

Your Condominium-FY18

Chantilly, VA

Level I Full Reserve Study

April 26, 2017



Prepared for:

Board of Directors



Engineer

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**EXECUTIVE SUMMARY**

**KEY TO UNDERSTANDING STUDY RESULTS** – The purpose of a reserve study is to establish a financial plan for keeping the property’s common and limited common elements in good repair. The plan is developed by identifying the component, assessing its condition and estimating both the time when work will be needed and cost of work. In a **PM+** study these entries can be found beginning on page A1, columns (1), (4) and (5). Those entries combined with reserve savings, current reserve contribution, interest and inflation rates and how much of a contingency should be preserved to fund unforeseen events are the factors that determine the reserve contribution.

**RELEVANT DATA**

<i>1st Study Year</i> FY18	\$700,000 <i>AOH Start FY18</i> ♦
<i>FY Begins</i> 1-Jan-18	185,000 <i>Your Contribution in FY17</i> ♦
<i>Inspection Date(s)</i> 25-Apr-17	1.76% <i>Inflation</i> ♦♦
<i># Units</i> 200	2.82% <i>Interest</i> ♦♦

- ♦ **AOH** (cash/investments start of fiscal year) and **Current Year Contribution** were provided to **PM+** and were best estimates available when provided, they are not audited amounts.
- ♦♦ **INTEREST AND INFLATION** factors<sup>1</sup> best project the future needs of the property. Inflation is based on the last ten-year average for the Consumer Price Index (CPI); interest on savings is based on the ten-year average of the Constant Maturity Yield for the 10-Year U.S. Treasury note.  
**NOTE** – If changes to amounts/factors are desired **PM+** will provide a revised study, if requested.
- **THE FOLLOWING TABLE COMPARES AND SUMMARIZES** the reserve funding plans. Association column is based on the contribution approved by the board of directors or last year’s contribution adjusted for inflation. Each portrays total funding, amounts expected from interest and contributions, and minimums and maximums year end balances anticipated over 30 and 50-years:

**CONTRIBUTION & FUNDING SUMMARY**

	<b>Association<sup>2</sup> Planned Contribution</b>	<b>PM+ Recommended Contribution</b>
<i>Reserve Contribution FY18</i>	\$185,000	\$173,430
<i>Avg Owner Contribution FY18</i>	925	867
<i>Avg Owner Contribution/Month</i>	77.08	72.26
<i>30-Year Income</i>	8,337,400	7,666,070
<i>Income From Interest</i>	1,108,150	888,650
<i>Income From Assessments</i>	7,229,250	6,777,420
<i>30-Year Min Balance</i>	516,970	299,440
<i>30-Year Max Balance</i>	2,989,150	2,425,030
<i>50-Year Min Balance</i>	1,760,440	1,010,770
<i>50-Year Max Balance</i>	5,946,680	4,174,170

**ANALYSIS:**

- Study findings are shown above and can be summarized - “the association’s current contribution is more than needed to meet the reserve needs of the property.”

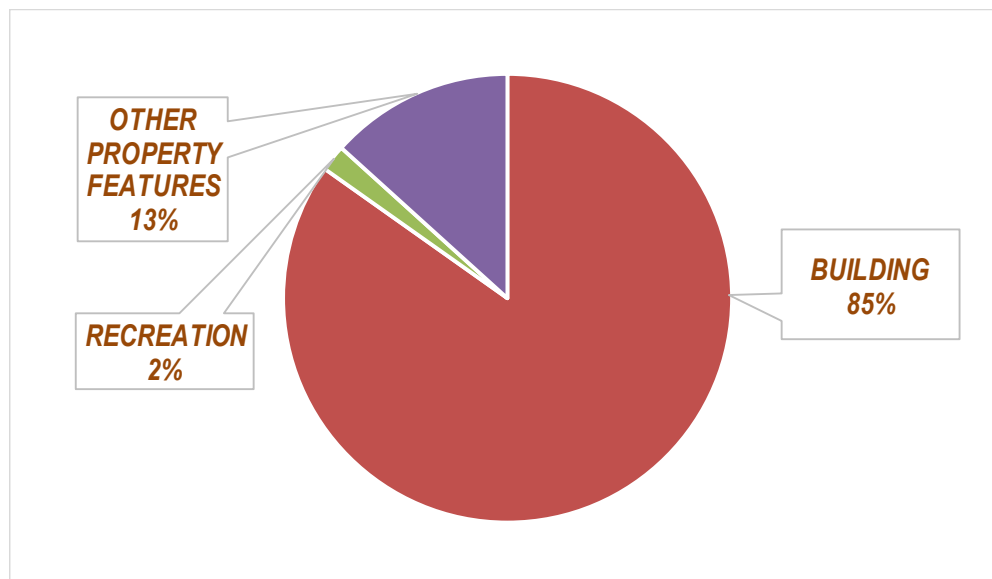
1. Although factors used may not prove to be precise they should be reasonable predictors of cost increases and contributions needed to support the reserve requirement over the life of the study.  
 2. If the study is being done for other than the current fiscal year, inflation is applied to prior year contribution.

- Both the association planned contribution and PM+ recommended contribution use the “Cash Flow” method as defined by the Community Association Institute (CAI) and the Association of Professional Reserve Analysts (APRA) for determining the reserve requirement. Most professional reserve providers, accountants and managers agree cash flow is the preferred method for funding reserves.
- “Component” method calculations are also provided to show the contribution needed if this method is used. Difference between cash flow and component method is cash flow averages the annual expenses over the life of the study to level out the needed contribution, yearly increases are mostly attributable to inflation. Component method is driven mostly by the estimated cost and remaining useful life for the next time work may be needed. Consequently, owner contributions will vary significantly from year to year. See page A3, columns (17) and (20), for a comparison of the contribution plans. Regardless of the plan chosen, both plans require the same amount of funding to pay 30-year expenses. Cash flow studies are considered valid for at least three years before updating; component studies should be update annually.
- The recommended owner contribution assumes interest earned on savings will be applied to the reserves and not used to offset operating account expenses or used for other purposes. If interest is not applied to the reserves, then the annual contribution will need to be increased by the interest amount.
- Funding plan dollar amounts shown on page A3 in columns (15), (18) and (21) are the approximate year end balances, both minimum and maximum, that can be expected if the plans are funded as shown. Properly funded plans will meet the following objectives: 1) funds are always available for needed work, 2) there is always a minimum savings balance available to provide for unforeseen contingencies, and 3) when studies are updated, there is not a substantial increase needed to meet the reserve requirement. To avoid substantial increases **PM+** studies take into consideration the first thirty-years of the study and an additional twenty-years, making the "look at" period a total of fifty-years. The 50-year projection is to assure the recommended contribution is based on a sound long range analysis of the property's reserve needs.

#### **RECOMMENDATION:**

Fund the reserves to the recommended amount.

#### **WHERE THE CONTRIBUTIONS TO THE RESERVES GO IN 30-YEARS:**



## STUDY INFORMATION

**THIS STUDY** is the initial engagement for the property by **PM+**. **PM+** has neither collaborated with nor provided consulting advice to others on issues pertaining to the property.

**THIS IS A LEVEL I FULL STUDY** with on-site visit. The association requested a Level I Full Study.

**STUDY WAS DONE** in its entirety by Mario B. “Ben” Ginnetti, a registered professional engineer (**P.E.**) licensed to practice engineering in the states of Virginia, Maryland and the District of Columbia. Mr. Ginnetti is also a CAI Certified Reserve Specialist (**RS**) and a Professional Reserve Analyst (**PRA**).

**RESERVE STUDY** criteria is defined by the Community Association Institute (CAI) and the Association of Professional Reserve Analysts (APRA). In complying with the criteria this study compares the “Associations” current funding plan to the two recommended methods for preparing reserve studies, “Cash Flow (AKA Pooling)” and “Component.” This is a reserve study only - no other use is intended.

**STUDY WAS COMPILED** in accordance with generally accepted standards and represents our professional opinion on the components, timing and dollar amounts that should be budgeted for repair and replacement. In compiling this study information was obtained from drawings, field measurements, visual observations and management (information provided by management is considered to be reliable). Also taken into consideration are construction features, current conditions and component age. Testing was not performed, nor was demolition done or panels removed to determine conditions that are not obvious. Based on our observations and the information gained during the visit this study contains, to the best of our ability, all material issues required to determine the funding needed to meet the property’s reserve requirement.

**FOR PROPERTIES LOCATED IN THE STATE OF VIRGINIA**, Virginia Statutes, 2003 Condominium and Property Owner’s Association Act require the association to conduct reserve studies at least every five years, review the results of the study at least annually and make adjustments as necessary unless the condominium instruments/declaration imposes more stringent requirements. Your attention is called to Sections 55-79.83:1or 55-514.1 of the Statutes for the complete text.

### **AGE, UNITS AND STYLE**

Constructed in 1997.

140-units; 70-single family, 70-townhomes.

Major amenities – tot-lot.

### **CASH FLOW AND COMPONENT METHOD STUDIES**

This study was calculated using both the Cash Flow and Component methods. A synopsis of each method:

**CASH FLOW METHOD** - This method develops the funding plan by having the annual contributions offset the variable annual expenses. All expenses are averaged over the life of the study to calculate the annual contribution needed to support the reserve requirement. Yearly contribution increases are mostly attributed to inflation.

**COMPONENT METHOD** - This method develops the funding plan by dividing the remaining useful life into the balance needed to fund the component for only the next cycle of work. Yearly contributions can vary significantly from year to year depending on where the components are in their life cycle. Contributions needed to pay expenses will equal the cash flow method over the life of the study.

### **FUNDING GOAL**

This study complies with the “Threshold Funding Plan” established by the Community Association Institute (CAI) for reserve studies. Funding goal objective is to keep the reserve balance above a specified dollar or Percent Funded amount.

**IN DEVELOPING** the reserve we consider components that have a predictable life cycle as well as those that will

most likely need annual maintenance and repairs to keep them in serviceable condition. They are as follows:

### **PREDICTABLE LIFE CYCLE**

These components have a predictable life cycle (an average useful life). At the end of its useful life total replacement will be needed.

### **ANNUAL ALLOWANCES**

We reserve an average annual amount for these components. They are typically "life of the property" or long lasting components that do not have a predictable life cycle. We assume the association will keep these components in satisfactory condition with timely spot repairs.

**FOLLOWING CONSIDERATIONS** should be taken into account to properly manage the reserves: 1) properly funded reserves avoids "special assessments", 2) each owner should pay their fair share for the time they use the component, 3) when reserve funds are available the Association is more inclined not to defer work; deferral results in additional deterioration and "catch-up" costs to restore the component to a good condition, 4) government mortgage guarantees agencies, i.e. FHA, require a current reserve study to be available before backing a loan, and 5) some state laws require them. In addition to these considerations, a new factor has recently become apparent. Years ago owners were poorly informed on the importance of the reserves and paid very little attention to whether or not a property had an adequate plan for funding the reserves. With the inclusion of reserve tables in resale packages and other publicity, many potential buyers are now verifying the reserve status before they buy.

**ALTHOUGH** we use generally accepted techniques and best information available, it is possible actual costs and useful lives can vary significantly from our estimates. We recognize that possibility and attempt with our methodology to arrive at the overall funding recommendation that will avoid, or minimize the amount of funding if a special assessment is needed to do reserve work.

**FOR THE RESERVES** to be an effective budget management tool it will need periodic updates. Because reserves on hand, current costs, quality of maintenance, acts of God, vandalism, and useful life can vary from year to year, a periodic review will assure it remains an effective management tool. We recommend studies be updated every 3 years.

**UNLESS OTHERWISE NOTED** this study does not take into consideration any work the association may need to correct hazardous or defective conditions, such as issues with asbestos, radon, lead, mold, FRT, etc., nor will it fund major projects to repair/replace facades, building tension cables, utilities and other essential systems. Projects of this nature require the services of engineers or other consultants to determine scope, timing and projects costs. If requested, once costs and project timing are known, we will provide a revised study at no additional cost.

**FOR ANY RESERVE PROJECTS** in progress on the date(s) of our visit our observation of the work should not be considered a project audit or quality control inspection. We leave that to others to determine.

**IF WE DESCRIBE PREVENTIVE MAINTENANCE** recommendations in this study they are intended to be general in nature and the most common tasks needed to extend useful life. They are not all inclusive; we do not imply that is all that is necessary for good maintenance. Manufacturers' brochures, service specialty companies, and other qualified sources should be consulted to establish the full array of actions needed for proper preventive maintenance.

**FUNDING FROM RESERVE VERSUS OPERATING ACCOUNT** - There could be components in this study the association is funding from the operating account. When there are we recommend they be funded from the reserves. When components are worked on it usually extends their useful life - a proper reserve expense. Reserve funds are intended to keep property components in good repair and to replace those that need replacing; operating funds are intended for maintenance and reoccurring operating expenses.

## MAINTENANCE/REPAIR/REPLACEMENT TIPS & RESERVE CONSIDERATIONS

**THERE ARE THREE LEVELS** of care needed to maximize the useful life of equipment and property components: 1) Maintenance, 2) Repair and 3) Replacement.

**MAINTENANCE** is taking care of a component by doing such tasks as sealing pavement cracks to prevent water from undermining the base, painting to prevent metal corrosion or wood rot, lubricating moving parts on mechanical equipment, fan belt adjustments, etc. It involves the least expenditure of funds and is the best way to maximize useful life. Repair is replacing a portion of a component, such as, a section of pavement, a part of a roof, an air conditioning compressor, etc. It's usually more expensive than maintenance. The most costly is replacement. It involves the entire replacement of the component.

**APPLICATION** of good maintenance and repair techniques can be explained by the following example: An asphalt parking lot of 1000 square yards develops a 10 foot long crack in the surface. The crack can be sealed for about a dollar a linear foot. By doing so, water will not seep through the asphalt causing damage to the base course. That simple maintenance action extended the useful life of the pavement at minimum cost. Assume the crack was not sealed and it grew to a 12' by 12' base damaged area. Cost of repairs would be approximately 60 times as much as fixing the crack. If the damaged area was not repaired and eventually the entire lot had to be replaced it would cost considerably more. Therefore, the prudent thing to do is good maintenance. It's the least costly of the three levels of work.

**PRIOR TO TOTALLY REPLACING** a component, e.g., a roof, a fence, an air conditioner, etc., all measures should be taken to extend the useful life of the component with repairs. If the roof is leaking do not automatically think the entire roof needs to be replaced. Most leaks occur around penetrations and flashed areas and they can be repaired for less than replacing the entire roof. Fence posts almost always rot out at ground level before the rest of the fence. Posts can be replaced without purchasing a complete new fence. The same applies to most mechanical/electrical equipment. Tube leaks frequently occur in boilers; compressor failures occur in air conditioners and circuit breakers wear out in electric panels. These kinds of failures are repairable without replacing the entire component. The reserve table should be used as an aid in establishing budgets - not as a work plan. When used as a budget management tool its effectiveness will be recognized when funds are readily available to do work - when it must be done. Do not use the remaining useful life data as a work plan. It should be treated as a "window of probable expectancy", based on statistical information, historical trends, conditions at time of survey and experience of when repair or replacement is most likely to be needed. Actual work should not be done until needed. For example, if paving is estimated to need replacement in five years but it's not a problem at that time, put it off until it is a problem. Conversely, if repairs are necessary sooner, do them sooner.

**WHEN CONTRACTING** for services, seek competitive bids and purchase only what's necessary to restore the component to its "like original" condition. Include state-of-the-art improvements but avoid over buying or substantially enhancing a component beyond its original condition. Such improvements are not included in the cost estimates.

**CATASTROPHIC FAILURES** to such components as footers, foundations, floors, exterior walls and total replacement of utility systems, etc., are not included in the table. They are not included because they are not predictable and it is rare that these components have to be replaced in total. We do recommend a reasonable annual amount be set aside for some repairs and reflect that in the reserve table.

**FUNDING FOR RESERVES SHOULD BE FAIR TO ALL OWNERS;** past, present and future. The worst case scenario for a property is to have no money set aside to pay for repairs/replacements forcing the current owners to pay the total cost. Additionally, having insufficient reserves also presents some injustices as illustrated by the following example:

Mr. and Mrs. "X" owned a unit at the property for the first ten years of its existence when reserve funding was suppressed and insufficient to take care of future problems. Mr. and Mrs. "X" sell their unit and leave. Five years after

they leave the pavement and sidewalks need to be repaired. Mr. & Mrs. "Y" now own the unit and receive notice they are to be "specially assessed" to pay for the repair costs.

For demonstration purposes let's say the pavement and sidewalk repairs costs \$150,000 and the association has \$50,000 in the reserve account. Let's also assume there are 100 units at this property.

Over the last fifteen years, past and present owners set aside \$50,000 to take care of the \$150,000 expenditure. Expressed in \$/year that equates to \$3,333/yr. or \$33.33 per owner per year.

Mr. & Mrs. "X" had the benefit of good paving and sidewalks for 10 years at a total cost to them of \$333.30. Unfortunately for Mr. & Mrs. "Y", they only used the components for five years, but it will cost them \$1166.50 for their share of the repairs.

Calculations for the above are as follows:

$$5 \text{ years they lived there} \times \$33.33/\text{yr.} = \$166.50$$

The difference between amount in reserves and repair costs divided by number of unit owners:

$$\begin{aligned} (\$150,000 - 50,000) / 100 &= \underline{\$1000.00} \\ \text{Total cost to Mr. \& Mrs. "Y"} &= \$1166.50 \end{aligned}$$

Or, said another way:

Mr. and Mrs. "X" used the components for 66% of their useful life but only paid 22% of the repair cost.

Mr. and Mrs. "Y" used the components for 34% of their useful life but had to pay 78% of the cost.

For funding to be fair all owners should contribute their share of the costs for the period of time they use the component.



**READING and UNDERSTANDING TABLES & CHARTS****RELEVANT DATA**

Study fiscal year, inspection date(s), units, association's financial data, and interest/inflation rates.

**CONTRIBUTION SUMMARY**

Financial summary of study results.

**TABLE OF REPAIR & REPLACEMENT RESERVES**

The Repair and Replacement Table shows the common or limited common element, average and remaining useful life, and estimated cost for work. This information, for the most part, is self-explanatory; however, when we believe more information is needed, we provide comments or use photographs.

Column

- (1) The property components the association should include in the reserves. Where a 15%, 30%, etc., is shown it means total replacement of the item is not anticipated. If we have omitted or added components that are not common or limited common area responsibility, please inform us so we can provide a revised table. It also applies if the association accomplishes the work from their annual operating expense and a reserve set-aside is not needed. If components are included that are operating expenses, we leave it to others to determine the correct tax consequence of the component.
- (2) Approximate quantity and unit of measure. The following abbreviations are used; however, they may not all appear in this study:

AC – Acres	LF - Linear Feet	TN - Tons
AOH - Amount-On-Hand	LS - Lump Sum	UN - Units
AnAvg - Annual Average	HP – Horsepower	> - Greater Than
BLD - Building	RC - Replacement Cost	< - Less Than
EA - Each	SF - Square Feet	
CY - Cubic Yards	SY - Square Yards	

- (3) The components' average useful life (Avg). Leading publications on useful life data, our own experiences and historical trends are used to determine average useful life.
- (4) Our best estimate of the remaining useful life (RUL). Some components in the table may not fail precisely as shown. We use the remaining useful life in conjunction with the estimated cost to calculate the annual contribution needed to fund the component. Actual remaining useful life can be significantly different.
- (5) Estimated costs are in current dollars; actual cost can be significantly different. Estimates are based on similar work in the greater Washington area, association experience, industry publications, such as R.S. Means and HomeTech, contractors and other reliable sources. It assumes the association will competitively seek bids and obtain a fair price in today's market. Some work, such as balconies, roofing, garages, façade, boiler and chiller replacements, etc. may need the services of an engineer or architect to determine scope and oversee repairs. Those estimates take precedence over those shown in the table. Some costs can be more predictable than others, i.e., when roofs and pavements are replaced the entire component will most likely be replaced so a total replacement costs can be estimated. Other components, such as closed loop piping, plumbing, electrical and fire protection systems may not need total replacement and will continue to perform with sub-systems being repaired. For these components, we reserve a reasonable amount for this work.
- (6) Distribution of the funds the association had (is projected to have) at the start of their fiscal year or the amount we were requested to use. The program distributes a prorated amount to each component.
- (7) The amount needed to fund the balance of the requirement.

- (8) The contribution needed to fund the 1<sup>st</sup> year applying the cash flow method. This value is the product of the components and the Funding Plans - 30 Year Projection chart. The annual contribution is calculated so that the reserve balance never falls below the “X” axis and there is always a minimum balance for unforeseen contingencies.
- (9) The contribution needed to fund the 1<sup>st</sup> year applying the component method.
- Fiscal Years 1 - 10 Expense Projection – Projected cash out-lays over the first ten years of the study.
- Fiscal Years 11 - 30 Expense Projection – Projected cash out-lays over the next twenty years of the study.
- Average Contribution Per Owner - The average contribution needed per owner to fund the 1st year reserve contribution. This amount is not indicative of each owner’s individual contribution.

### **FUNDING PLANS - 30 YEAR PROJECTION**

Column

(10) - Fiscal Year.

(11) - Projected annual expenses.

(12) - Cumulative expenses over 30-years.

(13), (16) and (19) - Interest earned per funding plan based on previous year end balance.

(14), (17) and (20) - Contribution per funding plan, inflation applied.

(15), (18) and (21) - Projected year-end balance per funding plan.

### **GRAPHS**

Graphs depict the projected contributions and year end balances for each plan. The contribution objective should be to have a consistent contribution, year after year, that can be maintained with inflation adjustments. Avoid fluctuating contributions as they can impose financial hardships on owners. The plot objective for the reserve balance is to have the year end balances always above the “X” axis. If it falls below, it indicates a special assessment or loan will be needed to support the reserves.

### **SUMMARY**

- 30-Year Income - projected from interest and owners.
- 30 & 50-Year Minimum/Maximum Balances - includes contingency for unforeseen events.

### **PROPERTY COMPARISON (NOT SHOWN IN SOME STUDIES)**

The “Property Comparison” chart compares the property’s current funding to the last properties we have studied. The comparison shows the maximums, minimums, property averages and medians compared to your property. Property features differ from one property to another so consider these as averages only and not a true comparison on your property to another similar property. Three comparisons are made:

- % Funded - Ratio of the current to the ideal Reserve Balance for each component in the Reserve Table. The ratio is a product of the “used-up” life, useful life and component cost.
- Reserve Depletion Factor - Number of years amount-on-hand will fund (It’s the same as the “go broke” date if no more money is added to the reserves).
- Cost Per Owner – Average contribution per owner needed to meet the reserve requirement. Dollar amounts will vary from property to property based on construction features, common/limited common elements, past contributions to the reserves and other factors that may not result in a true comparison.

# PHOTOGRAPHS

Front view of building. Photo deleted in sample to withhold property identification.

Rear view of building. Photo deleted in sample to withhold property identification.

Your Condominium is a 200-unit community constructed in 1978 and is located in Chantilly, Virginia.

There are 12 residential floors and a two level underground garage.



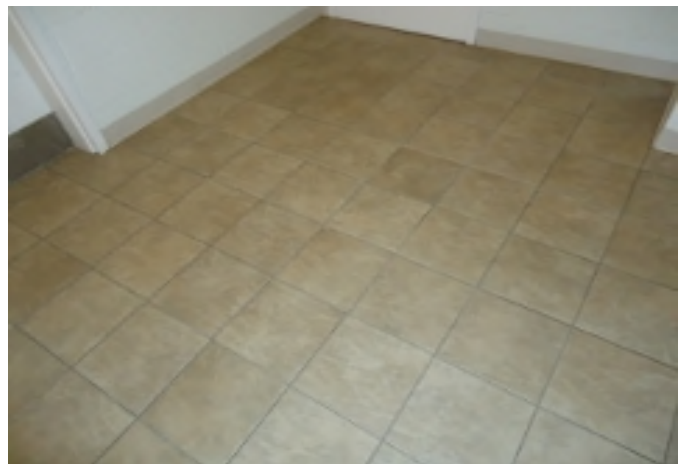
There are two roofing systems -this is the Inverted Roof Membrane system. These systems can last 30-years or more if maintained and repaired as needed.



The second system - fiberglass shingles over the penthouse unit.



Corridors are carpeted; walls are painted. Illumination is with ceiling and wall mounted fixtures.



Ceramic tile flooring is placed on the first floor and garage level elevator lobbies.

# PHOTOGRAPHS



Sealer placed on balconies years ago to prevent concrete structural damage has worn thin. Sealer reapplication should be done within the next two years.



Entrance door to roof-top mechanical room is corroding. Periodic painting will control rust and extend the doors useful life.



Exercise room has eleven major pieces and is nicely equipped.



Swimming pool to include shell, deck, filters, water heaters, handicap bathroom and fence were all recently re-furbished.



We reserve for the ladies and men's room to be renovated.



Both saunas are in good repair.

# PHOTOGRAPHS



Cooling towers are performing without major problems.



All four elevators and cabs were recently renovated to improve performance and meet current code requirements.



Water booster pump was recently replaced.



Mail boxes will eventually need to be replaced.

**Other photographs as needed.**

## APPENDIX A

TABLE OF REPAIR/REPLACEMENT RESERVES AND YEARS 1-10 EXPENSES

0-Your Condo-FY18

Level I Full Reserve Study

COMPONENT (1)	APPROX'MT QUANTITY (2)	USEFUL LIFE AVG REM (YRS) (3)		ESTIMATED COST IN CURRENT \$ (5)	DISTR'BTN OF AOH AS OF 1-Jan-18 (6)	BALANCE NEEDED TO FUND RESERVE (7)	FY18 CONTRIBUTION CASH FLOW COMPONENT METHODS (8)	(9)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
<b>BUILDING</b>																			
<b>ROOFING</b>																			
MAIN ROOF-IRMA	Deleted	SF	25	3	191,210	36,630	154,580	21,640	19,750	0	0	198,000	0	0	0	0	0	0	0
ROOF-SHINGLES	in	SF	25	2	3,380	650	2,730	570	520	0	3,440	0	0	0	0	0	0	0	0
FACADE/CAULK/WATERPROOFING	Sample	LS	5	3	27,000	5,170	21,830	3,060	2,790	0	0	27,960	0	0	0	0	30,510	0	0
<b>WINDOW/DOORS</b>																			
WINDOWS		EA	45	12	556,200	106,550	449,650	15,740	14,360	0	0	0	0	0	0	0	0	0	0
MAIN ENTRANCE DOORS		EA	45	11	6,000	1,150	4,850	190	170	0	0	0	0	0	0	0	0	0	0
<b>DECORATING</b>																			
<b>CORRIDORS</b>																			
CARPET		SF	10	7	90,300	17,300	73,000	4,380	4,000	0	0	0	0	0	0	100,270	0	0	0
CORRIDOR LIGHT FIXTURES		EA	25	10	49,000	9,390	39,610	1,660	1,520	0	0	0	0	0	0	0	0	0	57,330
<b>BATHROOMS</b>																			
RENOVATION		EA	25	10	16,000	3,060	12,940	540	500	0	0	0	0	0	0	0	0	0	18,720
<b>BALCONIES</b>																			
BALCONY REPAIRS		EA	10	2	300,000	57,470	242,530	50,930	46,480	0	305,280	0	0	0	0	0	0	0	0
<b>MECHANICAL/PLUMBING/ELECTRICAL</b>																			
<b>MECHANICAL</b>																			
COOLING TOWER(S)		EA	25	14	445,000	85,240	359,760	10,790	9,850	0	0	0	0	0	0	0	0	0	0
CORRIDOR HVAC		EA	30	29	148,670	28,480	120,190	1,740	1,590	0	0	0	0	0	0	0	0	0	0
<b>PLUMBING</b>																			
PLUMBING/CONDENSATE/DRAINS		LS	40	6	260,000	49,810	210,190	14,710	13,430	0	0	0	0	0	283,700	0	0	0	0
WATER HEATER(S)		EA	15	13	6,000	1,150	4,850	160	140	0	0	0	0	0	0	0	0	0	0
<b>ELECTRICAL</b>																			
SWITCHGEAR/COMMON AREA PANELS/WIRING		LS	40	6	260,000	49,810	210,190	14,710	13,430	0	0	0	0	0	283,700	0	0	0	0
<b>ELEVATORS</b>																			
ELEVATORS		EA	30	29	920,000	176,230	743,770	10,770	9,830	0	0	0	0	0	0	0	0	0	0
MECHANICAL/PLUMBING/ELECTRICAL		LS	1	1	12,000	2,300	9,700	4,070	3,720	12,000	12,210	12,430	12,640	12,870	13,090	13,320	13,560	13,800	14,040
<b>TOTAL BUILDING</b>					<b>3,290,760</b>	<b>630,390</b>	<b>2,660,370</b>	<b>155,660</b>	<b>142,080</b>										
<b>RECREATION</b>																			
<b>SWIMMING POOL</b>																			
WHITECOAT		SF	7	4	10,790	2,070	8,720	920	840	0	0	0	11,370	0	0	0	0	0	0
FILTER/PUMPS/WATER LINES		LS	15	12	15,000	2,870	12,130	420	390	0	0	0	0	0	0	0	0	0	0
COPING/TILES/WALLS&FLOORS		LS	14	11	16,220	3,110	13,110	500	460	0	0	0	0	0	0	0	0	0	0
<b>TOTAL RECREATION</b>					<b>42,010</b>	<b>8,050</b>	<b>33,960</b>	<b>1,840</b>	<b>1,690</b>										
<b>OTHER PROPERTY FEATURES</b>																			
<b>GARAGE</b>																			
GENERAL REPAIRS		SF	12	5	168,000	32,180	135,820	11,410	10,410	0	0	0	0	180,140	0	0	0	0	0
OVERHEAD DOORS		EA	12	5	27,000	5,170	21,830	1,830	1,670	0	0	0	0	28,950	0	0	0	0	0
MAIL BOXES		EA	40	40	32,000	6,130	25,870	270	250	0	0	0	0	0	0	0	0	0	0
STREET LIGHTS		EA	35	18	92,400	17,700	74,700	1,740	1,590	0	0	0	0	0	0	0	0	0	0
SITE ITEMS		LS	1	1	2,000	380	1,620	680	620	2,000	2,040	2,070	2,110	2,140	2,180	2,220	2,260	2,300	2,340

**TABLE OF REPAIR/REPLACEMENT RESERVES AND YEARS 1-10 EXPENSES**

0-Your Condo-FY18

Level I Full Reserve Study

COMPONENT  (1)	APPROX'MT QUANTITY  (2)	USEFUL LIFE AVG REM (YRS) (3) (4)	ESTIMATED COST IN CURRENT \$  (5)	DISTR'BTN OF AOH AS OF 1-Jan-18  (6)	BALANCE NEEDED TO FUND RESERVE  (7)	FY18 CONTRIBUTION CASH FLOW METHODS  (8)	CONTRIBUTION COMPONENT  (9)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
TOTAL OTHER PROPERTY FEATURES			321,400	61,560	259,840	15,930	14,540										
<b>TOTAL BUILDING</b>			\$3,654,170	\$700,000	\$2,954,170	\$173,430	\$158,310	\$14,000	\$322,970	\$240,460	\$26,120	\$224,100	#####	\$115,810	\$46,330	\$16,100	\$92,430
			=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
						<b>Reserve Contribution FY18</b>	<b>\$173,430</b>	<b>\$158,310</b>									
						<b>Avg Owner Contribution FY18</b>	<b>867</b>	<b>792</b>									
						<b>Avg Owner Contribution/Month</b>	<b>72</b>	<b>66</b>									

Notes:  
 All dollars rounded to nearest \$10. Totals may not add due to rounding.  
 One year remaining useful life indicates the useful life of the component is used up.



YEARS 11 - 30 EXPENSES

0-Year Condo-FY18

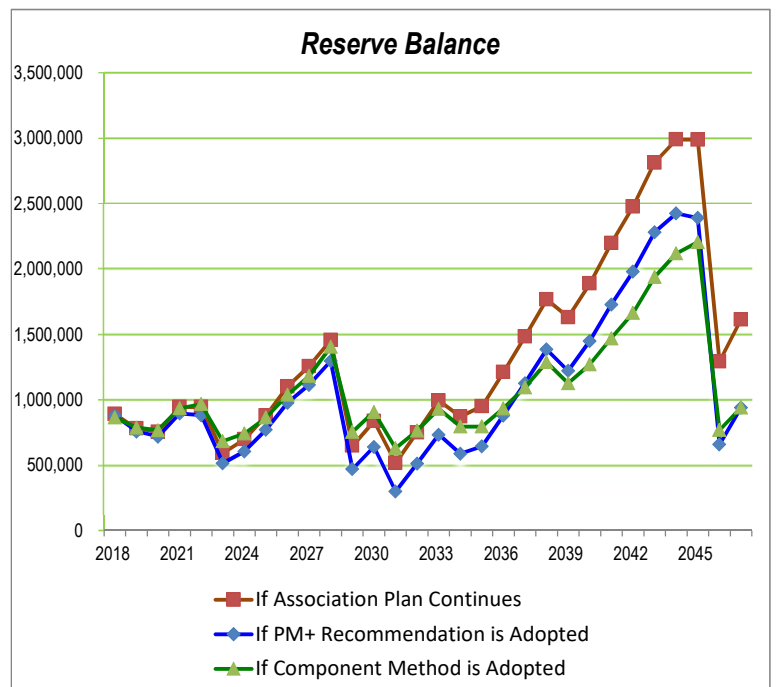
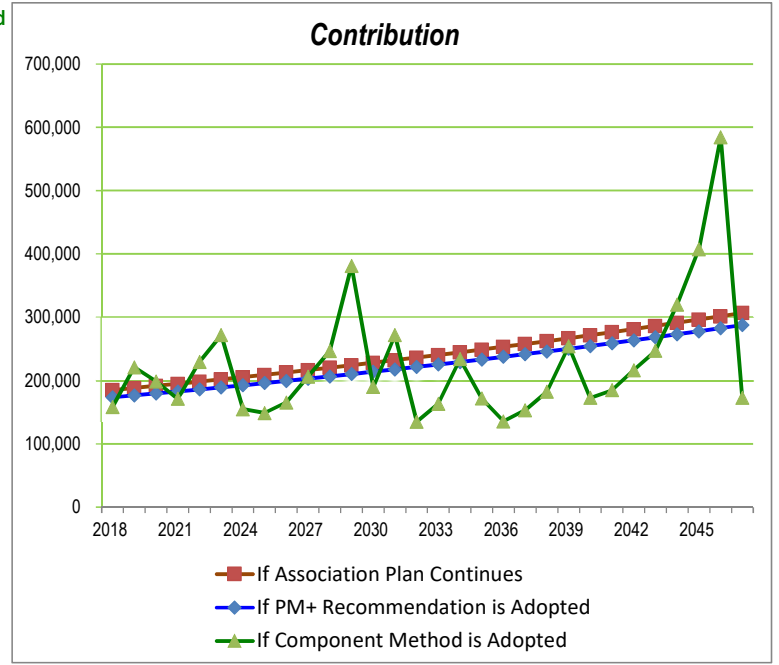
Level I Full Reserve Study

COMPONENT	USEFUL LIFE		ESTIMATED COST IN CURRENT \$	YEARS 11 - 30 EXPENSES																			
	AVG REM (YRS)			2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
(1)	(3)	(4)	(5)																				
<b>BUILDING</b>																							
<b>ROOFING</b>																							
MAIN ROOF-IRMA	25	3	191,210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	306,260	0	0
ROOF-SHINGLES	25	2	3,380	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,320	0	0	0
FACADE/CAULK/WATERPROOFING	5	3	27,000	0	0	33,290	0	0	0	0	36,320	0	0	0	0	39,630	0	0	0	0	43,250	0	0
<b>WINDOW/DOORS</b>																							
WINDOWS	45	12	556,200	0	673,870	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAIN ENTRANCE DOORS	45	11	6,000	7,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>DECORATING</b>																							
<b>CORRIDORS</b>																							
CARPET	10	7	90,300	0	0	0	0	0	0	119,380	0	0	0	0	0	0	0	0	0	142,130	0	0	0
CORRIDOR LIGHT FIXTURES	25	10	49,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>BATHROOMS</b>																							
RENOVATION	25	10	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>BALCONIES</b>																							
BALCONY REPAIRS	10	2	300,000	0	363,470	0	0	0	0	0	0	0	0	0	432,750	0	0	0	0	0	0	0	0
<b>MECHANICAL/PLUMBING/ELECTRICAL</b>																							
<b>MECHANICAL</b>																							
COOLING TOWER(S)	25	14	445,000	0	0	0	558,290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORRIDOR HVAC	30	29	148,670	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242,320	0
<b>PLUMBING</b>																							
PLUMBING/CONDENSATE/DRAINS	40	6	260,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATER HEATER(S)	15	13	6,000	0	0	7,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,610	0	0
<b>ELECTRICAL</b>																							
SWITCHGEAR/COMMON AREA PANELS/WIRING	40	6	260,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ELEVATORS</b>																							
ELEVATORS	30	29	920,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,499,500	0
MECHANICAL/PLUMBING/ELECTRICAL	1	1	12,000	14,290	14,540	14,790	15,060	15,320	15,590	15,860	16,140	16,430	16,720	17,010	17,310	17,610	17,920	18,240	18,560	18,890	19,220	19,560	19,900
<b>TOTAL BUILDING</b>			3,290,760																				
<b>RECREATION</b>																							
<b>SWIMMING POOL</b>																							
WHITECOAT	7	4	10,790	12,850	0	0	0	0	0	0	14,520	0	0	0	0	0	0	16,400	0	0	0	0	0
FILTER/PUMPS/WATER LINES	15	12	15,000	0	18,170	0	0	0	0	0	0	0	0	0	0	0	0	0	23,610	0	0	0	0
COPING/TILES/WALLS&FLOORS	14	11	16,220	19,310	0	0	0	0	0	0	0	0	0	0	0	0	24,650	0	0	0	0	0	0
<b>TOTAL RECREATION</b>			42,010																				
<b>OTHER PROPERTY FEATURES</b>																							
<b>GARAGE</b>																							
GENERAL REPAIRS	12	5	168,000	0	0	0	0	0	0	222,100	0	0	0	0	0	0	0	0	0	0	0	273,820	0
OVERHEAD DOORS	12	5	27,000	0	0	0	0	0	0	35,690	0	0	0	0	0	0	0	0	0	0	0	44,010	0
MAIL BOXES	40	40	32,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STREET LIGHTS	35	18	92,400	0	0	0	0	0	0	0	124,300	0	0	0	0	0	0	0	0	0	0	0	0
SITE ITEMS	1	1	2,000	2,380	2,420	2,470	2,510	2,550	2,600	2,640	2,690	2,740	2,790	2,840	2,890	2,940	2,990	3,040	3,090	3,150	3,200	3,260	3,320
<b>TOTAL OTHER PROPERTY FEATURES</b>			321,400																				
<b>TOTAL BUILDING</b>			\$3,654,170	\$55,970	\$1,072,470	\$57,950	\$575,860	\$17,870	\$18,190	\$395,670	\$193,970	\$19,170	\$19,510	\$19,850	\$452,950	\$60,180	\$20,910	\$62,330	\$21,650	\$193,100	\$381,540	\$2,082,470	\$23,220

30-YEAR FINANCIAL PLANS

Association & PM+ Plans are Calculated Using the Cash Flow Method

FY (10)	Expenses		If Association Plan Continues			If PM+ Recommendation is Adopted			If Component Method is Adopted		
	Annual * (11)	Cumulative (12)	Interest (13)	Contr'btn (14)	Balance (15)	Interest (16)	Contr'btn (17)	Balance (18)	Interest (19)	Contr'btn (20)	Balance (21)
AOH					<b>\$700,000</b>			<b>\$700,000</b>			<b>\$700,000</b>
2018	14,000	14,000	19,740	185,000	890,740	19,740	173,430	879,170	19,740	158,310	864,050
2019	322,970	336,970	25,120	188,260	781,150	24,790	176,480	757,470	24,370	221,070	786,520
2020	240,460	577,430	22,030	191,570	754,290	21,360	179,590	717,960	22,180	198,800	767,040
2021	26,120	603,550	21,270	194,940	944,380	20,250	182,750	894,840	21,630	171,230	933,780
2022	224,100	827,650	26,630	198,370	945,280	25,230	185,970	881,940	26,330	229,700	965,710
2023	582,670	1,410,320	26,660	201,860	591,130	24,870	189,240	513,380	27,230	272,090	682,360
2024	115,810	1,526,130	16,670	205,410	697,400	14,480	192,570	604,620	19,240	154,700	740,490
2025	46,330	1,572,460	19,670	209,030	879,770	17,050	195,960	771,300	20,880	148,850	863,890
2026	16,100	1,588,560	24,810	212,710	1,101,190	21,750	199,410	976,360	24,360	165,340	1,037,490
2027	92,430	1,680,990	31,050	216,450	1,256,260	27,530	202,920	1,114,380	29,260	206,430	1,180,750
2028	55,970	1,736,960	35,430	220,260	1,455,980	31,430	206,490	1,296,330	33,300	246,810	1,404,890
2029	1,072,470	2,809,430	41,060	224,140	648,710	36,560	210,120	470,540	39,620	381,370	753,410
2030	57,950	2,867,380	18,290	228,080	837,130	13,270	213,820	639,680	21,250	189,980	906,690
2031	575,860	3,443,240	23,610	232,090	516,970	18,040	217,580	299,440	25,570	271,920	628,320
2032	17,870	3,461,110	14,580	236,170	749,850	8,440	221,410	511,420	17,720	134,990	763,160
2033	18,190	3,479,300	21,150	240,330	993,140	14,420	225,310	732,960	21,520	163,300	929,790
2034	395,670	3,874,970	28,010	244,560	870,040	20,670	229,280	587,240	26,220	233,880	794,220
2035	193,970	4,068,940	24,540	248,860	949,470	16,560	233,320	643,150	22,400	171,850	794,500
2036	19,170	4,088,110	26,780	253,240	1,210,320	18,140	237,430	879,550	22,400	135,500	933,230
2037	19,510	4,107,620	34,130	257,700	1,482,640	24,800	241,610	1,126,450	26,320	153,350	1,093,390
2038	19,850	4,127,470	41,810	262,240	1,766,840	31,770	245,860	1,384,230	30,830	182,730	1,287,100
2039	452,950	4,580,420	49,820	266,860	1,630,570	39,040	250,190	1,220,510	36,300	254,420	1,124,870
2040	60,180	4,640,600	45,980	271,560	1,887,930	34,420	254,590	1,449,340	31,720	172,860	1,269,270
2041	20,910	4,661,510	53,240	276,340	2,196,600	40,870	259,070	1,728,370	35,790	184,890	1,469,040
2042	62,330	4,723,840	61,940	281,200	2,477,410	48,740	263,630	1,978,410	41,430	216,370	1,664,510
2043	21,650	4,745,490	69,860	286,150	2,811,770	55,790	268,270	2,280,820	46,940	247,010	1,936,810
2044	193,100	4,938,590	79,290	291,190	2,989,150	64,320	272,990	2,425,030	54,620	320,230	2,118,560
2045	381,540	5,320,130	84,290	296,310	2,988,210	68,390	277,790	2,389,670	59,740	407,740	2,204,500
2046	2,082,470	7,402,600	84,270	301,530	1,291,540	67,390	282,680	657,270	62,170	584,640	768,840
2047	23,220	7,425,820	36,420	306,840	1,611,580	18,540	287,660	940,250	21,680	172,950	940,250
<b>SUMMARY</b>											
	<b>30-Year Income =</b>		1,108,150	7,229,250		888,650	6,777,420		912,760	6,753,310	
	<b>30-Year Minimum Balance =</b>				516,970			299,440			628,320
	<b>30-Year Maximum Balance =</b>				2,989,150			2,425,030			2,204,500
	<b>50-Year Minimum Balance =</b>				516,970			299,440			628,320
	<b>50 Year Maximum Balance =</b>				5,946,680			4,174,170			2,771,850

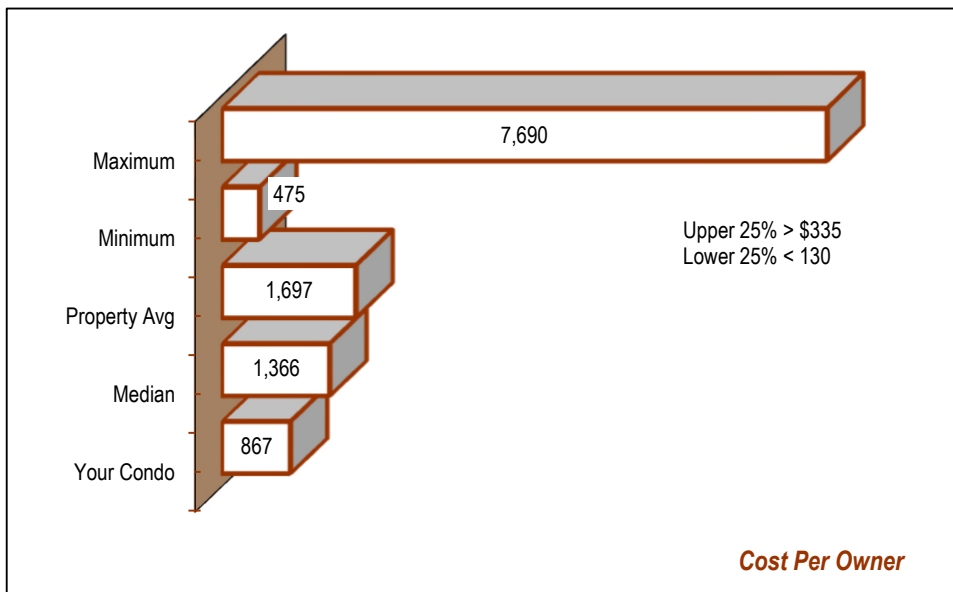
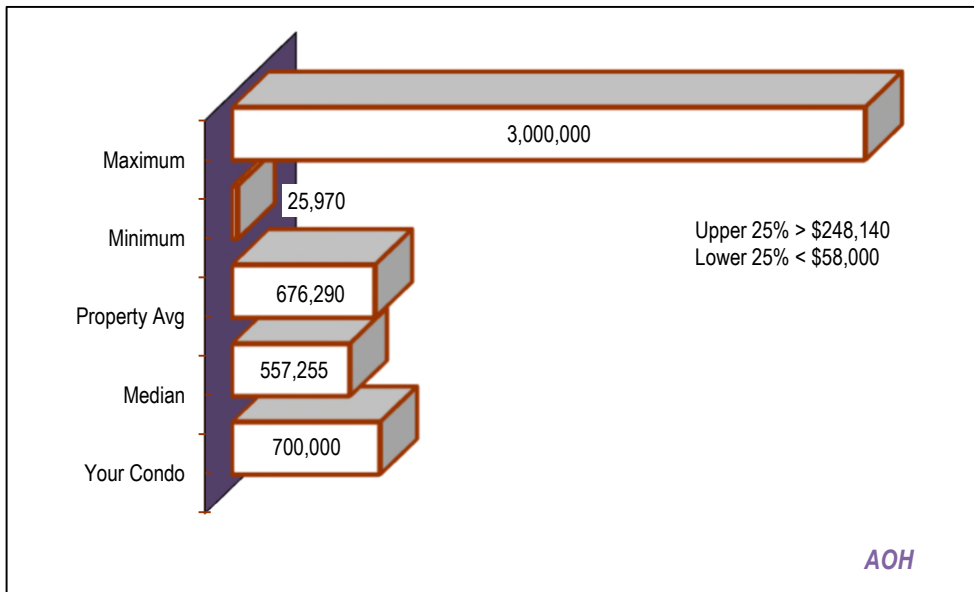
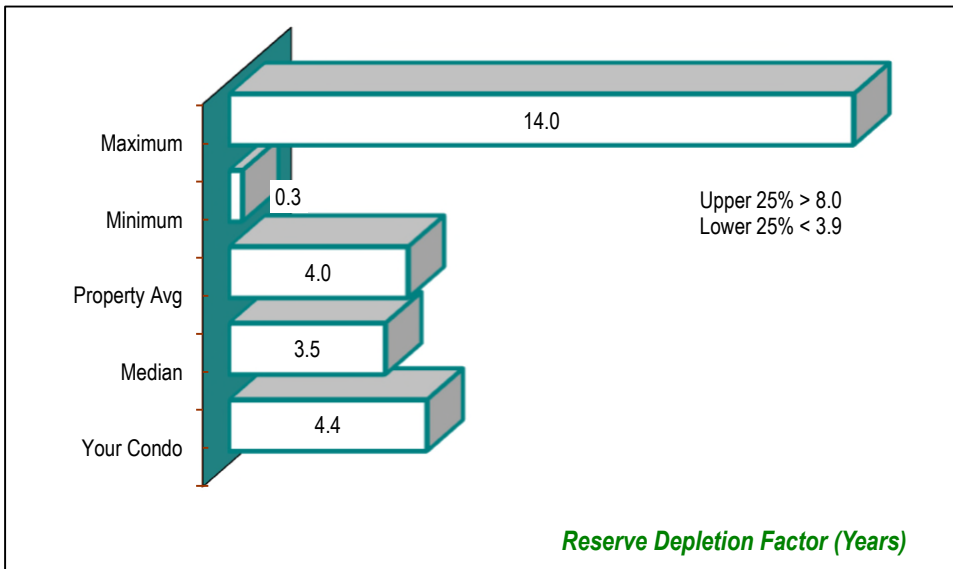
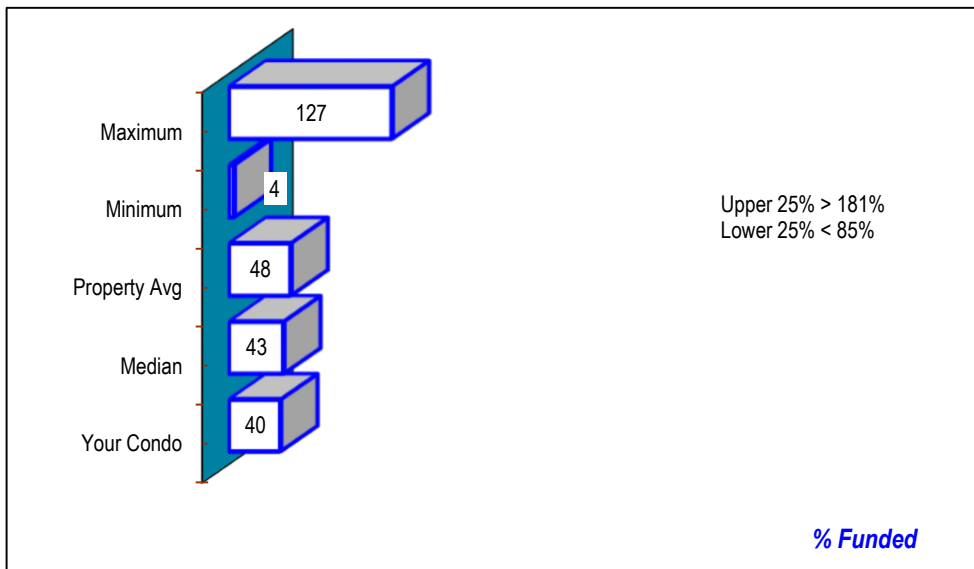


Notes:  
 \* An annual average cost. Expenditures can change from year-to-year depending on when actual work is done.  
 Projections are based on this year - will vary as current cost, useful life, amount-on-hand, contribution and contingency change.  
 Data should be considered a more accurate projection for years 1 - 5 than the out-years.  
 Minimum balance does not include the first year.



**COMPARISON TO OTHER PROPERTIES**

Sample Size = 100 HOA's/POA's



Legend:  
 This comparison only compares the first study year to other properties.  
 % Funded -- Used-up life divided by Useful Life times Current Cost.  
 Reserve Depletion Factor -- Number of years the amount-on-hand will fund if no more is contributed to the reserves.  
 AOH - Reserve funds available at start of fiscal year.  
 Cost Per Owner - The average cost per owner to meet the reserve requirement compared to other properties.

Attention is directed to columns (1) COMPONENT, (3) AVG and (4) REM USEFUL LIFE, and (5) ESTIMATED COST IN CURRENT DOLLARS on Page A1. These entries, along with reserve savings at the start of the fiscal year and contingency built into the funding plan, determine the annual contribution needed to support the reserves. The remaining useful life approximates the time period when funding should be available for repair/replacement work. Good maintenance and repair practices prior to replacement can extend component useful life; conversely, poor or no maintenance/repair will shorten life and result in more cost to the association. Following comments are provided for components that may need further explanation.

**BUILDING**

**FACADE/CAULK/WATERPROOFING**      repairs to bricks, siding, shutters, sealing windows, doors, walls, expansion joints and other openings to keep buildings weather tight.

**WINDOWS & DOORS**      We assume all common area windows will be replaced when repair costs become excessive; doors replaced as needed.

**DECORATING**

Decorating costs can vary depending on quality of materials desired, number of coats needed to properly protect surfaces, surface preparation, ease of access and other factors. We use average costs for our estimates. Your actual cost could be higher or lower.

**MECHANICAL/PLUMBING/ELECTRICAL**

**PLUMBING**      After years of use domestic water pipes leak - we reserve for common area pipe repairs. Because cost can be significantly different than the average cost we budget, we recommend the association hire a firm that can evaluate pipe condition to more precisely predict cost and when repairs/replacement may be needed. There are two ways to make domestic piping repairs; 1) pipe replacement, 2) relining with epoxy. Relining is in the range of 50% cheaper than replacement and has the advantage of being less inconvenient to owners because walls do not need to be removed and water outages are minimal.

**WATER HEATER(S)**      Usually leak to signal the end of their useful life.

**CORRIDOR HVAC**      Timely maintenance to the air conditioning and heating equipment, consisting of filter changes, coil cleaning, leak checks, tightening electric connections and controlling corrosion could make it possible for the units to exceed the remaining useful life shown in the table. Also, when the units fail to operate properly, consider component repairs (motors, coils, and other parts) to restore the units to full operation. Avoid replacing the entire unit until the components can no longer be repaired or the unit housing is so badly corroded it no longer serves its intended purpose.

**MECHANICAL/PLUMBING/ELECTRICAL**      A annual expenditure to keep in good repair common area mechanical, plumbing and electric systems that are not reserved for elsewhere. Heat exchangers, coils, unit heaters, motors, pumps, gauges, valves, controls, fire, security, mechanical system, plumbing pipes, electric faults and other kinds of system deterioration will need repair as problems occur.

**OTHER PROPERTY FEATURES**

**OVERHEAD DOORS**      Frequent use of the garage doors will result in wear and tear to motors, drive mechanisms, guides and doors. Maintenance actions, such as, lubricating moving parts, checking drive mechanism for proper movement and tightening electrical connections will extend useful life.

**SITE ITEMS**      Repairs to entrance features, signs, sign posts, flood lights, drainage, minor landscaping, irrigation systems, mulch, fountains, hand railing, masonry columns and walls, picnic tables/benches, exercise trails, trash receptacles, dog stations, mechanical, plumbing, electrical systems and other miscellaneous items that are not reserved for elsewhere.

**EXCLUSIONS**

**PRESSURE WASHING/PAINTING/STAINING**      Not included in the reserves. Maintenance work, properly funded from the operating account.

**CATASTROPHES**      Are not predictable events - no reserve allowance. If one occurs funding from other sources may be needed if the contingency built into the reserves is insufficient to cover expenses.

**STORM WATER FACILITIES**      Considered to be a long lasting system that can provide many years of service if spot repaired and cleared of debris as needed. We budget a reasonable amount for spot repairs every five years. If major work is needed, funding from sources other than the reserves may be needed.

**DRY WATER RETENTION POND**      Grounds maintenance is an operating expense. Funding that may be needed for spill way repairs is provided for in the Site Items entry.