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9/22/2016

Sample High-Rise Owners Association

Regarding: Fiscal Year beginning 1/1/2017 - Level I Capital Replacement Reserve Study

We are pleased to submit this Level I Reserve Study for Sample High-Rise Owners Association. This report is a budgeting tool designed to help you navigate the uncertain future. It contains financial projections to help you understand your future reserve expenses. This report will help you answer the questions "Do we have enough in our Reserve account?" and "How much do we need to contribute to our reserve fund?"

If you have questions about the Reserve Study, please contact us. We look forward to doing business with you in the future.

Thank you,

Casey Arnett, P.R.A
Project Manager



Table of Contents

Disclosure and Limitations	3
Report Guide	4
Report Summary	4
Expense Projections	4
Funding Plans	4
Physical Analysis/Maintenance Recommendations	4
Methodology and Definitions	4
Project Overview	5
Executive Summary	6
Five Year Projections – Reserve Expenses	8
Immediately Necessary Repairs and Replacements	8
5-Year Summary of Reserve Funding	8
Percent Funded	9
Recommended Funding Objective	9
Recommended Reserve Contribution	10
Reserve Fund Account	10
Projected Reserve Account Balance – FULL FUNDING	11
METHODOLOGY	12
Reserve Study	12
Reserve Component Four-Part Test	12
Determining Expected Useful Life	12
Cost Estimates	12
Recommended Funding Strategy	12
DATA TABLES APPENDIX	13
TABLE 1: Reserve Component List	14
TABLE 2: Projected Reserve Expenses (Years 1-10)	16
TABLE 3: Projected Reserve Expenses (Years 11-20)	18
TABLE 4: Projected Reserve Expenses (Years 21-30)	20
TABLE 5: Detailed Funding Plan – Full Funding	23
TABLE 6: Detailed Funding Plan – Threshold Funding	23
TABLE 7: Detailed Funding Plan – Baseline Funding	25
Supplemental Disclosures	26
Definitions	27
Physical Analysis (PHOTOGRAPHIC INVENTORY)	29-39

Disclosure and Limitations

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. 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 developed by Capital Reserves 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.

Report Guide

The Board of Directors or governing body of common interest entities has a fiduciary responsibility to maintain and preserve the value of common area assets belonging to the entity. As part of their fiduciary duty, board members are responsible for the long-term planning and funding of future major repairs and replacements of community assets such as; remodeling the clubhouse, retrofit of the fire alarm system and resurfacing of private streets.

The purpose of this study is to provide the Association with an inventory of reserve components that require periodic repair and replacement and a reserve funding plan to offset the associated costs of these projects. This report provides condition assessments and maintenance schedules of each reserve component to assist the association in making budget decisions regarding reserve funding.

This reserve study adheres to the Community Association Institute’s (CAI) standards regarding service levels and disclosures. This report is in compliance with The American Institute of Certified Public Accountants (AICPA) guidelines for Common Interest Realty Associations. Recommendations and accompanying assumptions included herein are based on information provided to Capital Reserve Analysts and assembled for the Association’s use.

Our analysis and recommendations are divided into five easy-to-understand sections:

Report Summary

Provides an overview of the Association’s current physical condition and financial situation, outlining significant findings and conclusions. This section of the report should be used as a quick reference in helping the reader to understand the parameters and results of the study.

Expense Projections

Examines report finding and results with projections for individual reserve components expenses and recommended funding. This section includes detailed tables outlining projected expenses, funding requirements and reserve balance calculations.

Funding Plans

Examines projected reserve expenses and outlines our recommended funding plan compared with Baseline and Threshold alternatives. This section includes detailed tables outlining projected expenses, funding requirements and reserve balance calculations.

Physical Analysis/Maintenance Recommendations

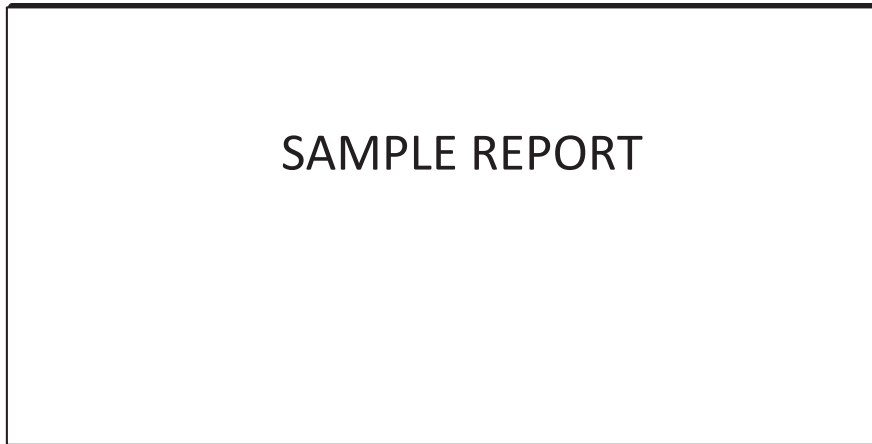
Provides in-depth, detailed condition assessments for each reserve component along with maintenance recommendations and depreciation schedules based on estimated useful life, remaining useful life and current replacement costs.

Methodology and Definitions

Details the framework, methods, and materials used in developing the reserve study and the associated funding plan. This section provides a comprehensive understanding of the methodology and the process taken to develop the report.

Project Overview

Association Name Sample High-Rise Owners Association	Project Description Condominiums	Number of Units 200
Location Austin, Texas	Type of Study Level I	Date Prepared 9/22/2016
Year Constructed 1/1/2005	Funding Strategy Recommended Full Funding	Next Study 2017



Project Summary

Report Period (Fiscal Year)	1/1/2017–10/31/2046	
Inflation Rate (30 Year Average)	3%	
Interest Earned on Reserves (30 Yr. Avg.)	2.50%	
Projected Starting Reserve Balance	\$350,000	<div style="border: 1px solid black; padding: 5px; width: fit-content;">Current projected Reserve balance on 1/1/2017</div>
Fully Funded Balance	\$665,502	
Percent Funded	52.59%	<div style="border: 1px solid black; padding: 5px; width: fit-content;">100% Funded level</div>
Recommended Reserve Contributions	\$128,400/Year	
Special Assessment Needed (2017)	\$N/A	

Executive Summary

The Financial Analysis is made up of a finding of the client's current *Reserve Fund Status* (measured in cash and Percent Funded) and a recommendation for an appropriate Reserve contribution rate (*Funding Plan*) in order to adequately plan for the ongoing major maintenance, repair and replacement of common area elements.

\$350,000

Starting Reserve Balance

- Your projected starting reserve balance is the dollar amount projected to be in the reserve account at the beginning of the report period. This amount is calculated based on client figures and is not audited.

\$665,502

Fully Funded Balance

- Fully funded balance is the amount needed to cover future reserve expenses and reduce special assessment risk.

52.59%

Percent Funded Level

- Percent funded compares what you currently have in the reserve account to the "Ideal" amount that should be in reserves i.e. The Fully Funded Balance.

\$128,400/Year

Recommended Reserve Contributions

- We are recommending reserve contributions of **\$128,400/year** or **\$10,700/month** with annual increases of **3%** for 10 years followed by annual increases of **3%** for the remaining years.

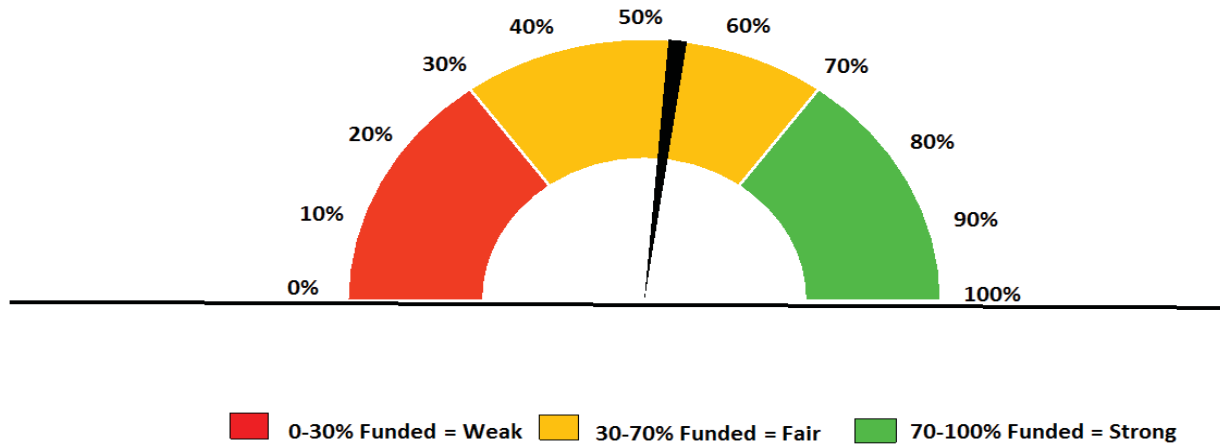
Total Reserve Components: 40 Reserve Components have been identified as part of this analysis.

Calculation Method: Modified Cash Flow Method

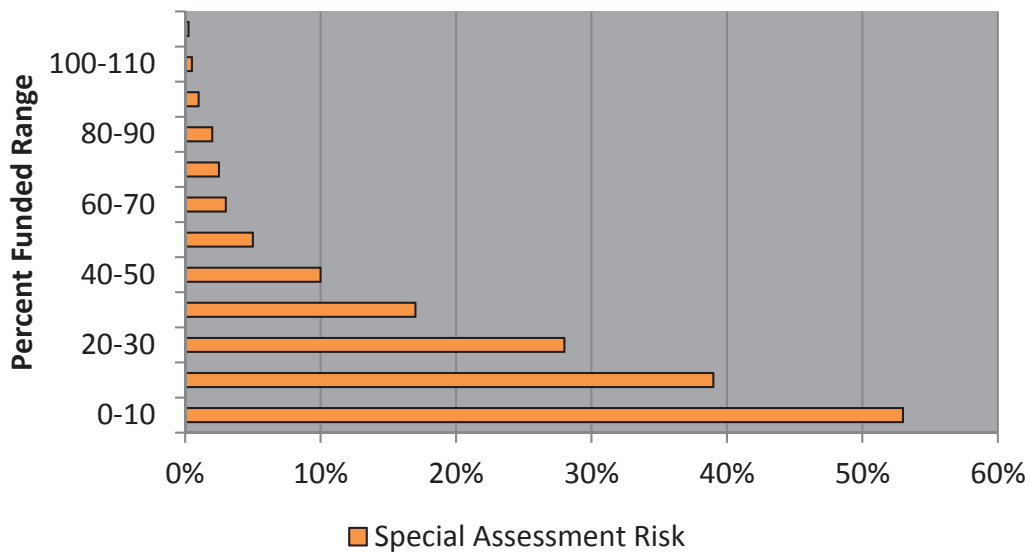
Recommended Funding Objective: Full funding approach with a 100% funding goal.

Certification: This Reserve Study exceeds the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) standards and requirements for a Level III Reserve Study.

Reserve fund strength is measured as a percentage. Typically, associations with a percent funded level of 70% and above have a low risk for special assessments. Associations with a percent funded level of 30% and below have a high risk of special assessments and deferred maintenance. The chart below illustrates the reserve fund percentage at **Sample High-Rise Owners Association** which is currently **52.59%** this represents a Fair position.



Special Assessment Risk



Five Year Projections – Reserve Expenses

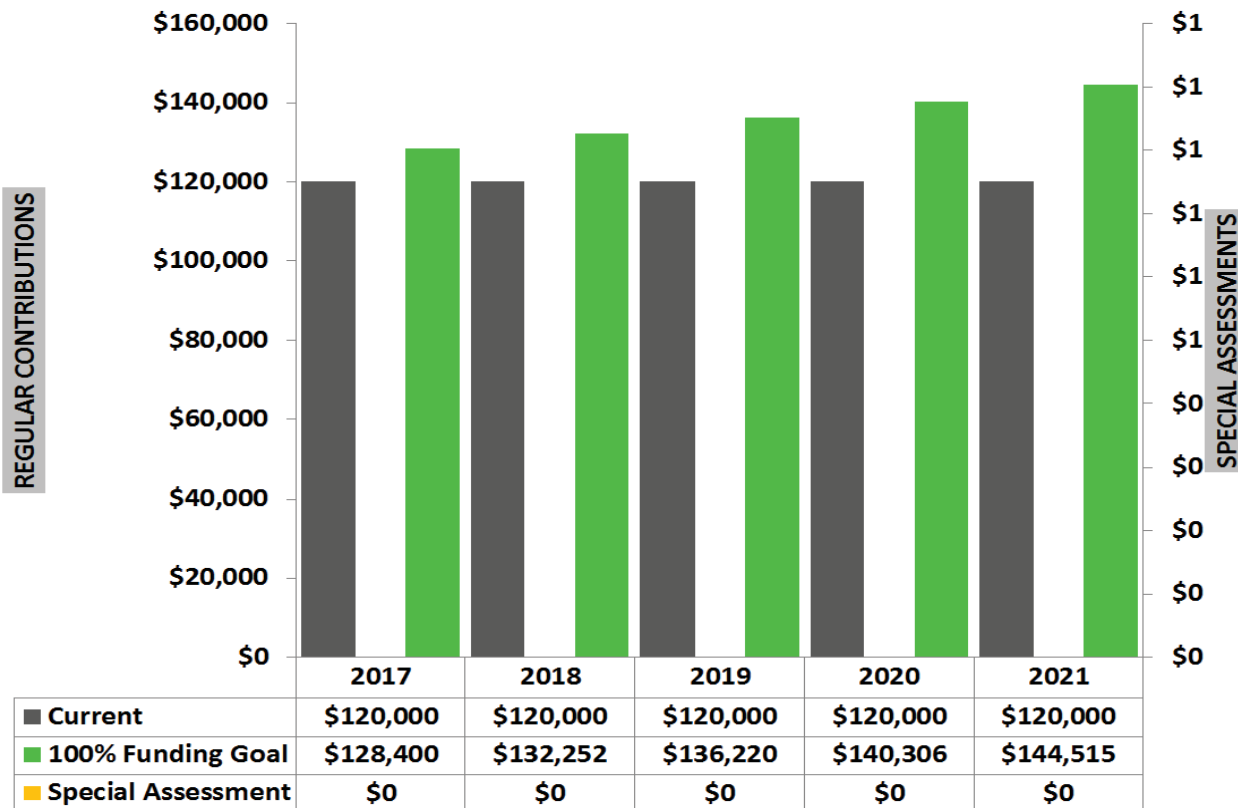
Immediately Necessary Repairs and Replacements

The table below components which are expected to have a remaining useful life of less than five (5) years, which are found to be in need of attention.

Reserve Asset	Location	2017	2018	2019	2020	2021
Concrete Repairs - Allowance	Parking Spaces	\$0	\$0	\$0	\$0	\$16,883
RFID Readers - Replace	Entry/Exit	\$0	\$0	\$0	\$0	\$35,116
Carpet - Replace (Levels 25-33)	Hallways/Lobby	\$0	\$0	\$0	\$0	\$99,270
Wallcovers - Replace (Levels 25-33)	Hallways/Lobby	\$0	\$0	\$0	\$0	\$70,749
Hydronic Pumps - Rebuild	Rooftop	\$15,000	\$0	\$0	\$0	\$0
Pool Furniture - Replace	Pool Area	\$0	\$0	\$0	\$0	\$31,514
Bldg. Surfaces - Repaint/Seal	Building Exterior	\$0	\$0	\$56,271	\$0	\$0
TOTAL EXPENSES		\$15,000	\$0	\$56,271	\$0	\$253,532

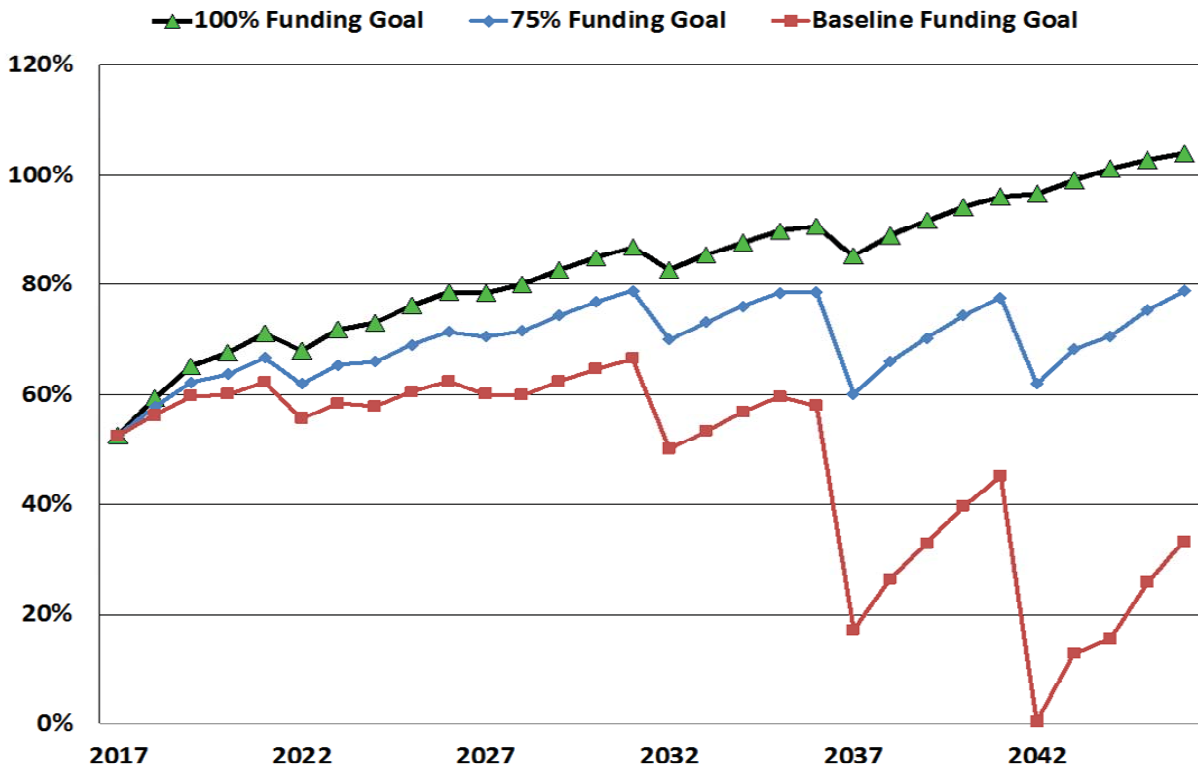
5-Year Summary of Reserve Funding

The graph below shows a comparison between the current levels of annual reserve contributions as measured against our recommended level of reserve contributions with a Full Funding approach.



Percent Funded

The graph below tracks the movement of the association’s reserve fund status (52.59%) over time with the current level of reserve contributions and our recommended level of reserve contributions.



Report Summary

Recommended Funding Objective

Full Funding

- Maintains the Reserve Fund at a level equal to the physical deterioration that has occurred is called “Full Funding” (100% Funded). As each asset ages and becomes “used up”, the Reserve Fund grows proportionally. We have utilized the Full Funding approach for this Replacement Reserve Study.

Threshold Funding

- Is the title of all other objectives randomly selected between Baseline Funding and Full Funding.

Baseline Funding

- Allows the Reserves to fall close to zero, but not below zero. In these instances, deterioration occurs without matching Reserve contributions. With a low Percent Funded, emergency funding and deferred maintenance are common.

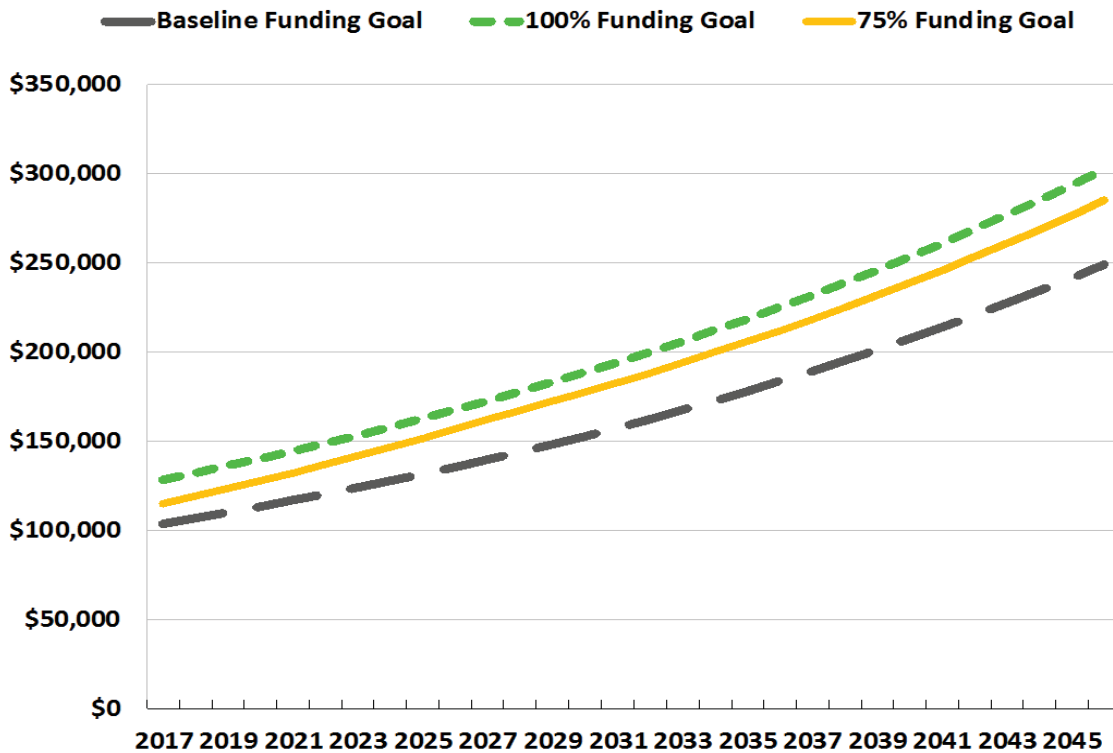
Recommended Reserve Contribution

Current reserve contributions at Sample High-Rise Owners Association are **\$10,000/month**. The association’s major Reserve obligations include: Maintenance to Building Exteriors, Unit Rooftops, Pool Area, Asphalt Parking and Landscaped Common Areas. In order to prepare for major capital expenditures associated with these assets, we recommend monthly reserve contributions of **\$10,700/month beginning on 1/1/2017 with 3.00% annual increases for 12 years followed by 3.00% annual increases thereafter**.

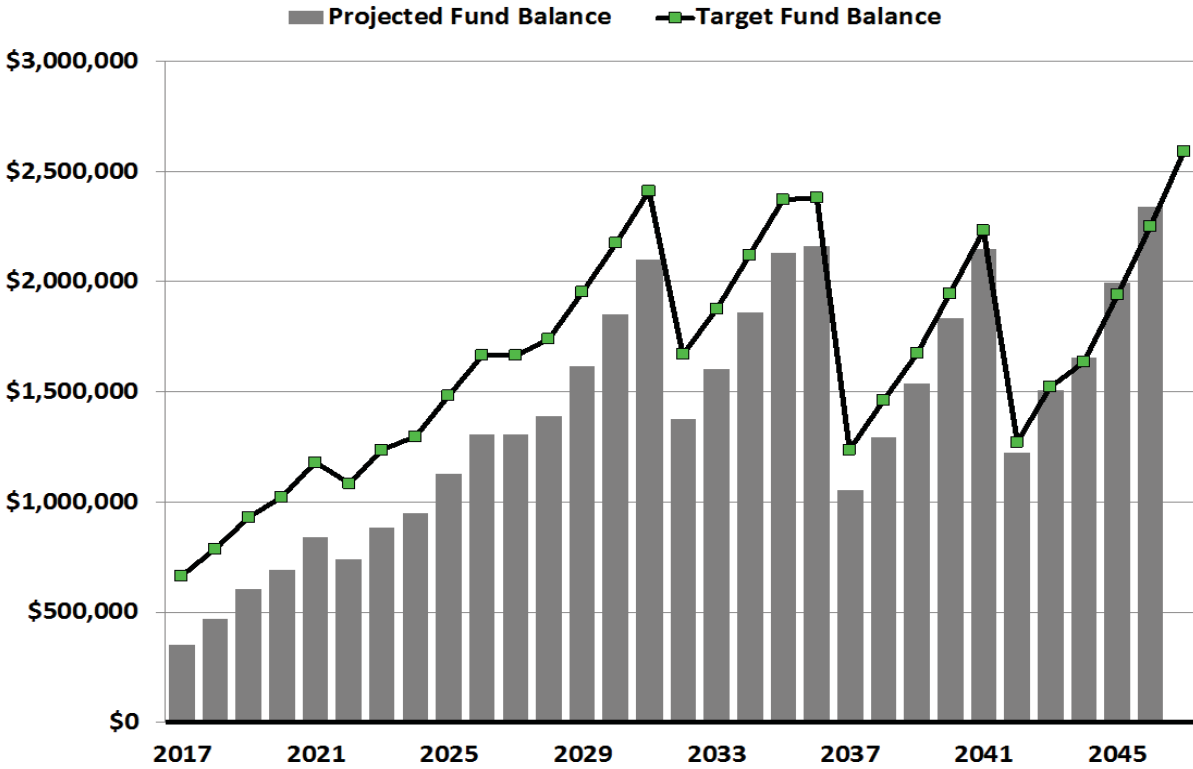
	Full Funding	Threshold Funding (75%)	Baseline Funding
Required Contributions:	\$128,400	\$115,200	\$103,800
Total Reserve Contributions:	\$6,108,683	\$5,717,919	\$4,976,691
Annual Increases to Reserve Contributions	2.5%	3%	2%
Average Percent Funded Level:	83.10%	69.64%	47.53%

For comparison purposes, the table above provides the financial results of three standard funding alternatives. Required contributions are equal to the amount needed each year to achieve a desired funding goal (Full, Threshold, and Baseline). Minimum Reserve Balance, Total Reserve Contributions and Average Percent Funded Level are indicators of the level of risk (probability of insufficient funds) associated with each plan. Special Assessment and Emergency Capital risks increase as these key indicators approach zero.

Reserve Fund Account

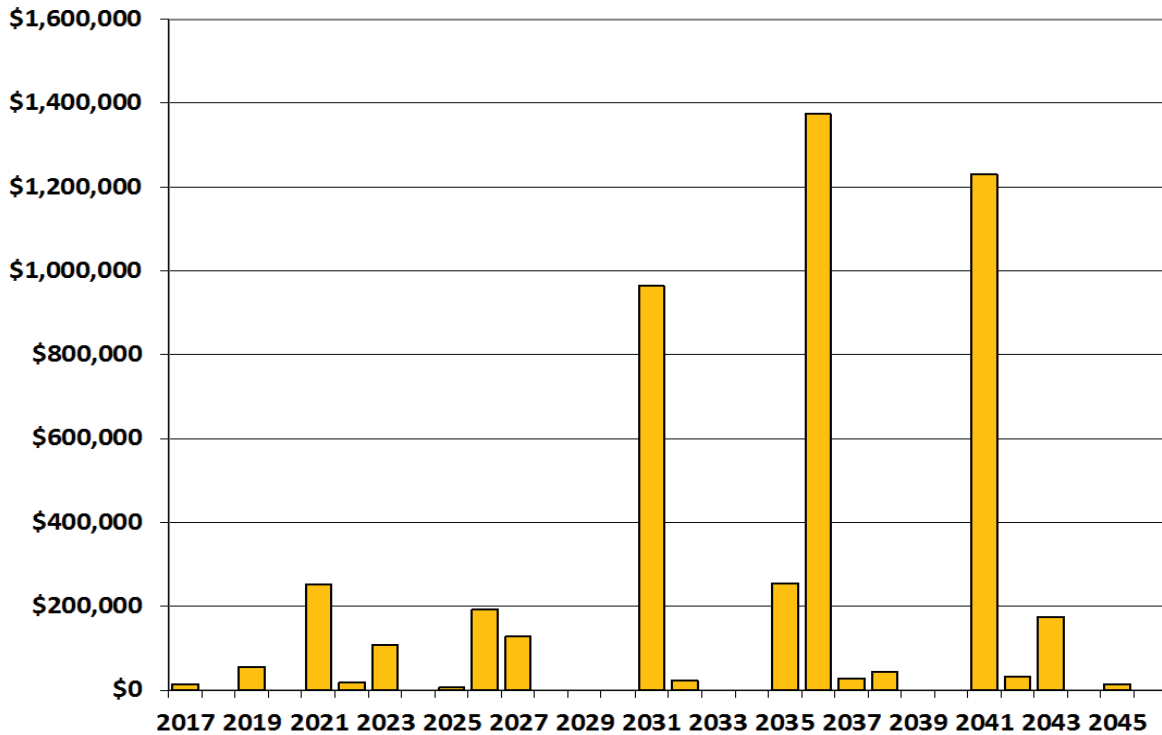


Projected Reserve Account Balance – FULL FUNDING (Recommended)



Report Summary

Reserve Expenditures



METHODOLOGY

Reserve Study

A Reserve Study is a budgeting tool to help prepare and plan for future expenditures. It should be noted that the projections made in this study are just that, projections and do not predict with 100% surety the future. We do however, use well defined methodologies and extensive research is done in preparation of each Reserve Study. In this Report you will find the Reserve Component List. It contains our estimates for Useful Life, Remaining Useful Life, and the current repair or replacement cost for each major component the client is responsible to maintain or replace. Based on that list and your starting balance we calculated the Reserve Fund Strength, which is measured as “Percent Funded”, and created a recommended 30-year Reserve Funding Strategy to offset future Reserve expenditures.

Reserve Component Four-Part Test

Credentialed Reserve Study professionals utilize CAI’s national-standard four-part test to determine which expenses should be funded through Reserves. **Part 1:** Item must be a common area maintenance responsibility. **Part 2:** the component must have a limited life. **Part 3:** the limited life must be predictable. **Part 4:** the component’s repair or replacement cost must be above a minimum threshold cost (this dollar amount varies depending number of components). This means that Reserve Components should be major, predictable expenses. It is incorrect to include “lifetime” components, unpredictable expenses (such as insurance related losses), and expenses more appropriately handled from the Operational Budget.

No items have been reserved for which have an estimated useful life of less than one year or a total cost less than \$1000

Determining Expected Useful Life

- 1) Visual Inspection (observed wear and age)
- 2) Cost Database of experience and similar projects
- 3) Client Component History
- 4) Vendor Expertise and Recommendations

Cost Estimates

Financial projections and our current cost estimates are established in this order:

- 1) Client Cost History
- 2) Comparison to Cost database
- 3) Vendor Recommendations
- 4) Industry cost estimating Software

Establishing Current Reserve Funding Level and Status

Do you have enough money in Reserves to fund future capital replacements? Reserve adequacy is measured by comparing where you need to be to where you are currently at with respect to Reserves:

- 1) Calculate your Fully Funded Balance (where you need to be).
- 2) Compare to the Reserve Fund Balance (where you currently are), and express as a percentage.

The Fully Funded Balance increases as assets deteriorate and age. The Fully Funded Balance shrinks when projects are completed.

Recommended Funding Strategy

We utilize four funding principles in establishing our recommended Reserve Contributions:

1. Ensuring that the client has sufficient funds to perform current reserve projects on time.
2. Put in place a stable contribution rate over the 30-years.
3. Evenly distributed contributions over the years. (Prepare now with manageable monthly contributions rather than face unmanageable expenses in the future)
4. Assist board members and officials in doing their fiduciary duty to guide the entity’s future.

DATA TABLES APPENDIX

TABLE 1: Reserve Component List

**EL = Expected Useful Life
 **RUL = Remaining Useful Life
 **UOM = Unit of Measure

Operating Expenses:
 Minor repairs under \$1000

Lifetime Components:
 Foundations
 Electrical Systems
 Pipes, Subsurface, Water and Sewer
 Structural Frames, Buildings

#	CATEGORY	LOCATION	RESERVE ASSET DESCRIPTION	QTY	% of TTL	UOM	EL	RUL	CURRENT COST	\$/UNIT	IN-SVC YR	REPLYR	FUTURE COST
PARKING GARAGE													
1	Concrete Flatwork	Parking Spaces	Concrete Repairs - Allowance	1	100%	LS	10	4	\$15,000	\$15,000.00	2010	2021	\$16,883
2	Access System	Entry/Exit	Gate Operators - Replace	6	100%	Ea.	12	6	\$7,200	\$1,200.00	2010	2023	\$8,597
3	Access System	Entry/Exit	RFID Readers - Replace	6	100%	E.	10	4	\$31,200	\$5,200.00	2010	2021	\$35,116
INTERIOR COMMON AREAS													
4	Fixtures/Furniture	Hotel Lobby	Lobby Furniture - Replace	18	100%	Ea.	12	6	\$25,680	\$1,426.67	2010	2023	\$30,663
5	Remodeling	Hotel Lobby	Lobby - Remodel	1	100%	LS	25	19	\$39,624	\$39,624.00	2010	2036	\$69,481
6	A/V Equipment	AV Room	Surveillance System - Replace	1	100%	LS	12	9	\$22,900	\$22,900.00	2013	2026	\$29,879
7	Fixtures/Furniture	Mailroom	Mailboxes - Replace	147	100%	Ea.	20	14	\$11,025	\$75.00	2010	2031	\$16,676
8	Fixtures/Furniture	Hallways/Lobby	Furniture - Replace (Levels 25-33)	76	100%	Ea.	12	6	\$49,700	\$653.95	2010	2023	\$59,344
9	Remodeling	Hallways/Lobby	Tile Floor - Replace (Levels 25-33)	2,662	100%	SF	25	19	\$39,930	\$15.00	2010	2036	\$70,017
10	Remodeling	Hallways/Lobby	Carpet - Replace (Levels 25-33)	2,520	100%	SF	10	4	\$88,200	\$35.00	2010	2021	\$99,270
11	Remodeling	Hallways/Lobby	Artwork - Replace (Levels 25-33)	1	100%	LS	20	14	\$30,000	\$30,000.00	2010	2031	\$45,378
12	Remodeling	Hallways/Lobby	Wallcovers - Replace (Levels 25-33)	31,430	100%	SF	10	4	\$62,860	\$2.00	2010	2021	\$70,749
13	Fixtures/Furniture	Hallways/Lobby	Lighting - Replace (Levels 25-33)	651	100%	Ea.	25	19	\$84,000	\$129.03	2010	2036	\$147,295
14	Fixtures/Furniture	Kitchen Flr. 33	Kitchen Furniture - Replace	16	100%	Ea.	12	6	\$7,930	\$495.63	2010	2023	\$9,469
15	Remodeling	Kitchen Flr. 33	Kitchen - Remodel	1	100%	LS	25	19	\$20,598	\$20,598.00	2010	2036	\$36,119

#	CATEGORY	LOCATION	RESERVE ASSET DESCRIPTION	QTY	% of TTL	UOM	EL	RUL	CURRENT COST	\$/UNIT	IN-SVC YR	REPLYR	FUTURE COST
16	Remodeling	Kitchen Flr. 33	Restrooms - Remodel	2	100%	LS	25	19	\$34,128	\$17,064.00	2010	2036	\$59,844
MECHANICAL EQUIP.													
17	Elevators	Rooftop	Elevators - Modernize (100%)	3	100%	Ea.	25	19	\$525,000	\$175,000.00	2010	2036	\$920,591
18	Elevators	Rooftop	Elevators - Modernize (26.48%)	1	26%	Ea.	25	19	\$41,090	\$41,090.00	2010	2036	\$72,052
19	Elevators	Elevators	Elevator Cabs - Remodel (100%)	3	100%	Ea.	20	14	\$48,999	\$16,333.00	2010	2031	\$74,115
20	Utility Equipment	Rooftop	Dom. Water Pumps - Replace (20-HP)	3	100%	Ea.	20	14	\$15,000	\$5,000.00	2010	2031	\$22,689
21	Utility Equipment	Rooftop	Dom. Water VFDs - Replace	3	100%	Ea.	15	9	\$7,500	\$2,500.00	2010	2026	\$9,786
22	Utility Equipment	Rooftop	Hydronic Pumps - Replace (P-10)	1	100%	Ea.	15	9	\$12,500	\$12,500.00	2010	2026	\$16,310
23	Utility Equipment	Rooftop	Hydronic Pumps - Replace (P-11)	1	100%	Ea.	15	9	\$12,500	\$12,500.00	2010	2026	\$16,310
24	Utility Equipment	Rooftop	Hydronic Pumps - Replace (P-12)	1	100%	Ea.	15	9	\$30,000	\$30,000.00	2010	2026	\$39,143
25	Utility Equipment	Rooftop	Hydronic Pumps - Replace (P-13)	1	100%	Ea.	15	9	\$30,000	\$30,000.00	2010	2026	\$39,143
26	Utility Equipment	Rooftop	Hydronic Pumps - Rebuild	1	100%	Ea.	5	0	\$15,000	\$15,000.00	2010	2017	\$17,389
27	HVAC	Rooftop	Exhaust Fans - Replace	31	100%	Ea.	20	14	\$46,500	\$1,500.00	2010	2031	\$70,335
28	HVAC	Rooftop	Air Handler - Replace	1	100%	Ea.	20	14	\$117,000	\$117,000.00	2010	2031	\$176,973
29	HVAC	Rooftop	Power Flame Burner - Replace	1	100%	Ea.	20	14	\$10,000	\$10,000.00	2010	2031	\$15,126
30	HVAC	Rooftop	Heat Exchanger - Replace	1	100%	Ea.	30	24	\$50,000	\$50,000.00	2010	2041	\$101,640
31	Fire Protection	Rooftop	Fire Alarm System - Modernize	1	26%	Ea.	15	9	\$33,100	\$33,100.00	2010	2026	\$43,188
32	Fire Protection	Rooftop	Fire Sprinkler Pump - Replace	1	26%	Ea.	30	24	\$26,480	\$26,480.00	2010	2041	\$53,828
EXTERIOR COMMON AREAS													
33	Amenities	Pool Area	Pool Furniture - Replace	30	100%	Ea.	10	4	\$28,000	\$933.33	2010	2021	\$31,514
34	Amenities	Pool Area	Pool - Retile	155	100%	LF	16	10	\$27,900	\$180.00	2010	2027	\$37,495
35	Exterior Façade	Building Exterior	Bldg. Joints - Seal/Caulk	115,910	26%	SF	20	14	\$84,406	\$0.73	2010	2031	\$127,672
36	Exterior Façade	Building Exterior	Bldg. Surfaces - Repaint/Seal	154,080	26%	SF	8	2	\$53,040	\$0.34	2010	2019	\$56,271
37	Roofing System	Rooftop	Membrane Roofing - Replace	21,000	26%	SF	30	24	\$94,534	\$4.50	2010	2041	\$192,167
38	Amenities	Pool Area	Landscape Planters - Waterproof	978	100%	Ea.	20	14	\$48,900	\$50.00	2010	2031	\$73,966
39	Amenities	Pool Area	Pool Deck Tile - Replace	5,561	100%	SF	30	24	\$83,415	\$15.00	2010	2041	\$169,566
40	Total Components	Pool Area	Spa - Resurface	30	100%	LF	10	8	\$6,000	\$200.00	2014	2025	\$7,601

TABLE 2: Projected Reserve Expenses (Years 1-10)

Location	Reserve Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	PARKING GARAGE										
Parking Spaces	Concrete Repairs - Allowance	\$0	\$0	\$0	\$0	\$16,883	\$0	\$0	\$0	\$0	\$0
Entry/Exit	Gate Operators - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$8,597	\$0	\$0	\$0
Entry/Exit	RFID Readers - Replace	\$0	\$0	\$0	\$0	\$35,116	\$0	\$0	\$0	\$0	\$0
	INTERIOR COMMON AREAS										
Hotel Lobby	Lobby Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$30,663	\$0	\$0	\$0
Hotel Lobby	Lobby - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AV Room	Surveillance System - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,879
Mailroom	Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Furniture - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$59,344	\$0	\$0	\$0
Hallways/Lobby	Tile Floor - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Carpet - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$99,270	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Artwork - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Wallcovers - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$70,749	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Lighting - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Kitchen Flr. 33	Kitchen Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$9,469	\$0	\$0	\$0
Kitchen Flr. 33	Kitchen - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Kitchen Flr. 33	Restrooms - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	MECHANICAL EQUIP.										
Rooftop	Elevators - Modernize (100%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Elevators - Modernize (26.48%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Elevators	Elevator Cabs - Remodel (100%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water Pumps - Replace (20-HP)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water VFDs - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,786
Rooftop	Hydronic Pumps - Replace (P-10)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,310
Rooftop	Hydronic Pumps - Replace (P-11)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,310
Rooftop	Hydronic Pumps - Replace (P-12)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,143

Sample High-Rise Owners Association
Level I – Reserve Study

Location	Reserve Asset	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Rooftop	Hydronic Pumps - Replace (P-13)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,143
Rooftop	Hydronic Pumps - Rebuild	\$15,000	\$0	\$0	\$0	\$0	\$17,389	\$0	\$0	\$0	\$0
Rooftop	Exhaust Fans - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Air Handler - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Power Flame Burner - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Heat Exchanger - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Fire Alarm System - Modernize	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,188
Rooftop	Fire Sprinkler Pump - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXTERIOR COMMON AREAS											
Pool Area	Pool Furniture - Replace	\$0	\$0	\$0	\$0	\$31,514	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool - Retile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Exterior	Bldg. Joints - Seal/Caulk	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Exterior	Bldg. Surfaces - Repaint/Seal	\$0	\$0	\$56,271	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Membrane Roofing - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Landscape Planters - Waterproof	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool Deck Tile - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Spa - Resurface	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,601	\$0
Total Expenses		\$15,000	\$0	\$56,271	\$0	\$253,532	\$17,389	\$108,074	\$0	\$7,601	\$193,759
Ending Reserve Balance:		\$467,486	\$605,098	\$691,528	\$839,486	\$738,355	\$886,046	\$949,630	\$1,128,307	\$1,307,699	\$1,307,603

TABLE 3: Projected Reserve Expenses (Years 11-20)

Location	Reserve Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	PARKING GARAGE										
Parking Spaces	Concrete Repairs - Allowance	\$0	\$0	\$0	\$0	\$22,689	\$0	\$0	\$0	\$0	\$0
Entry/Exit	Gate Operators - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,258	\$0
Entry/Exit	RFID Readers - Replace	\$0	\$0	\$0	\$0	\$47,193	\$0	\$0	\$0	\$0	\$0
	INTERIOR COMMON AREAS										
Hotel Lobby	Lobby Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,718	\$0
Hotel Lobby	Lobby - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$69,481
AV Room	Surveillance System - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mailroom	Mailboxes - Replace	\$0	\$0	\$0	\$0	\$16,676	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Furniture - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,611	\$0
Hallways/Lobby	Tile Floor - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,017
Hallways/Lobby	Carpet - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$133,410	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Artwork - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$45,378	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Wallcovers - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$95,081	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Lighting - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$147,295
Kitchen Flr. 33	Kitchen Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,500	\$0
Kitchen Flr. 33	Kitchen - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,119
Kitchen Flr. 33	Restrooms - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,844
	MECHANICAL EQUIP.										
Rooftop	Elevators - Modernize (100%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$920,591
Rooftop	Elevators - Modernize (26.48%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,052
Elevators	Elevator Cabs - Remodel (100%)	\$0	\$0	\$0	\$0	\$74,115	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water Pumps - Replace (20-HP)	\$0	\$0	\$0	\$0	\$22,689	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water VFDs - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-10)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-11)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-12)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Sample High-Rise Owners Association
Level II – Reserve Study

Location	Reserve Asset	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Rooftop	Hydronic Pumps - Replace (P-13)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Rebuild	\$20,159	\$0	\$0	\$0	\$0	\$23,370	\$0	\$0	\$0	\$0
Rooftop	Exhaust Fans - Replace	\$0	\$0	\$0	\$0	\$70,335	\$0	\$0	\$0	\$0	\$0
Rooftop	Air Handler - Replace	\$0	\$0	\$0	\$0	\$176,973	\$0	\$0	\$0	\$0	\$0
Rooftop	Power Flame Burner - Replace	\$0	\$0	\$0	\$0	\$15,126	\$0	\$0	\$0	\$0	\$0
Rooftop	Heat Exchanger - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Fire Alarm System - Modernize	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Fire Sprinkler Pump - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXTERIOR COMMON AREAS											
Pool Area	Pool Furniture - Replace	\$0	\$0	\$0	\$0	\$42,353	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool - Retile	\$37,495	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Exterior	Bldg. Joints - Seal/Caulk	\$0	\$0	\$0	\$0	\$127,672	\$0	\$0	\$0	\$0	\$0
Building Exterior	Bldg. Surfaces - Repaint/Seal	\$71,282	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90,298	\$0
Rooftop	Membrane Roofing - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Landscape Planters - Waterproof	\$0	\$0	\$0	\$0	\$73,966	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool Deck Tile - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Spa - Resurface	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,215	\$0
Total Expenses		\$128,936	\$0	\$0	\$0	\$963,656	\$23,370	\$0	\$0	\$254,600	\$1,375,398
Ending Reserve Balance:		\$1,391,661	\$1,614,429	\$1,849,385	\$2,097,063	\$1,379,706	\$1,601,032	\$1,858,906	\$2,130,900	\$2,159,159	\$1,057,091

TABLE 4: Projected Reserve Expenses (Years 21-30)

Location	Reserve Asset	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
	PARKING GARAGE										
Parking Spaces	Concrete Repairs - Allowance	\$0	\$0	\$0	\$0	\$30,492	\$0	\$0	\$0	\$0	\$0
Entry/Exit	Gate Operators - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Entry/Exit	RFID Readers - Replace	\$0	\$0	\$0	\$0	\$63,423	\$0	\$0	\$0	\$0	\$0
	INTERIOR COMMON AREAS										
Hotel Lobby	Lobby Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hotel Lobby	Lobby - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AV Room	Surveillance System - Replace	\$0	\$42,601	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mailroom	Mailboxes - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Furniture - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Tile Floor - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Carpet - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$179,292	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Artwork - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Wallcovers - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$127,781	\$0	\$0	\$0	\$0	\$0
Hallways/Lobby	Lighting - Replace (Levels 25-33)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Kitchen Fir. 33	Kitchen Furniture - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Kitchen Fir. 33	Kitchen - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Kitchen Fir. 33	Restrooms - Remodel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	MECHANICAL EQUIP.										
Rooftop	Elevators - Modernize (100%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Elevators - Modernize (26.48%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Elevators	Elevator Cabs - Remodel (100%)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water Pumps - Replace (20-HP)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Dom. Water VFDs - Replace	\$0	\$0	\$0	\$0	\$15,246	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-10)	\$0	\$0	\$0	\$0	\$25,410	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-11)	\$0	\$0	\$0	\$0	\$25,410	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-12)	\$0	\$0	\$0	\$0	\$60,984	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Replace (P-13)	\$0	\$0	\$0	\$0	\$60,984	\$0	\$0	\$0	\$0	\$0
Rooftop	Hydronic Pumps - Rebuild	\$27,092	\$0	\$0	\$0	\$0	\$31,407	\$0	\$0	\$0	\$0

Sample High-Rise Owners Association
Level I – Reserve Study

Location	Reserve Asset	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Rooftop	Exhaust Fans - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Air Handler - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Power Flame Burner - Replace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop	Heat Exchanger - Replace	\$0	\$0	\$0	\$0	\$101,640	\$0	\$0	\$0	\$0	\$0
Rooftop	Fire Alarm System - Modernize	\$0	\$0	\$0	\$0	\$67,285	\$0	\$0	\$0	\$0	\$0
Rooftop	Fire Sprinkler Pump - Replace	\$0	\$0	\$0	\$0	\$53,828	\$0	\$0	\$0	\$0	\$0
EXTERIOR COMMON AREAS											
Pool Area	Pool Furniture - Replace	\$0	\$0	\$0	\$0	\$56,918	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool - Retile	\$0	\$0	\$0	\$0	\$0	\$0	\$60,169	\$0	\$0	\$0
Building Exterior	Bldg. Joints - Seal/Caulk	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Exterior	Bldg. Surfaces - Repaint/Seal	\$0	\$0	\$0	\$0	\$0	\$0	\$114,387	\$0	\$0	\$0
Rooftop	Membrane Roofing - Replace	\$0	\$0	\$0	\$0	\$192,167	\$0	\$0	\$0	\$0	\$0
Pool Area	Landscape Planters - Waterproof	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pool Area	Pool Deck Tile - Replace	\$0	\$0	\$0	\$0	\$169,566	\$0	\$0	\$0	\$0	\$0
Pool Area	Spa - Resurface	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,728	\$0
Total Expenses		\$27,092	\$42,601	\$0	\$0	\$1,230,427	\$31,407	\$174,556	\$0	\$13,728	\$0
Ending Reserve Balance:		\$1,297,171	\$1,535,872	\$1,832,356	\$2,145,351	\$1,226,445	\$1,504,794	\$1,654,471	\$1,994,344	\$2,339,305	\$2,717,642

Sample High-Rise Owners Association
Level I – Reserve Study

TABLE 5: Detailed Funding Plan – Full Funding

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$350,000	\$467,486	\$605,098	\$691,528	\$839,486	\$738,355	\$886,046	\$949,630	\$1,128,307	\$1,307,699
FFB	\$665,502	\$786,172	\$929,396	\$1,022,547	\$1,180,149	\$1,085,148	\$1,234,446	\$1,298,858	\$1,480,679	\$1,664,412
% Funded	53%	59%	65%	68%	71%	68%	72%	73%	76%	79%
Rating	Fair	Fair	Fair	Fair	Strong	Fair	Strong	Strong	Strong	Strong
RC	\$128,400	\$132,252	\$136,220	\$140,306	\$144,515	\$148,851	\$153,316	\$157,916	\$162,653	\$167,533
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$4,086	\$5,361	\$6,480	\$7,652	\$7,886	\$16,230	\$18,341	\$20,761	\$24,339	\$26,130
Expenses	\$15,000	\$0	\$56,271	\$0	\$253,532	\$17,389	\$108,074	\$0	\$7,601	\$193,759
Ending Balance	\$467,486	\$605,098	\$691,528	\$839,486	\$839,486	\$886,046	\$949,630	\$1,128,307	\$1,307,699	\$1,307,603
Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Starting Balance	\$1,307,603	\$1,391,661	\$1,614,429	\$1,849,385	\$2,097,063	\$1,379,706	\$1,601,032	\$1,858,906	\$2,130,900	\$2,159,159
FFB	\$1,666,328	\$1,739,615	\$1,952,588	\$2,176,774	\$2,412,654	\$1,668,162	\$1,875,101	\$2,117,748	\$2,373,266	\$2,379,971
% Funded	78%	80%	83%	85%	87%	83%	85%	88%	90%	91%
Rating	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
RC	\$172,559	\$177,736	\$183,068	\$188,560	\$194,217	\$200,043	\$206,044	\$212,226	\$218,592	\$225,150
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$40,435	\$45,032	\$51,888	\$59,118	\$52,083	\$44,652	\$51,830	\$59,768	\$64,266	\$48,180
Expenses	\$128,936	\$0	\$0	\$0	\$963,656	\$23,370	\$0	\$0	\$254,600	\$1,375,398
Ending Balance	\$1,391,661	\$1,614,429	\$1,849,385	\$2,097,063	\$1,379,706	\$1,601,032	\$1,858,906	\$2,130,900	\$2,159,159	\$1,057,091
Year	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Starting Balance	\$1,057,091	\$1,297,171	\$1,535,872	\$1,832,356	\$2,145,351	\$1,226,445	\$1,504,794	\$1,654,471	\$1,994,344	\$2,339,305
FFB	\$1,238,388	\$1,457,423	\$1,673,348	\$1,946,113	\$2,233,737	\$1,269,527	\$1,518,465	\$1,634,724	\$1,941,779	\$2,251,645
% Funded	85%	89%	92%	94%	96%	97%	99%	101%	103%	104%
Rating	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
RC	\$231,905	\$238,862	\$246,028	\$253,409	\$261,011	\$268,841	\$276,906	\$285,214	\$293,770	\$302,583
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$35,267	\$42,439	\$50,457	\$59,587	\$50,510	\$40,914	\$47,326	\$54,660	\$64,919	\$75,754
Expenses	\$27,092	\$42,601	\$0	\$0	\$1,230,427	\$31,407	\$174,556	\$0	\$13,728	\$0
Ending Balance	\$1,297,171	\$1,535,872	\$1,832,356	\$2,145,351	\$1,226,445	\$1,504,794	\$1,654,471	\$1,994,344	\$2,339,305	\$2,717,642

FULL FUNDING GOAL

Sample High-Rise Owners Association
Level I – Reserve Study

TABLE 6: Detailed Funding Plan – Threshold Funding

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$350,000	\$442,762	\$554,661	\$614,354	\$734,521	\$604,509	\$720,693	\$751,269	\$895,382	\$1,038,595
FFB	\$665,502	\$786,172	\$929,396	\$1,022,547	\$1,180,149	\$1,085,148	\$1,234,446	\$1,298,858	\$1,480,679	\$1,664,412
% Funded	53%	56%	60%	60%	62%	56%	58%	58%	60%	62%
Rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
RC	\$103,800	\$106,914	\$110,121	\$113,425	\$116,828	\$120,333	\$123,943	\$127,661	\$131,491	\$135,435
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$3,962	\$4,985	\$5,843	\$6,742	\$6,692	\$13,241	\$14,707	\$16,452	\$19,323	\$20,375
Expenses	\$15,000	\$0	\$56,271	\$0	\$253,532	\$17,389	\$108,074	\$0	\$7,601	\$193,759
Ending Balance	\$442,762	\$554,661	\$614,354	\$734,521	\$604,509	\$720,693	\$895,382	\$1,038,595	\$1,480,679	\$1,664,412
Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$1,000,647	\$1,041,805	\$1,219,503	\$1,407,132	\$1,605,135	\$835,660	\$1,002,327	\$1,202,903	\$1,414,852	\$1,380,213
FFB	\$1,666,328	\$1,739,615	\$1,952,588	\$2,176,774	\$2,412,654	\$1,668,162	\$1,875,101	\$2,117,748	\$2,373,266	\$2,379,971
% Funded	60%	60%	62%	65%	67%	50%	53%	57%	60%	58%
Rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
RC	\$139,499	\$143,823	\$148,281	\$152,878	\$157,617	\$162,504	\$167,541	\$172,735	\$178,090	\$183,611
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$30,596	\$33,875	\$39,347	\$45,124	\$36,563	\$27,533	\$33,035	\$39,214	\$41,871	\$23,856
Expenses	\$128,936	\$0	\$0	\$0	\$963,656	\$23,370	\$0	\$0	\$254,600	\$1,375,398
Ending Balance	\$1,041,805	\$1,219,503	\$1,407,132	\$1,605,135	\$1,605,135	\$1,002,327	\$1,202,903	\$1,414,852	\$1,380,213	\$1,000,647
Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$212,282	\$383,416	\$549,969	\$770,978	\$1,005,042	\$3,615	\$195,715	\$255,272	\$501,006	\$747,655
FFB	\$1,238,388	\$1,457,423	\$1,673,348	\$1,946,113	\$2,233,737	\$1,269,527	\$1,518,465	\$1,634,724	\$1,941,779	\$2,251,645
% Funded	17%	26%	33%	40%	45%	0%	13%	16%	26%	33%
Rating	Weak	Weak	Fair	Fair	Fair	Weak	Weak	Weak	Weak	Fair
RC	\$189,302	\$195,171	\$201,221	\$207,459	\$213,890	\$220,521	\$227,357	\$234,405	\$241,672	\$249,163
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$8,924	\$13,982	\$19,788	\$26,605	\$15,110	\$2,986	\$6,756	\$11,329	\$18,705	\$26,530
Expenses	\$27,092	\$42,601	\$0	\$0	\$1,230,427	\$31,407	\$174,556	\$0	\$13,728	\$0
Ending Balance	\$383,416	\$549,969	\$770,978	\$1,005,042	\$1,005,042	\$195,715	\$255,272	\$501,006	\$747,655	\$1,023,349

THRESHOLD FUNDING GOAL

Sample High-Rise Owners Association
Level I – Reserve Study

TABLE 7: Detailed Funding Plan – Baseline Funding

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$350,000	\$442,762	\$554,661	\$614,354	\$734,521	\$604,509	\$720,693	\$751,269	\$895,382	\$1,038,595
FFB	\$665,502	\$786,172	\$929,396	\$1,022,547	\$1,180,149	\$1,085,148	\$1,234,446	\$1,298,858	\$1,480,679	\$1,664,412
% Funded	53%	56%	60%	60%	62%	56%	58%	58%	60%	62%
Rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
RC	\$103,800	\$106,914	\$110,121	\$113,425	\$116,828	\$120,333	\$123,943	\$127,661	\$131,491	\$135,435
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$3,962	\$4,985	\$5,843	\$6,742	\$6,692	\$13,241	\$14,707	\$16,452	\$19,323	\$20,375
Expenses	\$15,000	\$0	\$56,271	\$0	\$253,532	\$17,389	\$108,074	\$0	\$7,601	\$193,759
Ending Balance	\$442,762	\$554,661	\$614,354	\$734,521	\$604,509	\$720,693	\$895,382	\$1,038,595	\$1,480,679	\$1,664,412
Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Starting Balance	\$1,000,647	\$1,041,805	\$1,219,503	\$1,407,132	\$1,605,135	\$835,660	\$1,002,327	\$1,202,903	\$1,414,852	\$1,380,213
FFB	\$1,666,328	\$1,739,615	\$1,952,588	\$2,176,774	\$2,412,654	\$1,668,162	\$1,875,101	\$2,117,748	\$2,373,266	\$2,379,971
% Funded	60%	60%	62%	65%	67%	50%	53%	57%	60%	58%
Rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
RC	\$139,499	\$143,823	\$148,281	\$152,878	\$157,617	\$162,504	\$167,541	\$172,735	\$178,090	\$183,611
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$30,596	\$33,875	\$39,347	\$45,124	\$36,563	\$27,533	\$33,035	\$39,214	\$41,871	\$23,856
Expenses	\$128,936	\$0	\$0	\$0	\$963,656	\$23,370	\$0	\$0	\$254,600	\$1,375,398
Ending Balance	\$1,041,805	\$1,219,503	\$1,407,132	\$1,605,135	\$1,605,135	\$1,002,327	\$1,202,903	\$1,414,852	\$1,380,213	\$1,380,213
Year	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Starting Balance	\$212,282	\$383,416	\$549,969	\$770,978	\$1,005,042	\$3,615	\$195,715	\$255,272	\$501,006	\$747,655
FFB	\$1,238,388	\$1,457,423	\$1,673,348	\$1,946,113	\$2,233,737	\$1,269,527	\$1,518,465	\$1,634,724	\$1,941,779	\$2,251,645
% Funded	17%	26%	33%	40%	45%	0%	13%	16%	26%	33%
Rating	Weak	Weak	Fair	Fair	Fair	Weak	Weak	Weak	Weak	Fair
RC	\$189,302	\$195,171	\$201,221	\$207,459	\$213,890	\$220,521	\$227,357	\$234,405	\$241,672	\$249,163
SA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$8,924	\$13,982	\$19,788	\$26,605	\$15,110	\$2,986	\$6,756	\$11,329	\$18,705	\$26,530
Expenses	\$27,092	\$42,601	\$0	\$0	\$1,230,427	\$31,407	\$174,556	\$0	\$13,728	\$0
Ending Balance	\$383,416	\$549,969	\$770,978	\$1,005,042	\$1,005,042	\$195,715	\$255,272	\$501,006	\$747,655	\$1,023,349

BASELINE FUNDING GOAL

Supplemental Disclosures

General:

CRA has no other involvement(s) with Sample High-Rise Owners Association which could result in actual or perceived conflicts of interest.

Physical Analysis:

Capital Reserve Analysts did conduct a physical inspection.

Completeness:

CRA has found no material issues which, if not disclosed, would cause a distortion of the Association's situation.

Reliance on Client Data:

Information provided by the official representative of the client regarding financial, physical, quantity, or historical issues will be deemed reliable by CRA.

Scope:

This Reserve Study is a reflection of information provided to CRA and assembled for the client's use, not for the purpose of performing an audit, quality/forensic analysis, health and safety inspection, or background checks of historical records.

Reserve Balance:

The actual beginning reserve fund balance in this Reserve Study is based upon information provided and was not audited.

Reserve Projects:

Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit, quality inspection, or health and safety review.

Definitions

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

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

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

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

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

CURRENT REPLACEMENT COST: See “Replacement Cost.”

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

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

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

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

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

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

Or

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

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

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

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

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

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

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

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

Funding Principles:

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

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

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

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

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

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

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

RESERVE PROVIDER: An individual that prepares Reserve Studies.

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

PHOTOGRAPHIC INVENTORY

Physical Analysis

Landscape Planters - Waterproof

Item Number	367	Measurement Basis	Square Feet
Category	Exterior Common Areas	Unit Cost	\$50.00
Location	Exterior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
100%	2010	2030	14	20	978	\$48,900.00	\$ 73,965.64

Comments



Age: Using 2010 as the average install date.

Current Condition: No reported leaks or issues.

Maintenance Requirements: Inspect regularly and repair as-needed.

Condition Assessment:

Planter interiors need to be emptied and waterproofed periodically to prevent water from penetrating the structure of the planter and comprising any surrounding structures (decking, buildings, etc.) Typical project includes waterproofing of all interior surfaces (sides and bottoms) in contact with plants/soil/water. Costs can vary greatly depending on quantity, orientation and location of planters, as well as costs to re-plant and repair/replace any damaged irrigation components. Should ideally be coordinated with any other decking/waterproofing projects, such as balconies or pool decks.

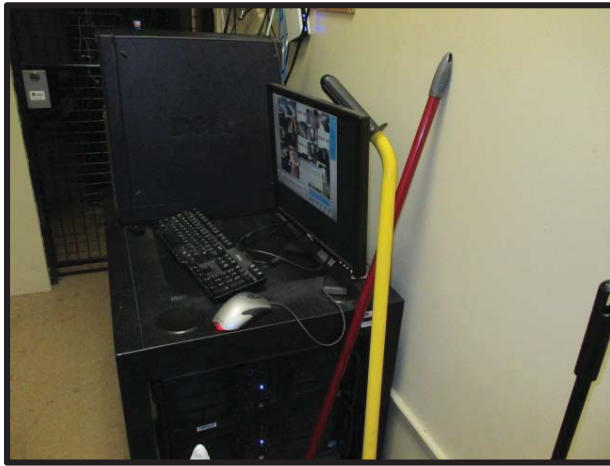
Physical Analysis

Surveillance System - Replace

Item Number	334	Measurement Basis	Unit
Category	Interior Common Areas	Unit Cost	\$22,900.00
Location	Interior		
Method	Fixed		

Code Description	Year	Service			Quantity	Replacement Cost	
		Replace Year	Rem Life	Est Life		Current	Future
100%	2013	2025	9	12	1	\$22,900.00	\$ 29,879.31

Comments



Age: Installed during 2013.

Current Condition: System is new and in good working order.

Maintenance Requirements: Replace individual components as an Operating expense.

Condition Assessment:

Major upgrades to the security system were made during 2013 by Dyezz Surveillance for \$22,259.67. Scope of work included; (1) 8 TB Server, (8) IP Cameras, and miscellaneous components.

Physical Analysis

Wallcovering - Replace (Levels 25-33)

Item Number	340	Measurement Basis	Square Feet
Category	Interior Common Areas	Unit Cost	\$2.00
Location	Interior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
100%	2010	2020	4	10	31,430	\$62,860.00	\$ 70,749.48

Comments



Age: Using 2010 as the average install date.

Current Condition: No signs of rips, tears or peeling.

Maintenance Requirements: Minor repairs should be made when needed.

Condition Assessment:

Wallcoverings should be replaced eventually to update appearance of common/amenity areas. Best practice is to coordinate at same time as other interior projects whenever possible to minimize downtime and maintain consistent quality standard. Timing and interval is subjective. Estimates shown here are based on our experience with similar properties and general aesthetic qualities. Schedule can be updated/adjusted at the discretion of the association for planning purposes.

Physical Analysis

Carpet - Replace (Levels 25-33)

Item Number	338	Measurement Basis	Square Yards
Category	Interior Common Areas	Unit Cost	\$35.00
Location	Interior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
100%	2010	2020	4	10	2,520	\$88,200.00	\$ 99,269.88

Comments



Age: Using 2010 as the average install date.

Current Condition: Carpet observed to be in good condition.

Maintenance Requirements: Vacuum as-needed and professionally clean as-needed.

Condition Assessment:

Best practice is to coordinate at same time as other interior projects whenever possible to minimize downtime and maintain consistent quality standard. Timing and interval is somewhat subjective, but not as flexible as other flooring finishes (tile, wood, etc.). Estimates shown here are based on our experience with similar properties and general aesthetic qualities. Schedule can be updated/adjusted at the discretion of the association for planning purposes.

Physical Analysis

Elevators - Modernize (100%)

Item Number	345	Measurement Basis	Unit
Category	Mechanical	Unit Cost	\$175,000.00
Location	Mechanical		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
100%	2010	2035	19	25	3	\$525,000.00	\$ 920,590.68

Comments



Age: Using 2010 as the average install date.

Current Condition: No reports of any unusual problems.

Maintenance Requirements: Should be inspected regularly and tested as a preventive maintenance expense.

Condition Assessment:

(3) passenger Traction Elevators. This project typically includes replacement/upgrade of controller(s), mechanical door components, push-button fixtures, code-required changes, etc. Elevator vendors typically recommend modernization cycles of approximately 25 years for continued smooth, safe operation, technology and code advances. In our experience, actual interval can be anywhere from 20-30 years or more depending on level of use, maintenance, availability of replacement parts, etc. When remaining useful life is within a year few years of 0, begin discussions with your vendor(s) to determine the most cost effective specifications and approach to a modernization project. Modernization should be anticipated and planned for, as lead time for required parts can be months-long if done on short notice. To minimize elevator downtime, schedule the project ahead of time and consult with elevator vendor for more information.

Physical Analysis

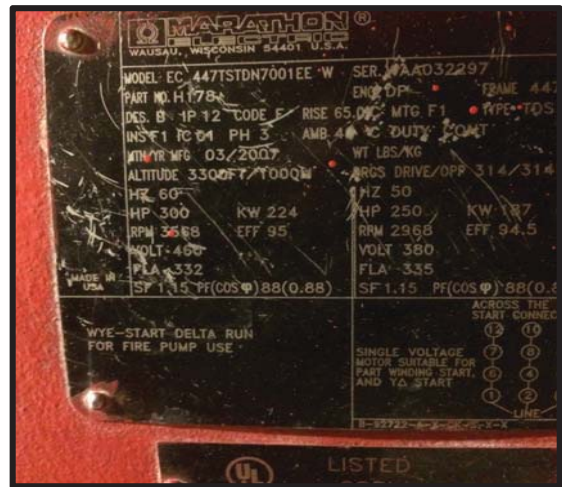
Fire Sprinkler Pump - Replace

Item Number	361	Measurement Basis	Unit
Category	Mechanical	Unit Cost	
Location	Mechanical		
Method	Fixed		

Code	Description	Service	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
		Year					Current	Future
26.48%		2010	2040	24	30	1	\$26,480.00	\$ 53,828.39

Comments

Photographic Inventory



Age: Using 2010 as the average install date.

Current Condition: No reported issues.

Maintenance Requirements: Regular testing should be conducted as an Operating expense.

Condition Assessment:

This system is considered a General Common Area Element and maintenance costs are shared between the Hotel and RROA based on a 73.52% (Hotel) and 26.48% (RROA) split. This pump should have a long useful life expectancy under normal circumstances. Over time, replacement parts may not be available and the Hotel/Association may need to replace the entire assembly prior to actual functional failure as a safety precaution.

Physical Analysis

Membrane Roofing - Replace

Item Number	366	Measurement Basis	Square Feet
Category	Exterior Common Areas	Unit Cost	\$17.00
Location	Exterior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
26.48%	2010	2040	24	30	21,000	\$94,533.60	\$ 192,167.35

Comments



Age: Using 2010 as the average install date.

Current Condition: Good condition.

Maintenance Requirements: Repair as-needed from the Operating budget.

Condition Assessment:

Replacement cost is based on 26.48% of (21,000 SF X \$17.00/SF = \$375,000). The white material of TPO (Thermoplastic Olefin) provides energy savings in the form of high thermal emittance and solar reflection. Over time, with exposure to heat, ultraviolet light and whether this roof will deterioration and require replacement. Future replacement should be expected according to the schedule and cost listed above.

Physical Analysis

Bldg. Surfaces - Repaint/Seal

Item Number	365	Measurement Basis	Square Feet
Category	Exterior Common Areas	Unit Cost	\$1.30
Location	Exterior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
26.48%	2010	2018	2	8	154,080	\$53,040.50	\$ 56,270.67

Comments



Age: Using 2010 as the average install date.

Current Condition: Building exterior surfaces observed to be new and in good condition.

Maintenance Requirements: Clean and inspect regularly to ensure maximum useful life.

Condition Assessment:

This component budgets to repaint/seal the concrete portions of the building exterior. Replacement cost is based on 26.48% of (154,080 SF X \$1.30/SF = \$200,304). The building exterior consists of concrete, glass windows, steel framing and EIFS (Exterior Insulation Finish System). EIFS wall systems require periodic maintenance to achieve maximum life expectancy. Repaint/Seal applications should be applied every 8-10 years. Paint applications help prevent water infiltration and deterioration. We recommend contracting with a qualified contractor or EIFS manufacturer to apply paint finish.

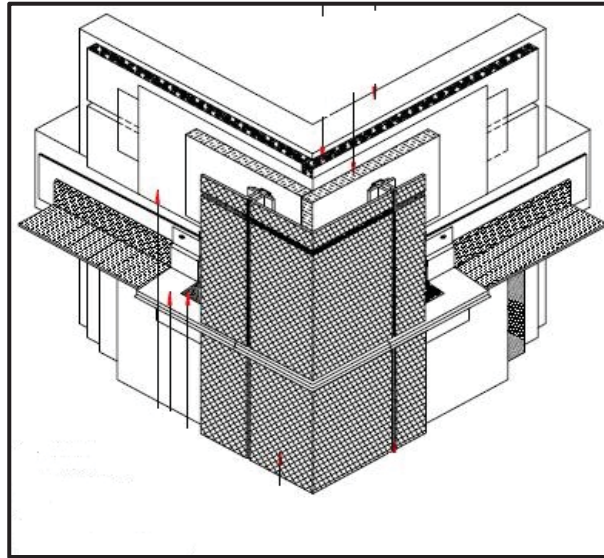
Physical Analysis

Bldg. Joints - Seal/Caulk

Item Number	364	Measurement Basis	LF
Category	Exterior Common Areas	Unit Cost	\$2.75
Location	Exterior		
Method	Fixed		

Code Description	Service Year	Replace Year	Rem Life	Est Life	Quantity	Replacement Cost	
						Current	Future
26.48%	2010	2030	14	20	115,910	\$84,405.95	\$ 127,671.58

Comments



Age: Using 2010 as the average install date.

Current Condition: Building exterior surfaces observed to be new and in good condition.

Maintenance Requirements: Proper sealant/caulking is critical to preventing water intrusion and resulting damage to the building structure

Condition Assessment:

Caulking and sealants play a primary role in the protection of the facility's exterior components and the overall weather tightness of the facility. Caulking also provides a seal between dissimilar materials and changes in construction where movement is expected. We therefore recommend recaulking every 20 years or when other exterior repairs and replacements are scheduled. Replacement cost is based on 26.48% of (115,910 LF X \$2.75/LF = \$318,754}