

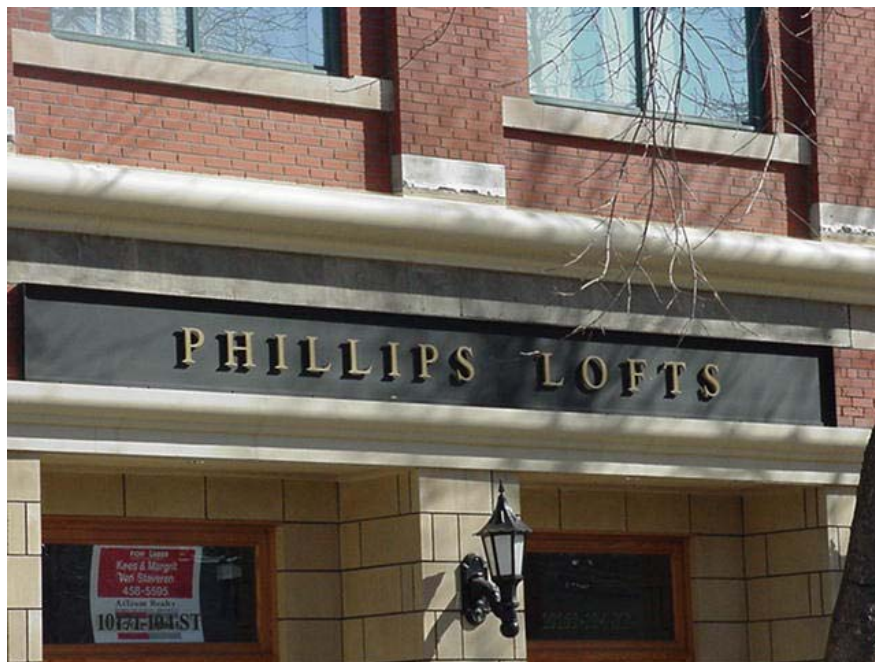
RESERVE FUND STUDY REPORT

Prepared for

Phillips Lofts

CONDOMINIUM CORPORATION

CONDOMINIUM PLAN No. 022 2718

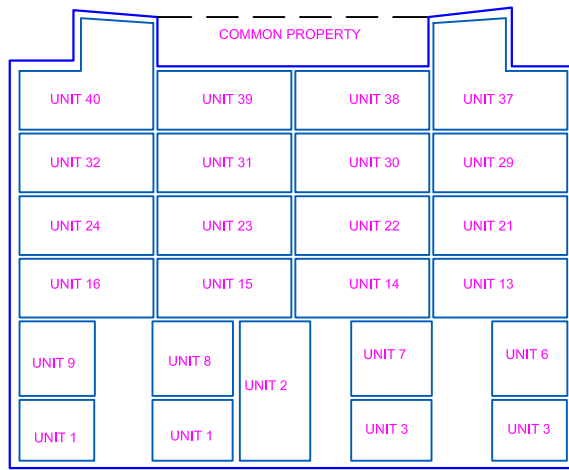


March 2004

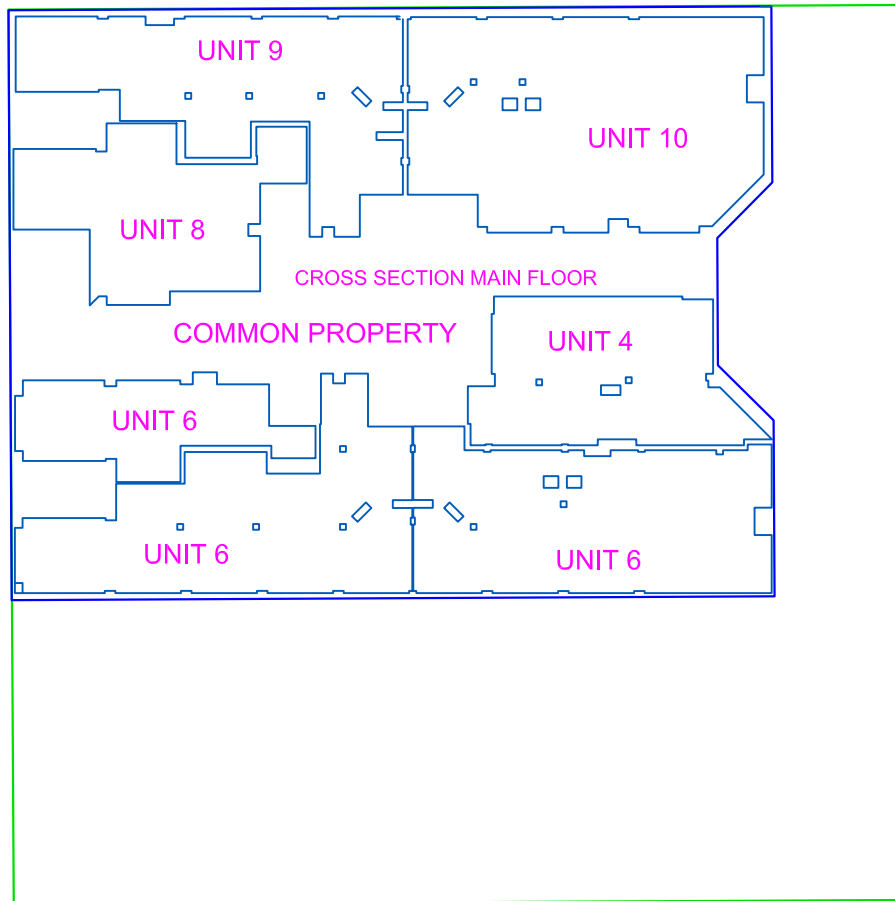
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Financial decisions based on assumptions or findings in this Study must consider the issuance date of this Study, the Scope of Work, Parameters and Variables as defined in this Study, as well as any information contained in Study Updates.



CROSS SECTION "A"



ALL DIMENSIONS IN METRES AND DECIMALS THEREOF.



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PLAN NO. 022 2718



TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
FINANCIAL SUMMARY	2
SUMMARY OF RECOMMENDATIONS.....	3
INTRODUCTION TO STUDY.....	4
SCOPE OF WORK.....	4
PARAMETERS	5
VARIABLES	6
COMPONENT DESCRIPTION & GENERAL CONDITIONS.....	7
LIFE ITEM CONDITIONS, SAFETY CONCERNS, & ANOMALIES NOTED.....	19
GENERAL RECOMMENDATIONS.....	22
FINANCIAL ANALYSIS.....	25
FINANCIAL SPREADSHEETS	LC1
QUALIFICATIONS	30
STUDY PERSONNEL.....	30
REFERENCE SOURCES	32

EXECUTIVE SUMMARY

Project Name:	Phillips Lofts
Address:	10169 - 104 Street Edmonton, Alberta
Condominium Plan Number:	022 2718
Style of Buildings:	Warehouse Conversion
Number of Units:	42
Number of Buildings:	1

Wade Engineering Ltd. was commissioned to conduct a Reserve Fund Study for Phillips Lofts Condominium Corporation (Condominium Plan No. 022 2718). This project is located in Central of Edmonton, at 10169 - 104 Street in the community of Rossdale.

Phillips Lofts Condominium Corporation is a 42-unit, wood-frame, apartment style conversion of a 1913 warehouse. There are 39 residential units of varying sizes and amenities. Semi-private elevators service eight units; eight units have semi-private balconies, and four units have rooftop access to a private patio, all designated for their exclusive use. Three retail units are located on the lower floor.

An underground parkade houses 15 parking stalls. Surface parking with 4 designated stalls is found in the rear alley, and a large secured lot to the south of the building provides the remainder of the parking facilities.

The Reserve Fund Study began in 2001, with a review of architectural plans, and consultation with the Developer, to establish an inventory of the common property components. Spreadsheets were generated using typical lives and replacement costs of the established inventory. The funding recommendations were used by the Developer in estimating the Condominium Fees listed in the pre-sale information packages. In March 2004, the site was re-visited by Wade Engineering and the quantities were verified and the conditions of the various components noted.

The component description, overall condition, conditions noted, pertinent history and specific maintenance or replacement recommendations have been summarized in chart form, beginning with the roof, and working down and out from the building. Mechanical equipment (if applicable) is listed at the end. Photographs illustrating the conditions noted may be included. Components expected to last the life of the project; Safety Concerns and Anomalies are summarized in a similar fashion. Recommendations have been summarized in order of priority. (See Summary of Recommendations following Financial Summary).

FINANCIAL SUMMARY

Current Replacement Cost:	\$1,854,829
Annual Replacement Cost:	\$65,602
Recommended Safety Margin	\$66,000
Opening Fund Balance:	'Nil
Current Annual Reserve Contribution:	Unknown
Recommended Annual Contribution 2004, increasing annually by 2%:	\$33,822
Recommended Annual Contribution 2004, increasing annually by 5%:	\$23,757

The expected life and replacement costs of components were estimated using technical resource literature, and information from contractors and industry professionals. Financial spreadsheets were developed, taking into account interest earned on Reserve Fund investments and inflation of replacement cost estimates.

At Phillips Lofts, the total replacement cost of common property components to be replaced by funds held in Reserve is \$1,854,829 in today's dollars. The annual replacement costs (or the annual cost of deterioration of these components) is \$65,602.

A minimum fund balance or "Safety Margin" is recommended to offset unpredictable expenses, such as random sewer collapses. The Safety Margin for this project has been set at \$66,000, which is based on the annual replacement cost for this project.

The preliminary Report prepared by Wade Engineering Ltd in 2001, called for an initial contribution by either the Developer or the new Unit Owners, of \$47,000, followed by annual contributions of \$20,800 beginning in 2002 and increasing by 2% annually. With the increase in some of the component costs following the final inspection, and the current minimal Fund balance, the required funding is as follows:

The "Reasonable & Sufficient" spreadsheet recommends an Annual Contribution of \$33,822, which is approximately equal to half the Current Annual Replacement Cost, beginning in 2004 and increasing by 2% inflation annually. Contributions could also be increased annually by 5%, resulting a required contribution in 2004 of \$23,757. Either option maintains a balance in the Reserve Fund sufficient to cover the scheduled expenses, without falling below the Safety Margin.

SUMMARY OF RECOMMENDATIONS

The most important maintenance consideration for Condominium Boards or Property Managers is keeping water out of the interstitial components of the building. It is equally important, however, to protect components from the damaging effects of the sun and inclement weather, and to ensure that safety concerns are dealt with in a timely fashion.

Recommendations are summarized below and listed in order of importance. The funds for the suggestions or recommendations that follow may not be accrued in this Study, unless specifically identified on the "Cost/Life Data" spreadsheet.

Specific Recommendations:

1. It is recommended that the furnaces be in operation at all times as they are also for hallway pressure in the event of a fire.
2. Storage of items in elevator machine room is in violation of the 1997 Fire Code and they should be moved to a different location.
3. Fire extinguisher and hose in parkade should have proper housing.
4. Scatter rugs in hallways are in violation of the 1997 Fire Code.
5. Exit signs in parkade should be repaired and illuminated.
6. Step differential between parkade storeroom and hallway is a potential tripping hazard and should be graded.
7. It is recommended that regular cleaning and infrared scans of the electrical distribution system be completed to help prevent possible anomalies from occurring.
8. It is recommended the pressure gauge on the glycol ramp heat be repaired and that the Board consider the installation of a protective cage in front of the motor and controls.
9. It is recommended that all parkade pillars have protective corner capping installed.
10. Further investigation into whether or not the penthouse roof doors need to meet certain Building Code requirements is recommended (if not already done so).
11. An area of exposed insulation was noted on the southwest corner of the building, and should be covered and sealed.
12. The board may want to consider an energy audit at some point in time for maximum energy saving sources. Low energy fixtures and bulbs, and digital thermostats can result in noticeable energy savings.

INTRODUCTION

This Reserve Fund Study Report is a comprehensive document, designed to provide an overall assessment of the common property and the Reserve Fund requirements of the Corporation. In order for a Study of this magnitude to be feasible, it is prudent to establish realistic parameters for a scope of work that will result in a product that meets the needs of the Corporation, at a reasonable cost. If the provider were expected to inspect “every square inch” of common property, the costs to the purchaser would be prohibitive.

SCOPE OF WORK

The Study began with a review of the condominium plan, bylaws and other pertinent documents and consultation with the Board of Directors and/or Property Manager, to determine the common property components to be replaced or refurbished with monies from the Reserve Fund. These components were measured and/or counted during visits to the site (quantity survey). This data is used to calculate the current replacement cost (G.S.T. inclusive) for each component, with the same or similar product. Pricing for replacement of common property components with alternative products may be requested, as an additional customized funding option for the Board Plan.

A cursory inspection, noting the general condition of the various components, was conducted in conjunction with the quantity survey. The conditions noted, combined with technical resource material typifying life cycles of building components, were used in forecasting the remaining functional lives of the various components.

A cursory inspection of the interior surface of the doors and windows was also conducted.

During the course of site inspections, safety concerns such as Building/Fire Code or condominium by-law violations, and/or other anomalies if noted, are reported in this Report.

PARAMETERS

No money is accrued in this Study for annual inspections and repairs, as they are considered to be part of ongoing operating costs. However, in the interest of achieving the maximum effective life of all components, specific maintenance recommendations may be included.

Assessment of the mechanical systems in the common building including heating, cooling, ventilation, plumbing, electrical, and fire protection, are based on information provided by the current Board, and/or contractors. Existing drawings, maintenance records and other pertinent documents (if available) were reviewed in conjunction with a site inspection. No testing of the mechanical systems and/or equipment (to determine capacities or peak load capabilities) was undertaken.

Replacement costs of components expected to last the life of the project, such as: attic insulation, structural building components, etc., are not included, since their expected lives are considered to be synonymous with that of the project. Periodic and/or random repairs or upgrades to these types of components may be necessary in the future. Attempts to predict the uncertainty of the unknown for inclusion in this Report would result in unreliable cost estimates.

Components located below grade, such as sewer systems and/or components concealed from view such as electrical, are not reviewed or considered within this Study. A safety margin, determined by the study provider, is incorporated in all funding scenarios, to help offset unpredictable expenses that may arise.

Other components specifically excluded are those considered the responsibility of the unit owner.

Partial replacement of components has been accounted for if the amount is significant (more than 5% of the total), and if it could be determined through inspection (previous replacement of sealed window units is not readily identifiable with a cursory inspection), or if the Board or Property Manager has supplied the information.

The inspections conducted in performance of this Study are cursory and are not to be considered a technical audit. Data generated by this Report is not intended for third party use. Wade Engineering Ltd. accepts no responsibility for damages, if any, suffered by a third party, as a result of actions taken, or decisions made, on the basis of this Report.

Should our work in preparing this Report uncover conditions that are deemed beyond this Study's scope, recommendations for further investigation will be included. Please note that any additional investigations and the related repair costs are not included in the financial forecasts of this Report.

VARIABLES

The estimate of life expectancies and replacement costs is not an exact science. However, every attempt is made to anticipate and compensate for the variables encountered in a Study of this magnitude.

Market prices fluctuate as a result of supply and demand characteristics. (Lower prices at the beginning of the season when contractors are looking for work, higher at the end of the season when contractors are over booked). Some components will experience accelerated deterioration in the latter part of their functional life. These, and other such phenomena, can cause significant variations between the original life and cost estimates, and those actually realized. Life cycles and replacement costs have been estimated as accurately as possible, however, comprehensive specifications and aggressive bidding typically realize better prices than those estimated in this Study.

Deterioration of components occurs at different rates, therefore it is prudent to replace or repair portions of some components as they deteriorate, limiting the potential for damage to adjacent components, and/or limiting the Corporation's exposure to liability. For example:

- ▶ Not all walkways will deteriorate in the last year of their expected lives,
- ▶ Curbs are more susceptible to damage from external forces,
- ▶ Asphalt may require a major maintenance/repair program to realize its expected life.

In these cases, an allowance may be identified in the financial spreadsheets allocating either; a portion of the replacement costs on a short but perpetual cycle, or cyclical phases of major repairs and replacement.

Deficiencies may be hidden or may be present but not located in areas where random sample inspections are conducted.



It is assumed that the level of future preventive maintenance will be consistent with the standards currently employed. A more aggressive preventive maintenance program may allow various components to achieve a longer functional life, while degradation may shorten it.

Although inflation and interest rates are difficult to predict, their impact on future pricing and potential earnings cannot be ignored. The spreadsheets for Funding Scenarios, as well as the "Ten Year Replacement Plan", incorporate interest and inflation where applicable.




While considerable effort has been made to present realistic projections, periodic updates of the Study are required to ensure it remains valid and on target.

COMPONENT DESCRIPTION & GENERAL CONDITIONS

During the course of conducting this Reserve Fund Study, a cursory site inspection was carried out on a representative sample of visible common property components. The following table outlines the conditions noted during that inspection. Photographs may be included.

<u>ROOFING</u>	<u>Description:</u> S.B.S. Membrane	<u>Overall Condition:</u> Good
<u>Comments:</u> Overall the installation appears to be satisfactory. The only concerns of note were as illustrated in the photos below. The replacement cost has gone up significantly from the interim Report, as it was not known that the S.B.S was going to be installed along the parapet walls. As well, we were not aware of the tremendous amount of mechanical equipment that would be transversing, penetrating or sitting on the roof deck. Nor were we sure of the design of the steel decks. Replacement will be very labour intensive with all these impediments.		
		
<p>Photograph 1</p> <p>Metal curb should have a cover, to prevent water entry.</p>	<p>Photograph 2</p> <p>The membrane has not adhered in a few locations, and soft ridges have formed. This should be picked up and monitored on future A.R.C.A. warranty inspections.</p>	
<u>Specific Recommendations:</u> Metal curbs should be covered to ensure water does not penetrate the roof assembly, or the interior wall assembly. This roof has a 5-year warranty and is due this year for a re-inspection. The soft ridges should be monitored, and the required repairs made before the warranty expires. See General Recommendations.		



COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>BRICK FINISH</u>	<u>Description:</u> Unknown	<u>Overall Condition:</u> Fair
<p><u>Comments:</u> The brick finish on the south and east faces of the building have been painted with what appears to be an inexpensive latex product. The finish is delaminating in areas. As well, cracks in the mortar don't appear to have been filled before the paint application.</p>		
		
<p align="center">Photograph 3</p>	<p align="center">Photograph 4</p>	
<p><u>Specific Recommendations:</u> The brick finish is for aesthetic purposes only, and it is not easy to say how long before the current finish is going to be too unsightly. For the purposes of this Report, a budget figure of \$2.00 per sq. ft. has been scheduled for 2007. This is for the application of 2 coats of a top quality acrylic product following power washing of the current finish.</p>		
<u>BALCONY DECKING</u>	<u>Description:</u> Stamped Steel	<u>Overall Condition:</u> Fair
<p><u>Comments:</u> The balcony decks should never need replacing, however, they should occasionally be painted with a rust-inhibitive coating. It is not known what coating was originally applied, but on the one balcony inspected, large amounts of rust are already visible. As well, an area rug had been placed over the deck. Without a proper coating, the moisture retained in the carpeting will hasten the formation of rust.</p>		
	<p align="center">Photograph 5</p>	



COMPONENT DESCRIPTION & GENERAL CONDITIONS

<p><u>Specific Recommendations:</u> Balcony decks should be painted with a rust-inhibitive. If unit owners wish to use area rugs, they should be reminded to inspect the decking on a regular basis to ensure that the coating is still effective.</p>		
<u>BALCONY & MISCELLANEOUS RAILINGS</u>	<u>Description:</u> Painted Steel	<u>Overall Condition:</u> Good
<p><u>Comments:</u> No anomalies noted or reported. These railings should never need replacement, however, occasional painting with a rust-inhibitive product will be required.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		
<u>BALCONY SUPPORTS</u>	<u>Description:</u> Painted steel	<u>Overall Condition:</u> Good
<p><u>Comments:</u> As with the railings, the support posts and beams will require occasional painting with a rust-inhibitive paint.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		
<u>WINDOWS</u>	<u>Description:</u> Front - Wood frame Remainder - Wood frame with aluminum exterior	<u>Overall Condition:</u> Good
<p><u>Comments:</u> Windows on the front face of the building are wood framed, in keeping with the requirements of the Heritage Building classification. The remaining are wood frame with aluminum exteriors. All windows are a better quality product, and with proper maintenance should have no problems reaching their expected life of 35 to 40 years.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		
<u>BALCONY DOORS</u>	<u>Description:</u> Insulated steel	<u>Overall Condition:</u> Good
<p><u>Comments:</u> No problems were noted with the installation. The doors are not typical sizes, and a custom made product will be required at the time of replacement. As such, replacement costs have been increased from those in the Interim Report.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		

COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>PENTHOUSE ROOF DOORS</u>	<u>Description:</u> Insulated steel	<u>Overall Condition:</u> Good
<u>Comments:</u> At the time of the initial inspections for the interim report, all the penthouse roof doors were well below the typical height of 82". Current inspection noted that one of the door heights has been corrected, but 3 are less than 5ft. high.		
		
Photograph 6	Photograph 7	
<u>Specific Recommendations:</u> Further investigation into whether or not these doors need to meet certain Building Code requirements is recommended (if not already done so). See General Recommendations.		
<u>EXTERIOR SECURITY ENTRANCE DOORS</u>	<u>Description:</u> Solid wood Insulated steel	<u>Overall Condition:</u> Good
<u>Comments:</u> No anomalies noted or reported.		
<u>Specific Recommendations:</u> See General Recommendations.		

COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>SEALANT</u>	<u>Description:</u> Varied	<u>Overall Condition:</u> Good
<p><u>Comments:</u> Sealant is used to close spaces between components, helping eliminate the movement of air and water past the joints. Sealant was found around the perimeter of all windows and doors. No problems were noted with the areas inspected.</p>		 <p align="center">Photograph 8</p>
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		
<u>INTERIOR UNIT DOORS & HARDWARE</u>	<u>Description:</u>	<u>Overall Condition:</u> Good
<p><u>Comments:</u> No anomalies noted or reported. It is highly unlikely that wholesale replacement of the unit doors will be required as they are not exposed to the elements, however, the hardware (door knobs and locksets) will likely need replacement after 20 to 25 years.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations.</p>		
<u>INTERIOR WALL FINISH</u>	<u>Description:</u> Paint	<u>Overall Condition:</u> Good
<p><u>Comments:</u> Columns in parkade have been clad with painted drywall. The majority have had steel protective corners installed, however the column just inside the overhead door has not, and unfortunately, has been struck and damaged.</p>		 <p align="center">Photograph 9</p>

COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>Specific Recommendations:</u> It is recommended that all parkade pillars have protective corner capping installed. See General Recommendations.		
<u>CEILING FINISH</u>	<u>Description:</u> Paint	<u>Overall Condition:</u> Good
<u>Comments:</u> Due to the amount of exposed piping along the ceilings, painting will be rather labour intensive. Costs have been increased from the interim report.		
<u>Specific Recommendations:</u> See General Recommendations.		
<u>FLOORING</u>	<u>Description:</u> Terrazzo Carpet Ceramic Tile Linoleum Tile	<u>Overall Condition:</u> Good
<u>Comments:</u> The terrazzo flooring in the front lobby is original, and should last the life of the building. Although ceramic tile can last 35 to 40 years, re-grouting may be necessary after 20 to 25 years.		
<u>Specific Recommendations:</u> See General Recommendations.		
<u>COMMUNITY MAILBOXES</u>	<u>Description:</u> Stainless Steel - Recessed	<u>Overall Condition:</u> Good
<u>Comments:</u> No anomalies noted.		
<u>Specific Recommendations:</u> See General Recommendations.		
<u>CONCRETE</u>	<u>Description:</u> Poured	<u>Overall Condition:</u> Good
<u>Comments:</u> Includes driveway retaining walls, loading dock. No anomalies noted or reported.		
<u>Specific Recommendations:</u> See General Recommendations.		


COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>ROADWAYS AND SURFACE PARKING</u>	<u>Description:</u> Asphalt	<u>Overall Condition:</u> Good to fair
<p><u>Comments:</u> At the time of the preliminary Study, Wade Engineering was advised that the Corporation would not own the lot to the south of the building. As such, no expenses for asphalt repair/replacement for that area was included in the original Study. The registered Plans indicate that the lot is indeed part of the common property, and adjustments have been made to the asphalt figures. A new overlay has been installed in the parking areas to the rear of the building, and appears to be in good condition. Repairs appear to have been made to the traffic portion of the south lot, however the parking areas visible at the time of inspection are cracked and deteriorated.</p>		
<p><u>Specific Recommendations:</u> See General Recommendations</p>		
<u>FENCING</u>	<u>Description:</u> Chain Link Wrought iron	<u>Overall Condition:</u> Good
<p><u>Comments:</u> Not included in the preliminary Study is the fencing around the lot to the south of the building. No problems were noted, and adjustments have been made in the cost centers of the Study.</p>		
<p><u>Recommendations:</u> See General Recommendations</p>		
<u>FURNACES</u>	<u>Description:</u> Hallway make up air furnaces	<u>Overall Condition:</u> Good
<p><u>Comments:</u> During site review it was noted that one of the furnaces was not in operation. It was identified that the controlling switch for the furnace had been turned off.</p> <p><u>Specific Recommendations:</u> It is recommended that this be investigated and that the furnace be in operation at all times as it is for hallway pressure in the event of a fire.</p>		
<u>HOT WATER TANKS</u>	<u>Description:</u> Located in the parkade are 5 Cyclone AO Smith 240,000 Btu Tanks	<u>Overall Condition:</u> Good
<p><u>Comments:</u> The installation of this type of tank appears to be for the energy management of the buildings domestic hot water system and the heating system. The cyclone tanks are ninety four percent efficient and are one of the best tanks on the market. No anomalies noted or reported with the operation of these tanks.</p>		



COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>HEATING PUMP</u>	<u>Description:</u> 2 X 1 H.P. heating pumps	<u>Overall Condition:</u> Good
<u>Comments:</u> Pump motors appear to operating as designed and not problems were noted at the time of site review.		
<u>UNIT HEATERS</u>	<u>Description:</u> Entrance heaters	<u>Overall Condition:</u> Good
<u>Comments:</u> No anomalies noted or reported for the unit heaters that service the entrances to the building.		
<u>FAN COIL UNIT HEATERS</u>	<u>Description:</u> Fan units with hot water coils for each units heating	<u>Overall Condition:</u> Good
<u>Comments:</u> In each unit a fan coil is installed to provide tempered air as regulated by a thermostat.		
<u>SUMP PUMPS</u>	<u>Description:</u> 3 pumps for removing excess ground water	<u>Overall Condition:</u> Good
<u>Comments:</u> No problems were noted at the time of site review. It is however recommended that the pumps be tested approximately every three months to ensure their operational when required.		
<u>PARKADE MAKE UP AIR UNIT</u>	<u>Description:</u> ICE Parkade ventilation fan	<u>Overall Condition:</u> Good
<u>Comments:</u> No problems or anomalies were noted with the operation of this fan unit.		



COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>PARKADE EXHAUST FAN</u>	<u>Description:</u> Exhaust fan	<u>Overall Condition:</u> Good
<u>Comments:</u> This exhaust fan works in conjunction with the parkade make-up air unit to ensure regulated air pressure in the parkade.		
<u>WATER PIPING</u>	<u>Description:</u> PVC and PEX potable water piping.	<u>Overall Condition:</u> Good
<u>Comments:</u> The water piping services the domestic hot and cold water supply of the building. No anomalies noted or reported		
<u>BUILDING SPRINKLER SYSTEM</u>	<u>Description:</u> Wet system	<u>Overall Condition:</u> Good
<u>Comments:</u> This system provides fire protection for the common areas of the building and the individual units.		
<u>PARKADE SPRINKLER SYSTEM</u>	<u>Description:</u> Pipe with standard sprinkler heads	<u>Overall Condition:</u> Good
<u>Comments:</u> The parkade sprinkler system provides fire protection and appears to be in accordance with the Alberta 1997 Fire Code. No anomalies noted or reported		
<u>BACK FLOW PREVENTION</u>	<u>Description:</u> As per Code requirements	<u>Overall Condition:</u> Good
<u>Comments:</u> Backflow protection appeared to be installed in accordance with the Alberta 1997 Building Code.		



COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>GLYCOL RAMP HEAT</u>	<u>Description:</u> Grundfos recirculating pump, controls, heat exchanger and piping	<u>Overall Condition:</u> Good
<u>Comments:</u> During site review it was noted that one of the pressure gauges has been damaged and is leaking.		
Photograph 11		
<u>Specific Recommendations:</u> It is recommended that this be repaired and that the Board consider the installation of a protective cage in front of the motor and controls.		
<u>PARKADE DOOR</u>	<u>Description:</u> Double steel insulated door and controller	<u>Overall Condition:</u> Good
<u>Comments:</u> No problems or anomalies noted at the time of site review. It is recommended that periodic servicing of the door and controller be completed to help insure proper operation.		
Photograph 12		

COMPONENT DESCRIPTION & GENERAL CONDITIONS

<p><u>ELECTRICAL DISTRIBUTION</u></p>	<p><u>Description:</u> Located in the parkade area</p>	<p><u>Overall Condition:</u> Fair</p>
<p><u>Comments:</u> The electrical distribution system has been installed open to the parkade area. This type of installation will require additional maintenance to help ensure its life cycle.</p>		
<p><u>Specific Recommendations:</u> It is recommended that regular cleaning and infrared scans of the electrical distribution system be completed to help prevent possible anomalies from occurring.</p>		
<p><u>LIGHTING</u></p>	<p><u>Description:</u> Use of both energy efficient and regular lighting fixtures</p>	<p><u>Overall Condition:</u> Good</p>
<p><u>Comments:</u> It was noted during review that the exit lights of the building are not energy efficient. Other lighting may have energy savings if replaced.</p>		
<p><u>Specific Recommendations:</u> It is recommended that the Board consider having an Energy Audit performed to capitalize on all possible energy savings.</p>		

COMPONENT DESCRIPTION & GENERAL CONDITIONS

<u>ELEVATORS</u>	<u>Description:</u> Three 40 HP hydraulic elevators	<u>Overall Condition:</u> Good
<u>Comments:</u> No anomalies noted or reported with the elevator.		
<u>FIRE ALARM SYSTEM</u>	<u>Description:</u> Horn / strobes, pull stations, smoke detectors/ heat sensors and Mircom panel.	<u>Overall Condition:</u> Good
<u>Comments:</u> The fire alarm system appears to meet the 1997 Alberta Fire Code and no anomalies were noted.		
<u>INTERCOM SYSTEM</u>	<u>Description:</u> Mircom	<u>Overall Condition:</u> Good
<u>Comments:</u> No anomalies noted or reported. It is recommended that periodic cleaning be completed to help protect the life cycle of the intercom.		
<u>SECURITY GATES AND WHEELCHAIR LIFT</u>	<u>Description:</u> Two motor controls for access into parking area and motor control for wheelchair lift.	<u>Overall Condition:</u> Good
<u>Comments:</u> Security gates have been added to the parking area to the south of the building and a wheelchair lift has been added to provide handicap access to the building. No problems were noted at the time of site review.		
		
Photograph 15		Photograph 16

LIFE ITEM CONDITIONS, SAFETY CONCERNS, & ANOMALIES NOTED

Not included in the financial forecasts of this Report are costs to repair items, such as structural components, that are expected to last the life of the project. Also not included are components considered to be the responsibility of the unit owners. Although a report on the cursory inspection of life items and anomalies follows, this review should in no way be considered a technical audit. General comments relating to the condition of the components have been reported, to give a better overall understanding of the conditions of the property. These conditions may require further investigation for an accurate estimation of repair scope and funds required. No cost centres have been included in this Report for these items.

Safety Concerns



Scatter rugs in hallways are in violation of the 1997 Fire Code.



Fire extinguisher and hose should have proper housing.

LIFE ITEM CONDITIONS, SAFETY CONCERNS, & ANOMALIES NOTED



Exit sign in parkade is not securely fastened and is not illuminated.



Exit sign in parkade is broken and not illuminated.



Step differential between parkade storeroom and hallway is a potential tripping hazard and should be graded.



Storage of items in elevator machine room is in violation of the 1997 Fire Code and should be removed to a different location.

LIFE ITEM CONDITIONS, SAFETY CONCERNS, & ANOMALIES NOTED

Anomalies

An area of exposed insulation was noted on the southwest corner of the building, and should be covered and sealed.



GENERAL RECOMMENDATIONS

It is incumbent on the Board to ensure that owner-installed objects have been properly and securely installed, and do not violate any of the current Building, Fire or Safety Codes. As well, it is the Board's responsibility to ensure that unit owners repair or replace these components in a timely fashion.

Some common examples of owner-installed objects requiring monitoring by the Board are:

- ▶ Satellite dishes
- ▶ Skylights or Solar Tubes
- ▶ Window bars
- ▶ Decks
- ▶ Wheelchair ramps
- ▶ Exterior wall decorations
- ▶ Solarium/Sunroom

Uneven walking surfaces and potential tripping hazards should be repaired as soon as possible to limit the Corporation's exposure to liability.

Roofing

Regular roof inspections, for identification of minor deficiencies such as blisters, ridges, open seams, deteriorated sealant etc. will allow for timely repairs.

Balconies – Metal

Railings should be inspected annually for loose fasteners and areas of rust. Components should be scraped clean of rust and painted with a rust inhibitive paint every 7 to 10 years.

Windows

Regular maintenance includes periodic inspection for failed weather stripping, ensuring weep holes are free of debris, and that weep hole covers are in place.

Sealants must be kept in good condition and replaced in a timely fashion. Windows with sealant in the sill to jamb joint (especially in lower corners), should be monitored regularly as this joint is more prone to water entry.

Head flashings must retain a positive drainage slope.

Screening should be repaired or replaced as required. Damaged or inoperable hardware should be repaired as required.

Wood frames should be painted every 5 to 6 years. Capping over deteriorated wood is not recommended.

GENERAL RECOMMENDATIONS

Exterior Doors

Regular maintenance includes periodic inspection for failed weather stripping and sealant (especially in lower corners), and damaged or inoperable hardware, and repair as required. Doors and frames should be painted every 5 to 7 years.

Sealant

Sealant requires regular inspection, as it deteriorates with exposure to the elements and becomes ineffective. Once sealant becomes dry, brittle and/or cracked, it should be removed, and the surface should be free of debris and contaminants before re-application. Sealant should be applied where objects have been mounted on or through other surfaces to prevent water entry.

Ceiling Finish

Ceilings should be monitored for signs of water staining (an indication of leaking pipes).

Flooring – Carpet

Carpeting should be cleaned on a regular basis. Open seams and/or loose sections should be repaired as necessary to limit the Corporation's exposure to liability.

Fire safety codes for apartment buildings specify that hallways be kept clear of obstructions. Scatter mats outside unit entry doors are considered to be obstructions.

Flooring – Ceramic Tile

Although the ceramic tile can last 35 to 40 years, re-grouting may be required after 20 years.

Community Mailboxes

Inspect regularly for damaged locks and/or hinges.

Concrete Components

It is recommended that salt not be used for de-icing, as it can cause spalling and premature deterioration of concrete components.

An application of penetrating hydrophobic sealant will retard the process of spalling and the resultant freeze/thaw damage.

Uneven walking surfaces should be levelled as soon as possible, to limit the Corporation's exposure to liability.

GENERAL RECOMMENDATIONS

Asphalt

Asphalt should be inspected on an annual basis and cracks and potholes repaired to extend the effective life of this component.

Fencing – Chain Link

Annual inspection of the link ties and the continuity of the galvanized coating on the posts is recommended. Any exposed steel should be re-coated with a zinc rich paint such as Galvicon.

Fencing and/or Railings – Wrought Iron

Wrought iron should be painted approximately every 10 years with a rust inhibitive paint. Areas of rust should be scraped clean with a wire brush, and painted as necessary.

Mechanical

A preventive maintenance program, which should include regular inspection, servicing and cleaning on a daily, weekly, monthly, semi-annual and/or annual basis, is recommended, if not already in place. Maintenance records, which must be kept for legal and insurance purposes, can also help in future financial planning. A good program helps to ensure that the expected life of each component is realized, and may possibly extend it. Over the life of the project, a good preventive maintenance program also serves to lower operational and Reserve Fund expenditures. Conversely, poor maintenance, even for a short period of time, can significantly reduce the expected lives of mechanical equipment components. This increases the expenses of the operational budget and has a premature drain on the Reserve Fund.

Some things to keep in mind when considering mechanical components are:

- ▶ As components age, replacement parts become harder to find, often resulting in higher costs.
- ▶ The cost effectiveness of maintaining and repairing older components versus replacement with more energy efficient models available in today's market.

While the sewer system is not considered in the financial forecasts of this Study, routine flushing of the system is recommended. The required frequency of flushing depends on various factors such as the location of project, the length of the system, the drainage incline, and the consistency of the contents flowing through it, etc. Consultation with the appropriate professional will help to identify a schedule for flushing the system and the associated costs.

FINANCIAL ANALYSIS

The financial analysis began with “Life Cycle Replacement” scheduling of the components. The replacement of each component was scheduled according to the expected life and the conditions noted for each individual component. Components were given a remaining “Life Span” of one or more years, but the funding requirements were generated assuming replacement in the earliest year. No thought is given to the scheduling of one component as it relates to the scheduling of another. Typically, components are scheduled for wholesale replacement in one year. High-ticket components may be scheduled over 2 or more years, if feasible. Recommended funding levels are generated from this scheduling, and are typically higher than those generated from a “customized” replacement schedule. This is “the worst case scenario”, and is “recommended”, as typically, the project will encounter other expenses that aren’t accounted for in the Study i.e. foundation repairs, insulation and venting upgrades. With the replacement cost and an acceptable remaining life span of each component, the Board can then formulate their own schedule and their Five-Year Plan.

In some Studies (particularly older projects), a second set of spreadsheets is run, based on a “Recommended Replacement Schedule”. If it is felt that the “Life Cycle Replacement” scheduling of some components is not in the best interest of the project, the scheduling is modified to reflect a schedule that is more in keeping with what the Corporation may want to incorporate in their Five-Year Plan. The Board can use this as a model to formulate their own Plan, in conjunction with the “Life Cycle Replacement Schedule”. Funding requirements generated by either Schedule would be acceptable, however, it is usually recommended that the Board use the higher figures.

Once the Board has established their Plan, Wade Engineering will run another set of spreadsheets at no extra charge, to determine the funding levels required to maintain their Plan. This is an added service, and the Spreadsheets are run as the Board Plan, and are not included in the Reserve Fund Study Report.

The following outlines the spreadsheets included with each schedule:

“COST/LIFE DATA” SPREADSHEET

Life Cycle Replacement Schedule, Suggested Replacement Plan, Board Plan

Summarizes the following key information:

- ▶ **Common Property Component** - the components to be replaced by the Reserve Fund
- ▶ **Condition Rating** - the general condition of each component, rated as either Good, Fair, Poor or a combination of thereof
* In Life Cycle Replacement Schedule of Basic Report only
- ▶ **Current Replacement Cost** - an estimate of the current replacement cost of each component
- ▶ **Expected Life** - the expected life of each component
- ▶ **Actual Age** - the actual age of each component
- ▶ **Effective Age** - the expected life, adjusted to reflect the conditions noted of each component
- ▶ **Remaining Life** - the expected life, less the effective age of each component
* Remaining Life Span is given in “Life Cycle Replacement Schedule” only
- ▶ **Annual Replacement Cost** - the Current Replacement Cost divided by the Expected Life of the component - the total is an initial indicator of annual reserve fund contribution requirements (if in a shortfall position, the Corporation should start by contributing at least as much as is being “used up” each year.)

May also include, in a separate section at the bottom of the page:

- ▶ **Non-recurring Expenses** - this category allows budgeting for repairs and /or upgrades to components expected to last the life of the project (i.e. re-mortaring of bricks), or to major repairs expected to be required only once during the life of the project

In summary, the “Cost/Life Data” Spreadsheet is the Board’s “Shopping List” for preparing their Five-Year Plan. The replacement cost and remaining life span for each component are displayed, simplifying the budget process.

"COST/LIFE ANALYSIS" SPREADSHEET

Life Cycle Replacement Schedule only

Summarizes the following key information:

- ▶ **Percent of Total Contribution** - the percentage of each component's Current Replacement Cost in relation to the Total Replacement Cost of all components
- ▶ **Actual Present Fund** - the percentage (as calculated above) of the Actual Present Fund, allocated proportionately for each component
- ▶ **Expired Equity** - represents the value of each component, that has been "used up", calculated by multiplying the Effective Age by the Annual Replacement Cost
- ▶ **Shortfall** - the difference between the Expired Equity and the Actual Present Fund

Review of the "Cost/Life Analysis" Spreadsheet is useful in identifying the "big ticket" components (the components comprising the greatest percentage of the total replacement cost). These are the components the Corporation wants to maintain to the best of its ability, to ensure they achieve their maximum effective lives. Although Wade Engineering does not recommend total recovery of the Shortfall, it is interesting to note the difference between the amount of the total expired equity of the components, and the current Reserve Fund balance.

FUNDING PLAN SCENARIOS

Various funding plan scenarios are run, depending on the funding levels required.

PRESENT COURSE

This spreadsheet predicts the flow of funds, based on the current fund balance, current contributions (inflated over time), and predicted expenses. This enables the Board to preview the long-term effects of current funding levels. Review of this funding Scenario can confirm the adequacy of fund balances and contribution levels, or reveal the need for change. This spreadsheet is run for the Life Cycle Replacement Schedule only.

EQUITY REPLACEMENT

This funding scenario is typical of industry standards and most Reserve Fund Studies available in today's market recommend this (or slight variations of) type of funding plan. While Wade Engineering does not recommend this scenario, an illustration is included for comparison to our recommended "Reasonable and Sufficient" funding scenario. This spreadsheet is run for the Life Cycle Replacement Schedule only.

REASONABLE AND SUFFICIENT

In an effort to keep Reserve Fund Contributions and Reserve Fund Levels as “reasonable” as possible, the question is: How much is “sufficient”? Because there will invariably be unscheduled expenses, it is felt that the Corporation should always maintain a minimum fund balance or **Safety Margin** to help offset these expenses. As well, to compensate for the variables discussed previously, a contingent amount should be included as an extra buffer. A **Contingency** of 10% of the total replacement cost spread over a 30-year period, is injected on an annual basis.

The goal then, is to determine the contributions required to keep the lowest predicted Closing Fund Balance over the next 25 years, from falling below the determined Safety Margin. This should be “Sufficient”, and is far more “Reasonable” than the funding levels generated by the Equity Replacement philosophy.

If the Corporation’s current level of funding is not sufficient (the closing balances plotted on the Present Course spreadsheet do not remain above the Safety Margin), levels must be increased either through either an increase in Annual Contributions, or a Special Assessment, or a combination of the two. In an effort to keep Annual Contributions reasonable, it is felt that an Annual Contribution equal to the amount of expiring equity (Total Annual Replacement Cost), is a good place to start. If increasing the contributions to that level is not enough to keep the closing balances from falling below the Safety Margin, the required Special Assessment is determined.

The Reasonable and Sufficient spreadsheet is run for each scheduling scenario (including any Board Plans).

REASONABLE AND SUFFICIENT WITH A BLENDED ASSESSMENT

Where a Special Assessment is required, a second funding scenario may be run, with the Special Assessment blended into the Annual Contributions over as many years as possible. If the Corporation’s “critical year” (the year with the greatest expenses), is in the next couple of years, it may not be possible to spread the assessment very far into the future. The Blended Assessment spreadsheet may be run for any of the scheduling scenarios, depending on the feasibility.

Each funding scenario follows the projected flow of cash over a 25-year period, starting with the base year (now), and incorporates the effects of interest and inflation. The Study provider determines a safety margin, taking into account various factors including the age, size, and location of the project. The effects of each funding scenario are illustrated in graph form, by plotting the Closing Balance for each year, along with the Safety Margin.

The cash flow is tracked through:

- ▶ **Opening Balance** - begins with current fund balance
- ▶ **Expenses** - cost of components to be replaced or refurbished for each year, with inflation compounded annually
- ▶ **Interest** - calculated on the closing balances for each year, after expenses, and compounded annually
- ▶ **Annual Contributions** - are treated as being contributed at the end of each year, and do not factor in interest accrued for that year; inflation is compounded annually
- ▶ **Additional Assessments** - may be included in some funding plan scenarios, usually when major capital replacement or refurbishment of common property is required within the first few years
- ▶ **Closing Balance** - each year's closing balance

TEN - YEAR REPLACEMENT SCHEDULE

To assist the Board, replacement scheduling of common property components is summarized in chart form. It starts with the Base Year (now), and schedules the predicted replacement of components for a 10-year period. Inflation at 2% is incorporated, and compounded annually. The Ten - Year Replacement Schedule is included with all scheduling scenarios.

CONCLUSION

The estimate of life expectancies and replacement costs is, at best, a good guess. However, the Reserve Fund Study Report allows management decisions to be made with the best long - range plan available, which is far better than reacting to immediate needs or being surprised with a substantial unbudgeted expense. Review of the "cash flow" and 10-year replacement schedule, will help facilitate decisions regarding the scheduling of component replacement and collection of shortfalls required to meet the financial demands of the Corporation.

To maximize the effectiveness of the Reserve Fund Study, updates are required on an ongoing basis.

LIFE CYCLE REPLACEMENT COST/LIFE DATA

3/24/2004

NO.	COMPONENT	CURRENT				REMAINING		ANNUAL REPLACEMENT COST
		REPLACEMENT COST	EXPECTED LIFE	ACTUAL AGE	EFFECTIVE AGE	LIFESPAN	LIFESPAN	
1	Roofing -S.B.S.	154,080	25	2	2	23	25	6,164
2	Paint Coat - Brick	26,087	10	2	7	3	4	2,609
3	Paint/Stain - Balcony Floors	3,424	10	2	9	1	2	343
4	Paint/Stain Balcony Supports	1,132	10	2	2	8	10	114
5	Paint/Stain Balcony Railings	1,198	10	2	2	8	10	120
6	Paint/Stain - Miscellaneous Railings	2,457	10	2	2	8	10	246
7	Windows	121,525	35	2	2	33	35	3,473
8	Paint/Stain - Windows - Wood framed	1,348	5	2	2	3	4	270
9	Paint/Stain - Windows - Aluminum framed	2,210	7	2	2	5	7	316
10	Balcony Doors	6,420	40	2	2	38	40	161
11	Penthouse Roof Doors	2,996	40	2	2	38	40	75
12	Entrance Security Doors	17,548	40	2	2	38	40	439
13	Paint/Stain Exterior Doors	1,231	7	2	2	5	7	176
14	Sealant	6,380	10	2	2	8	10	638
15	Hardware Entrance Doors - Units and Main Entrance	11,503	25	2	2	23	25	461
16	Hardware - Remaining Doors	3,692	25	2	2	23	25	148
17	Paint/Stain - Unit & Miscellaneous Interior Doors	3,531	7	2	2	5	7	505
18	Paint/Stain - Interior Walls	9,447	7	2	2	5	7	1,350
19	Paint/Stain - Ceilings	7,911	14	2	2	12	14	566
20	Flooring - Carpet	13,910	15	2	2	13	15	928
21	Flooring - Lino Tile	1,284	20	2	2	18	20	65
22	Flooring - Rubber Stair Treads	4,237	10	2	2	8	10	424
23	Flooring - Ceramic Tile	7,490	30	2	2	28	30	250
24	Ceramic Tile - Re-grouting	2,140	20	2	2	18	20	107
25	Community Mailboxes - Recessed	1,586	40	2	2	38	40	40
26	Asphalt	10,051	18	2	2	16	18	559
27	Concrete	20,330	35	2	2	33	35	581
28	Fencing - Chain Link	1,348	40	2	2	38	40	34
29	Paint/Stain - Wrought Iron Fencing	963	10	2	2	8	10	97
30	Furnaces	14,980	20	2	2	18	20	749

LIFE CYCLE REPLACEMENT COST/LIFE DATA

3/24/2004

NO.	COMPONENT	CURRENT				REMAINING		ANNUAL REPLACEMENT COST	
		REPLACEMENT COST	EXPECTED LIFE	ACTUAL AGE	EFFECTIVE AGE	LIFESPAN	LIFESPAN		
31	Hot Water Tanks	48,150	15	2	2	13	15	3,210	
32	Domestic Water and Fan Coil Heating Pumps	3,210	25	2	2	23	25	129	
33	Unit Heaters	5,564	25	2	2	23	25	223	
34	Fan Coil Unit Heaters	174,838	25	2	2	23	25	6,994	
35	Sump Pumps	2,247	7	2	2	5	7	321	
36	Parkade Make-Up Air Unit	12,840	25	2	2	23	25	514	
37	Parkade Exhaust Fan	4,280	25	2	2	23	25	172	
38	Water Piping	262,150	40	2	2	38	40	6,554	
39	Building Sprinkler System	486,850	40	2	2	38	40	12,172	
40	Parkade Sprinkler System	34,240	40	2	2	38	40	856	
41	Back Flow Prevention	21,400	25	2	2	23	25	856	
42	Glycol Ramp Heat	21,400	20	2	2	18	20	1,070	
43	Parkade Door	3,852	15	2	2	13	15	257	
44	Electrical	47,080	40	2	2	38	40	1,177	
45	Lighting	26,750	20	2	2	18	20	1,338	
46	Elevators	192,600	35	2	2	33	35	5,503	
47	Fire Alarm System	22,470	20	2	2	18	20	1,124	
48	Intercom System	5,350	20	2	2	18	20	268	
49	Parking Security Gate Controls	10,700	20	2	2	18	20	535	
50	Wheelchair Lift	6,420	20	2	2	18	20	321	
TOTAL									
		\$ 1,854,829							\$ 65,602

LIFE CYCLE REPLACEMENT COST/LIFE ANALYSIS

3/24/2004

NO.	COMPONENT	% OF ANNUAL REPLACEMENT COSTS	ACTUAL PRESENT FUND	EXPIRED EQUITY	SHORT FALL
1	Roofing -S.B.S.	9.40%	-	12,328	12,328
2	Paint Coat - Brick	3.98%	-	18,263	18,263
3	Paint/Stain - Balcony Floors	0.52%	-	3,087	3,087
4	Paint/Stain Balcony Supports	0.17%	-	228	228
5	Paint/Stain Balcony Railings	0.18%	-	240	240
6	Paint/Stain - Miscellaneous Railings	0.37%	-	492	492
7	Windows	5.29%	-	6,946	6,946
8	Paint/Stain - Windows - Wood framed	0.41%	-	540	540
9	Paint/Stain - Windows - Aluminum framed	0.48%	-	632	632
10	Balcony Doors	0.25%	-	322	322
11	Penthouse Roof Doors	0.11%	-	150	150
12	Entrance Security Doors	0.67%	-	878	878
13	Paint/Stain Exterior Doors	0.27%	-	352	352
14	Sealant	0.97%	-	1,276	1,276
15	Hardware Entrance Doors - Units and Main Entrance	0.70%	-	922	922
16	Hardware - Remaining Doors	0.23%	-	296	296
17	Paint/Stain - Unit & Miscellaneous Interior Doors	0.77%	-	1,010	1,010
18	Paint/Stain - Interior Walls	2.06%	-	2,700	2,700
19	Paint/Stain - Ceilings	0.86%	-	1,132	1,132
20	Flooring - Carpet	1.41%	-	1,856	1,856
21	Flooring - Lino Tile	0.10%	-	130	130
22	Flooring - Rubber Stair Treads	0.65%	-	848	848
23	Flooring - Ceramic Tile	0.38%	-	500	500
24	Ceramic Tile - Re-grouting	0.16%	-	214	214
25	Community Mailboxes - Recessed	0.06%	-	80	80
26	Asphalt	0.85%	-	1,118	1,118
27	Concrete	0.89%	-	1,162	1,162
28	Fencing - Chain Link	0.05%	-	68	68
29	Paint/Stain - Wrought Iron Fencing	0.15%	-	194	194
30	Furnaces	1.14%	-	1,498	1,498

LIFE CYCLE REPLACEMENT COST/LIFE ANALYSIS

3/24/2004

NO.	COMPONENT	% OF ANNUAL REPLACEMENT COSTS	ACTUAL PRESENT FUND	EXPIRED EQUITY	SHORT FALL
31	Hot Water Tanks	4.89%	-	6,420	6,420
32	Domestic Water and Fan Coil Heating Pumps	0.20%	-	258	258
33	Unit Heaters	0.34%	-	446	446
34	Fan Coil Unit Heaters	10.66%	-	13,988	13,988
35	Sump Pumps	0.49%	-	642	642
36	Parkade Make-Up Air Unit	0.78%	-	1,028	1,028
37	Parkade Exhaust Fan	0.26%	-	344	344
38	Water Piping	9.99%	-	13,108	13,108
39	Building Sprinkler System	18.55%	-	24,344	24,344
40	Parkade Sprinkler System	1.30%	-	1,712	1,712
41	Back Flow Prevention	1.30%	-	1,712	1,712
42	Glycol Ramp Heat	1.63%	-	2,140	2,140
43	Parkade Door	0.39%	-	514	514
44	Electrical	1.79%	-	2,354	2,354
45	Lighting	2.04%	-	2,676	2,676
46	Elevators	8.39%	-	11,006	11,006
47	Fire Alarm System	1.71%	-	2,248	2,248
48	Intercom System	0.41%	-	536	536
49	Parking Security Gate Controls	0.82%	-	1,070	1,070
50	Wheelchair Lift	0.49%	-	642	642
TOTAL		100.00%	\$ -	\$ 146,650	\$ 146,650

SUGGESTED REPLACEMENT PLAN COST/LIFE DATA

3/24/2004

NO.	COMPONENT	CURRENT				ANNUAL	
		REPLACEMENT COST	EXPECTED LIFE	ACTUAL AGE	EFFECTIVE AGE	REMAINING LIFE	REPLACEMENT COST
1	Roofing -S.B.S.	154,080	25	2	2	23	6,164
2	Paint Coat - Brick	26,087	10	2	7	3	2,609
3	Paint/Stain - Balcony Floors	3,424	10	2	9	1	343
4	Paint/Stain Balcony Supports	1,132	10	2	2	8	114
5	Paint/Stain Balcony Railings	1,198	10	2	2	8	120
6	Paint/Stain - Miscellaneous Railings	2,457	10	2	2	8	246
7	Windows	121,525	35	2	2	33	3,473
8	Paint/Stain - Windows - Wood framed	1,348	5	2	2	3	270
9	Paint/Stain - Windows - Aluminum framed	2,210	7	2	2	5	316
10	Balcony Doors	6,420	40	2	2	38	161
11	Penthouse Roof Doors	2,996	40	2	2	38	75
12	Entrance Security Doors	17,548	40	2	2	38	439
13	Paint/Stain Exterior Doors	1,231	7	2	2	5	176
14	Sealant	6,380	10	2	2	8	638
15	Hardware Entrance Doors - Units and Main Entrance	11,503	25	2	2	23	461
16	Hardware - Remaining Doors	3,692	25	2	2	23	148
17	Paint/Stain - Unit & Miscellaneous Interior Doors	3,531	7	2	2	5	505
18	Paint/Stain - Interior Walls	9,447	7	2	2	5	1,350
19	Paint/Stain - Ceilings	7,911	14	2	2	12	566
20	Flooring - Carpet	13,910	15	2	2	13	928
21	Flooring - Lino Tile	1,284	20	2	2	18	65
22	Flooring - Rubber Stair Treads	4,237	10	2	2	8	424
23	Flooring - Ceramic Tile	7,490	30	2	2	28	250
24	Ceramic Tile - Re-grouting	2,140	20	2	2	18	107
25	Community Mailboxes - Recessed	1,586	40	2	2	38	40
26	Asphalt	10,051	18	2	2	16	559
27	Concrete	20,330	35	2	2	33	581
28	Fencing - Chain Link	1,348	40	2	2	38	34
29	Paint/Stain - Wrought Iron Fencing	963	10	2	2	8	97
30	Furnaces	14,980	20	2	2	18	749

SUGGESTED REPLACEMENT PLAN COST/LIFE DATA

3/24/2004

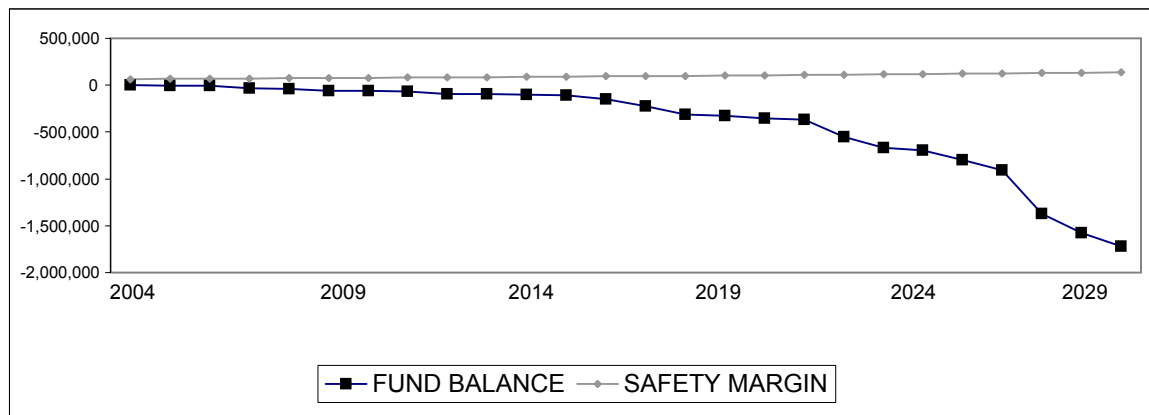
NO.	COMPONENT	CURRENT				ANNUAL	
		REPLACEMENT COST	EXPECTED LIFE	ACTUAL AGE	EFFECTIVE AGE	REMAINING LIFE	REPLACEMENT COST
31	Hot Water Tanks	48,150	15	2	1	14	3,210
32	Domestic Water and Fan Coil Heating Pumps	3,210	25	2	2	23	129
33	Unit Heaters	5,564	25	2	2	23	223
34	Fan Coil Unit Heaters	36,594	25	2	4	21	1,464
35	Fan Coil Unit Heaters	36,604	25	2	3	22	1,465
36	Fan Coil Unit Heaters	36,613	25	2	1	24	1,465
37	Fan Coil Unit Heaters	36,623	25	2	0	25	1,465
38	Fan Coil Unit Heaters	28,492	25	2	0	26	1,140
39	Sump Pumps	2,247	7	2	2	5	321
40	Parkade Make-Up Air Unit	12,840	25	2	1	24	514
41	Parkade Exhaust Fan	4,280	25	2	2	23	172
42	Water Piping	262,150	40	2	2	38	6,554
43	Building Sprinkler System	486,850	40	2	2	38	12,172
44	Parkade Sprinkler System	34,240	40	2	2	38	856
45	Back Flow Prevention	21,400	25	2	1	24	856
46	Glycol Ramp Heat	21,400	20	2	1	19	1,070
47	Parkade Door	3,852	15	2	2	13	257
48	Electrical	47,080	40	2	2	38	1,177
49	Lighting	26,750	20	2	2	18	1,338
50	Elevators	192,600	35	2	2	33	5,503
51	Fire Alarm System	22,470	20	2	2	18	1,124
52	Intercom System	5,350	20	2	2	18	268
53	Parking Security Gate Controls	10,700	20	2	1	19	535
54	Wheelchair Lift	6,420	20	2	2	18	321
TOTAL		\$ 1,854,917					\$ 65,607

SUGGESTED REPLACEMENT PLAN PRESENT COURSE

3/24/2004

Inflation 3%
Interest 4%
Annual Contribution Increase 2%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2004	-	-	-	-		0
2005	-	3,527	(141)	-		(3,668)
2006	(3,668)	-	(147)	-		(3,815)
2007	(3,815)	29,979	(1,352)	-		(35,145)
2008	(35,145)	-	(1,406)	-		(36,551)
2009	(36,551)	21,638	(2,328)	-		(60,516)
2010	(60,516)	-	(2,421)	-		(62,937)
2011	(62,937)	-	(2,517)	-		(65,454)
2012	(65,454)	22,442	(3,516)	-		(91,412)
2013	(91,412)	-	(3,656)	-		(95,069)
2014	(95,069)	-	(3,803)	-		(98,871)
2015	(98,871)	4,740	(4,144)	-		(107,755)
2016	(107,755)	37,892	(5,826)	-		(151,473)
2017	(151,473)	66,373	(8,714)	-		(226,560)
2018	(226,560)	72,831	(11,976)	-		(311,367)
2019	(311,367)	-	(12,455)	-		(323,821)
2020	(323,821)	16,129	(13,598)	-		(353,548)
2021	(353,548)	-	(14,142)	-		(367,690)
2022	(367,690)	165,323	(21,321)	-		(554,333)
2023	(554,333)	89,017	(25,734)	-		(669,084)
2024	(669,084)	-	(26,763)	-		(695,848)
2025	(695,848)	74,445	(30,812)	-		(801,105)
2026	(801,105)	70,136	(34,850)	-		(906,091)
2027	(906,091)	413,985	(52,803)	-		(1,372,879)
2028	(1,372,879)	144,030	(60,676)	-		(1,577,585)
2029	(1,577,585)	76,680	(66,171)	-		(1,720,436)
\$ 1,309,166 -\$ 411,270 \$ - \$ -						

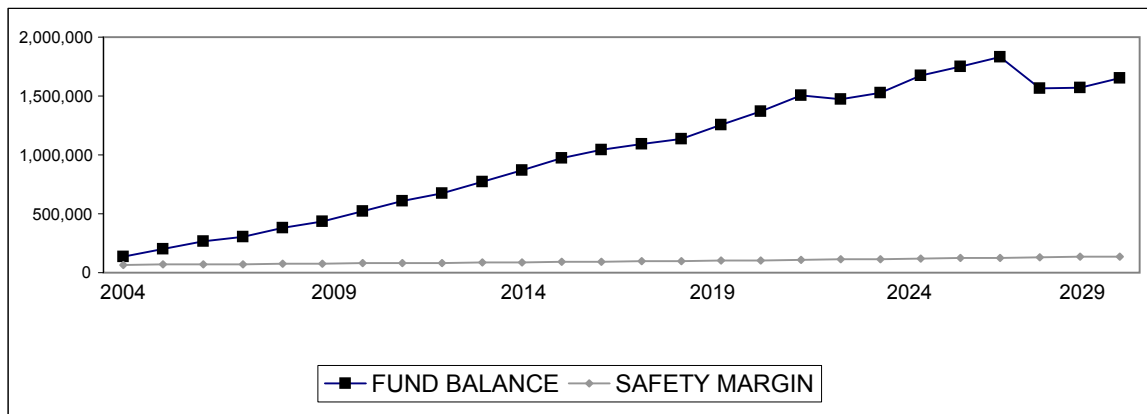


SUGGESTED REPLACEMENT PLAN EQUITY REPLACEMENT

3/24/2004

Inflation 3%
Interest 4%
Annual Contribution Increase 2%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2004	-	-	-	-	138,193	138,193
2005	138,193	3,527	5,387	58,555	-	198,608
2006	198,608	-	7,944	59,726	-	266,279
2007	266,279	29,979	9,452	60,921	-	306,673
2008	306,673	-	12,267	62,139	-	381,079
2009	381,079	21,638	14,378	63,382	-	437,200
2010	437,200	-	17,488	64,650	-	519,338
2011	519,338	-	20,774	65,943	-	606,054
2012	606,054	22,442	23,344	67,261	-	674,218
2013	674,218	-	26,969	68,607	-	769,793
2014	769,793	-	30,792	69,979	-	870,564
2015	870,564	4,740	34,633	71,378	-	971,835
2016	971,835	37,892	37,358	72,806	-	1,044,107
2017	1,044,107	66,373	39,109	74,262	-	1,091,106
2018	1,091,106	72,831	40,731	75,747	-	1,134,753
2019	1,134,753	-	45,390	77,262	-	1,257,405
2020	1,257,405	16,129	49,651	78,807	-	1,369,735
2021	1,369,735	-	54,789	80,384	-	1,504,908
2022	1,504,908	165,323	53,583	81,991	-	1,475,159
2023	1,475,159	89,017	55,446	83,631	-	1,525,219
2024	1,525,219	-	61,009	85,304	-	1,671,532
2025	1,671,532	74,445	63,883	87,010	-	1,747,980
2026	1,747,980	70,136	67,114	88,750	-	1,833,707
2027	1,833,707	413,985	56,789	90,525	-	1,567,036
2028	1,567,036	144,030	56,920	92,335	-	1,572,262
2029	1,572,262	76,680	59,823	94,182	-	1,649,587
\$ 1,309,166		\$ 945,023	\$ 1,875,537	\$ 138,193		

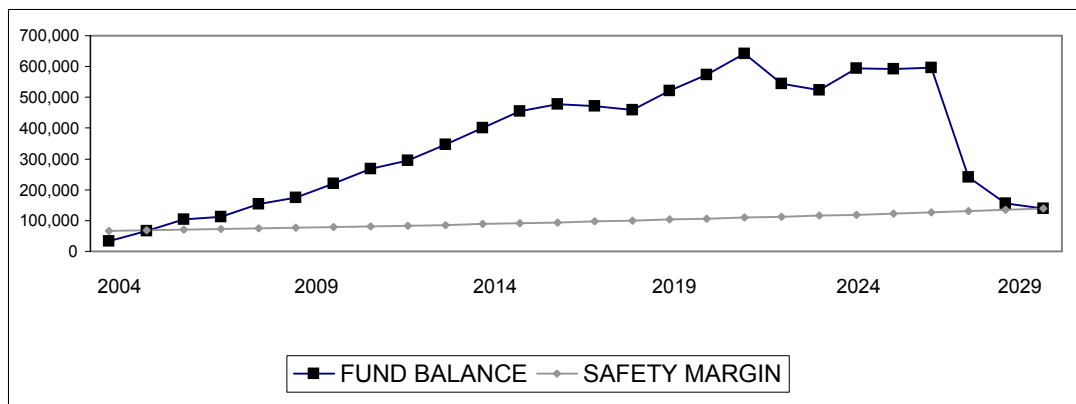


SUGGESTED REPLACEMENT PLAN REASONABLE AND SUFFICIENT WITH ANNUAL CONTRIBUTION INCREASED 2%

3/24/2004

Inflation 3%
Interest 4%
Annual Contribution Increase 2%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2004	-	-	-	33,822	-	33,822
2005	33,822	3,527	1,212	34,499		66,006
2006	66,006	-	2,640	35,189		103,835
2007	103,835	29,979	2,954	35,893		112,703
2008	112,703	-	4,508	36,610		153,822
2009	153,822	21,638	5,287	37,343		174,814
2010	174,814	-	6,993	38,089		219,896
2011	219,896	-	8,796	38,851		267,543
2012	267,543	22,442	9,804	39,628		294,533
2013	294,533	-	11,781	40,421		346,736
2014	346,736	-	13,869	41,229		401,834
2015	401,834	4,740	15,884	42,054		455,032
2016	455,032	37,892	16,686	42,895		476,721
2017	476,721	66,373	16,414	43,753		470,515
2018	470,515	72,831	15,907	44,628		458,219
2019	458,219	-	18,329	45,520		522,068
2020	522,068	16,129	20,238	46,431		572,608
2021	572,608	-	22,904	47,359		642,872
2022	642,872	165,323	19,102	48,307		544,957
2023	544,957	89,017	18,238	49,273		523,451
2024	523,451	-	20,938	50,258		594,647
2025	594,647	74,445	20,808	51,263		592,274
2026	592,274	70,136	20,885	52,289		595,311
2027	595,311	413,985	7,253	53,334		241,914
2028	241,914	144,030	3,915	54,401		156,200
2029	156,200	76,680	3,181	55,489		138,190
\$ 1,309,166 \$ 308,527 \$ 1,138,829 \$ -						

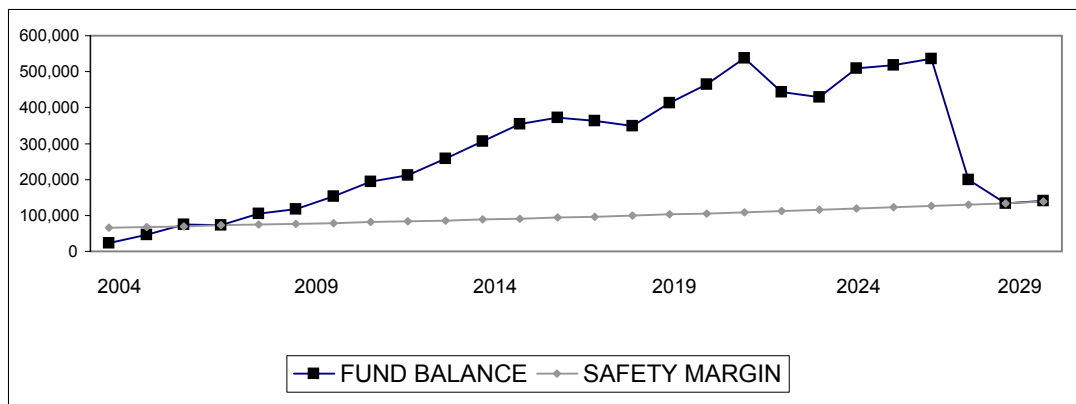


SUGGESTED REPLACEMENT PLAN REASONABLE AND SUFFICIENT WITH ANNUAL CONTRIBUTION INCREASED 5%

3/24/2004

Inflation 3%
Interest 4%
Annual Contribution Increase 5%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2004	-	-	-	23,757	-	23,757
2005	23,757	3,527	809	24,945		45,985
2006	45,985	-	1,839	26,192		74,016
2007	74,016	29,979	1,762	27,502		73,301
2008	73,301	-	2,932	28,877		105,110
2009	105,110	21,638	3,339	30,321		117,132
2010	117,132	-	4,685	31,837		153,654
2011	153,654	-	6,146	33,429		193,229
2012	193,229	22,442	6,831	35,100		212,719
2013	212,719	-	8,509	36,855		258,083
2014	258,083	-	10,323	38,698		307,104
2015	307,104	4,740	12,095	40,633		355,092
2016	355,092	37,892	12,688	42,665		372,553
2017	372,553	66,373	12,247	44,798		363,225
2018	363,225	72,831	11,616	47,038		349,047
2019	349,047	-	13,962	49,390		412,398
2020	412,398	16,129	15,851	51,859		463,980
2021	463,980	-	18,559	54,452		536,991
2022	536,991	165,323	14,867	57,175		443,709
2023	443,709	89,017	14,188	60,033		428,913
2024	428,913	-	17,157	63,035		509,104
2025	509,104	74,445	17,386	66,187		518,232
2026	518,232	70,136	17,924	69,496		535,515
2027	535,515	413,985	4,861	72,971		199,362
2028	199,362	144,030	2,213	76,619		134,165
2029	134,165	76,680	2,299	80,450		140,234
\$ 1,309,166		\$ 235,088		\$ 1,214,312		\$ -



SUGGESTED REPLACEMENT PLAN TEN YEAR REPLACEMENT SCHEDULE

3/24/2004

NO.	COMPONENT	1 2004	2 2005	3 2006	4 2007	5 2008	6 2009	7 2010	8 2011	9 2012	10 2013
1	Roofing -S.B.S.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	Paint Coat - Brick	\$ -	\$ -	\$ -	\$ 28,506	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	Paint/Stain - Balcony Floors	\$ -	\$ 3,527	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Paint/Stain Balcony Supports	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,435	\$ -
5	Paint/Stain Balcony Railings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,518	\$ -
6	Paint/Stain - Miscellaneous Railings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,112	\$ -
7	Windows	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Paint/Stain - Windows - Wood framed	\$ -	\$ -	\$ -	\$ 1,473	\$ -	\$ -	\$ -	\$ -	\$ 1,708	\$ -
9	Paint/Stain - Windows - Aluminum framed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,561	\$ -	\$ -	\$ -	\$ -
10	Balcony Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Penthouse Roof Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Entrance Security Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Paint/Stain Exterior Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,426	\$ -	\$ -	\$ -	\$ -
14	Sealant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,082	\$ -
15	Hardware Entrance Doors - Units and Main Entrance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Hardware - Remaining Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Paint/Stain - Unit & Miscellaneous Interior Doors	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,093	\$ -	\$ -	\$ -	\$ -
18	Paint/Stain - Interior Walls	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,952	\$ -	\$ -	\$ -	\$ -
19	Paint/Stain - Ceilings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Flooring - Carpet	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Flooring - Lino Tile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Flooring - Rubber Stair Treads	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,368	\$ -
23	Flooring - Ceramic Tile	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Ceramic Tile - Re-grouting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Community Mailboxes - Recessed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	Asphalt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	Concrete	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Fencing - Chain Link	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29	Paint/Stain - Wrought Iron Fencing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,220	\$ -
30	Furnaces	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

SUGGESTED REPLACEMENT PLAN TEN YEAR REPLACEMENT SCHEDULE

3/24/2004

NO.	COMPONENT	1 2004	2 2005	3 2006	4 2007	5 2008	6 2009	7 2010	8 2011	9 2012	10 2013
31	Hot Water Tanks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	Domestic Water and Fan Coil Heating Pumps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
33	Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	Fan Coil Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	Fan Coil Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Fan Coil Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	Fan Coil Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Fan Coil Unit Heaters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	Sump Pumps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,605	\$ -	\$ -	\$ -	\$ -
40	Parkade Make-Up Air Unit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Parkade Exhaust Fan	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	Water Piping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	Building Sprinkler System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	Parkade Sprinkler System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
45	Back Flow Prevention	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46	Glycol Ramp Heat	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Parkade Door	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
48	Electrical	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	Lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
50	Elevators	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51	Fire Alarm System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52	Intercom System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	Parking Security Gate Controls	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Wheelchair Lift	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Dollars		\$ -	\$ 3,527	\$ -	\$ 29,979	\$ -	\$ 21,638	\$ -	\$ -	\$ 22,442	\$ -

QUALIFICATIONS

Wade Engineering Ltd. was established in 1986, as an independent consulting firm, specializing in preparation of specifications for and/or review of work in progress for the restoration and repair of building envelopes and exterior finishes.

A combination of technical expertise and “hands on” experience has resulted in an extensive understanding of the repair and replacement procedures for common property components. Years of involvement in the condominium industry, including involvement with some education based organizations, has resulted in a sound understanding of the Reserve Fund requirements for condominiums, as well as the challenges facing Managers, Board Members and owners.

Wade Engineering Ltd. carries Commercial General Liability insurance, Professional Liability insurance and Document Replacement Insurance.

STUDY PERSONNEL

The Reserve Fund Study is conducted through the combined skills of the following personnel

A. C. (Al) King, B.A.Sc., P.Eng., A.C.C.I.

- ▶ Bachelor of Applied Science degree from the University of Waterloo.
- ▶ Professional Engineering degree from the University of Waterloo, and registered with the Association of Professional Engineers Geologists & Geophysicists of Alberta.
- ▶ Alberta Roofing Contractors Association (ARCA) Accepted Roof Inspector, and a member of the Society of Alberta Roofing Inspectors and Consultants.
- ▶ Senior Estimator status for insulation and air seal upgrades in CHIPS program.
- ▶ Associate of the Canadian Condominium Institute A.C.C.I.

Gwen King, Reserve Fund Study Director

- ▶ Professional Member of the Canadian Condominium Institute.
- ▶ 17 years partnership in Wade Engineering Ltd.
- ▶ Three years quantity surveying and product development.

Ron Shannon, Building Envelope Consultant

- ▶ Three years in the Building Maintenance Division – Tremco Ltd., specializing in Built-Up-Roofs, concrete restoration and wall coatings.
- ▶ Five years experience as production manager of vinyl window systems, insulated glass units and pre-hung steel entry doors.
- ▶ Three years with Wade Engineering as window, siding, stucco; specification & maintenance program consultant. Conducts infrared thermographic surveys and analysis and air barrier inspections.
- ▶ Associate member of the National Air Barrier Association.
- ▶ Moisture Control Technician Certificate from The Southern Alberta Institute of Technology

Tony Foster, ARCA Accepted Roof Inspector

- ▶ Journeyman Roofer, with an Interprovincial Red Seal, issued by Alberta Advanced Education and Career Development.
- ▶ Over 20 years in the roofing industry.
- ▶ Alberta Roofing Contractors Association (ARCA) Accepted Roof Inspector.

Scott MacKay, A. Tech.

- ▶ Associate Technician of The Alberta Society of Engineering Technologists.
- ▶ Certified Operating Engineer with The Boiler & Pressure Vessels Safety Association.
- ▶ Certified Energy Engineer with The Energy Engineers Association.

Other individuals employed by Wade Engineering Ltd. may be called upon for technical and/or clerical assistance. Outside professionals may also be consulted.

The component inventory, condition assessment, life estimates, fund status and funding scenarios are reviewed, verified and/or adjusted, by A.C. King, Professional Engineer.

REFERENCE SOURCES

Information used in completing this Study was collected from the following sources:

- ▶ Condominium Plan
- ▶ By-Laws
- ▶ Financial Statements
- ▶ Technical Reports on Common Property Components
- ▶ Site Investigations
- ▶ Property Manager and/or Board Members
- ▶ Technical Resource Material

The life cycles of common property components were determined using a combination of the following:

- ▶ Dr. Stephen J. Kirk, AIA, CVS and Alphonse J. Dell'isola, PE, *CVS Life Cycle Costing for Design Professionals (McGraw-Hill Book Company, 1995)*
- ▶ Recognizable conditions
- ▶ Experience factors
- ▶ Discussion with manufacturers, suppliers and service contractors

Replacement costs of common property components were determined using a combination of the following:

- ▶ *1999 Means Repair and Remodelling Cost Data*, (R.S. Means Company Inc., 1998)
- ▶ Hanscomb Consultants Inc., *1995 Yardsticks for Costing*, (Southam Construction Information Network, 1995)
- ▶ Experience with similar projects
- ▶ Discussion with manufacturers, suppliers and service contractors
- ▶ Review of financial documentation