

# CROSS CREEK RESERVE STUDY

Fiscal Year **2015**



CROSS Creek

[www.CrossCreekHOA.org](http://www.CrossCreekHOA.org)

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**ALLIANCE**  
PROJECT ENGINEERS AND CONSTRUCTION CONSULTANTS

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# EXECUTIVE SUMMARY

## RESERVE STUDIES DEFINED

A Reserve Study is made up of two parts, 1) the information about the physical status and repair/ replacement cost of the major common area components the association is obligated to maintain (Physical Analysis), and 2) the evaluation and analysis of the association’s Reserve balance, income, and expenses (Financial Analysis). The Physical Analysis is comprised of the Component Inventory, Condition Assessment, and Life and Valuation Estimates. The Component Inventory should be relatively “stable” from year to year, while the Condition Assessment and Life and Valuation Estimates will necessarily change from year to year. The Financial Analysis is made up of a finding of the client’s current Reserve Fund Status (measured in cash or as Percent Funded) and a recommendation for an appropriate Reserve contribution rate (Funding Plan).

### PHYSICAL ANALYSIS

- Component Inventory
- Condition Assessment
- Life and Valuation Estimates

### FINANCIAL ANALYSIS

- Fund Status
- Funding Plan

## LEVELS OF SERVICE

The following three categories describe the various types of Reserve Studies, from exhaustive to minimal.

I. FULL	II. UPDATE	III. UPDATE
<b>WITH-SITE-VISIT/ON-SITE REVIEW</b>	<b>WITH-SITE-VISIT/ON-SITE REVIEW</b>	<b>NO SITE-VISIT/ON-SITE REVIEW</b>
A Reserve Study in which the following five Reserve Study tasks are performed:	A Reserve Study update in which the following five Reserve Study tasks are performed:	A Reserve Study update with no on-site visual observations in which the following three Reserve Study tasks are performed:
<ul style="list-style-type: none"> <li>• Component Inventory</li> <li>• Condition Assessment (based upon on-site visual observations)</li> <li>• Life and Valuation Estimates</li> <li>• Fund Status</li> <li>• Funding Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Component Inventory (verification only, not quantification)</li> <li>• Condition Assessment (based on on-site visual observations)</li> <li>• Life and Valuation Estimates n Fund Status</li> <li>• Funding Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Life and Valuation Estimates</li> <li>• Fund Status</li> <li>• Funding Plan</li> </ul>

# 2015 RESERVE STUDY RESULTS SUMMARY

## PROPERTY DESCRIPTION

ASSOCIATION BOARD	ASSOCIATION BOARD REPRESENTATIVE	RESERVE STUDY PREPARER
The Cross Creek Homeowners Association  SW Rosa Road and SW Harmony Terrace Aloha, Oregon  Washington County	The Cross Creek Condominiums Association Cheryl Wrzesinski  <a href="mailto:rlwrzesi@frontier.com">rlwrzesi@frontier.com</a>	Alliance Project Engineers  Eric Harker, Assoc. AIA 123 NE 3rd Ave, Suite 308 Portland, OR 97232 971-888-5979  <a href="mailto:eric@alliance-nw.com">eric@alliance-nw.com</a>

PRE-STUDY RESERVE FUND STATUS	
Reserve Study Performed	2014
Fiscal Year	2015
Fiscal Year End	December 31
Fiscal Year Begin	January 1
Current Reserve Allocation (Annually)	\$0.00
Current Reserve Allocation (Monthly per Unit)	\$0.00
Starting Reserve Account Balance	\$46,600.00
Financial Information Provided:	1/23/2015

PROPERTY QUANTITIES	
Number of Residential Units	309
Number of Buildings	309
Year Constructed	1974

ECONOMIC VARIABLES	
Projected Annual Inflation*	2.96%
Reserve Account Interest Rate	1.00%

## ECONOMIC VARIABLES

Economic variables such as inflation of goods and services are factored into the estimated future replacement costs of common components, using historical data provided by [www.inflationdata.com](http://www.inflationdata.com). Inflation is compounded over the 30-year period to give an accurate portrait of what costs may look like over the 30 years. Using historical data allows us to forecast a fairly accurate 30-year cost analysis. Actual prices should be adjusted annually, using the current RS-Means Facilities Construction Cost Data guide, in order to provide the most up to date cost analysis. Updating your Reserve Study annually is important and

will help to prevent large fluctuation in Recommended Annual Contributions. The purpose of the Economic Variables section is to identify estimates of inflation and interest rates based on relative history of these figures. Inflation and interest rates are subject to change and may not reflect the actual future rates.

\*Based on inflation history in the Consumer Price index (CPI-U) from the Bureau of Labor Statistics.

## CURRENT STATUS

### CURRENT RESERVE FUND STATUS

The reserve account balance is currently in a **WEAK** financial position. This condition indicates that in 2014, reserves should be increased to meet future financial needs.

0% - 30% Funded	WEAK	A <b>WEAK</b> financial position. Reserve accounts which fall into this category are subject to special assessment charges and deferred maintenance which may harm the property value and building performance. If the reserve account is in this position, immediate action should be taken to improve the reserve account balance.
31% - 69% Funded	FAIR	A <b>FAIR</b> financial position. The majority of reserve accounts are within this range. Special assessments probably won't occur in this position; however, improvements should be made to the reserve account to stabilize the balance.
70% - 99% Funded	STRONG	A <b>STRONG</b> financial position. This position indicates a near- adequate reserve account balance and special assessments are likely to be omitted in this category. Efforts should be taken to maintain this level of status of the reserve account.
100% Funded	IDEAL	An <b>IDEAL</b> financial position. This means the reserve account is equal to, or exceeds, the amount of money needed to maintain the development. A 100% or more funding status does not necessarily indicate halting reserve contributions. This funding status indicates the reserve account balance is adequate, as intended.

## OUR RECOMMENDATIONS

### RECOMMENDED RESERVE CONTRIBUTIONS

The Cash-flow Method was used in determining our recommendation, also called the "Minimum Reserve Contribution". This factor is shown as an "Annual Contribution" by the Association and as a "Monthly Contribution" by the Individual Association member. Typically, we target a "Funding Percentage" level between 70%-100%. Of course all associations are different, so we try to consider as many factors as possible when making this recommendation. This Study is founded on the principal that the Minimum Reserve Contribution increases by 2.96% annually to keep up with inflation.

Interest Rate Earned on Reserve Account	1.00%
Recommended Minimum Reserve Contribution (Annually)	\$24,000.00
Recommended Minimum Reserve Contribution Per Unit (Monthly)	\$6.47
Estimated Expenditures over 30 years	\$758,925.37
Special Assessment	\$0

### 5-YEAR FUNDING PROJECTIONS

FISCAL YEAR	RECOMMENDED RESERVE CONTRIBUTIONS	RECOMMENDED MONTHLY RESERVE CONTRIBUTIONS	AVERAGE CONTRIBUTIONS PER UNIT PER MONTH	PROJECTED YEAR END BALANCE	ANTICIPATED FUNDING PERCENTAGE
2015	\$24,000.00	\$2,000.00	\$6.47	\$30,805.96	21.34%
2016	\$24,710.40	\$2,059.20	\$6.66	\$23,131.03	18.08%
2017	\$25,441.83	\$2,120.15	\$6.86	\$10,100.18	8.81%
2018	\$26,194.91	\$2,182.91	\$7.06	\$27,979.26	29.36%
2019	\$26,970.28	\$2,247.52	\$7.27	\$21,656.60	20.30%

<b>COMPONENT LIFE &amp; COST ANALYSIS</b>													
<b>COMPONENT DESCRIPTION</b>	<b>CONDITION</b>	<b>INSTALL YEAR</b>	<b>EXPECTED USEFUL LIFE</b>	<b>ACTUAL AGE</b>	<b>REMANING USEFUL LIFE</b>	<b>REPLACE DATE</b>	<b>IN RS?</b>	<b>QUANTITY</b>	<b>UNITS</b>	<b>UNIT COST</b>	<b>CURRENT REPLACE COST</b>	<b>% OF ANNUAL SPENDING</b>	<b>SPENDING PER YEAR</b>
<b>BUILDING COMPONENTS</b>													
<b>Wood Siding Repair</b>	Fair	2008	8	7	1	2016	YES	1	EA	\$15,000.00	\$15,000.00	6.61%	\$500.00
<b>Rain Gutters &amp; Downspouts</b>	Good	2004	50	11	39	2054	NO	1	EA	\$1,700.00	\$0.00	0.00%	\$0.00
<b>Composition Roof</b>	Good	2004	25	11	14	2029	YES	1	EA	\$15,000.00	\$15,000.00	6.61%	\$500.00
<b>Windows</b>	Fair	1974	43	41	2	2017	YES	1	EA	\$19,000.00	\$19,000.00	8.37%	\$633.33
<b>Exterior Doors</b>	Fair	1974	43	41	2	2017	YES	5	EA	\$650.00	\$3,250.00	1.43%	\$108.33
<b>Light Fixtures</b>	Fair	1974	45	41	4	2019	YES	4	EA	\$125.00	\$500.00	0.22%	\$16.67
<b>Exterior Paint &amp; Caulking</b>	Fair	2007	9	8	1	2016	YES	1	EA	\$2,100.00	\$2,100.00	0.93%	\$70.00
<b>Maintenance Shed</b>	Fair	1996	25	19	6	2021	YES	1	EA	\$3,900.00	\$3,900.00	1.72%	\$130.00
<b>Carpet</b>	Fair	2006	10	9	1	2016	YES	1,700	SF	\$2.50	\$4,250.00	1.87%	\$141.67
<b>Wood Flooring</b>	Good	2006	15	9	6	2021	YES	300	SF	\$3.00	\$900.00	0.40%	\$30.00
<b>Interior Paint</b>	Fair	2004	13	11	2	2017	YES	4,700	Sf	\$0.40	\$1,880.00	0.83%	\$62.67
<b>Kitchen Countertop Replacement</b>	Poor	1974	43	41	2	2017	YES	1	EA	\$1,200.00	\$1,200.00	0.53%	\$40.00
<b>Kitchen Appliances</b>	Good	2008	15	7	8	2023	YES	1	EA	\$2,500.00	\$2,500.00	1.10%	\$83.33
<b>Gaming Equipment Allowance</b>	n/a	2014	3	1	2	2017	YES	1	EA	\$600.00	\$600.00	0.26%	\$20.00
<b>Furniture</b>	Fair	2008	10	7	3	2018	YES	1	EA	\$3,000.00	\$3,000.00	1.32%	\$100.00
<b>Mens Bathroom Improvements</b>	Fair	1974	45	41	4	2019	YES	1	EA	\$6,500.00	\$6,500.00	2.86%	\$216.67
<b>Womens Bathroom Improvements</b>	Fair	1974	45	41	4	2019	YES	1	EA	\$6,500.00	\$6,500.00	2.86%	\$216.67
<b>Furnace</b>	Fair	1990	25	25	0	2015	YES	1	EA	\$2,950.00	\$2,950.00	1.30%	\$98.33
<b>Water Heater</b>	Poor	1999	18	16	2	2017	YES	1	EA	\$700.00	\$700.00	0.31%	\$23.33
<b>Heaters</b>	Fair	1995	20	20	0	2015	YES	2	EA	\$2,600.00	\$5,200.00	2.29%	\$173.33
<b>Pumps</b>	Fair	2007	10	8	2	2017	YES	1	EA	\$619.00	\$619.00	0.27%	\$20.63
<b>Chemical Equipment</b>	Fair	1999	20	16	4	2019	YES	1	EA	\$190.00	\$190.00	0.08%	\$6.33
<b>Sand Filter</b>	Fair	2003	20	12	8	2023	YES	1	EA	\$750.00	\$750.00	0.33%	\$25.00
<b>Pool Surfacing</b>	Poor	1974	40	41	0	2015	YES	1	EA	\$11,000.00	\$11,000.00	4.85%	\$366.67
<b>Concrete Pool Deck</b>	Poor	1974	40	41	0	2015	YES	1	EA	\$12,000.00	\$12,000.00	5.29%	\$400.00
<b>Pool Cover</b>	Fair	2000	20	15	5	2020	YES	1	EA	\$1,400.00	\$1,400.00	0.62%	\$46.67

<b>COMPONENT LIFE &amp; COST ANALYSIS</b>													
<b>COMPONENT DESCRIPTION</b>	<b>CONDITION</b>	<b>INSTALL YEAR</b>	<b>EXPECTED USEFUL LIFE</b>	<b>ACTUAL AGE</b>	<b>REMANING USEFUL LIFE</b>	<b>REPLACE DATE</b>	<b>IN RS?</b>	<b>QUANTITY</b>	<b>UNITS</b>	<b>UNIT COST</b>	<b>CURRENT REPLACE COST</b>	<b>% OF ANNUAL SPENDING</b>	<b>SPENDING PER YEAR</b>
<b>SITE AMENITIES</b>													
<b>Clubhouse Tennis Surface</b>	Good	2014	10	1	9	2024	YES	6,254	SF	\$0.90	\$5,628.60	2.48%	\$187.62
<b>Clubhouse Tennis Fence</b>	Fair	1994	25	21	4	2019	YES	342	LF	\$14.00	\$4,788.00	2.11%	\$159.60
<b>203rd Tennis Surface</b>	Fair	2014	5	1	4	2019	YES	6,254	SF	\$0.90	\$5,628.60	2.48%	\$187.62
<b>203rd Tennis Fence</b>	Fair	2014	20	1	19	2034	YES	342	LF	\$14.00	\$4,788.00	2.11%	\$159.60
<b>Clubhouse Playground</b>	Good	2001	15	14	1	2016	YES	1	EA	\$5,200.00	\$5,200.00	2.29%	\$173.33
<b>207th Playground</b>	Fair	2001	20	14	6	2021	YES	1	EA	\$2,900.00	\$2,900.00	1.28%	\$96.67
<b>Avon Playground</b>	Fair	1994	24	21	3	2018	YES	1	EA	\$2,900.00	\$2,900.00	1.28%	\$96.67
<b>203rd Playground</b>	Fair	1990	24	25	0	2015	YES	1	EA	\$2,200.00	\$2,200.00	0.97%	\$73.33
<b>Cross Creek Playground</b>	n/a	1974	24	41	0	2015	YES	1	EA	\$3,800.00	\$3,800.00	1.67%	\$126.67
<b>Three Bridges</b>	Good	2014	25	1	24	2039	YES	3	EA	\$1,200.00	\$3,600.00	1.59%	\$120.00
<b>Asphalt Walking Trails (Overlay)</b>	Good	2014	24	1	23	2038	YES	5,280	LF	\$6.82	\$36,009.60	15.87%	\$1,200.32
<b>Asphalt Walking Trails (Seal Coat)</b>	Good	2014	5	1	4	2019	YES	5,280	LF	\$0.60	\$3,168.00	1.40%	\$105.60
<b>Landscape Irrigation Repair Allowance</b>	Poor	2007	10	8	2	2017	YES	1	EA	\$5,500.00	\$5,500.00	2.42%	\$183.33
<b>Monument Signs</b>	Fair	1974	50	41	9	2024	YES	2	EA	\$1,100.00	\$2,200.00	0.97%	\$73.33
<b>RV Parking Gravel</b>	Good	2012	4	3	1	2016	YES	1	EA	\$2,500.00	\$2,500.00	1.10%	\$83.33
<b>RV Parking Fencing</b>	Fair	1974	50	41	9	2024	YES	600	LF	\$14.00	\$8,400.00	3.70%	\$280.00
<b>Riding Lawnmower</b>	Good	2009	12	6	6	2021	YES	1	EA	\$2,000.00	\$2,000.00	0.88%	\$66.67
<b>Landscaping Equipment / Tools</b>	Good	2014	8	1	7	2022	YES	1	EA	\$2,000.00	\$2,000.00	0.88%	\$66.67
<b>Pressure Washer</b>	Good	2013	8	2	6	2021	YES	1	EA	\$300.00	\$300.00	0.13%	\$10.00
<b>CONSULTANT FEES</b>													
<b>Reserve Study – Update</b>	n/a	2014	1	1	0	2015	YES	1	EA	\$1,500.00	\$1,500.00	0.66%	\$50.00
<b>Reserve Study – Site Visit Add'l Cost</b>	n/a	2014	3	1	2	2017	YES	1	EA	\$1,000.00	\$1,000.00	0.44%	\$33.33



YEARLY COMPONENT COST	YEARS 1-10									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>BUILDING COMPONENTS</b>										
Wood Siding Repair		\$15,901.14								\$20,080.60
Rain Gutters & Downspouts										
Composition Roof										
Windows			\$20,737.63							
Exterior Doors			\$3,547.23							
Light Fixtures					\$578.51					
Exterior Paint & Caulking		\$2,226.16								
Maintenance Shed							\$4,783.48			
Carpet		\$4,505.32								
Wood Flooring							\$1,103.88			
Interior Paint			\$2,051.93							
Kitchen Countertop Replacement			\$1,309.75							
Kitchen Appliances									\$3,250.55	
Gaming Equipment Allowance			\$654.87			\$714.76			\$780.13	
Furniture				\$3,371.28						
Mens Bathroom Improvements					\$7,520.66					
Womens Bathroom Improvements					\$7,520.66					
Furnace	\$3,037.32									
Water Heater			\$764.02							
Heaters	\$5,353.92									
Pumps			\$675.61							
Chemical Equipment					\$219.83					
Sand Filter									\$975.16	
Pool Surfacing	\$11,325.60									
Concrete Pool Deck	\$12,355.20									
Pool Cover						\$1,667.78				

YEARLY COMPONENT COST	YEARS 1-10									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>SITE AMENITIES</b>										
Clubhouse Tennis Surface										\$7,535.04
Clubhouse Tennis Fence					\$5,539.83					
203rd Tennis Surface					\$6,512.43					\$7,535.04
203rd Tennis Fence										
Clubhouse Playground		\$5,512.40								
207th Playground							\$3,556.95			
Avon Playground				\$3,258.91						
203rd Playground	\$2,265.12									
Cross Creek Playground	\$3,912.48									
Three Bridges										
Asphalt Walking Trails (Overlay)										
Asphalt Walking Trails (Seal Coat)					\$3,665.45					\$4,241.02
Landscape Irrigation Repair Allowance			\$6,003.00							
Monument Signs										\$2,945.15
RV Parking Gravel		\$2,650.19				\$2,978.18				\$3,346.77
RV Parking Fencing										\$11,245.13
Riding Lawnmower							\$2,453.07			
Landscaping Equipment / Tools								\$2,525.68		
Pressure Washer							\$367.96			
<b>CONSULTANT FEES</b>										
Reserve Study – Update	\$1,544.40	\$1,590.11	\$1,637.18	\$1,685.64	\$1,735.54	\$1,786.91	\$1,839.80	\$1,894.26	\$1,950.33	\$2,008.06
Reserve Study – Site Visit Add'l Cost			\$1,091.45			\$1,191.27			\$1,300.22	
	<b>YEARLY TOTAL</b>									
	\$39,794	\$32,385	\$38,473	\$8,316	\$33,293	\$8,339	\$14,105	\$4,420	\$8,256	\$58,937

YEARLY COMPONENT COST	YEARS 11-20									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
<b>BUILDING COMPONENTS</b>										
Wood Siding Repair								\$25,358.58		
Rain Gutters & Downspouts										
Composition Roof					\$23,233.75					
Windows										
Exterior Doors										
Light Fixtures										
Exterior Paint & Caulking	\$2,894.50									\$3,763.48
Maintenance Shed										
Carpet		\$6,031.31								
Wood Flooring										
Interior Paint						\$2,998.16				
Kitchen Countertop Replacement										
Kitchen Appliances										
Gaming Equipment Allowance		\$851.48			\$929.35			\$1,014.34		
Furniture				\$4,513.16						
Mens Bathroom Improvements										
Womens Bathroom Improvements										
Furnace										
Water Heater										
Heaters										
Pumps			\$904.44							
Chemical Equipment										
Sand Filter										
Pool Surfacing										
Concrete Pool Deck										
Pool Cover										

<b>YEARLY COMPONENT COST</b>	<b>YEARS 11-20</b>									
<b>COMPONENT DESCRIPTION</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>
<b>SITE AMENITIES</b>										
Clubhouse Tennis Surface										\$10,087.21
Clubhouse Tennis Fence										
203rd Tennis Surface					\$8,718.23					\$10,087.21
203rd Tennis Fence										\$8,580.74
Clubhouse Playground							\$8,538.24			
207th Playground										
Avon Playground										
203rd Playground										
Cross Creek Playground										
Three Bridges										
Asphalt Walking Trails (Overlay)										
Asphalt Walking Trails (Seal Coat)					\$4,906.97					\$5,677.48
Landscape Irrigation Repair Allowance			\$8,036.25							
Monument Signs										
RV Parking Gravel				\$3,760.97				\$4,226.43		
RV Parking Fencing										
Riding Lawnmower									\$3,481.23	
Landscaping Equipment / Tools						\$3,189.53				
Pressure Washer					\$464.67					
<b>CONSULTANT FEES</b>										
Reserve Study – Update	\$2,067.50	\$2,128.70	\$2,191.71	\$2,256.58	\$2,323.37	\$2,392.15	\$2,462.95	\$2,535.86	\$2,610.92	\$2,688.20
Reserve Study – Site Visit Addtl Cost		\$1,419.13			\$1,548.92			\$1,690.57		
	<b>YEARLY TOTAL</b>									
	\$4,962	\$10,431	\$11,132	\$10,531	\$42,125	\$8,580	\$11,001	\$34,826	\$6,092	\$40,884

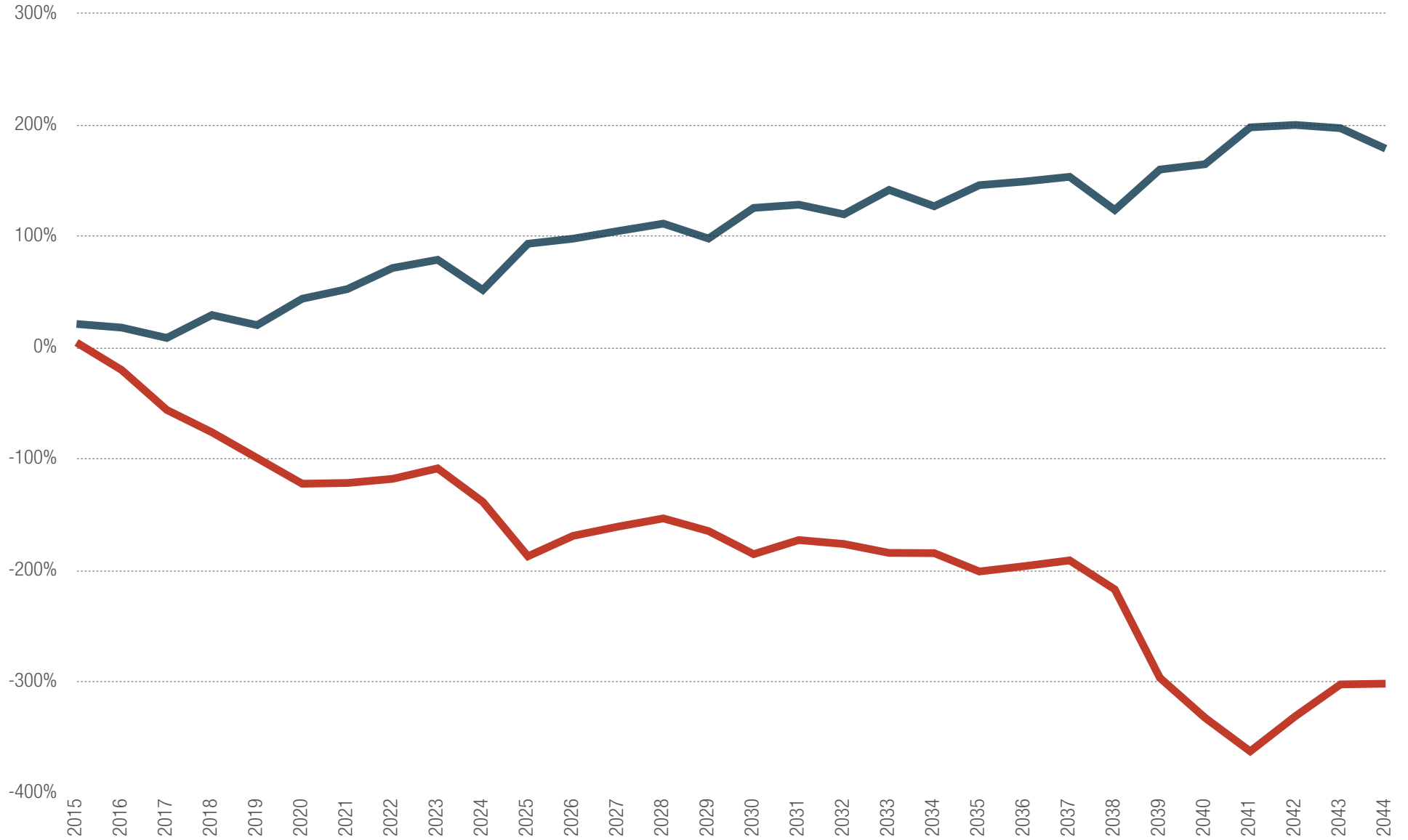
<b>YEARLY COMPONENT COST</b>	<b>YEARS 21-30</b>									
<b>COMPONENT DESCRIPTION</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>
<b>BUILDING COMPONENTS</b>										
Wood Siding Repair						\$32,023.82				
Rain Gutters & Downspouts										
Composition Roof										
Windows										
Exterior Doors										
Light Fixtures										
Exterior Paint & Caulking									\$4,893.36	
Maintenance Shed										
Carpet		\$8,074.15								
Wood Flooring		\$1,709.82								
Interior Paint									\$4,380.72	
Kitchen Countertop Replacement										
Kitchen Appliances				\$5,034.83						
Gaming Equipment Allowance	\$1,107.11			\$1,208.36			\$1,318.87			\$1,439.49
Furniture				\$6,041.80						
Mens Bathroom Improvements										
Womens Bathroom Improvements										
Furnace						\$6,298.02				
Water Heater	\$1,291.63									
Heaters	\$9,594.95									
Pumps			\$1,210.78							
Chemical Equipment					\$393.97					
Sand Filter									\$1,747.63	
Pool Surfacing										
Concrete Pool Deck										
Pool Cover						\$2,988.89				

YEARLY COMPONENT COST	YEARS 21-30									
	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
<b>SITE AMENITIES</b>										
Clubhouse Tennis Surface										\$13,503.81
Clubhouse Tennis Fence										\$11,487.09
203rd Tennis Surface					\$11,671.15					\$13,503.81
203rd Tennis Fence										
Clubhouse Playground										
207th Playground							\$6,374.53			
Avon Playground								\$6,563.22		
203rd Playground					\$4,561.80					
Cross Creek Playground					\$7,879.47					
Three Bridges					\$7,464.76					
Asphalt Walking Trails (Overlay)				\$72,520.89						
Asphalt Walking Trails (Seal Coat)					\$6,568.99					\$7,600.48
Landscape Irrigation Repair Allowance			\$10,758.18							
Monument Signs										
RV Parking Gravel		\$4,749.50				\$5,337.30				\$5,997.86
RV Parking Fencing										
Riding Lawnmower										
Landscaping Equipment / Tools				\$4,027.86						
Pressure Washer			\$586.81							
<b>CONSULTANT FEES</b>										
Reserve Study – Update	\$2,767.77	\$2,849.70	\$2,934.05	\$3,020.90	\$3,110.32	\$3,202.38	\$3,297.17	\$3,394.77	\$3,495.25	\$3,598.71
Reserve Study – Site Visit Add'l Cost	\$1,845.18			\$2,013.93			\$2,198.12			\$2,399.14
	<b>YEARLY TOTAL</b>									
	\$16,607	\$17,383	\$15,490	\$93,869	\$41,650	\$49,850	\$13,189	\$9,958	\$14,517	\$59,530

30-YEAR FUNDING PROJECTIONS												
YEAR #	FISCAL YEAR	IDEAL YEAR END RESERVE BALANCE	RECOMMENDED ANNUAL CONTRIBUTIONS	INTEREST EARNINGS	TOTAL ANNUAL INCOME	RECOMMENDED YEAR END RESERVE BALANCE	CURRENT YEAR END RESERVE BALANCE	CURRENT ANNUAL CONTRIBUTION	TOTAL EXPENDITURES	IDEAL FUNDING PERCENTAGE	STATUS WITH IDEAL FUNDING	CURRENT FUNDING PERCENTAGE
1	2015	\$144,330.89	\$24,000.00	\$309.48	\$24,309.48	\$30,805.96	\$6,805.96	\$0.00	\$39,794.04	21.34%	Weak	4.72%
2	2016	\$127,943.04	\$24,710.40	\$232.37	\$24,942.77	\$23,131.03	-\$25,579.37	\$0.00	\$32,385.33	18.08%	Weak	-19.99%
3	2017	\$114,708.78	\$25,441.83	\$101.47	\$25,543.29	\$10,100.18	-\$64,052.04	\$0.00	\$38,472.68	8.81%	Weak	-55.84%
4	2018	\$95,305.19	\$26,194.91	\$281.08	\$26,475.98	\$27,979.26	-\$72,367.88	\$0.00	\$8,315.83	29.36%	Weak	-75.93%
5	2019	\$106,680.09	\$26,970.28	\$217.56	\$27,187.84	\$21,656.60	-\$105,660.80	\$0.00	\$33,292.93	20.30%	Weak	-99.04%
6	2020	\$93,340.77	\$27,768.60	\$412.75	\$28,181.35	\$41,086.29	-\$113,999.71	\$0.00	\$8,338.91	44.02%	Fair	-122.13%
7	2021	\$105,478.87	\$28,590.55	\$558.27	\$29,148.82	\$55,571.69	-\$128,104.86	\$0.00	\$14,105.15	52.69%	Fair	-121.45%
8	2022	\$112,531.57	\$29,436.83	\$809.59	\$30,246.42	\$80,588.58	-\$132,524.80	\$0.00	\$4,419.94	71.61%	Strong	-117.77%
9	2023	\$129,929.24	\$30,308.16	\$1,031.12	\$31,339.28	\$102,640.34	-\$140,781.19	\$0.00	\$8,256.40	79.00%	Strong	-108.35%
10	2024	\$144,320.71	\$31,205.28	\$752.53	\$31,957.81	\$74,908.80	-\$199,718.01	\$0.00	\$58,936.82	51.90%	Fair	-138.38%
11	2025	\$109,288.59	\$32,128.95	\$1,025.45	\$33,154.40	\$102,075.76	-\$204,680.01	\$0.00	\$4,962.00	93.40%	Strong	-187.28%
12	2026	\$127,329.01	\$33,079.97	\$1,252.98	\$34,332.95	\$124,725.12	-\$215,110.62	\$0.00	\$10,430.61	97.95%	Strong	-168.94%
13	2027	\$140,857.88	\$34,059.14	\$1,483.30	\$35,542.44	\$147,651.85	-\$226,243.02	\$0.00	\$11,132.40	104.82%	Strong	-160.62%
14	2028	\$154,465.75	\$35,067.29	\$1,729.80	\$36,797.09	\$172,188.43	-\$236,773.73	\$0.00	\$10,530.71	111.47%	Strong	-153.29%
15	2029	\$169,411.00	\$36,105.28	\$1,669.32	\$37,774.60	\$166,168.45	-\$278,898.99	\$0.00	\$42,125.26	98.09%	Strong	-164.63%
16	2030	\$155,074.72	\$37,174.00	\$1,956.58	\$39,130.57	\$194,762.61	-\$287,478.82	\$0.00	\$8,579.83	125.59%	Strong	-185.38%
17	2031	\$172,817.71	\$38,274.35	\$2,230.56	\$40,504.91	\$222,035.76	-\$298,480.02	\$0.00	\$11,001.20	128.48%	Strong	-172.71%
18	2032	\$189,113.49	\$39,407.27	\$2,276.59	\$41,683.86	\$226,617.25	-\$333,305.80	\$0.00	\$34,825.78	119.83%	Strong	-176.25%
19	2033	\$184,189.85	\$40,573.72	\$2,622.99	\$43,196.71	\$261,098.83	-\$339,397.94	\$0.00	\$6,092.14	141.76%	Surplus	-184.27%
20	2034	\$206,164.48	\$41,774.70	\$2,631.93	\$44,406.64	\$261,989.20	-\$380,282.27	\$0.00	\$40,884.33	127.08%	Strong	-184.46%
21	2035	\$197,508.21	\$43,011.24	\$2,897.19	\$45,908.43	\$288,393.80	-\$396,888.91	\$0.00	\$16,606.64	146.02%	Surplus	-200.95%
22	2036	\$211,204.35	\$44,284.37	\$3,167.44	\$47,451.81	\$315,295.01	-\$414,272.07	\$0.00	\$17,383.16	149.28%	Surplus	-196.15%
23	2037	\$225,010.15	\$45,595.19	\$3,469.88	\$49,065.06	\$345,400.36	-\$429,761.90	\$0.00	\$15,489.83	153.50%	Surplus	-191.00%
24	2038	\$241,274.35	\$46,944.80	\$2,998.48	\$49,943.29	\$298,476.60	-\$523,630.47	\$0.00	\$93,868.57	123.71%	Strong	-217.03%
25	2039	\$190,642.70	\$48,334.37	\$3,065.63	\$51,400.00	\$305,160.51	-\$565,280.93	\$0.00	\$41,650.46	160.07%	Surplus	-296.51%
26	2040	\$185,081.44	\$49,765.07	\$3,064.77	\$52,829.84	\$305,075.16	-\$615,131.34	\$0.00	\$49,850.41	164.83%	Surplus	-332.36%
27	2041	\$173,354.13	\$51,238.11	\$3,447.02	\$54,685.13	\$343,124.58	-\$628,320.03	\$0.00	\$13,188.69	197.93%	Surplus	-362.45%
28	2042	\$192,868.77	\$52,754.76	\$3,876.95	\$56,631.71	\$385,921.36	-\$638,278.02	\$0.00	\$9,957.99	200.10%	Surplus	-330.94%
29	2043	\$215,896.24	\$54,316.30	\$4,276.77	\$58,593.08	\$425,720.70	-\$652,794.98	\$0.00	\$14,516.95	197.19%	Surplus	-302.37%
30	2044	\$236,102.77	\$55,924.06	\$4,240.54	\$60,164.61	\$422,114.37	-\$712,325.37	\$0.00	\$59,530.40	178.78%	Surplus	-301.70%

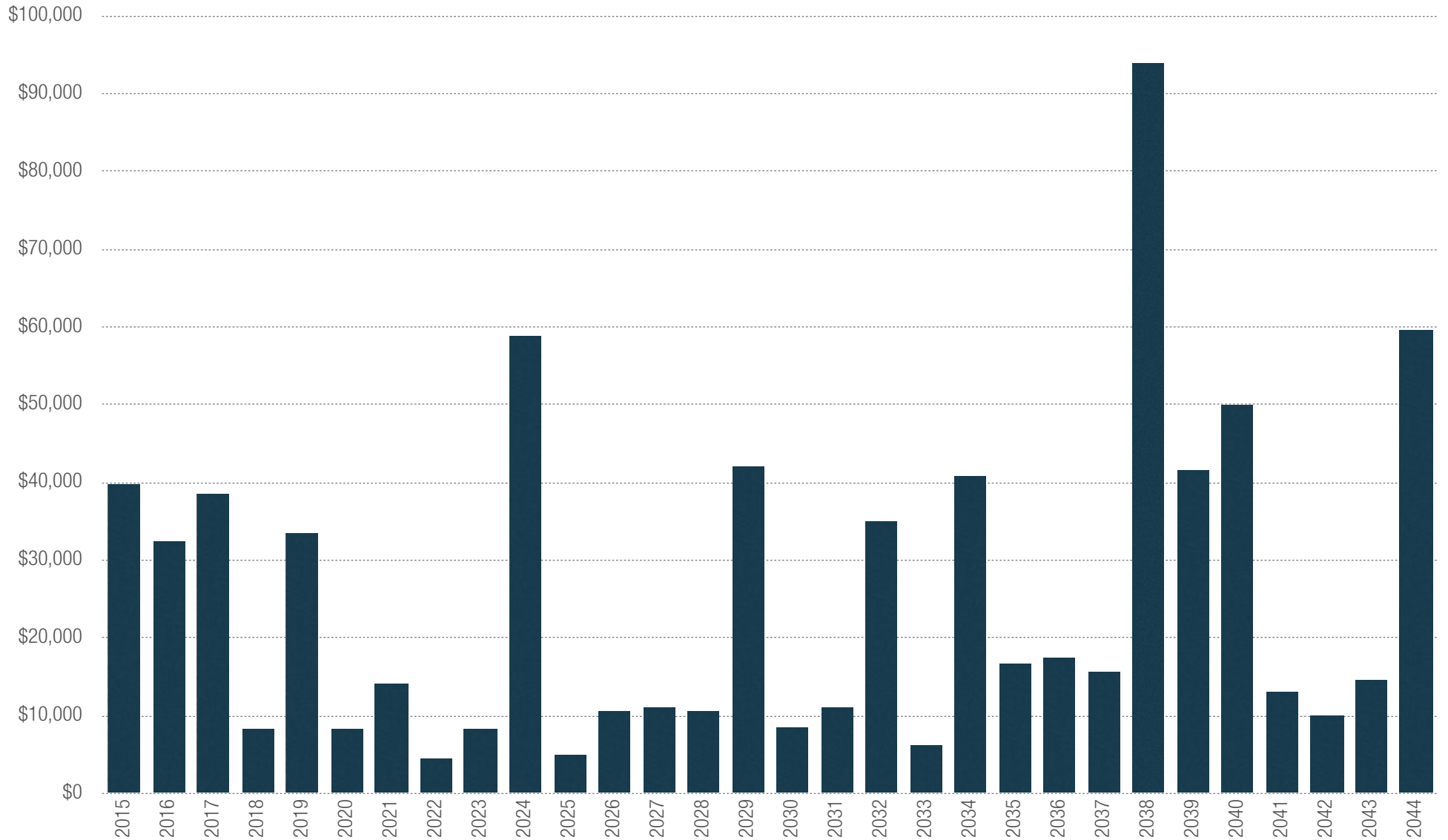
### FUNDING GRAPH

**IDEAL**      **CURRENT**





## EXPENDITURE GRAPH



# RESERVE STUDY METHODS

## ELEMENTS OF THIS RESERVE STUDY

This Reserve Study shall include the following elements:

1. Preparation of Major Common Elements Components Inventory
2. Assess Component Condition based upon an on-site visual observation
3. Assess the Use Life, Remaining Use Life and Valuation Estimates of Repair or Replacement
4. Test the Current fund Status and other Funding Method
5. Develop and recommend a practical Funding Plan

This Study addresses the normal deterioration of properly constructed and installed components with a predictable life expectancy. Our criteria to determine major components were:

1. The component was a Common Element
2. The component or sub-component had a Use Life of one (1) year or more

The following Components types are typically excluded from this report as their use-life cannot be determined due to lack of accessibility without “destructive” Investigation methods implemented. If any of these items are of concern to the association, or would like to have them included, please notify us so that we can determine the best way to assess the condition of these components:

1. In wall or underground plumbing, fittings and valves
2. In wall or underground electrical wiring
3. Electrical meter/breaker panels
4. Telephone lines and junction boxes
5. Environmental hazards, (radon, asbestos, etc.)
6. Mechanical systems and equipment that are inaccessible

The Replacement Cost Projections are based on current “estimated” replacement costs, using the 2014 National Renovation & Insurance Repair Estimator cost book as well as Bid Documents and other recourses available in this office. We project future costs by applying the annual inflation rate listed above. We do this as a way to budget for future costs; however, we have no way of predicting future market fluctuations that may cause the costs of goods and services to change.

## HOW TO USE A RESERVE STUDY

The documents included within the reserve study are intended to be used as guidelines and estimates. It is nearly impossible to know exactly when a common component or system will fail; however, an estimation of useful life based on similar product history and professional experience is used to estimate the time of replacement and associated costs. All costs included within this reserve study should be used as budgeting figures. For exact pricing, a qualified, licensed contractor should be contacted to provide a bid for any anticipated replacements.

The replacement schedule lists all components and systems which are anticipated to wear out or fail within 30 years. Items which are anticipated to be replaced or repaired in the current year (2014) are included within the reserve study. These items should already be budgeted for and scheduled to be replaced.

On the reserve schedule, review which items are anticipated to fail in the near future, and keep a close eye on them. It is always better to replace items prior to failure to eliminate the opportunity for surrounding components or associated systems to be affected. Be aware of items scheduled within 2-3 years of the current year. Remember, items listed are scheduled based on history and replacement is scheduled as an estimate. Items commonly fail sooner or later than the estimated date.

If items fail prematurely, a warranty may still be valid. Be sure to check with the manufacturer about warranty coverage prior to replacing the item. Warranty information may be available on the actual items, located within the "Warranty" section of this document.

This reserve study is not a guarantee or warranty for any components or systems. The product manufacturer or installation contractor generally provides The manufacturer and/or installation contractor may not be identified for some components or systems and therefore may be difficult to obtain warranty information. Anytime warranty info is provided by a service provider or upon the purchase of a new component or system, that information should be stored in the "Warranty" section of this document for future reference.

The anticipated funds per unit assume all units are participating. If vacant units exist or otherwise do not contribute to the reserve fund, adjustments may need to be made to compensate for that loss of revenue.

The reserve account anticipates earning 1.0% interest annually on the reserve account, based on average market assessments. If the association has multiple accounts with varying rates a conservative estimate for interest earned has been made. If the association believes that the stated rate is inaccurate, they can request an adjustment to the interest rate in writing, providing the new interest rate, so necessary revisions can be made.

Over time, deposits, interest rates, inflation, and replacement costs will vary, making the reserve study inaccurate. It is required to update this reserve study annually per the state of Oregon Code 100.175 to ensure accuracy and adequate funding. This document is included within this Reserve Study.

## PREPARATION OF A RESERVE STUDY

Data is collected from many sources to prepare a reserve study as a variety of document reviews, interviews, and site observations are required to adequately fulfill our duties as a reserve provider. The following sources and methods may have been utilized in preparation of this reserve study document:

- Property Management Personnel Interviews
- As-built Plans and Specifications Document Reviews
- On-site Observations
- 3D Modeling Technology
- In-house Engineers Consulting
- Interviewing Engineering Consultants
- 2014 National Renovation & Insurance Repair Estimator (Digital Edition)

A tabular list of commonly owned items is developed and given a current condition grade, expected useful life, and remaining useful life. This document is called a “Component Life & Cost Analysis” and also determines which items are to be replaced over the upcoming 30 years.

A “Reserve Schedule” identifies the quantity of items throughout the development and a current replacement or refurbishment cost. Based on the remaining useful life of the item (per the Component Life & Cost Analysis), it is scheduled to be replaced if expected to fail or wear out within the next 30 years.

The “Funding Analysis” portion of the reserve study is the association’s plan to provide income to a reserve fund in order to pay for anticipated expenditures (per the Reserve Schedule) to maintain the development. The funding plan is developed through a “Cash Flow Method”, which is a method of developing a reserve-funding plan where contributions into the reserve account are designed to offset the variable annual expenditures in order to maintain the development. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

The goal of the Funding Analysis is to achieve a funded status between 70%-100%, which the association is generating enough cash flow to meet the financial needs of the association. As monthly deposits are made into the reserve account in order to save for future costs, the funding plan rarely reaches a “fully funded” status. The motivation of achieving a “fully funded” status is to save enough money to afford the replacement of items as they are expected to fail or wear out.

## TERMS AND DEFINITIONS

**CASH FLOW METHOD:** A method of developing a Reserve Funding Plan where contributions to the Reserve fund are designed to offset the variable annual expenditures from the Reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of Reserve expenses until the desired Funding Goal is achieved.

**COMPONENT:** The individual line items in the Reserve Study, developed or updated in the Physical Analysis. These elements form the building blocks for the Reserve Study. Components typically are: 1) Association responsibility, 2) with limited Useful Life expectancies, 3) predictable Remaining Useful Life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes.

**COMPONENT INVENTORY:** The task of selecting and quantifying Reserve Components. This task can be accomplished through on-site visual observations, review of association design and organizational documents, a review of established association precedents, and discussion with appropriate association representative(s) of the association or cooperative.

**COMPONENT METHOD:** A method of developing a Reserve Funding Plan where the total contribution is based on the sum of contributions for individual components. See “Cash Flow Method.”

**CONDITION ASSESSMENT:** The task of evaluating the current condition of the component based on observed or reported characteristics.

**CURRENT REPLACEMENT COST:** See “Replacement Cost.”

**DEFICIT:** An actual (or projected) Reserve Balance less than the Fully Funded Balance. The opposite would be a Surplus.

**EFFECTIVE AGE:** The difference between Useful Life and Remaining Useful Life. Not always equivalent to chronological age, since some components age irregularly. Used primarily in computations.

**FINANCIAL ANALYSIS:** The portion of a Reserve Study where current status of the Reserves (measured as cash or Percent Funded) and a recommended Reserve contribution rate (Reserve Funding Plan) are derived, and the projected Reserve income and expense over time is presented. The Financial Analysis is one of the two parts of a Reserve Study.

**FULLY FUNDED:** 100% Funded. When the actual (or projected) Reserve balance is equal to the Fully Funded Balance.

**FULLY FUNDED BALANCE (FFB):** Total Accrued Depreciation. An indicator against which Actual (or projected) Reserve balance can be compared. The Reserve balance that is in direct proportion to the fraction of life “used up” of the current Repair or Replacement cost. This number is calculated for each component, then summed together for an association total. Two formulae can be utilized, depending on the provider’s sensitivity to interest and inflation effects. Note: Both yield identical results when interest and inflation are equivalent.

$FFB = \text{Current Cost} \times \text{Effective Age} / \text{Useful Life}$  or

$FFB = (\text{Current Cost} \times \text{Effective Age} / \text{Useful Life}) + [(\text{Current Cost} \times \text{Effective Age} / \text{Useful Life}) / (1 + \text{Interest Rate}) ^ \text{Remaining Life}] - [(\text{Current Cost} \times \text{Effective Age} / \text{Useful Life}) / (1 + \text{Inflation Rate}) ^ \text{Remaining Life}]$

**FUND STATUS:** The status of the reserve fund as compared to an established benchmark such as percent funding.

**FUNDING GOALS:** Independent of methodology utilized, the following represent the basic categories of Funding Plan goals:

**Baseline Funding:** Establishing a Reserve funding goal of keeping the Reserve cash balance above zero.

**Full Funding:** Setting a Reserve funding goal of attaining and maintaining Reserves at or near 100% funded.

**Statutory Funding:** Establishing a Reserve funding goal of setting aside the specific minimum amount of Reserves required by local statutes.

**Threshold Funding:** Establishing a Reserve funding goal of keeping the Reserve balance above a specified dollar or Percent Funded amount. Depending on the threshold, this may be more or less conservative than “Fully Funding.”

**FUNDING PLAN:** An association’s plan to provide income to a Reserve fund to offset anticipated expenditures from that fund.

**FUNDING PRINCIPLES:**

- Sufficient Funds When Required
- Stable Contribution Rate over the Years
- Evenly Distributed Contributions over the Years
- Fiscally Responsible

**LIFE AND VALUATION ESTIMATES:** The task of estimating Useful Life, Remaining Useful Life, and Repair or Replacement Costs for the Reserve components.

**PERCENT FUNDED:** The ratio, at a particular point of time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage. 4

**PHYSICAL ANALYSIS:** The portion of the Reserve Study where the Component Inventory, Condition Assessment, and Life and Valuation Estimate tasks are performed. This represents one of the two parts of the Reserve Study.

**REMAINING USEFUL LIFE (RUL):** Also referred to as “Remaining Life” (RL). The estimated time, in years, that a reserve component can be expected to continue to serve its intended function. Projects anticipated to occur in the initial year have “zero” Remaining Useful Life.

**REPLACEMENT COST:** The cost of replacing, repairing, or restoring a Reserve Component to its original functional condition. The Current Replacement Cost would be the cost to replace, repair, or restore the component during that particular year.

**RESERVE BALANCE:** Actual or projected funds as of a particular point in time that the association has identified for use to defray the future repair or replacement of those major components which the association is obligated to maintain. Also known as Reserves, Reserve Accounts, Cash Reserves. Based upon information provided and not audited.

**RESERVE PROVIDER:** An individual that prepares Reserve Studies.

**RESERVE STUDY:** A budget planning tool which identifies the current status of the Reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures. The Reserve Study consists of two parts: the Physical Analysis and the Financial Analysis. “Our budget and finance committee is soliciting proposals to update our Reserve Study for next year’s budget.”

**RESPONSIBLE CHARGE:** A reserve specialist in responsible charge of a reserve study shall render regular and effective supervision to those individuals performing services which directly and materially affect the quality and competence rendered by the reserve specialist. A reserve specialist shall maintain such records as are reasonably necessary to establish that the reserve specialist exercised regular and effective supervision of a reserve study of which he was in responsible charge. A reserve specialist engaged in any of the following acts or practices shall be deemed not to have rendered the regular and effective supervision required herein:

1. The regular and continuous absence from principal office premises from which professional services are rendered; except for performance of field work or presence in a field office maintained exclusively for a specific project;
2. The failure to personally inspect or review the work of subordinates where necessary and appropriate;
3. The rendering of a limited, cursory or perfunctory review of plans or projects in lieu of an appropriate detailed review;
4. The failure to personally be available on a reasonable basis or with adequate advance notice for consultation and inspection where circumstances require personal availability.

**SPECIAL ASSESSMENT:** An assessment levied on the members of an association in addition to regular assessments. Special Assessments are often regulated by governing documents or local statutes.

**SURPLUS:** An actual (or projected) Reserve Balance greater than the Fully Funded Balance. See “Deficit.”

**USEFUL LIFE (UL):** Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve component can be expected to serve its intended function if properly constructed in its present application or installation.

# REFERENCE MATERIALS

## STATE REQUIREMENTS

### OREGON CODE 100.175

#### **100.175 Reserve account for maintaining, repairing and replacing common elements; reserve study; maintenance plan.**

(1) The declarant, on behalf of the association of unit owners, shall:

- (a) Conduct an initial reserve study as described in subsection (3) of this section;
- (b) Prepare an initial maintenance plan as described in subsection (4) of this section; and
- (c) Establish a reserve account as provided in subsection (2) of this section.

(2)

(a) A reserve account shall be established to fund major maintenance, repair or replacement of those common elements all or part of which will normally require major maintenance, repair or replacement in more than one and less than 30 years, for exterior painting if the common elements include exterior painted surfaces, and for such other items as may be required by the declaration or bylaws. The reserve account need not include:

(A) Items that can reasonably be funded from the general budget or other funds or accounts of the association; or

(B) A reserve for limited common elements for which maintenance and replacement are the responsibility of one or more, but less than all, unit owners under the provisions of the declaration or bylaws.

(b) The reserve account shall be established in the name of the association of unit owners. The association is responsible for administering the account and for making periodic payments into the account.

(c) The reserve portion of the initial assessment determined by the declarant shall be based on:

- (A) The reserve study described in subsection (3) of this section;
- (B) In the case of a conversion condominium, the statement described in ORS 100.655 (1)(g); or
- (C) Other reliable information.

(d) The reserve account must be funded by assessments against the individual units for the purposes for which the reserve account is established.

(e) The assessment under this subsection accrues from the time of the conveyance of the first individual unit assessed as provided in ORS 100.530.

(3)

(a) The board of directors of the association annually shall conduct a reserve study or review and update an existing study to determine the reserve account requirements and may:

- (A) Adjust the amount of payments in accordance with the study or review; and
- (B) Provide for other reserve items that the board of directors, in its discretion, may deem appropriate.

(b) The reserve study shall:

- (A) Identify all items for which reserves are or will be established;
- (B) Include the estimated remaining useful life of each item as of the date of the reserve study; and
- (C) Include for each item, as applicable, an estimated cost of maintenance and repair and replacement at the end of the item's useful life.

(4)

(a) The board of directors shall prepare a maintenance plan for the maintenance, repair and replacement of all property for which the association has maintenance, repair or replacement responsibility under the declaration or bylaws or this chapter. The maintenance plan shall:

- (A) Describe the maintenance, repair and replacement to be conducted;
- (B) Include a schedule for the maintenance, repair and replacement;
- (C) Be appropriate for the size and complexity of the maintenance, repair and replacement responsibility of the association; and
- (D) Address issues that include but are not limited to warranties and the useful life of the items for which the association has maintenance, repair or replacement responsibility.

(b) The board of directors shall review and update the maintenance plan described under this subsection as necessary.

**OREGON CODE 100.175, CONT'D.**

(5)

(a) Except as provided in paragraph (b) of this subsection, the reserve study requirements under subsection (3) of this section and the maintenance plan requirements under subsection (4) of this section do not apply to a condominium consisting of one or two units, excluding units used for parking, storage or other uses ancillary to a unit:

(A) After the sale of the first unit to a person other than a successor declarant, if the condominium is created on or after September 27, 2007; or

(B) If the condominium was created before September 27, 2007, notwithstanding any requirement in the declaration or bylaws.

(b) The reserve study requirements under subsection (3) of this section and the maintenance plan requirements under subsection (4) of this section apply to a flexible condominium or a staged condominium created on or after September 27, 2007, if the condominium might in the future consist of more than two units.

(6)

(a) If the declaration or bylaws require a reserve account, the reserve study requirements of subsection (3) of this section and the maintenance plan requirements of subsection (4) of this section first apply to the association of a condominium recorded prior to October 23, 1999:

(A) Upon adoption of a resolution by the board of directors in accordance with the bylaws providing that the requirements of subsections (3) and (4) of this section apply to the association; or

(B) Upon submission to the board of directors of a petition signed by a majority of unit owners mandating that the requirements of subsections (3) and (4) of this section apply to the association.

(b) The reserve study and the maintenance plan shall be completed within one year of the date of adoption of the resolution or submission of the petition to the board of directors.

(7)

(a) Except as provided in paragraph (b) of this subsection, the reserve account is to be used only for the purposes for which reserves have been established and is to be kept separate from other funds.

(b) After the individual unit owners have assumed administrative responsibility for the association under ORS 100.210, if the board of directors has adopted a resolution, which may be an annual continuing resolution, authorizing the borrowing of funds:

(A) The board of directors may borrow funds from the reserve account to meet high seasonal demands on the regular operating funds or to meet unexpected increases in expenses.

(B) Not later than the adoption of the budget for the following year, the board of directors shall adopt by resolution a written payment plan providing for repayment of the borrowed funds within a reasonable period.

(8) Restrictions on the use of the reserve account do not prohibit its prudent investment subject to any constraints on investment of association funds imposed by the declaration, bylaws or rules of the association of unit owners.

(9) Assessments paid into the reserve account are the property of the association of unit owners and are not refundable to sellers of units.

(10) In addition to the authority of the board of directors under subsection (3)(a) of this section, following turnover, the association may:

(a) On an annual basis, elect not to fund the reserve account described in subsection (1) of this section by unanimous vote of the owners; or

(b) Elect to reduce or increase future assessments for the reserve account described in subsection (1) of this section by an affirmative vote of at least 75 percent of the owners. [Formerly 94.072; 1997 c.816 §7; 1999 c.677 §44; 2001 c.756 §34; 2003 c.569 §27; 2005 c.543 §2; 2007 c.409 §23]



## RESERVE PROVIDER CREDENTIALS

Mr. Eric Harker has assisted in the preparation of over 100 reserve studies in four states since 2010. He has provided reserve studies for high-rise condominiums of more than 300 residential units, rural apartment-style condominiums containing less than 10 residential units, corporate office parks, and master HOAs containing over 100 homes.

- Master of Architecture from The University of Utah School of Architecture
- Building Envelope Consultant on hundreds of construction defect investigations and lawsuits
- Project Manager overseeing complete building repairs and remodels on properties of over 200 units
- Certified Thermographer
- Conducted hundreds of reserve studies in four states since 2010
- Active member of Community Associations Institute (CAI)
- Reserve study clients range from management companies, new construction contractors, and community associations

## DISCLOSURES

1. **General** – The Client and Alliance Project Engineers have no professional or personal involvements with one another, other than the scope of work identified in the reserve study contract. This relationship cannot be perceived as a conflict of interest.
2. **Physical Analysis** - On-site observations were limited to visual observations only. Destructive testing (invasive testing) was not performed. Any items that were not clearly visible at the time of the site observation were not viewed, and therefore were not included in the drafting of this report.
3. **Measurements** - Measuring and inventory were identified via a combination of on-site physical measurements, 3D measurement technology, and drawing take-offs. Any drawing sets were provided by the property management for our use relating only to the reserve study scope of work.
4. **Completeness** - Alliance Project Engineers has found no observed material issues which, if not disclosed, would cause a distortion of the association's reserve situation.
5. **Reliance on Client Data** - Data received from property management and association representatives is deemed reliable by Alliance Project Engineers. Such data received may include financial information, physical deficiencies or physical conditions, quantity of physical assets, or historical issues.
6. **Scope** - This reserve study is a reflection of information provided by Alliance Project Engineers and was assembled for use by the client. The intent of this reserve study is not to be used for performing an audit, quality or forensic analysis, or background checks of historical records.
7. **Reserve Balance** - The actual or projected total presented in the reserve study is based upon information provided or collected and was not audited.
8. **Reserve Projects** - Information provided or collected for the purpose of the reserve study will be considered reliable and should not be considered a project audit or quality inspection.