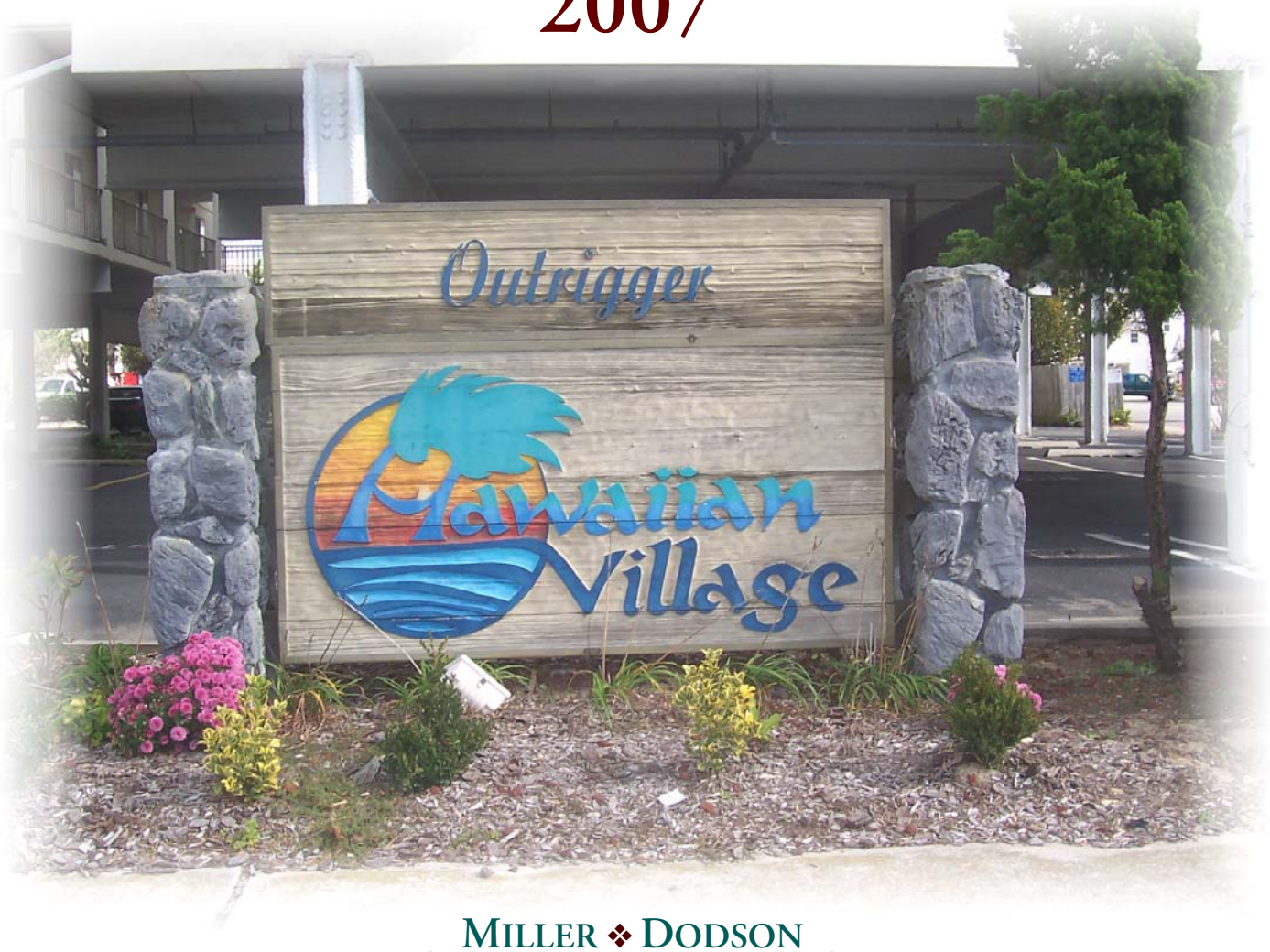
# HAWAIIAN VILLAGE
## CONDOMINIUM ASSOCIATION

# OUTRIGGER

# REPLACEMENT RESERVE STUDY
# 2007

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ASSOCIATES
CAPITAL RESERVE CONSULTANTS

October 31, 2006
Revised February 27, 2007

Mr. Steven Kenny
OCEAN POINT MANAGEMENT
9923 Steven Decatur Highway, Suite D6
Ocean City, MD 21843

Tel: 410-213-7144

RE: HAWAIIAN VILLAGE CONDOMINIUM ASSOCIATION - OUTRIGGER
Replacement Reserve Report

Dear Mr. Kenny,

Pursuant to your acceptance of our proposal of September 22, 2006, we have completed our evaluation of the Hawaiian Village Condominium Association - Outrigger in Ocean City, Maryland. The purpose of this evaluation was to obtain data for the preparation of the enclosed Replacement Reserve Study.

The following sections are included in this Report:

- ~ A written narrative, which includes a financial summary, additional information describing and clarifying the enclosed *Replacement Reserve Report*, and a summary of conditions found on the site;
- ~ The *Replacement Reserve Analysis* with tables listing the inventory of components, estimated replacement costs, estimated remaining life, and the graphical presentation of the calculated data;
- ~ *Supporting photographs*;
- ~ An *Appendix* describing the standard procedures and definitions.

Please review the narrative and data in this study with your Board of Directors. We will provide further revisions to this document if items have been improperly included or omitted, or if the Board wishes to suggest other modifications to the component inventory herein. We welcome the input and suggestions from your Board on these items. Such review and input always helps to hone the accuracy of the report. Such revisions should be requested in writing by the Board of Directors within ninety (90) days of the date of the original report.

If you have any questions regarding this report, please do not hesitate to contact my office.

Sincerely,
MILLER ❖ DODSON ASSOCIATES, INC.

Greg Gilbert
Reserve Analyst

Enclosures: Replacement Reserve Report

R:Projectfiles/hawaiianvillage

# REPLACEMENT RESERVE REPORT

## HAWAIIAN VILLAGE CONDOMINIUM ASSOCIATION OUTRIGGER

Ocean City, Maryland

October 31, 2006
Revised February 27, 2007

Property Management by:

Mr. Steven Kenny
OCEAN POINT MANAGEMENT
9923 Steven Decatur Highway, Suite D6
Ocean City, MD 21843
410-213-7144

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# Replacement Reserve Report

## HAWAIIAN VILLAGE CONDOMINIUM ASSOCIATION OUTRIGGER

Ocean City, Maryland

October 31, 2006
Revised February 27, 2007

## Table of Contents

# Replacement Reserve Report

## HAWAIIAN VILLAGE CONDOMINIUM ASSOCIATION OUTRIGGER

Ocean City, Maryland

October 31, 2006
Revised February 27, 2007

The subject property consists of a single five-story, high-rise condominium building containing 28 units. The field work for this study was conducted on October 25, 2006. The weather was over cast, and the temperature was approximately 60 degrees Fahrenheit. The survey covered the building exterior systems including the roof, exterior surfaces, elevated walks, and the lower level lobby, stairwells, elevators, and common building systems. This survey report did not include the common elements of the community, such as parking areas, walks, curbs, gutters, pools, and meeting rooms. These elements are included in a separate report. Interior of units were not evaluated, nor are they included in any of the analyses.

Miller-Dodson Associates has visually inspected the common elements in the building in order to ascertain the remaining useful life and the replacement costs of these components.

Miller-Dodson Associates would like to acknowledge the assistance and input of Mr. Richard Dannenberg and Mr. Steven Kenny. They have provided very helpful insight into the history of the physical condition of many of the components of the property.

**Level of Service:** This study has been performed as an Update, with Site Visit / On Site Review as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, the component inventory is based on the study that was performed by US Inspect dated June 26, 2002. This information was adjusted to reflect changes to the inventory that were provided by the property manager, and the quantities were adjusted accordingly from field measurements. The condition of all components was ascertained from a site visit and the visual inspection of each component by the analyst. The life expectancy and the value of components are provided based in part on these observations, and the fund status and funding plan have been derived from analysis of this data.

## A. FINANCIAL SUMMARY

**Methods of Accounting:** *Important Note:* In the enclosed Replacement Reserve Analysis, the recommended annual deposit is calculated by two methods, the *Cash Flow Method* and the *Component Method*. Both methods are presented graphically, pages A-1 through A-5, with tables showing recommended annual deposits, expenditures, and balances projected over the next thirty years. Both methods of calculating Reserves are discussed in more detail below, as well as in the attached *Appendix*. It should be pointed out that most communities adopt the Cash Flow Method due to its lower annual contributions. However, the Board of Directors, in consultation with their management and accounting professionals, must decide which of the two accounting methods is more suitable for use by the Association.

**Current Funding:** This reserve study has been prepared for Fiscal Year 2007. The *Replacement Reserves Reported to be on Deposit* at the start of the year are reported to be $15,000. The information concerning this balance has been supplied by the Association's representative, and confirmation or audit of the balance is beyond the scope of the study. The planned annual contribution to reserves for the Fiscal Year is $0, which is equivalent to an average contribution of $0 per unit per month. Based on currently projected expenditures, the Homeowners' Association will deplete the reserve fund in the year 2008 and will incur a deficit of $51,850 in that year if annual reserve contributions are not increased. See Page A-5 for details.

**Cash Flow Method:** The *Minimum Recommended Annual Deposit* as calculated by the Cash Flow Method is $33,586, which is equivalent to an average contribution of $99.96 per unit per month. This is the uniform amount that must be placed in reserves each year until the critical year is reached in 2008, at which time, the Annual Contribution decreases. This funding level will provide an adequate amount to cover the replacement expenses that have been projected in the study and to maintain a minimum balance Threshold of $15,323, which is equal to 3% of the value of the replacement inventory. It should be recognized, however, that Cash Flow Method calculations should be reviewed annually based on recent contributions and expenditures, and should be updated every three to five years based on a physical evaluation of the conditions of the components.

**Component Method:** *Note: The Association has elected to use the Cash Flow Method of calculating the Reserve Contributions. Therefore, the Component Method calculations presented here are not germane to the Reserve Study and are provided only for comparative purposes.*

The *Current Funding Objective* calculated by the Component Method is $186,285. With a reserves balance of $15,000, the Association reserves are funded at 8.05% of this objective. The recommended *Minimum Recommended Annual Contribution* to the reserves as computed by the Component Method is $67,279 in the first year of the study, declining to $34,830 in the tenth year of the study. Projected annual deposits by the Component Method over the next ten years are shown on page A-4 of the Replacement Reserve Analysis.

The *Minimum Recommended Annual Contribution* in the study year projected by the Component method is higher than the annual deposit if reserves were fully funded. This higher deposit is due in large part to the initial acceleration that results from Component Method mathematical model. However, the high first year contribution may also be dictated by significant anticipated costs to be incurred for replacement of major common elements in the first ten years of the study. Refer to the tables and in the report for more detail.

**Interest, Inflation and Taxes on Reserves:** This study does not take into account the interest on the reserves on deposit, nor does it account for inflation over the period of the study. We will, however, incorporate interest and inflation figures into the study at the direction of the Board of Directors using figures provided by the Board. The study also assumes that the principal on the Association's Reserves are not subject to tax.

## B. REPLACEMENT RESERVE ANALYSIS

**Components included:** Every effort has been made to identify all items, which should be reasonably considered to be "common elements" for inclusion in this analysis. To that end, this report may have been made overly inclusive. Some of these components could be appropriately deleted from the analysis. Such deletions, however, should be made consciously, with the approval of the Board, recognizing that any future replacement of the deleted components would have to be funded from sources other than the replacement reserves. Components that are candidates for deletion:

1. **Small components:** For ease of administration, it may be preferable to handle replacement of relatively low cost components from the annual operating budget rather than making disbursements from the reserves. A commonly used guideline is to use operating funds for replacement of any component with replacement cost less than $1,000. In larger Associations, this limit is often raised to $5,000.

2. **Long lasting components:** The reserve schedule includes components with estimated economic lives equaling or exceeding thirty years, for example, the stand pipes. While some analysts would omit these components from the schedule entirely on the basis that the economic lives of these components approach that of the property as a whole, it is recommended that they be retained since dropping them might expose the Association to a large unfunded liability should the replacements be needed at some time in the future.

3. **Components incorrectly included:** In an effort to include all components that could reasonably be considered as "common," it is possible that some items have been included which are not the responsibility of the Association.

**Components excluded:** The following components have been excluded from the Replacement Reserve Analyses. If any of these exclusions have been made in error, we will reinsert the component upon the written request of the Board of Directors:

1. **Long lived components.** The following components are expected to have a life equal to that of the project, if properly maintained:

    a. Building foundations, structure and floor slabs.

b. Exterior, load bearing, masonry walls.
c. Electrical panels and common wiring.

2. **Local Government.** We have assumed the following components will be maintained and replaced by the local government (or responsible utility company):

   a. Adjacent roads and associated improvements including curbs, gutters and sidewalks.
   b. Underground water, sewer and gas mains.

3. **Individual Owners.** We have assumed the following components will be maintained and replaced by the individual tenants:

   a. Entry doors, sliding glass doors windows and storm shutters.
   b. Utility connections including water, sewer and electrical.
   c. Building interiors, water heater and HVAC, including rooftop units.

4. **Operating Funds.** Pursuant to our proposal, we have not included items with a value of less than $500.00 or those items that are funded from operating funds. Some of these items are listed below:

   a. General signage throughout the community.
   b. Fire extinguishers.
   c. Plastic pool equipment.
   d. Drift fences on the dunes.

5. **Unreservable components.** The following items were omitted because they are considered to be non-capital expenses under IRS guidelines:

   a. Painting - Revenue Ruling 75-370 and 75-371.
   b. Seasonal landscaping, such as annual planting, mulching, and pruning.
   c. Future Reserve Studies.

**Revisions:** Revisions will be made to the Replacement Reserve Analysis in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision if requested in writing within three months of the date of this report.

**Updating:** It is recommended to review and revise the Replacement Reserve Analysis annually to take into account replacements, which have actually occurred and known changes in replacement costs. Updating the analysis after a major replacement is made usually results in a significant reduction in the annual deposit as calculated by the Component Method. A full analysis based on a physical evaluation of the components should be performed approximately every three to five years.

## C. SUMMARY OF CONDITIONS

The subject property appears to be in good overall condition for its age. The general upkeep of the common facilities reflects the conscientiousness of the building manager and staff. This report is based on normal life expectancy of the building components and does not include repair costs related to storm damage. The following comments pertain to the larger, more significant components in the property's inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the analysis.

***Photo 1 - Side elevation***

**General Site and Architectural Drawings.** No architectural drawings or engineering site plans were available other than a basic floor plan. We recommend the Association assemble a library of site and building plans of the property contacting the architect and the contractor who did the renovation in 1990. Reproducible drawings should be stored and kept in a secure fireproof location. The Association will find these drawings to be a valuable resource in the future.

**Exterior Finish.** The Exterior Wall Insulation and Finish System (EIFS) was visually inspected. The system is showing staining and is in need of recoating. All caulking appears in good condition. EIFS systems have historically experienced problems resulting from faulty installation and inappropriate design details that trap moisture behind the weather barrier. These conditions have caused leaks and structural damage at other locations. Improper detailing can also cause surface cracking. These defects can only be found by close inspection from scaffolding and by removal of small sections of the material to test if moisture is present. We recommend periodic inspection of the building by a professional certified and equipped to conduct this type of inspection.

There are different methods of maintaining the EIFS. The preferred method is to apply a silicone based color coat every 10 years. The theory behind installing a color coat is that ultraviolet rays slowly deteriorate the EIFS surface coat over time, which requires that the EIFS be refurbished on a periodic basis.

We recommend that the Association contact EIMA (EIFS industry manufacturers association) to determine inspection requirements and establish an annual inspection program. EIMA may be reached at the following:

EIMA
3000 Corporate Center Drive, Suite 270
Morrow, GA 30260
Tel: 1-800-294-3462 or 1-770-968-7945
www.eifsfacts.com

Alternatively, the Association may contact the manufacturer of to gain a better understanding of the EIFS system and standard inspection and maintenance procedures.

For the Reserve Study we have included an allowance for re-coating and caulking of the EIFS surface every 10 years. We included the joint caulking at the same time as re-coating to take advantage of the scaffolding in place.

***Photo 2 – EFIS system showing staining***

**Concrete Walkway.** The walkway has been recently resurfaced and is in good condition.

**Roofing.** The roof is covered with a fully adhered single membrane. The roofing system was replaced in 2004 and is in very good condition.

***Photo 3 - Single ply roofing system - adhered***

**Sprinkler (fire suppression) System.** The building is equipped with a fire suppression system. The system is tagged with an appropriate 3rd party inspection sticker and our cursory observations of the primary components did not reveal any defects. However, evaluation and testing of this system was beyond the scope of the inspection. Consultation with the firm which has been servicing the equipment is recommended.


***Photo 4 - Fire alarm and missing exit sign***

**Building Piping Systems.** The cost of replacing the various risers for water and waste throughout the building has been

estimated using R. S. Means Building Construction Cost Data. Most of these lines are concealed making inspection impractical. We assume that most of these lines were replaced when kitchen facilities and rest rooms were added, and that they are therefore relatively new. We also expect that serviceable sections of the older lines were left in place at that time making the piping systems a mixture of old and new. To contend with potential need to replace older sections of line we have included estimated amounts for this purpose in the 24 to 30 year time frame.

## D. LIFE EXPECTANCY AND COST ESTIMATES

**Estimated Life Left:** The “Estimated Life Left in Years” column represents the number of serviceable years left in the item based on its current or repaired condition. It is not a mathematical formula directly related to “Estimated Economic Life in Years." Some items may experience longer lives while others may experience shorter lives depending on many factors such as environment, initial quality of the component, maintenance, etc.

**Cyclical Funding:** The domestic water supply lines and sanitary waste and vent lines are components that are typically replaced in stages rather than all in one time period. For this reason, these items were placed in the cyclic replacement section of the reserve schedule, at full replacement value.

**Partial Funding:** Several of the replacement items have been funded at less than 100 percent of their full replacement value. This is done in an effort to keep reserve contributions at a reasonable level, on the theory that many of these components will never be replaced in their entirety. However, catastrophic failure is not anticipated, and therefore is not fully funded. The percentage of funding may be adjusted in future years based on historical data and actual experience. All other components were placed in the normal replacement sections at full estimated replacement cost with replacement time estimates based on current conditions and historical data.

## E. SURVEY METHODOLOGY

**Valuation:** The replacement reserve analysis depends upon estimates of total useful life, life remaining and replacement cost. These estimates were obtained from Government standards, published estimating manuals, recent experience on comparable properties and engineering judgment. We believe that the analysis will provide a useful guide for planning. Actual experience in replacing equipment may differ significantly from the projections in the analysis because of conditions beyond our control, such as maintenance practices, inflation, variations in pricing and market conditions, future technological developments and regulatory actions.

**Conflict of Interest:** Neither Miller-Dodson Associates nor this Reserve Analyst has any prior or existing relationship with this community association which would represent a real or perceived conflict of interest.

**Reliance on Client Data:** Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues will be deemed reliable by the consultant.

**Scope:** The Reserve Study will be a reflection of information provided to the consultant and assembled for the association's use, not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.

**Reserve Projects:** Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection.

**Analyst's Credentials:** Mr. Gregory S. Gilbert holds a Bachelors Degree in Architecture from the Georgia Institute of Technology and a Master of Architecture from the University of Oklahoma. Mr. Gilbert is a licensed Architect. Mr. Gilbert's experience includes the design of residential homes, fire stations, and most recently educational projects. He has also done over twenty feasibility studies for the U. S. Navy, Board of Educations and Retail developers. All of these feasibility studies included performing existing condition surveys to look for maintenance issues, code violations and general conditions of the structure to determine if and how the buildings can be renovated or modified. He is currently a Reserve Analyst for Miller-Dodson Associates.

End of Report

Respectfully Submitted,
MILLER ❖ DODSON ASSOCIATES, INC

Greg Gilbert
Reserve Analyst

Filed:R:projectfiles/hawaiianvillageoutrigger

RSTUDY+

# REPLACEMENT RESERVE ANALYSIS

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## GENERAL INFORMATION:

| | |
|---|---|
| 2007 | Study Year |
| $15,000 | Replacement Reserves reported to be on deposit at start of Study Year |
| $510,757 | Estimated value of all Components included in the Replacement Reserve Inventory |

The information shown in this Summary does not account for interest earned on Replacement Reserves on deposit, nor does it include adjustments for inflation. For more information see the attached Appendix.

## REPORTED CURRENT FUNDING DATA:

**None** **REPORTED CURRENT ANNUAL CONTRIBUTION TO REPLACEMENT RESERVES**

## CASH FLOW METHOD CALCULATIONS:

**$33,586** **MINIMUM RECOMMENDED ANNUAL CONTRIBUTION TO REPLACEMENT RESERVES**

| | |
|---|---|
| $99.96 | Per unit miniumum recommended monthly contribution to Replacement Reserves |
| $15,323 | Recommended minimum Replacement Reserve Funding Threshold (3.0 percent) |
| 2008 | First year Reserves fall to minimum recommended level (Design Year) |

## COMPONENT METHOD CALCULATIONS:

**$67,279** **MINIMUM RECOMMENDED ANNUAL CONTRIBUTION TO RESERVES (IN STUDY YEAR)**

| | |
|---|---|
| $200.23 | Per unit miniumum recommended monthly contribution to Replacement Reserves |
| $186,285 | Current Funding Objective |
| 8.05% | Funding Percentage |
| $171,285 | One time deposit required to fully fund Replacement Reserves |
| $28,382 | Annual Contribution to Replacement Reserves if Reserves were fully funded. |

## PROJECT INFORMATION:

PROPERTY MANAGED BY:
Ocean Point Management
Mr. Steven Kenny
67th Street
Ocean City, MD 21843
410 - 213-7144

MAJOR COMPONENTS IN ANALYSIS:
Building Exterior Materials, Roof, Building Systems, Rails

PROPERTY LOCATION:
Ocean City, Maryland

TYPE OF PROPERTY:
Condominium

# OF UNITS:
28

YEAR BUILT:
1989

## NOTES:

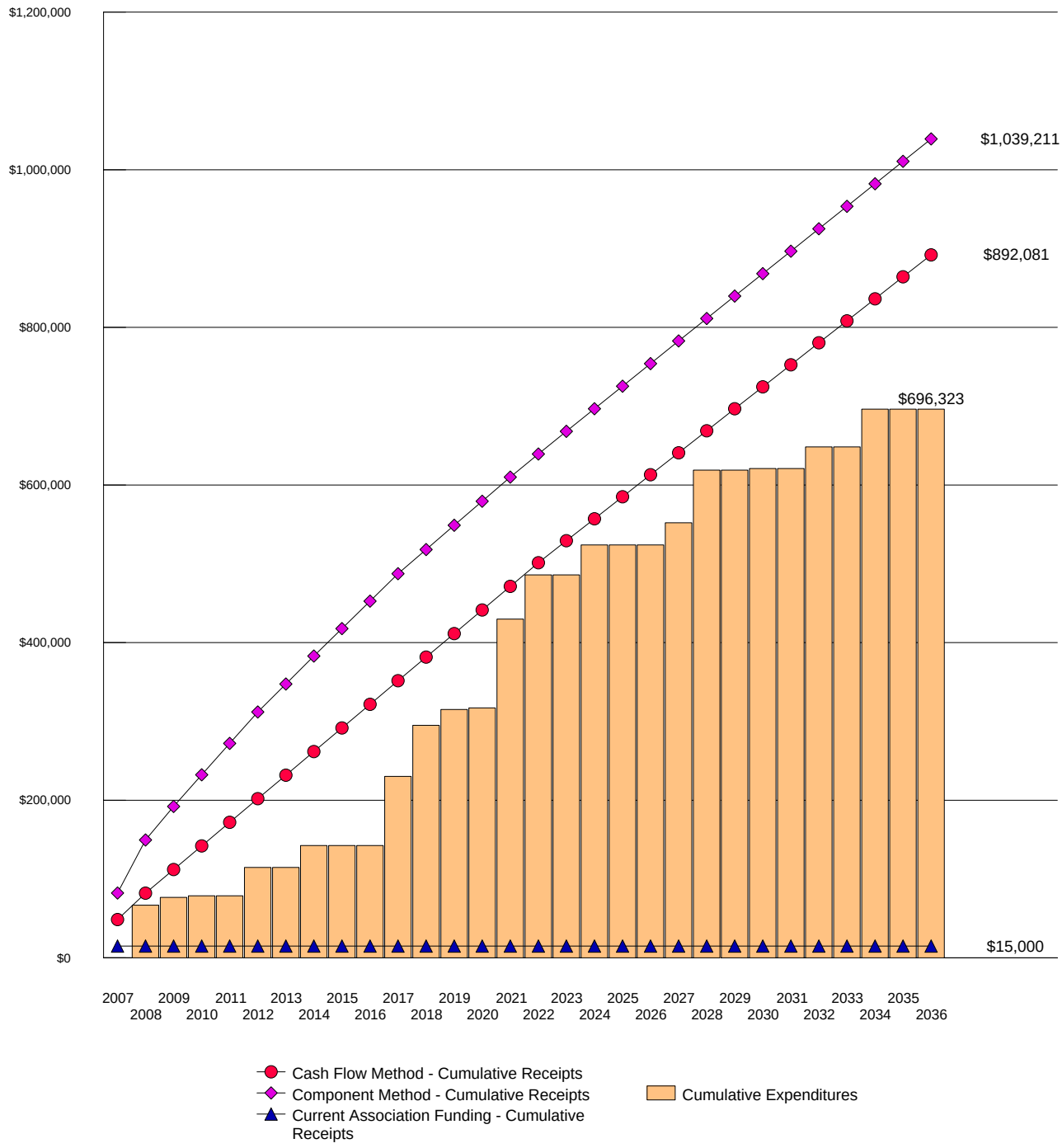
1. This report conforms to the National Reserve Study Standards that were adopted by the CAI in 1998.
2. The Association uses a Fiscal Year that covers the period of January 1 through December 31.

2/27/07. Revised per email dated January 17, 2007 from Richard Dannenberg.

# REPLACEMENT RESERVE ANALYSIS

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## Funding Methods Comparison Graph - Cumulative Receipts and Expenditures



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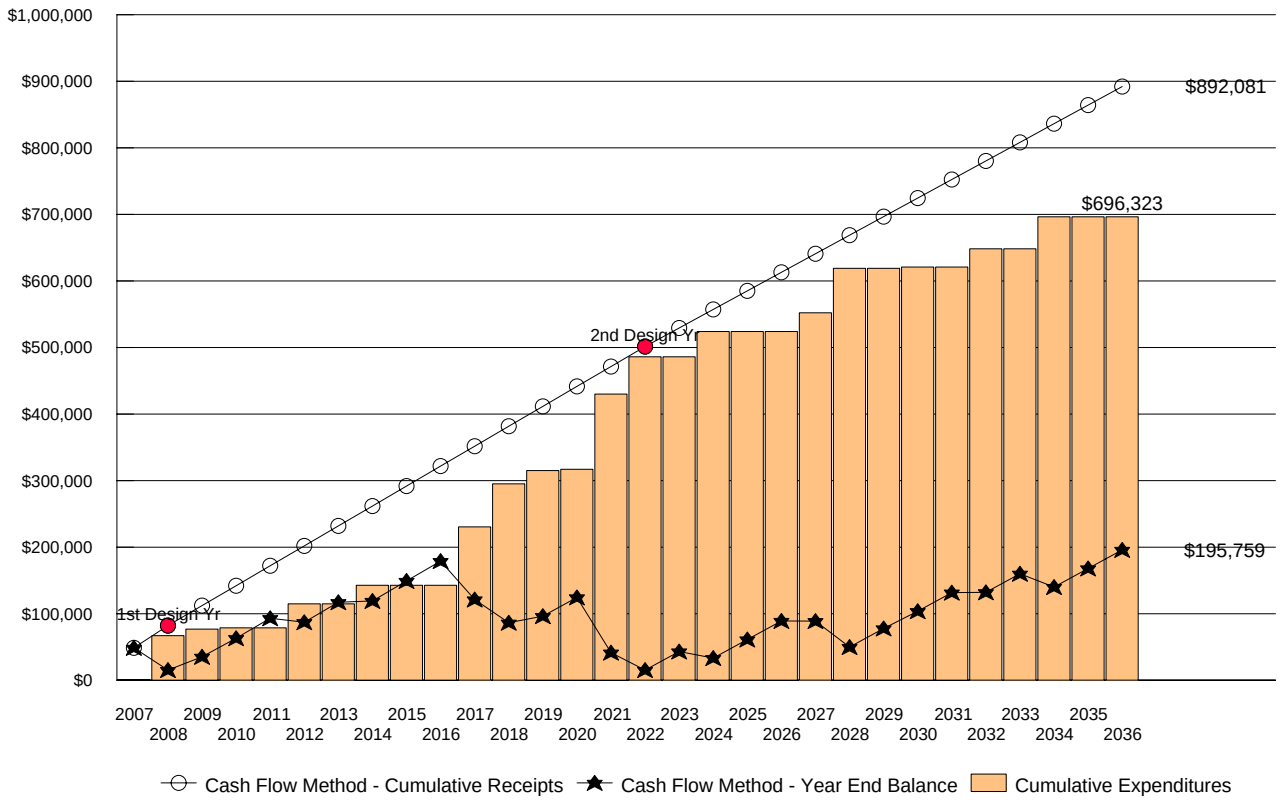
# REPLACEMENT RESERVE ANALYSIS

## Outrigger _ Hawaiian Village Condominium — October 24, 2006

## Cash Flow Method - Cumulative Receipts and Expenditures Graph




## Cash Flow Method Data - Years 1 through 30

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| Starting balance | $15,000 | | | | | | | | | |
| Annual deposit | $33,586 | $33,586 | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 |
| Expenditures | $0 | $66,850 | $9,990 | $2,000 | $0 | $35,874 | $0 | $27,902 | $0 | $0 |
| Year end balance | $48,586 | $15,323 | $35,276 | $63,218 | $93,161 | $87,230 | $117,173 | $119,214 | $149,157 | $179,100 |
| Minimum rec. funding lvl. | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 |
| Cumulative expenditures | $0 | $66,850 | $76,840 | $78,840 | $78,840 | $114,714 | $114,714 | $142,616 | $142,616 | $142,616 |
| Cumulative receipts | $48,586 | $82,173 | $112,116 | $142,058 | $172,001 | $201,944 | $231,887 | $261,830 | $291,773 | $321,716 |
| | | 1st Design Yr | | | | | | | | |

| Year | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 | $29,943 | $27,908 | $27,908 | $27,908 | $27,908 |
| Expenditures | $87,770 | $64,750 | $20,000 | $2,000 | $112,800 | $56,114 | $0 | $37,892 | $0 | $0 |
| Year end balance | $121,273 | $86,465 | $96,408 | $124,351 | $41,494 | $15,323 | $43,230 | $33,246 | $61,154 | $89,062 |
| Minimum rec. funding lvl. | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 |
| Cumulative expenditures | $230,386 | $295,136 | $315,136 | $317,136 | $429,936 | $486,050 | $486,050 | $523,942 | $523,942 | $523,942 |
| Cumulative receipts | $351,659 | $381,601 | $411,544 | $441,487 | $471,430 | $501,373 | $529,281 | $557,188 | $585,096 | $613,004 |
| | | | | | | 2nd Design Yr | | | | |

| Year | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 | $27,908 |
| Expenditures | $28,114 | $66,850 | $0 | $2,000 | $0 | $27,514 | $0 | $47,902 | $0 | $0 |
| Year end balance | $88,855 | $49,913 | $77,821 | $103,728 | $131,636 | $132,030 | $159,937 | $139,943 | $167,851 | $195,759 |
| Minimum rec. funding lvl. | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 | $15,323 |
| Cumulative expenditures | $552,056 | $618,906 | $618,906 | $620,906 | $620,906 | $648,421 | $648,421 | $696,323 | $696,323 | $696,323 |
| Cumulative receipts | $640,912 | $668,819 | $696,727 | $724,635 | $752,543 | $780,450 | $808,358 | $836,266 | $864,174 | $892,081 |

TEN YEAR SUMMARIES

Expenditures: $142,616
Receipts: $321,716

Expenditures: $381,326
Receipts: $293,305

Expenditures: $172,380
Receipts: $281,104

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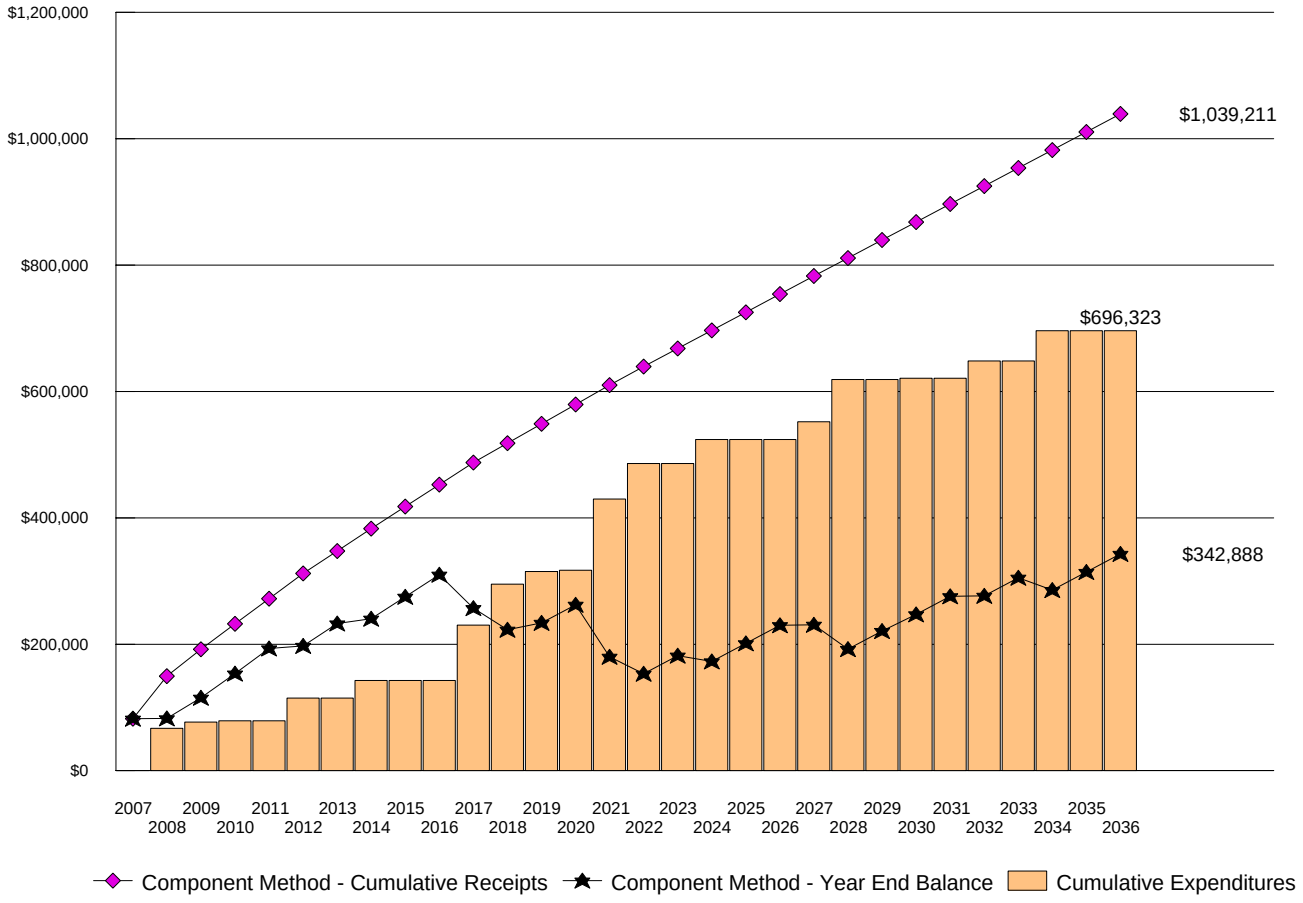
# REPLACEMENT RESERVE ANALYSIS

## Outrigger _ Hawaiian Village Condominium — October 24, 2006

### Component Method - Cumulative Receipts and Expenditures Graph




### Component Method Data - Years 1 through 30

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| Starting balance | $15,000 | | | | | | | | | |
| Annual deposit | $67,279 | $67,279 | $42,595 | $40,146 | $39,870 | $39,870 | $35,472 | $35,472 | $34,830 | $34,830 |
| Expenditures | $0 | $66,850 | $9,990 | $2,000 | $0 | $35,874 | $0 | $27,902 | $0 | $0 |
| Year end balance | $82,279 | $82,707 | $115,312 | $153,458 | $193,328 | $197,324 | $232,796 | $240,365 | $275,196 | $310,026 |
| Cumulative Expenditures | $0 | $66,850 | $76,840 | $78,840 | $78,840 | $114,714 | $114,714 | $142,616 | $142,616 | $142,616 |
| Cumulative Receipts | $82,279 | $149,557 | $192,152 | $232,298 | $272,168 | $312,038 | $347,510 | $382,981 | $417,812 | $452,642 |

| Year | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $34,830 | $30,731 | $30,731 | $30,542 | $30,542 | $29,390 | $28,675 | $28,675 | $28,675 | $28,675 |
| Expenditures | $87,770 | $64,750 | $20,000 | $2,000 | $112,800 | $56,114 | $0 | $37,892 | $0 | $0 |
| Year end balance | $257,087 | $223,068 | $233,799 | $262,341 | $180,083 | $153,359 | $182,034 | $172,816 | $201,491 | $230,165 |
| Cumulative Expenditures | $230,386 | $295,136 | $315,136 | $317,136 | $429,936 | $486,050 | $486,050 | $523,942 | $523,942 | $523,942 |
| Cumulative Receipts | $487,473 | $518,204 | $548,935 | $579,477 | $610,019 | $639,409 | $668,084 | $696,758 | $725,433 | $754,107 |

| Year | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $28,675 | $28,478 | $28,478 | $28,478 | $28,478 | $28,478 | $28,510 | $28,510 | $28,510 | $28,510 |
| Expenditures | $28,114 | $66,850 | $0 | $2,000 | $0 | $27,514 | $0 | $47,902 | $0 | $0 |
| Year end balance | $230,726 | $192,353 | $220,831 | $247,308 | $275,786 | $276,750 | $305,260 | $285,868 | $314,378 | $342,888 |
| Cumulative Expenditures | $552,056 | $618,906 | $618,906 | $620,906 | $620,906 | $648,421 | $648,421 | $696,323 | $696,323 | $696,323 |
| Cumulative Receipts | $782,782 | $811,260 | $839,737 | $868,215 | $896,692 | $925,170 | $953,680 | $982,190 | $1,010,700 | $1,039,211 |

TEN YEAR SUMMARIES

Expenditures: $142,616
Receipts: $452,642

Expenditures: $381,326
Receipts: $303,482

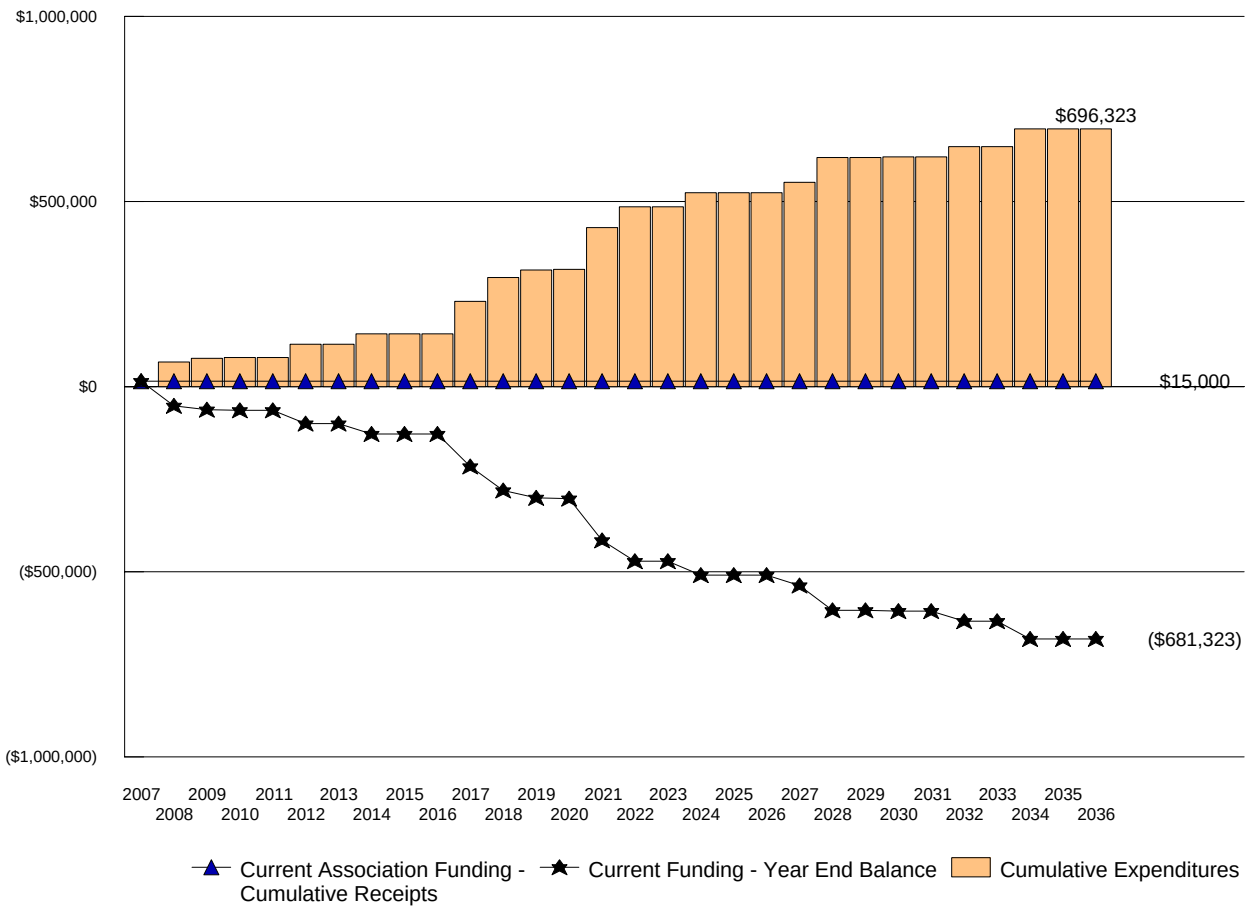
Expenditures: $172,380
Receipts: $287,130

RSTUDY+

# REPLACEMENT RESERVE ANALYSIS

## Outrigger _ Hawaiian Village Condominium — October 24, 2006

## Current Association Funding - Cumulative Receipts and Expenditures Graph




## Current Funding Data - Years 1 through 30

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| Starting balance | $15,000 | | | | | | | | | |
| Annual deposit | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Expenditures | $0 | $66,850 | $9,990 | $2,000 | $0 | $35,874 | $0 | $27,902 | $0 | $0 |
| Year end balance | $15,000 | ($51,850) | ($61,840) | ($63,840) | ($63,840) | ($99,714) | ($99,714) | ($127,616) | ($127,616) | ($127,616) |
| Cumulative Expenditures | $0 | $66,850 | $76,840 | $78,840 | $78,840 | $114,714 | $114,714 | $142,616 | $142,616 | $142,616 |
| Cumulative Receipts | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 |

| Year | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Expenditures | $87,770 | $64,750 | $20,000 | $2,000 | $112,800 | $56,114 | $0 | $37,892 | $0 | $0 |
| Year end balance | ($215,386) | ($280,136) | ($300,136) | ($302,136) | ($414,936) | ($471,050) | ($471,050) | ($508,942) | ($508,942) | ($508,942) |
| Cumulative expenditures | $230,386 | $295,136 | $315,136 | $317,136 | $429,936 | $486,050 | $486,050 | $523,942 | $523,942 | $523,942 |
| Cumulative receipts | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 |

| Year | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual deposit | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Expenditures | $28,114 | $66,850 | $0 | $2,000 | $0 | $27,514 | $0 | $47,902 | $0 | $0 |
| Year end balance | ($537,056) | ($603,906) | ($603,906) | ($605,906) | ($605,906) | ($633,421) | ($633,421) | ($681,323) | ($681,323) | ($681,323) |
| Cumulative Expenditures | $552,056 | $618,906 | $618,906 | $620,906 | $620,906 | $648,421 | $648,421 | $696,323 | $696,323 | $696,323 |
| Cumulative Receipts | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 | $15,000 |

TEN YEAR SUMMARIES

Expenditures: $142,616
Receipts: $15,000

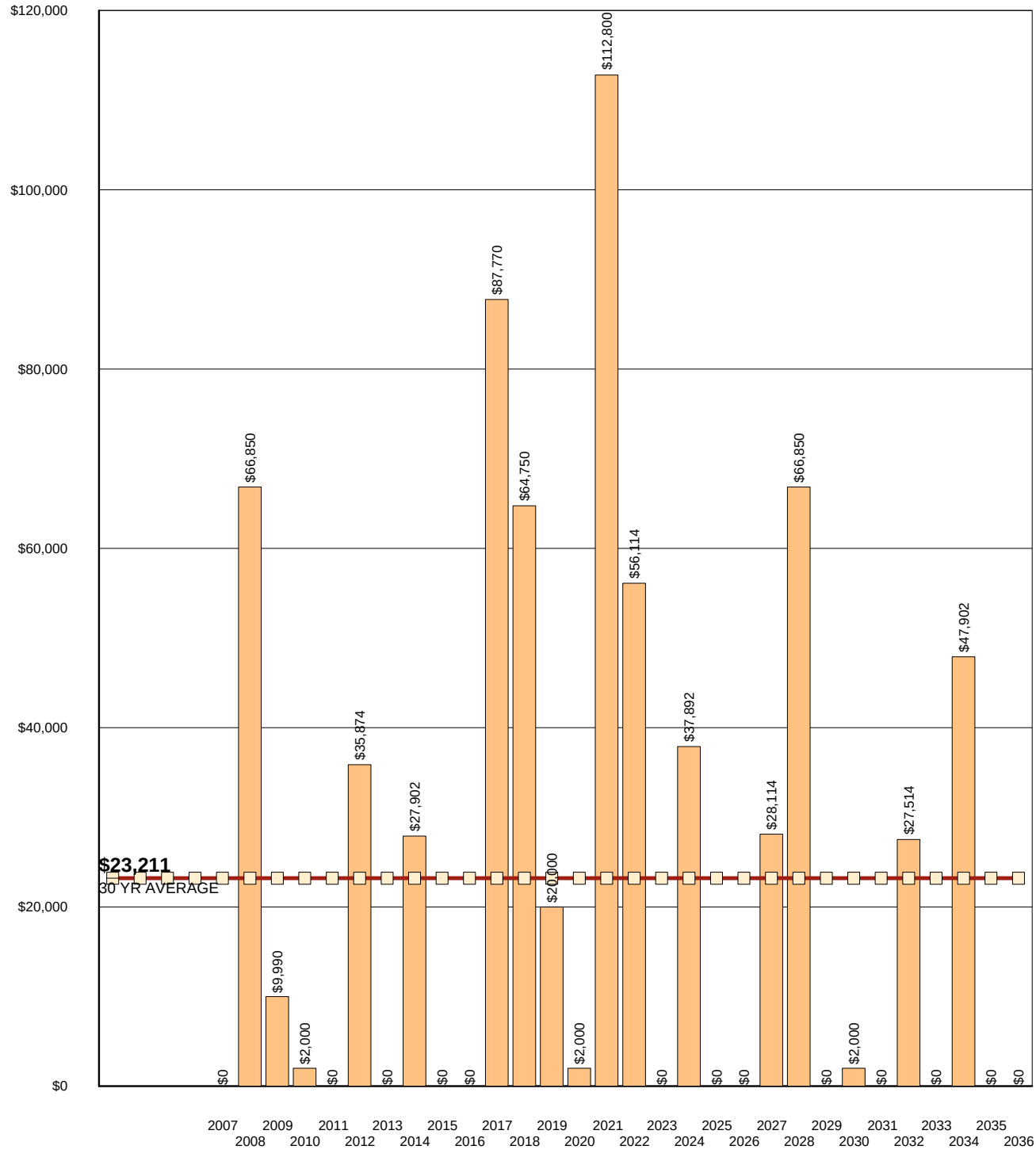
Expenditures: $381,326
Receipts: $0

Expenditures: $172,380
Receipts: $0

# REPLACEMENT RESERVE ANALYSIS

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## Graph of Annual Replacement Expenditures



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# REPLACEMENT RESERVE INVENTORY

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## INVENTORY OF COMPONENTS - INTERVAL REPLACEMENT

| ITEM # | COMPONENT | UNIT | NUMBER OF UNITS | UNIT REPLACEMENT COST ($) | COMPLETE CYCLE (YRS) | INITIAL REPLACEMENT (YRS) | TOTAL REPLACEMENT COST ($) |
|---|---|---|---|---|---|---|---|
| 1 | Domestic Water Supply Lines | ls | 1 | $53,571.00 | 25 | 15 | $53,571 |
| | 0.2 units to be replaced in 2022 | | | | | | $10,714 |
| | 0.2 units to be replaced in 2027 | | | | | | $10,714 |
| | 0.2 units to be replaced in 2032 | | | | | | $10,714 |
| | 0.2 units to be replaced in 2037 | | | | | | $10,714 |
| | 0.2 units to be replaced in 2042 | | | | | | $10,714 |
| 2 | Sanitary Waste and Vent Lines | ls | 1 | $52,000.00 | 25 | 15 | $52,000 |
| | 0.2 units to be replaced in 2022 | | | | | | $10,400 |
| | 0.2 units to be replaced in 2027 | | | | | | $10,400 |
| | 0.2 units to be replaced in 2032 | | | | | | $10,400 |
| | 0.2 units to be replaced in 2037 | | | | | | $10,400 |
| | 0.2 units to be replaced in 2042 | | | | | | $10,400 |

## COMMENTS:

# REPLACEMENT RESERVE INVENTORY

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## INVENTORY OF COMPONENTS - NORMAL REPLACEMENT

| ITEM # | | UNIT | NUMBER OF UNITS | UNIT REPLACEMENT COST ($) | NORMAL ECONOMIC LIFE (YRS) | REMAINING ECONOMIC LIFE (YRS) | TOTAL REPLACEMENT COST ($) |
|---|---|---|---|---|---|---|---|
| | SITE IMPROVEMENTS | | | | | | |
| 3 | Painted Wood Sign | ls | 1 | $2,000.00 | 10 | 3 | $2,000 |
| 4 | Metal Boxes | ea | 28 | $75.00 | 20 | 1 | $2,100 |
| | BUILDING EXTERIOR | | | | | | |
| 5 | Roof - Single Ply Membrane | sf | 9,400 | $12.00 | 18 | 14 | $112,800 |
| 6 | EIFS - recoating | sf | 18,500 | $3.50 | 10 | 1 | $64,750 |
| 7 | Concrete Plank Walkway - recoat | sf | 7,972 | $3.50 | 10 | 7 | $27,902 |
| 8 | Stone Panels - Repair | sf | 720 | $7.00 | 30 | 10 | $5,040 |
| 9 | Metal Picket Railing - 3.5' | ft | 1,272 | $45.00 | 25 | 10 | $57,240 |
| 10 | Aluminum Soffit | sf | 7,972 | $4.50 | 30 | 5 | $35,874 |
| 11 | Light Fixtures | ea | 28 | $250.00 | 25 | 20 | $7,000 |
| 12 | Wood steps (treated) (per rise) | ea | 64 | $100.00 | 15 | 10 | $6,400 |
| 13 | Garage Ceiling - Spray 0n Insulation | ls | 1 | $20,000.00 | 15 | 12 | $20,000 |
| | BUILDING SYSTEMS | | | | | | |
| 14 | Sprinkler Lines | ls | 1 | $23,000.00 | 15 | 15 | $23,000 |
| 15 | Fire Alarm Devices | ea | 8 | $300.00 | 15 | 2 | $2,400 |
| 16 | Fire Alarm System | ls | 1 | $7,590.00 | 15 | 2 | $7,590 |
| 17 | Stand Pipes | ea | 1 | $12,000.00 | 35 | 15 | $12,000 |
| 18 | Fire Pump | ea | 1 | $19,090.00 | 30 | 10 | $19,090 |

## COMMENTS:

Unit doors and windows. The replacement of units doors and windows is the responsibility of the Owner.
There are 28 unit entry doors with a replacement cost of approximately $16,100.
There are 1,880 sf of windows with a replacement cost of approximately $65,800.
2/27/07. Added metal boxes.
2/27/07. Changed remaining life of EIFS recoating.

# REPLACEMENT RESERVE INVENTORY

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## SCHEDULE OF REPLACEMENTS - YEARS ONE TO FIFTEEN

| 2007 | 2008 | 2009 |
|---|---|---|
| | EIFS - recoating $64,750<br>Metal Boxes $2,100 | Fire Alarm System $7,590<br>Fire Alarm Devices $2,400 |
| No Scheduled Replacements | Total Scheduled Replacements $66,850 | Total Scheduled Replacements $9,990 |
| **2010** | **2011** | **2012** |
| Painted Wood Sign $2,000 | | Aluminum Soffit $35,874 |
| Total Scheduled Replacements $2,000 | No Scheduled Replacements | Total Scheduled Replacements $35,874 |
| **2013** | **2014** | **2015** |
| | Concrete Plank Walkway - recoa $27,902 | |
| No Scheduled Replacements | Total Scheduled Replacements $27,902 | No Scheduled Replacements |
| **2016** | **2017** | **2018** |
| | Metal Picket Railing - 3.5' $57,240<br>Fire Pump $19,090<br>Wood steps (treated) (per rise) $6,400<br>Stone Panels - Repair $5,040 | EIFS - recoating $64,750 |
| No Scheduled Replacements | Total Scheduled Replacements $87,770 | Total Scheduled Replacements $64,750 |
| **2019** | **2020** | **2021** |
| Garage Ceiling - Spray 0n Insula $20,000 | Painted Wood Sign $2,000 | Roof - Single Ply Membrane $112,800 |
| Total Scheduled Replacements $20,000 | Total Scheduled Replacements $2,000 | Total Scheduled Replacements $112,800 |

# REPLACEMENT RESERVE INVENTORY

**Outrigger _ Hawaiian Village Condominium** **October 24, 2006**

## SCHEDULE OF REPLACEMENTS - YEARS SIXTEEN TO THIRTY

| 2022 | | 2023 | | 2024 | |
|---|---|---|---|---|---|
| Sprinkler Lines | $23,000 | | | Concrete Plank Walkway - recoa | $27,902 |
| Stand Pipes | $12,000 | | | Fire Alarm System | $7,590 |
| Domestic Water Supply Lines | $10,714 | | | Fire Alarm Devices | $2,400 |
| Sanitary Waste and Vent Lines | $10,400 | | | | |
| Total Scheduled Replacements | $56,114 | No Scheduled Replacements | | Total Scheduled Replacements | $37,892 |

| 2025 | | 2026 | | 2027 | |
|---|---|---|---|---|---|
| | | | | Domestic Water Supply Lines | $10,714 |
| | | | | Sanitary Waste and Vent Lines | $10,400 |
| | | | | Light Fixtures | $7,000 |
| No Scheduled Replacements | | No Scheduled Replacements | | Total Scheduled Replacements | $28,114 |

| 2028 | | 2029 | | 2030 | |
|---|---|---|---|---|---|
| EIFS - recoating | $64,750 | | | Painted Wood Sign | $2,000 |
| Metal Boxes | $2,100 | | | | |
| Total Scheduled Replacements | $66,850 | No Scheduled Replacements | | Total Scheduled Replacements | $2,000 |

| 2031 | | 2032 | | 2033 | |
|---|---|---|---|---|---|
| | | Domestic Water Supply Lines | $10,714 | | |
| | | Sanitary Waste and Vent Lines | $10,400 | | |
| | | Wood steps (treated) (per rise) | $6,400 | | |
| No Scheduled Replacements | | Total Scheduled Replacements | $27,514 | No Scheduled Replacements | |

| 2034 | | 2035 | | 2036 | |
|---|---|---|---|---|---|
| Concrete Plank Walkway - recoa | $27,902 | | | | |
| Garage Ceiling - Spray 0n Insula | $20,000 | | | | |
| Total Scheduled Replacements | $47,902 | No Scheduled Replacements | | No Scheduled Replacements | |

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# REPLACEMENT RESERVE ALLOCATION

## Outrigger _ Hawaiian Village Condominium — October 24, 2006

### CASH FLOW METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

| Item # | Component | Estimated Replacement Cost | Allocation of Reserves on Deposit | 2007 Deposits | 2007 Expenses | 2007 Year End Balance | 2008 Deposits | 2008 Expenses | 2008 Year End Balance | 2009 Deposits | 2009 Expenses | 2009 Year End Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INTERVAL COMPONENTS | | | | | | | | | | | |
| 1 | Domestic Water Supply Lines | 53,571 | | | | | | | | | | |
| 2 | Sanitary Waste and Vent Lines | 52,000 | | | | | | | | | | |
| | NORMAL COMPONENTS | | | | | | | | | | | |
| | SITE IMPROVEMENTS | | | | | | | | | | | |
| 3 | Painted Wood Sign | 2,000 | | | | | 2,000 | | 2,000 | | | 2,000 |
| 4 | Metal Boxes | 2,100 | 471 | 1,055 | | 1,526 | 574 | (2,100) | | | | |
| 5 | Roof - Single Ply Membrane | 112,800 | | | | | | | | | | |
| 6 | EIFS - recoating | 64,750 | 14,529 | 32,531 | | 47,060 | 17,690 | (64,750) | | | | |
| 7 | Concrete Plank Walkway - recoa | 27,902 | | | | | | | | | | |
| 8 | Stone Panels - Repair | 5,040 | | | | | | | | | | |
| 9 | Metal Picket Railing - 3.5' | 57,240 | | | | | | | | | | |
| 10 | Aluminum Soffit | 35,874 | | | | | 3,333 | | 3,333 | 29,943 | | 33,276 |
| 11 | Light Fixtures | 7,000 | | | | | | | | | | |
| 12 | Wood steps (treated) (per rise) | 6,400 | | | | | | | | | | |
| 13 | Garage Ceiling - Spray 0n Insula | 20,000 | | | | | | | | | | |
| 14 | Sprinkler Lines | 23,000 | | | | | | | | | | |
| 15 | Fire Alarm Devices | 2,400 | | | | | 2,400 | | 2,400 | | (2,400) | |
| 16 | Fire Alarm System | 7,590 | | | | | 7,590 | | 7,590 | | (7,590) | |
| 17 | Stand Pipes | 12,000 | | | | | | | | | | |
| 18 | Fire Pump | 19,090 | | | | | | | | | | |

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# REPLACEMENT RESERVE ALLOCATION

## Outrigger _ Hawaiian Village Condominium October 24, 2006

### COMPONENT METHOD - THREE YEAR ALLOCATION OF REPLACEMENT RESERVES

| Item # | Component | Estimated Replacement Cost | Allocation of Reserves on Deposit | 2007 Deposits | 2007 Expenses | 2007 Year End Balance | 2008 Deposits | 2008 Expenses | 2008 Year End Balance | 2009 Deposits | 2009 Expenses | 2009 Year End Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INTERVAL COMPONENTS | | | | | | | | | | | |
| 1 | Domestic Water Supply Lines | 53,571 | 449 | 2,209 | | 2,658 | 2,209 | | 4,867 | 2,209 | | 7,076 |
| 2 | Sanitary Waste and Vent Lines | 52,000 | 435 | 2,144 | | 2,580 | 2,144 | | 4,724 | 2,144 | | 6,869 |
| | NORMAL COMPONENTS | | | | | | | | | | | |
| | SITE IMPROVEMENTS | | | | | | | | | | | |
| 3 | Painted Wood Sign | 2,000 | 97 | 476 | | 572 | 476 | | 1,048 | 476 | | 1,524 |
| 4 | Metal Boxes | 2,100 | 152 | 974 | | 1,126 | 974 | (2,100) | | 105 | | 105 |
| 5 | Roof - Single Ply Membrane | 112,800 | 1,514 | 7,419 | | 8,933 | 7,419 | | 16,352 | 7,419 | | 23,771 |
| 6 | EIFS - recoating | 64,750 | 4,171 | 30,289 | | 34,461 | 30,289 | (64,750) | | 6,475 | | 6,475 |
| 7 | Concrete Plank Walkway - recoa | 27,902 | 449 | 3,432 | | 3,881 | 3,432 | | 7,313 | 3,432 | | 10,744 |
| 8 | Stone Panels - Repair | 5,040 | 257 | 435 | | 692 | 435 | | 1,127 | 435 | | 1,561 |
| 9 | Metal Picket Railing - 3.5' | 57,240 | 2,581 | 4,969 | | 7,550 | 4,969 | | 12,519 | 4,969 | | 17,488 |
| 10 | Aluminum Soffit | 35,874 | 2,311 | 5,594 | | 7,905 | 5,594 | | 13,499 | 5,594 | | 19,092 |
| 11 | Light Fixtures | 7,000 | 90 | 329 | | 419 | 329 | | 748 | 329 | | 1,077 |
| 12 | Wood steps (treated) (per rise) | 6,400 | 137 | 569 | | 707 | 569 | | 1,276 | 569 | | 1,845 |
| 13 | Garage Ceiling - Spray 0n Insula | 20,000 | 215 | 1,522 | | 1,737 | 1,522 | | 3,259 | 1,522 | | 4,781 |
| 14 | Sprinkler Lines | 23,000 | | 1,438 | | 1,438 | 1,438 | | 2,875 | 1,438 | | 4,313 |
| 15 | Fire Alarm Devices | 2,400 | 155 | 748 | | 903 | 748 | | 1,652 | 748 | (2,400) | |
| 16 | Fire Alarm System | 7,590 | 489 | 2,367 | | 2,856 | 2,367 | | 5,223 | 2,367 | (7,590) | |
| 17 | Stand Pipes | 12,000 | 525 | 717 | | 1,242 | 717 | | 1,959 | 717 | | 2,676 |
| 18 | Fire Pump | 19,090 | 974 | 1,647 | | 2,620 | 1,647 | | 4,267 | 1,647 | | 5,914 |

# APPENDIX
## Section A

### PROCEDURES AND DEFINITIONS USED IN THE REPLACEMENT RESERVE SCHEDULE

### A. Replacement Reserve Analysis

- **Analysis methods.** The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis. Due to the difference in accounting methodologies, these methods lead to different calculated values for the *Minimum Annual Contribution* to the Reserves. The results of both methods are presented in this report. The Association should obtain the advice of its accounting professional as to which method is more appropriate for this Association. The two methods are:

    1. **Component Method.** This method is a time tested mathematical model developed by HUD in the early 1980's. It treats each item in the replacement schedule as an individual line item budget. Generally, the *Minimum Annual Contribution* to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

    First, the total *Current Objective* is calculated, which is the reserve amount that would have accumulated had all of the items on the schedule been funded from initial construction at their current replacement costs. Next, the *Reserve Currently on Deposit* (as reported by the Association) are distributed to the components in the schedule in proportion to the *Current Objective*. The *Minimum Annual Deposit* for each component is equal to the Estimated Replacement Cost, minus the Reserves on Hand, divided by the years of life remaining.

    2. **Cash Flow Method.** The Cash Flow Method is sometimes referred to as the “Pooling Method." It calculates the minimum constant annual contribution to reserves (*Minimum Annual Deposit*) required to meet projected expenditures, without allowing TOTAL reserves on hand to fall below the specified minimum level in any year. This method usually results in a calculated requirement for annual contribution somewhat less than that arrived at by the Component Method of analysis.

    First, the *Minimum Recommended Reserve Level to be Held on Account* is determined based on the age, condition, and replacement cost of the individual components. The mathematical model then allocates the estimated replacement costs to the future years in which they are projected to occur. Based on these expenditures, it then calculates the minimum constant yearly contribution (*Minimum Annual Deposit*) to the reserves necessary to keep the reserve balance at the end of each year above the *Minimum Recommended Reserve Level to be Held on Account*. The Cash Flow Analysis assumes that the Association will have authority to use all of the reserves on hand for replacements as the need occurs. This method usually results in a *Minimum Annual Deposit* that is less than that arrived at by the Component Analysis.

- **Adjusted Cash Flow Analysis.** This program has the ability to modify the Cash Flow Method to take into account forecasted inflation and interest rates, thereby producing an *Adjusted Cash Flow Analysis*. Attempting to forecast future inflation and interest rates and the impact of changing technology is highly tenuous. Therefore, in most cases it is preferable to make a new schedule periodically rather than attempt to project far into the future. We will provide more information on this type of analysis upon request.

- **Unit costs.** Unit costs are developed using nationally published standards and estimating guides, and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures.

  Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information that should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

- **Replacement vs. repair and maintenance.** A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or cost of repairs or maintenance.

**B. Definitions**

- **Adjusted Cash Flow Analysis.** Cash flow analysis adjusted to take into account annual cost increases due to inflation, and interest earned on invested reserves. In this method, the annual contribution is assumed to grow annually at the inflation rate.

- **Annual Deposit if Reserves Were Fully Funded.** Shown on the Summary Sheet, "A" in the Component Method summary, this would be the amount of the Annual Deposit needed if the *Reserves Currently on Deposit* were equal to the *Total Current Objective*.

- **Cash Flow Analysis.** See *Cash Flow Method*, above.

- **Component Analysis.** See *Component Method*, above.

- **Contingency.** An allowance for unexpected requirements. Roughly the same as the *Minimum Recommended Reserve Level to be Held on Account* used in the *Cash Flow Method* of analysis.

- **Critical Year.** In the *Cash Flow Analysis*, a year in which the reserves on hand are projected to fall to the established minimum level. See *Minimum Recommended Reserve Level to be Held on Account*

  - **Current Objective.** *This* is the reserve amount that would have accumulated had the item been funded from initial construction at its current replacement costs. It is equal to the *estimated replacement cost* divided by the estimated economic life, times the number of years expended (the difference between the *Estimated Economic Life* and the *Estimated Life Left*). The *Total Current Objective* can be thought of as the amount of reserves the Association should now have on hand based on the sum of all of the Current Objectives.

- **Cyclic Replacement Item.** A component item that typically begins to fail after an initial period *(Estimated Initial Replacement*), but which will be replaced in increments over a number of years (the *Estimated Replacement Cycle*). The Reserve Analysis program divides the number of years in the *Estimated Replacement Cycle* into five equal increments. It then allocates the *Estimated Replacement Cost* equally over those five increments. (As distinguished from *Normal Replacement Items*, see below)

- **Normal Replacement Schedules.** A component item that typically begins to fail after an initial period *(Estimated Initial Replacement*), but which will be replaced in increments over a number of years (the *Estimated Replacement Cycle*).

- **Estimated Economic Life.** Used in the *Normal Replacement Schedules*. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

- **Estimated Economic Life Left.** Used in the *Normal Replacement Schedules*. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the *Estimated Economic Life* and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction and quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

- **Estimated Initial Replacement.** For a *Cyclic Replacement Item* (see above), the number of years until the replacement cycle is expected to begin.

- **Estimated Replacement Cycle.** For a *Cyclic Replacement Item*, the number of years over which the remainder of the component's replacement occurs.

- **Minimum Annual Deposit.** Shown on the Summary Sheet, "A-1." The calculated requirement for annual contribution to reserves as calculated by the *Cash Flow Method* (see above).

- **Minimum Deposit in the Study Year.** Shown on the Summary Sheet, "A-1." The calculated requirement for contribution to reserves in the study year as calculated by the Component Method (see above).

- **Minimum Recommended Reserve Level to be Held on Account.** Shown on the Summary Sheet, "A" this number is used in the Cash Flow Method only, this is the prescribed level below which the reserves will not be allowed to fall in any year. This amount is determined based on the age, condition, and replacement cost of the individual components. This number is normally given as a percentage of the total *Estimated Replacement Cost* of all reserve components.

- **Normal Replacement Item.** A component of the property that, after an expected economic life, is replaced in its entirety. (As distinguished from *Cyclic Replacement Items*, see above.)

- **Normal Replacement Schedules.** The list of Normal Replacement Items by category or location. These items appear on pages designated.

- **Number of Years of the Study.** The number of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. This study covers a 40-year period.

- **One Time Deposit Required to Fully Fund Reserves.** Shown on the Summary Sheet, "A-1" in the Component Method summary, this is the difference between the *Total Current Objective* and the *Reserves Currently* on Deposit.

- **Reserves Currently on Deposit.** Shown on the Summary Sheet, "A-1", this is the amount of accumulated reserves as reported by the Association in the current year.

- **Reserves on Hand**. Shown in the *Cyclic Replacement* and *Normal Replacement Schedules*, this is the amount of reserves allocated to each component item in the *Cyclic* or *Normal Replacement* schedules. This figure is based on the ratio of *Reserves Currently on Deposit* divided by the total *Current Objective*.

- **Replacement Reserve Study.** An analysis of all of the components of the common property of the Association for which a need for replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its estimated Replacement Cost, Estimated Economic Life, and Estimated Life Left. The objective of the study is to calculate a recommended annual contribution to the Association's Replacement Reserve Fund.

- **Total Replacement Cost.** Shown on the Summary Sheet, "A-1", this is total of the Estimated Replacement Costs for all items on the schedule if they were to be replaced once.

- **Unit Replacement Cost.** Estimated replacement cost for a single unit of a given item on the schedule.

- **Unit (of Measure)**. The following abbreviations are used in this report:
  **EA**: each **FT**: feet **LS**: lump sum **SF**: square feet