



SPECIALIZING IN RESERVE STUDIES SINCE 1990
A PROFESSIONAL CORPORATION

September 30, 2008

Tanterra HOA
c/o Mr. Curtis Barrett
President, Board of Directors
18742 Considine Drive
Brookeville, MD 20833

Dear Mr. Barrett:

Enclosed please find the updated Repair and Replacement Reserve Study for Tanterra HOA.

Consider this version a "Final Draft". It will become the "Final Report" after review by the Board of Directors (or their representatives) and all concerns have been addressed. If desired I will attend a meeting to discuss this study at a mutual agreeable time. In the meantime, please let me know if there are any questions.

I thank the Board of Directors for selecting **PM+** to do this study and hope you will continue to call upon us for your reserve study needs.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mario B. Ginnetti', is written over a light blue horizontal line.

Mario B. "Ben" Ginnetti, PRA, RS, P.E.
President

Enclosures:

Study - PDF File



SPECIALIZING IN RESERVE STUDIES SINCE 1990
A PROFESSIONAL CORPORATION

RESERVE STUDY UPDATE

TANTERRA HOA

Brookeville, MD

Prepared for:

Board of Directors

Date:

September 30, 2008



Engineer

Mario B. "Ben" Ginnetti, PRA, RS, P.E.

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Executive Summary

- The following relevant data was used in preparing this study:

1st Study Year	FY09	\$43,000	AOH at Start of Fiscal Year ♦
FY Begins	01-Jan-09	\$16,500	Current Year Contribution ♦
Proposal Received Date	22-Aug-08	2.90%	Inflation ♦♦
Property Inspection Date	23-Sep-08	3.85%	Interest ♦♦
Inflation/Interest Date	23-Sep-08	390	# Units

- ♦ AOH (cash amount on hand at start of fiscal year) and current year contribution were supplied by management and are considered best information available as of the proposal acceptance date. They are not audited amounts.
 - ♦♦ Interest and inflation factors¹ best project the current and future needs of the property. Inflation and interest are based on the 10-year CPI and U.S. 10-Year Treasury note yield, on the date shown.
- Based on the funds available at the start of the fiscal year and your current contribution (adjusted for inflation) the following summarizes your existing funding profile and compares it to our analysis of the funding needed to support the reserves over the life of the study:

	Contribution	
	Current	Our Analysis
	FY09	
Association Contribution	\$17,000	\$52,900
Average per Owner	\$44	\$136
	30-Yr Average	
Association Contribution	\$26,500	\$82,500
Average per Owner	\$68	\$212
	30-Yr Minimum Balance	
	\$ (\$2,225,700)	\$41,000
	% -524%	10%

- Our analysis of your current contribution indicates it will need to be increased if the reserve requirements of the property are to be met. See 30-Year Cash Flow Projection chart, column 12, for projected contributions needed to support the reserves.
- Our inspection found the components to be experiencing normal wear and tear.
- In preparing this study **PM+** compared the contributions needed to support both the Cash Flow Pooling and Component methods. Our analysis concluded the cash flow pooling method required the least contribution; therefore, this study is submitted using this method.

1. Although the 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.

Study Information

Introduction

The purpose of this study is to design a **Table of Repair/Replacement Reserves** for the common and limited common elements of the property based on the current condition of the components. If the property is to preserve the owner's investment and its quality of life features, a reserve of funds is necessary to do future work.

This study is the second engagement for the property by **PM+**. **PM+** has neither collaborated with nor provided consulting advice to others on issues pertaining to the property.

In developing the table we consider items 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 (Non # sign items).

These components have a predictable life cycle (an average useful life). We show that life in column (3) in the "Table of Repair and Replacement Reserves." At the end of its useful life total replacement will be needed.

Annual Allowances (Items preceded by the # sign).

We reserve an average annual amount for these items. These items 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.

If major work to these items is needed it usually requires the services of an architect, engineer, or specialty contractors to determine scope and cost. We do not reserve for major work in this category unless we are informed the community has a project pending and an estimated cost is known. If future major work is needed it should be budgeted for in an updated reserve study or funded from other sources.

There are three major considerations to be taken into account when establishing the **Reserves**: 1) properly funded reserves avoids "special assessments", 2) each owner should pay their fair share for the time they use the component, and 3) when reserve funds are available the Association is more inclined not to defer work. Work deferral results in additional deterioration and "catch-up" costs to restore the item to a good condition. 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 the best information available, it is possible actual costs and useful life can vary 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 need for a special assessment to do reserve work.

This study only considers items already in place. It does not take into consideration any major work the association is contemplating to alter present conditions, unless noted otherwise. Nor does it consider correcting hazardous or defective conditions associated with asbestos, radon, lead, mold, FRT, utility, plumbing, mechanical, electrical systems, etc. Work of this nature requires a special study to determine scope and costs.

This purpose of this study is to determine the funding needed to support the property's reserve requirement and a recommended funding plan to meet the requirement. No other use is intended.

For any reserve projects in progress on the date(s) of our inspection our observation of the work should not be considered a project audit or quality control inspection. We leave that to others to determine.

In order for the Table 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.

Maintenance/Repair/Replacement “Tips” and 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 an item 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 an item, 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 item.

The 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 an item, e.g., a roof, a fence, an air conditioner, etc., all measures should be taken to extend the useful life of the item with repairs. If the roof is leaking don't 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 item. 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 item to its “like original” condition. Include state-of-the-art improvements but avoid over buying or substantially enhancing an item beyond its original condition. Such improvements are not included in the cost estimates.

Catastrophic failures to such items 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 items 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 items 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 items for 66% of their useful life but only paid 22% of the repair cost.

Mr. and Mrs. "Y" used the items 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 item.

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

Level of Service and Engineer's Qualification

This is a Level II, Update, (with site visit/on-site review) as defined by CAI's National Reserve Study Standards.

This study was compiled in accordance with generally accepted standards and represents our professional opinion on the items, timing and dollar amounts that should be budgeted for repair and replacement. The contents of this study comply with the proposal acceptance. In compiling this study we used information obtained from field measurements, observations and management (information provided by management is considered to be reliable). We also took into considered 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 inspection and the information gained during the inspection 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.

This reserve 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. He is also a CAI Certified Reserve Specialist (RS) and a Professional Reserve Analyst (PRA).

Age, Units and Style

Constructed in the early 70's.

395 Single Family Units.

Major amenities – bathhouse, swimming pool, tennis courts and walking trail.

Cash Flow Pooling Method Studies

This study was calculated using the cash flow pooling 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.

Funding Goals

The following represent the basic categories of Funding Plan goals as defined by the Community Association Institute (CAI) for reserve studies:

- Baseline Funding - Establishing a Reserve funding goal of keeping the Reserve cash balance above zero.
- Component Full Funding - Setting a Reserve funding goal of attaining and maintaining cumulative Reserves at or near 100% funded.
- Statutory Funding - Establishing a Reserve funding goal of setting aside the specific minimum amount of Reserves of component 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." This study complies with this goal.

Common and Limited Common Elements (Major Components)

Pavements/Sidewalks

Asphalt Pavements
Concrete Curbs & Gutters
Concrete Sidewalks

Tennis Courts

Asphalt Courts
Chain Link Fencing

Swimming Pool

Bathhouse
Two Large and One Small Storage Buildings
Pavilion
Gazebo
Adult Pool
Baby Pool
Concrete Deck
Chain Link Fence
Lighting
Pool Furniture
Diving Boards

Other Property Features

Signs
Drainage
Minor Landscaping
Picnic Tables/Benches
Handrailing

Definition of Terms

These definitions pertain to the categories shown in the Table of Repair & Replacement Reserves.

Column

- (1) The various property components and major items of equipment we believe the community should include in the reserves. Where a 15%, 30%, etc., is shown means that total replacement of that item is not anticipated. These items generally have an indefinite life span and only need partial repairs. Items preceded by the pound (#) sign are budgeted for a year at a time. Typically, these items need annual repairs. These items should be adjusted at each update based on historical trends and the amount of work anticipated the following year. If we have omitted or added any items 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.
- (2) Approximate quantity and unit of measure. The following abbreviations are used; however, they may not all appear in this study:

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

Symbol (left of the item in the Reserve Table) - The item is expressed in terms of an annual amount to be done each year as conditions warrant. We believe an annual amount better reflects actual expenditures.

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).

% 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.

Cost Per Owner – Average contribution per owner needed to meet the reserve requirement. The dollar amount will vary from property to property based on construction features, common and limited common elements, past contributions to the reserves and other factors that may not result in a true comparison.

Minimum Balance Percentage – The minimum balance after the first year in the **Cost Projection** chart divided by the **Total Estimated Cost** of all the components (column 5) of the **Table**

of Repair and Replacement Reserves. An amount to be held in reserve to fund unforeseen contingencies. Expressed as a percentage.

- (3) The components average useful life (Avg). Leading publications on useful life data, our own experiences and historical trends are used to determine the average useful life.
- (4) Our best estimate of the remaining useful life (RUL). Some items in the table may not fail precisely as shown. We mainly use the remaining useful life number in conjunction with the estimated cost to arrive at a prudent dollar amount to be allocated to the reserves. Projects anticipated to occur in the first fiscal year are considered to have a “zero” remaining useful life.
- (5) Current cost estimates are in current dollars. Estimates are based on similar work in the greater Washington area, association experience, industry publications, such as R.S. Means and Home-Tech, 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. The cost of such repairs takes precedence over those shown in the table.
- (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 item.
- (7) The amount needed to fund the balance of the requirement.
- (8) The contribution needed to fund the 1st year applying the Pooling method. This value is the product of the reserve components and the 30-year Cash Flow 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) Fiscal Year.
- (10) Projected annual expenses.
- (11) Cumulative expenses over 30-years.
- (12) 30-year projected contribution if the **PM+** funding plan is implemented, adjusted for inflation.
- (13) Projected year-end balance based on our recommendations, interest applied.
- (14) 30-year projected contribution if the association's current funding plan is continued, adjusted for inflation.
- (15) Projected year-end balance based on the association's current funding plan, interest applied.

Significant Changes

(Since the last update dated September 5, 1998)

The “Table of Repair & Replacement Reserves” in appendix “A” lists the components, their estimated costs and useful lives, and the annual contribution needed to support the property’s reserve requirement. This chart also shows the actual cash out-lays the association should be prepared to fund in years 1 – 10.

The “Years 11 – 30 Expense Projection” chart shows the actual cash out-lay the association should be prepared to fund over this period of time.

The “30 – Year Cash Flow Projection” chart summarizes the yearly annual expenses, contributions, and fund balances that should be available at the end of each fiscal year, if our recommendations are implemented (blue line). The brown line plot represents the year end balances based on the associations current contribution. The plot objective 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.

The “Property Comparison” chart compares the property’s current funding to the last 100 properties we have studied. The comparison shows the maximums, minimums and property averages compared to your property.

In general, each item has been reviewed for cost and remaining useful life and, where appropriate, changes have been made to reflect current conditions. Below we address only those items that have had a significant change since the last update and/or we offer comments on items we observed during our visit to the property.

Pavements

Pavement entry revised to include preventive maintenance work. There are two considerations that apply to asphalt pavements. 1) Preventive maintenance will extend pavement useful life, and 2) when its useful life is used up the pavement will need to be restored to full strength.

- 1) Preventive maintenance consist of sealing open cracks (equal to or greater than 1/8”), repair base/sub-base areas that have failed (distinguished by “alligator” or “chicken wire” cracking), applying a seal coat to the entire surface and repaint all traffic markings. An additional benefit of the seal coat and traffic markings is the pavement will look uniform and that enhances property appearance. Funding for this work is identified as “Repair/Seal Coat/Traffic Markings” in the reserve table. Although we allow for this work to be done every four years, if cracks open or asphalt failures occur sooner they should be repaired at that time. The contingency built into the funding plan should be more than adequate to fund these repairs in the off years. If additional funds are needed in the scheduled years, likewise, the contingency should be used.
- 2) Be prepared to overlay all asphalt around the time period shown in the table. Although we allow for 100% of the asphalt to receive an overlay our experience supports a

smaller percentage of the base/sub base will need repairs. We show that percentage in the "Base/Concrete Repairs" entry. When paving, we recommend the contract call for "milling" of the gutter pans. Milling will maintain the same elevation at the pans and reduce the possibility of drainage problems. The cost estimate will provide a 1-1/2" compacted overlay and milling of the curbs. If complete milling of the driving lanes and parking areas is needed and a thicker overlay is placed, cost will be higher.

Note - We use current cost for the price of asphalt pavement work. Asphalt cost is dictated by the price of oil. Actual cost could be higher or lower depending on the cost of oil at the time work is done and how many base failures need repair to support the overlay.

Tennis/Multi-Purpose Courts

Tennis courts were re-built since our last visit. Also, the number of playing courts has been reduced from three to two; one court has been converted to multi-purpose use. We reserve for the next color coating and future repairs.

Fencing is showing corrosion. Fence useful life can be extended if corrosion can be controlled. Painting is cost effective in controlling corrosion.

Swimming Pool Complex

We notice some missing shingles on the roofs. Useful life of these roofs could be extended with some spot repairs.

The bathhouse was last renovated in 1989/99. We assume a major renovation will be needed every twenty-years and budget \$130,000 for this work.

A new building called the "Work Shed" has been constructed since our last visit. We assume the structure to be a "Life-of-the-Property" component and reserve only for the roof, gutters and downspouts, mechanical and electrical systems.

The pools were whitecoated since our last visit. We reserve for the next time this work may be needed. Note - Major catastrophic repairs caused by high water table flotation or major wall/floor failures are not budgeted for in the reserves because this work is not predictable. If failures do occur they are sometimes covered by insurance, if not, repairs should be funded from other sources at that time.

A gazebo has been built since our last visit. We reserve only for the roof and floor and assume the structure will last the "Life-of-the-Property" if the wood structure is periodically stained or painted and spot wood spot repairs are done as needed.

We reserve for the next time the newly installed surveillance system may need to be replaced.

Painting is not included in the reserves. Painting is funded from other sources.

Annual Allowances

These items are critical for the proper repair and replacement of components that do not fail on a cyclic basis but are an integral part of this reserve study. We reserve an annual amount based on quantity and quality of the components available. Most contractors have a minimum charge for work regardless of the size, and although the amount we allocate may be less than some minimums, that amount accrues, and in conjunction with the contingency, allows work to be funded when needed.

Facade/Caulk/Waterproofing – Minor repairs to bricks, siding, shutters, sealing windows, doors, walls, expansion joints and other openings to keep buildings weather tight.

Common Area Windows and Doors – Provides for replacing association owned windows and doors, as needed.

Curbs/Gutters/Sidewalks/Trail - Curbs, gutters, sidewalks and steps will deteriorate, heave, settle, be damaged by tree roots or sustain other types of damage. Defective areas should be corrected as needed.

Pool Deck/Coping & Tile - Deck, coping and tiles will need joint and crack sealing and spot repairs to keep them in good condition to meet safety and health department requirements.

Pool Furniture/Equipment - Some pool chairs, tables and other furnishings will need servicing or replacement each year to keep them in good repair. Also allows for the upkeep of lifeguard stands and diving boards, if installed.

Mechanical/Plumbing/Electrical - A general category to repair common area mechanical, plumbing and electric systems that are not reserved for elsewhere. Motors, pumps, gauges, valves, controls, fire, security, sinks, commodes, plumbing pipes, electric faults and other kinds of system deterioration will need repair as problems occur.

Site Lighting - The complex is illuminated through a series of pole and building mounted fixtures. Fixture, pole and distribution electric wiring failures should be expected.

Site Items - Repairs to entrance features, signs, drainage, minor landscaping, hand railing, masonry columns and walls, picnic tables/benches, trash receptacles, barbeque stoves, exercise trails, etc.

Appendix A

TABLE OF REPAIR & REPLACEMENT RESERVES

YEARS 1 - 10 EXPENSE PROJECTION

INFLATION = 2.90%
INTEREST = 3.85%

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ITEM	APPROX'MT		USEFUL LIFE ESTIMATED		DISTR'BTN OF AOH AS OF 01-Jan-09	BALANCE NEEDED TO FUND RESERVE	FY09 RECOM'MND CONTR'BTN	YEARS 1 - 10 EXPENSE PROJECTION											
	QUANTITY	AVG REM	YRS)	COST IN				CURRENT \$	(6)	(7)	(8)	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)												
PAVEMENTS																			
RPRS/SEAL COAT/TRAFFIC MARKINGS	3,278	SY	4	2	\$5,200	\$500	\$4,700	\$1,700	\$0	\$5,400	\$0	\$0	\$0	\$6,000	\$0	\$0	\$0	\$0	\$6,700
PAVEMENT OVERLAY	3,278	SY	15	7	39,300	4,000	35,300	3,700	0	0	0	0	0	0	46,700	0	0	0	0
BASE/CONCRETE RPRS @ 10%	328	SY	15	7	11,100	1,100	10,000	1,000	0	0	0	0	0	0	13,200	0	0	0	0
TOTAL PAVEMENTS					55,600	5,600	50,000	6,400											
TENNIS/MULTI-PURPOSE COURTS																			
RESURFACE/NETS	2	EA	5	2	7,800	800	7,000	2,600	0	8,000	0	0	0	0	9,300	0	0	0	0
STONE OVERLAY/CRACK SEALING	2	EA	20	17	58,000	5,800	52,200	2,200	0	0	0	0	0	0	0	0	0	0	0
MULTI-PURPOSE COURT	1	EA	5	2	3,900	400	3,500	1,300	0	4,000	0	0	0	0	4,600	0	0	0	0
10' CHAIN LINK FENCE	520	LF	30	5	15,100	1,500	13,600	2,000	0	0	0	0	16,900	0	0	0	0	0	0
8' CHAIN LINK FENCE	110	LF	30	5	2,900	300	2,600	400	0	0	0	0	3,300	0	0	0	0	0	0
4' CHAIN LINK FENCE	30	LF	30	5	500	100	400	100	0	0	0	0	600	0	0	0	0	0	0
TOTAL TENNIS/MULTI-PURPOSE COURTS					88,200	8,900	79,300	8,600											
SWIMMING POOL COMPLEX																			
BATHHOUSE ROOF	2,716	SF	20	8	9,500	1,000	8,500	800	0	0	0	0	0	0	11,600	0	0	0	0
BATHHOUSE RENOVATION		LS	20	10	130,000	13,100	116,900	8,500	0	0	0	0	0	0	0	0	168,100	0	0
ALL PURPOSE SHED ROOF	720	SF	20	8	2,500	300	2,200	200	0	0	0	0	0	0	3,100	0	0	0	0
WORK SHED ROOF	725	SF	20	17	2,500	300	2,200	100	0	0	0	0	0	0	0	0	0	0	0
SMALL STORAGE SHED ROOF	80	SF	20	8	300	0	300	0	0	0	0	0	0	0	400	0	0	0	0
PAVILION ROOF	2,310	SF	20	8	8,100	800	7,300	700	0	0	0	0	0	0	9,900	0	0	0	0
WHITECOAT/MINOR REPAIRS		LS	5	3	40,000	4,000	36,000	8,800	0	0	42,400	0	0	0	48,900	0	0	0	0
FILTER/PUMPS/WATER LINES		LS	15	4	12,000	1,200	10,800	2,000	0	0	0	13,100	0	0	0	0	0	0	0
HOT WATER HEATER	2	EA	15	5	18,000	1,800	16,200	2,400	0	0	0	0	20,200	0	0	0	0	0	0
6' CHAIN LINK FENCE	950	LF	30	5	20,900	2,100	18,800	2,700	0	0	0	0	23,400	0	0	0	0	0	0
4' CHAIN LINK FENCE	40	LF	30	5	700	100	600	100	0	0	0	0	800	0	0	0	0	0	0
3' CHAIN LINK FENCE	600	LF	30	5	9,600	1,000	8,600	1,300	0	0	0	0	10,800	0	0	0	0	0	0
GAZEBO ROOF	154	SF	20	15	1,200	100	1,100	100	0	0	0	0	0	0	0	0	0	0	0
GAZEBO FLOOR	288	SF	30	25	4,000	400	3,600	100	0	0	0	0	0	0	0	0	0	0	0
SURVEILLANCE SYSTEM		LS	10	10	7,700	800	6,900	500	0	0	0	0	0	0	0	0	0	10,000	0
TOTAL SWIMMING POOL COMPLEX					267,000	27,000	240,000	28,300											
ANNUAL ALLOWANCES																			
# FACADE/CAULK/WATERPROOFING		LS	1	1	1,400	100	1,300	1,000	1,400	1,400	1,500	1,500	1,600	1,600	1,700	1,700	1,800	1,800	1,800
# WINDOW/DOORS		LS	1	1	1,400	100	1,300	1,000	1,400	1,400	1,500	1,500	1,600	1,600	1,700	1,700	1,800	1,800	1,800
# CURBS/GUTTERS/SIDEWALKS/TRAIL		LS	1	1	1,000	100	900	700	1,000	1,000	1,100	1,100	1,100	1,200	1,200	1,200	1,300	1,300	1,300

TABLE OF REPAIR & REPLACEMENT RESERVES

YEARS 1 - 10 EXPENSE PROJECTION

INFLATION = 2.90%
INTEREST = 3.85%

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ITEM	APPROX'MT QUANTITY	USEFUL LIFE ESTIMATED		DISTR'BTN OF AOH AS OF 01-Jan-09	BALANCE NEEDED TO FUND RESERVE	FY09 RECOM'MND CONTR'BTN	YEARS 1 - 10 EXPENSE PROJECTION											
		AVG REM (YRS)	COST IN CURRENT \$				FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)											
# POOL DECK/COPING & TILE	LS	1	1	1,700	200	1,500	1,100	1,700	1,700	1,800	1,900	1,900	2,000	2,000	2,100	2,100	2,200	2,200
# POOL FURNITURE/EQUIPMENT	LS	1	1	3,100	300	2,800	2,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,000
# MECHANICAL/PLUMBING/ELECTRICAL	LS	1	1	1,500	200	1,300	1,000	1,500	1,500	1,600	1,600	1,700	1,700	1,800	1,800	1,900	1,900	1,900
# SITE LIGHTING	LS	1	1	1,500	200	1,300	1,000	1,500	1,500	1,600	1,600	1,700	1,700	1,800	1,800	1,900	1,900	1,900
# SITE ITEMS	LS	1	1	2,700	300	2,400	1,800	2,700	2,800	2,900	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,500
TOTAL ANNUAL ALLOWANCES				14,300	1,500	12,800	9,600											
TOTAL RESERVES				\$425,100	\$43,000	\$382,100	\$52,900	\$14,300	\$31,900	\$57,700	\$28,600	\$92,100	\$22,500	\$90,900	\$91,300	\$18,100	\$203,200	\$203,200

FY09 AVERAGE CONTRIBUTION PER OWNER = \$136

Notes:

All dollars rounded to nearest \$100, except contribution per owner. Totals may not add due to rounding.

- An annual allocation. Repairs are usually needed at least once a year.

One year remaining useful life indicates the useful life of the component is used up, except for # sign items that are treated as annual events.

YEARS 11 - 30 EXPENSE PROJECTION

INFLATION = 2.90%
INTEREST = 3.85%

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ITEM	USEFUL LIFE ESTIMATED		COST IN CURRENT \$	YEARS 11 - 30 EXPENSE PROJECTION																			
	AVG REM (YRS)	(4)		FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38
PAVEMENTS																							
RPRS/SEAL COAT/TRAFFIC MARKINGS	4	2	\$5,200	\$0	\$0	\$0	\$7,500	\$0	\$0	\$0	\$8,500	\$0	\$0	\$0	\$9,500	\$0	\$0	\$0	\$10,600	\$0	\$0	\$0	\$11,900
PAVEMENT OVERLAY	15	7	39,300	0	0	0	0	0	0	0	0	0	0	0	71,600	0	0	0	0	0	0	0	0
BASE/CONCRETE RPRS @ 10%	15	7	11,100	0	0	0	0	0	0	0	0	0	0	0	20,200	0	0	0	0	0	0	0	0
TOTAL PAVEMENTS			55,600																				
TENNIS/MULTI-PURPOSE COURTS																							
RESURFACE/NETS	5	2	7,800	0	10,700	0	0	0	0	12,300	0	0	0	0	14,200	0	0	0	0	16,400	0	0	0
STONE OVERLAY/CRACK SEALING	20	17	58,000	0	0	0	0	0	0	91,600	0	0	0	0	0	0	0	0	0	0	0	0	0
MULTI-PURPOSE COURT	5	2	3,900	0	5,300	0	0	0	0	6,200	0	0	0	0	7,100	0	0	0	0	8,200	0	0	0
10' CHAIN LINK FENCE	30	5	15,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8' CHAIN LINK FENCE	30	5	2,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4' CHAIN LINK FENCE	30	5	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TENNIS/MULTI-PURPOSE COURTS			88,200																				
SWIMMING POOL COMPLEX																							
BATHHOUSE ROOF	20	8	9,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,600	0	0
BATHHOUSE RENOVATION	20	10	130,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	297,800
ALL PURPOSE SHED ROOF	20	8	2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,400	0	0
WORK SHED ROOF	20	17	2,500	0	0	0	0	0	0	3,900	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STORAGE SHED ROOF	20	8	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	0	0
PAVILION ROOF	20	8	8,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,500	0	0
WHITECOAT/MINOR REPAIRS	5	3	40,000	0	0	56,400	0	0	0	0	65,000	0	0	0	75,000	0	0	0	0	86,600	0	0	0
FILTER/PUMPS/WATER LINES	15	4	12,000	0	0	0	0	0	0	0	20,100	0	0	0	0	0	0	0	0	0	0	0	0
HOT WATER HEATER	15	5	18,000	0	0	0	0	0	0	0	0	0	31,000	0	0	0	0	0	0	0	0	0	0
6' CHAIN LINK FENCE	30	5	20,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4' CHAIN LINK FENCE	30	5	700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3' CHAIN LINK FENCE	30	5	9,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GAZEBO ROOF	20	15	1,200	0	0	0	0	1,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GAZEBO FLOOR	30	25	4,000	0	0	0	0	0	0	0	0	0	0	0	0	0	7,900	0	0	0	0	0	0
SURVEILLANCE SYSTEM	10	10	7,700	0	0	0	0	0	0	0	0	13,300	0	0	0	0	0	0	0	0	0	0	17,600
TOTAL SWIMMING POOL COMPLEX			267,000																				
ANNUAL ALLOWANCES																							
# FACADE/CAULK/WATERPROOFING	1	1	1,400	1,900	1,900	2,000	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,600	2,600	2,700	2,800	2,900	2,900	3,000	3,100	3,200
# WINDOW/DOORS	1	1	1,400	1,900	1,900	2,000	2,000	2,100	2,100	2,200	2,300	2,300	2,400	2,500	2,600	2,600	2,700	2,800	2,900	2,900	3,000	3,100	3,200
# CURBS/GUTTERS/SIDEWALKS/TRAIL	1	1	1,000	1,300	1,400	1,400	1,500	1,500	1,500	1,600	1,600	1,700	1,700	1,800	1,800	1,900	1,900	2,000	2,000	2,100	2,200	2,200	2,300
# POOL DECK/COPING & TILE	1	1	1,700	2,300	2,300	2,400	2,500	2,500	2,600	2,700	2,800	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
# POOL FURNITURE/EQUIPMENT	1	1	3,100	4,100	4,200	4,400	4,500	4,600	4,800	4,900	5,000	5,200	5,300	5,500	5,700	5,800	6,000	6,200	6,300	6,500	6,700	6,900	7,100
# MECHANICAL/PLUMBING/ELECTRICAL	1	1	1,500	2,000	2,100	2,100	2,200	2,200	2,300	2,400	2,400	2,500	2,600	2,700	2,700	2,800	2,900	3,000	3,100	3,200	3,200	3,300	3,400
# SITE LIGHTING	1	1	1,500	2,000	2,100	2,100	2,200	2,200	2,300	2,400	2,400	2,500	2,600	2,700	2,700	2,800	2,900	3,000	3,100	3,200	3,200	3,300	3,400
# SITE ITEMS	1	1	2,700	3,600	3,700	3,800	3,900	4,000	4,100	4,300	4,400	4,500	4,600	4,800	4,900	5,100	5,200	5,400	5,500	5,700	5,800	6,000	6,200
TOTAL ANNUAL ALLOWANCES			14,300																				
TOTAL RESERVES			\$425,100	\$19,100	\$35,600	\$76,600	\$28,300	\$23,000	\$21,800	\$136,700	\$96,700	\$43,900	\$68,800	\$25,500	\$148,700	\$101,800	\$27,600	\$36,500	\$39,900	\$54,700	\$161,500	\$31,700	\$360,000

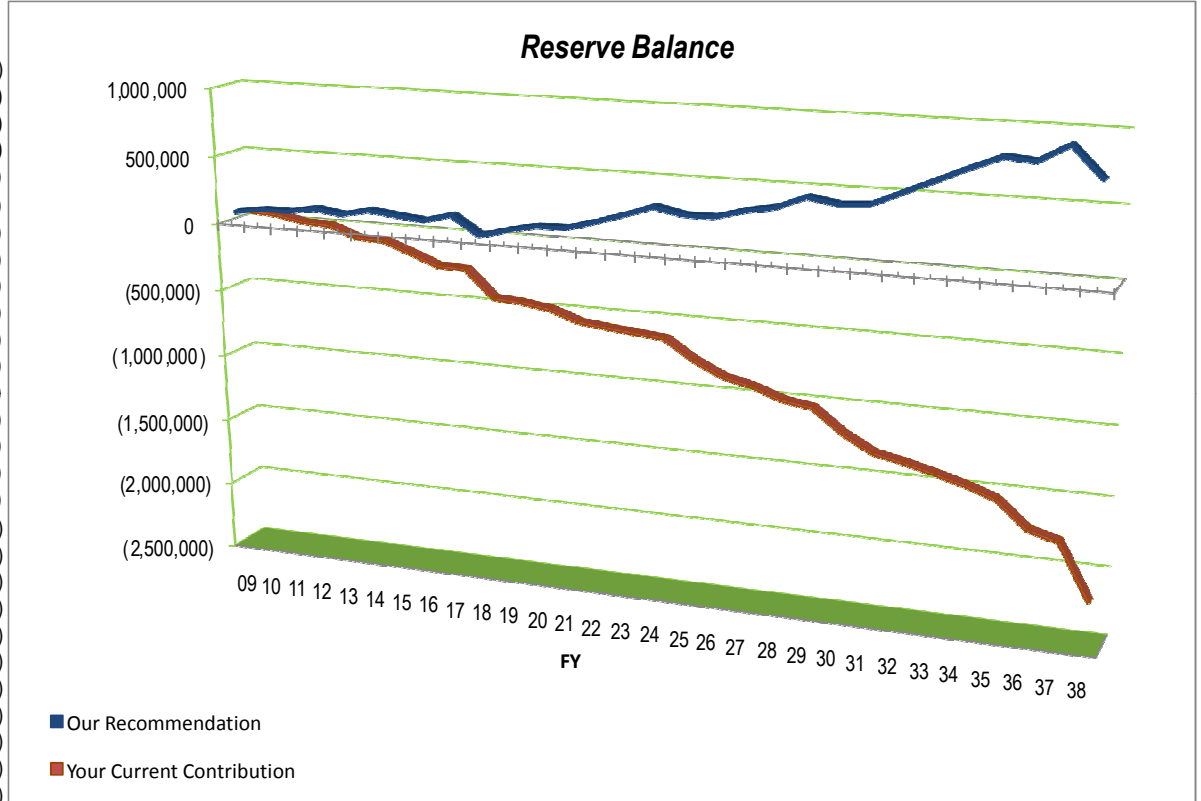
30 - YEAR CASH FLOW PROJECTION

Based on the assumptions in this study, the Association should be prepared to spend the following over the life of the study:

FY	Expenses		30-Year Cash Flow			
	Annual* (10)	Cumulative (11)	Our Recommendation Contribution (12)	Our Recommendation Balance (13)	Your Current Contribution (14)	Your Current Contribution Balance (15)
AOH				\$43,000		\$43,000
09	14,300	14,300	52,900	84,700	17,000	47,500
10	31,900	46,200	54,400	111,300	17,500	34,400
11	57,700	103,900	56,000	113,800	18,000	(5,500)
12	28,600	132,500	57,600	148,300	18,500	(16,200)
13	92,100	224,600	59,300	119,900	19,000	(92,700)
14	22,500	247,100	61,000	164,500	19,600	(99,300)
15	90,900	338,000	62,800	141,700	20,200	(176,500)
16	91,300	429,300	64,600	119,400	20,800	(256,500)
17	18,100	447,400	66,500	174,300	21,400	(262,900)
18	203,200	650,600	68,400	41,000	22,000	(461,200)
19	19,100	669,700	70,400	95,900	22,600	(475,300)
20	35,600	705,300	72,400	137,800	23,300	(506,400)
21	76,600	781,900	74,500	140,900	24,000	(580,500)
22	28,300	810,200	76,700	196,600	24,700	(606,600)
23	23,000	833,200	78,900	262,200	25,400	(627,500)
24	21,800	855,000	81,200	334,000	26,100	(647,200)
25	136,700	991,700	83,600	291,700	26,900	(786,100)
26	96,700	1,088,400	86,000	291,800	27,700	(888,000)
27	43,900	1,132,300	88,500	349,400	28,500	(938,200)
28	68,800	1,201,100	91,100	386,000	29,300	(1,015,300)
29	25,500	1,226,600	93,700	471,700	30,100	(1,049,600)
30	148,700	1,375,300	96,400	435,500	31,000	(1,212,200)
31	101,800	1,477,100	99,200	449,600	31,900	(1,331,500)
32	27,600	1,504,700	102,100	544,300	32,800	(1,377,400)
33	36,500	1,541,200	105,100	636,500	33,800	(1,433,200)
34	39,900	1,581,100	108,100	731,800	34,800	(1,493,700)
35	54,700	1,635,800	111,200	818,600	35,800	(1,570,800)
36	161,500	1,797,300	114,400	801,200	36,800	(1,760,800)
37	31,700	1,829,000	117,700	921,400	37,900	(1,822,200)
38	360,000	2,189,000	121,100	708,800	39,000	(2,225,700)

Units = 390

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SUMMARY

30-Year Annual Average =	\$82,500	\$26,500
30-Year Annual Average per Owner =	\$212	\$68
Minimum Balance over 30-Years =	\$41,000	(\$2,225,700)
Minimum Balance % =	10%	-524%

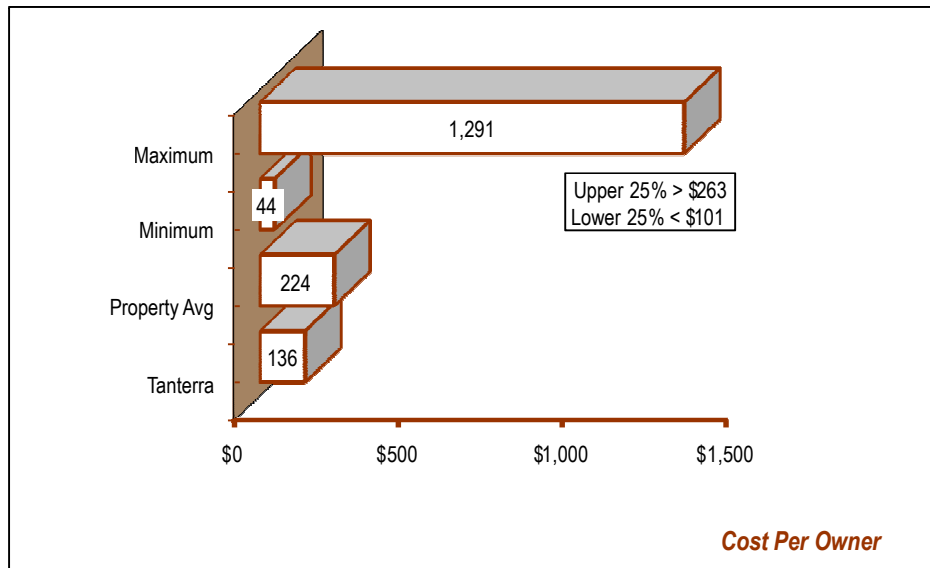
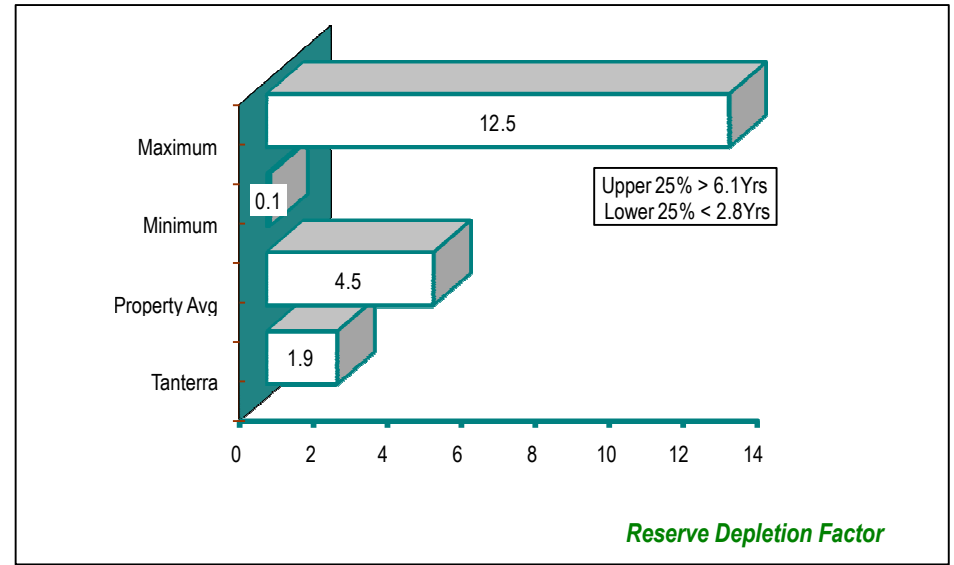
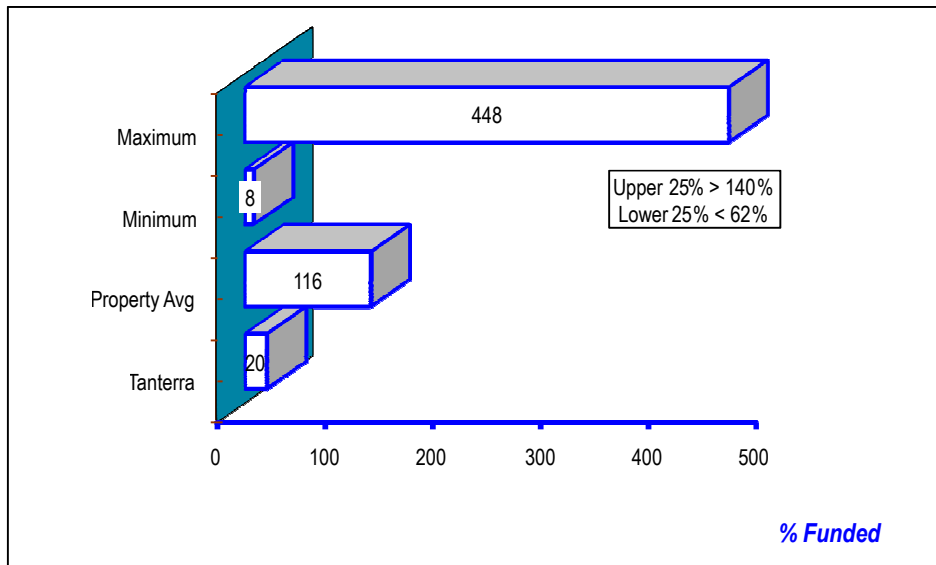
Current Amount-on-Hand =	\$43,000	2.90% = Average Inflation
% Funded =	20%	3.85% = Average Interest
Reserve Depletion Factor =	1.9	

Notes:

* An annual average cost. Some expenditures may be needed in earlier years, some in later years, depending on when the actual work is done. Data is a projection based on this point in time. The projection will change as useful life, current costs and amount-on-hand vary. Data should be considered a more accurate projection for years 1 - 5 than the out-years.

PROPERTY COMPARISON
 Sample Size = 100 HOA's/POA's

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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.

Cost Per Owner - The average cost per owner to meet the reserve requirement compared to other properties.