CRITKES STERENGINEERS

CRITERIUM-KESSLER ENGINEERS Independently Owned and Operated 14539 W. Indian School Road, Suite #880 Goodyear, Arizona 85395 TEL 480 218-1969

April 16, 2019

Dove Cove Estates Board of Directors Branton Turner, CMCA[®] Community Manager **Vision Community Management** 16625 S. Desert Foothills Parkway Phoenix, Arizona 85048 <u>BTurner@WeareVision.com</u>

PROPERTY: DOVE COVE ESTATES HOMEOWNERS ASSOCIATION BUCKEYE, ARIZONA

SERVICE: FULL PROPERTY EVALUATION AND RESERVE FUND ANALYSIS

ATTACHMENT: FINAL REPORT

Dear Mr. Turner and the Dove Cove Estates Homeowners Association Board of Directors:

As requested by Mr. Branton Turner, Dove Cove Estates Community Manager, on your behalf, Criterium-Kessler Engineers has completed a Full Reserve Study for the Dove Cove Estates Homeowners Association. We submit the attached final report for the Board's consideration and use.

This Reserve Study has been performed in general accordance with Community Association Institute (CAI) National Reserve Study Standards. However, Criterium-Kessler's scope of service has exceeded CAI's guidelines with regard to our engineering evaluation of the property's condition, identification of current deficiencies, and consideration of appropriate capital expenditures for recommended repairs, replacements, and improvements.

We observed the property Tuesday, February 19, 2019. Our findings and recommendations are principally based on observations made during our on-site visual inspection performed by:

✓ Jim Herman – Engineering Field Technician

We have reviewed the provided financial records and other public mapping resources.

The report should be reviewed in its entirety, including its Appendices, which contain the financial analysis, captioned photographs, and reference documents.

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As a result of our on-site inspections and other investigations, we find the common components of your community to be in generally good condition and moderately maintained. However, we did observe some deficiencies and deferred repairs, which are noted in the report.

In summary, given the approximate starting balance of the Capital Reserve Fund estimated at \$202,476 on March 1, 2019, and if the current annual rate of contribution to reserves at \$26,289 annually were carried forward unchanged throughout the 30-year planning period, our evaluation of facility needs, and financial analysis indicates that the Association's level of funding will prove <u>insufficient</u> to meet future needs. Due to aging building and site components, we calculate average reserve expenditures of approximately \$45,500 (in current dollars) annually over the next thirty years.

The 30-year total of projected capital expenditure (CapEx) budgets, (current dollar cost estimates inflated at 2.5% annually), is \$1,365,002. Because of drawdowns to pay for these CapEx expenses, projected year-end balances would fall into deficit values in Year 12 (2030), and would reach a theoretical accumulated deficit of approximately (\$369,217) at the end of the planning period in Year 30 (2048).

In this report we have suggested minimum threshold fund balances to be maintained and three alternate funding plans for the Board's consideration. We look forward to working with you to develop a satisfactory plan for adoption.

In reviewing the engineering assumptions, cost estimates and projected fund values herein, please understand that their accuracy diminishes greatly beyond Year 5. Long range facility maintenance projections are intended only to indicate the likely pattern of capital expenditures and to guide financial planning. Criterium-Kessler Engineers agrees with CAI's recommendation that reserve studies should be updated regularly to allow periodic adjustment of facility plans and funding strategies.

If you have any questions or would like to discuss further services, please contact Dan Kessler at 480.218.1969.

Criterium Engineers appreciates this opportunity to assist Board in support of the Association's facility and financial planning. Thank you.

Thank you for your confidence in Criterium-Kessler Engineers.

Respectfully Submitted,

Dan Kessler

President

Criterium-Kessler Engineers



FULL PROPERTY EVALUATION AND RESERVE FUND ANALYSIS

DOVE COVE ESTATES HOMEOWNERS ASSOCIATION Buckeye, AZ

Prepared for: Dove Cove Estates HOA Board of Directors

Requested by: Branton Turner Community Manager, Dove Cove Estates Vision Community Management 16625 S. Desert Foothills Parkway Phoenix, Arizona 85048



Prepared by:



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Site Inspection Date(s): February 19, 2019 Final Submittal: April 16, 2019

Project Number: 18-0187

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1.0 INTRODUCTION

Following authorization by the Dove Cove Estates Homeowners Association Board of Directors, Mr. Branton Turner, Community Manager, requested Criterium-Kessler Engineers to conduct a full Reserve Study of your 322-unit residential community located in Buckeye Arizona.

This report must be reviewed in its entirety to understand our findings and their limitations. The Appendices are an integral part of this report and must be included in any review. Please refer to Appendix D for definitions of common terms of reference used herein.

We have conducted the study in general accordance with the National Reserve Study Standards published by the Community Association Institute (CAI). Please refer to Appendix D which contains a copy of the CAI standards.

This study was conducted by licensed Professional Engineers and other qualified staff working under the responsible charge of a CAI-certified Reserve Specialist. Please refer to Appendix F for the qualifications of the project team.

Criterium-Kessler Engineers Jim Herman (Engineering Field Technician) performed this study. Mr. Herman visited the site on February 19, 2019. This report is principally based on our visual inspection(s) conducted on February 19, 2019. Mr. Herman prepared this report and the attached financial analysis. Mr. Dan Kessler reviewed his findings, and presents this confidential report for the Board's review and use.

In reviewing the engineering assumptions, cost estimates and projected fund values herein, please understand that their accuracy diminishes greatly beyond Year 5. Long-range facility maintenance projections are intended only to indicate the likely pattern of capital expenditures and to guide financial planning. Criterium-Kessler Engineers agrees with CAI's recommendation that reserve studies should be updated regularly to allow periodic adjustment of facility plans and funding strategies.



2.0 EXECUTIVE SUMMARY

In summary, our on-site inspections and other investigations found the common components of the property to be in generally good condition and moderately maintained.

We observed one deficiency and two deferred repairs which are noted within the report.

We have identified an inventory of Association-responsible common components that are likely to require periodic repair or replacement or other recurrent capital investment.

We have formed an opinion of the remaining useful life of each component. We have estimated the current cost of required capital expenditures for their repair or replacement. We have projected annual capital budgets over a 30-year planning period.

In the summary, the 30-year total of projected capital expenditure (CapEx) budgets, (current dollar cost estimates inflated at 2.5% annually), is \$1,365,002.

The Board has provided us with information on the Association's Capital Reserve Fund and the current funding plan. Our initial financial analysis was based on the data supplied.

Given the reported \$202,476 starting balance of the Capital Reserve Fund on March 1, 2019, the current ongoing rate of contribution \$26,289 annually, and an anticipated average rate of return on investment of 0.25% per year, our financial analysis indicates that the Association's current funding will prove <u>inadequate</u> to meet future needs.

Because of draw-downs to pay for projected CapEx expenses, projected year-end fund balances are (\$369,217) by the end of the 30-year planning period in 2048.

In this report, we have recommended minimum threshold fund balances be maintained and have included three (3) alternate funding plans.



3.0 PURPOSE AND SCOPE

3.1 **Objectives**

The purpose of this reserve study is to determine a capital needs plan for the Association, to evaluate the current rate of contribution to the capital reserve fund, and, if required, to suggest alternate funding strategies.

This report is intended for use as a tool by the Association's Board of Director's for considering and managing future financial obligations, for determining appropriate capital reserve fund allocations, and for informing the individual Owners of the Association's required capital expenditures and the resulting financial plan.

For purposes of financial planning, Association-responsibility expenses are typically divided into two categories:

- \checkmark Operation and maintenance (O&M) of commonly held elements of real property and other assets. These O&M expenses usually include taxes, insurance, property management costs and other service fees.
- ✓ Capital expenditures for major periodic repairs and replacement of commonly-held elements.

Normal, recurring O&M costs are typically paid by the individual owners through periodic assessments or service fees equal to their share of the annual budget, which is estimated based on cost projections of either actual or average levels of expense.

Some additional contingency amount may be included in annual O&M budgets to result in a year-end surplus which is carried forward year-to-year to cover variations in annual costs or any uninsured losses. This carry-over is often referred to as an operating reserve.

These O&M costs, their funding and operating reserves are not typically considered by a reserve study.

Studies of this nature are important to ensure that a community will have sufficient funds for the long-term, periodic capital expenditure requirements. This helps preserve the value of the community and the units within it.

Anticipating significant expenditures over an extended period will assist the Association in determining appropriate levels of present and ongoing contribution to a capital reserve fund which will result in adequate balances to cover these expenses as they arise without any need for borrowing or special assessments.

Of course, borrowing or special assessments may be part some capital plans. However, our study will not consider these sources of revenue unless directed. We caution our 9 clients to check state regulations, which may limit or preclude these options.

Our capital expenditure forecast is more reliable over its first few years than in later years. History demonstrates that, as time progresses, property conditions and management strategies will change. As a result, planned scopes of work may be altered or deferred. Actual cost in the marketplace will vary from estimates.

Actual rates of inflation and returns on investment will vary from projections. For the purposes of this study an inflation rate of 3% is used. This figure is in line with the historical average of 2.5% over the last thirty years and accounts for the increasing cost of construction.

The Mortenson Construction Index continues to experience a significant index rate increase above the 2% noted by the Consumer Price Index (CPI). The Phoenix and National construction cost indexes increased steadily throughout 2018, which included a 7.5% increase in the Phoenix Index compared to year-end 2017. The report also noted that those impacted by these costs should plan on a 4% - 6% increase in 2019.

For these reasons, we concur with Community Association Institute guidelines and recommend that this reserve study be updated every three to five years. As of late, many associations choose to perform a yearly update; this allows them to remain current and focused despite frequent Management or Board turnovers.

3.2 Level of Service

The Community Association Institute (CAI) identifies three levels of service for Reserve Studies:

- Ι. Full Reserve Study, with site visit
- Ш. Reserve Study Update, with site visit
- Reserve Study Update, without site visit III.

All may be appropriate for a community, depending on the condition of the facility and the phase of their planning cycle. The CAI National Reserve Study Standard in Appendix D contains more detail on these levels of service and the scope of study of each of them.

Our current study is Level I Full Reserve Study.

Criterium-Kessler's actual scope of service is enhanced and exceeds the CAI standard in Amount principal ways:

- \checkmark Our investigation and evaluation of the property is performed by, or overseen by experienced professional engineers.
- \checkmark After preparing and submitting our initial analysis, we engage in an iterative review process with the Board of Directors, toward developing a financial plan more responsive to the needs of the Community. 8

3.3 Sources of Information

✓ Community Manager – Branton Turner

The following documents were provided to us and reviewed:

- ✓ Budgets
- ✓ Maps and Aerial Images

4.0 PHYSICAL ANALYSIS

4.1 **Property Description**

Please refer to Appendix C for captioned photographs for selected assets throughout the community.

Dove Cove Estates Homeowners Association is a 322-unit (home) residential community located on a 75-acre site east of Miller Road and north of Southern Avenue in Buckeye, Arizona. The area is flat, developed farm fields generally sloping to the southwest. Drainage is directed into retention areas and there is no evidence of drainage issues.

The northern and western border of the community is homeowner block walls. The eastern border is a low block wall. The southern border is shared between the homes of this community and the community to the south. The western border has decorative block walls that extend on the and north and south of Dove Cove Drive from Miller to the main park. The main park, in the center of the community, area has a large swing set and a lighted basketball court.

The community has two other parks with shaded climbing structures and a ramada with a picnic table and trash can, one on Dove Gap and the other on Dove Ridge. A greenbelt area in the center of the community connects the Dove Ridge playground with the main park and extends north into the community. A second greenbelt is on the western border of the property.

The roads and fire hydrants are maintained by the City of Buckeye.

4.2 **Common Components**

Please refer to Appendix A for the Common Component Inventory.

Association-responsible common components include

- ✓ Decorative block wall western perimeter and on both sides of Dove Creek Drive from Miller to the main park
- 8 \checkmark Common block walls – on shared HOA/HO areas such as block ends and the northern and eastern perimeters

- ✓ Concrete flatwork including sidewalks, basketball court, and storm drains
- ✓ Drywells in the retention areas
- \checkmark Rip-rap covered drainage into the retention areas
- ✓ Irrigation systems, controllers and backflow prevention for irrigation of the common areas
- \checkmark Mailbox kiosks spread throughout the community, including three with solar lights
- \checkmark Granite in common areas
- ✓ Parks, play structures, and picnic areas on Dove Gap, Dove Ridge, and Dove Creek Drive
- ✓ Monument sign on Miller and the sign lighting

4.3 Condition Assessment

4.3.1 Site Improvements

Descriptions & Observations

The network of perimeter block walls throughout the property are in generally good condition. There were areas of water damage noted in the base of the walls and the retention walls below some of the yards. We recommend conducting a wall inspection in the next year to develop a wall maintenance plan to slow deterioration of the walls and prolong the life of this asset. Funds were included in the reserve study to perform the inspection and to repair 2.5% of the block walls on a ten year cycle. This figure is based on similar projects for comparable communities. The wall maintenance plan is the largest variable cost affecting the funding of the reserve study.

Painting of community assets, including the walls, metal rails, and ramadas appears to be completed on a regular basis and is in generally good condition.

The concrete flatwork in the community is in good condition with the exception of the concrete borders in the main park area. Several areas have been cracked and pushed out of position by tree roots. The reserve includes funding to repair 2.5% of the total concrete flatwork every four years. We recommend the initial repairs focus on the curbing in the main park.

The granite in the common areas appears to be replenished regularly. Granite replenishment is typically conducted on a 10 year cycle. To spread costs, the funding is split into two tasks, replenishing half every 5 years. . In addition to the concrete flatwork, the property includes retention areas with dry wells and drainage with riprap to break up the flow of runoff. These areas are in good condition.

The irrigation controllers, irrigation system, and backpressure valves appear to be in good condition for their age. Funding is included to replace these assets based on their standard expected useful life.

Mailbox kiosks are spread throughout the property. The kiosks are in appropriate condition for their age. Three of the mailbox kiosks have a solar light. The light was not tested or viewed at night.

The play structures at the Dove Gap and Dove Ridge parks and swing in the main park are in good condition for their age. General maintenance (currently included in the operations budget) will help extend the useful life of the structures.

The play area shades are in good condition and appear to have been replaced in the last few years.

The ramada roofs at the Dove Gap and Dove Ridge parks are in good condition. Replacement or refurbishment funding is included in the reserve on a 40-year cycle. These structures are also included in the exterior metal painting line item.

The basketball court in the main park is in good condition. The court has been repainted in the recent past. The backboards and chain nets are in good condition.

The Main Park and the Dove Ridge Park include solar lights. At the main park, the swing area is lighted in addition to the basketball court. The Dove Ridge playground includes a single light. These lights were inspected during the day and their operation was not confirmed. The reserve fund includes funding to replace the light fixture and the solar battery, not the entire mount and pole since that is outside of the 30-year study.

The sand under the play structures and the swing is funded for replenishment on a fiveyear cycle. The task is funded as a single item in the reserve fund.

The playground turf, or padded area under the play structures is in good condition and shows evidence of recent repairs.

The park furniture, including the tables, benches, and trash cans are combined into a single item for the reserve fund since they would likely be replaced at the same time. These items are in good condition for their age.

The monument sign on Miller Avenue shows signs of water damage on the back side. The lights on the monument sign were not viewed at night.

8 Except as noted in Section 4.5 Current Deficiencies, the site improvements are in good general condition.

Common Components & Required Expenditures

Appendix A contains an inventory of all site improvements which are common components, and a detailed schedule of projected Capital Expenditure (CapEx) budgets for these items:

- ✓ Block Wall Inspection Scheduled at 10-year intervals starting in Year 1
- ✓ Block Wall Repair (Decorative and Common) Scheduled at 10-year intervals starting in Year 2.
- ✓ Painting (Block Wall and Metal Items) Scheduled at 8-year intervals starting in Year 6.
- ✓ Concrete Flatwork Unscheduled Repair or Replacement Budget Scheduled at 4-Year intervals starting in Year 1.
- ✓ Dry Well Maintenance Funded to maintain two (2) per cycle on a 5-year cycle starting in Year 1.
- \checkmark Rip Rap Maintenance Scheduled at 10-year intervals starting in Year 5.
- ✓ Irrigation System Replacement Scheduled at 15-year intervals starting in Year 8.
- ✓ Irrigation Controller Replace Scheduled at 12-Year intervals starting in Year 7.
- ✓ Mailbox Kiosks Replace Scheduled at 20-year intervals in Year 6.
- ✓ Mailbox Lights Scheduled at 8-year intervals starting in Year 3.
- ✓ Play Structures (Dove Gap and Dove Ridge) Scheduled at 25-year intervals starting in Year 10
- ✓ Play Shades (Dove Gap and Dove Ridge) Scheduled at 15-year intervals starting in Year 12.
- ✓ Play Area Ramada Roofs (Dove Gap and Dove Ridge) Scheduled at 40-year intervals starting in Year 20.
- ✓ Monument Sign
 - Replace Scheduled at 20-year intervals starting in Year 11.
 - Refurbish Scheduled 10-years before and after replacement starting in Year 1. 8

4.4 **Current Deficiencies**

Based on our own observations:

ASSET	LOCATION	Сомментя
Solar LED Ramada Light	Dove Gap Park	The ramada at the Dove Gap park has a solar LED light under the ramada that has been damaged. The solar panel also appears to be damaged. Funding is not included in the reserve. It is expected that this will be funded through the operations and maintenance budget.
Concrete Flatwork - Curbs	Main Park	The concrete curbs at the main park have significant cracking and damage from tree roots. Reference photos 38 and 39. Funding for curb repair is included in the reserve under the concrete flatwork item.
Common Area Perimeter Walls	Various Locations	The common area walls show signs of deterioration and water damage. The reserve includes funding for a wall inspection and repair of sections of the block wall on a 10-year cycle.

4.5 Life and Valuation

4.5.1 Opinions of Useful Life

Simply stated, for components that require periodic capital expenditures (CapEx) for their repairs or replacement, the frequency of work equals the typical; industry accepted expected useful life (EUL) for the type of feature:

Component's Frequency of CapEx = Component's EUL

And, the remaining useful life (RUL) of a component before the next capital expenditure for its repair or replacement is equal to the difference between its EUL and its age:

RUL = EUL - Age

Of course, the condition and rate of deterioration of actual site improvements and building elements rarely conform to such simple analysis. Often, a property's history and available documentation does not provide any record of a particular component's actual age.

In our experience, the effective age and actual RUL of an installed item vary greatly from its actual age and calculated RUL. These variances depend on the quality of its original materials and workmanship, level of service, climatic exposure, and ongoing maintenance. As part of Criterium-Kessler Engineer's work on this reserve study, we have determined our opinion of the effective age, EUL and RUL of each common component based on our evaluation of its existing condition and considering those factors.

As a result, in preparing the CapEx schedule for reserve studies, we often:

- ✓ Accelerate the schedule of work for components found to be in poorer condition than expected for their age.
- ✓ Defer work for components observed to be in unusually good condition.

Capital repair and replacement work for some components is often spread over many years. This may be done because not all on-site installations of a particular type of component age or deteriorate at the same rate. Or, work may be scheduled in phases to limit disruption or ease cash flow.

For these reasons, when it seems appropriate we will spread some budgets over multiple years. However, it is beyond the scope of this reserve study to prioritize the need for work between a number of buildings or installed locations or to closely specify or breakdown phased work packages.

In summary, we have based our opinion of the remaining service life and expected frequency and schedule of repair for each common component on some or all of the following:

- ✓ Actual or assumed age
- ✓ Observed existing condition
- ✓ Association's or Community Manager's maintenance history and plan
- \checkmark Our experience with actual performance of such components under similar service and exposure
- \checkmark Our experience managing the repairs and replacements of such components

We use the following documentation to guide our considerations:

- ✓ Fannie Mae Expected Useful Life Tables
- ✓ National Association of Home Builders Life Expectancy of Components
- ✓ Marshall & Swift Valuation Service –Expected Life Expectancies

4.5.2 Cost Estimating

In developing our estimate of capital expenditure for most common components, we have estimated a quantity of each item and a unit cost for its repair or replacement. In some cases, it is more appropriate to estimate a lump sum cost for a required work package. 0 Unless directed to take a different approach, we assume that contract labor will perform the work and apply appropriate installer's mark-ups on supplied material and equipment. When required or requested, our estimated costs include demolition and disposal of existing materials, and protection of other portions of the property.

When appropriate for large capital projects, we will also include soft costs for design and project management, and typical general contractor's cost for general conditions, supervision, overhead and profit.

We have based our opinion of unit and lump sum costs on some or all of the following:

- ✓ Records of previous maintenance expenses
- ✓ Previously solicited vendor quotations or contractor proposals
- ✓ Provided capital budgets developed by others
- ✓ Our project files on repairs and replacements at other properties

We use the following publications to guide our considerations:

- ✓ On-Line RS Means Construction Cost Data
- ✓ Marshall & Swift Valuation Service Facility Cost Index

Annual aggregated capital expenditure budgets have been calculated for all years during the study period by inflating the annual tallies of current dollar cost estimates, and compounding for inflation at 2.50% per year.

Of course, it is impossible to accurately predict inflation fluctuation. Two point five percent is close to the average annual values of both consumer and construction cost increases since the U.S. Bureau of Labor Statistics started publishing data approximately 85 years ago.



5.0 FINANCIAL ANALYSIS

We have projected capital reserve expenditures over the next thirty years and analyzed funding options to satisfy those expenditures. The projections are based on anticipated repair or replacement schedules and estimated costs as discussed in the report. The projections also take into consideration 0.25% return on invested moneys and 2.5% inflation. These values are based on information provided to us by the Association (or our estimates based upon current conditions). Pease note that actual values and rates may vary significantly.

Please refer to Appendix A, which contains tables and graphs illustrating the findings discussed below and includes the following:

- Reserve Study Summary: Defines all the criteria used for financial calculations, including the assumed inflation rate and rate of return on deposited reserve funds.
- Component Inventory: Replacement and/or repair components broken down by categories that match the report. The table lists estimated costs as well as estimated useful lives and remaining useful lies for each component.
- ✓ Table of Annual Reserve Expenditures: Costs for component replacement and/or repair items broken down by year based on projections of estimated and remaining lives.
- ✓ Summary of Funding Plan Balances for Each Alternative: A table of yearly balances for each funding plan (if more than one) and annual reserve expenditures. Also included is a combined graph illustrating end of year balances for all funding plans over the 30-year study period.

5.1 Capital Expenditure Projection

Based on our investigations and estimates described in Section 4 of this report, we have identified likely capital expenditures throughout the study period. The components identified are those understood to be the responsibility of the Association.

For detailed information on projected capital expenditures, please refer to the Appendix A. tables titled "Common Component Inventory & Capital Expenditure (CapEx) Planning" and "Annual Capital Expenditures – 30-Year Budget Projection."

Please note that we have assumed that the cost of routine, annually occurring minor repair & replacement work (typically valued at less than \$1,000) will be covered by the normal Operations & Maintenance budget. Such minimal costs may be for one-time work on a single item, or aggregated repairs of a type of component over a year.



We have not included any reserve expenditures for repair of casualty damage by vehicle impact, severe storm action, etc. It is assumed that such expenses would be defrayed by proceeds of insurance claims.

Projections are based on a fiscal year running from January 1 to December 31. In summary, we calculate capital reserve expenditures (CapEx) expenditures over the next thirty years of approximately \$30,546 annually (in current dollars) and \$1,309,921 total (in current dollars).

5.2 Current Funding

5.2.1 Board-Provided Information

Our analysis and calculations are based upon the following starting data provided by the Community Manager:

Study Period / Fiscal Year Starting Date:	January 1, 2018
For Designated Fiscal Year:	2018
Starting Reserve Fund Balance:	\$202,476
On Date:	March 1, 2019
Current Rate of Designated Contribution:	\$2,191 Overall per month \$26,298 Overall per year
Planned Reserve Increases:	None formally adopted
Planned Special Assessments:	None
Planned Average Return on Investment:	0.25% per year
Projected Rate of Inflation:	2.5% per year

Table: 5.2-1 Provided Starting Data

Financial data, records of past expenses, and cost estimates provided by others have been taken in good faith and at face value. No audit or other verification has been performed.



5.2.2 Current Funding Plan Projection

The Capital Reserve Fund beginning balance for March 1, 2019 was taken from the annual 2019 budget. Our initial analysis was a projection of the Association's *current* annual fund contribution rate of \$26,298 forward over 30 years, with no increases.

Given the projected \$202,476 starting balance of the Capital Reserve Fund on March 1, 2019, a recommended minimum fund threshold of \$110,000 (2.5 times the average annual capital expenditure), and utilizing the data in Table 5.2.1 above, our cash flow projection (component funding projection) indicates that the Association's current funding of \$26,298 per year, <u>if carried forward unchanged</u>, is <u>inadequate</u> to cover anticipated capital expenditures (CapEx).

Because of drawdowns to pay for projected Capital Expenditures, projected year-end balances would fall to deficit levels at the end of 2030 (Year 12). Accumulated deficits would equal (\$369,217) by year-end 2048 (Year 30).

To correct the inadequate funding for projected Capital Expenditures, we have developed and provided three alternative funding approaches below (Section 5.3: Alternate Funding Plans). These approaches were not coordinated with the Board of Directors.

For detailed data, please refer to Appendix A tables and graphs titled "Capital Reserve Fund – Cash Flow Projection – Current Funding Plan.

5.3 Alternate Funding Plans

In this report, we suggested that the Board consider maintaining a minimum threshold fund balance of \$111,000, which is equal to 2.5 times the average annual capital expenditure budget, adjusted ahead for inflation.

Since the current funding profile is in inadequate, Criterium-Kessler Engineers has prepared three alternate funding plans for the Board's consideration that would result in positive year-end balances throughout the planning period.

- ✓ Alternate Funding Plan 1 Baseline funding to maintain a positive fund balance: An annual increase of 3.05% per year for the duration of the study will maintain a positive reserve fund balance. With this increase, the final balance in Year 30 is \$146,514.
- ✓ Alternate Funding Plan 2 Threshold funding to target the reserve fund balance above the recommended minimum threshold: An increase of 7% to the reserve fund contribution in Years 2-12 will maintain the fund balance above the recommended minimum for all years except Year 12. With this increase, the final balance in Year 30 is \$321,596.



 \checkmark Alternate Funding Plan 3 – Threshold funding to target the reserve fund balance above the recommended minimum threshold: A single increase of 50% to the reserve fund contribution in Years 2 will maintain the fund balance above the recommended minimum for all years except Year 12. With this increase, the final balance in Year 30 is \$423,507.

We recommend following Alternate Funding Plan 1, an annual increase of 3.05%, and updating the reserve study in five years after the wall inspection and development of a wall maintenance plan. The wall maintenance is the single largest variable in the community's future maintenance plans. Larger increases to maintain long-term fund balances should include an accurate estimate of the cost of wall maintenance if an evaluation reveals larger issues.

5.4 **Funding Methodologies**

The approach to funding methodologies continues to be a subject of much discussion and can create confusion for those responsible for long-term strategic planning for a community.

Appendix E provides general information related to Funding Methodologies and is not specific to your Association or Community. They are included to provide a framework for consideration of the study, and to explain our approach to the funding analysis.

We also recommend that the Board review the Community Association Institute (CAI) National Reserve Study Standards attached in Appendix D.

The Community Association Institute (CAI) recognizes several funding methodologies, all of which may be used to satisfy these principles:

- ✓ Sufficient Funds When Required
- ✓ Maintains Property Values
- ✓ Stable Contribution Rate over the Years
- Evenly Distributed Contributions over the Years
- ✓ Fiscally Responsible Some of the more common methods are outlined below.

For this reserve study, Criterium-Kessler Engineers has utilized a cash flow based funding approach as described below:

Criterium Engineer's recommended approach to reserve planning utilizes a cash flow model.

A cash flow based funding plan is prepared so that contributions to capital reserves are selected to be sufficient to offset future variable annual capital expenditures.

8

Our engineering evaluation and planning yields a projected annual capital expenditure (CapEx) budget schedule over the planning period. This CapEx plan and the Association's current rate of contribution to reserves is entered into our computer model.

The model allows us to determine whether the Association's current rate of contribution will prove sufficient to meet capital obligations over the planning period.

If the Association's current rate of contribution is not sufficient, our model allows us to develop alternate contribution strategies for the Association's consideration.

Baseline Funding

The goal of baseline funding is to maintain positive year-end balances throughout the planning period.

Threshold Funding

One strategy to ensure there will be sufficient funds available to cover unplanned emergencies is to maintain prudent minimum threshold reserve balances. In the face of unusual and uninsured expenses, this may eliminate the need for either making a special assessment or borrowing money.

Often, the initial threshold is established as some multiple of the average annual CapEx budget, and then inflated ahead at the selected rate of inflation.

Maintaining significant threshold balances has the additional benefit of allowing the Association to generate greater returns on investments and thereby reduce the rate of Owners' contribution to reserves.

Of course, the benefits of establishing larger threshold balance values must be weighed against Unit Owners' preference to control their own funds.

In any event, the goal of threshold funding is to ensure that year-end capital reserve fund balances will not fall below some minimum value.

This threshold value may be an arbitrary, prudent dollar amount based on our experience, or, it may be calculated as some multiple of the annual average CapEx amount over the study period.

Consideration should be given to increasing the threshold balance value over the study period to reflect historic rates of inflation.

In this case, we selected a \$110,000 threshold with no increase (with a 2.5% increase) over the planning period.

6.0 LIMITATIONS

The information in this study is not to be considered a warranty of condition, guality, compliance or cost. No warranty is implied.

Financial data, records of past expenses, and cost estimates provided by others have been taken in good faith and at face value. No audit or other verification has been performed.

The observations described in this study are valid on the dates of the investigation and have been made under the conditions noted in the report.

This study is limited to the visual observations made during our inspection. We did not undertake any excavation, conduct any destructive or invasive testing, remove surface materials or finishes, or displace furnishings or equipment.

Except as specifically noted or photographed, we did not observe or inspect the following areas and items:

- Buried foundations, utility services and infrastructure
- ✓ Locked or inaccessible or confined spaces
- Interior of mechanical enclosures and equipment
- ✓ Systems and equipment that was not operating was not tested
- ✓ Individual Owner's improvements

The following assets were not tested during our evaluation:

- ✓ Lighting fixtures
- ✓ Irrigation controllers

In the absence of other information such as records from construction or previous inspections, or indirect evidence of concealed conditions, we cannot form any conclusions about unobserved portions of the facility.

However, our opinion regarding concealed portions of the property and their condition are based on our experience with other similar facilities.

In some cases, we inspected only a representative sample of site improvements and building spaces, components, systems or equipment. We cannot be responsible for unobserved aberrations.

We did not perform any computations or other engineering analysis as part of this study, 8 nor did we conduct a comprehensive code compliance investigation.

We did not undertake to completely assess the structural stability of the buildings or the underlying foundations and soils. Similarly, we performed no seismic assessment.

We did not undertake a comprehensive environmental assessment of the facility, nor perform any sampling or testing for hazardous materials.

Capital budgets are opinions of likely expense based on rough cost estimates. We have not obtained competitive quotations or estimates from contractors. Actual costs can vary significantly, based on the eventually determined scope of work, availability of materials and qualified contractors, and many other variables. We cannot be responsible for variances.

In our Reserve Fund Analysis, we have provided estimated costs. These costs are based on our general knowledge of building systems and the contracting and construction industry. When appropriate, we have relied on standard sources, such as Means Building Construction Cost Data to develop estimates. However, for items that we have developed costs (e.g.: structural repairs), no standard guide for developing such costs exists. Actual costs can vary significantly, based on the availability of qualified contractors to do the work, as well as many other variables. We cannot be responsible for the specific cost estimates provided.

Criterium-Kessler Engineers prepared this confidential report for the review and use of Dove Cove Estates Homeowners Association. We do not intend any other individual or party to rely upon this study without our express written consent. If another individual or party relies on this study, they shall indemnify, defend and hold Criterium Kessler Engineers, its subsidiaries, affiliates, officers, directors, members, shareholders, partners, agents, employees and such other parties in interest specified by Criterium-Kessler Engineers harmless for any damages, losses, or expenses they may incur as a result of its use. Any use or reliance of the report by an individual or party other than Dove Cove Estates Homeowners Association shall constitute acceptance of these terms and conditions.

Criterium-Kessler Engineers does not offer financial counseling services. Although reasonable rates of inflation and return on investment must be assumed to calculate projected balances, no one can accurately predict actual economic performance. Although reserve fund management and investment may be discussed during the course of the study, we do not purport to hold any special qualifications in this area.

We recommend that the Dove Cove Estates Homeowners Association also seek other professional guidance before finalizing their current capital reserve fund planning. Depending on issues, which may arise, an appropriate team of consultants to aid decision-making might include the property manager, accountant, financial counselor, insurance agent and attorney.



7.0 CONCLUSION

Criterium-Kessler Engineers appreciates this opportunity to assist Community and the Board in support of the Association's facility and financial planning. We are pleased to present this final report for the Board's consideration and use.

To the best of our ability, we have attempted to work in the best interest of the Association and to aid the Board toward fulfillment of their fiduciary responsibilities and obligations to the individual homeowners who comprise the association's membership.

In our professional opinion, and within the limitations disclosed elsewhere herein, all information contained herein is reliable and appropriate to guide the Board's deliberations and decision-making.

We recommend that the Board seek other appropriate professional guidance before finalizing their current reserve planning. Depending on issues which may arise, consultants who could aid the Association's decision-making might include their community manager, certified public accountant, financial counselor, and/or attorney.

Criterium-Kessler Engineers' work for this study has been carried out in strict accordance with the Code of Ethics of the National Society of Professional Engineers (NSPE) and the Community Association Institute (CAI). We consider our report confidential to the Association, and will not share its content with anyone but the Client without their knowledge and release.

We are unaware of any other involvement or business relationship between Criterium-Kessler Engineers and the Developer, or individual Unit Owners, or members of the Board, or your Property Manager or any other Vendors or Contractors that constitutes any conflict of interest.

Please contact us at (480) 218-1969 to discuss any immediate questions or comments.

Thank you.

Respectfully submitted,

IMIN

Dan Kessler President Criterium-Kessler Engineers



APPENDICES

A – Financial Exhibits

- Funding information from the Association
- Common Component Inventory & Capital Expenditure (CapEx) Planning
- 30-Year Projection of the Current Funding Plan
- 30-sYear Projection of the Three Alternate Funding Plans
- **B** Graphic Exhibits
 - Aerial Photographs / Images
- C Photographs
- **D** Reference Documents
 - CAI Nation Reserve Study Standards
 - Definitions of Other Terms & References used in the report
 - Definitions of Building Systems Common Abbreviations and Acronyms
- **E** Funding Methodologies

F – Project Team Qualifications

APPENDIX A

FINANCIAL EXHIBITS





Data Provided	
Number of Units	322
Age of Building (in years)	71
Fiscal Year starts:	1/1/2019
Reserve Funds at start	\$ 202,476
Rate of Return on Reserve Funds (%)	%0
Inflation Rate (%)	%E
Initial Minimum Threshold	\$ 110,000
Current Funding Plan - Contribution	Details
Per Unit/Month	\$ 6.80
Per Unit/Year	\$ 81.64
Total/Month	\$ 2,190.75
Total Annual	\$ 26,289.00
Current Funding Plan - Review V	alues*
Cap Exp Total Expenditures	\$ 1,362,442
Average CapEx Annual	\$ 45,415
Deficit/ Surplus - End of Planning Period Year 30	\$ (366,645)
Contribution Details - Funding Plan - Be	st Alternate 1
Per Unit/Month - Year 1	\$ 7.01
Per Unit/Year - Year 1	\$ 84.13
Total/Month - Year 1	\$ 2,257.57
Total Annual - Year 1	\$ 27,090.81
Per Unit/Month - Year 30	\$ 16.76
Per Unit/Year - Year 30	\$ 201.08
Total/Month - Year 30	\$ 5,395.51
Total Annual - Year 30	\$ 64,746.15

*Values Rounded to Nearest \$00.00

Average CapEx Annual Deficit/ Surplus - End of Planning Period Year 30

Cap Exp Total Expenditures

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45,415 **149,199**

1,362,442

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Funding Plan - Best Alternate 1 - Review Values*

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Capital Item	Actual Quantity	Units	Unit Cost	Actual EUL	Actual RUL
Block Wall Inspection	1	Each	4,800	10	-
Decorative Block Wall - Repair	18,738	square feet	37	50	35
Regular Common and Perimeter Block Wall - Repair	71,698	Each	18	50	35
Decorative Block Wall - Paint	18,738	square feet	1	8	9
Exterior Metal Paint	1	each	6,000	8	6
Concrete Flatwork - Unscheduled Repair or Replace Budget	12,000	square feet	8	4	-
Landscaping and Granite Replenishment - 1 of 2	630	Tons	65	10	3
Landscaping and Granite Replenishment - 2 of 2	630	Tons	65	10	8
Dry Well Maintenance	16	Each	1,500	10	5
Rip Rap - Erosion Control	15	Each	500	10	5
Irrigation System	1	Each	25,000	15	8
Irrigation Controllers - Replace	5	Each	1,500	12	7
Backflow Prevention Device - Replace	4	Each	2,500	15	
Mailbox Kiosks - Replace	17	Each	1,900	20	6
Mail Box Lights - Replace	3	Each	900	8	3
Dove Gap Play Structure	1	Each	20,000	25	10
Dove Gap Play Shade - Replace	1	Each	5,400	15	12
Dove Gap Ramada Roof	1	Each	935	40	20
Dove Ridge Play Structure	1	Each	20,000	25	10
Dove Ridge Play Shade - Replace	1	Each	5,400	15	12
Dove Ridge Ramada Roof	1	Each	935	40	20
Main Park Swing	1	Each	15,000	25	10
Main Park Basketball Court -Resurface	4,200	Square Feet	3	10	8
Main Park Basketball Backboard	2	Each	900	25	11
Park Lights	5	Each	006	8	5
Playground Sand Refurbish	23	Tons	55	5	3
Playground Turf - Replace	1,600	Square Feet	21	12	10
Park Furniture Allowance	1	Each	9,000	15	5
Monument Signs - Replace	1	Each	10,000	20	11
Monument Signs - Refurbish	1	Each	2,000	10	-
Solar Monument Lights	2	Each	560	4	2
Reserve Study	1	Each	2,000	5	5

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Capital Item	Calc Quantity	Units	Unit Cost	Calc EUL	Calc RUL	Planning Notes
Block Wall Inspection	1	Each	4,800	10	1	Inspect walls before painting and repair to itemize and
Decorative Block Wall - Repair	468	square fee	37	10	2	Budget adjusted to 2.5% of total block wall (\$28 sq/ft *1.3 disposal/removal) on a 10YR cycle; Budget data source RS Means; quantity approximated. Quantity approximated assuming 2 linear miles with an average of 6ft tall 4in block dooley walls.
Regular Common and Perimeter Block Wa	1,792	Each	8	10	р	Budget adjusted to 2.5% of total block wall (\$14 sq/ft *1.3 disposal/removal) on a 10YR cycle; Budget data source RS Means; quantity approximated. Quantity approximated assuming 2 linear miles with an average of 6ft tall 4in block dooley walls.
Decorative Block Wall - Paint	18,738	square fee	4	ω	Q	Paint decorative wall on an eight year cycle. Pricing based on CKE quotes.
Exterior Metal Paint	~	each	6,000	ω	Q	Paint exposed metal and miscellaneous on an eight year cycle. Pricing based on CKE quotes.
Concrete Flatwork - Unscheduled Repair o	300	square fee	Ø	4	~	Budget assigned for unscheduled repair or replace of concrete flatwork including: park sidewalks, basketball court (installed 2012), landscape edging, and drainage ways. 2.5% to be repaired every four years. Values from measurement and project history.

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Capital Item	Calc Quantity	Units	Unit Cost	Calc EUL	Calc RUL	Planning Notes
Landscaping and Granite Replenishment -	630	Tons	65	10	Э	Budget source: CKE experience/ RS Means. Budget on 10 year cycle. Split into two activities to spread costs.
Landscaping and Granite Replenishment -	630	Tons	65	10	ω	Budget source: CKE experience/ RS Means. Budget on 10 year cycle. Split into two activities to spread costs.
Dry Well Maintenance	7	Each	1,500	5	1	Budget source: CKE experience/ RS Means. Budget to maintain two every five years.
Rip Rap - Erosion Control	2	Each	500	10	5	Maintenance allowance for repairs.
Irrigation System	1	Each	25,000	15	8	Update pipes, valves, etc. Price based on CKE historical data.
Irrigation Controllers - Replace	£	Each	1,500	12	2	\$1,500 includes install and removal, source CKE historical data.
Backflow Prevention Device - Replace		Each	2,500	4	+	Budget allocated for 1/4 of total replacement on a 4YR cycle, for 100% replacement over 16YR. Reportedly installed in 2005. Cost based on CKE historical quotes for similar tasks.
Mailbox Kiosks - Replace	17	Each	1,900	20	9	\$1310 X 1.45 install and disposal, source - Online comparison / RSMeans. Reportedly installed in 2004; quantity approximated.
Mail Box Lights - Replace	3	Each	006	8	3	Budget includes fixtures and install only - does not include concrete poles or mounting brakets.
Dove Gap Play Structure	-	Each	20,000	25	10	Price estimated on comparable replacement with addition for installation and disposal.



Capital Item	Calc Quantity	Units	Unit Cost	Calc EUL	Calc RUL	Planning Notes
Dove Gap Play Shade - Replace	-	Each	5,400	15	12	Price based on quote from local vendor and assumption of age based on condition of the shade.
Dove Gap Ramada Roof	~	Each	935	40	20	Price estimated on comparable replacement with addition for installation and disposal.
Dove Ridge Play Structure	~	Each	20,000	25	10	Price estimated on comparable replacement with addition for installation and disposal.
Dove Ridge Play Shade - Replace	-	Each	5,400	15	12	Price based on quote from local vendor and assumption of age based on condition of the shade.
Dove Ridge Ramada Roof	-	Each	935	40	20	Price estimated on comparable replacement with addition for installation and disposal.
Main Park Swing	-	Each	15,000	25	10	Price estimated on comparable replacement with addition for installation and disposal.
Main Park Basketball Court -Resurface	4,200	Square Fe	3	10	8	Budget source: CKE experience/ RS Means. Budget on 10 year cycle.
Main Park Basketball Backboard	2	Each	900	25	11	Budget source: CKE experience/ RS Means. Budget on 20 year cycle.
Park Lights	5	Each	006	ω	5	Budget includes fixtures and install only - does not include concrete poles or mounting brakets.
Playground Sand Refurbish	23	Tons	55	ى ك	ę	Price based on quote from local vendor and assumption of age based on condition of the shade. Includes both playground structures and swing at main park.

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Capital Item	Calc Quantity	Units	Unit Cost	Calc EUL	Calc RUL	Planning Notes
Playground Turf - Replace	1,600	Square Fe	21	12	10	Source: Dave Bang Associates Park & Playground Equipment, similar product. RUL adjusted based upon condition. Includes both play structure pads.
Park Furniture Allowance	۲	Each	000'6	15	5	Includes various park furniture assets including: (4) park benches, (3) trash receptacles, (2) picnic table.
Monument Signs - Replace	L	Each	10,000	20	11	Estimated costs based on CKE historical data.
Monument Signs - Refurbish	1	Each	2,000	10	1	Deterioration on back side of sign. Budget data source: CKE experience.
Solar Monument Lights	2	Each	560	4	2	Solar lights at monument sign. Pricing based on similar items online and include removal and installation.
Reserve Study	-	Each	2,000	5	5	Budget reserve study updates funded from the reserve.

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TOTAL ANNUAL CAPEX >>	006'6\$	\$51,985	\$47,189	\$0	\$21,414
Asset	Year 1 2019	Year 2 2020	Year 3 2021	Year 4 2022	Year 5 2023
Block Wall Inspection	4,800			ı	
Decorative Block Wall - Repair		17,766			
Regular Common and Perimeter Block Wall - Repair	-	33,071			
Decorative Block Wall - Paint	-				
Exterior Metal Paint	-				
Concrete Flatwork - Unscheduled Repair or Replace Budget	2,400				2,649
Landscaping and Granite Replenishment - 1 of 2			43,023	1	
Landscaping and Granite Replenishment - 2 of 2	-				
Dry Well Maintenance	3,000				
Rip Rap - Erosion Control					1,104
Irrigation System	-	•		ı	
Irrigation Controllers - Replace					
Backflow Prevention Device - Replace	2,500				2,760
Mailbox Kiosks - Replace	-				
Mail Box Lights - Replace	-	•	2,837	•	
Dove Gap Play Structure	-	•		1	
Dove Gap Play Shade - Replace	-			ı	
Dove Gap Ramada Roof					
Dove Ridge Play Structure	-		-		
Dove Ridge Play Shade - Replace	-				
Dove Ridge Ramada Roof					
Main Park Swing			•	•	•
Main Park Basketball Court -Resurface					
Main Park Basketball Backboard					
Park Lights	-	•		•	4,967
Playground Sand Refurbish	-		1,329		
Playground Turf - Replace				I	
Park Furniture Allowance		I	ı	I	9,934
Monument Signs - Replace				I	1
Monument Signs - Refurbish	2,000			I	
Solar Monument Lights		1,148			

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Reserve Study - - 2,208	Asset	Year 1 2019	Year 2 2020	Year 3 2021	Year 4 2022	Year 5 2023
	Reserve Study					2,208



TOTAL ANNUAL CAPEX >>	\$63,895	\$8,698	\$92,379	\$5,970	\$112,048
Asset	Year 6 2024	Year 7 2025	Year 8 2026	Year 9 2027	Year 10 2028
Block Wall Inspection					
Decorative Block Wall - Repair					
Regular Common and Perimeter Block Wall - Repair					
Decorative Block Wall - Paint	15,900				
Exterior Metal Paint	6,788				
Concrete Flatwork - Unscheduled Repair or Replace Budget		-		2,924	
Landscaping and Granite Replenishment - 1 of 2				-	
Landscaping and Granite Replenishment - 2 of 2			48,677		
Dry Well Maintenance	3,394				
Rip Rap - Erosion Control					
Irrigation System			29,717	-	
Irrigation Controllers - Replace		8,698		-	
Backflow Prevention Device - Replace		-		3,046	
Mailbox Kiosks - Replace	36,544	-		-	
Mail Box Lights - Replace		•		-	
Dove Gap Play Structure		-		-	24,977
Dove Gap Play Shade - Replace		-		-	
Dove Gap Ramada Roof				-	
Dove Ridge Play Structure		-		-	24,977
Dove Ridge Play Shade - Replace					
Dove Ridge Ramada Roof					
Main Park Swing					18,733
Main Park Basketball Court -Resurface			12,481		ı
Main Park Basketball Backboard	-			-	
Park Lights	•	-		-	
Playground Sand Refurbish	•	-	1,504	-	
Playground Turf - Replace	1				41,962
Park Furniture Allowance					ı
Monument Signs - Replace	I	1	I		ı
Monument Signs - Refurbish	I		ı		ı
Solar Monument Lights	1,267			1	1,399

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Accel	Year 6	Year 7	Year 8	Year 9	Year 10
ASSE	2024	2025	2026	2027	2028
Reserve Study				-	2,498

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TOTAL ANNUAL CAPEX >>	\$22,401	\$79,246	\$69,416	\$29,188	\$1,413
Asset	Year 11 2029	Year 12 2030	Year 13 2031	Year 14 2032	Year 15 2033
Block Wall Inspection	6,144				
Decorative Block Wall - Repair		22,742			
Regular Common and Perimeter Block Wall - Repair	•	42,333			
Decorative Block Wall - Paint				19,373	
Exterior Metal Paint	-		-	8,271	
Concrete Flatwork - Unscheduled Repair or Replace Budget			3,228		
Landscaping and Granite Replenishment - 1 of 2			55,073		
Landscaping and Granite Replenishment - 2 of 2	-				
Dry Well Maintenance	3,840				
Rip Rap - Erosion Control	•				1,413
Irrigation System	•				
Irrigation Controllers - Replace	•				
Backflow Prevention Device - Replace			3,362		
Mailbox Kiosks - Replace	-				
Mail Box Lights - Replace	3,456				
Dove Gap Play Structure	-		-	-	•
Dove Gap Play Shade - Replace		7,085		-	-
Dove Gap Ramada Roof	-		-	-	-
Dove Ridge Play Structure	-		-	-	-
Dove Ridge Play Shade - Replace	-	7,085	-	-	
Dove Ridge Ramada Roof			•		
Main Park Swing					
Main Park Basketball Court -Resurface	-		-	-	
Main Park Basketball Backboard	2,304				
Park Lights	-		6,052		
Playground Sand Refurbish	-		1,701	-	
Playground Turf - Replace	ı	I	'	1	ı
Park Furniture Allowance					
Monument Signs - Replace	12,801	ı	'	'	1
Monument Signs - Refurbish	1	I		'	ı
Solar Monument Lights	•	•	•	1,544	,

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	Year 11	Year 12	Year 13	Year 14	Year 15
ASSet	2029	2030	2031	2032	2033
Reserve Study			-		2,826

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TOTAL ANNUAL CAPEX >>	\$4,345	\$7,274	\$81,916	\$15,909	\$17,377
Asset	Year 16 2034	Year 17 2035	Year 18 2036	Year 19 2037	Year 20 2038
Block Wall Inspection					
Decorative Block Wall - Repair					
Regular Common and Perimeter Block Wall - Repair	•	•	-		
Decorative Block Wall - Paint					
Exterior Metal Paint	-		-		
Concrete Flatwork - Unscheduled Repair or Replace Budget	-	3,563	-		
Landscaping and Granite Replenishment - 1 of 2	-		-		
Landscaping and Granite Replenishment - 2 of 2	-		62,310		
Dry Well Maintenance	4,345	•	-		
Rip Rap - Erosion Control	-		-		
Irrigation System	-	•	-	•	
Irrigation Controllers - Replace			-	11,697	
Backflow Prevention Device - Replace	-	3,711	-		
Mailbox Kiosks - Replace	-		-		
Mail Box Lights - Replace	•	•	-	4,211	
Dove Gap Play Structure	-	•	-	•	
Dove Gap Play Shade - Replace	-		-		
Dove Gap Ramada Roof	-	-		-	1,495
Dove Ridge Play Structure	-		-		
Dove Ridge Play Shade - Replace					
Dove Ridge Ramada Roof				-	1,495
Main Park Swing	•	•		•	
Main Park Basketball Court -Resurface			15,977	-	
Main Park Basketball Backboard					
Park Lights					
Playground Sand Refurbish			1,925		
Playground Turf - Replace	-	ı		'	
Park Furniture Allowance					14,388
Monument Signs - Replace	-	1		-	-
Monument Signs - Refurbish	-	1	'	'	
Solar Monument Lights			1,704		ı

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Asset 2034 2035 2036 2037	Year 19 Year 20 2037 2038
Reserve Study	

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TOTAL ANNUAL CAPEX >>	\$23,596	\$175,298	\$115,715	\$0	\$10,671
Asset	Year 21 2039	Year 22 2040	Year 23 2041	Year 24 2042	Year 25 2043
Block Wall Inspection	7,865			ı	
Decorative Block Wall - Repair		29,112		1	
Regular Common and Perimeter Block Wall - Repair		54,190			-
Decorative Block Wall - Paint		23,604			
Exterior Metal Paint		10,077			
Concrete Flatwork - Unscheduled Repair or Replace Budget	3,933		1		4,341
Landscaping and Granite Replenishment - 1 of 2			70,498	ı	-
Landscaping and Granite Replenishment - 2 of 2					-
Dry Well Maintenance	4,916				-
Rip Rap - Erosion Control					1,809
Irrigation System			43,039		-
Irrigation Controllers - Replace			ı	ı	
Backflow Prevention Device - Replace	4,097				4,522
Mailbox Kiosks - Replace					-
Mail Box Lights - Replace					
Dove Gap Play Structure					-
Dove Gap Play Shade - Replace			1		-
Dove Gap Ramada Roof					-
Dove Ridge Play Structure					-
Dove Ridge Play Shade - Replace					-
Dove Ridge Ramada Roof	•	•	•	•	•
Main Park Swing					-
Main Park Basketball Court -Resurface					-
Main Park Basketball Backboard		-			-
Park Lights	7,374			I	
Playground Sand Refurbish			2,178		
Playground Turf - Replace	I	56,434	I	I	I
Park Furniture Allowance	ı	I	ı	I	1
Monument Signs - Replace	ı	I	I	I	1
Monument Signs - Refurbish	3,277	I	I	I	1
Solar Monument Lights		1,881			

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	Year 21	Year 22	Year 23	Year 24	Year 25
ASSet	2039	2040	2041	2042	2043
Reserve Study		-	-	-	3,617

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TOTAL ANNUAL CAPEX >>	\$67,521	\$25,654	\$102,678	\$18,767	\$43,330
Asset	Year 26 2044	Year 27 2045	Year 28 2046	Year 29 2047	Year 30 2048
Block Wall Inspection					
Decorative Block Wall - Repair					
Regular Common and Perimeter Block Wall - Repair					
Decorative Block Wall - Paint					28,759
Exterior Metal Paint					12,278
Concrete Flatwork - Unscheduled Repair or Replace Budget	-	-		4,792	
Landscaping and Granite Replenishment - 1 of 2					
Landscaping and Granite Replenishment - 2 of 2			79,762		
Dry Well Maintenance	5,562	-			
Rip Rap - Erosion Control					
Irrigation System					
Irrigation Controllers - Replace					
Backflow Prevention Device - Replace				4,991	
Mailbox Kiosks - Replace	59,882				
Mail Box Lights - Replace		5,131			
Dove Gap Play Structure					
Dove Gap Play Shade - Replace		10,262			
Dove Gap Ramada Roof		-			
Dove Ridge Play Structure		-			
Dove Ridge Play Shade - Replace		10,262			
Dove Ridge Ramada Roof		-	•	•	
Main Park Swing					
Main Park Basketball Court -Resurface		-	20,452		
Main Park Basketball Backboard	-	-			
Park Lights	•	-		8,984	
Playground Sand Refurbish			2,464		ı
Playground Turf - Replace	I	-	I	ı	'
Park Furniture Allowance		-		-	
Monument Signs - Replace	I	-	I	ı	'
Monument Signs - Refurbish	1	-	ı	I	ı
Solar Monument Lights	2,076			I	2,292



Reserve Study - - 4,093	Asset	Year 26 2044	Year 27 2045	Year 28 2046	Year 29 2047	Year 30 2048
	Reserve Study					4,093

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Dove Cove Estates Reserve Study Criterium-Kessler Engineers



		Contribution De	tail	S	
	Total/Month	Total Annual		Per Unit/Month	Per Unit/Year
First Year	\$ 2,191	\$ 26,289	\$	6.80	\$ 81.64
Last Year	\$ 2,191	\$ 26,289	\$	6.80	\$ 81.64

Number of Units		322
Fiscal Year starts:		01/01/19
Reserve Funds at start		202,476
Rate of Return (%)		0.25%
Inflation Rate (%)		2.50%
Initial Minimum Threshold	\$	110,000

	Special Assessments		
Year	Total/Year	Per Unit	
		\$	-
		\$	-
		\$	-

SUMMARY
No change to contribution
No Special Assessments





Year	Fiscal Year	Beginning Reserve Balance	Revenue	Special Assessment	Investment Earnings	Capital Expenditure	Ending Reserve Balance	Minimum Threshold
2019	1	202,476	26,289	-	506	14,700	214,571	110,000
2020	2	214,571	26,289	-	536	51,985	189,412	112,750
2021	3	189,412	26,289	-	474	47,189	168,986	115,569
2022	4	168,986	26,289	-	422	-	195,697	118,458
2023	5	195,697	26,289	-	489	23,622	198,854	121,419
2024	6	198,854	26,289	-	497	63,895	161,745	124,455
2025	7	161,745	26,289	-	404	8,698	179,741	127,566
2026	8	179,741	26,289	-	449	92,379	114,101	130,755
2027	9	114,101	26,289	-	285	5,970	134,705	134,024
2028	10	134,705	26,289	-	337	114,546	46,785	137,375
2029	11	46,785	26,289	-	117	28,546	44,645	140,809
2030	12	44,645	26,289	-	112	79,246	(8,200)	144,330
2031	13	(8,200)	26,289	-	-	69,416	(51,328)	147,938
2032	14	(51,328)	26,289	-	-	29,188	(54,227)	151,636
2033	15	(54,227)	26,289	-	-	4,239	(32,177)	155,427
2034	16	(32,177)	26,289	-	-	4,345	(10,232)	159,313
2035	17	(10,232)	26,289	-	-	7,274	8,782	163,296
2036	18	8,782	26,289	-	22	81,916	(46,823)	167,378
2037	19	(46,823)	26,289	-	-	15,909	(36,442)	171,562
2038	20	(36,442)	26,289	-	-	20,575	(30,728)	175,852
2039	21	(30,728)	26,289	-	-	31,461	(35,901)	180,248
2040	22	(35,901)	26,289	-	-	175,298	(184,910)	184,754
2041	23	(184,910)	26,289	-	-	115,715	(274,336)	189,373
2042	24	(274,336)	26,289	-	-	-	(248,047)	194,107
2043	25	(248,047)	26,289	-	-	14,289	(236,047)	198,960
2044	26	(236,047)	26,289	-	-	67,521	(277,279)	203,934
2045	27	(277,279)	26,289	-	-	25,654	(276,644)	209,032
2046	28	(276,644)	26,289	-	-	102,678	(353,033)	214,258
2047	29	(353,033)	26,289	-	-	18,767	(345,511)	219,614
2048	30	(345,511)	26,289	-	-	47,422	(366,645)	225,105



Contribution Details										
		Total/Month	Total Annual Per Unit/Month					Per Unit/Year		
First Year	\$	2,258	\$	27,091	\$	7.01	\$	84.13		
Last Year	\$	5,396	\$	64,746	\$	16.76	\$	201.08		

Number of Units	322
Fiscal Year starts:	01/01/19
Reserve Funds at start	\$ 202,476
Rate of Return (%)	0.25%
Inflation Rate (%)	2.50%
Initial Minimum Threshold	\$ 110,000

Special Assessments										
Year	Total/Year	Per Unit								
		\$-								
		\$-								
		\$-								

SUMMARY

Annual Increase of 3.05%

No lump sum increase

No Special Assessments





Year	Fiscal Year	Beginning Reserve Balance	Revenue	Special Assessment	Investment Earnings	Capital Expenditure	Ending Reserve Balance	Minimum Threshold
2019	1	202,476	27,091	-	506	14,700	215,373	110,000
2020	2	215,373	27,917	-	538	51,985	191,844	112,750
2021	3	191,844	28,769	-	480	47,189	173,903	115,569
2022	4	173,903	29,646	-	435	-	203,984	118,458
2023	5	203,984	30,550	-	510	23,622	211,423	121,419
2024	6	211,423	31,482	-	529	63,895	179,538	124,455
2025	7	179,538	32,442	-	449	8,698	203,732	127,566
2026	8	203,732	33,432	-	509	92,379	145,294	130,755
2027	9	145,294	34,451	-	363	5,970	174,138	134,024
2028	10	174,138	35,502	-	435	114,546	95,530	137,375
2029	11	95,530	36,585	-	239	28,546	103,808	140,809
2030	12	103,808	37,701	-	260	79,246	62,523	144,330
2031	13	62,523	38,851	-	156	69,416	32,113	147,938
2032	14	32,113	40,036	-	80	29,188	43,041	151,636
2033	15	43,041	41,257	-	108	4,239	80,166	155,427
2034	16	80,166	42,515	-	200	4,345	118,537	159,313
2035	17	118,537	43,812	-	296	7,274	155,371	163,296
2036	18	155,371	45,148	-	388	81,916	118,991	167,378
2037	19	118,991	46,525	-	297	15,909	149,905	171,562
2038	20	149,905	47,944	-	375	20,575	177,649	175,852
2039	21	177,649	49,406	-	444	31,461	196,038	180,248
2040	22	196,038	50,913	-	490	175,298	72,143	184,754
2041	23	72,143	52,466	-	180	115,715	9,074	189,373
2042	24	9,074	54,066	-	23	-	63,163	194,107
2043	25	63,163	55,715	-	158	14,289	104,747	198,960
2044	26	104,747	57,415	-	262	67,521	94,903	203,934
2045	27	94,903	59,166	-	237	25,654	128,652	209,032
2046	28	128,652	60,970	-	322	102,678	87,265	214,258
2047	29	87,265	62,830	-	218	18,767	131,546	219,614
2048	30	131,546	64,746	-	329	47,422	149,199	225,105



Contribution Details										
		Total/Month		Total Annual Per Unit/Month				Per Unit/Year		
First Year	\$	2,191	\$	26,289	\$	6.80	\$	81.64		
Last Year	\$	4,611	\$	55,334	\$	14.32	\$	171.85		

Number of Units	322
Fiscal Year starts:	01/01/19
Reserve Funds at start	\$ 202,476
Rate of Return (%)	0.25%
Inflation Rate (%)	2.50%
Initial Minimum Threshold	\$ 110,000

Special Assessments										
Year	Total/Year		Per Unit							
		\$		-						
		\$		-						
		\$		-						

SUMMARY Annual Increase

7% Years 2-12

No lump sum increase

No Special Assessments



Dove Cove Estates Reserve Study Criterium-Kessler Engineers



	Beginning			Ending				
Year	Fiscal Year	Reserve	Revenue	Special Assessment	Investment Farnings	Capital Expenditure	Reserve	Minimum Threshold
		Balance			Lannigo	Experiantare	Balance	Threehold
2019	1	202,476	26,289	-	506	14,700	214,571	110,000
2020	2	214,571	28,129	-	536	51,985	191,252	112,750
2021	3	191,252	30,098	-	478	47,189	174,640	115,569
2022	4	174,640	32,205	-	437	-	207,282	118,458
2023	5	207,282	34,460	-	518	23,622	218,638	121,419
2024	6	218,638	36,872	-	547	63,895	192,161	124,455
2025	7	192,161	39,453	-	480	8,698	223,397	127,566
2026	8	223,397	42,214	-	558	92,379	173,791	130,755
2027	9	173,791	45,169	-	434	5,970	213,425	134,024
2028	10	213,425	48,331	-	534	114,546	147,744	137,375
2029	11	147,744	51,714	-	369	28,546	171,282	140,809
2030	12	171,282	55,334	-	428	79,246	147,799	144,330
2031	13	147,799	55,334	-	369	69,416	134,086	147,938
2032	14	134,086	55,334	-	335	29,188	160,568	151,636
2033	15	160,568	55,334	-	401	4,239	212,065	155,427
2034	16	212,065	55,334	-	530	4,345	263,584	159,313
2035	17	263,584	55,334	-	659	7,274	312,304	163,296
2036	18	312,304	55,334	-	781	81,916	286,503	167,378
2037	19	286,503	55,334	-	716	15,909	326,645	171,562
2038	20	326,645	55,334	-	817	20,575	362,221	175,852
2039	21	362,221	55,334	-	906	31,461	387,000	180,248
2040	22	387,000	55,334	-	967	175,298	268,003	184,754
2041	23	268,003	55,334	-	670	115,715	208,293	189,373
2042	24	208,293	55,334	-	521	-	264,148	194,107
2043	25	264,148	55,334	-	660	14,289	305,854	198,960
2044	26	305,854	55,334	-	765	67,521	294,432	203,934
2045	27	294,432	55,334	-	736	25,654	324,849	209,032
2046	28	324,849	55,334	-	812	102,678	278,317	214,258
2047	29	278,317	55,334	-	696	18,767	315,580	219,614
2048	30	315,580	55,334	-	789	47,422	324,281	225,105



Contribution Details										
		Total/Month		Total Annual Per Unit/Month				Per Unit/Year		
First Year	\$	2,191	\$	26,289	\$	6.80	\$	81.64		
Last Year	\$	6,123	\$	73,480	\$	19.02	\$	228.20		

Number of Units	322
Fiscal Year starts:	01/01/19
Reserve Funds at start	\$ 202,476
Rate of Return (%)	0.25%
Inflation Rate (%)	2.50%
Initial Minimum Threshold	\$ 110,000

Special Assessments									
Year	Total/Year	Per Unit							
		\$		-					
		\$		-					
		\$		-					

SUMMARY					
Annual Increase with Inflation					

50% Increase in Year 2

No Special Assessments



Dove Cove Estates Reserve Study Criterium-Kessler Engineers



-								
Year	Fiscal Year	Beginning Reserve Balance	Revenue	Special Assessment	Investment Earnings	Capital Expenditure	Ending Reserve Balance	Minimum Threshold
2019	1	202,476	26,289	-	506	14,700	214,571	110,000
2020	2	214,571	36,805	-	536	51,985	199,928	112,750
2021	3	199,928	37,725	-	500	47,189	190,963	115,569
2022	4	190,963	38,668	-	477	-	230,109	118,458
2023	5	230,109	39,635	-	575	23,622	246,697	121,419
2024	6	246,697	40,625	-	617	63,895	224,044	124,455
2025	7	224,044	41,641	-	560	8,698	257,548	127,566
2026	8	257,548	42,682	-	644	92,379	208,495	130,755
2027	9	208,495	43,749	-	521	5,970	246,795	134,024
2028	10	246,795	44,843	-	617	114,546	177,709	137,375
2029	11	177,709	45,964	-	444	28,546	195,571	140,809
2030	12	195,571	47,113	-	489	79,246	163,928	144,330
2031	13	163,928	48,291	-	410	69,416	143,212	147,938
2032	14	143,212	49,498	-	358	29,188	163,880	151,636
2033	15	163,880	50,736	-	410	4,239	210,786	155,427
2034	16	210,786	52,004	-	527	4,345	258,972	159,313
2035	17	258,972	53,304	-	647	7,274	305,650	163,296
2036	18	305,650	54,637	-	764	81,916	279,134	167,378
2037	19	279,134	56,003	-	698	15,909	319,926	171,562
2038	20	319,926	57,403	-	800	20,575	357,554	175,852
2039	21	357,554	58,838	-	894	31,461	385,824	180,248
2040	22	385,824	60,309	-	965	175,298	271,799	184,754
2041	23	271,799	61,816	-	679	115,715	218,579	189,373
2042	24	218,579	63,362	-	546	-	282,487	194,107
2043	25	282,487	64,946	-	706	14,289	333,851	198,960
2044	26	333,851	66,569	-	835	67,521	333,734	203,934
2045	27	333,734	68,234	-	834	25,654	377,148	209,032
2046	28	377,148	69,940	-	943	102,678	345,352	214,258
2047	29	345,352	71,688	-	863	18,767	399,136	219,614
2048	30	399,136	73,480	-	998	47,422	426,192	225,105

APPENDIX B

GRAPHIC EXHIBITS





APPENDIX C

Photographs


























































































APPENDIX D

REFERENCE DOCUMENTS



TERMS OF REFERENCE RESERVE STUDY			
Association	The unit owners' association. May be referred to with different terminology in legal covenants of incorporation.		
Board	Elected officers of the Association with fiduciary responsibility for the community's common holdings. May be referred to with different terminology in legal covenants of incorporation.		
Owner	Individual unit owner, a Member, or the Association.		
Community Manager	Professional organization through which the Board delegates responsibilities for operations and maintenance of the community (also known as a property manager, portfolio manager, managing agent, etc.).		
Excellent	Component or system is in "as new" condition, requiring no rehabilitation and should perform in accordance with expected performance.		
Good	Component or system is sound and performing its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.		
Fair	Component or system falls into one or more of the following categories: a) Workmanship not in compliance with commonly accepted standards, b) Evidence of previous repairs not in compliance with commonly accepted practice, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration, or to prolong expected life.		
Poor	Component or system has either failed, or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is required.		
Adequate	A component or system is stable, has capacity to function as required, is sufficient for its services, is suitable for operation, and/or conforms to standard construction practices.		
Basis of Comparison	Ratings are determined by comparison to other buildings of similar age and construction type.		
Left, Right, Front, Rear	Directions are taken from the viewpoint of an observer standing at the property frontage and facing it. Or, for a building within a campus setting, the viewpoint of an observer standing in front of the principal entrance and facing it.		
Current deficiency immediate expense	We will note any observed or reported physical condition that requires immediate action to correct an existing or potential safety hazard, an enforceable building code violation, or the poor or deteriorated condition of a critical element or system. Also, to address any conditions which, if left "as is," would likely result in the failure of a critical element or system. Such items will be noted in our report even if they do not require a capital expenditure.		
Short-term capital expenditures	Correction of physical deficiencies including deferred maintenance, which may not warrant immediate attention, but required repairs or replacements that should be undertaken on a priority basis, taking precedence over preventative maintenance work within a one-year time frame. Included are physical deficiencies resulting from improper design, faulty installation, and/or substandard quality of original systems or materials. Components or systems that have exceeded their expected useful life and require repair or replacement within a one-year timeframe are also included. Observed minor issues that would typically be addressed as normal operations & maintenance work may not be noted in the report.		
Long-term capital expenditures	Non-routine repairs, replacements or planned improvements that will require significant expenditure during the study period. Included are items that will reach the end of their estimated useful life or which, in the opinion of the engineer, will require such expense during that time. If saving for longer-term expenditures is desired, then allowances or contingencies for such items may also be included. Observed minor issues that would typically be addressed as normal operations & maintenance work may not be noted in the report.		
Expected Useful Life (EUL)	As components age, they wear and deteriorate at varying rates, depending on their service and exposure. Although it is an inexact science, various financial underwriters, data services, and trade organizations publish guidance regarding the EULs of typical building materials and operating systems. For short-lived components, their EUL is used as the frequency between periodic repairs or replacements. Some systems' economic life may be shortened because improved equipment or materials has become available that is less costly to operate or maintain.		
Remaining Useful Life (RUL)	The simple equation for determining remaining useful life before repair or replacement is: EUL – Age = RUL However, based on our evaluation of a component, and our professional judgment, we may assign a shorter or longer RUL to actual items being considered.		

BUILDING SYSTEMS AND COMPONENTS COMMON ABBREVIATIONS AND ACRONYMS

	COMMON ABBREVIA		ACRONTING
ABS	Acrylonitrile-Butadiene-Styrene (Black Pipe)	IBC	International Building Code
ACM	Asbestos Containing Material	IRC	International Residential Code
ACT	Acoustic Ceiling Tile	KVA	Kilovolt-Ampere
ADA	Americans with Disabilities Act	LF	Lineal Foot
AHU	Air Handling Unit	LUST	Leaking Underground Storage Tank
ASHRAE	American Society of Heating, Refrigeration, and Air-Conditioning Engineers	MSL	Mean Sea Level
ASTM	American Society for Testing and Materials	NEC	National Electric Code
BBL	Barrels	NFPA	National Fire Protection Association
BOCA	Building Officials Code Administrators International	MBH	Thousand British Thermal Units / Hour
BTU	British Thermal Unit	MDP	Main Distribution Panel (electric power)
BTUH	British Thermal Unit / Hour	O&M	Operations & Maintenance
CFM	Cubic Foot / Minute	OSB	Oriented Strand Board (sheathing or decking)
CI	Cast Iron (piping)	PCA	Property Condition Assessment
CIP	Cast in Place (concrete)	PCB	Polychlorinated Biphenyls
CMU	Concrete Masonry Unit (block)	PCR	Property Condition Report
CPVC	Chlorinated Poly Vinyl Chloride (piping)	PE	Polyethylene (pipe)
CW	Cold Water	PE	Licensed Professional Engineer
DI	Ductile Iron (piping)	PVC	Poly Vinyl Chloride (piping and siding)
EIFS	Exterior Insulating and Finishing System	PTAC	Packaged Terminal Air Conditioning Unit
EPDM	Ethylene Propylene Diene Monomer	ROM	Rough Order of Magnitude
EUL	Expected Useful Life	RUL	Remaining Useful Life
FCU	Fan Coil Unit	RTU	Roof Top Unit
FEMA	Federal Emergency Management Agency	SF	Square Foot
FFE	Furniture, Fixtures and Equipment	SOG	Slab On Grade (concrete basement or ground floor)
FHA	Forced Hot Air	SQ	100 Square Feet
FHAA	Fair Housing Act and Amendments	SY	Square Yard
FHW	Forced Hot Water	UBC	Uniform Building Code
FIRM	Flood Insurance Rate Map	UL	Underwriters Laboratories
FOIA	Freedom of Information Act	UST	Underground Storage Tank
GFI	Ground Fault Interruption (circuit breaker)	VAC	Volts Alternating Current
GWB	Gypsum Wall Board (drywall or sheetrock)	VAV	Variable Air Volume Box
HID	High Intensity Discharge (lamp, lighting fixture)	VCT	Vinyl Composition Tile
HVAC	Heating Ventilation and Air Conditioning	VWC	Vinyl Wall Covering
HW	Hot Water		
HWH	Hot Water Heater (domestic)		



National Reserve Study Standards

General Information

Reserve Study

A Reserve Study is made up of two parts, 1) the information about the physical status and repair/ replacement cost of the major common area components the association is obligated to maintain (Physical Analysis), and 2) the evaluation and analysis of the association's Reserve balance, income, and expenses (Financial Analysis). The Physical Analysis is comprised of the Component Inventory, Condition Assessment, and Life and Valuation Estimates. The Component Inventory should be relatively "stable" from year to year, while the Condition Assessment and Life and Valuation Estimates will necessarily change from year to year. The Financial Analysis is made up of a finding of the client's current Reserve Fund Status (measured in cash or as Percent Funded) and a recommendation for an appropriate Reserve contribution rate (Funding Plan).

Physical Analysis

- Component Inventory
- Condition Assessment
- Life and Valuation Estimates

Financial Analysis

- Fund Status
- Funding Plan



Levels of Service

The following three categories describe the various types of Reserve Studies, from exhaustive to minimal.

- I. Full: A Reserve Study in which the following five Reserve Study tasks are performed:
 - Component Inventory
 - Condition Assessment (based upon on-site visual observations)
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan
- II. Update, With-Site-Visit/On-Site Review: A Reserve Study update in which the following five Reserve Study tasks are performed:
 - Component Inventory (verification only, not quantification)
 - Condition Assessment (based on on-site visual observations)
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan
- **III. Update, No-Site-Visit/Off Site Review:** A Reserve Study update with no on-site visual observations in which the following three Reserve Study tasks are performed:
 - Life and Valuation Estimates
 - Fund Status
 - Funding Plan

Terms and 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.

FFB = Current Cost X Effective Age / Useful Life or FFB = (Current Cost X Effective Age / Useful Life) + [(Current Cost X Effective Age / Useful Life) / (1 + Interest Rate) ^ Remaining Life] - [(Current Cost X Effective Age /

Useful Life) / (1 + Inflation Rate) ^ 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 statues.

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. 4

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."

RESPONSIBLE CHARGE: A reserve specialist in responsible charge of a reserve study shall render regular and effective supervision to those individuals performing services which directly and materially affect the quality and competence rendered by the reserve specialist. A reserve specialist shall maintain such records as are reasonably necessary to establish that the reserve specialist exercised regular and effective supervision of a reserve study of which he was in responsible charge. A reserve specialist engaged in any of the following acts or practices shall be deemed not to have rendered the regular and effective supervision required herein:



- The regular and continuous absence from principal office premises from which professional services are rendered; expect for performance of field work or presence in a field office maintained exclusively for a specific project;
- 2. The failure to personally inspect or review the work of subordinates where necessary and appropriate;
- 3. The rendering of a limited, cursory or perfunctory review of plans or projects in lieu of an appropriate detailed review;
- 4. The failure to personally be available on a reasonable basis or with adequate advance notice for consultation and inspection where circumstances require personal availability.

SPECIAL ASSESSMENT: An assessment levied on the members of an association in addition to regular assessments. Special Assessments are often regulated by governing documents or local statutes.

SURPLUS: An actual (or projected) Reserve Balance greater than the Fully Funded Balance. See "Deficit."

USEFUL LIFE (UL): Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve component can be expected to serve its intended function if properly constructed in its present application or installation.



Reserve Study Required Contents

Each Reserve Study prepared by a Reserve Specialist or Reserve Specialist applicant **must contain all** of the following elements:

PAGE	CONTENTS
	1. A summary of the association's number of units.
	2. Association physical description (legal or physical narrative).
	 General statement or opinion describing the association's current reserve fund status (good/fair/ poor, adequate or inadequate. Percent Funded, etc.).
	 General statement describing the methods and objectives utilized in computing or evaluating the association's Reserve Fund status (Percent Funded or otherwise).
	5. Fiscal Year (start and end) for which the Reserve study is prepared.
	6. A projection of starting reserve cash balance (as-of above start date).
	 A general statement describing the development or computation of the association's starting Re- serve Fund balance.
	8. Recommended reserve contributions (minimum 20 years).
	9. Projected reserve expenses (minimum 20 years).
	10. Projected ending reserve fund balance (minimum of 20 years).
	11. A tabular listing of the components in the Reserve Study.
	12. A tabular listing of the component quantities or identifying descriptions.
	13. A tabular listing showing each component's Useful Life.
	14. A tabular listing showing each component's Remaining Useful Life, where RUL=0=initial year.
	15. A tabular listing showing each component's Current Replacement Cost.
	16. A general statement describing the Methods (cash flow, component, etc.) and Goals (Full Funding, Threshold Funding, Baseline Funding) of the Funding Plan, using National Standard terminology.
	17. Identification of the source(s) utilized to obtain component repair or replacement cost estimates.
	 A clear description of which one of the three Reserve Study "Levels of Service" (ie: Full, Update With-Site-Visit, Update No-Site-Visit) was performed.
	19. A clear statement of assumption used for Interest and inflation (whether zero or otherwise).

Applicants MUST INCLUDE THE ABOVE TABLE with their work product submission, noting the page number where all the above required elements can be found in their sample work product.



Reserve Study Required Disclosures

Each Reserve Study prepared by a Reserve Specialist or Reserve Specialist applicant must contain all of the following disclosures:

PAGE	DISCLOSURE
	1. General: Description of other involvement(s) with the association, which could result in actual or perceived conflicts of interest.
	 Physical Analysis: Description of how thorough the on-site observations were performed: repre- sentative sampling vs. all common areas, destructive testing or not, field measurements vs. draw- ing take-offs, etc.
	 Personnel Credentials: State or organizational licenses or credentials carried by the individual responsible for Reserve Study preparation or oversight.
	 Completeness: 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 association re- garding 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 as- sembled for the association's use, not for he purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
	 Reserve Balance: The actual or projected total presented in the 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 or quality inspection.

Applicants MUST INCLUDE THE ABOVE TABLE with their work product submission, noting the page number where all the above required elements can be found in their sample work product.



APPENDIX E

FUNDING METHODOLOGIES (DISCUSSION POINTS)



Funding Methodologies

The approach to funding methodologies continues to be a subject of much discussion and can create confusion for those responsible for long-term strategic planning for a community.

This is written to be applicable to for communities that utilize reserve studies including Homeowners Associations and Condominium Associations—both residential and commercial.

This Appendix provides general information related to Funding Methodologies and is not specific to your Association or Community. This has been included to provide a framework for consideration of the study, and to explain our approach to the funding analysis.

We also recommend that the Board review the Community Association Institute (CAI) National Reserve Study Standards attached in the "Reference Documents" Appendix of this report.

The Community Association Institute (CAI) recognizes several funding methodologies, all of which may be used to satisfy these principles:

- ✓ Sufficient Funds When Required
- ✓ Stable Contribution Rate over the Years
- ✓ Evenly Distributed Contributions over the Years
- ✓ Fiscally Responsible Some of the more common methods are outlined below.

Within the context of the report, "Section 5.4 – Funding Methodologies," provides a brief overview that we used for this report since we recognize that some Associations prefer a different methodology. The text in included in Section 5.4 is replicated below.

STATUTORY FUNDING

Some states regulate the management of homeowner associations, including the fiduciary responsibility of its Officers or Board regarding reserve funding.

To our knowledge, Arizona does not require any funding criteria.

COVENANTAL FUNDING

The legal documents, which originally establish a homeowner's association, may set forth guidelines for its reserve funding.

You should review the Master Deed and/or CC&Rs for your Association to determine if there are stipulations for long-term funding criteria since each community is set up with unique requirements.

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CASH FLOW BASED FUNDING

Criterium Engineer's recommended approach to reserve planning utilizes a cash flow model implementing either Baseline or Threshold Based Funding methodology.

A cash flow based funding plan is prepared so that contributions to capital reserves are selected to be sufficient to offset future variable annual capital expenditures.

Our engineering evaluation and planning yields a projected annual capital expenditure (CapEx) budget schedule over the planning period. This CapEx plan and the Association's current rate of contribution to reserves is entered into our computer model.

The model allows us to determine whether the Association's current rate of contribution will prove sufficient to meet capital obligations over the planning period.

If the Association's current rate of contribution is not sufficient, our computer model allows us to develop alternate contribution strategies for the Association's consideration.

Baseline Cash Flow Based Funding

The goal of baseline funding is to maintain positive year-end balances throughout the planning period.

Threshold Cash Flow Based Funding

One strategy to ensure there will be sufficient funds available to cover unplanned emergencies is to maintain prudent minimum threshold reserve balances. In the face of unusual and uninsured expenses, this may eliminate the need for either making a special assessment or borrowing money.

Often, the initial threshold is established as some multiple of the average annual CapEx budget, and then inflated ahead at the selected rate of inflation.

Maintaining significant threshold balances has the additional benefit of allowing the Association to generate greater returns on investments and thereby reduce the rate of Owners' contribution to reserves.

Of course, the benefits of establishing larger threshold balance values must be weighed against Unit Owners' preference to control their own funds.

In any event, the goal of threshold funding is to ensure that year-end capital reserve fund balances will not fall below some minimum value.



This threshold value is typically determined by one of the following methods:

- ✓ An arbitrary, prudent dollar amount based on our experience
- ✓ It may be calculated as some multiple of the annual average CapEx amount over the study period
- ✓ A collaborative effort with the Board or Community Manager to determine a threshold amount that works for the community

Consideration should be given to increasing the threshold balance value over the study period to reflect historic rates of inflation.

COMPONENT BASED

In our experience, a component-based funding plan based on a comprehensive common component inventory will produce a very conservative funding strategy for an Association.

A component-based funding plan is based on calculated incremental savings toward the eventual repair or replacement of each individual common component.

The accounting concept underlying component-based funding is that an Association should save for repair or replacement of each of their common assets at an annual incremental amount equal to the annual straight-line depreciation of the item. In this way, they will accumulate its full value in capital reserves at the time it is fully depreciated, and funds may be required for a capital expenditure.

Full Funding

For each Fiscal Year, a component-based funding plan calculates an ideal reserve balance that should be on-hand at the beginning of the year. This recommended balance is based on saving money at the rate of depreciation of each common component as explained in the previous section.

If the Association's projected cash flow projection indicates that their capital reserve fund balance will be equal to or greater than that ideal value at the beginning of any given year, then, by Community Association Institute (CAI) definition, the Association is said to be "fully funded" in that year.

In our opinion, when an Association is "fully funded" per the CAI definition set forth below, then, very often, this will mean that the Association is holding more cash reserves than absolutely necessary for prudent management of their financial obligations.



Percent Fully Funded

In component-based fund planning, the percentage ratio between the projected actual reserve balance and the calculated ideal amount of accumulated savings at any point of time is the "percent fully funded".

This metric is used to indicate whether an Association is:

- ✓ "Under-funded" percent fully funded less than 100%
- ✓ "Over funded" percent fully funded greater than 100%

Often, statutory and covenantal funding requirements may obligate an Association to maintain their reserve balance above some minimum percent fully funded value.

Such rules were originally promulgated to ensure conservative funding practices, which would protect the membership from unsound financial policies, which some developers and associations have practiced in the past.

SPECIAL ASSESSMENTS

The goal of nearly all reserve studies is to establish a regular, periodic rate of contribution to reserves, which ensures there will be sufficient funds when required.

However, sometimes it is necessary to boost the reserve balance quickly, before there is adequate time to accumulate funds through regular savings. In those cases, assuming the Unit Owners' personal finances can support it, it is expeditious to assess a lump sum special payment.

Special assessments are often tied to, or earmarked for, some particular capital expenditure. This may be a periodic but unusually high expense such as re-paving or re-roofing. Or, it may be to collect funds to pay for some desired new amenity, such as a new building, new tennis court or an elevator.

Although it is unusual, if the individual Unit Owners who form an Association all have sufficient means, the membership may prefer to manage their own investments and contribute to capital expenses only based on annual special assessments rather than through monthly, quarterly, or annual assessments.



BORROWING

The goal of nearly all reserve studies is to establish a regular, periodic rate of contribution to reserves, which ensures there will be sufficient funds when required.

However, sometimes it is necessary to boost the reserve balance quickly, before there is adequate time to accumulate funds through regular savings. In those cases, if the Unit Owners' personal finances cannot support an adequate special assessment, then the Association may need to borrow the funds.

Borrowing is often justified to obtain funds for some particular capital expenditure. This may be a periodic but unusually high expense such as re-paving or re-roofing. Or, a loan may be taken to obtain funds to pay for some desired new feature, such as a new building, tennis court, or to enhanced interior furnishings.

When funds are borrowed, then part of the regular, periodic contributions of the membership in the following years will be earmarked for repaying the loan.



APPENDIX F

PROJECT TEAM QUALIFICATIONS



Dove Cove Homeowners Association Property Evaluation & Reserve Fund Analysis



BUILDING INSPECTION ENGINEERS PROUDLY SERVING NORTH AMERICA SINCE 1957

Dan Kessler President



Dan is the President of Criterium-Kessler Engineers located in Phoenix, Arizona (formerly known as Criterium-Arizona). He is a proven, employee-centric executive leader with over 30 years of engineering, program management, senior leadership, military, and Intelligence Community experience. His broad range of management and technical skills include:

- Program and Project Management
- Technical Leadership
- Wall and fence evaluations
- Process Improvement and Best Practices
- Budgeting and Cost Control

Prior to becoming an affiliate owner with Criterium Engineers, Dan was an executive with a large company in the defense industry where he held numerous positions of increasing responsibility in engineering development, engineering operations, program management, and executive leadership—culminating in his role as Executive Director of Engineering for a nationwide team of 5,000+ technically diverse engineers. Dan is also a US Air Force veteran.

EDUCATION AND PROFESSIONAL AFFILIATION

National Louis University, Evanston, IL Bachelors of Business Management Community College of the Air Force, Birmingham, AL Associates of Applied Science, Remote Sensing

WHY I DO WHAT I DO

"We live in an exciting age when seemingly nothing is beyond our ability to create through proper engineering—and that means constant change, even to some of the most common elements of our society. Whether we realize it or not, we have a symbiotic relationship with buildings and structures, and it's fascinating to understand how all of the different elements work together to form the landscape we interact with each day. Most important though, is the opportunity to develop strong relationships and partner with clients to help them understand their structures in a way that can alleviate concerns, instill confidence, and ultimately succeed in their endeavors."

WHY CRITERIUM ENGINEERS

"Although buildings and other elements of society may appear simplistic in nature, the facts are that every element of our society has been engineered to perform as an element of an integrated system—whether that's buildings, roads, bridges, or even the topography around one's home. When a problem surfaces, the ability to partner with a company such as Criterium Engineers, with over 60 years of extremely diverse experience, and the combined nationwide expertise of 140+ engineers, is critical to understanding and solving problems.

Criterium Engineers is comprised of people who genuinely care about developing and nurturing relationships with other people and creating collaborative partnerships to fully investigate and understand their buildings and their associated challenges."

PROJECT HIGHLIGHTS

- **Property Condition Assessments** Large 500,000 SF shopping mall, office buildings, commercial retail, etc.
- **Paradise Reserve Community Association, Paradise Valley, Arizona** Reserve Study to project capital needs over the next 20 years for unique
- Palm Valley Phase V Community Association, Goodyear, Arizona Structural wall evaluations, bid specification development for repair/repainting
- **Canyon Trails Homeowners Association, Goodyear, Arizona** Structural wall inspections and measurements to prepare for repainting and repairs.
- **Pebble Creek Community Association, Goodyear, Arizona** Reserve Study to project capital needs over the next 20 years for the Association that manages over 4,500 homes for the Robson and Pebble Creek.
- Estrella Community Association, Goodyear, Arizona Wall and fence structural defect evaluation across twelve communities.
- **Ironwood Village Community Association, Scottsdale, Arizona** Wall evaluation to determine structural deficiencies, repairs, and erosion issues.
- **Homeowners Associations and Communities** Structural Inspections and reports, water intrusion, and erosion control.
- Insurance, Home Warranty, and Commercial Clients Stucco inspections, building inspections, structural distress inventory.

<u>dkessler@criterium-kessler.com</u> -- 480.218.1969 14539 W. Indian School Road, Suite #880, Goodyear, Arizona 85395



BUILDING INSPECTION ENGINEERS PROUDLY SERVING NORTH AMERICA SINCE 1957

Jim Herman Senior Engineering Field Technician



Jim is a Field Technician for Criterium-Kessler Engineers located in Phoenix, Arizona. He has over 20 years of experience in the refrigeration, semiconductor, and defense industries. His range of management and technical skills include:

- Project Management
- End-to-end Project Execution
- Risk Assessment and Risk Management
- Field Installations and Documentation
- Quality Control and Assurance

Prior to becoming a Field Technician with Criterium-Kessler Engineers, Jim was a Systems Engineer in the defense industry. He led the successful completion on multiple large projects, including the installation of fiber optic cables for a command system for a U.S. ally. In the semiconductor industry, he performed equipment sales, design, training, and installations for chemical and gas distribution systems. For several years, he sold HVAC equipment and continues to perform installations on large jobs with a local mechanical contractor.

EDUCATION AND PROFESSIONAL AFFILIATION

Western International University, Phoenix, AZ Masters of Science, Information Systems Engineering

Arizona State University, Tempe, AZ Bachelors of Arts, Mathematics

WHY I DO WHAT I DO

"I enjoy the challenge of solving problems and increasing efficiencies. When promoting engineering at local schools, I tell the students there is no problem we cannot solve with appropriate application of time and resources. Consulting engineering provides ample opportunities to help a client resolve an issue or determine the most effective method to apply limited resources towards a satisfactory solution."

WHY CRITERIUM ENGINEERS

"I found that work is more exciting and rewarding when I'm surrounded by skilled people that are passionate about their mission. Criterium Engineers has a long history of helping their clients that I'm proud to be a part of."

PROJECT HIGHLIGHTS

- Estrella Community Association, Goodyear, Arizona Wall and fence structural defect evaluation across twelve communities.
- Palm Valley Home Owners Association, Goodyear, Arizona Wall evaluation to determine structural deficiencies, repairs, and erosion issues.
- Paradise Reserve Property Owners Association, Paradise Valley, Arizona Reserve Study to project capital needs over the next 30 years.
- **Roadhaven Home Owners Association, Apache Junction, Arizona** Reserve Study to project capital needs over the next 20 years.

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