2016	0.75	0.50
2017	0.98	0.71
average	1.20	0.87

Based on actual investments - and not all restricted funds being invested - an interest rate of 1.0% is used in the analysis.

The interest on money held in the reserve fund is estimated as interest on the starting balance over the full year plus interest for six months on the contributions less the expenditures in the year.

⁴ Source: Bank of Canada <http://www.bankofcanada.ca/rates/interest-rates/canadian-interest-rates/>

⁵ Source: Bank of Canada <http://www.bankofcanada.ca/rates/interest-rates/t-bill-yields/>



TABLE C – PROJECTED CASH FLOW

Appendix Table C presents the recommended budget for expenditures and contributions.

The total projected expenditures for each year are as detailed in **Table B – Forecast Expenditures** and include the effects of inflation.

In the scenario presented in **Table C**, interest earned stays in the reserve fund.

The projected balance at year-end is the sum of the starting balance, contributions and interest, less expenses. The balance at the start of the year is the balance at the end of the preceding year. The table includes interest on funds at the rate noted above.

As shown in **Table C**, the recommended contribution in 2018 is \$68,000, as budgeted. The recommended contributions in Years 2 to 6 (2019 to 2023) is held at \$68,000. Contributions in future years are escalated 2% annually to reflect inflation.

The contributions are anticipated to provide a stable level of funding for the long-term upkeep of the condominium's common elements, subject to the recommendations of future updates to the study.

TABLES D AND E – OPTIONAL PROJECTED CASH FLOW

The Regulations require alternative cash flow options be presented. **Tables D** and **E**, respectively, present scenarios in which interest is removed for operations, and contributions are reduced by the interest reported in the previous year. In both cases, contributions must be larger to achieve long-term funds at the same level as shown in **Table C**.

The funding described in **Table C** is recommended as the simplest means of financial planning for the Condominium and its Unit Owners.

TABLE F: MASTER RESERVE FUND SPREAD SHEET

As required by the Regulations, the Master Reserve Fund Spread Sheet indicates the contribution that would be required to fund reserves for each component's future work individually. The table calculates a total funding requirement for all components in each year and may be used for comparison with the recommended annual contribution.

(The costs, funding requirements, contributions and calculated balances shown in this table do not include effects of inflation, interest or escalation.)



RESERVE FUND STATUS CERTIFICATE

SUMMARY REPORT

A reserve fund study of Halifax County Condominium Corporation No. 241 "Victorian Estates", was conducted by Bluenose Engineering in 2018 at the request of Canmar Services.

Victorian Estates is a medium-rise condominium in downtown Dartmouth, built in 2003. The building includes 44 residential units on four floors above an entrance and parking level. The entrance and parking level are concrete framed; residential floors and the roof are wood framed. The exterior walls include a brick exterior façade and vinyl-framed windows and doors.

The site and building are in good condition overall.

The reserve fund study makes projections for future repairs or replacements: these are summarized by component in **Appendix Table A**. The projected expenditures are presented by year in **Table B** for each year of the evaluation period.

The financial year of the Condominium is January 1st - December 31st. The financial statements indicate a reserve fund balance of \$471,438 at the start of the current financial year. Contributions to the reserve fund in the current financial year are budgeted to be \$68,000.

RECOMMENDATIONS

A schedule of recommended refurbishments is provided in **Table A**.

As shown in **Table C**, the recommended contribution in 2018 is \$68,000, as budgeted. Recommended contributions in future years are identified in **Table C**. Alternative scenarios are presented in **Tables D** and **E**.

OPINION

Based on the observations and analysis made in the preparation of this Reserve Fund Study, it is expected the funding recommended in **Table C**, or included in optional **Tables D** or **E** of this report, will be adequate to offset the expenditures for the major repair or replacement of the components included in the condominium's common elements.

Signed: **J Fletcher, P.Eng.**
Date: **December 6th, 2018**

BLUENOSE ENGINEERING

Unit 160 Box 374, 3650 Hammonds Plains Road,
Upper Tantallon, NS. B3Z 4R3



APPENDIX – COST TABLES

TABLE A: SCHEDULE OF COMPONENTS AND CAPITAL REQUIREMENTS

TABLE B: FORECAST EXPENDITURES

TABLE C: PROJECTED CASH FLOW (INTEREST STAYS IN FUND)

TABLE D: OPTIONAL PROJECTED CASH FLOW (interest removed for operations)

TABLE E: OPTIONAL PROJECTED CASH FLOW (contributions are reduced by interest)

TABLE F: MASTER RESERVE FUND SPREAD SHEET



TABLE A

Schedule of Components and Capital Requirements

No.	Item Description - Action	Cost				Timing			Cost -25 years (\$)
		unit	number	unit cost	item cost	Year Required	RUL ¹ (years)	EUL ² (years)	
1	Site								
1.1	concrete walls - repair and paint	LS	1	8,000	8,000	2022	4	6	32,000
1.2	steel railings - repair and paint	LS	1	10,000	10,000	2019	1	3	80,000
1.3	wood fence - replacement allowance	LF	200	100	20,000	2042	24	25	20,000
1.4	landscaping - allowance	LS	1	5,000	5,000	2020	2	5	25,000
1.5	site – contingency allowance	LS	1	5,000	5,000	2021	3	4	30,000
2	Building Structures								
2.1	balcony soffits – replacement allowance	item	11	3,000	33,000	2020	2	25	99,000
2.2	balcony decks – replacement allowance	item	33	2,000	66,000	2032	14	30	66,000
2.3	structure – contingency allowance	LS	1	4,000	4,000	2020	2	5	20,000
3	Roofs								
3.1	roof - replacement allowance	SF	16,000	15.00	240,000	2028	10	25	240,000
3.2	mansard roof – inspections and repairs	LS	1	12,000	12,000	2018	0	5	36,000
3.3	mansard roof – replacement allowance	SF	7,500	12.00	90,000	2033	15	30	90,000
4	Exterior Walls								
4.1	brickwork – refurbishment allowance	LS	1	10,000	10,000	2020	2	10	30,000
5	Exterior Doors and Windows								
5.1	entry and exits – replacement allowance	LS	1	32,000	32,000	2038	20	35	32,000
5.2	garage doors – replacement allowance	LS	1	3,600	3,600	2023	5	20	7,200
5.3	unit balcony doors – replacement allow.	Item	11	2,200	24,200	2031	13	35	72,600
5.4	unit windows - replacement allowance	LS	1	1,500	1,500	2018	0	40	37,500
5.5	caulking – inspection and repair	LS	1	25,000	25,000	2021	3	8	75,000
6	Building Interiors								
6.1	interior doors - contingency allowance	LS	1	1,200	1,200	2018	0	40	30,000
6.2	interior finishes - replace carpet	SF	7,000	9.00	63,000	2034	16	16	126,000
6.3	corridor finishes - walls and ceilings	SF	20,000	0.90	18,000	2018	0	8	72,000
6.4	lobby finishes - allowance	LS	1	25,000	25,000	2032	14	30	25,000
6.5	service room finishes - allowance	LS	1	4,000	4,000	2019	1	5	20,000
7	Interior Fixtures and Equipment								
7.1	elevator – replace controls	LS	1	50,000	50,000	2033	15	30	50,000
7.2	elevator – mechanical refurbishment	LS	1	45,000	45,000	2033	15	30	45,000
8	Mechanical								
8.1	domestic hot water tanks - replacement	Item	6	9,000	54,000	2023	5	25	54,000
8.2	DHW Circulating pumps – replacement	LS	1	3,000	3,000	2023	5	25	3,000
8.3	boilers – replacement	item	2	30,000	60,000	2036	18	25	60,000
8.4	heating system 3-way valve – replacement	LS	1	7,200	7,200	2028	10	25	7,200
8.5	heating system circ. pumps – replacement	item	4	1,500	6,000	2023	5	20	6,000
8.6	mechanical – contingency allowance	LS	1	3,000	3,000	2022	4	5	15,000
9	Electrical								
9.1	interior lighting – replacements	LS	1	12,000	12,000	2026	8	30	12,000
9.2	door operators – replacement allowance	item	6	1,200	7,200	2036	18	20	7,200
9.3	fire protection controls – replacement	LS	1	7,500	7,500	2033	15	30	7,500
9.4	electrical – contingency allowance	LS	1	3,000	3,000	2020	2	5	15,000
10	General								
10.1	expenses – year to date	LS	1	50,000	50,000	2018	0		50,000
10.2	reserve fund – reports	LS	1	3,000	3,000	2018	0	5	15,000
TOTAL:									1,612,200

¹ 'Remaining Useful Life' (RUL) is time remaining before the action is anticipated to be required

² 'Expected Useful Life' (EUL) is the duration for which the action is considered effective, i.e., life cycle

TABLE B

Forecast Expenditures

sheet 1

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)				
			2018	2019	2020	2021	2022
1	Site						
1.1	concrete walls - repair and paint	41,762	-	-	-	-	8,659
1.2	steel railings - repair and paint	101,393	-	10,200	-	-	10,824
1.3	wood fence - replacement allowance	32,169	-	-	-	-	-
1.4	landscaping - allowance	32,018	-	-	5,202	-	-
1.5	site – contingency allowance	39,164	-	-	-	5,306	-
2	Building Structures						
2.1	balcony soffits – replacement allowance	111,723	-	-	34,333	-	-
2.2	balcony decks – replacement allowance	87,086	-	-	-	-	-
2.3	structure – contingency allowance	25,614	-	-	4,162	-	-
3	Roofs						
3.1	roof - replacement allowance	292,559	-	-	-	-	-
3.2	mansard roof – inspections and repairs	39,877	12,000	-	-	-	-
3.3	mansard roof – replacement allowance	121,128	-	-	-	-	-
4	Exterior Walls						
4.1	brickwork – refurbishment allowance	38,546	-	-	10,404	-	-
5	Exterior Doors and Windows						
5.1	entry and exits – replacement allowance	47,550	-	-	-	-	-
5.2	garage doors – replacement allowance	8,820	-	-	-	-	-
5.3	unit balcony doors – replacement allow.	104,030	-	-	-	-	-
5.4	unit windows - replacement allowance	48,045	1,500	1,530	1,561	1,592	1,624
5.5	caulking – inspection and repair	94,035	-	-	-	26,530	-
6	Building Interiors						
6.1	interior doors - contingency allowance	38,436	1,200	1,224	1,248	1,273	1,299
6.2	interior finishes - replace carpet	149,485	63,000	-	-	-	-
6.3	corridor finishes - walls and ceilings	92,752	18,000	-	-	-	-
6.4	lobby finishes - allowance	32,987	-	-	-	-	-
6.5	service room finishes - allowance	25,112	-	4,080	-	-	-
7	Interior Fixtures and Equipment						
7.1	elevator – replace controls	67,293	-	-	-	-	-
7.2	elevator – mechanical refurbishment	60,564	-	-	-	-	-
8	Mechanical						
8.1	domestic hot water tanks - replacement	59,620	-	-	-	-	-
8.2	DHW Circulating pumps – replacement	3,312	-	-	-	-	-
8.3	boilers – replacement	85,695	-	-	-	-	-
8.4	heating system 3-way valve – replacement	8,777	-	-	-	-	-
8.5	heating system circ. pumps – replacement	6,624	-	-	-	-	-
8.6	mechanical – contingency allowance	19,987	-	-	-	-	3,247
9	Electrical						
9.1	interior lighting – replacements	14,060	-	-	-	-	-
9.2	door operators – replacement allowance	10,283	-	-	-	-	-
9.3	fire protection controls – replacement	10,094	-	-	-	-	-
9.4	electrical – contingency allowance	19,211	-	-	3,121	-	-
10	General						
10.1	expenses – year to date	50,000	50,000	-	-	-	-
10.2	reserve fund – reports	18,465	3,000	-	-	-	-
Total Annual Expenditure:		2,038,277	148,700	17,034	60,031	34,702	25,654

TABLE B

Forecast Expenditures

sheet 2

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2023	2024	2025	2026	2027	
1	Site							
1.1	concrete walls - repair and paint	41,762	-	-	-	-	-	-
1.2	steel railings - repair and paint	101,393	-	-	11,487	-	-	-
1.3	wood fence - replacement allowance	32,169	-	-	-	-	-	-
1.4	landscaping - allowance	32,018	-	-	5,743	-	-	-
1.5	site – contingency allowance	39,164	-	-	5,743	-	-	-
2	Building Structures							
2.1	balcony soffits – replacement allowance	111,723	-	37,163	-	-	-	-
2.2	balcony decks – replacement allowance	87,086	-	-	-	-	-	-
2.3	structure – contingency allowance	25,614	-	-	4,595	-	-	-
3	Roofs							
3.1	roof - replacement allowance	292,559	-	-	-	-	-	-
3.2	mansard roof – inspections and repairs	39,877	13,249	-	-	-	-	-
3.3	mansard roof – replacement allowance	121,128	-	-	-	-	-	-
4	Exterior Walls							
4.1	brickwork – refurbishment allowance	38,546	-	-	-	-	-	-
5	Exterior Doors and Windows							
5.1	entry and exits – replacement allowance	47,550	-	-	-	-	-	-
5.2	garage doors – replacement allowance	8,820	3,975	-	-	-	-	-
5.3	unit balcony doors – replacement allow.	104,030	-	-	-	-	-	-
5.4	unit windows - replacement allowance	48,045	1,656	1,689	1,723	1,757	1,793	
5.5	caulking – inspection and repair	94,035	-	-	-	-	-	-
6	Building Interiors							
6.1	interior doors - contingency allowance	38,436	1,325	1,351	1,378	1,406	1,434	
6.2	interior finishes - replace carpet	149,485	-	-	-	-	-	
6.3	corridor finishes - walls and ceilings	92,752	-	-	-	21,090	-	
6.4	lobby finishes - allowance	32,987	-	-	-	-	-	
6.5	service room finishes - allowance	25,112	-	4,505	-	-	-	
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	67,293	-	-	-	-	-	
7.2	elevator – mechanical refurbishment	60,564	-	-	-	-	-	
8	Mechanical							
8.1	domestic hot water tanks - replacement	59,620	59,620	-	-	-	-	
8.2	DHW Circulating pumps – replacement	3,312	3,312	-	-	-	-	
8.3	boilers – replacement	85,695	-	-	-	-	-	
8.4	heating system 3-way valve – replacement	8,777	-	-	-	-	-	
8.5	heating system circ. pumps – replacement	6,624	6,624	-	-	-	-	
8.6	mechanical – contingency allowance	19,987	-	-	-	-	3,585	
9	Electrical							
9.1	interior lighting – replacements	14,060	-	-	-	14,060	-	
9.2	door operators – replacement allowance	10,283	-	-	-	-	-	
9.3	fire protection controls – replacement	10,094	-	-	-	-	-	
9.4	electrical – contingency allowance	19,211	-	-	3,446	-	-	
10	General							
10.1	expenses – year to date	50,000	-	-	-	-	-	
10.2	reserve fund – reports	18,465	3,312	-	-	-	-	
Total Annual Expenditure:		2,038,277	93,074	44,709	34,116	38,313	6,812	

TABLE B

Forecast Expenditures

sheet 3

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)				
			2028	2029	2030	2031	2032
1	Site						
1.1	concrete walls - repair and paint	41,762	9,752	-	-	-	-
1.2	steel railings - repair and paint	101,393	12,190	-	-	12,936	-
1.3	wood fence - replacement allowance	32,169	-	-	-	-	-
1.4	landscaping - allowance	32,018	-	-	6,341	-	-
1.5	site – contingency allowance	39,164	-	6,217	-	-	-
2	Building Structures						
2.1	balcony soffits – replacement allowance	111,723	40,227	-	-	-	-
2.2	balcony decks – replacement allowance	87,086	-	-	-	-	87,086
2.3	structure – contingency allowance	25,614	-	-	5,073	-	-
3	Roofs						
3.1	roof - replacement allowance	292,559	292,559	-	-	-	-
3.2	mansard roof – inspections and repairs	39,877	14,628	-	-	-	-
3.3	mansard roof – replacement allowance	121,128	-	-	-	-	-
4	Exterior Walls						
4.1	brickwork – refurbishment allowance	38,546	-	-	12,682	-	-
5	Exterior Doors and Windows						
5.1	entry and exits – replacement allowance	47,550	-	-	-	-	-
5.2	garage doors – replacement allowance	8,820	-	-	-	-	-
5.3	unit balcony doors – replacement allow.	104,030	-	-	-	31,305	-
5.4	unit windows - replacement allowance	48,045	1,828	1,865	1,902	1,940	1,979
5.5	caulking – inspection and repair	94,035	-	31,084	-	-	-
6	Building Interiors						
6.1	interior doors - contingency allowance	38,436	1,463	1,492	1,522	1,552	1,583
6.2	interior finishes - replace carpet	149,485	-	-	-	-	-
6.3	corridor finishes - walls and ceilings	92,752	-	-	-	-	-
6.4	lobby finishes - allowance	32,987	-	-	-	-	32,987
6.5	service room finishes - allowance	25,112	-	4,973	-	-	-
7	Interior Fixtures and Equipment						
7.1	elevator – replace controls	67,293	-	-	-	-	-
7.2	elevator – mechanical refurbishment	60,564	-	-	-	-	-
8	Mechanical						
8.1	domestic hot water tanks - replacement	59,620	-	-	-	-	-
8.2	DHW Circulating pumps – replacement	3,312	-	-	-	-	-
8.3	boilers – replacement	85,695	-	-	-	-	-
8.4	heating system 3-way valve – replacement	8,777	8,777	-	-	-	-
8.5	heating system circ. pumps – replacement	6,624	-	-	-	-	-
8.6	mechanical – contingency allowance	19,987	-	-	-	-	3,958
9	Electrical						
9.1	interior lighting – replacements	14,060	-	-	-	-	-
9.2	door operators – replacement allowance	10,283	-	-	-	-	-
9.3	fire protection controls – replacement	10,094	-	-	-	-	-
9.4	electrical – contingency allowance	19,211	-	-	3,805	-	-
10	General						
10.1	expenses – year to date	50,000	-	-	-	-	-
10.2	reserve fund – reports	18,465	3,657	-	-	-	-
Total Annual Expenditure:		2,038,277	385,080	45,632	31,326	47,734	127,594

TABLE B

Forecast Expenditures

sheet 4

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)				
			2033	2034	2035	2036	2037
1	Site						
1.1	concrete walls - repair and paint	41,762	-	10,982	-	-	-
1.2	steel railings - repair and paint	101,393	-	13,728	-	-	14,568
1.3	wood fence - replacement allowance	32,169	-	-	-	-	-
1.4	landscaping - allowance	32,018	-	-	7,001	-	-
1.5	site – contingency allowance	39,164	6,729	-	-	-	7,284
2	Building Structures						
2.1	balcony soffits – replacement allowance	111,723	-	-	-	-	-
2.2	balcony decks – replacement allowance	87,086	-	-	-	-	-
2.3	structure – contingency allowance	25,614	-	-	5,601	-	-
3	Roofs						
3.1	roof - replacement allowance	292,559	-	-	-	-	-
3.2	mansard roof – inspections and repairs	39,877	-	-	-	-	-
3.3	mansard roof – replacement allowance	121,128	121,128	-	-	-	-
4	Exterior Walls						
4.1	brickwork – refurbishment allowance	38,546	-	-	-	-	-
5	Exterior Doors and Windows						
5.1	entry and exits – replacement allowance	47,550	-	-	-	-	-
5.2	garage doors – replacement allowance	8,820	4,845	-	-	-	-
5.3	unit balcony doors – replacement allow.	104,030	-	-	-	34,564	-
5.4	unit windows - replacement allowance	48,045	2,019	2,059	2,100	2,142	2,185
5.5	caulking – inspection and repair	94,035	-	-	-	-	36,420
6	Building Interiors						
6.1	interior doors - contingency allowance	38,436	1,615	1,647	1,680	1,714	1,748
6.2	interior finishes - replace carpet	149,485	-	86,485	-	-	-
6.3	corridor finishes - walls and ceilings	92,752	-	24,710	-	-	-
6.4	lobby finishes - allowance	32,987	-	-	-	-	-
6.5	service room finishes - allowance	25,112	-	5,491	-	-	-
7	Interior Fixtures and Equipment						
7.1	elevator – replace controls	67,293	67,293	-	-	-	-
7.2	elevator – mechanical refurbishment	60,564	60,564	-	-	-	-
8	Mechanical						
8.1	domestic hot water tanks - replacement	59,620	-	-	-	-	-
8.2	DHW Circulating pumps – replacement	3,312	-	-	-	-	-
8.3	boilers – replacement	85,695	-	-	-	85,695	-
8.4	heating system 3-way valve – replacement	8,777	-	-	-	-	-
8.5	heating system circ. pumps – replacement	6,624	-	-	-	-	-
8.6	mechanical – contingency allowance	19,987	-	-	-	-	4,370
9	Electrical						
9.1	interior lighting – replacements	14,060	-	-	-	-	-
9.2	door operators – replacement allowance	10,283	-	-	-	10,283	-
9.3	fire protection controls – replacement	10,094	10,094	-	-	-	-
9.4	electrical – contingency allowance	19,211	-	-	4,201	-	-
10	General						
10.1	expenses – year to date	50,000	-	-	-	-	-
10.2	reserve fund – reports	18,465	4,038	-	-	-	-
Total Annual Expenditure:		2,038,277	278,326	145,103	20,584	134,398	66,576

TABLE B

Forecast Expenditures

sheet 5

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2038	2039	2040	2041	2042	
1	Site							
1.1	concrete walls - repair and paint	41,762	-	-	12,368	-	-	
1.2	steel railings - repair and paint	101,393	-	-	15,460	-	-	
1.3	wood fence - replacement allowance	32,169	-	-	-	-	32,169	
1.4	landscaping - allowance	32,018	-	-	7,730	-	-	
1.5	site – contingency allowance	39,164	-	-	-	7,884	-	
2	Building Structures							
2.1	balcony soffits – replacement allowance	111,723	-	-	-	-	-	
2.2	balcony decks – replacement allowance	87,086	-	-	-	-	-	
2.3	structure – contingency allowance	25,614	-	-	6,184	-	-	
3	Roofs							
3.1	roof - replacement allowance	292,559	-	-	-	-	-	
3.2	mansard roof – inspections and repairs	39,877	-	-	-	-	-	
3.3	mansard roof – replacement allowance	121,128	-	-	-	-	-	
4	Exterior Walls							
4.1	brickwork – refurbishment allowance	38,546	-	-	15,460	-	-	
5	Exterior Doors and Windows							
5.1	entry and exits – replacement allowance	47,550	47,550	-	-	-	-	
5.2	garage doors – replacement allowance	8,820	-	-	-	-	-	
5.3	unit balcony doors – replacement allow.	104,030	-	-	-	38,161	-	
5.4	unit windows - replacement allowance	48,045	2,229	2,273	2,319	2,365	2,413	
5.5	caulking – inspection and repair	94,035	-	-	-	-	-	
6	Building Interiors							
6.1	interior doors - contingency allowance	38,436	1,783	1,819	1,855	1,892	1,930	
6.2	interior finishes - replace carpet	149,485	-	-	-	-	-	
6.3	corridor finishes - walls and ceilings	92,752	-	-	-	-	28,952	
6.4	lobby finishes - allowance	32,987	-	-	-	-	-	
6.5	service room finishes - allowance	25,112	-	6,063	-	-	-	
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	67,293	-	-	-	-	-	
7.2	elevator – mechanical refurbishment	60,564	-	-	-	-	-	
8	Mechanical							
8.1	domestic hot water tanks - replacement	59,620	-	-	-	-	-	
8.2	DHW Circulating pumps – replacement	3,312	-	-	-	-	-	
8.3	boilers – replacement	85,695	-	-	-	-	-	
8.4	heating system 3-way valve – replacement	8,777	-	-	-	-	-	
8.5	heating system circ. pumps – replacement	6,624	-	-	-	-	-	
8.6	mechanical – contingency allowance	19,987	-	-	-	-	4,825	
9	Electrical							
9.1	interior lighting – replacements	14,060	-	-	-	-	-	
9.2	door operators – replacement allowance	10,283	-	-	-	-	-	
9.3	fire protection controls – replacement	10,094	-	-	-	-	-	
9.4	electrical – contingency allowance	19,211	-	-	4,638	-	-	
10	General							
10.1	expenses – year to date	50,000	-	-	-	-	-	
10.2	reserve fund – reports	18,465	4,458	-	-	-	-	
Total Annual Expenditure:		2,038,277	56,020	10,155	66,013	50,303	70,289	

TABLE C

Projected Cash Flow

inflation rate: 2.00%
 interest rate: 1.00%
 escalation of contributions: 2.00%

- interest stays in Reserve Fund

Year	Expenses (inflated)	Contributions		Interest #REF!	Balance	
		amount	% change		year start	year end
1 2018	\$148,700	\$68,000		\$4,311	\$471,438	\$395,049
2 2019	\$17,034	\$68,000	0.00%	\$4,205	\$395,049	\$450,220
3 2020	\$60,031	\$68,000	0.00%	\$4,542	\$450,220	\$462,731
4 2021	\$34,702	\$68,000	0.00%	\$4,794	\$462,731	\$500,823
5 2022	\$25,654	\$68,000	0.00%	\$5,220	\$500,823	\$548,390
6 2023	\$93,074	\$68,000	0.00%	\$5,359	\$548,390	\$528,674
7 2024	\$44,709	\$69,360	2.00%	\$5,410	\$528,674	\$558,736
8 2025	\$34,116	\$70,747	2.00%	\$5,771	\$558,736	\$601,137
9 2026	\$38,313	\$72,162	2.00%	\$6,181	\$601,137	\$641,167
10 2027	\$6,812	\$73,605	2.00%	\$6,746	\$641,167	\$714,706
11 2028	\$385,080	\$75,077	2.00%	\$5,597	\$714,706	\$410,300
12 2029	\$45,632	\$76,579	2.00%	\$4,258	\$410,300	\$445,505
13 2030	\$31,326	\$78,111	2.00%	\$4,689	\$445,505	\$496,979
14 2031	\$47,734	\$79,673	2.00%	\$5,129	\$496,979	\$534,047
15 2032	\$127,594	\$81,266	2.00%	\$5,109	\$534,047	\$492,829
16 2033	\$278,326	\$82,892	2.00%	\$3,951	\$492,829	\$301,346
17 2034	\$145,103	\$84,549	2.00%	\$2,711	\$301,346	\$243,503
18 2035	\$20,584	\$86,240	2.00%	\$2,763	\$243,503	\$311,923
19 2036	\$134,398	\$87,965	2.00%	\$2,887	\$311,923	\$268,377
20 2037	\$66,576	\$89,725	2.00%	\$2,800	\$268,377	\$294,325
21 2038	\$56,020	\$91,519	2.00%	\$3,121	\$294,325	\$332,945
22 2039	\$10,155	\$93,349	2.00%	\$3,745	\$332,945	\$419,885
23 2040	\$66,013	\$95,216	2.00%	\$4,345	\$419,885	\$453,432
24 2041	\$50,303	\$97,121	2.00%	\$4,768	\$453,432	\$505,019
25 2042	\$70,289	\$99,063	2.00%	\$5,194	\$505,019	\$538,987
Total:	\$2,038,277	\$1,992,221		\$113,605		

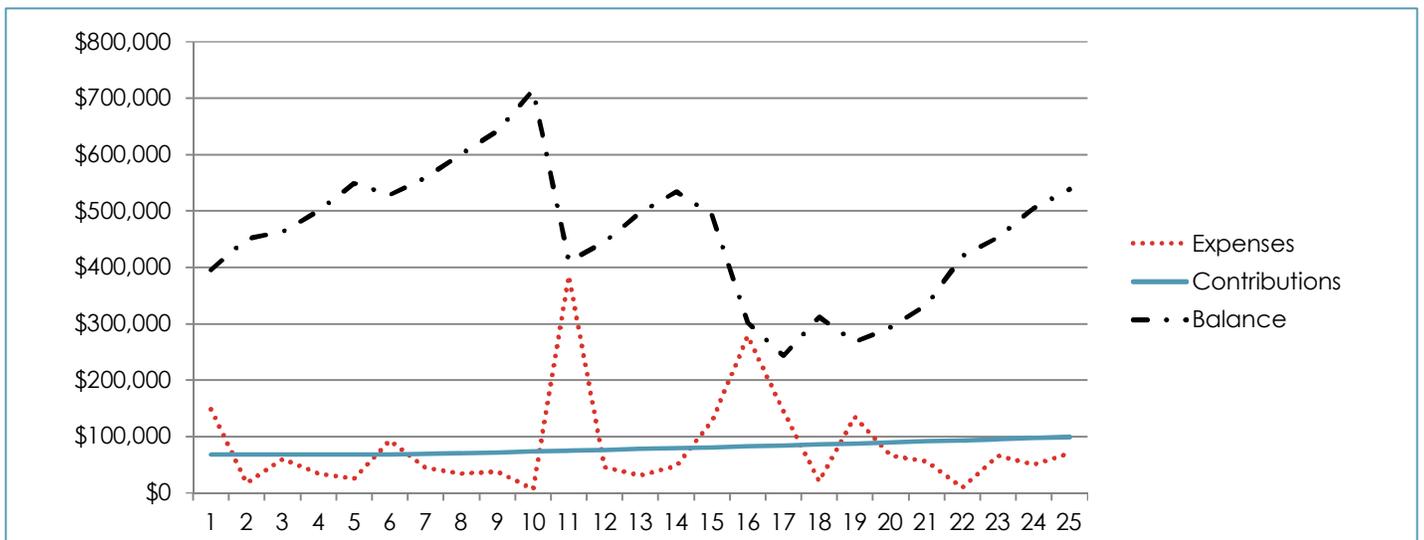


TABLE D

Projected Cash Flow

inflation rate: 2.00%
 interest rate: 1.00%
 escalation of contributions: 2.00%

(Optional): interest removed for Operations

Year	Expenses (inflated)	Contributions		Interest #REF!	Balance	
		amount	% change		year start	year end
1 2018	\$148,700	\$68,000		\$4,311	\$471,438	\$390,738
2 2019	\$17,034	\$68,000	0.00%	\$4,162	\$390,738	\$441,704
3 2020	\$60,031	\$68,000	0.00%	\$4,457	\$441,704	\$449,673
4 2021	\$34,702	\$68,000	0.00%	\$4,663	\$449,673	\$482,971
5 2022	\$25,654	\$68,000	0.00%	\$5,041	\$482,971	\$525,318
6 2023	\$93,074	\$68,000	0.00%	\$5,128	\$525,318	\$500,244
7 2024	\$44,709	\$69,360	2.00%	\$5,126	\$500,244	\$524,895
8 2025	\$34,116	\$70,747	2.00%	\$5,432	\$524,895	\$561,526
9 2026	\$38,313	\$72,162	2.00%	\$5,785	\$561,526	\$595,375
10 2027	\$6,812	\$73,605	2.00%	\$6,288	\$595,375	\$662,169
11 2028	\$385,080	\$75,077	2.00%	\$5,072	\$662,169	\$352,166
12 2029	\$45,632	\$76,579	2.00%	\$3,676	\$352,166	\$383,113
13 2030	\$31,326	\$78,111	2.00%	\$4,065	\$383,113	\$429,898
14 2031	\$47,734	\$79,673	2.00%	\$4,459	\$429,898	\$461,837
15 2032	\$127,594	\$81,266	2.00%	\$4,387	\$461,837	\$415,509
16 2033	\$278,326	\$82,892	2.00%	\$3,178	\$415,509	\$220,076
17 2034	\$145,103	\$84,549	2.00%	\$1,898	\$220,076	\$159,522
18 2035	\$20,584	\$86,240	2.00%	\$1,923	\$159,522	\$225,178
19 2036	\$134,398	\$87,965	2.00%	\$2,020	\$225,178	\$178,746
20 2037	\$66,576	\$89,725	2.00%	\$1,903	\$178,746	\$201,894
21 2038	\$56,020	\$91,519	2.00%	\$2,196	\$201,894	\$237,393
22 2039	\$10,155	\$93,349	2.00%	\$2,790	\$237,393	\$320,587
23 2040	\$66,013	\$95,216	2.00%	\$3,352	\$320,587	\$349,790
24 2041	\$50,303	\$97,121	2.00%	\$3,732	\$349,790	\$396,608
25 2042	\$70,289	\$99,063	2.00%	\$4,110	\$396,608	\$425,382
Total:	\$2,038,277	\$1,992,221		\$99,153		

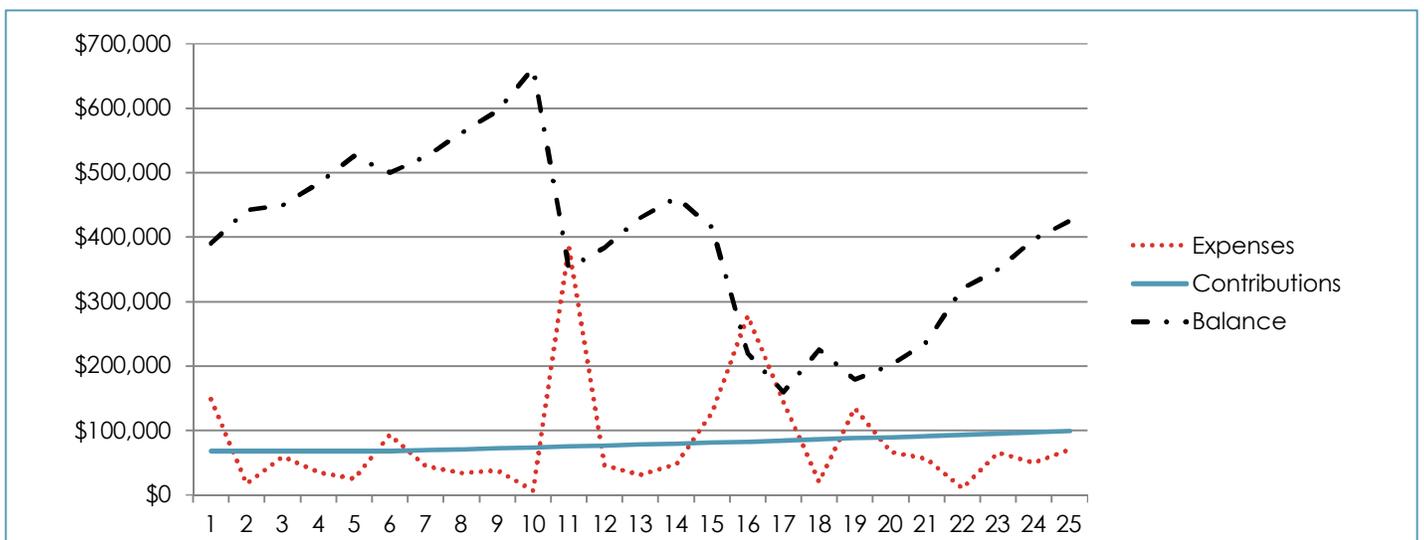


TABLE E

Projected Cash Flow

inflation rate: 2.00%
 interest rate: 1.00%
 escalation of contributions: 2.00%

(Optional): contributions are reduced by interest

Year	Expenses (inflated)	Contributions		Interest #REF!	Balance	
		amount	% change		year start	year end
1 2018	\$148,700	\$68,000		\$4,311	\$471,438	\$395,049
2 2019	\$17,034	\$68,000	0.00%	\$4,205	\$395,049	\$450,220
3 2020	\$60,031	\$68,000	0.00%	\$4,542	\$450,220	\$462,731
4 2021	\$34,702	\$68,000	0.00%	\$4,794	\$462,731	\$500,823
5 2022	\$25,654	\$68,000	0.00%	\$5,220	\$500,823	\$548,390
6 2023	\$93,074	\$68,000	0.00%	\$5,359	\$548,390	\$528,674
7 2024	\$44,709	\$64,001	-5.88%	\$5,383	\$528,674	\$553,350
8 2025	\$34,116	\$65,364	2.13%	\$5,690	\$553,350	\$590,288
9 2026	\$38,313	\$66,472	1.70%	\$6,044	\$590,288	\$624,491
10 2027	\$6,812	\$67,562	1.64%	\$6,549	\$624,491	\$691,789
11 2028	\$385,080	\$68,529	1.43%	\$5,335	\$691,789	\$380,573
12 2029	\$45,632	\$71,244	3.96%	\$3,934	\$380,573	\$410,119
13 2030	\$31,326	\$74,177	4.12%	\$4,315	\$410,119	\$457,285
14 2031	\$47,734	\$75,357	1.59%	\$4,711	\$457,285	\$489,620
15 2032	\$127,594	\$76,555	1.59%	\$4,641	\$489,620	\$443,222
16 2033	\$278,326	\$78,251	2.21%	\$3,432	\$443,222	\$246,579
17 2034	\$145,103	\$81,118	3.66%	\$2,146	\$246,579	\$184,739
18 2035	\$20,584	\$84,095	3.67%	\$2,165	\$184,739	\$250,415
19 2036	\$134,398	\$85,800	2.03%	\$2,261	\$250,415	\$204,079
20 2037	\$66,576	\$87,463	1.94%	\$2,145	\$204,079	\$227,111
21 2038	\$56,020	\$89,374	2.18%	\$2,438	\$227,111	\$262,903
22 2039	\$10,155	\$90,912	1.72%	\$3,033	\$262,903	\$346,692
23 2040	\$66,013	\$92,184	1.40%	\$3,598	\$346,692	\$376,460
24 2041	\$50,303	\$93,523	1.45%	\$3,981	\$376,460	\$423,661
25 2042	\$70,289	\$95,082	1.67%	\$4,361	\$423,661	\$452,815
Total:	\$2,038,277	\$1,915,063		\$104,591		

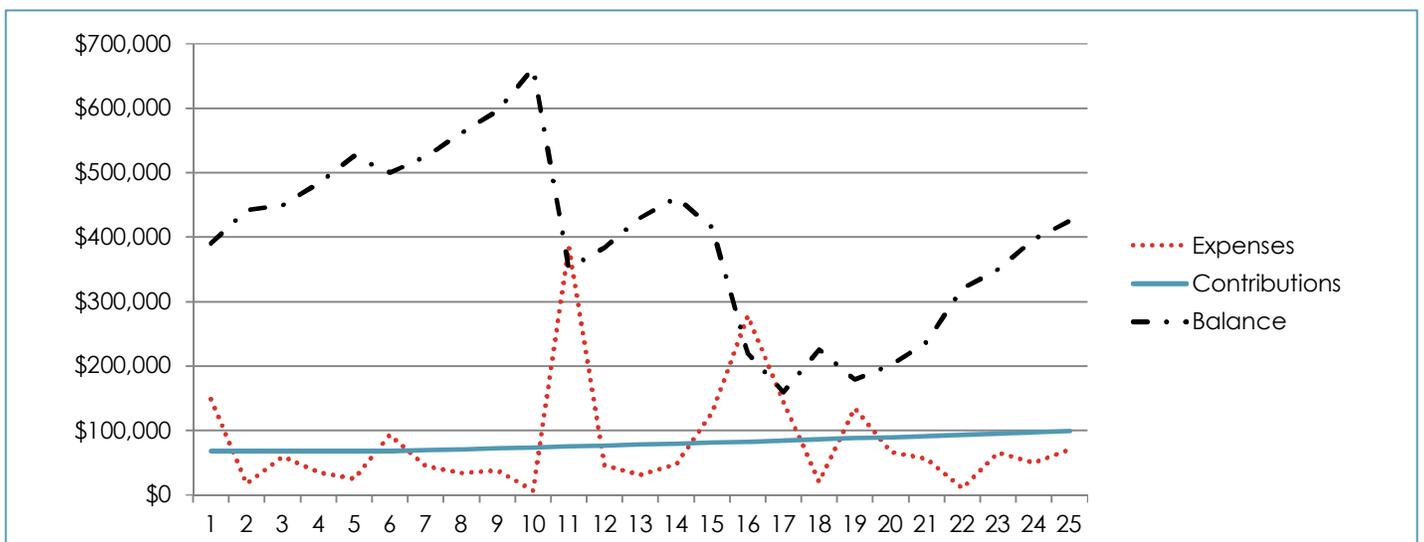


TABLE F

Master Reserve Fund Spreadsheet

sheet 1

No.	Item Description - Action	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	Site														
1.1	concrete walls - repair and paint	-	-	-	-	8,000	-	-	-	-	-	8,000	-	-	-
	- funding:	1,600	1,600	1,600	1,600	1,600	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333
1.2	steel railings - repair and paint	-	10,000	-	-	10,000	-	-	10,000	-	-	10,000	-	-	10,000
	- funding:	5,000	5,000	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333
1.3	wood fence - replacement allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	800	800	800	800	800	800	800	800	800	800	800	800	800	800
1.4	landscaping - allowance	-	-	5,000	-	-	-	-	5,000	-	-	-	-	5,000	-
	- funding:	1,667	1,667	1,667	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1.5	site – contingency allowance	-	-	-	5,000	-	-	-	5,000	-	-	-	5,000	-	-
	- funding:	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
2	Building Structures														
2.1	balcony soffits – replacement allowance	-	-	33,000	-	-	-	33,000	-	-	-	33,000	-	-	-
	- funding:	11,000	11,000	11,000	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250
2.2	balcony decks – replacement allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
2.3	structure – contingency allowance	-	-	4,000	-	-	-	-	4,000	-	-	-	-	4,000	-
	- funding:	1,333	1,333	1,333	800	800	800	800	800	800	800	800	800	800	800
3	Roofs														
3.1	roof - replacement allowance	-	-	-	-	-	-	-	-	-	-	240,000	-	-	-
	- funding:	21,818	21,818	21,818	21,818	21,818	21,818	21,818	21,818	21,818	21,818	21,818	9,600	9,600	9,600
3.2	mansard roof – inspections and repairs	12,000	-	-	-	-	12,000	-	-	-	-	12,000	-	-	-
	- funding:	12,000	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
3.3	mansard roof – replacement allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625
4	Exterior Walls														
4.1	brickwork – refurbishment allowance	-	-	10,000	-	-	-	-	-	-	-	-	-	10,000	-
	- funding:	3,333	3,333	3,333	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
5	Exterior Doors and Windows														
5.1	entry and exits – replacement allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524	1,524
5.2	garage doors – replacement allowance	-	-	-	-	-	3,600	-	-	-	-	-	-	-	-
	- funding:	600	600	600	600	600	600	360	360	360	360	360	360	360	360
5.3	unit balcony doors – replacement allow.	-	-	-	-	-	-	-	-	-	-	-	-	-	24,200
	- funding:	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729	1,729
5.4	unit windows - replacement allowance	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
	- funding:	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
5.5	caulking – inspection and repair	-	-	-	25,000	-	-	-	-	-	-	-	25,000	-	-
	- funding:	6,250	6,250	6,250	6,250	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125
6	Building Interiors														
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6.2	interior finishes - replace carpet	63,000	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	63,000	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938

TABLE F

Master Reserve Fund Spreadsheet

sheet 1

No.	Item Description - Action	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
6.3	corridor finishes - walls and ceilings	18,000	-	-	-	-	-	-	-	18,000	-	-	-	-	-
	- funding:	18,000	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250
6.4	lobby finishes - allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667
6.5	service room finishes - allowance	-	4,000	-	-	-	-	4,000	-	-	-	-	4,000	-	-
	- funding:	2,000	2,000	800	800	800	800	800	800	800	800	800	800	800	800
7	Interior Fixtures and Equipment														
7.1	elevator – replace controls	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125
7.2	elevator – mechanical refurbishment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813
8	Mechanical														
8.1	domestic hot water tanks - replacement	-	-	-	-	-	54,000	-	-	-	-	-	-	-	-
	- funding:	9,000	9,000	9,000	9,000	9,000	9,000	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160
8.2	DHW Circulating pumps – replacement	-	-	-	-	-	3,000	-	-	-	-	-	-	-	-
	- funding:	500	500	500	500	500	500	120	120	120	120	120	120	120	120
8.3	boilers – replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158	3,158
8.4	heating system 3-way valve – replacement	-	-	-	-	-	-	-	-	-	-	7,200	-	-	-
	- funding:	655	655	655	655	655	655	655	655	655	655	655	288	288	288
8.5	heating system circ. pumps – replacement	-	-	-	-	-	6,000	-	-	-	-	-	-	-	-
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	300	300	300	300	300	300	300	300
8.6	mechanical – contingency allowance	-	-	-	-	3,000	-	-	-	-	3,000	-	-	-	-
	- funding:	600	600	600	600	600	600	600	600	600	600	600	600	600	600
9	Electrical														
9.1	interior lighting – replacements	-	-	-	-	-	-	-	-	12,000	-	-	-	-	-
	- funding:	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	400	400	400	400	400
9.2	door operators – replacement allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	379	379	379	379	379	379	379	379	379	379	379	379	379	379
9.3	fire protection controls – replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	469	469	469	469	469	469	469	469	469	469	469	469	469	469
9.4	electrical – contingency allowance	-	-	3,000	-	-	-	-	3,000	-	-	-	-	3,000	-
	- funding:	1,000	1,000	1,000	600	600	600	600	600	600	600	600	600	600	600
10	General														
10.1	expenses – year to date	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-
	- funding:	50,000	500	500	500	500	500	500	500	500	500	500	500	500	500
10.2	reserve fund – reports	3,000	-	-	-	-	3,000	-	-	-	-	3,000	-	-	-
	- funding:	3,000	600	600	600	600	600	600	600	600	600	600	600	600	600
Total Annual Expenditure:		148,700	16,700	57,700	32,700	23,700	84,300	39,700	29,700	32,700	5,700	315,900	36,700	24,700	36,900
<i>Calculated Total Funding Requirement:</i>		244,327	108,014	105,147	98,464	95,339	95,072	86,912	86,912	86,912	85,979	85,979	73,394	73,394	73,394
Basic Annual Contribution (Table C):		68,000	68,000	68,000	68,000	68,000	68,000	69,360	70,747	72,162	73,605	75,077	76,579	78,111	79,673
Balance, Start of Year:		471,438	390,738	442,038	452,338	487,638	531,938	515,638	545,298	586,345	625,807	693,713	452,890	492,769	546,180
Balance, End of Year:		390,738	442,038	452,338	487,638	531,938	515,638	545,298	586,345	625,807	693,713	452,890	492,769	546,180	588,953

TABLE F

Master Reserve Fund Spreadsheet

sheet 2

No.	Item Description - Action	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	totals:	
													expenses	funding
1	Site													
1.1	concrete walls - repair and paint	-	-	8,000	-	-	-	-	-	8,000	-	-	32,000	
	- funding:	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333	1,333		34,667
1.2	steel railings - repair and paint	-	-	10,000	-	-	10,000	-	-	10,000	-	-	80,000	
	- funding:	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333		86,667
1.3	wood fence - replacement allowance	-	-	-	-	-	-	-	-	-	-	20,000	20,000	
	- funding:	800	800	800	800	800	800	800	800	800	800	800		20,000
1.4	landscaping - allowance	-	-	-	5,000	-	-	-	-	5,000	-	-	25,000	
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000		27,000
1.5	site – contingency allowance	-	5,000	-	-	-	5,000	-	-	-	-	5,000	30,000	
	- funding:	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250		31,250
2	Building Structures													
2.1	balcony soffits – replacement allowance	-	-	-	-	-	-	-	-	-	-	-	99,000	
	- funding:	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250		214,500
2.2	balcony decks – replacement allowance	66,000	-	-	-	-	-	-	-	-	-	-	66,000	
	- funding:	4,400	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200		88,000
2.3	structure – contingency allowance	-	-	-	4,000	-	-	-	-	4,000	-	-	20,000	
	- funding:	800	800	800	800	800	800	800	800	800	800	800		21,600
3	Roofs													
3.1	roof - replacement allowance	-	-	-	-	-	-	-	-	-	-	-	240,000	
	- funding:	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600		374,400
3.2	mansard roof – inspections and repairs	-	-	-	-	-	-	-	-	-	-	-	36,000	
	- funding:	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400		69,600
3.3	mansard roof – replacement allowance	-	90,000	-	-	-	-	-	-	-	-	-	90,000	
	- funding:	5,625	5,625	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000		117,000
4	Exterior Walls													
4.1	brickwork – refurbishment allowance	-	-	-	-	-	-	-	-	10,000	-	-	30,000	
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000		32,000
5	Exterior Doors and Windows													
5.1	entry and exits – replacement allowance	-	-	-	-	-	-	32,000	-	-	-	-	32,000	
	- funding:	1,524	1,524	1,524	1,524	1,524	1,524	1,524	914	914	914	914		35,657
5.2	garage doors – replacement allowance	-	3,600	-	-	-	-	-	-	-	-	-	7,200	
	- funding:	360	360	360	360	360	360	360	360	360	360	360		10,440
5.3	unit balcony doors – replacement allow.	-	-	-	-	24,200	-	-	-	-	24,200	-	72,600	
	- funding:	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840		77,440
5.4	unit windows - replacement allowance	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	37,500	
	- funding:	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500		37,500
5.5	caulking – inspection and repair	-	-	-	-	-	25,000	-	-	-	-	-	75,000	
	- funding:	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125		90,625
6	Building Interiors													
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	30,000	
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200		30,000
6.2	interior finishes - replace carpet	-	-	63,000	-	-	-	-	-	-	-	-	126,000	
	- funding:	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938	3,938		157,500

TABLE F

Master Reserve Fund Spreadsheet

sheet 2

No.	Item Description - Action	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	totals:	
													expenses	funding
6.3	corridor finishes - walls and ceilings	-	-	18,000	-	-	-	-	-	-	-	18,000	72,000	
	- funding:	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250		72,000
6.4	lobby finishes - allowance	25,000	-	-	-	-	-	-	-	-	-	-	25,000	
	- funding:	1,667	833	833	833	833	833	833	833	833	833	833		33,333
6.5	service room finishes - allowance	-	-	4,000	-	-	-	-	4,000	-	-	-	20,000	
	- funding:	800	800	800	800	800	800	800	800	800	800	800		22,400
7	Interior Fixtures and Equipment													
7.1	elevator – replace controls	-	50,000	-	-	-	-	-	-	-	-	-	50,000	
	- funding:	3,125	3,125	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667		65,000
7.2	elevator – mechanical refurbishment	-	45,000	-	-	-	-	-	-	-	-	-	45,000	
	- funding:	2,813	2,813	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500		58,500
8	Mechanical													
8.1	domestic hot water tanks - replacement	-	-	-	-	-	-	-	-	-	-	-	54,000	
	- funding:	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160	2,160		95,040
8.2	DHW Circulating pumps – replacement	-	-	-	-	-	-	-	-	-	-	-	3,000	
	- funding:	120	120	120	120	120	120	120	120	120	120	120		5,280
8.3	boilers – replacement	-	-	-	-	60,000	-	-	-	-	-	-	60,000	
	- funding:	3,158	3,158	3,158	3,158	3,158	2,400	2,400	2,400	2,400	2,400	2,400		74,400
8.4	heating system 3-way valve – replacement	-	-	-	-	-	-	-	-	-	-	-	7,200	
	- funding:	288	288	288	288	288	288	288	288	288	288	288		11,232
8.5	heating system circ. pumps – replacement	-	-	-	-	-	-	-	-	-	-	-	6,000	
	- funding:	300	300	300	300	300	300	300	300	300	300	300		11,700
8.6	mechanical – contingency allowance	3,000	-	-	-	-	3,000	-	-	-	-	3,000	15,000	
	- funding:	600	600	600	600	600	600	600	600	600	600	600		15,000
9	Electrical													
9.1	interior lighting – replacements	-	-	-	-	-	-	-	-	-	-	-	12,000	
	- funding:	400	400	400	400	400	400	400	400	400	400	400		18,400
9.2	door operators – replacement allowance	-	-	-	-	7,200	-	-	-	-	-	-	7,200	
	- funding:	379	379	379	379	379	360	360	360	360	360	360		9,360
9.3	fire protection controls – replacement	-	7,500	-	-	-	-	-	-	-	-	-	7,500	
	- funding:	469	469	250	250	250	250	250	250	250	250	250		9,750
9.4	electrical – contingency allowance	-	-	-	3,000	-	-	-	-	3,000	-	-	15,000	
	- funding:	600	600	600	600	600	600	600	600	600	600	600		16,200
10	General													
10.1	expenses – year to date	-	-	-	-	-	-	-	-	-	-	-	50,000	
	- funding:	500	500	500	500	500	500	500	500	500	500	500		62,000
10.2	reserve fund – reports	-	3,000	-	-	-	-	3,000	-	-	-	-	15,000	
	- funding:	600	600	600	600	600	600	600	600	600	600	600		17,400
Total Annual Expenditure:		96,700	206,800	105,700	14,700	94,100	45,700	37,700	6,700	42,700	31,900	43,700	1,612,200	
<i>Calculated Total Funding Requirement:</i>		<i>76,506</i>	<i>73,472</i>	<i>67,858</i>	<i>67,858</i>	<i>67,858</i>	<i>67,081</i>	<i>67,081</i>	<i>66,471</i>	<i>66,471</i>	<i>66,471</i>	<i>66,471</i>		<i>2,152,841</i>
Basic Annual Contribution (Table C):		81,266	82,892	84,549	86,240	87,965	89,725	91,519	93,349	95,216	97,121	99,063		1,992,221
Balance, Start of Year:		588,953	573,519	449,611	428,460	500,001	493,866	537,890	591,709	678,359	730,875	796,096		
Balance, End of Year:		573,519	449,611	428,460	500,001	493,866	537,890	591,709	678,359	730,875	796,096	851,459		