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Update "With-Site-Visit" Reserve Study

North Shore Terrace
Newport, OR

Report #: 22568-1
For Period Beginning: January 1, 2019
Expires: December 31, 2019

Date Prepared: July 11, 2018

JIM TALAGA
CAI-RS
00066
DESIGNATION
RESERVE SPECIALIST

Hello, and welcome to your Reserve Study!

This 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.

With 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 or call us at:

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ASSOCIATION RESERVES
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Table of Contents

3- Minute Executive Summary

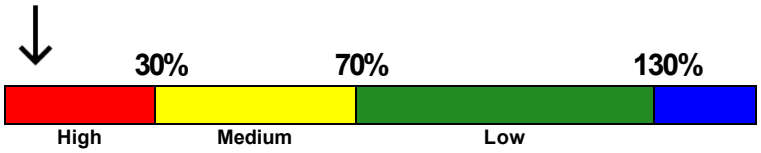
Association:	**North Shore Terrace**	**Assoc. #: 22568-1**
Location:	**Newport, OR**	**# of Units:32**
Report Period:	**January 1, 2019 through December 31, 2019**	

Findings/Recommendations as-of: January 1, 2019

Starting Reserve Balance	**$47,989**
Current Fully Funded Reserve Balance	**$854,595**
Percent Funded	**5.6 %**
Average Reserve Deficit or (Surplus) Per Unit	**$25,206**
Recommended 2019 100% Monthly "Full Funding" Contributions	**$6,140**
2019 70% Monthly "Threshold Funding" Contributions	**$5,570**
2019 "Baseline Funding" minimum contributions to keep Reserves above $0	**$4,550**
Most Recent Budgeted Contribution Rate	**$5,120**

Reserves % Funded: 5.6%

Special Assessment Risk:



Economic Assumptions:

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

• This is a Update "With-Site-Visit" Reserve Study, meeting or exceeding all requirements of the RCW. This study was prepared by, or under the supervision of a credentialed Reserve Specialist (RS™).

• Your Reserve Fund is currently 5.6 % 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 monthly Reserve Contributions within the 70% - 100% funding range, with planned annual increases as noted on page 19. The 70% "Threshold" and and 100% "Full" contribution rates are designed to gradually achieve these funding objectives 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.

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
	Site / Grounds			
110	Site Stairs - Repair/Replace	25	5	$3,500
120	Asphalt - Resurface	35	11	$82,800
121	Asphalt - Seal/Repair/Stripe	6	0	$8,250
160	Pole Lights - Replace	25	0	$5,500
205	Mailboxes/Shelter - Replace	20	0	$10,800
	Building Exterior			
140	Bldg 66 Wood Fence - Replace	20	13	$9,950
140	Bldg 76 Wood Fence - Replace	20	13	$6,600
140	Bldg 85 Wood Fence - Replace	20	17	$4,950
140	Bldg 86 Wood Fence - Replace	20	4	$10,200
140	Bldg 96 A-D Wood Fence - Replace	20	13	$4,800
140	Bldg 96 E-H Wood Fence - Replace	20	18	$4,200
500	Bldg 66 Roof - Replace	30	18	$34,000
500	Bldg 76 Roof - Replace	25	11	$34,000
500	Bldg 85 Roof - Replace	25	24	$35,000
500	Bldg 86 Roof - Replace	25	12	$51,650
500	Bldg 96 A-D Roof - Replace	25	22	$49,900
500	Bldg 96 E-H Roof - Replace	25	21	$64,000
508	Bldg 85 Skylights - Replace	30	5	$7,000
508	Bldg 86 Skylights - Replace	30	2	$21,000
508	Bldg 96 A-D Skylights - Replace	30	13	$15,000
508	Bldg 96 E-H Skylights - Replace	30	26	$16,000
510	Bldg 66 Gutters/Downspts - Replace	36	5	$4,300
510	Bldg 76 Gutters/Dwnspts - Replace	36	6	$4,300
510	Bldg 85 Gutters/Dwnspts - Replace	36	10	$3,600
510	Bldg 86 Gutters/Dwnspts - Replace	36	7	$4,550
510	Bldg 96 A-D Gutters/Downspts - Rplc	36	8	$4,100
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	36	9	$3,000
516	Bldg 86 Chimney Covers & Flue Caps	30	17	$6,650
522	Bldg 66 Siding: Fiber-Cement	50	24	$111,500
522	Bldg 76 Siding: Fiber-Cement	50	24	$111,500
522	Bldg 85 Siding: Fiber-Cement	50	28	$82,500
522	Bldg 86 Siding: Fiber-Cement	50	28	$82,000
522	Bldg 96 (A-D) Siding: Fiber-Cement	50	27	$130,500
522	Bldg 96 (E-H) Siding: Fiber-Cement	50	25	$97,500
533	Bldg 66 - Paint/Caulk	10	4	$16,600
533	Bldg 76 - Paint/Caulk	10	4	$15,750
533	Bldg 85 - Paint/Caulk	10	7	$13,500
533	Bldg 86 - Paint/Caulk	10	6	$11,650
533	Bldg 96 A-D - Paint/Caulk	10	9	$17,000
533	Bldg 96 E-H - Paint/Caulk	10	5	$13,850
535	Bldg 66 Windows/Sliders - Replace	30	3	$43,100
535	Bldg 76 Windows/Sliders - Replace	30	3	$43,100
535	Bldg 85 Windows/Sliders - Replace	30	10	$39,800
535	Bldg 86 Windows/Sliders - Replace	30	2	$38,450
535	Bldg 96 A-D Windows/Sldrs - Replace	30	8	$38,450

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
535	Bldg 96 E-H Windows/Sldrs - Replace	30	9	$44,500
540	Decks - Clean/Seal	1	1	$1,850
545	Bldg 66 Decks - Repair/Replace	20	13	$24,600
545	Bldg 76 Decks - Repair/Replace	20	13	$24,600
545	Bldg 85 Decks - Repair/Replace	20	10	$39,200
545	Bldg 86 Decks - Repair/Replace	20	11	$7,550
545	Bldg 96 A-D Decks - Repair/Replace	25	7	$27,000
545	Bldg 96 E-H Decks - Repair/Replace	25	7	$24,550
	Systems / Equipment / Other			
900	Plumbing - Repair/Replace	3	2	$16,000
930	Sewer Pumps - Replace	15	6	$4,550
55	**Total Funded Components**			

Note 1: Yellow highlighted line items are expected to require attention in this initial year.

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 STUDY RESULTS

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 Update With-Site-Visit Reserve Study, we started with a review of your prior Reserve Study, then looked into recent Reserve expenditures, evaluated how expenditures are handled (ongoing maintenance vs Reserves), and researched any well-established association precedents. We performed an on-site inspection to evaluate your common areas, updating and adjusting your Reserve Component List as appropriate.

Which Physical Assets are Funded by Reserves?

RESERVE COMPONENT "FOUR-PART TEST"

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?

FUNDING OBJECTIVES

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.*

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 6/22/2018, we began with a meeting and walk-through with three members of the Board of Directors. We then started the site inspection beginning with the site and grounds. We visually inspected all visible common area 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.

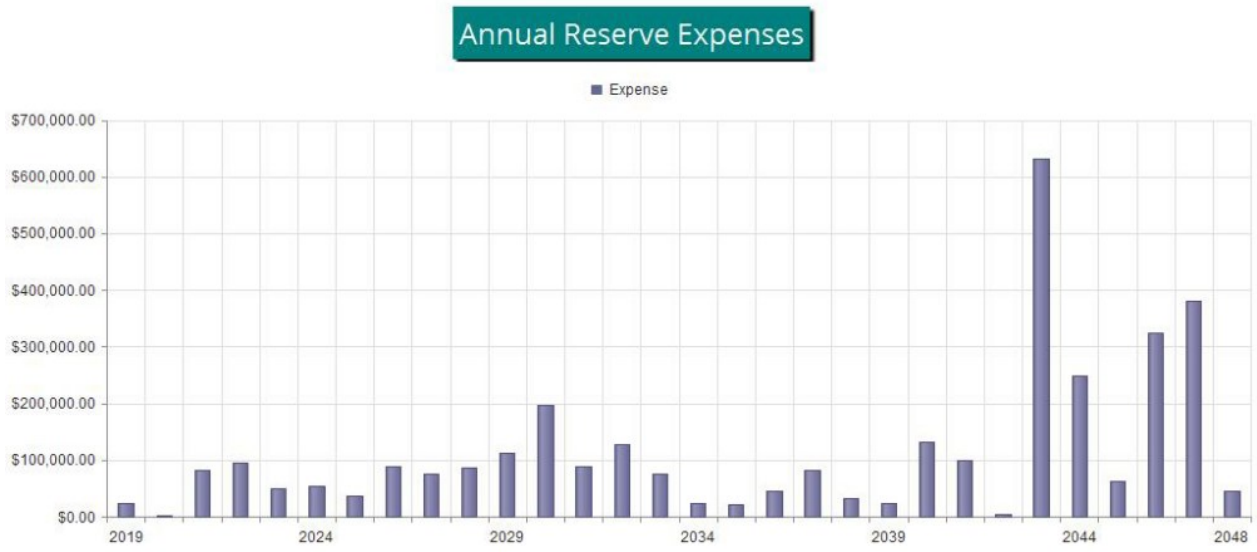


Figure 1

Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be $47,989 as-of the start of your Fiscal Year on 1/1/2019. As of that date, your Fully Funded Balance is computed to be $854,595 (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 $6,140 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.

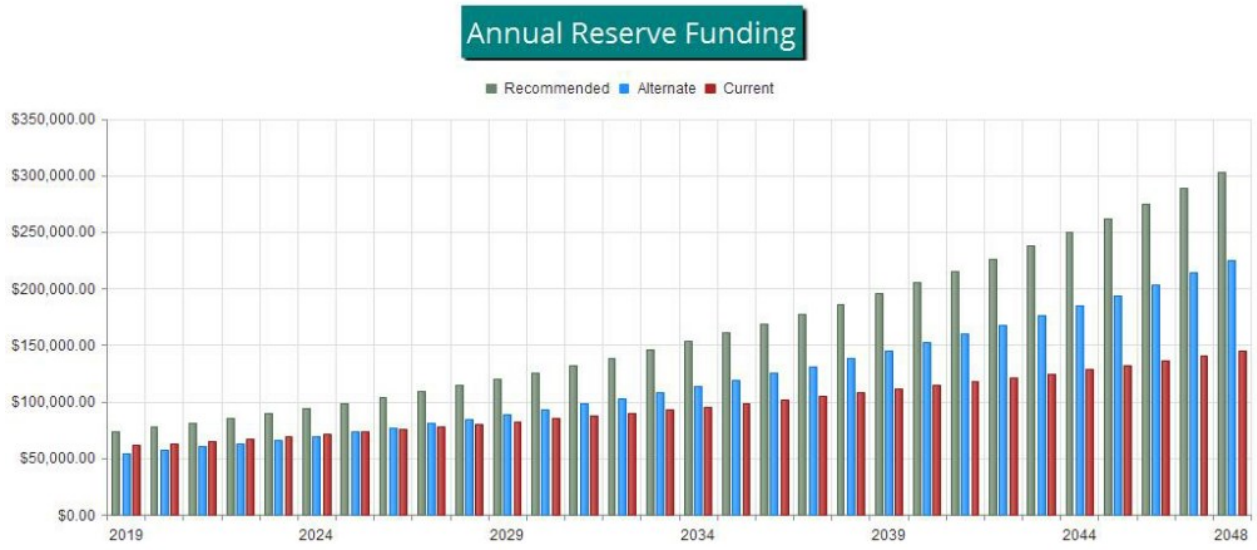


Figure 2

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.

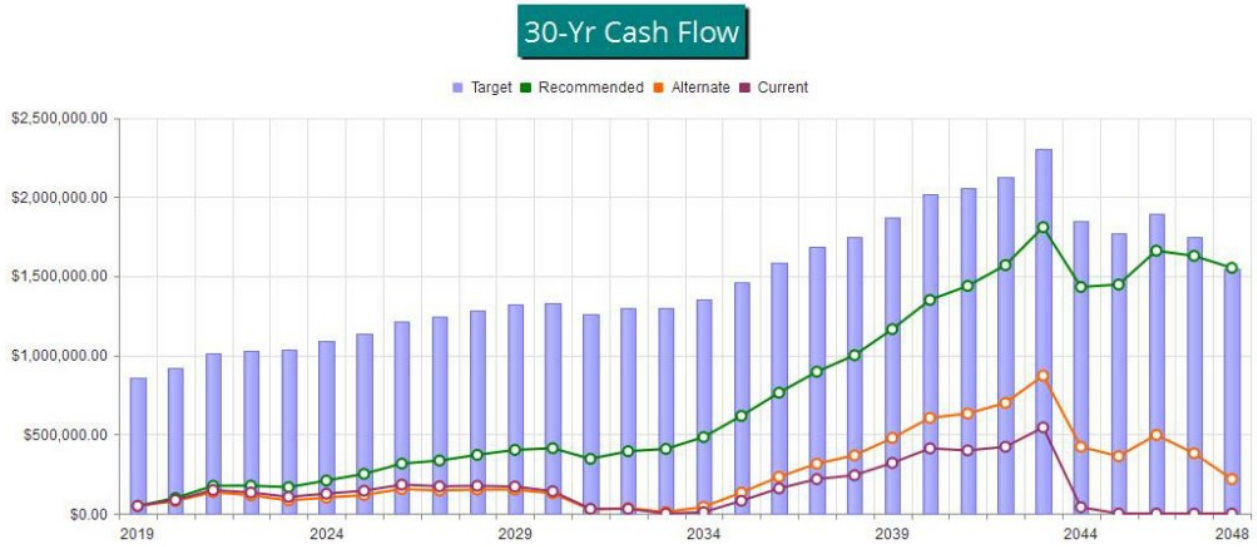


Figure 3

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.

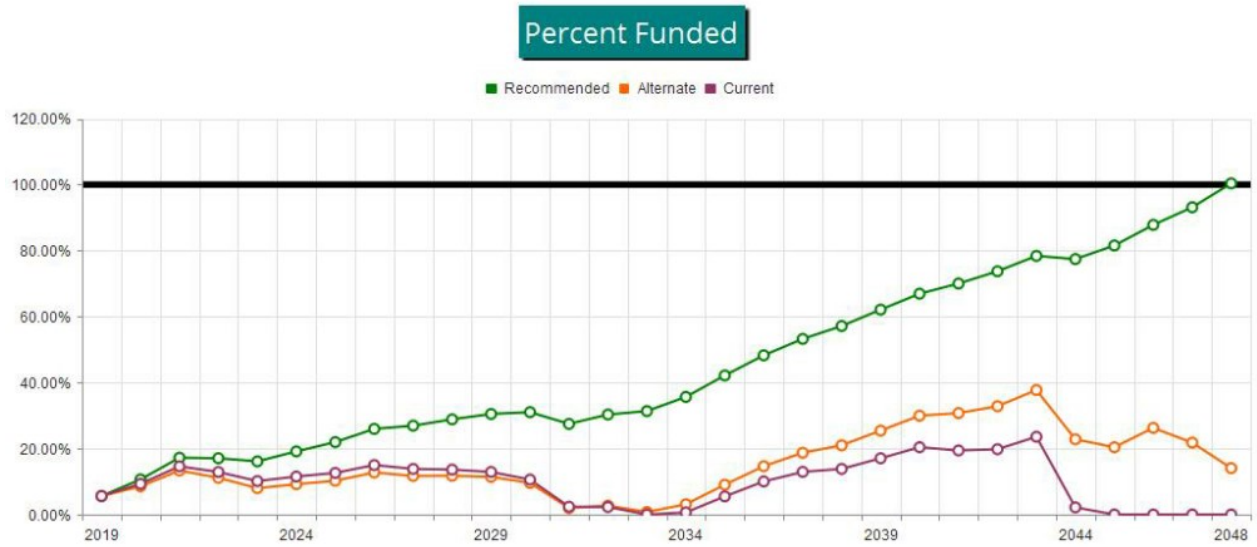


Figure 4

Table Descriptions

The tabular information in this Report is broken down into nine tables, not all which may have been chosen by your Project Manager to appear in your report. Tables are listed in the order in which they appear in your Report.

Executive Summary is a summary of your Reserve Components

Budget Summary is a management and accounting tool, summarizing groupings of your Reserve Components.

Analysis Summary provides a summary of the starting financial information and your Project Manager's Financial Analysis decision points.

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.

Accounting-Tax Summary provides information on each Component's proportionate portion of key totals, valuable to accounting professionals primarily during tax preparation time of year.

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.

#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate Best Case	Current Cost Estimate Worst Case
	Site / Grounds					
110	Site Stairs - Repair/Replace	(1) wood stair set	25	5	$2,500	$4,500
120	Asphalt - Resurface	~ 30,100 SF	35	11	$75,300	$90,300
121	Asphalt - Seal/Repair/Stripe	~ 30,100 SF	6	0	$7,500	$9,000
160	Pole Lights - Replace	(9) fixtures	25	0	$4,400	$6,600
205	Mailboxes/Shelter - Replace	(7) stands	20	0	$9,500	$12,100
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	~ (330) LF	20	13	$8,300	$11,600
140	Bldg 76 Wood Fence - Replace	~ (220) LF	20	13	$5,500	$7,700
140	Bldg 85 Wood Fence - Replace	~ (165) LF	20	17	$4,100	$5,800
140	Bldg 86 Wood Fence - Replace	~ (340) LF	20	4	$8,500	$11,900
140	Bldg 96 A-D Wood Fence - Replace	~ (160) LF	20	13	$4,000	$5,600
140	Bldg 96 E-H Wood Fence - Replace	~ (140) LF	20	18	$3,500	$4,900
500	Bldg 66 Roof - Replace	~ 7,500 SF	30	18	$30,000	$38,000
500	Bldg 76 Roof - Replace	~ 7,500 SF	25	11	$30,000	$38,000
500	Bldg 85 Roof - Replace	~ 5,700 SF	25	24	$33,000	$37,000
500	Bldg 86 Roof - Replace	~ 11,470 SF	25	12	$45,900	$57,400
500	Bldg 96 A-D Roof - Replace	~ 5,900 SF	25	22	$45,100	$54,700
500	Bldg 96 E-H Roof - Replace	~ 9,000 SF	25	21	$60,600	$67,400
508	Bldg 85 Skylights - Replace	~ (12) skylights*	30	5	$6,000	$8,000
508	Bldg 86 Skylights - Replace	~ (36) skylights*	30	2	$19,000	$23,000
508	Bldg 96 A-D Skylights - Replace	~ (26) skylights	30	13	$13,000	$17,000
508	Bldg 96 E-H Skylights - Replace	~ (28) skylights	30	26	$14,000	$18,000
510	Bldg 66 Gutters/Downspts - Replace	~ 710 LF	36	5	$3,600	$5,000
510	Bldg 76 Gutters/Dwnspts - Replace	~ 710 LF	36	6	$3,600	$5,000
510	Bldg 85 Gutters/Dwnspts - Replace	~ 600 LF	36	10	$3,000	$4,200
510	Bldg 86 Gutters/Dwnspts - Replace	~ 750 LF	36	7	$3,800	$5,300
510	Bldg 96 A-D Gutters/Downspts - Rplc	~ 680 LF	36	8	$3,400	$4,800
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	~ 500 LF	36	9	$2,500	$3,500
516	Bldg 86 Chimney Covers & Flue Caps	(6) caps / hoods	30	17	$5,900	$7,400
522	Bldg 66 Siding: Fiber-Cement	7,420 GSF	50	24	$89,000	$134,000
522	Bldg 76 Siding: Fiber-Cement	~ 7,420 GSF	50	24	$89,000	$134,000
522	Bldg 85 Siding: Fiber-Cement	~ 5,475 GSF	50	28	$66,000	$99,000
522	Bldg 86 Siding: Fiber-Cement	~ 5,470 GSF	50	28	$66,000	$98,000
522	Bldg 96 (A-D) Siding: Fiber-Cement	~ 8,700 GSF	50	27	$104,000	$157,000
522	Bldg 96 (E-H) Siding: Fiber-Cement	~ 6,500 GSF	50	25	$78,000	$117,000
533	Bldg 66 - Paint/Caulk	~ 7,420 GSF	10	4	$15,400	$17,800
533	Bldg 76 - Paint/Caulk	~ 7,420 GSF	10	4	$13,000	$18,500
533	Bldg 85 - Paint/Caulk	~ 5,475 GSF	10	7	$11,300	$15,700
533	Bldg 86 - Paint/Caulk	~ 5,470 GSF	10	6	$9,600	$13,700
533	Bldg 96 A-D - Paint/Caulk	~ 8,700 GSF	10	9	$16,000	$18,000
533	Bldg 96 E-H - Paint/Caulk	~ 6,500 GSF	10	5	$11,400	$16,300
535	Bldg 66 Windows/Sliders - Replace	(30) windows (7) sliders	30	3	$34,500	$51,700
535	Bldg 76 Windows/Sliders - Replace	(30) windows (7) sliders	30	3	$34,500	$51,700
535	Bldg 85 Windows/Sliders - Replace	(23) windows (8) sldrs	30	10	$31,600	$48,000

#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate	
					Best Case	Worst Case
535	Bldg 86 Windows/Sliders - Replace	(29) windows (6) sldrs	30	2	$33,800	$43,100
535	Bldg 96 A-D Windows/Sldrs - Replace	(20) windows (8) sldrs	30	8	$33,800	$43,100
535	Bldg 96 E-H Windows/Sldrs - Replace	(20) windows (12) sldrs	30	9	$34,900	$54,100
540	Decks - Clean/Seal	~ 4,715 SF	1	1	$1,500	$2,200
545	Bldg 66 Decks - Repair/Replace	~ 1,100 GSF	20	13	$23,400	$25,800
545	Bldg 76 Decks - Repair/Replace	~ 1,100 SF	20	13	$23,400	$25,800
545	Bldg 85 Decks - Repair/Replace	~ 1,120 SF	20	10	$33,600	$44,800
545	Bldg 86 Decks - Repair/Replace	~ 250 SF	20	11	$6,300	$8,800
545	Bldg 96 A-D Decks - Repair/Replace	~ 600 SF	25	7	$24,000	$30,000
545	Bldg 96 E-H Decks - Repair/Replace	~ 545 SF	25	7	$21,800	$27,300
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	Supply, waste, drains	3	2	$14,000	$18,000
930	Sewer Pumps - Replace	(2) pumps	15	6	$3,900	$5,200
55	Total Funded Components					

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
	Site / Grounds							
110	Site Stairs - Repair/Replace	$3,500	X	20	/	25	=	$2,800
120	Asphalt - Resurface	$82,800	X	24	/	35	=	$56,777
121	Asphalt - Seal/Repair/Stripe	$8,250	X	6	/	6	=	$8,250
160	Pole Lights - Replace	$5,500	X	25	/	25	=	$5,500
205	Mailboxes/Shelter - Replace	$10,800	X	20	/	20	=	$10,800
	Building Exterior							
140	Bldg 66 Wood Fence - Replace	$9,950	X	7	/	20	=	$3,483
140	Bldg 76 Wood Fence - Replace	$6,600	X	7	/	20	=	$2,310
140	Bldg 85 Wood Fence - Replace	$4,950	X	3	/	20	=	$743
140	Bldg 86 Wood Fence - Replace	$10,200	X	16	/	20	=	$8,160
140	Bldg 96 A-D Wood Fence - Replace	$4,800	X	7	/	20	=	$1,680
140	Bldg 96 E-H Wood Fence - Replace	$4,200	X	2	/	20	=	$420
500	Bldg 66 Roof - Replace	$34,000	X	12	/	30	=	$13,600
500	Bldg 76 Roof - Replace	$34,000	X	14	/	25	=	$19,040
500	Bldg 85 Roof - Replace	$35,000	X	1	/	25	=	$1,400
500	Bldg 86 Roof - Replace	$51,650	X	13	/	25	=	$26,858
500	Bldg 96 A-D Roof - Replace	$49,900	X	3	/	25	=	$5,988
500	Bldg 96 E-H Roof - Replace	$64,000	X	4	/	25	=	$10,240
508	Bldg 85 Skylights - Replace	$7,000	X	25	/	30	=	$5,833
508	Bldg 86 Skylights - Replace	$21,000	X	28	/	30	=	$19,600
508	Bldg 96 A-D Skylights - Replace	$15,000	X	17	/	30	=	$8,500
508	Bldg 96 E-H Skylights - Replace	$16,000	X	4	/	30	=	$2,133
510	Bldg 66 Gutters/Downspts - Replace	$4,300	X	31	/	36	=	$3,703
510	Bldg 76 Gutters/Dwnspts - Replace	$4,300	X	30	/	36	=	$3,583
510	Bldg 85 Gutters/Dwnspts - Replace	$3,600	X	26	/	36	=	$2,600
510	Bldg 86 Gutters/Dwnspts - Replace	$4,550	X	29	/	36	=	$3,665
510	Bldg 96 A-D Gutters/Downspts - Rplc	$4,100	X	28	/	36	=	$3,189
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$3,000	X	27	/	36	=	$2,250
516	Bldg 86 Chimney Covers & Flue Caps	$6,650	X	13	/	30	=	$2,882
522	Bldg 66 Siding: Fiber-Cement	$111,500	X	26	/	50	=	$57,980
522	Bldg 76 Siding: Fiber-Cement	$111,500	X	26	/	50	=	$57,980
522	Bldg 85 Siding: Fiber-Cement	$82,500	X	22	/	50	=	$36,300
522	Bldg 86 Siding: Fiber-Cement	$82,000	X	22	/	50	=	$36,080
522	Bldg 96 (A-D) Siding: Fiber-Cement	$130,500	X	23	/	50	=	$60,030
522	Bldg 96 (E-H) Siding: Fiber-Cement	$97,500	X	25	/	50	=	$48,750
533	Bldg 66 - Paint/Caulk	$16,600	X	6	/	10	=	$9,960
533	Bldg 76 - Paint/Caulk	$15,750	X	6	/	10	=	$9,450
533	Bldg 85 - Paint/Caulk	$13,500	X	3	/	10	=	$4,050
533	Bldg 86 - Paint/Caulk	$11,650	X	4	/	10	=	$4,660
533	Bldg 96 A-D - Paint/Caulk	$17,000	X	1	/	10	=	$1,700
533	Bldg 96 E-H - Paint/Caulk	$13,850	X	5	/	10	=	$6,925
535	Bldg 66 Windows/Sliders - Replace	$43,100	X	27	/	30	=	$38,790
535	Bldg 76 Windows/Sliders - Replace	$43,100	X	27	/	30	=	$38,790
535	Bldg 85 Windows/Sliders - Replace	$39,800	X	20	/	30	=	$26,533
535	Bldg 86 Windows/Sliders - Replace	$38,450	X	28	/	30	=	$35,887

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
535	Bldg 96 A-D Windows/Sldrs - Replace	$38,450	X	22	/	30	=	$28,197
535	Bldg 96 E-H Windows/Sldrs - Replace	$44,500	X	21	/	30	=	$31,150
540	Decks - Clean/Seal	$1,850	X	0	/	1	=	$0
545	Bldg 66 Decks - Repair/Replace	$24,600	X	7	/	20	=	$8,610
545	Bldg 76 Decks - Repair/Replace	$24,600	X	7	/	20	=	$8,610
545	Bldg 85 Decks - Repair/Replace	$39,200	X	10	/	20	=	$19,600
545	Bldg 86 Decks - Repair/Replace	$7,550	X	9	/	20	=	$3,398
545	Bldg 96 A-D Decks - Repair/Replace	$27,000	X	18	/	25	=	$19,440
545	Bldg 96 E-H Decks - Repair/Replace	$24,550	X	18	/	25	=	$17,676
	Systems / Equipment / Other							
900	Plumbing - Repair/Replace	$16,000	X	1	/	3	=	$5,333
930	Sewer Pumps - Replace	$4,550	X	9	/	15	=	$2,730
								$854,595

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
	Site / Grounds				
110	Site Stairs - Repair/Replace	25	$3,500	$140	0.22 %
120	Asphalt - Resurface	35	$82,800	$2,366	3.71 %
121	Asphalt - Seal/Repair/Stripe	6	$8,250	$1,375	2.16 %
160	Pole Lights - Replace	25	$5,500	$220	0.34 %
205	Mailboxes/Shelter - Replace	20	$10,800	$540	0.85 %
	Building Exterior				
140	Bldg 66 Wood Fence - Replace	20	$9,950	$498	0.78 %
140	Bldg 76 Wood Fence - Replace	20	$6,600	$330	0.52 %
140	Bldg 85 Wood Fence - Replace	20	$4,950	$248	0.39 %
140	Bldg 86 Wood Fence - Replace	20	$10,200	$510	0.80 %
140	Bldg 96 A-D Wood Fence - Replace	20	$4,800	$240	0.38 %
140	Bldg 96 E-H Wood Fence - Replace	20	$4,200	$210	0.33 %
500	Bldg 66 Roof - Replace	30	$34,000	$1,133	1.78 %
500	Bldg 76 Roof - Replace	25	$34,000	$1,360	2.13 %
500	Bldg 85 Roof - Replace	25	$35,000	$1,400	2.20 %
500	Bldg 86 Roof - Replace	25	$51,650	$2,066	3.24 %
500	Bldg 96 A-D Roof - Replace	25	$49,900	$1,996	3.13 %
500	Bldg 96 E-H Roof - Replace	25	$64,000	$2,560	4.01 %
508	Bldg 85 Skylights - Replace	30	$7,000	$233	0.37 %
508	Bldg 86 Skylights - Replace	30	$21,000	$700	1.10 %
508	Bldg 96 A-D Skylights - Replace	30	$15,000	$500	0.78 %
508	Bldg 96 E-H Skylights - Replace	30	$16,000	$533	0.84 %
510	Bldg 66 Gutters/Downspts - Replace	36	$4,300	$119	0.19 %
510	Bldg 76 Gutters/Dwnspts - Replace	36	$4,300	$119	0.19 %
510	Bldg 85 Gutters/Dwnspts - Replace	36	$3,600	$100	0.16 %
510	Bldg 86 Gutters/Dwnspts - Replace	36	$4,550	$126	0.20 %
510	Bldg 96 A-D Gutters/Downspts - Rplc	36	$4,100	$114	0.18 %
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	36	$3,000	$83	0.13 %
516	Bldg 86 Chimney Covers & Flue Caps	30	$6,650	$222	0.35 %
522	Bldg 66 Siding: Fiber-Cement	50	$111,500	$2,230	3.50 %
522	Bldg 76 Siding: Fiber-Cement	50	$111,500	$2,230	3.50 %
522	Bldg 85 Siding: Fiber-Cement	50	$82,500	$1,650	2.59 %
522	Bldg 86 Siding: Fiber-Cement	50	$82,000	$1,640	2.57 %
522	Bldg 96 (A-D) Siding: Fiber-Cement	50	$130,500	$2,610	4.09 %
522	Bldg 96 (E-H) Siding: Fiber-Cement	50	$97,500	$1,950	3.06 %
533	Bldg 66 - Paint/Caulk	10	$16,600	$1,660	2.60 %
533	Bldg 76 - Paint/Caulk	10	$15,750	$1,575	2.47 %
533	Bldg 85 - Paint/Caulk	10	$13,500	$1,350	2.12 %
533	Bldg 86 - Paint/Caulk	10	$11,650	$1,165	1.83 %
533	Bldg 96 A-D - Paint/Caulk	10	$17,000	$1,700	2.67 %
533	Bldg 96 E-H - Paint/Caulk	10	$13,850	$1,385	2.17 %
535	Bldg 66 Windows/Sliders - Replace	30	$43,100	$1,437	2.25 %
535	Bldg 76 Windows/Sliders - Replace	30	$43,100	$1,437	2.25 %
535	Bldg 85 Windows/Sliders - Replace	30	$39,800	$1,327	2.08 %
535	Bldg 86 Windows/Sliders - Replace	30	$38,450	$1,282	2.01 %

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
535	Bldg 96 A-D Windows/Sldrs - Replace	30	$38,450	$1,282	2.01 %
535	Bldg 96 E-H Windows/Sldrs - Replace	30	$44,500	$1,483	2.33 %
540	Decks - Clean/Seal	1	$1,850	$1,850	2.90 %
545	Bldg 66 Decks - Repair/Replace	20	$24,600	$1,230	1.93 %
545	Bldg 76 Decks - Repair/Replace	20	$24,600	$1,230	1.93 %
545	Bldg 85 Decks - Repair/Replace	20	$39,200	$1,960	3.07 %
545	Bldg 86 Decks - Repair/Replace	20	$7,550	$378	0.59 %
545	Bldg 96 A-D Decks - Repair/Replace	25	$27,000	$1,080	1.69 %
545	Bldg 96 E-H Decks - Repair/Replace	25	$24,550	$982	1.54 %
	Systems / Equipment / Other				
900	Plumbing - Repair/Replace	3	$16,000	$5,333	8.36 %
930	Sewer Pumps - Replace	15	$4,550	$303	0.48 %
55	Total Funded Components			$63,780	100.00 %

30-Year Reserve Plan Summary

22568-1
WSV

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	% Increase In Annual Reserve Contribs.	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2019	$47,989	$854,595	5.6 %		High	19.92 %	$73,680	$0	$729	$24,550
2020	$97,848	$920,640	10.6 %		High	5.00 %	$77,364	$0	$1,362	$1,906
2021	$174,668	$1,013,960	17.2 %		High	5.00 %	$81,232	$0	$1,751	$82,008
2022	$175,644	$1,029,605	17.1 %		High	5.00 %	$85,294	$0	$1,710	$96,215
2023	$166,433	$1,033,177	16.1 %		High	5.00 %	$89,559	$0	$1,871	$49,973
2024	$207,889	$1,086,638	19.1 %		High	5.00 %	$94,036	$0	$2,290	$53,906
2025	$250,310	$1,139,870	22.0 %		High	5.00 %	$98,738	$0	$2,827	$36,538
2026	$315,337	$1,214,873	26.0 %		High	5.00 %	$103,675	$0	$3,247	$87,874
2027	$334,385	$1,241,603	26.9 %		High	5.00 %	$108,859	$0	$3,522	$76,513
2028	$370,252	$1,283,261	28.9 %		High	5.00 %	$114,302	$0	$3,859	$86,572
2029	$401,841	$1,318,305	30.5 %		Medium	5.00 %	$120,017	$0	$4,070	$113,494
2030	$412,434	$1,329,241	31.0 %		Medium	5.00 %	$126,018	$0	$3,788	$196,838
2031	$345,402	$1,257,310	27.5 %		High	5.00 %	$132,319	$0	$3,692	$88,041
2032	$393,372	$1,298,010	30.3 %		Medium	5.00 %	$138,935	$0	$4,005	$128,350
2033	$407,962	$1,301,222	31.4 %		Medium	5.00 %	$145,881	$0	$4,450	$75,932
2034	$482,361	$1,353,107	35.6 %		Medium	5.00 %	$153,175	$0	$5,492	$24,460
2035	$616,568	$1,462,295	42.2 %		Medium	5.00 %	$160,834	$0	$6,893	$21,664
2036	$762,632	$1,580,454	48.3 %		Medium	5.00 %	$168,876	$0	$8,286	$44,544
2037	$895,250	$1,681,488	53.2 %		Medium	5.00 %	$177,320	$0	$9,471	$82,228
2038	$999,813	$1,749,724	57.1 %		Medium	5.00 %	$186,186	$0	$10,813	$33,054
2039	$1,163,759	$1,873,731	62.1 %		Medium	5.00 %	$195,495	$0	$12,558	$22,847
2040	$1,348,964	$2,015,138	66.9 %		Medium	5.00 %	$205,270	$0	$13,925	$130,965
2041	$1,437,194	$2,052,688	70.0 %		Low	5.00 %	$215,533	$0	$15,023	$99,158
2042	$1,568,592	$2,127,484	73.7 %		Low	5.00 %	$226,310	$0	$16,876	$3,651
2043	$1,808,127	$2,306,358	78.4 %		Low	5.00 %	$237,625	$0	$16,186	$631,487
2044	$1,430,451	$1,847,490	77.4 %		Low	5.00 %	$249,507	$0	$14,375	$248,531
2045	$1,445,801	$1,772,972	81.5 %		Low	5.00 %	$261,982	$0	$15,521	$63,619
2046	$1,659,684	$1,890,460	87.8 %		Low	5.00 %	$275,081	$0	$16,428	$323,975
2047	$1,627,218	$1,747,200	93.1 %		Low	5.00 %	$288,835	$0	$15,886	$380,597
2048	$1,551,342	$1,545,334	100.4 %		Low	5.00 %	$303,277	$0	$16,885	$44,421

(Alternate Funding Plan) 30-Year Reserve Plan Summary

22568-1
WSV

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	% Increase In Annual Reserve Contribs.	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2019	$47,989	$854,595	5.6 %		High	-11.13 %	$54,600	$0	$633	$24,550
2020	$78,672	$920,640	8.5 %		High	5.00 %	$57,330	$0	$1,069	$1,906
2021	$135,165	$1,013,960	13.3 %		High	5.00 %	$60,197	$0	$1,248	$82,008
2022	$114,603	$1,029,605	11.1 %		High	5.00 %	$63,206	$0	$985	$96,215
2023	$82,580	$1,033,177	8.0 %		High	5.00 %	$66,367	$0	$912	$49,973
2024	$99,886	$1,086,638	9.2 %		High	5.00 %	$69,685	$0	$1,083	$53,906
2025	$116,747	$1,139,870	10.2 %		High	5.00 %	$73,169	$0	$1,357	$36,538
2026	$154,735	$1,214,873	12.7 %		High	5.00 %	$76,828	$0	$1,499	$87,874
2027	$145,187	$1,241,603	11.7 %		High	5.00 %	$80,669	$0	$1,479	$76,513
2028	$150,823	$1,283,261	11.8 %		High	5.00 %	$84,703	$0	$1,506	$86,572
2029	$150,460	$1,318,305	11.4 %		High	5.00 %	$88,938	$0	$1,388	$113,494
2030	$127,292	$1,329,241	9.6 %		High	5.00 %	$93,385	$0	$759	$196,838
2031	$24,597	$1,257,310	2.0 %		High	5.00 %	$98,054	$0	$297	$88,041
2032	$34,908	$1,298,010	2.7 %		High	5.00 %	$102,956	$0	$223	$128,350
2033	$9,737	$1,301,222	0.7 %		High	5.00 %	$108,104	$0	$259	$75,932
2034	$42,169	$1,353,107	3.1 %		High	5.00 %	$113,509	$0	$871	$24,460
2035	$132,089	$1,462,295	9.0 %		High	5.00 %	$119,185	$0	$1,817	$21,664
2036	$231,428	$1,580,454	14.6 %		High	5.00 %	$125,144	$0	$2,730	$44,544
2037	$314,757	$1,681,488	18.7 %		High	5.00 %	$131,401	$0	$3,409	$82,228
2038	$367,340	$1,749,724	21.0 %		High	5.00 %	$137,971	$0	$4,217	$33,054
2039	$476,475	$1,873,731	25.4 %		High	5.00 %	$144,870	$0	$5,400	$22,847
2040	$603,898	$2,015,138	30.0 %		High	5.00 %	$152,114	$0	$6,173	$130,965
2041	$631,219	$2,052,688	30.8 %		Medium	5.00 %	$159,719	$0	$6,645	$99,158
2042	$698,426	$2,127,484	32.8 %		Medium	5.00 %	$167,705	$0	$7,840	$3,651
2043	$870,320	$2,306,358	37.7 %		Medium	5.00 %	$176,090	$0	$6,456	$631,487
2044	$421,379	$1,847,490	22.8 %		High	5.00 %	$184,895	$0	$3,914	$248,531
2045	$361,656	$1,772,972	20.4 %		High	5.00 %	$194,140	$0	$4,289	$63,619
2046	$496,465	$1,890,460	26.3 %		High	5.00 %	$203,847	$0	$4,384	$323,975
2047	$380,721	$1,747,200	21.8 %		High	5.00 %	$214,039	$0	$2,988	$380,597
2048	$217,151	$1,545,334	14.1 %		High	5.00 %	$224,741	$0	$3,087	$44,421

	Fiscal Year	2019	2020	2021	2022	2023
	Starting Reserve Balance	$47,989	$97,848	$174,668	$175,644	$166,433
	Annual Reserve Contribution	$73,680	$77,364	$81,232	$85,294	$89,559
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$729	$1,362	$1,751	$1,710	$1,871
	Total Income	$122,398	$176,574	$257,651	$262,647	$257,862
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$0	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$8,250	$0	$0	$0	$0
160	Pole Lights - Replace	$5,500	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$10,800	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$11,480
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$0	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 76 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 86 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$0	$0	$0	$0
508	Bldg 85 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$22,279	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 E-H Skylights - Replace	$0	$0	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$0	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$0	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$0
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$0	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$0	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$18,683
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$17,727
533	Bldg 85 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 E-H - Paint/Caulk	$0	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$47,097	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$47,097	$0
535	Bldg 85 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$40,792	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$0	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Seal	$0	$1,906	$1,963	$2,022	$2,082
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 85 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$0	$0	$16,974	$0	$0

	Fiscal Year	2019	2020	2021	2022	2023
930	Sewer Pumps - Replace	$0	$0	$0	$0	$0
	Total Expenses	$24,550	$1,906	$82,008	$96,215	$49,973
	Ending Reserve Balance	$97,848	$174,668	$175,644	$166,433	$207,889

	Fiscal Year	2024	2025	2026	2027	2028
	Starting Reserve Balance	$207,889	$250,310	$315,337	$334,385	$370,252
	Annual Reserve Contribution	$94,036	$98,738	$103,675	$108,859	$114,302
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$2,290	$2,827	$3,247	$3,522	$3,859
	Total Income	$304,216	$351,875	$422,259	$446,765	$488,413
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$4,057	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$0	$9,851	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$0	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$0	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 76 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 86 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$0	$0	$0	$0
508	Bldg 85 Skylights - Replace	$8,115	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 E-H Skylights - Replace	$0	$0	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$4,985	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$5,134	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$5,596	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$5,194	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$3,914
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$0	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$0	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 85 - Paint/Caulk	$0	$0	$16,603	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$13,911	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$22,181
533	Bldg 96 E-H - Paint/Caulk	$16,056	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 85 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$48,707	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$58,062
540	Decks - Clean/Seal	$2,145	$2,209	$2,275	$2,344	$2,414
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 85 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$33,207	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$30,193	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$18,548	$0	$0	$20,268	$0
930	Sewer Pumps - Replace	$0	$5,433	$0	$0	$0
	Total Expenses	$53,906	$36,538	$87,874	$76,513	$86,572
	Ending Reserve Balance	$250,310	$315,337	$334,385	$370,252	$401,841

	Fiscal Year	2029	2030	2031	2032	2033
	Starting Reserve Balance	$401,841	$412,434	$345,402	$393,372	$407,962
	Annual Reserve Contribution	$120,017	$126,018	$132,319	$138,935	$145,881
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$4,070	$3,788	$3,692	$4,005	$4,450
	Total Income	$525,928	$542,240	$481,413	$536,312	$558,293
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$0	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$114,615	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$0	$0	$11,763	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$0	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$14,612	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$9,692	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$7,049	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$0	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 76 Roof - Replace	$0	$47,064	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 86 Roof - Replace	$0	$0	$73,641	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$0	$0	$0	$0
508	Bldg 85 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$22,028	$0
508	Bldg 96 E-H Skylights - Replace	$0	$0	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$0	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$4,838	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$0	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$0
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$0	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$0	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$25,109
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$23,823
533	Bldg 85 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 E-H - Paint/Caulk	$0	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 85 Windows/Sliders - Replace	$53,488	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$0	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Seal	$2,486	$2,561	$2,638	$2,717	$2,798
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$36,126	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$36,126	$0
545	Bldg 85 Decks - Repair/Replace	$52,682	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$10,451	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$0	$22,148	$0	$0	$24,201
930	Sewer Pumps - Replace	$0	$0	$0	$0	$0
	Total Expenses	$113,494	$196,838	$88,041	$128,350	$75,932
	Ending Reserve Balance	$412,434	$345,402	$393,372	$407,962	$482,361

	Fiscal Year	2034	2035	2036	2037	2038
	Starting Reserve Balance	$482,361	$616,568	$762,632	$895,250	$999,813
	Annual Reserve Contribution	$153,175	$160,834	$168,876	$177,320	$186,186
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$5,492	$6,893	$8,286	$9,471	$10,813
	Total Income	$641,028	$784,296	$939,794	$1,082,041	$1,196,812
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$0	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$0	$0	$0	$14,045	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$0	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$8,182	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$7,150	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$57,883	$0
500	Bldg 76 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 86 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$0	$0	$0	$0
508	Bldg 85 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 E-H Skylights - Replace	$0	$0	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$0	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$0	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$0
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$10,991	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$0	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 85 - Paint/Caulk	$0	$0	$22,313	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$18,695	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$29,810
533	Bldg 96 E-H - Paint/Caulk	$21,578	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 85 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$0	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Seal	$2,882	$2,969	$3,058	$3,150	$3,244
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 85 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$0	$0	$0	$0	$0
930	Sewer Pumps - Replace	$0	$0	$0	$0	$0
	Total Expenses	$24,460	$21,664	$44,544	$82,228	$33,054
	Ending Reserve Balance	$616,568	$762,632	$895,250	$999,813	$1,163,759

	Fiscal Year	2039	2040	2041	2042	2043
	Starting Reserve Balance	$1,163,759	$1,348,964	$1,437,194	$1,568,592	$1,808,127
	Annual Reserve Contribution	$195,495	$205,270	$215,533	$226,310	$237,625
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$12,558	$13,925	$15,023	$16,876	$16,186
	Total Income	$1,371,812	$1,568,159	$1,667,750	$1,811,778	$2,061,938
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$0	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$0	$0	$0	$0	$16,771
160	Pole Lights - Replace	$0	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$19,506	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$20,734
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$0	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 76 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$71,148
500	Bldg 86 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$95,614	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$119,059	$0	$0	$0
508	Bldg 85 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 E-H Skylights - Replace	$0	$0	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$0	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$0	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$0
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$0	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$226,657
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$226,657
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$0	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$33,744
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$32,017
533	Bldg 85 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 96 E-H - Paint/Caulk	$0	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 85 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$0	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Seal	$3,341	$3,442	$3,545	$3,651	$3,761
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 85 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$0	$0	$0	$0	$0
930	Sewer Pumps - Replace	$0	$8,464	$0	$0	$0
	Total Expenses	$22,847	$130,965	$99,158	$3,651	$631,487
	Ending Reserve Balance	$1,348,964	$1,437,194	$1,568,592	$1,808,127	$1,430,451

	Fiscal Year	2044	2045	2046	2047	2048
	Starting Reserve Balance	$1,430,451	$1,445,801	$1,659,684	$1,627,218	$1,551,342
	Annual Reserve Contribution	$249,507	$261,982	$275,081	$288,835	$303,277
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$14,375	$15,521	$16,428	$15,886	$16,885
	Total Income	$1,694,333	$1,723,304	$1,951,193	$1,931,939	$1,871,504
#	Component					
	Site / Grounds					
110	Site Stairs - Repair/Replace	$0	$0	$0	$0	$0
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair/Stripe	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$11,516	$0	$0	$0	$0
205	Mailboxes/Shelter - Replace	$0	$0	$0	$0	$0
	Building Exterior					
140	Bldg 66 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 76 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 85 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 86 Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 A-D Wood Fence - Replace	$0	$0	$0	$0	$0
140	Bldg 96 E-H Wood Fence - Replace	$0	$0	$0	$0	$0
500	Bldg 66 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 76 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 85 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 86 Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 A-D Roof - Replace	$0	$0	$0	$0	$0
500	Bldg 96 E-H Roof - Replace	$0	$0	$0	$0	$0
508	Bldg 85 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 86 Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 A-D Skylights - Replace	$0	$0	$0	$0	$0
508	Bldg 96 E-H Skylights - Replace	$0	$34,505	$0	$0	$0
510	Bldg 66 Gutters/Downspts - Replace	$0	$0	$0	$0	$0
510	Bldg 76 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 85 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 86 Gutters/Dwnspts - Replace	$0	$0	$0	$0	$0
510	Bldg 96 A-D Gutters/Downspts - Rplc	$0	$0	$0	$0	$0
510	Bldg 96 E-H Gutters/Dwnspts - Rplc	$0	$0	$0	$0	$0
516	Bldg 86 Chimney Covers & Flue Caps	$0	$0	$0	$0	$0
522	Bldg 66 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 76 Siding: Fiber-Cement	$0	$0	$0	$0	$0
522	Bldg 85 Siding: Fiber-Cement	$0	$0	$0	$188,754	$0
522	Bldg 86 Siding: Fiber-Cement	$0	$0	$0	$187,610	$0
522	Bldg 96 (A-D) Siding: Fiber-Cement	$0	$0	$289,878	$0	$0
522	Bldg 96 (E-H) Siding: Fiber-Cement	$204,143	$0	$0	$0	$0
533	Bldg 66 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 76 - Paint/Caulk	$0	$0	$0	$0	$0
533	Bldg 85 - Paint/Caulk	$0	$0	$29,987	$0	$0
533	Bldg 86 - Paint/Caulk	$0	$25,124	$0	$0	$0
533	Bldg 96 A-D - Paint/Caulk	$0	$0	$0	$0	$40,062
533	Bldg 96 E-H - Paint/Caulk	$28,999	$0	$0	$0	$0
535	Bldg 66 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 76 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 85 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 86 Windows/Sliders - Replace	$0	$0	$0	$0	$0
535	Bldg 96 A-D Windows/Sldrs - Replace	$0	$0	$0	$0	$0
535	Bldg 96 E-H Windows/Sldrs - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Seal	$3,873	$3,990	$4,109	$4,233	$4,360
545	Bldg 66 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 76 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 85 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 86 Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 A-D Decks - Repair/Replace	$0	$0	$0	$0	$0
545	Bldg 96 E-H Decks - Repair/Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
900	Plumbing - Repair/Replace	$0	$0	$0	$0	$0
930	Sewer Pumps - Replace	$0	$0	$0	$0	$0
	Total Expenses	$248,531	$63,619	$323,975	$380,597	$44,421
	Ending Reserve Balance	$1,445,801	$1,659,684	$1,627,218	$1,551,342	$1,827,083

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

BTU	British Thermal Unit (a standard unit of energy)
DIA	Diameter
GSF	Gross Square Feet (area). Equivalent to Square Feet
GSY	Gross Square Yards (area). Equivalent to Square Yards
HP	Horsepower
LF	Linear Feet (length)
Effective Age	The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.
Fully Funded Balance (FFB)	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.
Inflation	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.
Interest	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.
Percent Funded	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.
Remaining Useful Life (RUL)	The estimated time, in years, that a common area component can be expected to continue to serve its intended function.
Useful Life (UL)	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 **Quantity: Moderate SF**

Location: Walkways, patios, curb, etc.
Funded?: No. Useful life not predictable, repair/replace from Operating budget
History: Local repairs reported completed 2013 - $3,000
Evaluation: We noted generally stable conditions with some cracking but no significant damage/deterioration observed. There was only one (2013) record of a large scale expense (>$2.500) noted within Association expense history.

As routine maintenance, inspect regularly, pressure wash for appearance and repair promptly as needed to prevent water penetrating into the base and causing further damage. Repair any trip and fall hazards (1/2" or more displacement) immediately to ensure safety.

Larger repair/replacement expenses may emerge as the community ages, but are difficult to predict (timing, cost and scope) at this time. We suggest treating as a general maintenance expense - evaluating each year and allocating repair needs within the operating budget. If regular patterns of significant repair emerge in future, or need for a large renovation project becomes apparent, funding can be included within a future Reserve study update. No Reserve funding suggested at this time.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

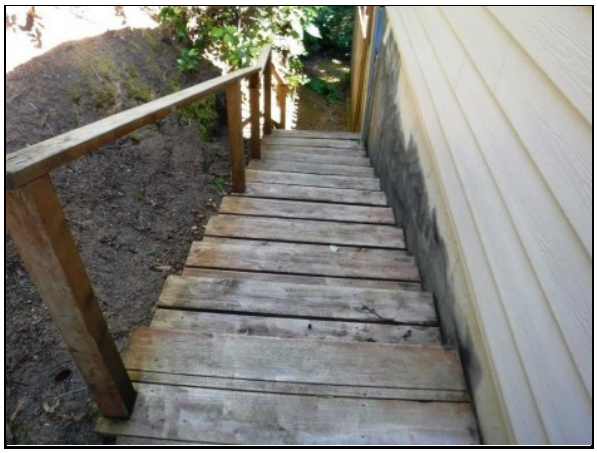
Comp #: 110 Site Stairs - Repair/Replace **Quantity: (1) wood stair set**

Location: Adjacent to building 96 (A - D)
Funded?: Yes.
History:
Evaluation: Generally stable condition of stairs/railings constructed of pressure-treated wood. No rot, damage or other advanced wear observed - general aging and dryness.

As routine maintenance, inspect regularly and perform any needed local repairs promptly as general maintenance expense to ensure that tread and rail connections are tight, secure and slip resistant. With ordinary care and maintenance, plan to replace at roughly the 25 year mark of life. Use quality treated, cedar, composite or similar with appropriate hardware for this coastal location (grade 316 stainless steel best).

Useful Life:
25 years

Remaining Life:
5 years



Best Case: $ 2,500 Worst Case: $ 4,500

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 120 Asphalt - Resurface **Quantity: ~ 30,100 SF**

Location: Roadway, parking areas of Association
Funded?: Yes.
History: Repairs completed 2013 - $4,800
Evaluation: Overall fair condition with some local cracking, alligator cracking, settling and waviness noted. Majority appears to be stable.

Useful life below assumes regular seal coating and repairs (see component #121). The lack of seal coating and repairs can greatly decrease the asphalt's useful life. Resurfacing is typically one of the larger expense items in a reserve study. When need to resurface is apparent within a couple of years, consult with geotechnical engineer for recommendations, specifications / scope of work and project oversight.

As routine maintenance, keep surfaces clean and free of debris, ensure that drains are free flowing, repair cracks, and clean oil stains promptly. Assuming proactive maintenance, plan to resurface at roughly the time frame below.

Further resources:
Pavement Surface Condition Field Rating Manual for Asphalt Pavement.
http://www.wsdot.wa.gov/NR/rdonlyres/4FE2F96D-BFE0-4484-812E-DD5164EB34F5/0/AsphaltPavementBook.pdf

Washington Asphalt Pavement Association
http://www.asphaltwa.com/

Useful Life:
35 years

Remaining Life:
11 years

Best Case: $ 75,300 Worst Case: $ 90,300

Lower allowance Higher allowance

Cost Source: Research with Local Vendor/Contractor

Comp #: 121 Asphalt - Seal/Repair/Stripe **Quantity: ~ 30,100 SF**

Location: Roadway, parking areas of Association
Funded?: Yes.
History: Last reported sealcoat 2009 - $7,550
Evaluation: Prior sealcoat (2009) is generally worn off, or worn thin, in most locations. Regular cycles of seal coating, along with needed repairs is a best practice for the long term care of lower traffic asphalt areas to extend the useful life. Repairs should be made prior to seal, including remove and replacement of alligatored area (photo).

We recommend regular cycles of seal coating for the long-term care of asphalt paving with low traffic and low speed. The primary reason to seal coat asphalt pavement is to protect the pavement from the deteriorating effects of sun and water. When asphalt pavement is exposed, the asphalt oxidizes or hardens and this causes the pavement to become increasingly brittle. As a result, the pavement will become more likely to crack, as it is unable to bend and flex when subjected to traffic (weight) and temperature changes (thermal expansion and contraction). A seal coat combats this situation by providing a waterproof membrane, which not only slows down the oxidation process, but also helps the pavement shed water. Seal coating also provides uniform appearance and conceals the inevitable patching and repairs which accumulate over time, ultimately extending the useful life of asphalt before more costly resurfacing is needed (see component #120).

Repairing asphalt before seal coating is imperative. Surface preparation and dry weather during and following application, is key to lasting performance.

For further resources:
Best Practices Handbook on Asphalt Pavement Maintenance
http://www.cee.mtu.edu/~balkire/CE5403/AsphaltPaveMaint.pdf

Other references:
http://www.pavementinteractive.org/article/bituminous-surface-treatments/

Useful Life:
6 years

Remaining Life:
0 years

Best Case: $ 7,500 Worst Case: $ 9,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

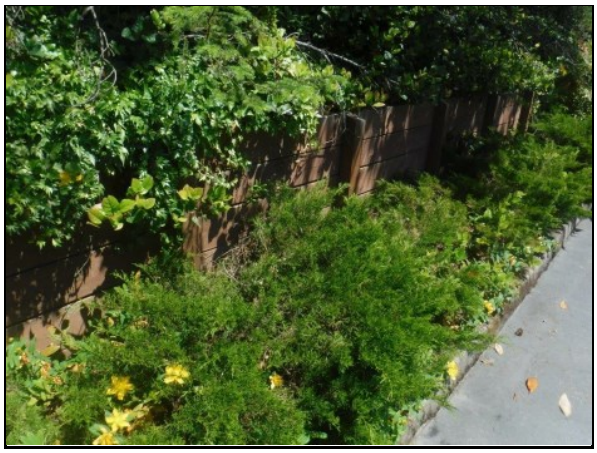
Comp #: 157 Retention Walls - Repair/Replace **Quantity: ~ (160) SF**
Location: Common area between Bldg 86/96 (A-D)
Funded?: No.
History:
Evaluation: Fair, stable condition noted with no obvious deterioration or other problems observed. Treated wood material. Assumed to have been properly designed and installed with adequate base and surrounding drainage.

Inspect regularly, repair as-needed from Operating budget. If shifting, cracking, etc. are observed, consult with appropriate professional for repair scope.

At this time, no predictable expectation of large-scale repairs or replacement; no Reserve funding recommended.

Useful Life:

Remaining Life:



Best Case: Worst Case:

Cost Source:

Comp #: 160 Pole Lights - Replace **Quantity: (9) fixtures**

Location: Adjacent to roadway/parking throughout Association
Funded?: Yes.
History:
Evaluation: Generally fair to poor, but stable condition noted. Observed during daylight hours; assumed to be in functional operating condition. Aged appearance - factored for replacement, but that is elective if they remain functional.

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

Best to plan for large scale replacement at roughly the time frame below for cost efficiency and consistent quality/appearance throughout Association.

Useful Life:
25 years

Remaining Life:
0 years

Best Case: $ 4,400 Worst Case: $ 6,600

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 170 Landscape - Refurbish **Quantity: Common area plantings**
Location: Common area space throughout Community
Funded?: No. Operating budget item
History:
Evaluation: Landscape is in generally mature, healthy condition.

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 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 #: 182 Drainage/Stormwater Sys - Maintain **Quantity: Basins, conveyance**
Location: Common areas of property
Funded?: No.
History:
Evaluation: Thorough analysis of the drainage system is beyond the scope of a Reserve study as the vast majority of the drainage system is located below ground. Observations were very limited to catch basin areas. No problems were observed or reported to us.

No predictable large-scale repairs/replacement at this time. Local repairs should be performed as part of general maintenance. If problems become known from professional evaluation, funding can be included in future reserve studies.

As routine maintenance, inspect regularly and keep drains/grates free of debris to ensure water drains as intended. Maintenance schedules on stormwater systems depend on the condition of the system itself and the amount of sediment and debris moving around on site. Stormwater inspections usually consist of inspecting the catch basins and manholes, ensuring vaults and control structures are properly functioning. Evaluation of drainage can include the visual review of interior drain lines by use of miniature remote camera. Clean out drain lines and basins as often as needed in order to prevent decreased drainage capacity. Repair as needed. The responsibility of keeping the stormwater system in good working order falls on the Association.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 201 Signage - Refurbish **Quantity: Building, unit lettering**

Location: Building exterior locations

Funded?: No. Cost projected too small for Reserve funding

History: None known

Evaluation: There is no entry monument sign. Lettering/numbering at each building is in legible condition with no significant damage/deterioration noted.

As routine maintenance, inspect regularly, clean/touch up for appearance and repair from Operating budget. Our projected cost is too small to merit separate Reserve funding.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 205 Mailboxes/Shelter - Replace **Quantity: (7) stands**

Location: Central common area of community

Funded?: Yes.

History:

Evaluation: Mailbox clusters are partially protected from the weather by a structure. (4) 8-unit cluster boxes, (1) 12-unit, (2) vinyl parcel lockers. Older boxes are in fair to poor overall condition. No functional problems observed or reported; replacement timing is elective.

Inspect regularly, clean by wiping down for appearance, change lock cylinders, lubricate hinges and paint bases with rust inhibitor, repair as needed from operating budget. Best to plan for total replacement at roughly the time frame below due to constant exposure, usage and wear over time.

Note: USPS has a limited budget for replacement and should not be relied upon for purposes of long term planning.

Wood shelter should be maintained along with other similar building components. No separate Reserve funding necessary for shelter.

Useful Life:
20 years

Remaining Life:
0 years

Best Case: $ 9,500 Worst Case: $ 12,100

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 66 Wood Fence - Replace **Quantity: ~ (330) LF**

Location: Rear of building, entry porch privacy
Funded?: Yes.
History: Replaced 2012
Evaluation: Fair condition with no advanced wear or deterioration observed. Twenty year service life is upper end of range in our experience. See below for typical cost range to remove and replace with quality treated / cedar fence.

As routine maintenance, inspect regularly for any damage, repair as-needed and avoid contact with ground, surrounding vegetation and sprinkler patterns.

Funding included here is for similar wood replacement. Association might want to consider replacing with more sturdy, lesser maintenance products like composite, vinyl, fiber-cement, etc; typical costs at installation are about 30% higher, but these products require less maintenance and will a have longer life.

Useful Life:
20 years

Remaining Life:
13 years

Best Case: $ 8,300 Worst Case: $ 11,600

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 76 Wood Fence - Replace **Quantity: ~ (220) LF**

Location: Rear of building, entry porch privacy
Funded?: Yes.
History: Reported replaced in 2012
Evaluation: Fair condition with no advanced wear or deterioration. Twenty year service life is upper end of range in our experience.

As routine maintenance, inspect regularly for any damage, repair as-needed and avoid contact with ground, surrounding vegetation and sprinkler patterns. Funding included here is for similar wood replacement. At next project, the Association might want to consider replacing with more sturdy, lesser maintenance products like composite, vinyl, fiber-cement, etc; typical costs at installation are about 30% higher, but they require less maintenance and will have a longer life.

Useful Life:
20 years

Remaining Life:
13 years

Best Case: $ 5,500 Worst Case: $ 7,700

Lower allowance Higher allowance

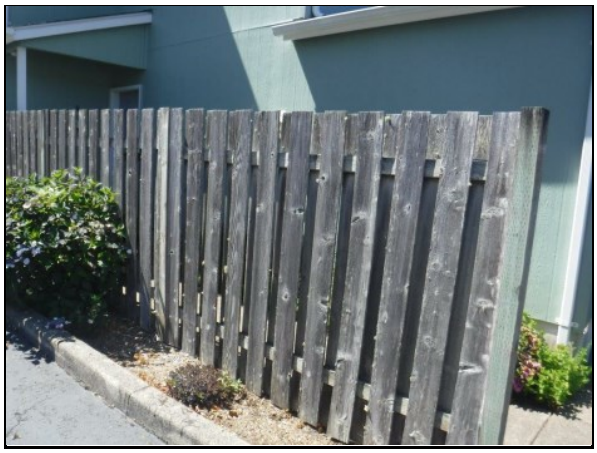
Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 85 Wood Fence - Replace **Quantity: ~ (165) LF**
Location: Rear of building
Funded?: Yes.
History: Reported repaired/replaced 2016
Evaluation: Fair, stable condition with no advanced wear or deterioration.

As routine maintenance, inspect regularly for any damage, repair as-needed and avoid contact with ground, surrounding vegetation and sprinkler patterns. Plan to replace at roughly the time frame below; funding included here for similar wood replacement. At next replacement, Association might want to consider replacing with more sturdy, lesser maintenance products like composite, vinyl, etc; typical costs at installation are about 30% higher, but requires less maintenance and will have longer life.

Useful Life:
20 years

Remaining Life:
17 years



Best Case: $ 4,100 Worst Case: $ 5,800

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 86 Wood Fence - Replace **Quantity: ~ (340) LF**

Location: Rear of building, entry courtyard
Funded?: Yes.
History: Repair/replace reported at 86F in 2016
Evaluation: Generally fair condition with some advanced wear and deterioration observed, particularly in the rear. Twenty year service life is upper end of range in our experience.

As routine maintenance, inspect regularly for any damage, repair as-needed and avoid contact with ground, surrounding vegetation and sprinkler patterns. Funding included here for similar wood replacement. Association might want to consider replacing with more sturdy, lesser maintenance products like composite, vinyl, fiber-cement, etc; typical costs at installation are about 30% higher, but requires less maintenance and will have longer life.

Useful Life:
20 years

Remaining Life:
4 years

Best Case: $ 8,500 Worst Case: $ 11,900

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 96 A-D Wood Fence - Replace **Quantity: ~ (160) LF**

Location: Rear of building
Funded?: Yes.
History: Local repairs completed in 2016 and 2017
Evaluation: Fair, stable condition with local repairs noted. No advance wear or deterioration observed. Twenty year service life is upper end of range in our experience.

As routine maintenance, inspect regularly for any damage, repair as-needed and avoid contact with ground, surrounding vegetation and sprinkler patterns. Funding included here for similar wood replacement. Association might want to consider replacing with more sturdy, lesser maintenance products like composite, vinyl, fiber-cement, etc; typical costs at installation are about 30% higher, but requires less maintenance and will have longer life.

Useful Life:
20 years

Remaining Life:
13 years

Best Case: $ 4,000 Worst Case: $ 5,600

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 140 Bldg 96 E-H Wood Fence - Replace **Quantity: ~ (140) LF**

Location: Rear of building, entry courtyard
Funded?: Yes.
History: Local repairs reported completed in 2017
Evaluation: Fair, stable condition with no advanced wear or deterioration. Although Association is currently opting for spot repairs and replacement as-needed, rather than full replacement, eventual full replacement will be necessary. Twenty year service life is upper end of range in our experience. Plan to replace around the time frame indicated below.

As routine maintenance, inspect regularly for any damage, repair as needed and avoid contact with ground, surrounding vegetation and sprinkler patterns. Funding included here for similar wood replacement as other buildings.

Useful Life:
20 years

Remaining Life:
18 years

Best Case: $ 3,500 Worst Case: $ 4,900

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 500 Bldg 66 Roof - Replace **Quantity: ~ 7,500 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Reported replaced 2006/2007
Evaluation: Roof was reported replaced with three-tab shingles in 2006, then overlaid in 2007 with 50-year Malarkey shingles due to faulty 2006 installation. Ventilation (the lack of which can greatly reduce useful life) was observed at both eave and ridge. Eave venting consisted of circular holes in blocking between rafters. Ridge venting appeared to be provided by continuous ridge vents. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Kick out flashings were observed. Gutters blocked the view of eaves, so eave flashing was not confirmed. No moss or debris was observed.

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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

There is a wealth of information available through Roofing Organizations such as:
Western States Roofing Contractors Association (WSRCA) http://www.wsrca.com/
Roof Consultant Institute http://www.rci-online.org/
National Roofing Contractors Association (NRCA) http://www.nrca.net/. NCRA has some very good information for homeowners. They have an entire section dedicated to "consumer" with valuable information including this page for getting your monies worth out of your new roof.
http://www.nrca.net/consumer/fyi.aspx?homeowners Their page on maintenance is here:
http://www.nrca.net/consumer/maintenance.aspx

At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation. We recommend all Associations seek advice from a qualified consultant whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Useful Life:
30 years

Remaining Life:
18 years

Best Case: $ 30,000 Worst Case: $ 38,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 500 Bldg 76 Roof - Replace **Quantity: ~ 7,500 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Reported replaced 2005 with add'l repairs completed 2006
Evaluation: Roofing is three tab shingles, reportedly replaced last in 2005 with Malarkey Rubberized spec. Some local minor edge curling, but no missing shingles or obvious damage. Ventilation (the lack of which can greatly reduce useful life) was observed at both eave and ridge. Eave venting consisted of circular holes in blocking between rafters. Ridge venting appeared to be provided by continuous ridge vents. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Kick out flashings were observed. Gutters blocked the view of eaves, so eave flashing was not confirmed. No moss or debris was observed.

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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

There is a wealth of information available through Roofing Organizations such as the Western States Roofing Contractors Association (WSRCA) http://www.wsrca.com/ Roof Consultant Institute http://www.rci-online.org/ and the National Roofing Contractors Association (NRCA) http://www.nrca.net/. NCRA has some very good information for homeowners. They have an entire section dedicated to "consumer" with valuable information including this page for getting your monies worth out of your new roof. http://www.nrca.net/consumer/fyi.aspx?homeowners
Their page on maintenance is here: http://www.nrca.net/consumer/maintenance.aspx

At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation. We recommend all Associations seek advice from a qualified consultant whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Useful Life:
25 years

Remaining Life:
11 years

Best Case: $ 30,000 Worst Case: $ 38,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 500 Bldg 85 Roof - Replace **Quantity: ~ 5,700 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Budgeted for 2018
Evaluation: Roofing is three tab shingles; original, installed in 1997. No reported leaks, no missing shingles or obvious damage. Ventilation (the lack of which can greatly reduce useful life) was observed at the eave; ridge was difficult to observe due to height. Eave venting consisted of circular holes in blocking between rafters. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Gutters blocked the view of eaves, so eave flashing was not confirmed.

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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

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At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation. We recommend all Associations seek advice from a qualified consultant whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Useful Life:
25 years

Remaining Life:
24 years

Best Case: $ 33,000 Worst Case: $ 37,000

Lower allowance Higher allowance

Cost Source: Estimate Provided by Client: 2018 Budget

Comp #: 500 Bldg 86 Roof - Replace **Quantity: ~ 11,470 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Reported replaced in 2006
Evaluation: Roofing is three tab shingles; reported replaced in 2006 with Malarkey Rubberized spec. No reported leaks, no missing shingles or obvious damage. Ventilation (the lack of which can greatly reduce useful life) was observed at the eave and ridge. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Gutters blocked the view of eaves, so eave flashing was not confirmed.

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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

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Useful Life:
25 years

Remaining Life:
12 years

Best Case: $ 45,900 Worst Case: $ 57,400

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 500 Bldg 96 A-D Roof - Replace **Quantity: ~ 5,900 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Reported replaced 2016, with skylight flashing repairs in 2017
Evaluation: Roofing is architectural grade shingles, most likely a 50-year Malarkey product as consistent with other recently replaced roofs by same contractor. No reported leaks, no missing shingles or other obvious damage. Ventilation (the lack of which can greatly reduce useful life) was observed at the eave; ridge was difficult to observe due to height. Eave venting consisted of circular holes in blocking between rafters. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Gutters blocked the view of eaves, so eave flashing was not confirmed.

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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

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At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation. We recommend all Associations seek advice from a qualified consultant whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Useful Life:
25 years

Remaining Life:
22 years

Best Case: $ 45,100 Worst Case: $ 54,700

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History: Maier Roofing

Comp #: 500 Bldg 96 E-H Roof - Replace **Quantity: ~ 9,000 SF**

Location: Rooftop of building and garages
Funded?: Yes.
History: Reported replaced 2015
Evaluation: Roofing is three tab shingles; original, installed in 1996. No reported leaks, no missing shingles or obvious damage. Ventilation (the lack of which can greatly reduce useful life) was observed at the eave; ridge was difficult to observe due to height. Eave venting consisted of circular holes in blocking between rafters. Visible portions of roof flashing were observed at the rake, headwall, and sidewall conditions. Gutters blocked the view of eaves, so eave flashing was not confirmed.

This type of roofing typically has a 15 to 18 year service life assuming it was properly installed and is properly maintained. 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 roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or low pressure water) taking care to not damage the shingles. Do not use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, reducing the remaining useful life.

There is a wealth of information available through Roofing Organizations such as the Western States Roofing Contractors Association (WSRCA) http://www.wsrca.com/ Roof Consultant Institute http://www.rci-online.org/ and the National Roofing Contractors Association (NRCA) http://www.nrca.net/. NCRA has some very good information for homeowners. They have an entire section dedicated to "consumer" with valuable information including this page for getting your monies worth out of your new roof. http://www.nrca.net/consumer/fyi.aspx?homeowners
Their page on maintenance is here: http://www.nrca.net/consumer/maintenance.aspx

Plan for replacement at roughly the time frame indicated below. Costs below include replacing with a similar shingle to what is currently in place. We suggest that the best value (life cycle cost) might be to spend about $2 - $3/square foot more and install a 50-year shingle.

At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation. We recommend all Associations seek advice from a qualified consultant whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Useful Life:
25 years

Remaining Life:
21 years

Best Case: $ 60,600 Worst Case: $ 67,400

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History: Maier Roofing

Comp #: 508 Bldg 85 Skylights - Replace **Quantity: ~ (12) skylights***

Location: Rooftop of building
Funded?: Yes.
History: 85D reported replaced 2017 - $580
Evaluation: Close observation of skylights was not possible due to limited access and location of skylights.

Ideally, skylights should be replaced at time of roofing for best waterproofing, flashing integration with roof shingles and underlayment. We have roofing scheduled for replacement in 2015 - therefore we have skylights below at that time as well. At that time, the original skylights will be 18 years old. Assume replacement with better quality specification such as Velux.

Note: Satellite photos confirm there are no skylights installed on Buildings 66 and 76.

* Quantity on Bldg 85 confirmed via satellite photos.

Useful Life:
30 years

Remaining Life:
5 years

Best Case: $ 6,000 Worst Case: $ 8,000

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 508 Bldg 86 Skylights - Replace **Quantity: ~ (36) skylights***

Location: Rooftop of building
Funded?: Yes.
History: Roof replaced 2006, no report of skylight replacement at that time
Evaluation: Close observation of skylights was not possible due to limited access and location of skylights. Original skylights are at or near the end of their useful life. Typical quality skylight useful life is 30 years.

Inspect skylights during roof inspections and repair/replace as-needed to maintain waterproof integrity.

Note: Satellite photos confirm there are no skylights installed on Buildings 66 and 76.

* Quantity verified from satellite photos.

Useful Life:
30 years

Remaining Life:
2 years

Best Case: $ 19,000 Worst Case: $ 23,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 508 Bldg 96 A-D Skylights - Replace **Quantity: ~ (26) skylights**

Location: Rooftop of building
Funded?: Yes.
History: Roof replaced 2016/2017. Skylight flashing reported replaced at that time.
Evaluation: Close observation of skylights was not possible due to limited access and location of skylights. Roof replaced in 2016/2017. Skylight flashing reported replaced at that time. A couple of skylights have been reported replaced with previous Reserve studies. Original skylights are at or near the end of their normal useful life. Typical quality skylight useful life is 30 years. We have extended remaining useful life based on reported 2016/17 flashing replacement.

Inspect skylights during roof inspections and repair as-needed to maintain waterproof integrity.

Note: Satellite photos confirm there are no skylights installed on Buildings 66 and 76.

* Quantity from internal spreadsheet previously provided by Association.

Useful Life:
30 years

Remaining Life:
13 years

Best Case: $ 13,000 Worst Case: $ 17,000

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 508 Bldg 96 E-H Skylights - Replace **Quantity: ~ (28) skylights**

Location: Rooftop of building
Funded?: Yes.
History: Roof and Skylights reported replaced 2015
Evaluation: Close observation of skylights was not possible due to limited access and location of skylights. Typical quality skylight useful life is 30 years.

Inspect skylights during roof inspections and repair as-needed to maintain waterproof integrity.

Note: Satellite photos confirm there are no skylights installed on Buildings 66 and 76.

* Quantity from internal spreadsheet previously provided by Association.

Useful Life:
30 years

Remaining Life:
26 years

Best Case: $ 14,000 Worst Case: $ 18,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 510 Bldg 66 Gutters/Downspts - Replace **Quantity: ~ 710 LF**

Location: Perimeter of building
Funded?: Yes.
History: None reported
Evaluation: Generally the aluminum gutters and downspouts appeared in fair condition. Some local dents and dings were noted. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below; best timed with roofing.

Useful Life:
36 years

Remaining Life:
5 years

Best Case: $ 3,600 Worst Case: $ 5,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 510 Bldg 76 Gutters/Dwnspts - Replace **Quantity: ~ 710 LF**

Location: Perimeter of building
Funded?: Yes.
History: None reported
Evaluation: Generally the aluminum gutters and downspouts appeared in fair condition. Some local dents and dings were noted. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below, best timed with roofing.

Useful Life:
36 years

Remaining Life:
6 years

Best Case: $ 3,600 Worst Case: $ 5,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 510 Bldg 85 Gutters/Dwnspts - Replace **Quantity: ~ 600 LF**

Location: Perimeter of building
Funded?: Yes.
History: None reported
Evaluation: Generally the aluminum gutters and downspouts appeared in fair to good condition. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below; best timed with roofing.

Useful Life:
36 years

Remaining Life:
10 years

Best Case: $ 3,000 Worst Case: $ 4,200

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 510 Bldg 86 Gutters/Dwnspts - Replace **Quantity: ~ 750 LF**

Location: Perimeter of building
Funded?: Yes.
History: None reported
Evaluation: Generally the aluminum gutters and downspouts appeared in fair condition. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below, best timed with roofing.

Useful Life:
36 years

Remaining Life:
7 years

Best Case: $ 3,800 Worst Case: $ 5,300

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 510 Bldg 96 A-D Gutters/Downspts - Rplc **Quantity: ~ 680 LF**

Location: Perimeter of building
Funded?: Yes.
History: None reported
Evaluation: Generally the aluminum gutters and downspouts appeared in fair to good condition. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below, best timed with roofing.

Useful Life:
36 years

Remaining Life:
8 years

Best Case: $ 3,400 Worst Case: $ 4,800

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

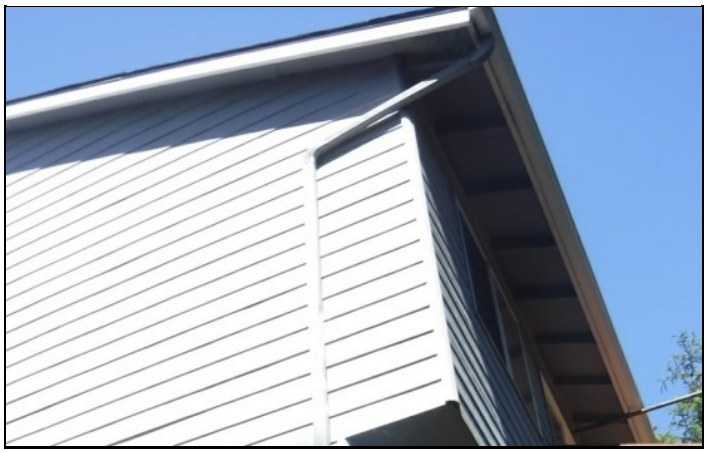
Comp #: 510 Bldg 96 E-H Gutters/Dwnspts - Rplc **Quantity: ~ 500 LF**

Location: Perimeter of building
Funded?: Yes.
History:
Evaluation: Generally the aluminum gutters and downspouts appeared in fair to good condition. Terminated into a drainage system - we assume adequate.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters. We suggest to plan for total replacement of gutter and downspouts at roughly the time frame below, best timed with roofing.

Useful Life:
36 years

Remaining Life:
9 years



Best Case: $ 2,500 Worst Case: $ 3,500

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 516 Bldg 86 Chimney Covers & Flue Caps **Quantity: (6) caps / hoods**

Location: Chimney at each unit
Funded?: Yes.
History: Assumed replaced 2006
Evaluation: Observed from ground-level, appears to be stainless steel cap and flashing. Based on current condition, assumed to have been replaced at the time of last roof replacement.

As routine maintenance, inspect and clean during roof maintenance. Ensure proper attachment and seal; repair locally as needed. Assuming proactive maintenance, plan for total replacement at roughly the time frame indicated below. Review condition of chimney caps and flue caps with consultant while evaluating the roofing project.

Useful Life:
30 years

Remaining Life:
17 years

Best Case: $ 5,900 Worst Case: $ 7,400

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 66 Siding: Fiber-Cement **Quantity: 7,420 GSF**

Location: Building exterior

Funded?: Yes.

History:

Evaluation: Siding is horizontal clapboard. Surface is painted (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
24 years

Best Case: $ 89,000 Worst Case: $ 134,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 76 Siding: Fiber-Cement **Quantity: ~ 7,420 GSF**

Location: Building exterior

Funded?: Yes.

History:

Evaluation: Siding is horizontal clapboard. Surface is painted (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

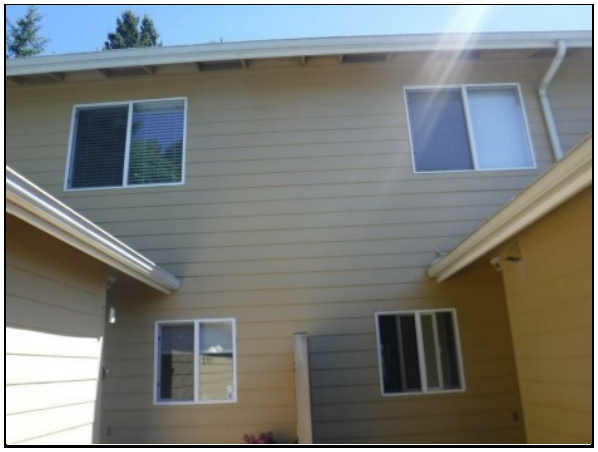
The leading manufacture of fiber-cement siding (James Hardie Siding) currently provides either a 30-year non-prorated or 50-year prorated limited warranty on their products. Local James Hardie representative suggests planning for ~50-year total service life of siding.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
24 years



Best Case: $ 89,000 Worst Case: $ 134,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 85 Siding: Fiber-Cement **Quantity: ~ 5,475 GSF**

Location: Building exterior

Funded?: Yes.

History:

Evaluation: Siding is mostly horizontal clapboard, with some 4 x 8 panels. Surface is painted, (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
28 years

Best Case: $ 66,000 Worst Case: $ 99,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 86 Siding: Fiber-Cement **Quantity: ~ 5,470 GSF**

Location: Building exterior

Funded?: Yes.

History:

Evaluation: Siding is horizontal clapboard. Surface is painted, (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
28 years

Best Case: $ 66,000 Worst Case: $ 98,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 96 (A-D) Siding: Fiber-Cement **Quantity: ~ 8,700 GSF**
Location: Building exterior
Funded?: Yes.
History:
Evaluation: Siding is horizontal clapboard. Surface is painted, (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
27 years

Best Case: $ 104,000 Worst Case: $ 157,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Bldg 96 (E-H) Siding: Fiber-Cement **Quantity: ~ 6,500 GSF**
Location: Building exterior
Funded?: Yes.
History:
Evaluation: Siding is horizontal clapboard. Surface is painted, (see component #533). Actual manufacturer of siding was not confirmed. 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 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.

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.

Note: At replacement we highly recommend including building enclosure design documents with waterproofing details by an architect or engineer, and independent oversight during construction to verify compliance with those details.

Useful Life:
50 years

Remaining Life:
25 years

Best Case: $ 78,000 Worst Case: $ 117,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 533 Bldg 66 - Paint/Caulk **Quantity: ~ 7,420 GSF**

Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Completed 2013 - $12,900; prior 2001
Evaluation: The painted surface of the siding and trim appeared in fair condition with no 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:
4 years

Best Case: $ 15,400 Worst Case: $ 17,800

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 533 Bldg 76 - Paint/Caulk **Quantity: ~ 7,420 GSF**

Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Reported completed 2013; prior 2001
Evaluation: The painted surface of the siding and trim appeared in fair condition with no peeling or blistering observed.

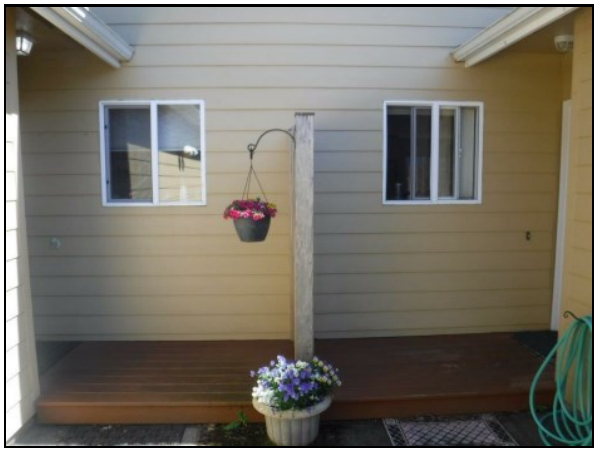
Typical Northwest paint cycles vary greatly depending upon many factors including type of material painted, surface preparation, quality of primer/paint/stain, application methods, weather conditions during application, moisture beneath surface, and exposure to weather conditions. Repair areas as needed 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:
4 years



Best Case: $ 13,000 Worst Case: $ 18,500

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 533 Bldg 85 - Paint/Caulk **Quantity: ~ 5,475 GSF**

Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Reported completed 2016 - $12,350
Evaluation: The painted surface of the siding and trim appeared in good condition with no 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:
7 years

Best Case: $ 11,300 Worst Case: $ 15,700

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 533 Bldg 86 - Paint/Caulk **Quantity: ~ 5,470 GSF**

Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Reported completed 2015
Evaluation: The painted surface of the siding and trim appeared in fair/good condition with no 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:
6 years

Best Case: $ 9,600 Worst Case: $ 13,700

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 533 Bldg 96 A-D - Paint/Caulk **Quantity: ~ 8,700 GSF**

Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Reported scheduled for 2018 - $17,000
Evaluation: The painted surface of the siding and trim appeared in faded condition with minimal 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:
9 years

Best Case: $ 16,000 Worst Case: $ 18,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 533 Bldg 96 E-H - Paint/Caulk **Quantity: ~ 6,500 GSF**
Location: Exterior building surfaces: siding, trim, doors
Funded?: Yes.
History: Reported completed 2014
Evaluation: The painted surface of the siding and trim appeared in fair condition with no 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:
5 years

Best Case: $ 11,400 Worst Case: $ 16,300

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 66 Windows/Sliders - Replace **Quantity: (30) windows (7) sliders**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure. 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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/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:
30 years

Remaining Life:
3 years

Best Case: $ 34,500 Worst Case: $ 51,700

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 76 Windows/Sliders - Replace **Quantity: (30) windows (7) sliders**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure.

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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/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:
30 years

Remaining Life:
3 years

Best Case: $ 34,500 Worst Case: $ 51,700

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 85 Windows/Sliders - Replace **Quantity: (23) windows (8) sldrs**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure. 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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/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:
30 years

Remaining Life:
10 years

Best Case: $ 31,600 Worst Case: $ 48,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 86 Windows/Sliders - Replace **Quantity: (29) windows (6) sldrs**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure. 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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/2010-04-hinjosa.pdf

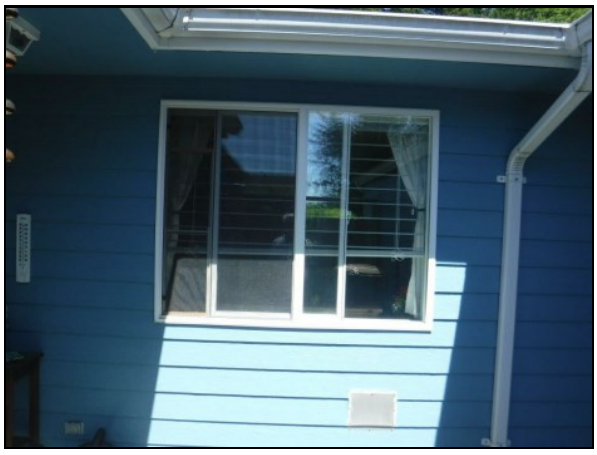
Inspect regularly, including sealant, if any, and repair as needed. Typical sealant failures include a lack of adhesion to adjacent materials, tearing/splitting of the sealant itself, and loss of elastic ability. Loss of elastic ability can be caused by exposure to ultra-violet light and general aging. 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:
30 years

Remaining Life:
2 years



Best Case: $ 33,800 Worst Case: $ 43,100

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 96 A-D Windows/Sldrs - Replace **Quantity: (20) windows (8) sldrs**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure. 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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/2010-04-hinjosa.pdf

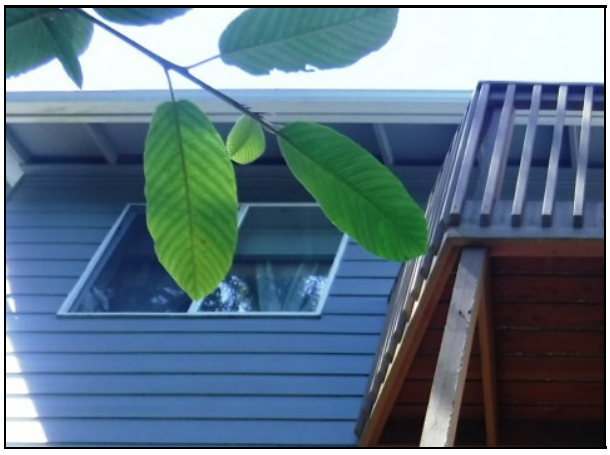
Inspect regularly, including sealant, if any, and repair as needed. Typical sealant failures include a lack of adhesion to adjacent materials, tearing/splitting of the sealant itself, and loss of elastic ability. Loss of elastic ability can be caused by exposure to ultra-violet light and general aging. 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:
30 years

Remaining Life:
8 years



Best Case: $ 33,800 Worst Case: $ 43,100

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Bldg 96 E-H Windows/Sldrs - Replace **Quantity: (20) windows (12) sldrs**

Location: Building exterior walls

Funded?: Yes.

History:

Evaluation: Windows were vinyl frames with horizontal sliders, and fixed operation. Head flashing was not observed - should be added when replacement occurs. Weep holes at exterior lower corners were observed to be clear in the few windows sampled for our study. No condensation was observed between window panes, typically indicative of failed glazing seals. Failed glazing seals are common in windows as they age, especially areas with high UV exposure. 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, replacement costs. You can learn more about window design here: http://www.rci-online.org/interface/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:
30 years

Remaining Life:
9 years

Best Case: $ 34,900 Worst Case: $ 54,100

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 538 Doors: Unit Entry, Garage Man Doors **Quantity: ~ (64) doors**

Location: Exterior entry man doors at units and garage
Funded?: No. Useful life not predictable
History: Scattered replacement as-needed
Evaluation: Exterior doors were mostly metal. However, some metal doors have been replaced as-needed with fiberglass. Expect similar replacement needs over time, but not on schedule as a predictable one-time Reserve project. We suggest inspecting each year and allocating any replacement funding needs within the Operating budget.

Door painting is included as part of exterior painting. Touch up paint as needed between painting cycles. Inspect periodically and repair as needed to maintain appearance, security and operation with maintenance funds. No predictable large scale repair or replacement of doors. No reserve funding suggested.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 540 Decks - Clean/Seal **Quantity: ~ 4,715 SF**

Location: Wood decks, porches throughout association
Funded?: Yes.
History: All decks reported scheduled for clean/stain 2018
Evaluation: Age and appearance varies throughout. Typically wood decks should be cleaned and sealed with a product specifically formulated for these wood traffic surfaces. We suggest this project be scheduled every two years at all decks for cost efficiency and consistent appearance throughout. Association reported plans to clean/stain all decks in 2018 followed by cyclical, staged cleaning and staining of approximately one building per year. We used $7,000 for full 2018 project (reflected in 2019 starting balance) have reduced our costs and useful life to remain consistent with planned standard of care going forward.

Useful Life:
1 years

Remaining Life:
1 years

Best Case: $ 1,500 Worst Case: $ 2,200

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 545 Bldg 66 Decks - Repair/Replace **Quantity: ~ 1,100 GSF**

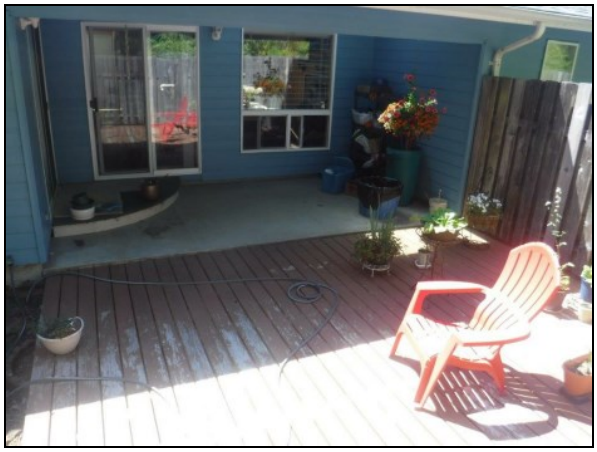
Location: Rear yards, entry porches
Funded?: Yes.
History: Front and Rear decks replaced 2012
Evaluation: Wood front porches and rear decks at building 66 were reported replaced in 2012 and are in generally fair to good condition with no advanced aging or deterioration present. Deck surfaces are open boards that allows water to drain off between wood boards. Decks are less than one-foot above ground. No rail assembly.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wood boards with in-kind material is factored below.

Useful Life:
20 years

Remaining Life:
13 years



Best Case: $ 23,400 Worst Case: $ 25,800

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 545 Bldg 76 Decks - Repair/Replace **Quantity: ~ 1,100 SF**

Location: Rear yards, entry porches
Funded?: Yes.
History: Front and rear decks replaced 2012
Evaluation: Wood front porches and rear decks at building 76 were reported replaced in 2012 and are assumed to be in generally the same configuration and condition as building 66, with no advanced aging or deterioration. We did not have direct access to rear decks at building 76 as back yards are fenced. Deck surfaces are open boards that allows water to drain off between wood boards. Decks are less than one-foot above ground. No rail assembly.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wo

Useful Life:
20 years

Remaining Life:
13 years

Best Case: $ 23,400 Worst Case: $ 25,800

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 545 Bldg 85 Decks - Repair/Replace **Quantity: ~ 1,120 SF**

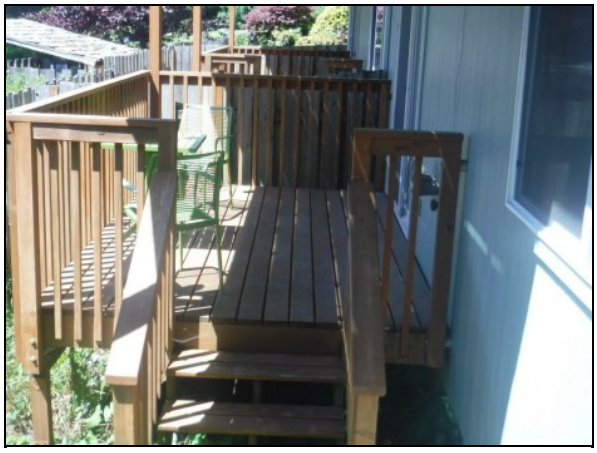
Location: Rear yards, entry porces
Funded?: Yes.
History: Reported rebuilt 2009
Evaluation: Wood front porches at Building 85 are in generally fair to good condition with no advanced aging or deterioration present. In contrast to buildings 66, 76 & 86, rear decks at building 85 are raised at first and second floors and appear to be in good to fair condition. Decks have wood rail assemblies as pictured below. Deck surfaces are open boards that allows water to drain off between wood boards.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wood boards with in-kind material is factored below.

Useful Life:
20 years

Remaining Life:
10 years



Best Case: $ 33,600 Worst Case: $ 44,800

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 545 Bldg 86 Decks - Repair/Replace **Quantity: ~ 250 SF**

Location: Rear of two units at building 86
Funded?: Yes.
History: Reported replaced in 2009
Evaluation: Front porches at building 86 are concrete in mostly good condition with no advanced cracking or deterioration. Some rear decks have been removed entirely at Owner request.. Remaining rear decks are in mostly fair condition. Deck surfaces are open boards that allows water to drain off between wood boards. Decks are less than one-foot above ground. No rail assembly.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wood boards with in-kind material is factored below.s found.

Useful Life:
20 years

Remaining Life:
11 years

Best Case: $ 6,300 Worst Case: $ 8,800

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 545 Bldg 96 A-D Decks - Repair/Replace **Quantity: ~ 600 SF**

Location: Rear of building

Funded?: Yes.

History: Misc repairs reported in 2016 and 2017

Evaluation: Front porches at Building 96 (A-D) are concrete in generally fair condition with no advanced cracking or deterioration present. Rear decks are concrete at ground level and raised at first and second floors. All appear in fair to good condition with no obvious signs of advanced deterioration. Decks have wood rail assemblies as pictured below. Deck surfaces are open boards that allows water to drain off between wood boards.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wood boards with in-kind material is factored below.

Useful Life:
25 years

Remaining Life:
7 years

Best Case: $ 24,000 Worst Case: $ 30,000

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 545 Bldg 96 E-H Decks - Repair/Replace **Quantity: ~ 545 SF**

Location: Rear of building

Funded?: Yes.

History:

Evaluation: Front porches at Building 96 (E-H) are concrete in generally fair condition with no advanced cracking or deterioration present. Rear decks are concrete at ground level and raised at second floors. All appear in fair to good condition with no obvious signs of advanced deterioration. Decks have wood rail assemblies as pictured below. Deck surfaces are open boards that allows water to drain off between wood boards.

We recommend decks and porches be inspected annually and repaired as-needed to ensure continued safety and aesthetics. As part of maintenance, apply water repellent stain/preservative at least every other year (component #540). Paint/staining of porches is also included in component #533, or as a general maintenance project.

Options for a longer lasting deck include such things as using a thick wood boards that are treated, cedar or redwood, or a composite product. Composite materials are available that require less maintenance. Funding for replacing existing wood boards with in-kind material is factored below.

Useful Life:
25 years

Remaining Life:
7 years

Best Case: $ 21,800 Worst Case: $ 27,300

Lower allowance Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 560 Exterior Lighting - Replace **Quantity: Assorted fixtures**
Location: Building exterior locations
Funded?: No. Cost predicted too small for Reserve funding
History: None reported
Evaluation: Varying condition of of exterior light fixtures with general weathering as consistent with close proximity to the ocean. No damage or extensive wear noted. Observed during daylight hours and assumed to be in functional operating condition.

As routine maintenance, inspect, repair/change bulbs as needed. Because the ages vary throughout and each buildings exterior lighting can generally be replaced for less than $1,500 we suggest the cost does not rise above the Reserve funding threshold (1% of Operating budget). We suggest individual fixtures be replaced as needed, or included in the Operating budget, best timed to coincide with exterior paint cycles. No reserve funding suggested at this time.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 605 Garage Doors - Repair/Replace **Quantity: (20 single (8) double**
Location: Garage entry
Funded?: No. No predictable basis for funding large-scale cyclical replacement
History:
Evaluation: Varying appearance - some history of door replacement. All appeared to be generally in functional condition during our site visit. These door types can last for many years if properly maintained and not damaged or abused. Without a basis for cyclical replacement funding, it is more appropriate to factor any periodic replacement needs within the annual Operating budget - or - if future conditions indicate a larger project is needed, funding can be incorporated within a future Reserve study update. No reserve funding suggested at this time.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Systems / Equipment / Other

Comp #: 900 Plumbing - Repair/Replace **Quantity: Supply, waste, drains**
Location: Throughout buildings
Funded?: Yes.
History: Copper supply-lines replaced 96G in 2018 - $15,900
Evaluation: Thorough analysis of plumbing system is beyond the scope of a Reserve study. Association reported recent need for replacement of copper supply lines in selected homes. We have factored one additional home to be re-piped every three years for the next 15 years, or, five more homes in addition to 96G noted above. If plumbing problems become more severe, or costs are more are accurately estimated we can adjust future Reserve study updates accordingly.

Treat minor local repairs as ongoing maintenance expense.

Useful Life:
3 years

Remaining Life:
2 years

Best Case: $ 14,000 Worst Case: $ 18,000

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 905 Electrical System - Repair/Replace **Quantity: Main, branch systems**
Location: Throughout commnon areas of association
Funded?: No.
History:
Evaluation: Analysis of electrical system(s), beyond visual inspection, is not within the scope of a Reserve study. No reported issues or problems at this time.

Typically, if installed per architectural specifications, building codes, and electric codes, without defect, there is no predictable time frame for large-scale repair/replacement expenses within the scope of our review. Treat minor repairs as ongoing maintenance expense.

Some electrical system components used historically are known to be life limited. Manufacturing defects can become apparent from time to time and certain site conditions can contribute to premature deterioration of system components. Periodic inspections and maintenance by an electrician may be wise operating expense. 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.
Funding may be incorporated into future reserve study updates if conditions change. No basis for reserve funding at this time.

Useful Life:

Remaining Life:

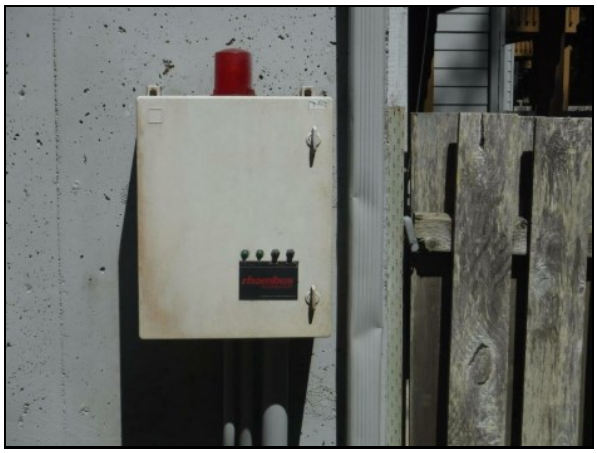
Best Case: Worst Case:

Cost Source:

Comp #: 930 Sewer Pumps - Replace **Quantity: (2) pumps**
Location: Between 96 A-D and 96 E-H
Funded?: Yes.
History:
Evaluation: This sewer lift station serves the 96 buildings only. Pumps were reported replaced in 2010 and the outfall piping was changed to 2" for better performance. We have factored 15 year replacement interval below. Units in 96 building reportedly pay a surcharge for this equipment - a portion of that surcharge is operating / maintenance expense, remainder is Reserves.

Useful Life:
15 years

Remaining Life:
6 years



Best Case: $ 3,900 Worst Case: $ 5,200

Lower allowance Higher allowance

Cost Source: Inflated Client Cost History

Comp #: 999 Reserve Study - Update **Quantity: Annual update**
Location: Common areas of Association
Funded?: No. Annual costs, best handled from Operating budget
History: With-Site-Visit: 2019; Full: 2012
Evaluation: Reserve studies should be updated periodically (see Oregon Revised Statutes ORS 100). We recommend updates with site inspections 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:
