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## "Full" Reserve Study



### **White Pass Village Inn White Pass, WA**

**Report #: 36105-0**  
**For Period Beginning: July 1, 2019**  
**Expires: June 30, 2020**

**Date Prepared: April 9, 2019**



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**Hello, and welcome to your Reserve Study!**

**T**his Report is a valuable budget planning tool, for with it you control the future of your association. It contains all the fundamental information needed to understand your current and future Reserve obligations, the most significant expenditures your association will face.

**W**ith respect to Reserves, this Report will tell you "where you are," and "where to go from here."

In this Report, you will find...

- 1) A List of What you're Reserving For**
- 2) An Evaluation of your Reserve Fund Size and Strength**
- 3) A Recommended Multi-Year Reserve Funding Plan**

**More Questions?**

Visit our website at [www.ReserveStudy.com](http://www.ReserveStudy.com) or call us at:

253-661-5437



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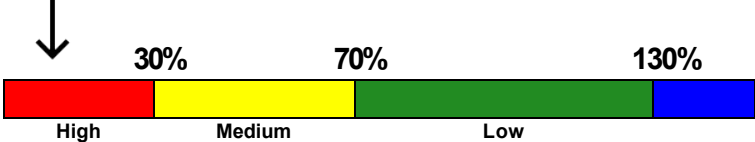
## 3- Minute Executive Summary

**Association:** White Pass Village Inn **Assoc. #: 36105-0**  
**Location:** White Pass, WA **# of Units: 55**  
**Report Period:** July 1, 2019 through June 30, 2020

**Findings/Recommendations as-of: July 1, 2019**

Starting Reserve Balance . . . . .	\$95,700
Current Fully Funded Reserve Balance . . . . .	\$1,013,847
Percent Funded . . . . .	9.4 %
Average Reserve Deficit or (Surplus) Per Unit . . . . .	\$16,694
Recommended 2019/2020 100% Monthly "Full Funding" Contributions . . . . .	\$5,657
2019/2020 "Alternate / Baseline Funding" minimum to keep Reserves above \$0 . . .	\$5,268
Recommended 2019/2020-2028/2029 Special Assessment, Each Year . . . . .	\$75,000***
Most Recent Budgeted Contribution Rate . . . . .	\$0

Reserves % Funded: 9.4%



Special Assessment Risk:

**Economic Assumptions:**

**Net Annual "After Tax" Interest Earnings Accruing to Reserves . . . . .** 1.00 %  
**Annual Inflation Rate . . . . .** 3.00 %

- This is a "Full" Reserve Study, meeting or exceeding all requirements of the RCW. This study was prepared by a credentialed Reserve Specialist (RS™).
- Your Reserve Fund is currently 9.4 % Funded. This means the association’s special assessment & deferred maintenance risk is currently High. The objective of your multi-year Funding Plan is to fund your Reserves to a level where you will enjoy a low risk of such Reserve cash flow problems.
- Based on this starting point and your anticipated future expenses, our recommendation is to budget Reserve Contributions of \$5,657 per month this fiscal year, as well as levy a special assessment in the amount of \$75,000 per year for fiscal years 2019/2020 through 2028-2029. \*\*\*The recommended special assessment is preliminary pending actual scope of work and vendor estimates for projects coming up within the next ten years including exterior building paint, siding replacement, window replacement and deck work. The 100% “Full” contribution rate is designed to gradually achieve this funding objective by the end of our 30-year report scope.
- No assets appropriate for Reserve designation known to be excluded. See appendix for component information and the basis of our assumptions. "Alternate Funding" in this report is synonymous with Baseline Funding, as defined within the RCW " to maintain the reserve account balance above zero throughout the thirty-year study period, without special assessments." Funding plan contribution rates are presented as an aggregate

**total, assuming average percentage of ownership. The actual ownership allocation may vary - refer to your governing documents.**

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
<b>Site / Grounds</b>				
200	Monument Sign - Replace	25	10	\$3,000
346	Unit Patio Furniture - Replace	20	10	\$7,500
<b>Pool</b>				
300	Pool Deck - Resurface	50	17	\$15,250
301	Pool Fence - Repair/Replace	25	5	\$4,350
303	Pool - Resurface	10	7	\$18,500
305	Pool - Retile	30	7	\$3,000
307	Pool Heater - Replace (a)	6	5	\$4,700
307	Pool Heater - Replace (b)	6	1	\$4,700
314	Pool Cover - Replace	10	9	\$6,500
<b>Building Exterior</b>				
500	Steep Slope Roof - Repair/Replace	30	15	\$73,150
522	Fiber-Cement Siding -Repair/Replace	50	40	\$185,700
523	Wood Siding - Replace	50	10	\$664,500
533	Exterior Surfaces - Paint/Caulk	10	0	\$101,600
535	Windows, Sliders - Repair/Replace	50	10	\$153,750
541	Sheet Good Decks - Repair/Replace	15	10	\$152,000
545	Wood Decks - Repair/Replace	25	10	\$80,850
550	Metal Deck Rail - Repair/Replace	45	39	\$51,650
551	Wood/Metal Deck Rail - Repair/Rpl	30	24	\$11,200
560	Exterior Lights - Replace	30	10	\$6,450
<b>Building Interior</b>				
730	Managers' Units - Refurbish	5	4	\$4,000
740	Office - Remodel	15	5	\$2,500
<b>Systems / Equipment</b>				
909	Generator - Repair/Replace	40	22	\$62,500
920	Unit Key System - Replace	10	8	\$10,000
965	Fire Alarm Panel - Repair/Replace	20	3	\$3,500
966	Fire Hydrants - Repair/Replace	10	9	\$3,750
970	Snowblowers - Replace	3	1	\$1,750
972	Riding Lawn Mower - Replace	10	2	\$2,000
974	Laundry Machines - Replace	8	7	\$2,600
<b>28 Total Funded Components</b>				

Note 1: Yellow highlighted line items are expected to require attention in this initial year, green highlighted items are expected to occur within the first-five years.

## Introduction



A Reserve Study is the art and science of anticipating, and preparing for, an association's major common area repair and replacement expenses. Partially art, because in this field we are making projections about the future. Partially science, because our work is a combination of research and well-defined computations, following consistent National Reserve Study Standard principles.

The foundation of this and every Reserve Study is your Reserve Component List (what you are reserving for). This is because the Reserve Component List defines the *scope and schedule* of all your anticipated upcoming Reserve projects. Based on that List and your starting balance, we calculate the association's Reserve Fund Strength (reported in terms of "Percent Funded"). Then we compute a Reserve Funding Plan to provide for the Reserve needs of the association. These form the three results of your Reserve Study.



Reserve contributions are not “for the future”. Reserve contributions are designed to offset the ongoing, daily deterioration of your Reserve assets. Done well, a stable, budgeted Reserve Funding Plan will collect sufficient funds from the owners who enjoyed the use of those assets, so the association is financially prepared for the irregular expenditures scattered through future years when those projects eventually require replacement.

## Methodology



For this [Full Reserve Study](#), we started with a review of your Governing Documents, recent Reserve expenditures, an evaluation of how expenditures are handled (ongoing maintenance vs Reserves), and research into any well-established association precedents. We

performed an on-site inspection to quantify and evaluate your common areas, creating your Reserve Component List *from scratch*.

## *Which Physical Assets are Funded by Reserves?*

There is a national-standard four-part test to determine which expenses should appear in your Reserve Component List. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the remaining life must be predictable (or it by definition is a *surprise* which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost (often between .5% and 1% of an association's total budget). This limits Reserve



Components to major, predictable expenses. Within this framework, it is inappropriate to include *lifetime* components, unpredictable expenses (such as damage due to fire, flood, or earthquake), and expenses more appropriately handled from the Operational Budget or as an insured loss.

## *How do we establish Useful Life and Remaining Useful Life estimates?*

- 1) Visual Inspection (observed wear and age)
- 2) Association Reserves database of experience
- 3) Client History (install dates & previous life cycle information)
- 4) Vendor Evaluation and Recommendation

## *How do we establish Current Repair/Replacement Cost Estimates?*

In this order...

- 1) Actual client cost history, or current proposals
- 2) Comparison to Association Reserves database of work done at similar associations
- 3) Vendor Recommendations
- 4) Reliable National Industry cost estimating guidebooks

## How much Reserves are enough?

Reserve adequacy is not measured in cash terms. Reserve adequacy is found when the *amount* of current Reserve cash is compared to Reserve component deterioration (the *needs of the association*). Having *enough* means the association can execute its projects in a timely manner with existing Reserve funds. Not having *enough* typically creates deferred maintenance or special assessments.

Adequacy is measured in a two-step process:

- 1) Calculate the *value of deterioration* at the association (called Fully Funded Balance, or FFB).
- 2) Compare that to the Reserve Fund Balance, and express as a percentage.



Each year, the *value of deterioration* at the association changes. When there is more deterioration (as components approach the time they need to be replaced), there should be more cash to offset that deterioration and prepare for the expenditure. Conversely, the *value of deterioration* shrinks after projects are accomplished. The *value of deterioration* (the FFB) changes each year, and is a moving but predictable target.

There is a high risk of special assessments and deferred maintenance when the Percent Funded is *weak*, below 30%. Approximately 30% of all associations are in this high risk range. While the 100% point is Ideal (indicating Reserve cash is equal to the *value of deterioration*), a Reserve Fund in the 70% - 130% range is considered strong (low risk of special assessment).

Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. New buyers should be very aware of this important disclosure!

## How much should we contribute?



RESERVE FUNDING PRINCIPLES

According to National Reserve Study Standards, there are four Funding Principles to balance in developing your Reserve Funding Plan. Our first objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. Second, a stable contribution is desirable because it keeps these naturally irregular expenses from unsettling the budget.

Reserve contributions that are evenly distributed over current and future owners enable each owner to pay their fair share of the association's Reserve expenses over the years. And finally, we develop a plan that is fiscally responsible and safe for Boardmembers to recommend to their association. Remember, it is the Board's job to provide for the ongoing care of the common areas. Boardmembers invite liability exposure when Reserve contributions are inadequate to offset ongoing common area deterioration.

## What is our Recommended Funding Goal?

Maintaining the Reserve Fund at a level equal to the *value* of deterioration is called "Full Funding" (100% Funded). As each asset ages and becomes "used up," the Reserve Fund grows proportionally. **This is simple, responsible, and our recommendation.** Evidence shows that associations in the 70 - 130% range *enjoy a low risk of special assessments or deferred maintenance.*



FUNDING OBJECTIVES

Allowing the Reserves to fall close to zero, but not below zero, is called Baseline Funding. Doing so allows the Reserve Fund to drop into the 0 - 30% range, where there is a high risk of special assessments & deferred maintenance. Since Baseline Funding still provides for the timely execution of all Reserve projects, and only the "margin of safety" is different, Baseline Funding contributions average only 10% - 15% less than Full Funding contributions. Threshold Funding is the title of all other Cash or Percent Funded objectives *between* Baseline Funding and Full Funding.

## **Site Inspection Notes**

During our site visit on 2/27/2019, we visually inspected all visible common areas, while compiling a photographic inventory, noting: current condition, make & model information where appropriate, apparent levels of care and maintenance, exposure to weather elements and other factors that may affect the components useful life.

## Projected Expenses

While this Reserve Study looks forward 30 years, we have no expectation that all these expenses will all take place as anticipated. This Reserve Study needs to be updated annually because we expect the timing of these expenses to shift and the size of these expenses to change. We do feel more certain of the timing and cost of near-term expenses than expenses many years away.

The figure below summarizes the projected future expenses at your association as defined by your Reserve Component List. A summary of these expenses are shown in the 30-yr Summary Table, while details of the projects that make up these expenses are shown in the Cash Flow Detail Table.

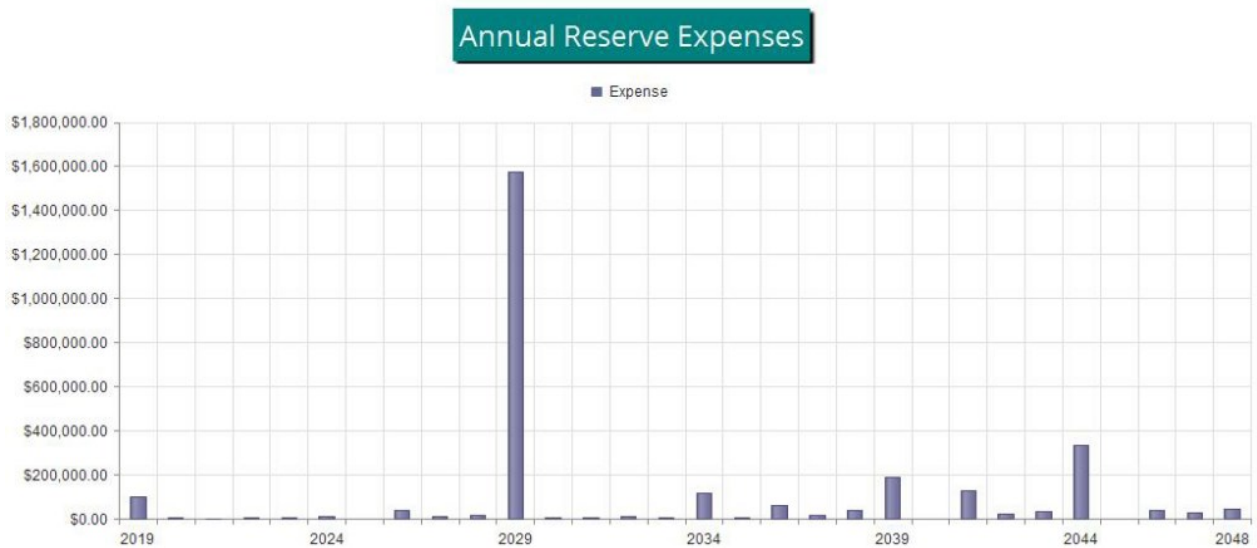


Figure 1

## Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$95,700 as-of the start of your Fiscal Year on 7/1/2019. As of that date, your Fully Funded Balance is computed to be \$1,013,847 (see Fully Funded Balance Table). This figure represents the deteriorated value of your common area components.

## Recommended Funding Plan

Based on your current Percent Funded and your near-term and long-term Reserve needs, we are recommending budgeted contributions of \$5,657 per month this Fiscal Year. The overall 30-yr plan, in perspective, is shown below. This same information is shown numerically in both the 30-yr Summary Table and the Cash Flow Detail Table.

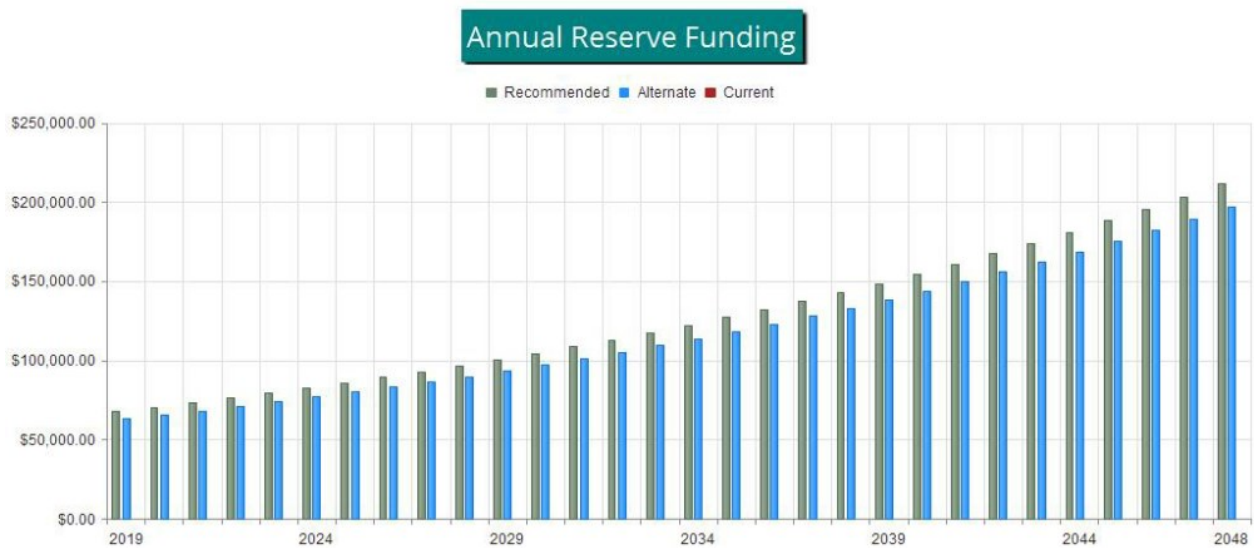


Figure 2

The following chart shows your Reserve balance under our recommended Full Funding Plan, an alternate Baseline Funding Plan, and at your current budgeted contribution rate (assumes future increases), compared to your always-changing Fully Funded Balance target.

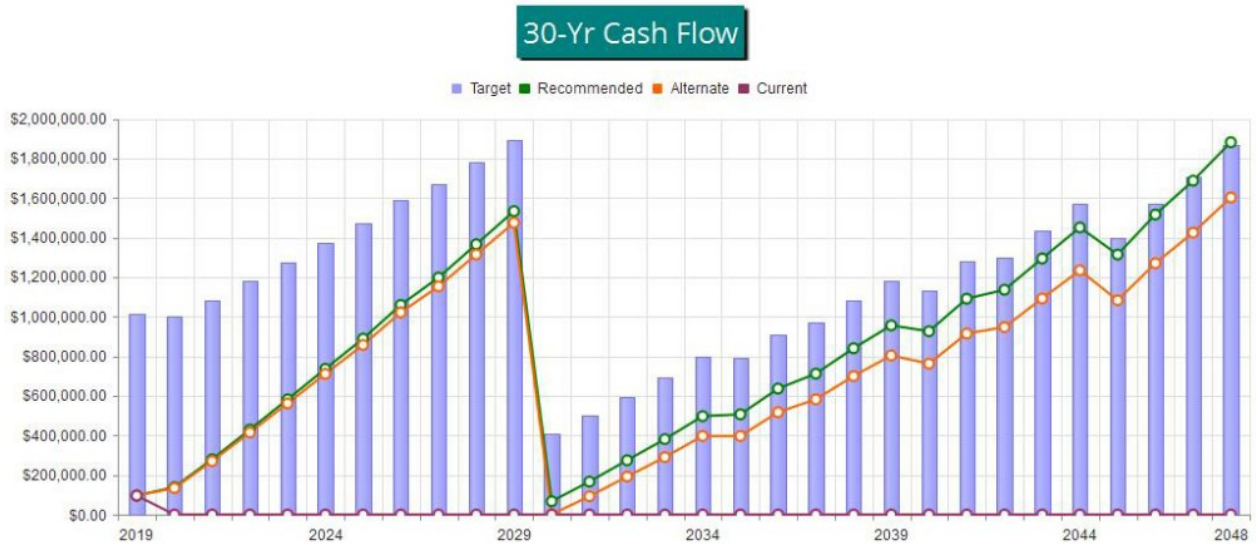


Figure 3

This figure shows the same information plotted on a Percent Funded scale. It is clear here to see how your Reserve Fund strength approaches the 100% Funded level under our recommended multi-yr Funding Plan.

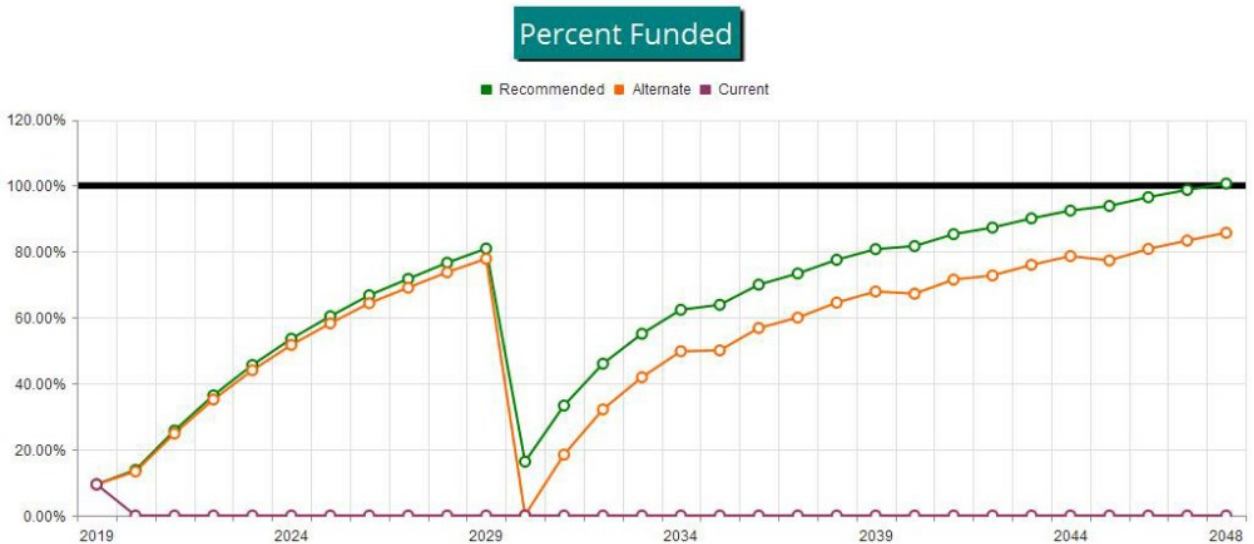


Figure 4

## **Table Descriptions**

Executive Summary is a summary of your Reserve Components

Reserve Component List Detail discloses key Component information, providing the foundation upon which the financial analysis is performed.

Fully Funded Balance shows the calculation of the Fully Funded Balance for each of your components, and their contributions to the association total. For each component, the Fully Funded Balance is the fraction of life used up multiplied by its estimated Current Replacement Cost.

Component Significance shows the relative significance of each component to Reserve funding needs of the association, helping you see which components have more (or less) influence than others on your total Reserve contribution rate. The deterioration cost/yr of each component is calculated by dividing the estimated Current Replacement Cost by its Useful Life, then that component's percentage of the total is displayed.

30-Yr Reserve Plan Summary provides a one-page 30-year summary of the cash flowing into and out of the Reserve Fund, with a display of the Fully Funded Balance, Percent Funded, and special assessment risk at the beginning of each year.

30-Year Income/Expense Detail shows the detailed income and expenses for each of the next 30 years. This table makes it possible to see which components are projected to require repair or replacement in a particular year, and the size of those individual expenses.

# Reserve Component List Detail

36105-0  
Full

# Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate		
				Best Case	Worst Case	
<b>Site / Grounds</b>						
200	Monument Sign - Replace	~ (1) large wood	25	10	\$2,500	\$3,500
346	Unit Patio Furniture - Replace	~ (45) wood pieces	20	10	\$6,000	\$9,000
<b>Pool</b>						
300	Pool Deck - Resurface	~ 1,090 GSF concrete	50	17	\$13,100	\$17,400
301	Pool Fence - Repair/Replace	~ 145 LF wood	25	5	\$3,600	\$5,100
303	Pool - Resurface	~ 1,365 GSF plaster	10	7	\$16,500	\$20,500
305	Pool - Retile	~ 85 LF tile	30	7	\$2,600	\$3,400
307	Pool Heater - Replace (a)	~ (1) Pentair propane	6	5	\$4,200	\$5,200
307	Pool Heater - Replace (b)	~ (1) Pentair propane	6	1	\$4,200	\$5,200
314	Pool Cover - Replace	~ (1) electric cover	10	9	\$5,500	\$7,500
<b>Building Exterior</b>						
500	Steep Slope Roof - Repair/Replace	~ 16,260 GSF composition	30	15	\$65,000	\$81,300
522	Fiber-Cement Siding -Repair/Replace	~ 9,775 GSF fiber-cement	50	40	\$146,600	\$224,800
523	Wood Siding - Replace	~ 34,975 GSF wood	50	10	\$524,600	\$804,400
533	Exterior Surfaces - Paint/Caulk	~ 44,750 GSF	10	0	\$83,300	\$119,900
535	Windows, Sliders - Repair/Replace	~ (123) assorted	50	10	\$123,000	\$184,500
541	Sheet Good Decks - Repair/Replace	~ 6,080 GSF sheet good	15	10	\$121,600	\$182,400
545	Wood Decks - Repair/Replace	~ 2,695 GSF wood	25	10	\$67,400	\$94,300
550	Metal Deck Rail - Repair/Replace	~ 645 LF metal	45	39	\$45,200	\$58,100
551	Wood/Metal Deck Rail - Repair/Rpl	~ 320 LF wood/metal	30	24	\$9,600	\$12,800
560	Exterior Lights - Replace	~ (92) assorted	30	10	\$5,500	\$7,400
<b>Building Interior</b>						
730	Managers' Units - Refurbish	~ (2) units	5	4	\$3,000	\$5,000
740	Office - Remodel	~ (1) 19'x13' office	15	5	\$2,000	\$3,000
<b>Systems / Equipment</b>						
909	Generator - Repair/Replace	~ (1) Detroit Diesel	40	22	\$50,000	\$75,000
920	Unit Key System - Replace	~ (55) unit locks	10	8	\$9,000	\$11,000
965	Fire Alarm Panel - Repair/Replace	~ (1) SilentKnight	20	3	\$3,000	\$4,000
966	Fire Hydrants - Repair/Replace	~ (3) hydrants	10	9	\$3,000	\$4,500
970	Snowblowers - Replace	~ (2) Honda	3	1	\$1,450	\$2,050
972	Riding Lawn Mower - Replace	~ (1) John Deere	10	2	\$1,800	\$2,200
974	Laundry Machines - Replace	~ (2) Speed Queen machine	8	7	\$2,000	\$3,200
28 Total Funded Components						

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
<b>Site / Grounds</b>								
200	Monument Sign - Replace	\$3,000	X	15	/	25	=	\$1,800
346	Unit Patio Furniture - Replace	\$7,500	X	10	/	20	=	\$3,750
<b>Pool</b>								
300	Pool Deck - Resurface	\$15,250	X	33	/	50	=	\$10,065
301	Pool Fence - Repair/Replace	\$4,350	X	20	/	25	=	\$3,480
303	Pool - Resurface	\$18,500	X	3	/	10	=	\$5,550
305	Pool - Retile	\$3,000	X	23	/	30	=	\$2,300
307	Pool Heater - Replace (a)	\$4,700	X	1	/	6	=	\$783
307	Pool Heater - Replace (b)	\$4,700	X	5	/	6	=	\$3,917
314	Pool Cover - Replace	\$6,500	X	1	/	10	=	\$650
<b>Building Exterior</b>								
500	Steep Slope Roof - Repair/Replace	\$73,150	X	15	/	30	=	\$36,575
522	Fiber-Cement Siding -Repair/Replace	\$185,700	X	10	/	50	=	\$37,140
523	Wood Siding - Replace	\$664,500	X	40	/	50	=	\$531,600
533	Exterior Surfaces - Paint/Caulk	\$101,600	X	10	/	10	=	\$101,600
535	Windows, Sliders - Repair/Replace	\$153,750	X	40	/	50	=	\$123,000
541	Sheet Good Decks - Repair/Replace	\$152,000	X	5	/	15	=	\$50,667
545	Wood Decks - Repair/Replace	\$80,850	X	15	/	25	=	\$48,510
550	Metal Deck Rail - Repair/Replace	\$51,650	X	6	/	45	=	\$6,887
551	Wood/Metal Deck Rail - Repair/Rpl	\$11,200	X	6	/	30	=	\$2,240
560	Exterior Lights - Replace	\$6,450	X	20	/	30	=	\$4,300
<b>Building Interior</b>								
730	Managers' Units - Refurbish	\$4,000	X	1	/	5	=	\$800
740	Office - Remodel	\$2,500	X	10	/	15	=	\$1,667
<b>Systems / Equipment</b>								
909	Generator - Repair/Replace	\$62,500	X	18	/	40	=	\$28,125
920	Unit Key System - Replace	\$10,000	X	2	/	10	=	\$2,000
965	Fire Alarm Panel - Repair/Replace	\$3,500	X	17	/	20	=	\$2,975
966	Fire Hydrants - Repair/Replace	\$3,750	X	1	/	10	=	\$375
970	Snowblowers - Replace	\$1,750	X	2	/	3	=	\$1,167
972	Riding Lawn Mower - Replace	\$2,000	X	8	/	10	=	\$1,600
974	Laundry Machines - Replace	\$2,600	X	1	/	8	=	\$325
								\$1,013,847

# Component Significance

36105-0  
Full

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
<b>Site / Grounds</b>					
200	Monument Sign - Replace	25	\$3,000	\$120	0.21 %
346	Unit Patio Furniture - Replace	20	\$7,500	\$375	0.65 %
<b>Pool</b>					
300	Pool Deck - Resurface	50	\$15,250	\$305	0.52 %
301	Pool Fence - Repair/Replace	25	\$4,350	\$174	0.30 %
303	Pool - Resurface	10	\$18,500	\$1,850	3.18 %
305	Pool - Retile	30	\$3,000	\$100	0.17 %
307	Pool Heater - Replace (a)	6	\$4,700	\$783	1.35 %
307	Pool Heater - Replace (b)	6	\$4,700	\$783	1.35 %
314	Pool Cover - Replace	10	\$6,500	\$650	1.12 %
<b>Building Exterior</b>					
500	Steep Slope Roof - Repair/Replace	30	\$73,150	\$2,438	4.20 %
522	Fiber-Cement Siding -Repair/Replace	50	\$185,700	\$3,714	6.39 %
523	Wood Siding - Replace	50	\$664,500	\$13,290	22.87 %
533	Exterior Surfaces - Paint/Caulk	10	\$101,600	\$10,160	17.48 %
535	Windows, Sliders - Repair/Replace	50	\$153,750	\$3,075	5.29 %
541	Sheet Good Decks - Repair/Replace	15	\$152,000	\$10,133	17.44 %
545	Wood Decks - Repair/Replace	25	\$80,850	\$3,234	5.57 %
550	Metal Deck Rail - Repair/Replace	45	\$51,650	\$1,148	1.98 %
551	Wood/Metal Deck Rail - Repair/Rpl	30	\$11,200	\$373	0.64 %
560	Exterior Lights - Replace	30	\$6,450	\$215	0.37 %
<b>Building Interior</b>					
730	Managers' Units - Refurbish	5	\$4,000	\$800	1.38 %
740	Office - Remodel	15	\$2,500	\$167	0.29 %
<b>Systems / Equipment</b>					
909	Generator - Repair/Replace	40	\$62,500	\$1,563	2.69 %
920	Unit Key System - Replace	10	\$10,000	\$1,000	1.72 %
965	Fire Alarm Panel - Repair/Replace	20	\$3,500	\$175	0.30 %
966	Fire Hydrants - Repair/Replace	10	\$3,750	\$375	0.65 %
970	Snowblowers - Replace	3	\$1,750	\$583	1.00 %
972	Riding Lawn Mower - Replace	10	\$2,000	\$200	0.34 %
974	Laundry Machines - Replace	8	\$2,600	\$325	0.56 %
28	Total Funded Components			\$58,109	100.00 %

# 30-Year Reserve Plan Summary

36105-0  
Full

Fiscal Year Start: 2019

Interest:

1.00 %

Inflation:

3.00 %

Reserve Fund Strength Calculations: (All values of Fiscal Year Start Date)

Projected Reserve Balance Changes

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2019	\$95,700	\$1,013,847	9.4 %	High	\$67,884	\$75,000	\$1,169	\$101,600
2020	\$138,153	\$999,466	13.8 %	High	\$70,599	\$75,000	\$2,086	\$6,644
2021	\$279,194	\$1,084,255	25.7 %	High	\$73,423	\$75,000	\$3,540	\$2,122
2022	\$429,036	\$1,178,095	36.4 %	Medium	\$76,360	\$75,000	\$5,051	\$3,825
2023	\$581,623	\$1,274,900	45.6 %	Medium	\$79,415	\$75,000	\$6,586	\$6,472
2024	\$736,152	\$1,373,846	53.6 %	Medium	\$82,591	\$75,000	\$8,120	\$13,390
2025	\$888,473	\$1,470,655	60.4 %	Medium	\$85,895	\$75,000	\$9,734	\$0
2026	\$1,059,102	\$1,586,241	66.8 %	Medium	\$89,331	\$75,000	\$11,276	\$37,573
2027	\$1,197,136	\$1,668,739	71.7 %	Low	\$92,904	\$75,000	\$12,806	\$12,668
2028	\$1,365,178	\$1,781,573	76.6 %	Low	\$96,620	\$75,000	\$14,483	\$18,593
2029	\$1,532,689	\$1,893,963	80.9 %	Low	\$100,485	\$0	\$7,995	\$1,574,264
2030	\$66,904	\$409,726	16.3 %	High	\$104,504	\$0	\$1,164	\$6,506
2031	\$166,067	\$498,167	33.3 %	Medium	\$108,684	\$0	\$2,200	\$2,852
2032	\$274,100	\$595,509	46.0 %	Medium	\$113,032	\$0	\$3,274	\$9,472
2033	\$380,934	\$691,514	55.1 %	Medium	\$117,553	\$0	\$4,387	\$6,050
2034	\$496,823	\$796,559	62.4 %	Medium	\$122,255	\$0	\$5,012	\$118,016
2035	\$506,075	\$792,147	63.9 %	Medium	\$127,145	\$0	\$5,709	\$2,808
2036	\$636,121	\$909,064	70.0 %	Medium	\$132,231	\$0	\$6,735	\$63,552
2037	\$711,535	\$969,804	73.4 %	Low	\$137,521	\$0	\$7,753	\$17,024
2038	\$839,785	\$1,083,257	77.5 %	Low	\$143,021	\$0	\$8,973	\$36,298
2039	\$955,481	\$1,183,320	80.7 %	Low	\$148,742	\$0	\$9,401	\$188,016
2040	\$925,609	\$1,133,263	81.7 %	Low	\$154,692	\$0	\$10,076	\$0
2041	\$1,090,376	\$1,278,603	85.3 %	Low	\$160,880	\$0	\$11,124	\$126,942
2042	\$1,135,438	\$1,300,894	87.3 %	Low	\$167,315	\$0	\$12,140	\$21,315
2043	\$1,293,578	\$1,436,090	90.1 %	Low	\$174,007	\$0	\$13,714	\$30,898
2044	\$1,450,401	\$1,569,015	92.4 %	Low	\$180,968	\$0	\$13,813	\$331,759
2045	\$1,313,423	\$1,399,691	93.8 %	Low	\$188,206	\$0	\$14,140	\$0
2046	\$1,515,769	\$1,570,758	96.5 %	Low	\$195,735	\$0	\$16,004	\$41,094
2047	\$1,686,414	\$1,708,503	98.7 %	Low	\$203,564	\$0	\$17,829	\$26,883
2048	\$1,880,924	\$1,869,006	100.6 %	Low	\$211,707	\$0	\$19,735	\$44,657

# 30-Year Reserve Plan Summary (Alternate Funding Plan)

36105-0  
Full

Fiscal Year Start: 2019

Interest:

1.00 %

Inflation:

3.00 %

Reserve Fund Strength Calculations: (All values of Fiscal Year Start Date)				Projected Reserve Balance Changes				
Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2019	\$95,700	\$1,013,847	9.4 %	High	\$63,216	\$75,000	\$1,145	\$101,600
2020	\$133,461	\$999,466	13.4 %	High	\$65,745	\$75,000	\$2,014	\$6,644
2021	\$269,577	\$1,084,255	24.9 %	High	\$68,374	\$75,000	\$3,418	\$2,122
2022	\$414,247	\$1,178,095	35.2 %	Medium	\$71,109	\$75,000	\$4,876	\$3,825
2023	\$561,408	\$1,274,900	44.0 %	Medium	\$73,954	\$75,000	\$6,356	\$6,472
2024	\$710,246	\$1,373,846	51.7 %	Medium	\$76,912	\$75,000	\$7,831	\$13,390
2025	\$856,599	\$1,470,655	58.2 %	Medium	\$79,988	\$75,000	\$9,384	\$0
2026	\$1,020,971	\$1,586,241	64.4 %	Medium	\$83,188	\$75,000	\$10,862	\$37,573
2027	\$1,152,449	\$1,668,739	69.1 %	Medium	\$86,515	\$75,000	\$12,325	\$12,668
2028	\$1,313,622	\$1,781,573	73.7 %	Low	\$89,976	\$75,000	\$13,932	\$18,593
2029	\$1,473,937	\$1,893,963	77.8 %	Low	\$93,575	\$0	\$7,370	\$1,574,264
2030	\$618	\$409,726	0.2 %	High	\$97,318	\$0	\$462	\$6,506
2031	\$91,893	\$498,167	18.4 %	High	\$101,211	\$0	\$1,417	\$2,852
2032	\$191,669	\$595,509	32.2 %	Medium	\$105,259	\$0	\$2,407	\$9,472
2033	\$289,863	\$691,514	41.9 %	Medium	\$109,470	\$0	\$3,431	\$6,050
2034	\$396,714	\$796,559	49.8 %	Medium	\$113,848	\$0	\$3,964	\$118,016
2035	\$396,511	\$792,147	50.1 %	Medium	\$118,402	\$0	\$4,564	\$2,808
2036	\$516,669	\$909,064	56.8 %	Medium	\$123,138	\$0	\$5,490	\$63,552
2037	\$581,745	\$969,804	60.0 %	Medium	\$128,064	\$0	\$6,402	\$17,024
2038	\$699,187	\$1,083,257	64.5 %	Medium	\$133,187	\$0	\$7,511	\$36,298
2039	\$803,586	\$1,183,320	67.9 %	Medium	\$138,514	\$0	\$7,824	\$188,016
2040	\$761,908	\$1,133,263	67.2 %	Medium	\$144,055	\$0	\$8,378	\$0
2041	\$914,341	\$1,278,603	71.5 %	Low	\$149,817	\$0	\$9,300	\$126,942
2042	\$946,516	\$1,300,894	72.8 %	Low	\$155,809	\$0	\$10,184	\$21,315
2043	\$1,091,195	\$1,436,090	76.0 %	Low	\$162,042	\$0	\$11,621	\$30,898
2044	\$1,233,959	\$1,569,015	78.6 %	Low	\$168,524	\$0	\$11,576	\$331,759
2045	\$1,082,300	\$1,399,691	77.3 %	Low	\$175,264	\$0	\$11,753	\$0
2046	\$1,269,317	\$1,570,758	80.8 %	Low	\$182,275	\$0	\$13,461	\$41,094
2047	\$1,423,959	\$1,708,503	83.3 %	Low	\$189,566	\$0	\$15,122	\$26,883
2048	\$1,601,764	\$1,869,006	85.7 %	Low	\$197,149	\$0	\$16,857	\$44,657

# 30-Year Income/Expense Detail

36105-0  
Full

Fiscal Year	2019	2020	2021	2022	2023
Starting Reserve Balance	\$95,700	\$138,153	\$279,194	\$429,036	\$581,623
Annual Reserve Contribution	\$67,884	\$70,599	\$73,423	\$76,360	\$79,415
Recommended Special Assessments	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Interest Earnings	\$1,169	\$2,086	\$3,540	\$5,051	\$6,586
<b>Total Income</b>	<b>\$239,753</b>	<b>\$285,838</b>	<b>\$431,157</b>	<b>\$585,447</b>	<b>\$742,623</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$0	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$0	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$0	\$0	\$0
301 Pool Fence - Repair/Replace	\$0	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$0	\$0	\$0
305 Pool - Retile	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (a)	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (b)	\$0	\$4,841	\$0	\$0	\$0
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$0	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$0	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$101,600	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$0
560 Exterior Lights - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$4,502
740 Office - Remodel	\$0	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$0	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$0	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$3,825	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$0
970 Snowblowers - Replace	\$0	\$1,803	\$0	\$0	\$1,970
972 Riding Lawn Mower - Replace	\$0	\$0	\$2,122	\$0	\$0
974 Laundry Machines - Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$101,600</b>	<b>\$6,644</b>	<b>\$2,122</b>	<b>\$3,825</b>	<b>\$6,472</b>
Ending Reserve Balance	\$138,153	\$279,194	\$429,036	\$581,623	\$736,152

<b>Fiscal Year</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Starting Reserve Balance	\$736,152	\$888,473	\$1,059,102	\$1,197,136	\$1,365,178
Annual Reserve Contribution	\$82,591	\$85,895	\$89,331	\$92,904	\$96,620
Recommended Special Assessments	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Interest Earnings	\$8,120	\$9,734	\$11,276	\$12,806	\$14,483
<b>Total Income</b>	<b>\$901,863</b>	<b>\$1,059,102</b>	<b>\$1,234,709</b>	<b>\$1,377,846</b>	<b>\$1,551,282</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$0	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$0	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$0	\$0	\$0
301 Pool Fence - Repair/Replace	\$5,043	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$22,753	\$0	\$0
305 Pool - Retile	\$0	\$0	\$3,690	\$0	\$0
307 Pool Heater - Replace (a)	\$5,449	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (b)	\$0	\$0	\$5,780	\$0	\$0
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$8,481
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$0	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$0	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$0	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$0
560 Exterior Lights - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$5,219
740 Office - Remodel	\$2,898	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$0	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$12,668	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$0	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$4,893
970 Snowblowers - Replace	\$0	\$0	\$2,152	\$0	\$0
972 Riding Lawn Mower - Replace	\$0	\$0	\$0	\$0	\$0
974 Laundry Machines - Replace	\$0	\$0	\$3,198	\$0	\$0
<b>Total Expenses</b>	<b>\$13,390</b>	<b>\$0</b>	<b>\$37,573</b>	<b>\$12,668</b>	<b>\$18,593</b>
Ending Reserve Balance	\$888,473	\$1,059,102	\$1,197,136	\$1,365,178	\$1,532,689

<b>Fiscal Year</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
Starting Reserve Balance	\$1,532,689	\$66,904	\$166,067	\$274,100	\$380,934
Annual Reserve Contribution	\$100,485	\$104,504	\$108,684	\$113,032	\$117,553
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$7,995	\$1,164	\$2,200	\$3,274	\$4,387
<b>Total Income</b>	<b>\$1,641,168</b>	<b>\$172,573</b>	<b>\$276,952</b>	<b>\$390,406</b>	<b>\$502,874</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$4,032	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$10,079	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$0	\$0	\$0
301 Pool Fence - Repair/Replace	\$0	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$0	\$0	\$0
305 Pool - Retile	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (a)	\$0	\$6,506	\$0	\$0	\$0
307 Pool Heater - Replace (b)	\$0	\$0	\$0	\$6,902	\$0
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$0	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$893,032	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$136,542	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$206,627	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$204,275	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$108,656	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$0
560 Exterior Lights - Replace	\$8,668	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$6,050
740 Office - Remodel	\$0	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$0	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$0	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$0	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$0
970 Snowblowers - Replace	\$2,352	\$0	\$0	\$2,570	\$0
972 Riding Lawn Mower - Replace	\$0	\$0	\$2,852	\$0	\$0
974 Laundry Machines - Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$1,574,264</b>	<b>\$6,506</b>	<b>\$2,852</b>	<b>\$9,472</b>	<b>\$6,050</b>
Ending Reserve Balance	\$66,904	\$166,067	\$274,100	\$380,934	\$496,823

<b>Fiscal Year</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>
Starting Reserve Balance	\$496,823	\$506,075	\$636,121	\$711,535	\$839,785
Annual Reserve Contribution	\$122,255	\$127,145	\$132,231	\$137,521	\$143,021
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$5,012	\$5,709	\$6,735	\$7,753	\$8,973
<b>Total Income</b>	<b>\$624,091</b>	<b>\$638,929</b>	<b>\$775,087</b>	<b>\$856,809</b>	<b>\$991,779</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$0	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$0	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$25,206	\$0	\$0
301 Pool Fence - Repair/Replace	\$0	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$30,578	\$0	\$0
305 Pool - Retile	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (a)	\$0	\$0	\$7,768	\$0	\$0
307 Pool Heater - Replace (b)	\$0	\$0	\$0	\$0	\$8,241
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$11,398
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$113,965	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$0	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$0	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$0
560 Exterior Lights - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$7,014
740 Office - Remodel	\$0	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$0	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$17,024	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$0	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$6,576
970 Snowblowers - Replace	\$0	\$2,808	\$0	\$0	\$3,069
972 Riding Lawn Mower - Replace	\$0	\$0	\$0	\$0	\$0
974 Laundry Machines - Replace	\$4,051	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$118,016</b>	<b>\$2,808</b>	<b>\$63,552</b>	<b>\$17,024</b>	<b>\$36,298</b>
Ending Reserve Balance	\$506,075	\$636,121	\$711,535	\$839,785	\$955,481

<b>Fiscal Year</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
Starting Reserve Balance	\$955,481	\$925,609	\$1,090,376	\$1,135,438	\$1,293,578
Annual Reserve Contribution	\$148,742	\$154,692	\$160,880	\$167,315	\$174,007
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$9,401	\$10,076	\$11,124	\$12,140	\$13,714
<b>Total Income</b>	<b>\$1,113,625</b>	<b>\$1,090,376</b>	<b>\$1,262,380</b>	<b>\$1,314,893</b>	<b>\$1,481,300</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$0	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$0	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$0	\$0	\$0
301 Pool Fence - Repair/Replace	\$0	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$0	\$0	\$0
305 Pool - Retile	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (a)	\$0	\$0	\$0	\$9,276	\$0
307 Pool Heater - Replace (b)	\$0	\$0	\$0	\$0	\$0
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$0	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$0	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$183,501	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$22,767
560 Exterior Lights - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$8,131
740 Office - Remodel	\$4,515	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$119,756	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$0	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$6,908	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$0
970 Snowblowers - Replace	\$0	\$0	\$3,353	\$0	\$0
972 Riding Lawn Mower - Replace	\$0	\$0	\$3,832	\$0	\$0
974 Laundry Machines - Replace	\$0	\$0	\$0	\$5,131	\$0
<b>Total Expenses</b>	<b>\$188,016</b>	<b>\$0</b>	<b>\$126,942</b>	<b>\$21,315</b>	<b>\$30,898</b>
Ending Reserve Balance	\$925,609	\$1,090,376	\$1,135,438	\$1,293,578	\$1,450,401

<b>Fiscal Year</b>	<b>2044</b>	<b>2045</b>	<b>2046</b>	<b>2047</b>	<b>2048</b>
Starting Reserve Balance	\$1,450,401	\$1,313,423	\$1,515,769	\$1,686,414	\$1,880,924
Annual Reserve Contribution	\$180,968	\$188,206	\$195,735	\$203,564	\$211,707
Recommended Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$13,813	\$14,140	\$16,004	\$17,829	\$19,735
<b>Total Income</b>	<b>\$1,645,182</b>	<b>\$1,515,769</b>	<b>\$1,727,508</b>	<b>\$1,907,807</b>	<b>\$2,112,365</b>
# Component					
<b>Site / Grounds</b>					
200 Monument Sign - Replace	\$0	\$0	\$0	\$0	\$0
346 Unit Patio Furniture - Replace	\$0	\$0	\$0	\$0	\$0
<b>Pool</b>					
300 Pool Deck - Resurface	\$0	\$0	\$0	\$0	\$0
301 Pool Fence - Repair/Replace	\$0	\$0	\$0	\$0	\$0
303 Pool - Resurface	\$0	\$0	\$41,094	\$0	\$0
305 Pool - Retile	\$0	\$0	\$0	\$0	\$0
307 Pool Heater - Replace (a)	\$0	\$0	\$0	\$0	\$11,076
307 Pool Heater - Replace (b)	\$9,841	\$0	\$0	\$0	\$0
314 Pool Cover - Replace	\$0	\$0	\$0	\$0	\$15,318
<b>Building Exterior</b>					
500 Steep Slope Roof - Repair/Replace	\$0	\$0	\$0	\$0	\$0
522 Fiber-Cement Siding -Repair/Replace	\$0	\$0	\$0	\$0	\$0
523 Wood Siding - Replace	\$0	\$0	\$0	\$0	\$0
533 Exterior Surfaces - Paint/Caulk	\$0	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
541 Sheet Good Decks - Repair/Replace	\$318,254	\$0	\$0	\$0	\$0
545 Wood Decks - Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Metal Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
551 Wood/Metal Deck Rail - Repair/Rpl	\$0	\$0	\$0	\$0	\$0
560 Exterior Lights - Replace	\$0	\$0	\$0	\$0	\$0
<b>Building Interior</b>					
730 Managers' Units - Refurbish	\$0	\$0	\$0	\$0	\$9,426
740 Office - Remodel	\$0	\$0	\$0	\$0	\$0
<b>Systems / Equipment</b>					
909 Generator - Repair/Replace	\$0	\$0	\$0	\$0	\$0
920 Unit Key System - Replace	\$0	\$0	\$0	\$22,879	\$0
965 Fire Alarm Panel - Repair/Replace	\$0	\$0	\$0	\$0	\$0
966 Fire Hydrants - Repair/Replace	\$0	\$0	\$0	\$0	\$8,837
970 Snowblowers - Replace	\$3,664	\$0	\$0	\$4,004	\$0
972 Riding Lawn Mower - Replace	\$0	\$0	\$0	\$0	\$0
974 Laundry Machines - Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$331,759</b>	<b>\$0</b>	<b>\$41,094</b>	<b>\$26,883</b>	<b>\$44,657</b>
Ending Reserve Balance	\$1,313,423	\$1,515,769	\$1,686,414	\$1,880,924	\$2,067,708

## Accuracy, Limitations, and Disclosures

"The reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair or replacement of a reserve component."

Association Reserves and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. James Talaga, company President, is a credentialed Reserve Specialist (#066). All work done by Association Reserves WA, LLC is performed under his responsible charge and is performed in accordance with National Reserve Study Standards (NRSS). There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the client's situation.

Per NRSS, information provided by official representative(s) of the client, vendors, and suppliers regarding financial details, component physical details and/or quantities, or historical issues/conditions will be deemed reliable, and is not intended to be used for the purpose of any type of audit, quality/forensic analysis, or background checks of historical records. As such, information provided to us has not been audited or independently verified.

Estimates for interest and inflation have been included, because including such estimates are more accurate than ignoring them completely. When we are hired to prepare Update reports, the client is considered to have deemed those previously developed component quantities as accurate and reliable, whether established by our firm or other individuals/firms (unless specifically mentioned in our Site Inspection Notes). During inspections our company standard is to establish measurements within 5% accuracy, and our scope includes visual inspection of accessible areas and components and does not include any destructive or other testing. Our work is done only for budget purposes. Uses or expectations outside our expertise and scope of work include, but are not limited to: project audit, quality inspection, and the identification of construction defects, hazardous materials, or dangerous conditions. Identifying hidden issues such as but not limited to, plumbing or electrical problems are also outside our scope of work. Our estimates assume proper original installation & construction, adherence to recommended preventive maintenance, a stable economic environment, and do not consider frequency or severity of natural disasters. Our opinions of component Useful Life, Remaining Useful Life, and current or future cost estimates are not a warranty or guarantee of actual costs or timing.

Because the physical and financial status of the property, legislation, the economy, weather, owner expectations, and usage are all in a continual state of change over which we have no control, we do not expect that the events projected in this document will all occur exactly as planned. This Reserve Study is by nature a "one-year" document in need of being updated annually so that more accurate estimates can be incorporated. It is only because a long-term perspective improves the accuracy of near-term planning that this Report projects expenses into the future. We fully expect a number of adjustments will be necessary through the interim years to the cost and timing of expense projections and the funding necessary to prepare for those estimated expenses.

In this engagement our compensation is not contingent upon our conclusions, and our liability in any matter involving this Reserve Study is limited to our fee for services rendered.

## Terms and Definitions

<b>BTU</b>	British Thermal Unit (a standard unit of energy)
<b>DIA</b>	Diameter
<b>GSF</b>	Gross Square Feet (area). Equivalent to Square Feet
<b>GSY</b>	Gross Square Yards (area). Equivalent to Square Yards
<b>HP</b>	Horsepower
<b>LF</b>	Linear Feet (length)
<b>Effective Age</b>	The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.
<b>Fully Funded Balance (FFB)</b>	The value of the deterioration of the Reserve Components. This is the fraction of life "used up" of each component multiplied by its estimated Current Replacement. While calculated for each component, it is summed together for an association total.
<b>Inflation</b>	Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on the "30-yr Income/Expense Detail" table.
<b>Interest</b>	Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary.
<b>Percent Funded</b>	The ratio, at a particular point in time (the first day of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.
<b>Remaining Useful Life (RUL)</b>	The estimated time, in years, that a common area component can be expected to continue to serve its intended function.
<b>Useful Life (UL)</b>	The estimated time, in years, that a common area component can be expected to serve its intended function.

## Component Details

The primary purpose of the Component Details appendix is to provide the reader with the basis of our funding assumptions resulting from our research and analysis. The information presented here represents a wide range of components that were observed and measured against National Reserve Study Standards to determine if they meet the criteria for reserve funding.

- 1) Common area repair & replacement responsibility
- 2) Component must have a limited useful life
- 3) Life limit must be predictable
- 4) Above a minimum threshold cost (board's discretion – typically ½ to 1% of Annual operating expenses).

Not all your components may have been found appropriate for reserve funding. In our judgment, the components meeting the above four criteria are shown with the Useful Life (how often the project is expected to occur), Remaining Useful Life (when the next instance of the expense will be) and representative market cost range termed “Best Cost” and “Worst Cost”. There are many factors that can result in a wide variety of potential costs, and we have attempted to present the cost range in which your actual expense will occur.

Where no Useful Life, Remaining Useful Life, or pricing exists, the component was deemed inappropriate for Reserve Funding.

## Site / Grounds

**Comp #: 100 Concrete - Repair/Replace**

**Quantity: Minimal GSF**

Location: Scattered common area locations, primarily located in front of office

Funded?: No. Cost of any necessary repairs projected to be too small to qualify for reserve funding

History: None known

Comments: Concrete appeared in generally clean, intact condition. See component # 908 for concrete snow melt system.

Annual repair needs below the reserve funding threshold (1% or more of total annual expenses) should be factored in the operating budget. In our experience, larger repair/replacement expenses may emerge as the community ages that cannot be comfortably absorbed in the operating budget. Currently, it is difficult to predict timing, scope and costs of larger repairs. Monitor concrete annually and if conditions deteriorate leading to larger repair needs, funding can be included within a reserve study update.

As routine maintenance, inspect regularly and pressure wash for appearance. Repair any trip hazards (1/2" difference in height) immediately to ensure safety. Repair promptly as needed to prevent water penetrating into the base, which can cause further damage. Factors affecting the quality, service life of the concrete include; the preparation of the underlying soil and drainage, thickness and strength of concrete used, steel reinforcement (none likely), amount and weight of vehicle traffic, if any and tree roots nearby.

Additional Resources:

<http://www.mrsc.org/subjects/pubworks/sidew.aspx>

[http://www.sakrete.com/media-center/blog-detail.cfm/bp\\_alias/Placing-Concrete-in-hot-or-cold-weather](http://www.sakrete.com/media-center/blog-detail.cfm/bp_alias/Placing-Concrete-in-hot-or-cold-weather)

<http://www.concretenetwork.com/cold-weather-concrete/weather.html>

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 106 Gravel Areas - Refurbish**

**Quantity: Extensive GSF**

Location: Driving & parking areas

Funded?: No. Reportedly not association responsibility to maintain, repair or replace

History: Parking area work done 2010 \$11,588.46 to facilitate ADA access

Comments: Our source reported that the parking and driving areas surrounding the buildings are not the association's responsibility to maintain, repair or replace. These areas a gravel. Parking area work was reportedly completed in 2010 at a cost of \$11,588.46 to facilitate ADA access, at the association's expense.

No funding included for future work as these areas do not appear to be association responsibility.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 170 Landscape - Refurbish**

**Quantity: Minimal landscaping**

Location: Landscaped areas surrounding buildings

Funded?: No. Annual cost; best handled as operating expense

History: None known

Comments: Minimal landscape area consisting primarily of natural vegetation.

Currently, landscaping maintenance is funded out of the operating budget. As associations age, many find the need or desire for larger scale refurbish projects not covered within the maintenance contract, and they allocate funds within reserves. These types of projects can include: bed renovations, major replanting, large scale bark or mulch replacements, turf renovations, drainage improvements, irrigation system extensions / replacement, etc.

Walk area each year with landscape contractor, and perhaps a landscape architect, to assess the overall health, function, and future needs of maintenance and refurbish to determine if supplemental reserve funding should be planned for.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 200 Monument Sign - Replace**

**Quantity: ~ (1) large wood**

Location: Entrance to community, along Highway 12

Funded?: Yes.

History: None known

Comments: Main sign appeared in legible condition at the time of our site visit.

Reserve funding recommended for regular intervals of replacement to maintain a consistent, quality appearance.

Inspect periodically, repair, clean, and touch up for appearance as needed using general maintenance funds.

Useful Life:  
25 years

Remaining Life:  
10 years



Best Case: \$ 2,500

Worst Case: \$ 3,500

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 346 Unit Patio Furniture - Replace**

**Quantity: ~ (45) wood pieces**

Location: Placed at unit patios during summer months

Funded?: Yes.

History: None known

Comments: Our source reported that the association places approximately 15 sets of wood patio furniture consisting of a table and two chairs within unit patio/balcony areas during the summer months.

Wood furniture is reportedly painted/stained by onsite staff as part of routine maintenance program, and is placed in storage over the winter for protection. The component represents periodic cycles of replacement to maintain function and aesthetics. As routine maintenance, continue to repair and paint/stain as needed through operating budget.

Useful Life:  
20 years

Remaining Life:  
10 years



Best Case: \$ 6,000

Worst Case: \$ 9,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 348 Gas BBQ - Replace**

**Quantity: ~ (1) Char-Griller**

Location: BBQ area next to office

Funded?: No. Cost projected to be too small to qualify for reserve funding

History: None known

Comments: No problems reported of gas BBQ at the time of our site visit.

Cost to replace is projected to be too small to qualify for reserve funding, therefore repair/replace as needed utilizing general maintenance operating funds.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

# Pool

**Comp #: 300 Pool Deck - Resurface**

**Quantity: ~ 1,090 GSF concrete**

Location: Pool deck

Funded?: Yes.

History: Replaced 1989 \$31,796 including pool tile

Comments: Pool deck appeared generally clean and intact with no wide scale damage or deterioration noted.

Plan for total replacement as shown below based upon our experience with similar communities. There are a variety of topical resurface products that may be of lower cost if base is solid and coating is feasible. Research options thoroughly prior to anticipated replacement. Total slab replacement is factored below for financial planning purposes.

Inspect periodically, and repair as needed through operating budget.

Useful Life:  
50 years

Remaining Life:  
17 years



Best Case: \$ 13,100

Worst Case: \$ 17,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 301 Pool Fence - Repair/Replace**

**Quantity: ~ 145 LF wood**

Location: Perimeter of pool

Funded?: Yes.

History: None known

Comments: Wood pool fence appeared generally intact, with peeling paint noted in areas, particularly along top rail. Our source reported that maintenance staff repairs and paints fencing as needed.

Wood fence will eventually need to be replaced due to constant exposure to weather elements. Plan for regular replacement intervals to ensure safety, and to maintain appearance, conform with health department regulations. Inspect regularly, perform any repairs which may be necessary promptly to ensure safety; funded from operating budget. We assume that fence will continue to be painted by maintenance staff, or in conjunction with larger building paint cycles, therefore no separate reserve funding included.

Useful Life:  
25 years

Remaining Life:  
5 years



Best Case: \$ 3,600

Worst Case: \$ 5,100

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 302 Pool Furniture - Maintain/Replace**

**Quantity: ~ (10) assorted**

Location: Within pool area

Funded?: No. Annual cost; best handled as operating expense

History: None known

Comments: Majority of pool furniture was in storage during our off-season site visit, however our source reported that the association has approximately 6 chairs and 4 lounge chairs.

Cost to replace this small quantity of furniture is projected to be too small to qualify for reserve funding, therefore best replaced on an as-needed basis through the general maintenance operating budget. As routine maintenance, inspect and repair as needed to maintain function.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 303 Pool - Resurface**

**Quantity: ~ 1,365 GSF plaster**

Location: Interior of pool

Funded?: Yes.

History: 2011 \$13,029.29, 2016 \$18,437.95

Comments: No widespread pitting, discoloration or other damage/deterioration noted. Association records indicate that pool was last resurfaced in 2016 for \$18,437.95.

Plan to resurface at the time frame below; incorporate tile every other resurface cycle; see separate component.

Proactive cleaning, proper chemical balance, and the use of a cover when possible are keys to maximum service life of plaster. There are a variety of pool surface types - plan in advance as cost and life cycle can vary.

Resource:

<http://www.luxurypools.com/blog/pool-finishes-plaster-aggregate-and-tile-pool-surfaces>

Useful Life:  
10 years

Remaining Life:  
7 years



Best Case: \$ 16,500

Worst Case: \$ 20,500

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 305 Pool - Retile**

**Quantity: ~ 85 LF tile**

Location: Perimeter of pool interior

Funded?: Yes.

History: 1989

Comments: Majority of tiles appeared in intact condition with no missing or cracked tile observed.

Best to plan for regular intervals of replacement. We have timed tile work to coincide with every other pool resurface project for cost efficiency and consistency, see component #303.

Inspect regularly, clean, and repair as part of routine maintenance.

Useful Life:  
30 years

Remaining Life:  
7 years



Best Case: \$ 2,600

Worst Case: \$ 3,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 307 Pool Heater - Replace (a)**

**Quantity: ~ (1) Pentair propane**

Location: Within pool equipment room adjacent to storage shed

Funded?: Yes.

History: Replaced 2014 (cost history \$6,988.20 for both heaters), 2018 \$4,681.77

Comments: Heaters are a propane Pentair model. No problems observed or reported to us. One heater was reportedly replaced in 2018 at a cost of \$4,681.77 and is represented within this component; see next component for older heater.

Provide regular service, and maintain as recommended by the manufacturer.

Useful Life:  
6 years

Remaining Life:  
5 years



Best Case: \$ 4,200

Worst Case: \$ 5,200

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 307 Pool Heater - Replace (b)**

**Quantity: ~ (1) Pentair propane**

Location: Within pool equipment room adjacent to storage shed

Funded?: Yes.

History: Replaced 2014 (cost history \$6,988.20 for both heaters)

Comments: This component represents the older pool heater which was installed in 2014 according to association records. See prior component for other heater, and heater replacement details.

Useful Life:  
6 years

Remaining Life:  
1 years



Best Case: \$ 4,200

Worst Case: \$ 5,200

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 308 Pool Filter/Pumps - Replace**

**Quantity: ~ (1) pump, (1) filter**

Location: Within pool equipment room adjacent to break room

Funded?: No. Cost projected to be too small to qualify for reserve funding

History: Scupper & plumbing work 2017 \$4,543.67, filter 2010 \$1,250.26, pump 2009 \$1,673.12

Comments: Miscellaneous pool equipment included one filter and one Pentair pump. No problems were reported at the time of our site visit.

As routine maintenance, inspect and repair as needed. Flush filter and change media as directed by manufacturer. Cost to replace this equipment is projected to be too small to qualify for reserve funding, therefore best handled as operating expense. Often times, pumps can be rebuilt rather than completely replaced.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 314 Pool Cover - Replace**

**Quantity: ~ (1) electric cover**

Location: Within pool area

Funded?: Yes.

History: 2007 \$9,914.94, motor 2005 \$865.36, cover replaced 2018 \$6,474.00.

Comments: Our source reported that electric pool cover was replaced in 2018 at a cost of \$6,474.

Plan to replace at roughly the time frame below to maintain function. Some vendors recommend that cover is left open daily in summer months during pool hours to reduce the number of open/close cycles and thus prolong the useful life of the cover. Cover can provide cost savings for temperature differentials, reduce cleaning costs and provide safety.

Useful Life:  
10 years

Remaining Life:  
9 years



Best Case: \$ 5,500

Worst Case: \$ 7,500

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 318 Pool Restrooms - Remodel**

**Quantity: ~ (2) restrooms**

Location: Within pool building

Funded?: No. Cost projected to be too small to qualify for reserve funding

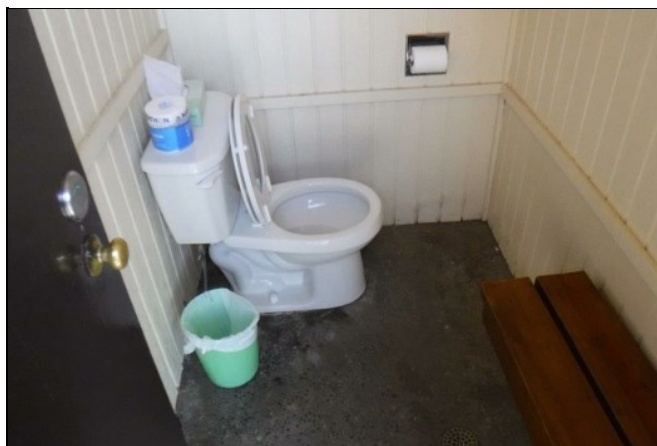
History: None known

Comments: Pool restrooms featured concrete floor, wood walls and a toilet.

Cost to refurbish these basic restrooms is projected to be too small to qualify for reserve funding, therefore best handled as operating expense.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

## Building Exterior

### Comp #: 500 Steep Slope Roof - Repair/Replace

Quantity: ~ 16,260 GSF composition

Location: Rooftop of buildings

Funded?: Yes.

History: None known

Comments: Majority of roof areas were obscured by snow at the time of our site visit. Ventilation (the lack of which can greatly reduce the roof's useful life) was observed at eave. A reserve study conducts a limited visual review for budget purposes, and many of the critical waterproofing and ventilation items of the roof are not readily viewable. For a full evaluation have a professional roof consultant/contractor perform a thorough up-close survey of your entire roof system, including attic inspection (if any).

As routine maintenance, many manufacturers recommend inspections at least twice annually (once in the fall before the rainy season, and again in the spring), and after large storm events. Promptly replace any damaged/missing sections, or any other repair needed to ensure waterproof integrity of roof. Keep the roof surface, gutters, and downspouts clear and free of moss or debris.

At the time of re-roofing, we recommend that you hire a professional consultant to evaluate the existing roof, specify the new roof materials/design, and provide installation oversight. We recommend that all Associations hire qualified consultants whenever they are considering having work performed on any building envelope (waterproofing) components including; roof, walls, windows, decks, exterior painting, and caulking/sealant.

There is a wealth of information available through Roofing Organizations such as:  
National Roofing Contractors Association (NRCA) <http://www.nrca.net>.  
Asphalt Roofing Manufacturers Association (ARMA) <http://www.asphaltroofing.org/>  
Roof Consultant Institute (RCI) <http://www.rci-online.org>  
Western States Roofing Contractors Association (WSRCA) <http://www.wsrca.com/>

Useful Life:  
30 years

Remaining Life:  
15 years



Best Case: \$ 65,000

Worst Case: \$ 81,300

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 522 Fiber-Cement Siding -Repair/Replace**

**Quantity: ~ 9,775 GSF fiber-cement**

Location: Exterior building walls at ends only

Funded?: Yes.

History: Installed 2014 \$50,458.37

Comments: Fiber-cement siding was located at end walls only, and was horizontal clapboard style. Surface is painted, see component #533 for exterior painting. Damage was noted in two areas, where pool heaters vent and where siding was removed to repair unit water leak. Actual manufacturer of siding was not confirmed. No view of the critical underlying waterproofing was available as part of our limited visual review. Association records indicate that siding was installed in 2014 at a cost of \$50,458.37.

Replacement may ultimately be needed due to the failure of the underlying waterproofing degrading over the decades, and/or the end of the useful life of the siding materials from general aging. Many factors influence the useful life, including exposure to (or protection from) wind driven rain, and the quality of the waterproofing and flashing beneath the siding. Evaluate the siding and the critical underlying waterproofing (typically building paper or house-wrap) more frequently as the remaining useful life approaches zero years. Adjust remaining useful life as dictated by the evaluation. Align with window replacement for cost efficiencies and building envelope integrity when practical. Inspect annually and repair locally as needed using general maintenance funds.

The leading manufacture of fiber-cement siding (James Hardie Siding) currently provides either a 30-year non-prorated or 50-year prorated limited warranty on their products. Local James Hardie representative suggests planning for ~50-year total service life of siding.

Note: Rehabilitative construction projects with associated costs are equal to or greater than 5% of the assessed value of the units must comply with the requirements of RCW 64.55. <http://app.leg.wa.gov/rcw/default.aspx?cite=64.55> These requirements include building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Project costs can vary depending upon materials chosen and the condition of the underlying structural framing when exposed. We recommend the Board conduct research well in advance in order to define scope, timing and costs, including plan for some margin of contingency.

Useful Life:  
50 years

Remaining Life:  
40 years



Best Case: \$ 146,600

Worst Case: \$ 224,800

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 523 Wood Siding - Replace**

**Quantity: ~ 34,975 GSF wood**

Location: Partial exterior building walls except building ends

Funded?: Yes.

History: Siding & fascia work 1995 \$18,680

Comments: Siding is vertical, tongue & groove in appearance wood in all areas except building end walls. Surface was painted. Our source reported siding is original to construction. No view of the critical underlying waterproofing was available as part of our limited visual review.

Replacement may ultimately be needed due to the failure of the underlying waterproofing degrading over the decades, and/or the end of the useful life of the siding materials from general aging. Many factors influence the useful life, including exposure to (or protection from) wind driven rain, and the quality of the waterproofing and flashing beneath the siding. Evaluate the siding and the critical underlying waterproofing (typically building paper or house-wrap) more frequently as the remaining useful life approaches zero years. Adjust the remaining useful life as dictated by the evaluation. Align with window replacement for cost efficiencies, and building envelope integrity when practical. Inspect annually, and repair locally as needed using general maintenance funds. Keep the wood siding painted to protect the wood from decay caused by water, see component # 533.

Another item that greatly influences useful life is the thoroughness of the original painting. Wood siding will last longer if each piece was painted on all six sides. Typically, wood siding is painted on the two sides that are exposed, and not on the back, ends, or top. Since we perform only a visual review, we were unable to confirm the extent of the painting. It is reasonable to presume that not all six sides are painted. If the siding is not painted on all sides, water can infiltrate, and be absorbed into the wood on the unpainted sides, which over time will lead to cupping, warping, and decay, limiting its useful life.

Note: Rehabilitative construction projects with associated costs are equal to or greater than 5% of the assessed value of the units must comply with the requirements of RCW 64.55. <http://app.leg.wa.gov/rcw/default.aspx?cite=64.55> These requirements include building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Project costs can vary depending upon materials chosen, and the condition of the underlying structural framing when exposed. We recommend the Board conduct research well in advance in order to define the scope, timing, and costs, including plan for some margin of contingency.

Useful Life:  
50 years

Remaining Life:  
10 years



Best Case: \$ 524,600

Worst Case: \$ 804,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 533 Exterior Surfaces - Paint/Caulk**

**Quantity: ~ 44,750 GSF**

Location: Exterior building walls

Funded?: Yes.

History: None known

Comments: The painted surface of the siding and trim appeared in deteriorated condition with extensive peeling or blistering observed.

Typical Northwest paint cycles vary greatly depending upon many factors including type of material painted, surface preparation, quality of primer/paint/stain, application methods, weather conditions during application, moisture beneath surface, and exposure to weather conditions. Repair areas as needed prior to painting/caulking. As routine maintenance, inspect regularly (including sealants), repair locally, and touch-up paint as needed using operating funds.

Proper sealant/caulking is critical to keeping water out of the walls, and preventing water damage. Incorrect installations of sealant are very common, and can greatly decrease its useful life. Inspect sealant (more frequently as it ages) to determine if it is failing. Typical sealant problems include failure of sealant to adhere to adjacent materials, and tearing/splitting of the sealant itself. As sealants age, and due to exposure to ultra-violet sunlight, they will dry out, harden, and lose their elastic ability. Remove and replace all sealant at the time sealant failure begins to appear. Proper cleaning, prep work, and installation technique (shape, size, tooling of joint) are critical for a long lasting sealant/caulking. Do not install sealant in locations that would block water drainage from behind the siding (e.g. at head flashings).

Additional information on painting is available through:

American Coatings Association at <http://www.paint.org/> and Master Paint Institute at <http://www.paintinfo.com/>

Useful Life:  
10 years

Remaining Life:  
0 years



Best Case: \$ 83,300

Worst Case: \$ 119,900

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 535 Windows, Sliders - Repair/Replace**

**Quantity: ~ (123) assorted**

Location: Exterior building walls

Funded?: Yes.

History: None known

Comments: Windows were metal framed and varied in age. Our source reported that some owners have chosen to replace their windows at their expense. Head flashing was not observed. Jambs and sills did not appear to have sealant joint between window frame and cladding. Weep holes were not present at the sample windows viewed. No observation of the critical underlying waterproofing details and flashing was part of our limited visual review. The underlying details and flashing are critical to maintaining the waterproofing of the building envelope and preventing structural damage as a result of water infiltration.

Many factors affect useful life, including quality of window (design pressure rating), waterproofing and flashing details, building movement, and exposure to the elements, including wind driven rain. Those same variables, along with glazing and frame materials, can also greatly affect the appropriate choice and replacement costs. You can learn more about window design here: <http://rci-online.org/wp-content/uploads/2010-04-hinjosa.pdf>

Inspect regularly, including sealant, if any, and repair as needed. Typical sealant failures include a lack of adhesion to adjacent materials, tearing/splitting of the sealant itself, and loss of elastic ability. Loss of elastic ability can be caused by exposure to ultra-violet light, and general aging. Remove and replace all sealants as signs of failure begin to appear. Proper cleaning, prep work, and installation of specified joint design are critical for lasting performance. Keep weep holes free and clear to allow proper drainage of water that gets into window frame. Do not block (caulk or seal) gap at top of head flashing, as this allows water that gets behind the siding to drain out.

We recommend the board conduct research well in advance of this project to help better define timing and costs (scope of work, material specifications, etc.). Further, we recommend that you hire a professional consultant (architect, engineer, building envelope consultant) to evaluate the existing windows, design and specify new installation requirements, assist with bid process, and observe construction to increase the likelihood of proper installation. We recommend all associations hire qualified consultants whenever they are considering having work performed on any high-risk building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Note: Cost below factors professional architectural details, specifications and installation oversight. Any needed repair of underlying structural framing can add significantly to project cost. No observation of the critical underlying waterproofing details and flashing was part of our limited visual review.

Useful Life:  
50 years

Remaining Life:  
10 years



Best Case: \$ 123,000

Worst Case: \$ 184,500

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 541 Sheet Good Decks - Repair/Replace**

**Quantity: ~ 6,080 GSF sheet good**

Location: Elevated decks and walkways at all buildings

Funded?: Yes.

History: Installed 2012-2013 \$118,517.06 including railings

Comments: Exact material was not confirmed, however upper floor walkways and decks appeared to be constructed of a sheet good material, possibly a PVC membrane. Adequacy of slope was not verified, as a reserve study conducts a limited visual review for budget purposes. Further, no observation or evaluation of the underlying waterproofing was available. Drip edge of deck was open. Vertical portion of drip edge flashing was observed. Venting on the underside of the deck, at the soffit below was not observed. Venting is a good practice as it can reduce problems from minor water infiltration and condensation. Railing connections did not attach through deck surface. The fewer penetrations through the waterproof surface the fewer opportunities there are for water penetration.

Inspect membrane annually, and repair as needed. Vinyl (pvc) membranes deteriorate from exposure to the ultra violet sunlight, and from thermal expansion and contraction. Patch any damage as soon as possible to maintain waterproof integrity.

Useful Life:  
15 years

Remaining Life:  
10 years



Best Case: \$ 121,600

Worst Case: \$ 182,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 545 Wood Decks - Repair/Replace**

**Quantity: ~ 2,695 GSF wood**

Location: First floor decks and walkways

Funded?: Yes.

History: Repairs and painting planned for 2019

Comments: Deck surface is open boards that allow water to drain off between them. Wood deck surface was painted and peeling paint was noted in several areas. Majority of walkways are protected by building roof and no wide scale decay was noted. Our source reported that repairs and painting are planned for 2019.

Funding is for replacing existing walking surface materials with like kind material, which is factored below. Costs may be greater if the structural framing is found to need repair or replacement.

Inspect deck, stairs, and railings annually, and repair as needed. As part of maintenance, apply water repellent stain/preservative at least every other year. Painting is included in component #533. Almost all exterior wood exposed to weather elements will decay over time, and require replacement. Current building code requires flashing of the ledger joist (at the exterior building wall) to prevent decay from compromising the structural integrity. Options for a longer lasting deck include using thick wood boards or a composite product (increased cost).

Note: Wood benches on rear decks are reportedly maintained, repaired and replaced by association staff.

Useful Life:  
25 years

Remaining Life:  
10 years



Best Case: \$ 67,400

Worst Case: \$ 94,300

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 550 Metal Deck Rail - Repair/Replace**

**Quantity: ~ 645 LF metal**

Location: Adjacent to elevated decks/walkways

Funded?: Yes.

History: Installed 2012/2013 \$118,517.06 including deck walking surface work

Comments: Generally the metal rails appeared in intact condition. Rails were not attached through the waterproof surface of the deck.

As routine maintenance, all railings and connections should be inspected at least annually for structural and/or waterproofing issues. Repair promptly as needed using general operating/maintenance funds.

Useful Life:  
45 years

Remaining Life:  
39 years



Best Case: \$ 45,200

Worst Case: \$ 58,100

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

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**Comp #: 551 Wood/Metal Deck Rail - Repair/Rpl**

**Quantity: ~ 320 LF wood/metal**

Location: Adjacent to elevated decks/walkways, primarily at front of buildings

Funded?: Yes.

History: Metal railings installed 2012/2013

Comments: A portion of the front walkways featured wood railing with a metal top rail. Rails were not attached through the waterproof surface of the deck.

As routine maintenance, all railings and connections should be inspected at least annually for structural and/or waterproofing issues. Repair promptly as needed using general operating/maintenance funds. This component assumes replacement cycles for wood portion of railings; metal portion can be re-used or replaced.

Note: The quantity within this component does not include stairwell railings as these are located within protected areas and therefore have no basis to anticipate wide scale replacement.

Useful Life:  
30 years

Remaining Life:  
24 years



Best Case: \$ 9,600

Worst Case: \$ 12,800

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 560 Exterior Lights - Replace**

**Quantity: ~ (92) assorted**

Location: Exterior building walls

Funded?: Yes.

History: None known

Comments: Exterior lighting varied in style and age. Observed during daylight hours, therefore unable to confirm functional operating condition.

Best to plan for eventual large scale replacement at roughly the time frame indicated below, timed to coincide with exterior painting projects for cost efficiency, and consistent quality/appearance throughout the association. A mid-range replacement allowance is factored below for planning purposes.

As routine maintenance, inspect, and repair/change bulbs as needed.

Useful Life:  
30 years

Remaining Life:  
10 years



Best Case: \$ 5,500

Worst Case: \$ 7,400

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 590 Stairs - Repair/Replace**

**Quantity: ~ (18) sets**

Location: Protected locations within buildings

Funded?: No. Useful life not predictable

History: None known

Comments: Stair stringers are wood and treads are wood. Railings are wood. No obvious decay of wood was observed in the few stairs sampled for our visual review.

No predictable large-scale repairs or replacement at this time. Repair as needed using general maintenance funds. As stairs age, and repair needs become evident, funding can be added to future reserve studies.

As routine maintenance, inspect regularly to ensure safety and stability. Repair promptly as needed using general operating funds. Paint as part of exterior paint project. Treat corroded metal with rusted inhibitor to extend useful life.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 597 Generator/Pool Bldgs-Repair/Replace**

**Quantity: ~ (2) outbuildings**

Location: Pool and generator buildings

Funded?: No. Useful life not predictable; maintain with larger building projects

History: Generator building constructed 2001

Comments: Property features two outbuildings; one for pool equipment and one for generator. Our source reported that the generator buildign was constructed in 2001.

There is no predictable basis to expect complete replacement of these buildings. Maintain in conjunction with main residential buildings (paint, re-roof, etc.) or as maintenance project, so separate funding required. No reserve funding included at this time.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

## Building Interior

### Comp #: 730 Managers' Units - Refurbish

Quantity: ~ (2) units

Location: Units 12 & 27

Funded?: Yes.

History: None known

Comments: Our source reported that the association owns Units 12 & 27 for the purposes of housing association staff. Units are reportedly a one-bedroom and a studio.

This component provides a rotating allowance for periodic updating of association owned units. Projects may include flooring replacement, interior paint, appliance replacement, kitchen/restroom remodel, etc. Cost can vary widely based on scope of work; track actual expenses and update future reserve studies as needed.

Useful Life:  
5 years

Remaining Life:  
4 years



Best Case: \$ 3,000

Worst Case: \$ 5,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 740 Office - Remodel**

**Quantity: ~ (1) 19'x13' office**

Location: Main office area

Funded?: Yes.

History: None known

Comments: Association office featured painted walls, carpeting and minimal office furniture.

Funding is included here for periodic remodeling of this highly visible space. Projects may include interior paint, flooring, lighting, furniture, décor, etc. Cost can vary widely based on scope of work, therefore track actual expenses and update future reserve studies as needed.

Useful Life:  
15 years

Remaining Life:  
5 years



Best Case: \$ 2,000

Worst Case: \$ 3,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 750 Break Room - Remodel**

**Quantity: ~ (1) breakroom**

Location: Building basement, adjacent to pool equipment room

Funded?: No. Useful life not predictable

History: None known

Comments: Break room featured minimally appointed finishes.

There is no predictable basis to expect wide scale refurbishment of this area at this time, therefore it is assumed that association staff will maintain as needed. No reserve funding included accordingly.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

## Systems / Equipment

**Comp #: 900 Plumbing - Repair/Replace**

**Quantity: Supply, drain systems**

Location: Common area plumbing

Funded?: No. Useful life not predictable

History: None known

Comments: The vast majority of the plumbing system is hidden, and not visible for review. A reserve study conducts a limited visual review. No testing was conducted, and no problems were observed or reported. We highly recommend you have a qualified plumber or consultant provide an evaluation of your system to assess condition, material types, and note any deficiencies.

Typically, if installed per architectural specifications and local building codes without defect, there is no predictable time frame for large-scale repair/replacement expenses within the scope of our report. Current Washington state law requires plumbing to be considered in the reserve study. Patterns of significant repair expenses, leaks, poor flow, sediments in line should be evaluated promptly by a qualified plumber and / or engineer.

Some types of piping used historically are known to be life limited. Manufacturing defects become apparent from time to time, and certain site conditions (e.g. galvanic corrosion, certain minerals in contact with piping, chemical reactions, etc.) can contribute to premature deterioration of plumbing system.

Treat minor repairs as ongoing maintenance expense.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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**Comp #: 905 Electrical System - Maintain/Repair**

**Quantity: Main, branch systems**

Location: Common area electrical

Funded?: No. Useful life not predictable

History: None known

Comments: The majority of the electrical system was not visible for review. Analysis of the electrical system, beyond a limited visual review, is not within the scope of a reserve study. No large issues or problems/defects were reported.

Typically, if installed per architectural specifications and local building codes, there is no predictable time frame for large-scale repair/replacement expenses within the scope of our review. Some electrical system components are known to be life limited. Manufacturing defects become known from time to time, and certain site conditions can contribute to premature deterioration of electrical components. Periodic inspections and maintenance by a master electrician may become necessary. Some associations employ infrared, or other testing methodologies, to identify potential trouble spots. A good resource book available for purchase is NFPA 70B Recommended Practices for Electrical Equipment Maintenance. <http://catalog.nfpa.org/NFPA-70B-Recommended-Practice-for-Electrical-Equipment-Maintenance-P1196.aspx>

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 906 Telephone System - Replace**

**Quantity: ~ (1) telephone system**

Location: Within association office

Funded?: No. Cost projected to be too small to qualify for reserve funding

History: None known

Comments: Our source reported that association telephone system is not integrated within the units, therefore system serves office only. Cost to replace this minimal system is projected to be too small to qualify for reserve funding, therefore best handled as operating expense.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 908 Snow Melt System - Repair/Replace**

**Quantity: Snow melt system**

Location: Primarily at office entry, some reportedly at pool deck

Funded?: No. Useful life not predictable

History: Installed 2010 at office entry \$45,113.05

Comments: Association records indicate that the snow melt system at the office entry was installed in 2010 at a cost of \$45,113.05.

There is no predictable basis to expect expenses affecting reserves at this basic system, therefore repair as needed utilizing general maintenance operating funds. Update future reserve studies should need for complete replacement arise.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 909 Generator - Repair/Replace**

**Quantity: ~ (1) Detroit Diesel**

Location:

Funded?: Yes.

History: Purchased used 2001 \$147,407.12 (generator cost \$53,800, switch gear & bus transition \$26,900, remainder for construction of building), radiator refurb 2018/2019 \$5k

Comments: Our source reported that Detroit Diesel Series 60 generator was purchased lightly used in 2001 at a cost of \$53,800. Total project cost was \$147,407.12 which included \$26,900 for switch gear and bus transition, and remainder for construction of generator building. Most recently, the radiator was refurbished during the 2018/2019 fiscal year at a cost of approximately \$5k. Our source reported that majority of generator maintenance is performed in-house.

Life span of emergency generators varies greatly, but for financial planning purposes, we suggest planning for eventual replacement. Timing of replacement is difficult to predict and can be brought about when replacement parts are hard to find or no longer available. As the generator ages, wait time for parts can significantly increase and costs of renting an emergency generator during that time can be very costly.

Many generator vendors recommend maintenance twice a year. Typically, this includes replacing the coolant and the hoses every 2 to 3 years and replacement of batteries. These costs are below the reserve fund threshold and should be considered operational expenses.

Generator system is composed of the fuel pump assembly, the engine, and the head end controls, switch. Costs below include installing an entire new system. Replacement options may include installing a remanufactured engine or replacing major components over time. Discuss this item with your vendor to better determine a replacement plan.

Useful Life:  
40 years

Remaining Life:  
22 years



Best Case: \$ 50,000

Worst Case: \$ 75,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 920 Unit Key System - Replace**

**Quantity: ~ (55) unit locks**

Location: Locks at each individual unit

Funded?: Yes.

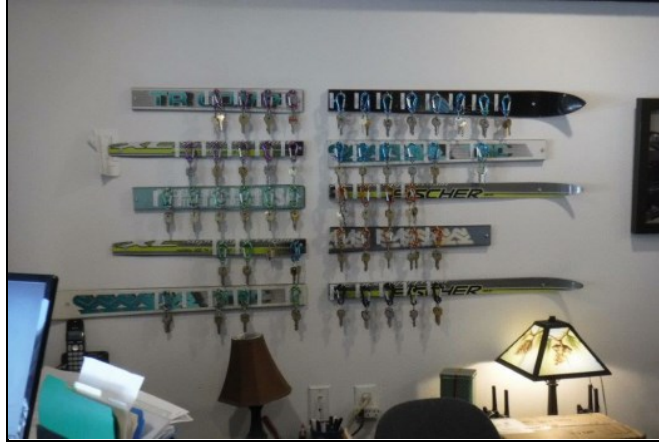
History: 2017 \$9,998.01

Comments: Our source reported that units were re-keyed with a commercial quality key system in 2017 at a cost of \$9,998.01. It was reported that the association previously tested remote key-fob locks but were concerned about the effects of the weather on these lock systems.

This component represents rekeying of units at roughly 10 year intervals based on the association's prior cost history.

Useful Life:  
10 years

Remaining Life:  
8 years



Best Case: \$ 9,000

Worst Case: \$ 11,000

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 965 Fire Alarm Panel - Repair/Replace**

**Quantity: ~ (1) SilentKnight**

Location: Within office

Funded?: Yes.

History: Installed 2002 \$19,729.54 including wiring, strobes & associated equipment

Comments: Fire panel is a SilentKnight Intelliknight model. Log notes indicated that it has been inspected annually. No problems were reported to us at the time of our site visit. Our source reported that fire alarm panel was installed in 2002 at a cost of \$19,729.54 which included all wiring, strobes and associated equipment.

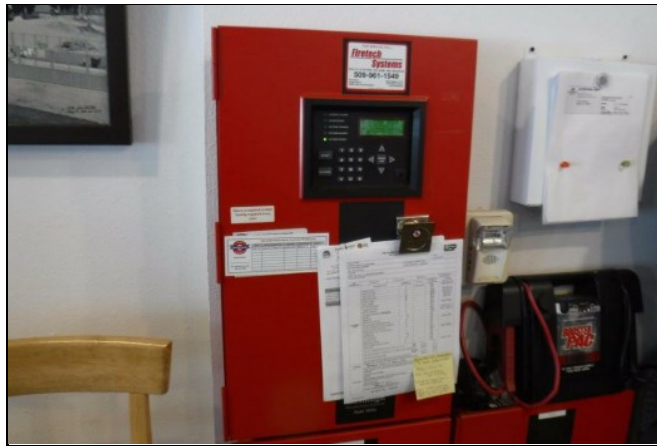
Our experience suggests that an approximate useful life for the panel for budget planning purposes is in the 20 year range. Discuss this component with your fire panel vendor or consultant to better determine the timing of panel repair or replacement needs, and to assess the overall system in relation to the current codes, and parts & technician availability to determine if upgrades or replacement will be required.

Fire alarm panels are required to be inspected annually, and the company performing the inspection is required to log/note it at the panel so that the fire department can view it. Fire departments can issue a fine if inspections are not performed. Fire panels are a critical life safety item that needs to be well maintained, following all requirements of the National Fire Protection Association (N.F.P.A.) 25.

Scope of work at time of repairs can vary greatly based on the amount of work needed to bring the existing fire system to the level required by the fire/building codes in place at that time. Evaluating the entire fire prevention system is beyond the scope of a reserve study. Replace panel as needed, and perform additional upgrade as required by code. Costs below are for repair and/or replacement of only the panel.

Useful Life:  
20 years

Remaining Life:  
3 years



Best Case: \$ 3,000

Worst Case: \$ 4,000

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 966 Fire Hydrants - Repair/Replace**

**Quantity: ~ (3) hydrants**

Location: Scattered common area locations

Funded?: Yes.

History: 2 planned for repair 2019

Comments: Our source reported that two of the three fire hydrants were in need of repair, with one possibly requiring replacement.

Typically, these fire hydrants are a long lived item of which replacement is difficult to predict. The most common repair requirement is valve replacement due to frozen valves. While there is no predictable basis to expect reoccurring replacement of hydrants, we have included a rotating allowance for periodic repairs based on the association's history of repairs.

As routine maintenance, test hydrants and exercise valves as directed by current fire code. Consult with local fire department and/or fire systems vendor for maintenance recommendations.

Useful Life:  
10 years

Remaining Life:  
9 years



Best Case: \$ 3,000

Worst Case: \$ 4,500

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 970 Snowblowers - Replace**

**Quantity: ~ (2) Honda**

Location: Stored within equipment room adjacent to pool heaters

Funded?: Yes.

History: 1998 \$2,106.10, 2012 \$1,731.20

Comments: Association records indicate that snowblowers were replaced in 1998 and 2012. No problems were reported at the time of our site visit. Our source reported that snow blowers receive heavy use during winter months.

This component factors replacement of one snow blower every 3 years, for a total useful life of 6 years per item. Service regularly as recommended by manufacturer.

Useful Life:  
3 years

Remaining Life:  
1 years



Best Case: \$ 1,450

Worst Case: \$ 2,050

Lower allowance

Higher allowance

Cost Source: Client Cost History

**Comp #: 972 Riding Lawn Mower - Replace**

**Quantity: ~ (1) John Deere**

Location: Unknown

Funded?: Yes.

History: 2011 \$1,532.23

Comments: Our source reported that the association purchased the John Deere riding lawnmower in 2011 at a cost of \$1,532.23. Lawn mower was not available for viewing at the time of our site visit, therefore no photo is available.

Plan to replace at roughly the time frame below to maintain function. Service as recommended by manufacturer.

Useful Life:  
10 years

Remaining Life:  
2 years



Best Case: \$ 1,800

Worst Case: \$ 2,200

Lower allowance

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 974 Laundry Machines - Replace**

**Quantity: ~ (2) Speed Queen machine**

Location: Within break room

Funded?: Yes.

History: 2018 \$2,576.54

Comments: Association records indicate that laundry machines were replaced in 2018 at a cost of \$2,576.54. Machines are reportedly used by staff only and are not for resident/guest use.

This component factors replacement of machines at 8 year intervals. Monitor and repair as needed in between replacement cycles.

Useful Life:  
8 years

Remaining Life:  
7 years



Best Case: \$ 2,000

Worst Case: \$ 3,200

Lower allowance

Higher allowance

Cost Source: Client Cost History

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**Comp #: 998 Association Annual Inspection**

**Quantity: Annual inspection**

Location: Association building envelope components

Funded?: No. Annual cost; best handled as operating expense

History: None known

Comments: Many associations are required to have annual inspections by a qualified engineer or architect to assess the physical condition of the improvements. The inspection typically covers, at a minimum, the building envelope, including: roofs, exterior, decks, waterproofing / sealants, flashings, glazing systems and doors. Forensic evaluation, building drops, etc. are beyond the scope of a typical reserve study. We recommend that the Board provide for periodic building envelope inspections, funded from the operating budget, to help ensure critical areas are functioning properly.

In addition to an annual inspection, we recommend the association annually survey residents to inquire about conditions only visible from the unit interiors that the association may not be aware of. Survey questions may include, but are not limited to: water intrusion / organic growth (particularly at windows & doors, skylights, water heaters, plumbing fixtures), cracking or any other movement of drywall or structural members, and any other general building concerns the residents may have. Such surveys can be key in identifying potential concerns early, thus increasing the opportunity to conduct repairs before advanced deterioration/damage and, therefore, larger expense occurs.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

**Comp #: 999 Reserve Study - Annual Update**

**Quantity: Annual update**

Location: Association common and limited common elements

Funded?: No. Annual cost; best handled as operating expense

History: 2019/2020 FULL

Comments: Per Washington law (RCW), reserve studies are to be updated annually, with site inspections by an independent reserve study professional to occur no less than every three years to assess changes in condition (i.e. physical, economic, governmental, etc.), and the resulting effect on the community's long-term reserve plan. Most appropriately factored within operating budget, not as reserve component.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source: