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## Update “With-Site-Visit” Reserve Study



### **Touraine HOA Sammamish, WA**

**Report #: 9794-1**  
**For Period Beginning: February 1, 2007**  
**Ending: December 31, 2007**

**Date Prepared: February 22, 2007**

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## Hello, and welcome to your Reserve Study!

It's all very simple, really. A Reserve Study is the *art and science* of anticipating, and preparing for, major common area repair and replacement costs. With our experience in this industry, we have gathered the information necessary to make an evaluation of the current status of your Reserve Components, an evaluation of the current status of your Reserve Fund, and a recommended Reserve Funding Plan.

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

While this Report has been prepared to answer all of your questions, please don't hesitate to call us if unanswered questions remain. Our toll-free number is (866) 900-2792, and answers to most frequently asked questions are on our web site ([www.ReserveStudy.com](http://www.ReserveStudy.com)). A *Quick Reference Guide* is provided on the following page, to map out your Reserve Study and provide directions to the most valuable areas. From the entire staff of Association Reserves, thank you for selecting us as your Reserve-planning partner!



# Quick Reference Guide



## **What do I distribute to the homeowners?**

A good choice is to distribute copies of the “Executive Summary” immediately following the Table of Contents (a summary page and the Reserve Component Listing).

## **Where do I find...**

### ***...a listing of our Reserve Components?***

Table 2 shows the name, Useful Life, Remaining Useful Life, and current Replacement Cost.

### ***...our Percent Funded rating and recommended Reserve Contribution Rate?***

With our major financial summary information, in the Executive Summary (Page i)

### ***...a description of our objectives and methodology?***

Beginning on Page 1 we introduce the Reserve Study, our objectives, and methodology.

### ***...more detailed information on our site inspection?***

General site inspection notes can be found on Page 5. Photographs and specific information on each component can be found in the Photographic Inventory Appendix.

## **More questions?**

Visit our web site at [www.ReserveStudy.com](http://www.ReserveStudy.com)



or call us at (866) 900-2792

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## Executive Summary

Association: Touraine HOA Assoc. #: 9794-1  
Location: Sammamish, WA  
# of Units: 62  
Report Period: February 1, 2007 through December 31, 2007

### Results

Projected Starting Reserve Balance: .....	\$124,571
Fully Funded Reserve Balance: .....	\$466,847
Percent Funded: .....	26.7%
Recommended 2007 Monthly Reserve Contribution: .....	\$5,378
Recommended Special Assessment this year: .....	\$155,000
Most Recent Reserve Contribution Rate:.....	\$5,378

### Economic Assumptions:

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

- The information in this Reserve Study updates information in the prior Reserve Study prepared by Association Reserves for the association's 2002 Fiscal Year. Our site inspection was performed on February 15, 2007.
- Because your Reserve Fund is 26.7% Funded, this represents a weak position, well below the 70-100% level where associations statistically enjoy fiscal stability with relatively low risk of special assessment and/or deferred maintenance.
- Based on this starting point, your anticipated future expenses, and your historical Reserve contribution rate, our recommendation is to implement a special assessment of \$155,000 while maintaining Monthly Reserve Contributions of \$5,378 with annual inflation offsetting increases hereafter.
- Your multi-year Funding Plan is designed to gradually bring you to the 100% level, or "Fully Funded".
- Reserve projects anticipated this year include: see following page.

# Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost	Future Average Cost
103 Concrete - Repair/Replace	3	2	\$3,000	\$3,183
201 Asphalt - Resurface	25	17	\$10,450	\$17,272
403 Mailboxes - Replace	20	12	\$5,200	\$7,414
505 Wood Fence - Replace (a)	16	8	\$45,000	\$57,005
505 Wood Fence - Replace (b)	16	8	\$37,500	\$47,504
1001 Irrigation System - Repair/Replace	20	12	\$77,500	\$110,496
1109 Wood Fence - Clean/Stain (a)	4	0	\$3,960	\$4,457
1109 Wood Fence - Restain (b)	4	0	\$3,300	\$3,714
1116 Building Exteriors - Paint/Caulk	7	0	\$240,870	\$296,240
1303 Comp Shingle Roof - Replace	23	15	\$332,475	\$517,985
1310 Gutters/Downspouts - Repair/Replace	25	15	\$46,500	\$72,445
1402 Signage - Replace	15	7	\$1,500	\$1,845
1901 Landscape/Drainage - Refurbish	5	0	\$5,000	\$5,796
<b>*13 Total Funded Components</b>				

**\*Cross reference component numbers with photographic inventory pages.**

## Introduction

It is all very simple, really. A Reserve Study is the art and science of anticipating and preparing for major common area repair and replacement expenses. Partially art, because in this field we are making projections about the future. Partially science, because our work is a process of research and analysis along well defined methodologies.

A Reserve Study consists of two parts: the Physical Analysis and the Financial Analysis. The Physical Analysis contains the information about the current condition and repair or replacement cost of the major common area components the association is obligated to maintain. The Financial Analysis contains an evaluation of the association's Reserve balance (measured by Percent Funded) and a recommended Funding Plan to offset the anticipated Reserve expenses.

### Reserve Study

- Physical Analysis
- Financial Analysis

The primary responsibility of the Board of Directors is to maintain, protect, and enhance the assets of the association. As the physical assets age and deteriorate, it is important to accumulate financial assets, keeping the two “in balance”. The Reserve Study is the document that helps keep the physical and financial assets of the association in balance. This Reserve Study is a budget-planning document. The primary information you will get from this document is a list of your major Reserve components, a finding of the current status (strength) of your Reserve Fund, and a recommended Funding Plan. The basic objective of the Reserve Study is to provide a plan to collect funds at a stable rate to offset the predicted irregular Reserve expenses. Setting a stable Reserve contribution rate will ensure that each owner pays their own “fair share” of the ongoing, gradual deterioration of the common areas.

## Methodology

By necessity, the Physical Analysis occurs before the Financial Analysis (first we establish what the projected expenses are, then we determine the association's financial status and create a Funding Plan). For this Update “With-Site-Visit” Reserve Study, the Physical Analysis included a review of your prior Reserve Study and recent Reserve expenditures, and an evaluation of how expenditures are handled (ongoing maintenance vs Reserves). We performed an on-site inspection to evaluate your common areas, confirming and adjusting (as necessary) your prior Reserve Component List. This List (Table 1 or Table 2) contains a description and quantification of individual line items, and estimates for the Useful Life,

### Reserve Study Types

- Full
- • Update With-Site-Visit
- Update No-Site-Visit
- Do-It-Yourself Kit



Remaining Useful Life, and current Replacement Cost of each component. The average of the Best and Worst Case cost estimates are used for all calculations throughout the Financial Analysis. With this information and an assumed inflation rate (as shown on the Executive Summary), we are able to project the array of future major expenses facing the association.

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

Reserve expenses are the larger, infrequent expenses that require significant advance planning. Operating expenses, on the other hand, are those ongoing daily, weekly, or monthly expenses that occur and recur throughout the year. Small surprises are typically handled as maintenance contingencies, while the larger ones may be covered by insurance or require special assessments.

There is a national-standard four-part test to determine which expense items should be funded through Reserves. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the limited life must be predictable (or it by definition is a “surprise” which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost. This limits Reserve Components to major, predictable expenses. We do not typically Reserve for building foundations and major infrastructure elements since they do not have limited life expectancies. Light bulbs or other small items are not listed as Reserve Components since their individual costs are insignificant. Finally, it is usually inappropriate to include unpredictable expenses such as damage due to fire, flood, or earthquake since these typically cannot be considered “reasonably predictable”.

#### **Reserve Components**

- Common Area
- Limited Useful Life
- Predictable Life Limit
- Cost must be Significant

### *How are Useful Life and Remaining Useful Life established?*

Useful Life is typically established by our experience with the component, adjusted by assumptions for quality, rate of wear and tear, expected normal maintenance, and weather exposure. Remaining Useful Life is established primarily by the component’s current observed condition. The observed age of the component may or may not equal the “Chronological Age” of the component due to accelerated wear or low usage. For components requiring a particular expertise or components where age characteristics are not visible (elevators, chillers, security electronics, etc.), it is typical that we interview the association’s service vendor to obtain a recommendation for Useful Life and Remaining Useful Life.

*How are Cost Estimates Established?*

The best way to obtain an accurate cost for a component is for it to be repaired or replaced, providing us with a valuable benchmark from which to make current cost estimates. In absence of “actual” costs, we regularly make comparisons to projects that were done recently at similar associations. In addition, we often contact local vendors who provide us with insights into current pricing trends. For components that require a particular expertise (major roof or roadway systems, elevators, etc.), it is our normal practice to interview your vendor who maintains that asset. In the absence of these estimating tools, we look to reliable industry cost guidebooks. A “Best Case” and “Worst Case” cost estimate is made for each component in an attempt to bracket the actual cost.

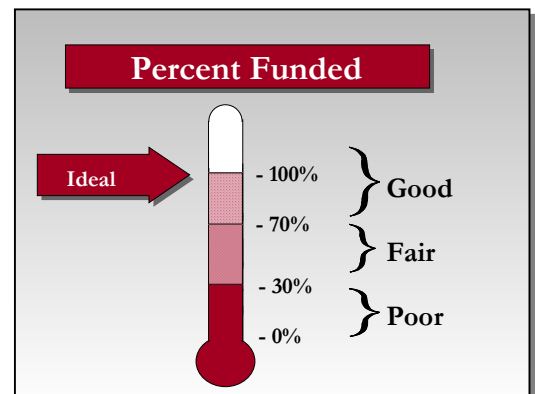
Cost Estimating Tools

- Association History
- Similar Properties
- Vendor Interviews
- Printed cost guides

*How much Reserves are enough?*

Your Reserve cash Balance can measure reserves, but the true measure is whether the funds are adequate for the needs of the association. Reserve Fund size is therefore measured by Percent Funded, which is the actual (or projected) Reserve Balance divided by the association’s calculated Fully Funded Balance (FFB), expressed as a percentage. Table 3 shows that the Fully Funded Balance is the current “value” of the deteriorated portion (not the total replacement value) of all the Reserve Components. To show how this works with one component, in the case of a \$10,000 component with a 10 year Useful Life, in the third year the Fully Funded Balance is three tenths of \$10,000, or \$3,000. The FFB grows as assets age, but shrinks as components are replaced. Deteriorated associations have a higher FFB than association with assets in good condition. The Fully Funded Balance changes each year, and is a predictable, but moving target.

Special assessments and deferred maintenance are common when the Percent Funded is weak (below 30%). While the 100% point is Ideal, a Reserve Fund above the 70% level should be considered “strong” because cash flow problems are rare. Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. An association with a strong Reserve Fund should experience smooth sailing financially, while an association with a weak Reserve Fund should expect cash flow problems. New buyers should be very aware of this important disclosure!



*How much should we contribute?*

There are four Funding Principles that we balance in developing your Reserve Funding Plan. First and foremost, our objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. A stable contribution rate is desirable because it indicates the association is being run on a stable financial platform, not being driven by the winds of change from year to year. For fairness, it is important to evenly distribute the contributions over the years so each owner pays their fair share of the deterioration in direct proportion to the amount of time they are owners. And finally, any Funding Plan must be based on fiscally responsible principles. Your Funding Plan was created by a process where different solutions were tested until one was found that most successfully met all four of these principles and achieved your Funding Goal.

### Funding Principles

- Sufficient Cash
- Stable Contribution Rate
- Evenly Distributed
- Fiscally Responsible

*What is our Funding Goal?*

There are different Funding Goals to strive for, ranging from conservative to risky. Establishing a goal of simply having sufficient cash for all future years is called “Baseline Funding”. The drawback is that there is little or no “margin for error”, and expenses that are higher than budgeted or projects that occur earlier than planned will often cause special assessments.

“Full Funding” is when the association has the goal of becoming Fully Funded (Reserve Cash equals the FFB). Such an objective means the association is following the simple and responsible principle that you “replace what you use up”. Believing this to be the responsible choice, our Funding Plan will direct you to Full Funding. Members of Fully Funded associations enjoy low exposure to the risk of special assessments or deferred maintenance. Strong interest earnings will minimize their Reserve contributions. Board members enjoy peace of mind that the association’s physical and financial assets are in balance, and therefore a degree of insulation from claims of fiscal irresponsibility.

### Funding Goals

- Full Funding
- Threshold Funding
- Baseline Funding

Threshold Funding option is different in that the association selects a target other than 0% or 100%. This objective may be between 0% and 100% Funded, higher than 100% Funded, or a particular Reserve cash balance. Associations choosing Threshold Funding select this option to customize their risk exposure.

## **Site Inspection Notes**

Our site inspection was conducted to update information that appeared in a Reserve Study prepared by Association Reserves for the association's 2002 Fiscal Year. The association deemed that information reliable. All components were re-inspected, and were checked for appropriateness regarding Reserve Funding using the standard four-part test. As this was an Update analysis, we did not review of your Governing Documents.

During our site visit on February 15, 2007, we started the site inspection beginning with the asphalt and general common areas. We visually inspected all the common and limited common elements while compiling a photographic inventory. We noted materials, current condition, apparent levels of care and maintenance as well as exposure to weather elements.

We were informed which items are being successfully handled from the operational/maintenance budget, not reserves.

Follow up research was conducted with several major association vendors as well as members of the associations Board of Directors.

### Projected Expenses

The figure below shows the array of the projected future expenses at your association. As with all computations in this Report, the estimates in this figure are based on the average of Best and Worst Case expense projections. As you can see, expenses are projected 30 years into the future, using the Inflation rate shown in the Executive Summary. This figure clearly shows the near term and future expenses that your association will face.

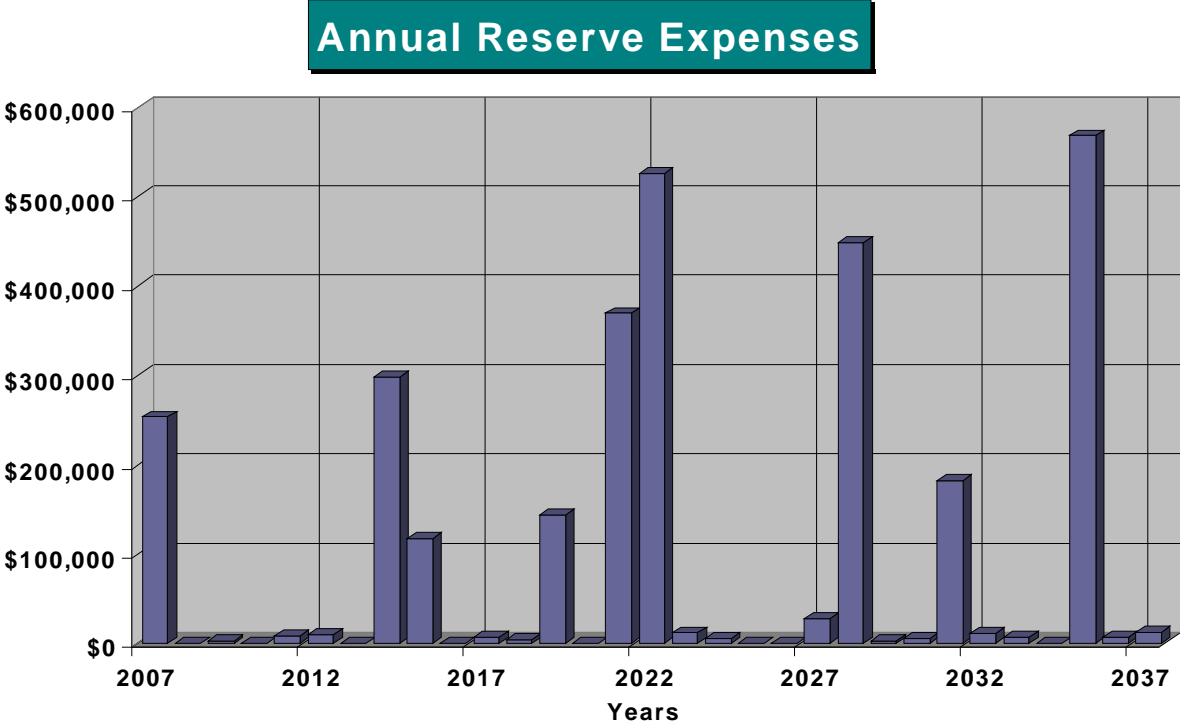


Figure 1

A summary of this information is shown in Table 4, while details of the projects that make up this information are shown in Table 5. Since this is a projection about future events that may or may not take place as anticipated, we feel more certain about “near-term” projects than those many years away. While this Reserve Study is a one-year document, it is based on 30 years worth of looking forward into the future.

## Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$124,571 as-of the start of your Fiscal Year on February 1, 2007. This is based on your actual balance on financial information provided to us by the Board of Directors. As of February 1, 2007, your Fully Funded Balance is computed to be \$466,847 (see Table 3). This figure represents the deteriorated value of your common area components. Comparing your Reserve Balance to your Fully Funded Balance indicates your Reserves are 27% Funded. As mentioned earlier in the Executive Summary, this represents a weak status.

## Recommended Funding Plan

Based on your current Percent Funded and your projected cash flow requirements, we are recommending a one-time special assessment of \$155,000 and continuing Reserve contributions of \$5,378/month this Fiscal Year. This represents the first year of a 30-year Funding Plan. To most fairly spread out the contribution burden over current and future owners in our inflationary economic environment, nominal annual increases should be expected in future years. This Reserve contribution rate was established by testing different contribution rates and balancing the four Funding Principles in an attempt to eventually achieve Full Funding. Generally, the tools we utilize are regular ongoing contributions (for stability and fairness), and special assessments (used only as a last resort). Our recommended multi-year Funding Plan is shown below. This same information is shown numerically in both Table 4 and Table 5

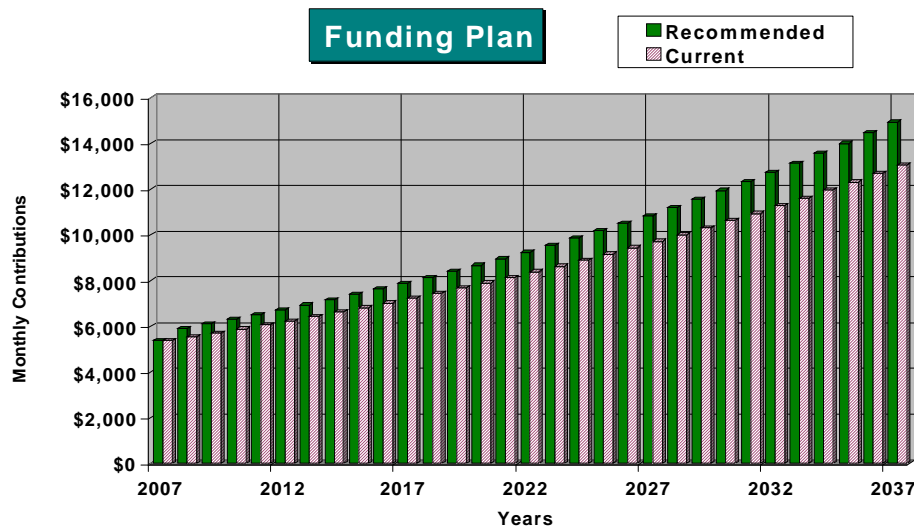


Figure 2

Your projected Reserve Balance as a result of following this Recommended multi-year Funding Plan and your Current Funding Plan is shown below, compared to your Fully Funded Balance target. This assumes the future expenses we have projected in this

Reserve Study. Note that your Reserve Fund gradually draws close to the Fully Funded Balance profile over a period of approximately thirty years. While your Reserve Balance might seem high in future years, remember that these figures are “inflated” future dollars. In addition, this Reserve Balance is necessary to prepare for expenses in following years and provide necessary “margin” for projects that will probably not occur exactly as planned.

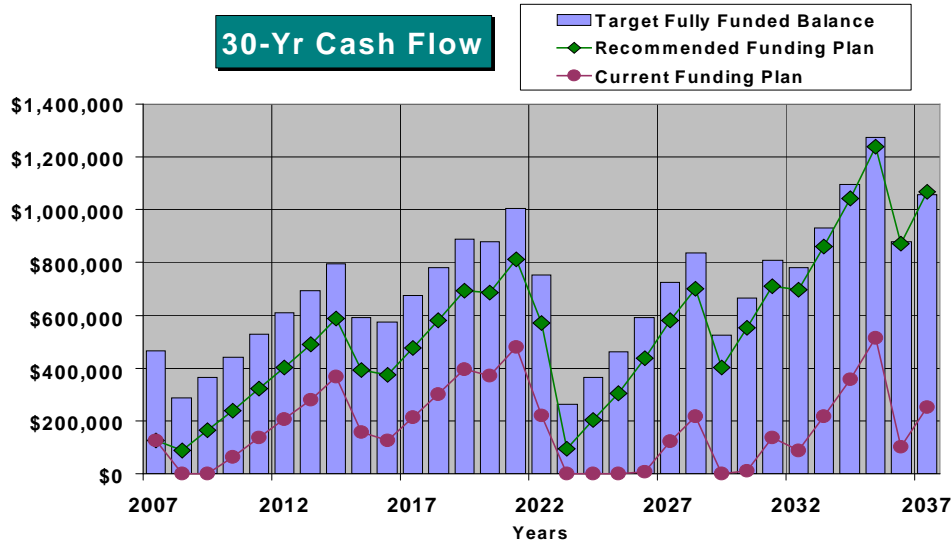


Figure 3

A simple comparison (a percentage comparison) of your Actual Reserve Balance to the moving Fully Funded Balance target is shown below. In this figure it is easy to see how your Reserve Fund gradually draws closer to the Fully Funded (100%) level.

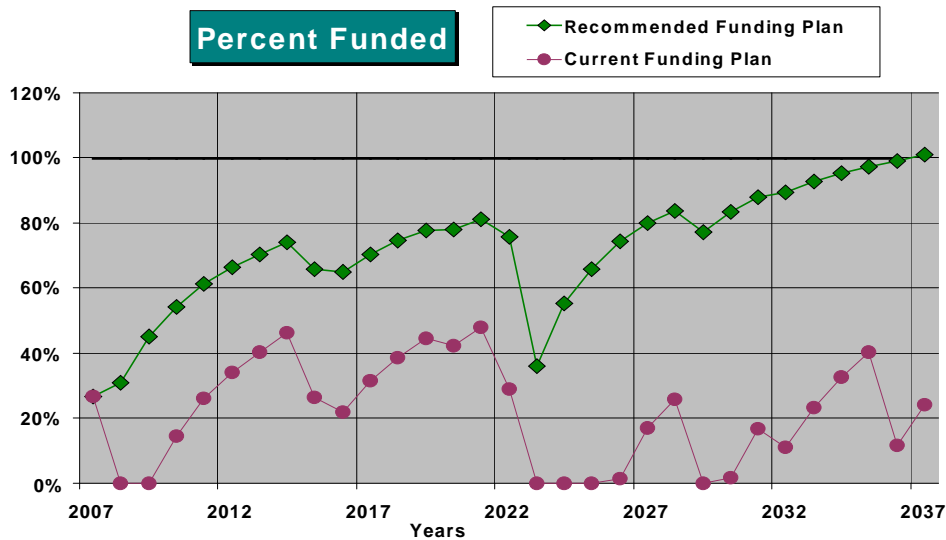


Figure 4

## Table Descriptions

The tabular information in this Report is broken down into five tables.

Table 1 summarizes your funded Reserve Components, and is part of the Executive Report summary that appeared earlier in this Report.

Table 2 provides the main component description, life, and cost factors for all components determined to be appropriate for Reserve designation. This table represents the core information from which all other tables are derived.

Table 3 is presented primarily as an accounting summary page. The results of the individual line item Fully Funded Balance computations are shown. These individual quantities are summed to arrive at the Fully Funded Balance for the association as of the start date of the Report. The figures in the Current Fund Balance column and the Monthly Reserve Contribution column show our distribution throughout the line items. If the association is under-funded, Reserve Funds are distributed first to components with a short Remaining Useful Life. If the association's Reserve Balance is above 100% Funded, funds are distributed evenly for all components. Contribution rates for each component are a proportionate distribution of the total contribution on the basis of the component's significance to the association (current cost divided by useful life). This presentation is not meant to cause clients to redistribute association funds, it simply presents one way to evenly distribute the total among all the different line items.

Table 4: This table provides a one-page 30-year summary of the cash flowing into and out of the association, compared to the Fully Funded Balance for each year.

Table 5: This table shows the cash flow detail for the next 30 years. This table makes it possible to see what components are projected to require repair or replacement each year, and the size of those individual expenses.



**Table 2: Reserve Component List Detail****9794-1**

# Component	Quantity	Useful	Rem.	Best	Current
		Life	Useful		
			Life		Cost
103 Concrete - Repair/Replace	Approx 21,500 Square Feet	3	2	\$2,500	\$3,500
201 Asphalt - Resurface	Approx 7,600 square feet	25	17	\$9,500	\$11,400
403 Mailboxes - Replace	(4) cluster boxes	20	12	\$4,800	\$5,600
505 Wood Fence - Replace (a)	Approx 1,800 linear feet	16	8	\$39,600	\$50,400
505 Wood Fence - Replace (b)	Approx 1,500 linear feet	16	8	\$33,000	\$42,000
1001 Irrigation System - Repair/Replace	Extensive, in ground	20	12	\$62,000	\$93,000
1109 Wood Fence - Clean/Stain (a)	Approx 3,600 square feet	4	0	\$3,600	\$4,320
1109 Wood Fence - Restain (b)	Approx 3,000 square feet	4	0	\$3,000	\$3,600
1116 Building Exteriors - Paint/Caulk	Approx 138,600 GSF	7	0	\$225,370	\$256,370
1303 Comp Shingle Roof - Replace	Approx 120,900 Sq Ft	23	15	\$302,250	\$362,700
1310 Gutters/Downspouts - Repair/Replace	Approx 7,750 linear feet	25	15	\$38,750	\$54,250
1402 Signage - Replace	Entry sign	15	7	\$1,250	\$1,750
1901 Landscape/Drainage - Refurbish	Extensive landscape	5	0	\$4,000	\$6,000
<hr/>					
13 Total Funded Components					

**Table 3: Contribution and Fund Breakdown****9794-1**

# Component	Useful Life	Rem. Useful Life	Current (Avg) Cost	Fully Funded Balance	Current Fund Balance	Reserve Contributions
103 Concrete - Repair/Replace	3	2	\$3,000	\$1,000	\$0.00	\$83.57
201 Asphalt - Resurface	25	17	\$10,450	\$3,344	\$0.00	\$34.93
403 Mailboxes - Replace	20	12	\$5,200	\$2,080	\$0.00	\$21.73
505 Wood Fence - Replace (a)	16	8	\$45,000	\$22,500	\$0.00	\$235.05
505 Wood Fence - Replace (b)	16	8	\$37,500	\$18,750	\$0.00	\$195.88
1001 Irrigation System - Repair/Replace	20	12	\$77,500	\$31,000	\$0.00	\$323.85
1109 Wood Fence - Clean/Stain (a)	4	0	\$3,960	\$3,960	\$3,960.00	\$82.74
1109 Wood Fence - Restain (b)	4	0	\$3,300	\$3,300	\$3,300.00	\$68.95
1116 Building Exteriors - Paint/Caulk	7	0	\$240,870	\$240,870	\$112,311.00	\$2,875.80
1303 Comp Shingle Roof - Replace	23	15	\$332,475	\$115,643	\$0.00	\$1,208.11
1310 Gutters/Downspouts - Repair/Replace	25	15	\$46,500	\$18,600	\$0.00	\$155.45
1402 Signage - Replace	15	7	\$1,500	\$800	\$0.00	\$8.36
1901 Landscape/Drainage - Refurbish	5	0	\$5,000	\$5,000	\$5,000.00	\$83.57
13 Total Funded Components				\$466,847	\$124,571	\$5,378

**Table 4: 30-Year Reserve Plan Summary****9794-1**

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Annual Reserve Contribs.	Special Assessments	Interest Income	Reserve Expenses
2007	\$124,571	\$466,847	26.7%	\$59,158	\$155,000	\$3,196	\$253,130
2008	\$88,795	\$286,409	31.0%	\$70,840	\$0	\$3,778	\$0
2009	\$163,413	\$363,270	45.0%	\$73,142	\$0	\$6,034	\$3,183
2010	\$239,407	\$441,207	54.3%	\$75,519	\$0	\$8,430	\$0
2011	\$323,357	\$526,869	61.4%	\$77,974	\$0	\$10,897	\$8,171
2012	\$404,056	\$608,858	66.4%	\$80,508	\$0	\$13,373	\$9,274
2013	\$488,663	\$694,408	70.4%	\$83,124	\$0	\$16,127	\$0
2014	\$587,915	\$794,382	74.0%	\$85,826	\$0	\$14,654	\$298,085
2015	\$390,310	\$592,703	65.9%	\$88,615	\$0	\$11,432	\$117,506
2016	\$372,853	\$573,415	65.0%	\$91,495	\$0	\$12,732	\$0
2017	\$477,080	\$677,098	70.5%	\$94,469	\$0	\$15,845	\$6,720
2018	\$580,675	\$779,565	74.5%	\$97,539	\$0	\$19,082	\$4,153
2019	\$693,143	\$890,421	77.8%	\$100,709	\$0	\$20,664	\$128,261
2020	\$686,255	\$879,524	78.0%	\$103,982	\$0	\$22,454	\$0
2021	\$812,691	\$1,003,245	81.0%	\$107,362	\$0	\$20,742	\$368,875
2022	\$571,919	\$753,655	75.9%	\$110,851	\$0	\$9,984	\$598,221
2023	\$94,533	\$263,360	35.9%	\$114,454	\$0	\$4,439	\$11,650
2024	\$201,776	\$365,622	55.2%	\$118,173	\$0	\$7,596	\$22,231
2025	\$305,314	\$463,244	65.9%	\$122,014	\$0	\$11,142	\$0
2026	\$438,470	\$589,978	74.3%	\$125,979	\$0	\$15,252	\$0
2027	\$579,702	\$723,901	80.1%	\$130,074	\$0	\$19,191	\$27,561
2028	\$701,406	\$836,939	83.8%	\$134,301	\$0	\$16,562	\$448,089
2029	\$404,180	\$523,816	77.2%	\$138,666	\$0	\$14,359	\$2,874
2030	\$554,330	\$663,570	83.5%	\$143,173	\$0	\$18,948	\$5,921
2031	\$710,530	\$808,188	87.9%	\$147,826	\$0	\$21,085	\$182,464
2032	\$696,977	\$779,230	89.4%	\$152,630	\$0	\$23,361	\$10,469
2033	\$862,499	\$930,600	92.7%	\$157,591	\$0	\$28,532	\$6,470
2034	\$1,042,152	\$1,094,793	95.2%	\$162,712	\$0	\$34,173	\$0
2035	\$1,239,036	\$1,274,865	97.2%	\$168,000	\$0	\$31,608	\$567,703
2036	\$870,941	\$880,020	99.0%	\$173,460	\$0	\$29,021	\$7,070

<b>Table 5: 30-Year Reserve Plan Detail (yrs 0 through 4)</b>	<b>9794-1</b>
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Fiscal Year	2007	2008	2009	2010	2011
Starting Reserve Balance	\$124,571	\$88,795	\$163,413	\$239,407	\$323,357
Annual Reserve Contribution	\$59,158	\$70,840	\$73,142	\$75,519	\$77,974
Planned Special Assessments	\$155,000	\$0	\$0	\$0	\$0
Interest Earnings	\$3,196	\$3,778	\$6,034	\$8,430	\$10,897
<b>Subtotal</b>	<b>\$341,925</b>	<b>\$163,413</b>	<b>\$242,590</b>	<b>\$323,357</b>	<b>\$412,228</b>
<b># Component</b>					
103 Concrete - Repair/Replace	\$0	\$0	\$3,183	\$0	\$0
201 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$0	\$0
1001 Irrigation System - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$3,960	\$0	\$0	\$0	\$4,457
1109 Wood Fence - Restain (b)	\$3,300	\$0	\$0	\$0	\$3,714
1116 Building Exteriors - Paint/Caulk	\$240,870	\$0	\$0	\$0	\$0
1303 Comp Shingle Roof - Replace	\$0	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$0	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$5,000	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$253,130</b>	<b>\$0</b>	<b>\$3,183</b>	<b>\$0</b>	<b>\$8,171</b>
<b>Ending Reserve Balance:</b>	<b>\$88,795</b>	<b>\$163,413</b>	<b>\$239,407</b>	<b>\$323,357</b>	<b>\$404,056</b>

<b>Table 5: 30-Year Reserve Plan Detail (yrs 5 through 9)</b>	<b>9794-1</b>
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Fiscal Year	2012	2013	2014	2015	2016
Starting Reserve Balance	\$404,056	\$488,663	\$587,915	\$390,310	\$372,853
Annual Reserve Contribution	\$80,508	\$83,124	\$85,826	\$88,615	\$91,495
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$13,373	\$16,127	\$14,654	\$11,432	\$12,732
<b>Subtotal</b>	<b>\$497,937</b>	<b>\$587,915</b>	<b>\$688,395</b>	<b>\$490,358</b>	<b>\$477,080</b>
<b># Component</b>					
103 Concrete - Repair/Replace	\$3,478	\$0	\$0	\$3,800	\$0
201 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$57,005	\$0
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$47,504	\$0
1001 Irrigation System - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$0	\$0	\$0	\$5,016	\$0
1109 Wood Fence - Restain (b)	\$0	\$0	\$0	\$4,180	\$0
1116 Building Exteriors - Paint/Caulk	\$0	\$0	\$296,240	\$0	\$0
1303 Comp Shingle Roof - Replace	\$0	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$1,845	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$5,796	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$9,274</b>	<b>\$0</b>	<b>\$298,085</b>	<b>\$117,506</b>	<b>\$0</b>
<b>Ending Reserve Balance:</b>	<b>\$488,663</b>	<b>\$587,915</b>	<b>\$390,310</b>	<b>\$372,853</b>	<b>\$477,080</b>

**Table 5: 30-Year Reserve Plan Detail (yrs 10 through 14)****9794-1**

Fiscal Year	2017	2018	2019	2020	2021
Starting Reserve Balance	\$477,080	\$580,675	\$693,143	\$686,255	\$812,691
Annual Reserve Contribution	\$94,469	\$97,539	\$100,709	\$103,982	\$107,362
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$15,845	\$19,082	\$20,664	\$22,454	\$20,742
Subtotal	\$587,394	\$697,296	\$814,516	\$812,691	\$940,795
# Component					
103 Concrete - Repair/Replace	\$0	\$4,153	\$0	\$0	\$4,538
201 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$7,414	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$0	\$0
1001 Irrigation System - Repair/Replace	\$0	\$0	\$110,496	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$0	\$0	\$5,646	\$0	\$0
1109 Wood Fence - Restain (b)	\$0	\$0	\$4,705	\$0	\$0
1116 Building Exteriors - Paint/Caulk	\$0	\$0	\$0	\$0	\$364,337
1303 Comp Shingle Roof - Replace	\$0	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$0	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$6,720	\$0	\$0	\$0	\$0
Subtotal	\$6,720	\$4,153	\$128,261	\$0	\$368,875
Ending Reserve Balance:	\$580,675	\$693,143	\$686,255	\$812,691	\$571,919

**Table 5: 30-Year Reserve Plan Detail (yrs 15 through 19)****9794-1**

Fiscal Year	2022	2023	2024	2025	2026
Starting Reserve Balance	\$571,919	\$94,533	\$201,776	\$305,314	\$438,470
Annual Reserve Contribution	\$110,851	\$114,454	\$118,173	\$122,014	\$125,979
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$9,984	\$4,439	\$7,596	\$11,142	\$15,252
Subtotal	\$692,754	\$213,426	\$327,545	\$438,470	\$579,702
# Component					
103 Concrete - Repair/Replace	\$0	\$0	\$4,959	\$0	\$0
201 Asphalt - Resurface	\$0	\$0	\$17,272	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$0	\$0
1001 Irrigation System - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$0	\$6,355	\$0	\$0	\$0
1109 Wood Fence - Restain (b)	\$0	\$5,296	\$0	\$0	\$0
1116 Building Exteriors - Paint/Caulk	\$0	\$0	\$0	\$0	\$0
1303 Comp Shingle Roof - Replace	\$517,985	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$72,445	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$0	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$7,790	\$0	\$0	\$0	\$0
Subtotal	\$598,221	\$11,650	\$22,231	\$0	\$0
Ending Reserve Balance:	\$94,533	\$201,776	\$305,314	\$438,470	\$579,702

**Table 5: 30-Year Reserve Plan Detail (yrs 20 through 24)****9794-1**

Fiscal Year	2027	2028	2029	2030	2031
Starting Reserve Balance	\$579,702	\$701,406	\$404,180	\$554,330	\$710,530
Annual Reserve Contribution	\$130,074	\$134,301	\$138,666	\$143,173	\$147,826
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$19,191	\$16,562	\$14,359	\$18,948	\$21,085
Subtotal	\$728,967	\$852,269	\$557,204	\$716,451	\$879,440
# Component					
103 Concrete - Repair/Replace	\$5,418	\$0	\$0	\$5,921	\$0
201 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$0	\$91,476
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$0	\$76,230
1001 Irrigation System - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$7,152	\$0	\$0	\$0	\$8,050
1109 Wood Fence - Restain (b)	\$5,960	\$0	\$0	\$0	\$6,708
1116 Building Exteriors - Paint/Caulk	\$0	\$448,089	\$0	\$0	\$0
1303 Comp Shingle Roof - Replace	\$0	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$2,874	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$9,031	\$0	\$0	\$0	\$0
Subtotal	\$27,561	\$448,089	\$2,874	\$5,921	\$182,464
Ending Reserve Balance:	\$701,406	\$404,180	\$554,330	\$710,530	\$696,977



**Table 5: 30-Year Reserve Plan Detail (yrs 25 through 29)****9794-1**

Fiscal Year	2032	2033	2034	2035	2036
Starting Reserve Balance	\$696,977	\$862,499	\$1,042,152	\$1,239,036	\$870,941
Annual Reserve Contribution	\$152,630	\$157,591	\$162,712	\$168,000	\$173,460
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$23,361	\$28,532	\$34,173	\$31,608	\$29,021
Subtotal	\$872,968	\$1,048,621	\$1,239,036	\$1,438,645	\$1,073,422
# Component					
103 Concrete - Repair/Replace	\$0	\$6,470	\$0	\$0	\$7,070
201 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
403 Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (a)	\$0	\$0	\$0	\$0	\$0
505 Wood Fence - Replace (b)	\$0	\$0	\$0	\$0	\$0
1001 Irrigation System - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1109 Wood Fence - Clean/Stain (a)	\$0	\$0	\$0	\$9,060	\$0
1109 Wood Fence - Restain (b)	\$0	\$0	\$0	\$7,550	\$0
1116 Building Exteriors - Paint/Caulk	\$0	\$0	\$0	\$551,093	\$0
1303 Comp Shingle Roof - Replace	\$0	\$0	\$0	\$0	\$0
1310 Gutters/Downspouts - Repair/Replace	\$0	\$0	\$0	\$0	\$0
1402 Signage - Replace	\$0	\$0	\$0	\$0	\$0
1901 Landscape/Drainage - Refurbish	\$10,469	\$0	\$0	\$0	\$0
Subtotal	\$10,469	\$6,470	\$0	\$567,703	\$7,070
Ending Reserve Balance:	\$862,499	\$1,042,152	\$1,239,036	\$870,941	\$1,066,353

## Accuracy, Limitations, and Disclosures

Because we have no control over future events, we cannot claim that all the events we anticipate will occur as planned. We expect that inflationary trends will continue, and we expect that financial institutions will provide interest earnings on funds on-deposit. We believe that reasonable estimates for these figures are much more accurate than ignoring these economic realities. The things we can control are measurements, which we attempt to establish within 5% accuracy. Your starting Reserve Balance and current Reserve interest earnings are also numbers that can be identified with a high degree of certainty. These figures have been provided to us, and were not confirmed by our independent research. Our projections assume a stable economic environment and lack of natural disasters.

Because both the physical status and financial status of the association change each year, this Reserve Study is by nature a “one-year” document. This information can and should be adjusted annually as part of the Reserve Study Update process so that more accurate estimates can be reflected in the Reserve plan. Reality often differs from even the best assumptions due to changing economic factors, physical factors, or ownership expectations. Because many years of financial preparation help the preparation for large expenses, this Report shows expenses for the next 30 years. We fully expect a number of adjustments will be necessary through the interim years to both the cost and timing of distant expense projections. It is our recommendation and that of the American Institute of Certified Public Accountants (AICPA) that your Reserve Study be updated annually.

Association Reserves, Inc., and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. Robert M. Nordlund, P.E., R.S., company president, is a California licensed Professional Engineer (Mechanical, #22322), and credentialed Reserve Specialist (#5). All work done by Association Reserves is performed under his Responsible Charge. There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the association’s situation.

We have relied upon the client to provide the current (or projected) Reserve Balance, the estimated net-after-tax current rate of interest earnings, and to indicate if those earnings accrue to the Reserve Fund. In addition, we have considered the association’s representation of current and historical Reserve projects reliable, and we have considered the representations made by its vendors and suppliers to also be accurate and reliable.

Component quantities indicated in this Report were derived from the prior Reserve Study, unless otherwise noted in our “Site Inspection Notes” comments. No destructive or intrusive testing was performed, nor should the site inspection be assumed to be anything other than for budget purposes.

## Terms and Definitions

<b>BTU</b>	British Thermal Unit (a standard unit of energy)
<b>DIA</b>	Diameter
<b>GSF</b>	Gross Square Feet (area)
<b>GSY</b>	Gross Square Yards (area)
<b>HP</b>	Horsepower
<b>LF</b>	Linear Feet (length)

**Effective Age:** The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.

**Fully Funded Balance (FFB):** The Reserve Balance that is in direct proportion to the fraction of life “used up” of the current Repair or Replacement cost. This benchmark balance represents the value of the deterioration of the Reserve Components. This number is calculated for each component, then summed together for an association total.

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

**Inflation:** Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on Table 5.

**Interest:** Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary, page ii.

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

**Remaining Useful Life:** The estimated time, in years, that a common area component can be expected to continue to serve its intended function.

**Useful Life:** The estimated time, in years, that a common area component can be expected to serve its intended function.

## Photographic Inventory Appendix