

LIFE CYCLE ANALYSIS REPORT

Prepared for

**EAGLE RIDGE HOME OWNERS ASSOCIATION
538 HEFFERNAN DRIVE, EDMONTON, AB**



NOVEMBER 2017



WADE ENGINEERING LTD.

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FINAL

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Financial decisions based on assumptions or findings in this Report must consider the issuance date of this Report, the Scope of Work, Parameters and Variables as defined in this Report.

FINAL

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1. PROPERTY DESCRIPTION

Project Name:	Eagle Ridge Home Owners Association
Project Address:	538 Heffernan Drive, Edmonton, AB
Style of Buildings:	Single Family Houses
Number of Buildings:	265 Buildings
Age of Buildings:	23 Years

Wade Engineering Ltd. was commissioned to conduct a Life Cycle Analysis Report for **Eagle Ridge Home Owners Association**. The development is located at 538 Heffernan Drive, in the City of Edmonton.

Eagle Ridge is a Home Owners Association consisting of 265 single family houses, which includes poured concrete walkways, fences, lights and landscaping as part of the common property.

The grounds are landscaped with grass, coniferous and deciduous trees and shrubs.

The Life Cycle Analysis Study consisted of a review of pertinent documentation and consultation with the Board of Directors to develop an inventory of the common property components.

The quantities and conditions of the common components were determined through site investigations conducted in October, 2017. The component description, overall condition, conditions noted, pertinent history and specific maintenance or replacement recommendations have been summarized in chart form. Areas of Concern are summarized in a similar fashion.

2. SITE PLAN



3. FINANCIAL SUMMARY

Current Replacement Cost:	\$496,987
Annual Replacement Cost:	\$30,532
Recommended Safety Margin:	\$31,000
Opening Fund Balance as at March 31, 2017:	\$198,794
Current Annual Reserve Contribution:	\$46,375
Recommended Annual Contribution (starting 2019):	\$31,800

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 (1% per annum) and inflation (1% per annum) of replacement cost estimates.

At Eagle Ridge Home Owners Association, the total cost of the common property components to be replaced or restored by the Reserve Fund, in today's dollars is **\$496,987.00**. The Annual Replacement Cost (or the annual rate of deterioration of these components expressed in dollars) is **\$30,532.00** per year.

A minimum fund balance or "Safety Margin" is recommended to offset unpredictable expenses, such as random sewer collapses. The Safety Margin for this development has been set at **\$31,000.00** which is based on the Annual Replacement Cost for this development.

The "Reasonable & Sufficient" spreadsheet recommends an Annual Contribution of **\$<Recommended Annual Contribution> (approximately \$120.00/unit annually)** increased annually by **1%**.

Note: The Reasonable & Sufficient recommendations are based on the average amount per unit.

4. SUMMARY OF RECOMMENDATIONS

The most important maintenance consideration for Boards is ensuring that safety concerns are dealt with in a timely fashion.

Recommendations are summarized below and listed in order of the report. 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:

- **Walkways (Pg.16):** Seal cracks on poured concrete walkways as necessary.
- **Areas of Concern (Pg. 18):**
 - Corrosion was evident on the surface of flood lighting cage. Paint metal cage with corrosion inhibitive paint.
 - Minor crack and unsealed wall penetration was noted at one located of monument wall. Seal wall penetrations to avoid any potential water entry into wall components.

5. INTRODUCTION

This Life Cycle Analysis Report is a financial document based on a review of a sample of each of the components to be funded to provide an opinion of the Reserve Fund requirements of the Association. In order for a random representative sample of property reviewed to be of benefit, it is prudent to establish realistic parameters for a scope of work that will result in a product that meets the needs of the Association, at a reasonable cost. Included in this process is a meeting with the Board to review the draft report such that Board knowledge of the property is included within the report.

The estimate of life expectancies and replacement costs is completed as accurately as can be at the time of the study, however, actual replacement costs and expected life of items can vary depending on market conditions and the rate of deterioration near the end of the life of the component. The Life Cycle Analysis 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 25-year replacement schedule will help facilitate decisions regarding the scheduling of component replacement and collection of funds required to meet the financial demands of the Association.

6. SCOPE OF WORK

The Study consisted of a review of the bylaws and other pertinent documents and consultation with the Board of Directors to determine the common property components to be replaced or refurbished with monies from the Reserve Fund. These components were measured and counted during visits to the site (quantity and quality survey). This data in combination with current market replacement cost and is used to predict future replacement cost and timelines for each component.

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

7. 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. Furthermore, no monies are included for the catch-up of deferred maintenance. The report reflects the condition by penalizing the life of the item.

Components located below grade, such as sewer systems and/or components concealed from view such as electrical, are not reviewed, however a contingency amount for underground services has been included should an issue arise that would allow the Association to service these components. In addition, a Safety Margin, determined by the Study Provider, is incorporated in all funding scenarios to *help offset* unpredictable expenses that may arise.

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

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

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.

8. 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 this Study.

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.

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.

For example:

- ❖ Walkways require ongoing maintenance programs to realize their expected life.
- ❖ Fencing requires ongoing maintenance programs to realize their expected life.

Where possible, component replacement has been sequenced with other components adjacent to or impacted by other components. Some components that do not require replacement all at the same time can be phased.

Also note that deficiencies may not be identified or they may be present but not located in areas where random inspections are conducted. These costs may not be carried in the spreadsheets. This can be more accurately accounted for through a technical audit to determine if wall systems have been compromised.

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 deferral of maintenance may shorten their life.



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 "25-Year Replacement Plan", incorporate interest and inflation where applicable.

9. COMPONENT DESCRIPTION & GENERAL CONDITIONS

To be able to complete a Life Cycle Analysis Study a random sample of each common property component included in the Study was visually inspected for the purpose of estimating the remaining life. In conjunction with a quantity survey and opinion of replacement costs an expense stream for common property component replacement has been developed for the next twenty-five (25) years.

9.1 EXTERIOR SITE COMPONENTS

9.1.1 FENCING

TYPE OF COMPONENT(S):					OVERALL CONDITION:
Wood, metal, stone veneer, paint					Good
CURRENT REPLACEMENT COST:		EXPECTED LIFE:	ACTUAL AGE:	EFFECTIVE AGE:	REMAINING LIFE:
Wood Replacement – Zone 5	\$113,400	30	23	20	10
Wood Replacement – Zone 6	127,575	30	23	20	10
Wood – Paint (Zone 1)	\$12,805	7	Unknown	2	5
Wood – Paint (Zone 4)	\$26,933	7	Unknown	3	4
Wood – Paint (Zone 5)	\$22,680	7	Unknown	4	3
Wood – Paint (Zone 6)	\$25,515	7	Unknown	5	2
Metal Replacement – Zone 7	\$57,750	40	23	23	17
Metal – Paint (Zone 7)	\$10,500	10	Unknown	2	8
Columns - Stone Veneer - Repointing	\$6,300	40	23	23	17
COMPONENT DESCRIPTION: <ul style="list-style-type: none"> – Painted wood fencing with stone clad columns is installed on the perimeter of the property and along the interior roadways and walkways. – Painted metal fencing is installed in one interior section of the property along the monument walk. – All the fencing is divided into zones. The replacement of Zone 5 and 6 (wood fencing) and Zone 7 (metal fencing) are the responsibility of Eagle Ridge Home Owners Association. – Painting on one side of wood fencing is the responsibility of the Home Owners Association. CONDITIONS NOTED: <ul style="list-style-type: none"> – No concerns were noted with the fencing. <p><i>Note: It is thought that wholesale replacement stone veneer application may not be required; therefore, monies for only localized repairs are budgeted.</i></p>					
					
Photograph 1		Photograph 2			
Painted wood fencing – Zone 1		Painted wood fencing – Zone 6			

FENCING – CONTINUED



Photograph 3

Painted metal fencing – Zone 7



Photograph 4

Stone veneer columns

GOOD PRACTICE GUIDELINES:

- ❖ Schedule regular maintenance and paint wood fencing approximately every 7 years or as required to protect the wood from the elements.
- ❖ Schedule regular maintenance and paint fencing approximately every 10 years or as required with a corrosion inhibitive paint.
- ❖ The trim board at the base of the fence is protecting the fence post and minimizing the damage caused by the grass trimmer. The trim board does not appear to be in distress with the exception of loss of paint. If aesthetics is a concern the trim board could be painted more often than the fence repainting cycle.
- ❖ At locations where settlement has occurred and the trim board is above the grass, some damage is occurring to the base of some posts. A galvanized steel guard installed at the base of new posts will help to eliminate this problem.

9.1.2 LANDSCAPING

<u>TYPE OF COMPONENT(S):</u> Varies				<u>OVERALL CONDITION:</u> Good	
<u>CURRENT REPLACEMENT COST:</u>	<u>EXPECTED LIFE:</u>	<u>ACTUAL AGE:</u>	<u>EFFECTIVE AGE:</u>	<u>REMAINING LIFE:</u>	
\$13,913	5	Unknown	2	3	

COMPONENT DESCRIPTION:

- The landscaping consists of grass, mulch beds, deciduous and coniferous trees and shrubs.


CONDITIONS NOTED:

- No concerns were noted with the fencing.

Note: Monies carried for landscaping is not for wholesale replacement and is a contingency amount for items such as re-grading, tree and grass replacement, etc. that may be required from time to time.



Photograph 5



Photograph 6

Overview of landscaping

GOOD PRACTICE GUIDELINES:

- ❖ Landscaping will settle over time, and may allow the ground to slope towards the building foundations. Settling also leaves the potential for uneven walking surfaces and tripping hazards. Re-grading as necessary will help limit the chances of water entry through the foundations.
- ❖ Proper aeration, fertilizing, weed control, cutting, and raking will maintain lawns, and they should not require wholesale replacement.

9.1.3 LIGHTING


TYPE OF COMPONENT(S): Site lighting fixtures					OVERALL CONDITION: Good
CURRENT REPLACEMENT COST:		EXPECTED LIFE:	ACTUAL AGE:	EFFECTIVE AGE:	REMAINING LIFE:
Entrance Signage	\$630	35	23	23	12
Monument – Flood Lights	\$735	35	23	23	12
Monument – Base Lights	\$1,680	35	23	23	12
Monument – Wall Mounted	\$315	35	Unknown	3	32

COMPONENT DESCRIPTION:

- Site lighting fixtures are installed at the monument and along the property entrance signage.


CONDITIONS NOTED:

- No concerns were noted with the lighting.
- Exterior wall mounted lighting on the monument (west side) was replaced over the recent years.




Photograph 7

Lighting at property entrance signage




Photograph 8

Flood lighting for monument



Photograph 9

Base light (floor mounted) for monument



Photograph 10

Replaced wall mounted back light on monument

GOOD PRACTICE GUIDELINES:

- ❖ Schedule regular maintenance.
- ❖ Weekly walk around to ensure lighting is working properly.

9.1.4 PROPERTY SIGNAGE

<u>TYPE OF COMPONENT(S):</u> Property signage				<u>OVERALL CONDITION:</u> Good	
<u>CURRENT REPLACEMENT COST:</u>	<u>EXPECTED LIFE:</u>	<u>ACTUAL AGE:</u>	<u>EFFECTIVE AGE:</u>	<u>REMAINING LIFE:</u>	
\$5,250	20	Unknown	10	10	


COMPONENT DESCRIPTION:

- Property signage's are mounted over the stone veneer clad walls at the main entrance of the property.
- Entrance sign is also installed on the metal fence at Heffernan Close Road.


CONDITIONS NOTED:

- No concerns were noted with the property signage.

Note: It is not thought the signage will require wholesale replacement but may require some repair from time to time.



Photograph 11



Photograph 12

Property signage

GOOD PRACTICE GUIDELINES:

- ❖ Clean and paint property signage as required.


9.1.5 STONE VENEER

<u>TYPE OF COMPONENT(S):</u> Stone veneer				<u>OVERALL CONDITION:</u> Good	
<u>CURRENT REPLACEMENT COST:</u>		<u>EXPECTED LIFE:</u>	<u>ACTUAL AGE:</u>	<u>EFFECTIVE AGE:</u>	<u>REMAINING LIFE:</u>
Monument – Repointing	\$8,820	40	23	23	17
Signage Wall - Repointing	\$2,520	40	23	23	17


COMPONENT DESCRIPTION:

– Stone veneer cladding is installed on the exterior of monument structure and signage wall.

Note: It is thought that wholesale replacement stone veneer application may not be required; therefore, monies for only localized repairs are budgeted.



Photograph 13



Photograph 14

Stone veneer application on monument and signage wall

GOOD PRACTICE GUIDELINES:

❖ Schedule regular maintenance.

9.1.6 RAILINGS & GUARD POSTS


TYPE OF COMPONENT(S): Painted metal & wood posts				OVERALL CONDITION: Good	
CURRENT REPLACEMENT COST:		EXPECTED LIFE:	ACTUAL AGE:	EFFECTIVE AGE:	REMAINING LIFE:
Railings	\$840	40	23	23	17
Railings - Paint	\$210	10	Unknown	5	5
Guard Posts	\$4,095	40	23	23	17
Guard Posts - Paint	\$2,048	7	Unknown	2	5

COMPONENT DESCRIPTION:


- Painted metal railings and wood guard posts are located at the south entrance to the monument park and at end of each walkway throughout the neighborhood.

CONDITIONS NOTED:

- No concerns were noted with railings and guard posts.



Photograph 15




Photograph 16

Overview of painted metal railings & guard post

GOOD PRACTICE GUIDELINES:

- ❖ Schedule regular maintenance and paint wood guard posts approximately every 7 years or as required to protect the wood from the elements.
- ❖ Schedule regular maintenance and paint metal railings approximately every 10 years or as required with a corrosion inhibitive paint.

9.1.7 RETAINING WALLS

<u>TYPE OF COMPONENT(S):</u> Allan Block				<u>OVERALL CONDITION:</u> Good	
<u>CURRENT REPLACEMENT COST:</u>	<u>EXPECTED LIFE:</u>	<u>ACTUAL AGE:</u>	<u>EFFECTIVE AGE:</u>	<u>REMAINING LIFE:</u>	
\$1,575	40	23	23	17	
<u>COMPONENT DESCRIPTION:</u> – Allan block retaining walls adjoin the unistone pavers along the monument walkways.					
<u>CONDITIONS NOTED:</u> – No concerns were noted with Allan block retaining wall.					
			Allan Block retaining wall		
Photograph 17					
<u>GOOD PRACTICE GUIDELINES:</u> ❖ Inspect Allan block for movement. Complete repairs if safety or aesthetics are a concern.					

9.1.8 UNDERGROUND SERVICES – REPAIR

<u>TYPE OF COMPONENT(S):</u> Underground Utilities				<u>OVERALL CONDITION:</u> Unknown	
<u>CURRENT REPLACEMENT COST:</u>	<u>EXPECTED LIFE:</u>	<u>ACTUAL AGE:</u>	<u>EFFECTIVE AGE:</u>	<u>REMAINING LIFE:</u>	
\$26,250	35	23	23	12	
<u>COMPONENT DESCRIPTION:</u> – Although the underground services were not inspected, it is thought that repairs may be required from time to time. – Monies for periodic repair were budgeted in this report.					
<u>GOOD PRACTICE GUIDELINES:</u> ❖ Schedule regular maintenance.					

9.1.9 WALKWAYS

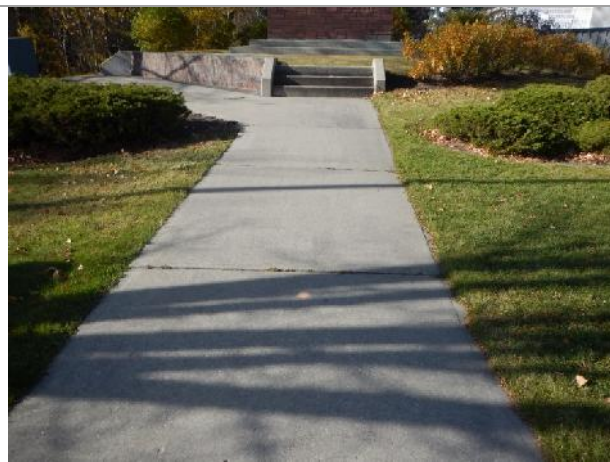
TYPE OF COMPONENT(S):					OVERALL CONDITION:
Varies					Good
CURRENT REPLACEMENT COST:		EXPECTED LIFE:	ACTUAL AGE:	EFFECTIVE AGE:	REMAINING LIFE:
Poured Concrete	\$9,975	35	23	23	12
Steps	\$6,300	35	23	23	12
Stamped Concrete	\$5,292	35	23	23	12
Unistone Pavers	\$1,103	35	23	23	12

COMPONENT DESCRIPTION:

- Poured concrete walkways and steps are located around the monument tower.
- Stamped concrete walkways are located along the monument park.
- Unistone pavers have been installed on the south of the monument tower besides the Allan block retaining wall.
- Concrete pavers are located adjacent to walkways at the entrances.

CONDITIONS NOTED:

- Minor cracking was noted at few locations on the poured concrete walkways.



Photograph 18



Photograph 19

Overview of poured concrete walkways & steps around monument tower



Photograph 20



Photograph 21

Overview of stamped concrete walkways

WALKWAYS – CONTINUED



Photograph 22

Unistone pavers



Photograph 23

Minor cracking on poured concrete walkway

SPECIFIC RECOMMENDATIONS:

- Seal cracks on poured concrete walkways as necessary.

GOOD PRACTICE GUIDELINES:

- ❖ Do not use salt for de-icing, as it can cause spalling and premature deterioration of concrete components.
- ❖ An application of a penetrating sealer will help protect the surface from spalling and freeze/ thaw damage.
- ❖ Seal cracks wider than 3/16th of an inch to minimize progressive damage from freeze/thaw.

10. AREAS OF CONCERN

It should be noted that some deficiencies may not become apparent during the Life Cycle Analysis Report site inspections since only a sample of components are reviewed. Although a report on the cursory inspection of areas of concern follows, this should not be considered a technical audit. General comments relating to the condition of the components are included to give a better overall understanding of conditions of the property. Often 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.

COMPONENT DESCRIPTION:

- Corrosion was evident on the surface of flood lighting cage. Paint metal cage with corrosion inhibitive paint.
- Minor crack and unsealed wall penetration was noted at one located of monument wall. Seal wall penetrations to avoid any potential water entry into wall components.



Photograph 24

Corrosion on surface of metal cage



Photograph 25

Unsealed wall penetration

11. FINANCIAL ANALYSIS

The financial spreadsheets that follow summarize and link the quantity survey, conditions noted, estimated life cycles, replacement costs and future expenditures.

11.1 "Cost/Life Data" Spreadsheet

Summarizes the following key information:

- ❖ **Common Property Component** - Defines the components to be replaced by the Reserve Fund.
- ❖ **Current Replacement Cost** - Estimates the current replacement cost of each component.
- ❖ **Expected Life** - Expresses the expected life of each component.
- ❖ **Actual Age** - Expresses the actual age of each component.
- ❖ **Effective Age** - The expected life of each component, adjusted to reflect the conditions noted.
- ❖ **Remaining Life** - Determines the expected life of each component, less the effective age of that component.
- ❖ **Annual Replacement Cost** - The Current Replacement Cost of each component, divided by its Expected Life - an initial indicator of annual reserve fund contribution requirements.

11.2 "Cost/Life Analysis" Spreadsheet

Analyzes the information from the "Cost/Life" Data spreadsheet and determines the following:

- ❖ **Percent of Total Contribution** - Determines the percentage of each component's Current Replacement Cost in relation to the Total Replacement Cost of all components.
- ❖ **Actual Present Fund** - Determines 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** - Calculates the difference between the Expired Equity and the Actual Present Fund.
- ❖ **Contingency** - In order to compensate for the variables discussed previously, a contingent amount is included in the totals. Based on 10% of the total replacement cost spread over a 25-year period, and injected annually.
- ❖ **Areas of Concern** - This category outlines areas of concern, however monies have not been carried for the items noted as they typically relate to operating maintenance issues that affect the Reserve Fund components.

11.3 Funding Plan Scenarios

The ideal Reserve Fund scenario would see adequate contributions being made from the start of the project's life. Unfortunately, this is a rare occurrence. As the age of a project advances, the "catch-up" of under-funding becomes increasingly difficult.

The first step in establishing appropriate contribution figures is consideration of the expenses for which the fund is responsible. The Study Provider determines a Safety Margin taking into account various factors including the age, size, and location of the project.

The purpose of this Study is to determine a "Reasonable" Annual contribution figure that will generate a cash stream "Sufficient" to cover predictable expenses (Annual Replacement Costs), and to help offset unpredictable expenses (random sewer collapse). Various contribution figures are tested, to find the funding scenario that maintains a cash stream that flows as closely to the Safety Margin as possible (Reasonable), without dipping below it (Sufficient).

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 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 minimum fund balance for each year
- ❖ **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

The effects of each funding scenario are illustrated in graph form, by plotting the Closing Balance for each year, along with the Safety Margin.

Two funding scenarios are presented:

- ❖ Present Course
- ❖ Reasonable and Sufficient

11.3.1 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.

11.3.2 Reasonable & Sufficient

This funding plan suggests the collection of an Annual Contribution approximately equal to the Annual Replacement Cost, in conjunction with the portion of Shortfall required to generate and maintain a cash flow that is:

- ❖ Reasonable - covers predictable expenses, yet maintains a cash stream that flows as closely to the Safety Margin as possible
- ❖ Sufficient - does not fall below the Safety Margin, required to help offset unpredictable expenses

11.4 Twenty-Five 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 25-year period. The 25-Year Replacement Schedule is included with all scheduling scenarios.

12. CONCLUSION

To maximize the effectiveness of the Life Cycle Analysis Report, updates are required on an ongoing basis.

13. 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.

14. STUDY PERSONNEL

The Report is conducted through the combined skills of the following personnel:

A. C. (Al) King, P.Eng., A.C.C.I., F.C.C.I.

- ⇒ Principal of Wade Engineering for 30+ years.
- ⇒ University of Waterloo, Bachelor of Applied Science degree.
- ⇒ Association of Professional Engineers and Geoscientists of Alberta (APEGA).
- ⇒ Canadian Condominium Institute (Associate & Fellow).

Ron Shannon, Manager, Building Envelope Services

- ⇒ Building Envelope Consultant with Wade Engineering for 17 years.
- ⇒ Southern Alberta Institute of Technology (SAIT), Certified Moisture Control Technician.
- ⇒ Roof Consultants, Inc. (Member).

Tony Foster, Manager, Roofing Services

- ⇒ Roof Consultant with Wade Engineering for 18 years.
- ⇒ Alberta Advanced Education & Career Development, Journeyman Roofer with an Inter-Provincial Red Seal.
- ⇒ Alberta Roofing Contractors Association (ARCA) Accepted Roof Inspector.
- ⇒ Roof Consultants, Inc. (Member).

Bradley Tierney, Manager of Reserve Fund Studies

- ⇒ Building Envelope Inspector with Wade Engineering for 3 years.
- ⇒ Milwaukee School of Engineering, Bachelor of Science, Architectural Engineering.
- ⇒ Southern Alberta Institute of Technology (SAIT), Certified Moisture Control Technician.

Shantel Kalakalo, Reserve Fund Analyst, Client Services Liaison

- ⇒ Various roles within Wade Engineering over the past 13 years.
- ⇒ Reserve Fund Analyst (reviewed in excess of 500 reports).
- ⇒ Condominium Management experience.
- ⇒ Client liaison presenting Reserve Fund Study Reports to Condominium Corporation.
- ⇒ Canadian Condominium Institute (Board Member – 1st Vice President, Education Chair).
- ⇒ Condominium Owner (Board Member – Secretary).

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

15. REFERENCE SOURCES

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

- ⇒ By-Laws
- ⇒ Financial Statements
- ⇒ Site Investigations
- ⇒ Board Members
- ⇒ Technical Resource Material

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

- ⇒ 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:

- ⇒ RSMeans *Commercial Renovation Cost Data 2016*
- ⇒ RSMeans *Square Foot Costs 2016*
- ⇒ RSMeans *Interior Cost Data 2016*
- ⇒ Experience with similar developments
- ⇒ Discussion with manufacturers, suppliers and service contractors
- ⇒ Review of financial documentation

COST/LIFE DATA

15/11/2017

NO.	COMPONENT	CURRENT			EFFECTIVE	REMAINING	ANNUAL
		REPLACEMENT	EXPECTED	ACTUAL			
		COST	LIFE	AGE	AGE	LIFE	REPLACEMENT COST
1	Fencing - Wood (Replacement Zone 5)	\$ 113,400	30	23	20	10	\$ 3,780
2	Fencing - Wood (Replacement Zone 6)	\$ 127,575	30	23	20	10	\$ 4,253
3	Fencing - Wood - Zone 1 - Paint	\$ 12,805	7	Unknown	2	5	\$ 1,830
4	Fencing - Wood - Zone 4 - Paint	\$ 26,933	7	Unknown	3	4	\$ 3,848
5	Fencing - Wood - Zone 5 - Paint	\$ 22,680	7	Unknown	4	3	\$ 3,240
6	Fencing - Wood - Zone 6 - Paint	\$ 25,515	7	Unknown	5	2	\$ 3,645
7	Fencing - Metal (Replacement Zone 7)	\$ 57,750	40	23	23	17	\$ 1,444
8	Fencing - Metal - Zone 7 - Paint	\$ 10,500	10	Unknown	2	8	\$ 1,050
9	Fencing - Stone Veneer Columns - Repointing	\$ 6,300	40	23	23	17	\$ 158
10	Landscaping	\$ 13,913	5	Unknown	2	3	\$ 2,783
11	Lighting - Entrance Signage	\$ 630	35	23	23	12	\$ 18
12	Lighting - Monument (Flood Lights)	\$ 735	35	23	23	12	\$ 21
13	Lighting - Monument (Base Lights)	\$ 1,680	35	23	23	12	\$ 48
14	Lighting - Monument (Wall Mounted)	\$ 315	35	Unknown	3	32	\$ 9
15	Property Signage	\$ 5,250	20	Unknown	10	10	\$ 263
16	Stone Veneer - Monument - Repointing	\$ 8,820	40	23	23	17	\$ 221
17	Stone Veneer - Signage Wall - Repointing	\$ 2,520	40	23	23	17	\$ 63
18	Railings & Guard Posts - Railings	\$ 840	40	23	23	17	\$ 21
19	Railings & Guard Posts - Railings - Paint	\$ 210	10	Unknown	5	5	\$ 21
20	Railings & Guard Posts - Guard Posts	\$ 4,095	40	23	23	17	\$ 103
21	Railings & Guard Posts - Guard Posts - Paint	\$ 2,048	7	Unknown	2	5	\$ 293
22	Retaining Wall - Allan Block	\$ 1,575	40	23	23	17	\$ 40
23	Underground Services	\$ 26,250	35	23	23	12	\$ 750
24	Walkways - Poured Concrete	\$ 9,975	35	23	23	12	\$ 285
25	Walkways - Steps	\$ 6,300	35	23	23	12	\$ 180
26	Walkways - Stamped Concrete	\$ 5,292	35	23	23	12	\$ 152
27	Walkways - Unistone Pavers	\$ 1,103	35	23	23	12	\$ 32
140	Contingency	\$ 1,980	1	0	1	0	\$ 1,981
TOTAL		\$ 496,987					\$ 30,532

COST/LIFE ANALYSIS

15/11/2017

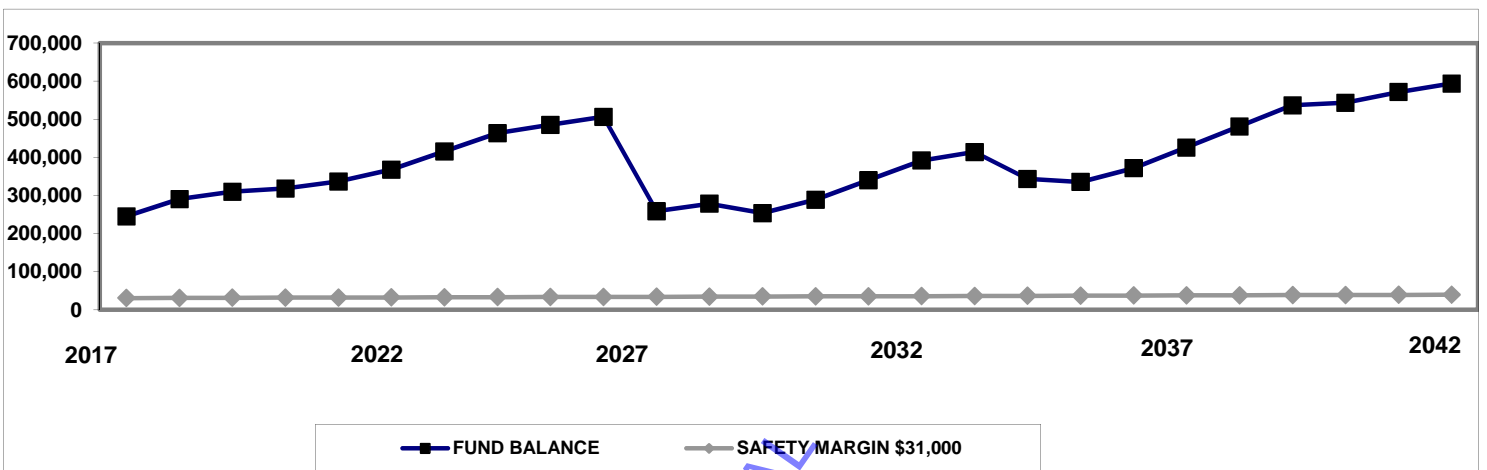
NO. COMPONENT		% OF ANNUAL REPLACEMENT COSTS	ACTUAL PRESENT FUND	EXPIRED EQUITY	SHORT FALL
1	Fencing - Wood (Replacement Zone 5)	12.38%	\$ 24,612	\$ 75,600	\$ 50,988
2	Fencing - Wood (Replacement Zone 6)	13.93%	\$ 27,691	\$ 85,060	\$ 57,369
3	Fencing - Wood - Zone 1 - Paint	5.99%	\$ 11,915	\$ 3,660	\$ (8,255)
4	Fencing - Wood - Zone 4 - Paint	12.60%	\$ 25,054	\$ 11,544	\$ (13,510)
5	Fencing - Wood - Zone 5 - Paint	10.61%	\$ 21,096	\$ 12,960	\$ (8,136)
6	Fencing - Wood - Zone 6 - Paint	11.94%	\$ 23,733	\$ 18,225	\$ (5,508)
7	Fencing - Metal (Replacement Zone 7)	4.73%	\$ 9,402	\$ 33,212	\$ 23,810
8	Fencing - Metal - Zone 7 - Paint	3.44%	\$ 6,837	\$ 2,100	\$ (4,737)
9	Fencing - Stone Veneer Columns - Repointing	0.52%	\$ 1,029	\$ 3,634	\$ 2,605
10	Landscaping	9.12%	\$ 18,120	\$ 5,566	\$ (12,554)
11	Lighting - Entrance Signage	0.06%	\$ 117	\$ 414	\$ 297
12	Lighting - Monument (Flood Lights)	0.07%	\$ 137	\$ 483	\$ 346
13	Lighting - Monument (Base Lights)	0.16%	\$ 313	\$ 1,104	\$ 791
14	Lighting - Monument (Wall Mounted)	0.03%	\$ 59	\$ 27	\$ (32)
15	Property Signage	0.86%	\$ 1,712	\$ 2,630	\$ 918
16	Stone Veneer - Monument - Repointing	0.72%	\$ 1,439	\$ 5,083	\$ 3,644
17	Stone Veneer - Signage Wall - Repointing	0.21%	\$ 410	\$ 1,449	\$ 1,039
18	Railings & Guard Posts - Railings	0.07%	\$ 137	\$ 483	\$ 346
19	Railings & Guard Posts - Railings - Paint	0.07%	\$ 137	\$ 105	\$ (32)
20	Railings & Guard Posts - Guard Posts	0.34%	\$ 671	\$ 2,369	\$ 1,698
21	Railings & Guard Posts - Guard Posts - Paint	0.96%	\$ 1,908	\$ 586	\$ (1,322)
22	Retaining Wall - Allan Block	0.13%	\$ 260	\$ 920	\$ 660
23	Underground Services	2.46%	\$ 4,883	\$ 17,250	\$ 12,367
24	Walkways - Poured Concrete	0.93%	\$ 1,856	\$ 6,555	\$ 4,699
25	Walkways - Steps	0.59%	\$ 1,172	\$ 4,140	\$ 2,968
26	Walkways - Stamped Concrete	0.50%	\$ 990	\$ 3,496	\$ 2,506
27	Walkways - Unistone Pavers	0.10%	\$ 208	\$ 736	\$ 528
140	Contingency	6.49%	\$ 12,898	\$ 1,981	\$ (10,917)
TOTAL		100.00%	\$ 198,794	\$ 301,372	\$ 102,578

PRESENT COURSE

15/11/2017

Inflation 1%
Interest 1%
Annual Contribution Increase 1%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2017	\$ 198,794	\$ -	\$ 310	\$ 46,375		\$ 245,479
2018	\$ 245,479	\$ 2,000	\$ 313	\$ 46,839		\$ 290,631
2019	\$ 290,631	\$ 28,048	\$ 316	\$ 47,307		\$ 310,206
2020	\$ 310,206	\$ 39,741	\$ 319	\$ 47,780		\$ 318,565
2021	\$ 318,565	\$ 30,086	\$ 323	\$ 48,258		\$ 337,059
2022	\$ 337,059	\$ 17,912	\$ 326	\$ 48,741		\$ 368,214
2023	\$ 368,214	\$ 2,102	\$ 329	\$ 49,228		\$ 415,669
2024	\$ 415,669	\$ 2,123	\$ 332	\$ 49,720		\$ 463,599
2025	\$ 463,599	\$ 28,579	\$ 336	\$ 50,217		\$ 485,572
2026	\$ 485,572	\$ 30,071	\$ 339	\$ 50,720		\$ 506,560
2027	\$ 506,560	\$ 299,226	\$ 342	\$ 51,227		\$ 258,904
2028	\$ 258,904	\$ 32,257	\$ 346	\$ 51,739		\$ 278,732
2029	\$ 278,732	\$ 77,522	\$ 349	\$ 52,257		\$ 253,816
2030	\$ 253,816	\$ 18,087	\$ 353	\$ 52,779		\$ 288,861
2031	\$ 288,861	\$ 2,276	\$ 356	\$ 53,307		\$ 340,248
2032	\$ 340,248	\$ 2,543	\$ 360	\$ 53,840		\$ 391,905
2033	\$ 391,905	\$ 32,240	\$ 363	\$ 54,378		\$ 414,407
2034	\$ 414,407	\$ 126,200	\$ 367	\$ 54,922		\$ 343,497
2035	\$ 343,497	\$ 63,785	\$ 371	\$ 55,471		\$ 335,554
2036	\$ 335,554	\$ 20,335	\$ 375	\$ 56,026		\$ 371,620
2037	\$ 371,620	\$ 2,416	\$ 378	\$ 56,586		\$ 426,168
2038	\$ 426,168	\$ 2,440	\$ 382	\$ 57,152		\$ 481,262
2039	\$ 481,262	\$ 2,465	\$ 386	\$ 57,724		\$ 536,907
2040	\$ 536,907	\$ 52,056	\$ 390	\$ 58,301		\$ 543,542
2041	\$ 543,542	\$ 31,312	\$ 394	\$ 58,884		\$ 571,508
2042	\$ 571,508	\$ 37,348	\$ 398	\$ 59,473		\$ 594,030
		\$ 983,167	\$ 9,153	\$ 1,369,251	\$ -	

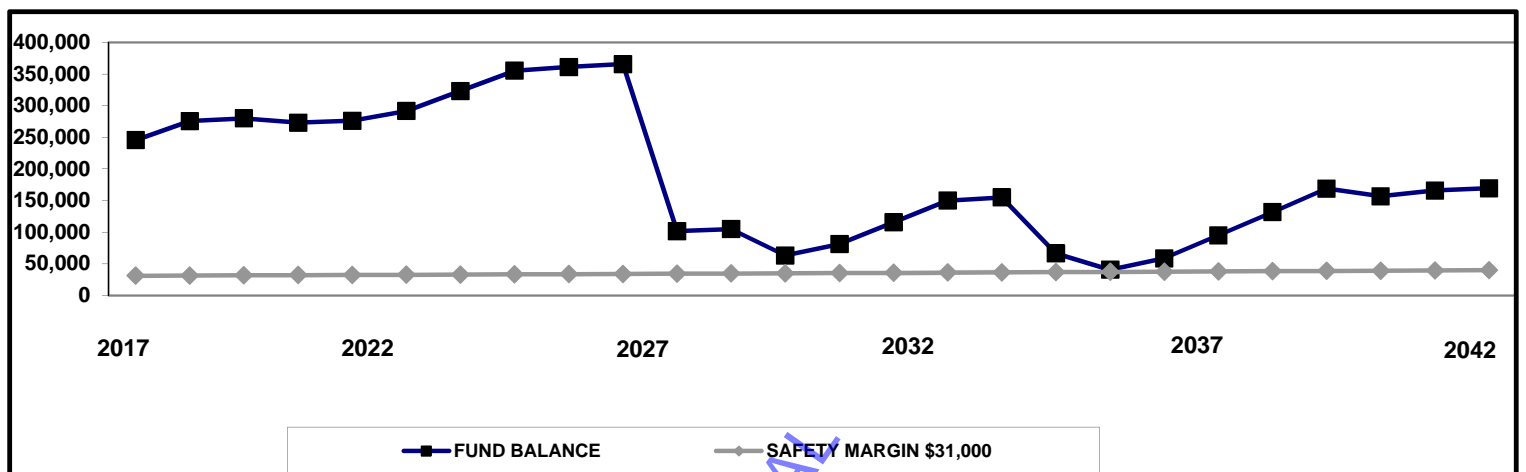


REASONABLE AND SUFFICIENT

15/11/2017

Inflation 1%
Interest 1%
Annual Contribution Increase 1%

Year	Opening Balance	Expenses	Interest	Annual Contribution	Additional Assessments	Closing Balance
2017	\$ 198,794	\$ -	\$ 310	\$ 46,375		\$ 245,479
2018	\$ 245,479	\$ 2,000	\$ 313	\$ 31,800		\$ 275,592
2019	\$ 275,592	\$ 28,048	\$ 316	\$ 32,118		\$ 279,978
2020	\$ 279,978	\$ 39,741	\$ 319	\$ 32,439		\$ 272,996
2021	\$ 272,996	\$ 30,086	\$ 323	\$ 32,764		\$ 275,995
2022	\$ 275,995	\$ 17,912	\$ 326	\$ 33,091		\$ 291,501
2023	\$ 291,501	\$ 2,102	\$ 329	\$ 33,422		\$ 323,150
2024	\$ 323,150	\$ 2,123	\$ 332	\$ 33,756		\$ 355,116
2025	\$ 355,116	\$ 28,579	\$ 336	\$ 34,094		\$ 360,966
2026	\$ 360,966	\$ 30,071	\$ 339	\$ 34,435		\$ 365,669
2027	\$ 365,669	\$ 299,226	\$ 342	\$ 34,779		\$ 101,565
2028	\$ 101,565	\$ 32,257	\$ 346	\$ 35,127		\$ 104,781
2029	\$ 104,781	\$ 77,522	\$ 349	\$ 35,478		\$ 63,087
2030	\$ 63,087	\$ 18,087	\$ 353	\$ 35,833		\$ 81,186
2031	\$ 81,186	\$ 2,276	\$ 356	\$ 36,191		\$ 115,457
2032	\$ 115,457	\$ 2,543	\$ 360	\$ 36,553		\$ 149,828
2033	\$ 149,828	\$ 32,240	\$ 363	\$ 36,919		\$ 154,870
2034	\$ 154,870	\$ 126,200	\$ 367	\$ 37,288		\$ 66,326
2035	\$ 66,326	\$ 63,785	\$ 371	\$ 37,661		\$ 40,573
2036	\$ 40,573	\$ 20,335	\$ 375	\$ 38,037		\$ 58,650
2037	\$ 58,650	\$ 2,416	\$ 378	\$ 38,418		\$ 95,030
2038	\$ 95,030	\$ 2,440	\$ 382	\$ 38,802		\$ 131,774
2039	\$ 131,774	\$ 2,465	\$ 386	\$ 39,190		\$ 168,885
2040	\$ 168,885	\$ 52,056	\$ 390	\$ 39,582		\$ 156,801
2041	\$ 156,801	\$ 31,312	\$ 394	\$ 39,978		\$ 165,860
2042	\$ 165,860	\$ 37,348	\$ 398	\$ 40,378		\$ 169,288
		\$ 983,167	\$ 9,153	\$ 944,509	\$ -	



TWENTY-FIVE YEAR REPLACEMENT SCHEDULE (Years 1 to 12)

15/11/2017

NO.	COMPONENT	1	2	3	4	5	6	7	8	9	10	11	12
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Inflation Rate	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1	Fencing - Wood (Replacement Zone 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 125,264	\$ -
2	Fencing - Wood (Replacement Zone 6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140,922	\$ -
3	Fencing - Wood - Zone 1 - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,458	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Fencing - Wood - Zone 4 - Paint	\$ -	\$ -	\$ -	\$ -	\$ 28,026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,048
5	Fencing - Wood - Zone 5 - Paint	\$ -	\$ -	\$ -	\$ 23,367	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,053	\$ -
6	Fencing - Wood - Zone 6 - Paint	\$ -	\$ -	\$ 26,028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,905	\$ -	\$ -
7	Fencing - Metal (Replacement Zone 7)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Fencing - Metal - Zone 7 - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,370	\$ -	\$ -	\$ -
9	Fencing - Stone Veneer Columns - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Landscaping	\$ -	\$ -	\$ -	\$ 14,334	\$ -	\$ -	\$ -	\$ -	\$ 15,065	\$ -	\$ -	\$ -
11	Lighting - Entrance Signage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Lighting - Monument (Flood Lights)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Lighting - Monument (Base Lights)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	Lighting - Monument (Wall Mounted)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Property Signage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,799	\$ -
16	Stone Veneer - Monument - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Stone Veneer - Signage Wall - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	Railings & Guard Posts - Railings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Railings & Guard Posts - Railings - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 221	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Railings & Guard Posts - Guard Posts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Railings & Guard Posts - Guard Posts - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,152	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Retaining Wall - Allan Block	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	Underground Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Walkways - Poured Concrete	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Walkways - Steps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	Walkways - Stamped Concrete	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	Walkways - Unistone Pavers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
140	Contingency		\$ 2,000	\$ 2,020	\$ 2,040	\$ 2,060	\$ 2,081	\$ 2,102	\$ 2,123	\$ 2,144	\$ 2,166	\$ 2,187	\$ 2,209
	Future Dollars	\$ -	\$ 2,000	\$ 28,048	\$ 39,741	\$ 30,086	\$ 17,912	\$ 2,102	\$ 2,123	\$ 28,579	\$ 30,071	\$ 299,226	\$ 32,257

FINAL
LC5-A

TWENTY-FIVE YEAR REPLACEMENT SCHEDULE SCHEDULE (Years 13 to 25)

15/11/2017

NO.	COMPONENT	13	14	15	16	17	18	19	20	21	22	23	24	25
		2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
	Inflation Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1	Fencing - Wood (Replacement Zone 5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	Fencing - Wood (Replacement Zone 6)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	Fencing - Wood - Zone 1 - Paint	\$ 14,429	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,470	\$ -	\$ -	\$ -	\$ -	\$ -
4	Fencing - Wood - Zone 4 - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,215	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Fencing - Wood - Zone 5 - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,860	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28,798
6	Fencing - Wood - Zone 6 - Paint	\$ -	\$ -	\$ -	\$ -	\$ 29,918	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,077	\$ -
7	Fencing - Metal (Replacement Zone 7)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 68,394	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Fencing - Metal - Zone 7 - Paint	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,560	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Fencing - Stone Veneer Columns - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,461	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Landscaping	\$ -	\$ 15,834	\$ -	\$ -	\$ -	\$ -	\$ 16,641	\$ -	\$ -	\$ -	\$ -	\$ 17,490	\$ -
11	Lighting - Entrance Signage	\$ 710	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Lighting - Monument (Flood Lights)	\$ 828	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Lighting - Monument (Base Lights)	\$ 1,893	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	Lighting - Monument (Wall Mounted)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Property Signage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Stone Veneer - Monument - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,446	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Stone Veneer - Signage Wall - Repointing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,984	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	Railings & Guard Posts - Railings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 995	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Railings & Guard Posts - Railings - Paint	\$ -	\$ -	\$ -	\$ 244	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20	Railings & Guard Posts - Guard Posts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Railings & Guard Posts - Guard Posts - Paint	\$ 2,307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,474	\$ -	\$ -	\$ -	\$ -	\$ -
22	Retaining Wall - Allan Block	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,865	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	Underground Services	\$ 29,579	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Walkways - Poured Concrete	\$ 11,240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	Walkways - Steps	\$ 7,099	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	Walkways - Stamped Concrete	\$ 5,963	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	Walkways - Unistone Pavers	\$ 1,242	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
140	Contingency	\$ 2,231	\$ 2,253	\$ 2,276	\$ 2,299	\$ 2,322	\$ 2,345	\$ 2,368	\$ 2,392	\$ 2,416	\$ 2,440	\$ 2,465	\$ 2,489	\$ 2,514
	Future Dollars	\$ 77,522	\$ 18,087	\$ 2,276	\$ 2,543	\$ 32,240	\$ 126,200	\$ 63,785	\$ 20,335	\$ 2,416	\$ 2,440	\$ 2,465	\$ 52,056	\$ 31,312

FINAL
LC5-B