MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.

MEMBER OF community ASSOCIATIONS INSTITUTE

Condition Assessment
&
Reserve Fund Plan Update
2019

Sample Garden Condominium
Rockville, Maryland

Prepared for:
The Board of Directors

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.

MEMBER OF community ASSOCIATIONS INSTITUTE

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March 13, 2019

Ms. Johana Short, CMCA, AMS, General Manager
Sample Garden Condominium
9864 Short Drive
North Bethesda, Maryland 20852

RE: CONDITION ASSESSMENT AND RESERVE FUND PLAN UPDATE 2019
Sample Garden Condominium
Rockville, Maryland
Project No. 99999

Dear Ms. Short:

Mason & Mason Capital Reserve Analysts, Inc. has completed the report for Sample Garden Condominium

As outlined in our proposal, the report is being submitted to you and the Board of Directors for review and comment. A review of the Summary of Key Issues iii, and Sections 1 and 2 will provide you with our findings and financial analyses. We will be happy to meet with the Board to help them fully understand the issues. If no changes are necessary, please consider this version the final report. If changes are requested, Mason & Mason will make the revisions and re-issue the report. We encourage the Board to complete this process expeditiously and will support the effort.

We genuinely appreciate the opportunity to work with you and the Condominium.

Sincerely,

Mason & Mason Capital Reserve Analysts, Inc.

Levi K. Mason, R.S.
Vice President

LEVI K. MASON CAI-RS 00213 DESIGNATION RESERVE SPECIALIST

James G. Mason, R.S.
Principal

JAMES G. MASON CAI-RS 00010 DESIGNATION RESERVE SPECIALIST

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RESERVE FUND PLAN

FOREWORD

PLEASE READ THIS FIRST

This report contains information the Board requires to fulfill its fiduciary responsibilities with respect to the financial health of the Association. Even if you are already familiar with the concepts of capital reserve planning, it requires some study. The information in this report is vital to your Association's financial health. Unless you understand it, your Association may not follow it. This may lead to underfunding and financial stress at some time in the future.

Our years of experience providing reserve analysis to both first-time and multi-update return clients have compelled us to develop a logical funding approach, which is based on generational equity and fairness to common-interest property owners that helps ensure realistic reserve funding levels.

Our approach is neither standard, nor is it necessarily easy to understand without first becoming familiar with some basic concepts. Section 3 explains these concepts in more detail. We want you to understand them because a well-informed Association makes the best decisions for its common-property owners.

SUMMARY OF KEY ISSUES

Different readers will look for different things from this report. Perhaps the homeowner will just be looking for the high points. A prospective buyer may be looking at the general financial condition of the Association's reserves. A Board member should probe deeper in order to understand the financial tools that will be helpful in fulfilling their fiduciary responsibilities to the Association.

The Summary of Key Issues presents a recapitulation of the most important findings of Sample Garden Condominium's Reserve Fund Plan Update. Each is discussed in greater detail in the body of the report. We encourage the reader to "go deeper" into the report, and we have written it in a way that's understandable to a first-time reader.

Analyzing the capital reserves reveals that:

- The reserve fund is approximately 80% funded through 2018. See Section 3.1. This is a significant improvement from past years. Our goal is to achieve fully funded status by the end of the 20-year period (2038).

In order to achieve the fully funded goal, the Board should:

- Simply apply a 0.85% annual adjustment to the current contribution to reflect inflation.

Supporting data are contained in the body of this report, and we encourage the reader to take the time to understand it.

VISUAL EVALUATION METHODOLOGY

The first step in the process is collection of specific data on each of your community's commonly-held components. This information includes quantity and condition of each included component. We collect most of this data during the on-site field survey. When this information is not available in the field, we may obtain it by discussion with those knowledgeable through management or service activities.

The field survey or condition assessment is visual and non-invasive. We don't perform destructive testing to uncover hidden conditions; perform operational testing of mechanical, electrical, plumbing, fire and life safety protection; or perform code compliance analysis.

We make no warranty that every defect has been identified. Our scope of work doesn't include an evaluation of moisture penetration, mold, indoor air quality, or other environmental issues. While we may identify safety, hazards observed during the course of the field survey, this report shouldn't be considered a safety evaluation of components.

Replacement costs are sometimes based on published references, such as R. S. Means. However, our opinions of replacement costs usually include removal and disposal and are usually based on experience with similar projects including information provided by local contractors and reported client experience. Actual construction costs can vary significantly due to seasonal considerations, material availability, labor, economy of scale, and other factors beyond our control.

Projected useful service lives are based on statistical data and our opinion of their current visual condition. No guarantee of component service life expectancies is expressed or implied and none should be inferred by this report. Your actual experience in replacing components may differ significantly from the projections in the report, because of conditions beyond our control or that were not visually apparent at the time of the survey.

1. INTRODUCTION

1.1 Background: Sample Garden Condominium is comprised of 180 residential, garden-style condominiums in four, five-story, brick veneer buildings located at 9864 and 9865 Short Drive in Rockville, Maryland. The Condominium was constructed in 1990. The buildings have two common entrances and each building has a partially below-grade parking garage that provides a garden-style terrace on the east-facing elevations. Each of the four buildings is served by an elevator. Surface parking provides 53 additional spaces in four bays at the central area of the main entrance. A gatehouse is constructed at the entrance, which is staffed during the evening hours and on weekends. Amenities include underground parking, a fitness center, a pool complex, tennis courts, and an asphalt footpath constructed along the rear of the community in a park-like setting.

We are providing the Condition Assessment and Reserve Fund Plan Update based on Proposal Acceptance Agreement No. 99999 dated December 12, 2018. Our services are subject to all terms and conditions specified therein.

Mason & Mason did not review the declarations, covenants, or other organization documents pertaining to the establishment and governance of the Condominium. Ultimately, the establishment, management, and expenditure of reserves are within the discretion of the Condominium and its Board of Directors pursuant to their organizational documents and subject to the laws of the applicable jurisdiction. We are not otherwise financially associated with Sample Garden Condominium and we therefore do not have any conflicts of interest that would bias this report. Information provided by Sample Garden Condominium is deemed reliable. This report is not intended to be an audit or a forensic investigation. This report is not a mandate, but is intended to be a guide for future planning.

Mason & Mason provided a Level I Condition Assessment and Reserve Fund Plan for Sample Garden Condominium in 2003 and Condition Assessment and Reserve Fund Plan Updates in 2006, 2010, 2015 and an Administrative Update in 2016. This report is an additional Level II Update and includes a new condition assessment. All common components were visually observed. Measurements and quantities were generally accepted from the previous report except where changes have occurred. The update report is a stand-alone document and reference to the previous report should not be necessary.

Levi K. Mason, R. S. conducted the field evaluation for this Level II report on February 28 and on March 5, 2019. We were accompanied by Ms. Short, Site Community Manager. The weather was clear, and the temperature was approximately 40 degrees F. The pavements, walkways, and grounds were dry and free of snow and debris. After the field evaluation, Mason & Mason met with Ms. Johana Short, General Manager, Ms. Monica Long, President, Ms. Margaret Spicy, Secretary, Mr. Tom Right, Board member, Mr. John Wright, Board member, and Mr. Tony Mustard, Reserves Committee to review the prior financial tables, discuss the financial issues and the particulars of prior projects that have been completed since the last report.

1.2 Principal Findings: As has been the case since our first Condition Assessment and Reserve Fund Plan in 2003, Sample Garden Condominium has continued to improve both financially and in terms of general conditions. Previous reserve fund plans have discussed many large-scale refurbishment / replacement projects including the replacement of the full asphalt shingle roofing, gutters and down spouts, the replacement of the corridors HVAC systems, elevator modernization, repaving projects, significant interior refurbishment, emergency generator replacement, and most significantly, the replacement of the waterproof membrane above all garages. These past few cycles have generally addressed the most significant components, in terms of financial liability. Sample Garden Condominium should be congratulated on these accomplishments, particularly in light of the fact that these projects have been accomplished while steadily increasing the reserve fund balance. This proactive management has resulted in Sample Garden Condominium being in not only excellent physical condition, but also with reserve fund balances that are high enough that the contributions can be maintained with only very small annual adjustments. While previous evaluations have focused on relatively high-profile projects, this cycle has largely focused on slightly smaller scale replacement, repair, and maintenance related issues. Since the previous Administrative Update, conducted in 2016 Sample Garden Condominium has:

1. Added several sets of concrete stairs, serving single units along the rear elevations of the buildings
2. Added approximately 236 linear feet of fencing throughout the patios
3. Added a comprehensive drainage system adjacent to the tennis courts
4. Coated and repaired the metal roofing
5. Replaced the pool house roofing
6. Repaired the deficient chimney caps
7. Repainted the railings and ancillary balcony components
8. Replaced 10 of the lobby windows
9. Refurbished the fitness center restroom
10. Installed a comprehensive access control, security, and surveillance system
11. Replaced all interior carpeting, which included the repair of the concrete decks
12. A comprehensive interior refurbishment project totaling nearly $809,000

Several projects have been planned for 2019 and 2020, which address observed deficiencies as well as general site usability improvements. The asphalt drivelanes appear to be in good condition having been restored in 2013 (Phase II) and in 2015 (Phase I). However, both phases of asphalt have some significant deficiencies, which should be addressed. We have altered our approach and have combined the phases of asphalt repair and restoration. This may reduce long-term repair and restoration costs by avoiding repeated staging. The repairs should include the repair of the sub-base failure, filling of the transverse and lateral cracking, and the seal coating of the asphalt to promote uniformity. Because asphalt restoration equipment will be on site, we have scheduled the full replacement of the asphalt footpath at the same time. The restoration of the footpath should include the removal of the many tree roots, which have localized heaving and a full overlay to build the level of the path. Years of erosion have caused the path to be level with adjacent soils and if allowed to continue, sections of the footpath will be covered. We anticipate a minimum of a two inch overlay. A minor amount of concrete work is required to address some minor cracking and general deficiency. Additionally, we understand that a concrete picnic area will be added

adjacent to the pool deck. This project will be completed in conjunction with the replacement of the existing chain link pool fencing with coated aluminum fencing. The brick masonry throughout appears to be in generally good condition. However, we have scheduled a relatively large tuckpointing and brick repair project, which should address the various brick wall deficiencies observed throughout the site, including at the pool and in the wall adjacent to the tennis courts. We observed at least one sheer crack in the condominium façade, which should be addressed and the arched openings throughout the pool building require some potentially substantial repair. These masonry projects may interface with a masonry chimney evaluation. We observed several chimneys throughout the condominium with evidence of water intrusion. We were able to inspect several of the problem chimneys, but were not able to identify specific points of entry. We suggest an engineering evaluation be conducted to determine the severity of the water intrusion and to locate the areas that require additional water proofing.

In addition to the masonry repairs and water proofing, the flat roofing membranes are nearing the end of their service lives. These roofs are understood to be problematic due to inadequate drainage provision. During heavy rains which have become frequent, these roofs have the potential to fill with water, which may then flow into the HVAC duct penetrations and potentially even in through the access hatches. The remediation of this problem is not immediately evident, and engineering may be required to address the replacement of the roofing and the increased need for drainage. It may be possible to construct new roofing planes above the current plane. This approach may eliminate the need for additional drainage as water will be shed directly off the new roofing eliminating the parapet barrier all together. We understand that the package units which were replaced in recent years have already been elevated and it may be possible to construct the new roofing under these units. We understand that the HVAC units were installed without returns. This results in a dramatically reduced air-drying ability and mold and mildew is a problem in the corridors during the summer months. With the additional space created by the change in roofing elevation, installing returns may be possible. However, engineering is required to make these determinations.

Some recreational refurbishment projects have been planned near-term, in addition to the new picnic area. These include a tennis court repair and color coat project and a comprehensive pool building interior refurbishment project.

The electrical distribution equipment is currently in serviceable condition. However, because of the difficulty and expense associated with electrical modernization, we encourage the condominium to begin planning for this eventuality. We suggest a comprehensive plane be generated near-term and the findings be integrated into the reserve fund plan. Several of the HVAC systems (excluding the corridor units located on the roofs) are very dated. We observed at least one unit still in service from 1998, which is impressive. We have scheduled the older units to be replaced near-term at Management's request. The condensate discharge lines will be equipped with cleanouts, the dryer ducts will be cleaned, and the electrical distribution system will be thermographically scanned and all lugs will be properly torqued.

Finally, the interiors throughout have largely been updated, and Management reported that the tile throughout the mailrooms and garage lobbies will be replaced near-term.

Currently, the reserve fund is adequate, and requires only minimal annual adjustments in contributions to achieve the fully funded goal at the end of twenty years.

In order to maintain the physical attributes that preserve property values and provide a safe environment for occupants and guests, a series of capital expenditures should be anticipated. Consequently, we have scheduled near-, mid-, and late-term restoration and replacement projects based on anticipated need from our experience with similar properties.

Generally, our approach is to group appropriately related component replacement items into projects. This creates a more realistic model and allows a grouping time line that is more convenient to schedule and logical to accomplish. Please see the Table 1 Discussion, Column 17, for specific information.

2. FINANCIAL ANALYSIS

We track the annual inflation rate among our clients based on their reported costs for typical services. The average rate of inflation since the 2008 recession has been 1.46% according to the U.S. Labor Department, and is similar in our experience with clients. However, currently we are seeing somewhat higher rates and are anticipating that general price inflation will continue at elevated levels near to mid-term. As such, we are using a 3% rate of inflation in our calculations. Interest income has increased similarly since 2008, and many smaller Associations and Condominiums are earning up to 1.85% on savings accounts and as much as 3.37% on 5-year certificates of deposit. Accordingly, we are assuming 2.5% interest income in our calculations. However, unlike reserves, interest income is taxable, which may reduce the net gain. We anticipate increasingly volatile economic conditions near to mid-term. It is prudent to keep a close watch on the economy and be ready to respond by updating the reserve fund plan as economic changes dictate.

2.1 Calculation Basics: The Condominium is on a fiscal year of October 1st to September 30th. Management reported that the audited reserve fund balance, including cash and securities, as of September 30, 2018, was $2,418,914. We have used a 2.50% annual interest income factor and a 3.00% inflation factor in our calculations. The total expenditures for the twenty-year period for both the Cash Flow Method and Component Method are projected to be $8,471,731.

2.2 Funding Analysis, Cash Flow Method, Hybrid Approach (Table 3): The 2018 annual contribution to reserves has been set at $699,664 with a 0.85% annual increase. This plan allows for a gradual increase over time and addresses generational equity issues. The total for all annual contributions for the twenty-year period would be $15,329,970, and the total interest income is projected to be $3,247,729. The fully funded balance in 2038 is $12,524,882.

2.3 Funding Analysis, Component Method (Table 4): This method of funding would require variable annual contributions, averaging $754,282 over the twenty-year period. The total for all annual contributions would be $15,085,642, and the total interest income is projected to be $3,492,057. The fully funded balance in 2038 is $12,524,882. The Component Method model considers the current reserve fund balance in computing individual component contributions for current cycles.

3. METHODS OF FUNDING

Once the data are compiled, our proprietary software produces two distinct funding methods. These are the Component Method and Cash Flow Method. Each of these methods is used in analyzing your Association's reserve status and each plays a role in the Board's decision on how to fund reserves. While we provide the guidance, the choice of funding method is ultimately the prerogative of the Board. Considering the vulnerability of the Association's assets, its risk tolerance, and its ability to fund contributions, the Board should decide how the Association will fund its reserves and at what level.

3.1 Component Method: As reserve analysts, we recognize the value of Component Method calculations as they address both future replacement costs and the time remaining to fund them. This is the foundation of the savings concept. You will see the term "fully funded." This simply means you are on schedule, in any given year, to accrue sufficient funds by the component's replacement date. It does not mean you must have 100% of the funds ahead of time. Simplified Example: A component projected to cost $1,000 at the end of its 10-year life cycle would require a $100 annual contribution in each of the 10 years. As long as you follow this contribution plan, the component is "fully funded."

Prior to determining the actual required annual contribution, a complex calculation apportions the existing reserve fund to each component. Each component's remaining unfunded balance forms the basis for the required contribution going forward.

Funds set aside for replacement of individual components are not normally used for the replacement of other components, even though the funds reside in the same bank account. In rare cases where a reserve fund is actually overfunded, $0 will be displayed on the Component Method tables, indicating that the component is fully funded for that cycle.

While the time basis for the report is a 20-year period, the Component Method allows for inclusion of long-life components that may require replacement after the specified period. This allows for funding of long-life components contemporaneously, which is fundamentally fair if they are serving the current owners. This is in contrast to saying, "if it doesn't require replacement within our 20-year period, we're going to ignore it."

Due to replacement cycle time and cost differentials, the Component Method typically results in annual contribution fluctuations, which often makes it difficult for a Board to implement. However, its guidance is essential and invaluable for understanding funding liabilities and making informed recommendations. Table 4 shows these calculations, as well as projects interest income, expenses with inflation, and yearly balances, which will be "fully funded."

3.2 Cash Flow Method: The Cash Flow Method is easier to implement. It is a simple 20-year spread sheet that includes the starting balance, current contribution, interest income, inflation rate, projected expenses, and resulting yearly balances. The Cash Flow Method pools the contributions allocated to each of the Association's common components into a single "account."

Table 3 shows these calculations. This table reflects the information you provided on your reserve fund balance and current contribution. It also shows projected yearly positive or negative balances. The Cash Flow Method doesn't include replacement funding for anything beyond the 20-year period, thus leaving a potential shortfall in funding and failing to address generational equity if not specifically set to do so. It doesn't provide any real guidance beyond the basic information. There are several variations on cash flow goals such as Threshold Funding (just enough to stay positive) and Percentage Funding (a predetermined level based on some arbitrary percentage), but these schemes don't address the reality of fully funding, and typically are just a way of passing the obligation on to the next generation.

3.3 Hybrid Approach: Please note that this is not a method, rather a way (approach) for us to utilize the Cash Flow Method, while insuring the appropriate funding levels are achieved long-term. Our Hybrid Approach uses the projected fully funded balance at the end of the 20-year period from Table 4 as a funding goal. We then set up Cash Flow funding plans. Table 3 is your "where we are now" Cash Flow spreadsheet modeling your reserve balance and current contribution. Table 3.1 (and possibly others) provides alternative(s) to this that meet the fully funded goal from Table 4.

We usually establish a new Cash Flow contribution that requires only small annual inflationary increases to reach the fully funded goal at the end of the 20-year period. This has the added effect of establishing a funding plan that addresses inflation. The contribution in the first year, adjusted for inflation, is equal to the contribution in the last year, based on inflated dollars (future value of money). This approach will also allow underfunded Associations the time to catch up, mitigating undue hardships. It balances the risk of temporary underfunding with the benefit of consistent predictable increasing contributions. The combination of the Component and Cash Flow Methods (Hybrid Approach) provides the advantages of both methods.

4. RESERVE PROGRAMMING

The Mason & Mason proprietary software used to produce the financial tables (Tables 1 through 4) have been under continual refinement for over a decade. It is unique in the industry as it provides comprehensive modeling through Microsoft Access and Excel that addresses the many challenges of reserve funding, allows analysts and clients to run "what if" scenarios, provides an easy to understand matrix of views and functions, and is easily provided to clients through e-mail.

4.1 Interest Income on Reserve Funds: Most Associations invest at least part of their reserve funds. Small Associations may simply use a savings account or certificates of deposit, while large Associations may have multiple investments with short-, medium-, and long-term instruments. One issue that is difficult to quantify is the percentage of funds invested. Some Associations invest a fairly substantial portion, while others hold back due to current cash outflow obligations. Some Associations do not reinvest the investment proceeds in their reserves; rather they divert the cash into their operations fund. We do not agree with this approach as it has the effect of requiring additional reserve contributions to make up for the difference. There is also the issue of changing rates over the 20-year period. In the recent past we have seen large swings in relatively short time periods. While reserve funds are not usually taxable by

the IRS, the investment income generated by the reserve fund is taxable in most situations. Even with all these potential pitfalls, investment income still represents a substantial source of additional funds and for this reason should not be ignored. There is no way to make "one size fits all" with any accuracy for the individual Association. Our approach to this dilemma is to use lower approximations that compensate for less than 100% of funds invested. We feel this is still better than not recognizing it, and periodic updates allow for adjustments based on experience. The rate can be set at any level, including zero, for Associations desiring to not recognize interest. The rate should reflect, as accurately as possible, the actual composite rate of return on all securities and other instruments of investment including allowances for taxes.

The interest income displayed on Table 3 and Table 4 is the summation of the beginning reserve fund interest accrual and the interest earned on the contributions minus the interest lost by withdrawing the capital expenditures. This method of calculation, while not exact, approximates the averages of the three principal components of a reserve fund for each twelve-month period.

4.2 Future Replacement Costs (Inflation): Inflation is a fact of life. In order to replicate future financial conditions as accurately as possible, inflation on replacement costs should be recognized. The financial tables have been programmed to calculate inflation based upon a pre-determined rate. This rate can be set at any level, including zero. A plan that doesn't include inflation is a 1-year plan, and any data beyond that first year won't reflect reality.

4.3 Simultaneous Funding: This is a method of calculating funding for multiple replacement cycles of a single component over a period of time from the same starting date. Simple Example: Funding for a re-roofing project, while, at the same time, funding for a second, subsequent re-roofing project. This method serves a special purpose if multiple-phase projects are all near-term, but will result in higher annual contribution requirements and leads to generational equity issues otherwise. We use this type of programming only in special circumstances.

4.4 Sequential Funding: This is a method of calculating funding for multiple replacement cycles of a single component over a period of time where each funding cycle begins when the previous cycle ends. Simple Example: Funding for the second re-roofing project begins after the completion of the initial re-roofing project. This method of funding appears to be fundamentally equitable. We use this type of programming except in special circumstances.

4.5 Normal Replacement: Components are scheduled for complete replacement at the end of their useful service lives. Simple Example: An entrance sign is generally replaced all at once.

4.6 Cyclic Replacement: Components are replaced in stages over a period of time. Simple Example: Deficient sidewalk panels are typically replaced individually as a small percentage, rather than the complete system.

4.7 Minor Components: A minimum component value is usually established for inclusion in the reserve fund. Components of insignificant value in relation to the scale of the Association shouldn't be included and should be deferred to the operations budget. A small Association might exclude components with aggregate values less than $1,000, while a large Association might exclude components with aggregate values of less than $10,000. Including many small components tends to over complicate the plan and doesn't provide any relative value or utility.

4.8 Long Life Components: Almost all Associations have some components with long or very long useful service lives typically ranging between thirty and sixty years. Traditionally, this type of component has been ignored completely. Simple Example: Single replacement components such as entrance monuments should be programmed for full replacement at their statistical service life. This allows for all common property owners to pay their fair share during the time the component serves them. This also has the added effect of reducing the funding burden significantly as it is carried over many years.

4.9 Projected Useful Service Life: Useful service lives of components are established using construction industry standards and our local experience as a guideline. Useful service lives can vary greatly due to initial quality and installation, inappropriate materials, maintenance practices or lack thereof, environment, parts attrition, and obsolescence. By visual observation, the projected useful service life may be shortened or extended due to the present condition. The projected useful service life is not a mandate, but a guideline, for anticipating when a component will require replacement and how many years remain to fund it.

4.10 Generational Equity: As the term applies to reserves, it is the state of fairness between and over the generations relating to responsibility for assets you are utilizing during your time of ownership. It is neither reasonable, nor good business to defer current liabilities to future owners. This practice is not only unfair; it can also have a very negative impact on future property values.

5. UPDATING THE RESERVE FUND PLAN

A reserve fund plan should be periodically updated to remain a viable planning tool. Changing financial conditions and widely varying aging patterns of components dictate that revisions should be undertaken periodically from one to five years, depending upon the complexity of the common assets and the age of the community. Weather, which is unpredictable, plays a large part in the aging process.

Full Updates (Level II) include a site visit to observe current conditions. These updates include adjustments to the component inventory, replacement schedules, annual contributions, balances, replacement costs, inflation rates, and interest income.

We encourage Associations that are undergoing multiple simultaneous or sequential costly restoration projects (usually high rise buildings) to perform Level III Administrative Updates. Administrative updates do not include a condition assessment. They are accomplished by comparing original projections with actual experience during the interim period as reported by Management. These updates can be performed annually and include adjustments to the replacement schedules, contributions, balances, replacement costs, inflation rates, and interest income. The Level III Administrative Update can be a cost-effective way of keeping current between Level II Full Update cycles. Full Updates (Level II) and Administrative Updates (Level III) help to ensure the integrity of the reserve fund plan.

COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE
TABLE 1 EXPLANATION

This table lists the common assets included in the reserve fund plan and provides details of the replacement schedules. A narrative discussion is provided adjacent to each component. Photo references and maintenance protocol reference numbers are also provided. An explanation of each column in the table follows:

Column 1 **Component No.** is consistent throughout all tables.

Column 2 **Component** is a brief description of the component.

Column 3 **Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.

Column 4 **Unit of Measurement** used to quantify the component:

SY = Square Yards
SF = Square Feet
LF = Linear Feet
EA = Each
LS = Lump Sum
PR = Pair
CY = Cubic Yards

Column 5 **Unit Cost** used to calculate the required expenditure. This unit cost includes removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor.

Column 6 **Total Asset Base** is the total value of common assets included in the study in current dollars. In addition to capital assets, this figure includes one cycle of maintenance liability.

Column 7 **Typical Service Life (Yrs) or Cycle** is the typical life expectancy of similar components in average conditions or the length of years between replacement cycles, and does not necessarily reflect the conditions observed during the field evaluation. This number is furnished for reference and is not necessarily computed in the system.

Column 8 **1st Cycle Year** is the scheduled year of the first projected replacement or repair.

Column 9 **Percentage of Replacement** is the percentage of component value to be replaced in the first replacement cycle.

Column 10 **Cost for 1st Cycle** is the future cost (with inflation) of the replacement. It is the product of Column 6 times Column 9 in future dollars.

Column 11 **2nd Cycle Year** is the scheduled year of the second projected replacement or repair. If a second cycle is not listed, it is because the first cycle is beyond the end of the study.

Column 12 **Percentage of Replacement** is the percentage of component value to be replaced in the second replacement cycle. This can vary from the percentage of the first cycle for various reasons, such as the increased age of a component may require a larger amount of repair.

Columns 13 Through 16 **Cycles, Percentage, and Cost** repeat as itemized above. Although not shown on the tables, the cycles continue throughout the study period and beyond.

Column 18 **Discussion** is the description and observed condition of the component and the methodology employed in the decision-making process. Includes the photo reference, (Photo #1, #2, etc.) and Maintenance Protocol reference numbers (7.1, 7.2 etc.) if applicable.

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE
TABLE 1
2019 Through 2038

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost For 3rd Cycle	DISCUSSION
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
1 ASPHALT COMPONENTS																
1.2	Asphalt Restoration Project	5,212	SY	$15.14	$78,910	18	2031	100%	$112,506	2049	100%	$191,535				We understand that the asphalt drivelanes and parking bays on the southern (trafficked) side of the complex was restored in 2015 by & Sealing, Inc. for a cost of $64,782. This project included full-depth repairs of 329 square yards, a 2" overlay of 4,279 square yards, the installation of two speed bumps, and the marking of the asphalt drivelanes, and parking bays. The asphalt appears to be in generally good condition, however we observed approximately 271 square yards of asphalt, with some significant deflection and map cracking, indicative of sub-base failure. The deflection appears to be somewhat geometrical and concentrated along one side of the drivelane suggesting localized failure and some underlying cause. We recommend that repairs be conducted near-term and should include an investigation of the cause of the sub-base failure. Additionally, we measured approximately 281 linear feet of transverse and lateral cracking throughout the asphalt, which is normal but should be filled. The older asphalt, which is non-trafficked, installed on the north end of the complex appears to be in fair condition and requires some repairs near-term. We understand that a portion of this asphalt was restored recently as it was damaged during construction. However, the overlay was observed to be only 1/2" thick and is failing in several locations. Former reserve studies have differentiated between the two sections of asphalt. However, since both sections of asphalt require attention near-term, we have opted to combine the phases, shortened the service life based on the observed condition, and scheduled repairs and restorations to coincide. This approach may reduce long-term costs by avoiding the need to repeatedly stage equipment and to capitalize on economies of scale.
1.3	Asphalt Seal Coat	5,212	SY	$1.20	$6,254	6	2019	100%	$6,254	2024	100%	$7,251	2037	100%	$10,648	The pavement does not appear to have been seal coated since initial construction. Seal coating may help prevent water infiltration into the sub-base through micro-cracks, but is largely a cosmetic issue. To help improve curb appeal after repairs, we have scheduled seal coating projects every five years, except in the year of the pavement restoration project when it is not necessary. Crack filling and full-depth repairs should be completed prior to application to achieve maximum benefit from the seal coating. Seal coating projects include re-striping.
1.4	Asphalt Full-Depth Repair Allowance	1	LS	$20,000.00	$20,000	6	2019	55.20%	$11,040	2024	75%	$17,389	2031	100%	$28,515	To help maximize the service life of the pavement we have scheduled the repair of the deflected areas as well as the filling of the transverse and lateral cracks. Our projection is based on the contract price of recent repair work, but the figure should be revised after proposals have been provided by service contractors. Continuing repairs are essential in order to achieve the projected service life of future pavements. Full-depth repairs and crack filling are scheduled every six years throughout the study period, including the year of the asphalt restoration projects.
1.5	Asphalt Footpath	518	SY	$46.50	$24,087	12	2019	100%	$24,087	2031	100%	$34,342	2043	100%	$48,964	An asphalt footpath generally 4' in width is constructed near the rear property line and runs the entire length of the property. An additional length of 65 l.f. (approximately 4.5' in width) has been added connecting the path to the street to the north of the property. The footpath was in generally fair to poor condition. We calculated that approximately 578 linear feet or 44% of the total surface area is in poor condition. Additionally, much of the footpath is in jeopardy of being covered by erosion due to age and increased annual rainfall. Because of the general condition and the need to build the thickness of the footpath, we have scheduled a full restoration of the footpath near-term. The footpath restoration projects are scheduled to coincide with other asphalt work to promote cost efficiencies. It will be critical to thoroughly remove any tree roots that have grown under the path to prevent reflective cracking, prior to overlay.
2 CONCRETE COMPONENTS																
2.1	Concrete Sidewalks and Flatwork	24,019	SF	$11.50	$276,219	5	2019	1.80%	$4,972	2024	3%	$9,606	2029	3%	$11,136	Concrete sidewalks throughout the community are generally 3', 4', 5', or 8' wide with some large expanses of concrete flatwork at the front and between the buildings. We have quantified and added areas of new concrete including newly constructed steps on the side and rear elevations of the buildings. The thickness of the concrete could not be visually determined. Their condition is generally very good with many newly replaced sections. The emergency vehicle lane at the rear of the buildings is in good condition with few deficiencies observed. Though this is not actually a pedestrian surface, it is used as such and the cracks that present tripping hazards should be mitigated. Over time surface scaling should be anticipated and replacement of some of the more severely scaled sections should be addressed with each replacement cycle as they will tend to deteriorate more quickly over time. Cyclic repairs are scheduled as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with other concrete components to promote cost efficiencies. Management requested a 2019 allowance of $5,000 for general repairs and for the repair of a damaged driveway apron.
2.2	Concrete Curbs & Gutters	3,874	LF	$36.00	$139,464	5	2024	2%	$3,234	2029	2%	$3,749	2034	2%	$4,346	The drivelanes and parking bays are lined with standard-profile, cast-in-place, concrete curbs. The curbs are generally in continuing good condition with a few minor transverse cracks and a few settled sections, as well as some repaired sections, observed. Cyclic repairs are scheduled as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with other concrete components to promote cost efficiencies.
2.3	Concrete Pool Deck	5,529	SF	$13.50	$74,642	20	2019	16.90%	$12,614	2029	100%	$100,312	2039	10%	$13,481	The pool deck is cast-in-place concrete on grade and was observed to be in generally good condition with some minor cracking. Any cracks that occur in the future should be routed and sealed to prevent water infiltration into the deck. We understand that a new section of concrete deck will be installed near-term, which will serve as a picnic area. Management provided the cost for the project. We have updated the pool deck quantity to reflect the additional projected surface area.
2.4	Concrete Fire Pads	2,502	SF	$12.50	$31,275	5	2024	10%	$3,626	2029	10%	$4,203	2034	10%	$4,873	Four concrete pads are provided along Drive for fire equipment access. They consist of a 33' by 10' access ramp, two 3' wide tread surfaces of varying lengths, and 18' by 10' pads adjacent to fire hydrant. Two fire lanes have had the installation of a center apron. We understand that these may be replaced with asphalt at sometime in the future if Drive is ever widened. Cyclic repairs are scheduled as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with other concrete components to promote cost efficiencies.

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3 SITE FEATURES																
3.1	Entrance Wall Lettering	1	LS	$2,500.00	$2,500	20	2035	100%	$4,012	2055	100%	$7,246				Wall-mounted plastic letters have been installed on the brick wall of the parking garage facing Edson Lane. They have been given a statistical service life and are in good condition.
3.2	Signage Allowance	44	EA	$155.00	$6,820	10	2022	50%	$3,726	2032	50%	$5,008	2042	50%	$6,730	Standard metal signs mounted on painted or pressure-treated wood posts, small metal posts, or wall or chain mounted are located throughout the site. We have budgeted an allowance throughout the study period to address replacements as necessary. No significant deficiencies were observed.
3.3	Stone Embankment Wall Repair Allowance	2,004	SF	$11.00	$22,044	10	2022	20%	$4,818	2032	20%	$6,474	2042	20%	$8,701	Two sections of stone and mortar embankment walls are constructed across from the entrance adjacent to Drive. The walls have been periodically tuckpointed to maintain good condition. No deficiencies were observed. We have budgeted a tuckpointing and repair allowance every ten years throughout the study period. The cost is based on the actual previous contract price. With diligent maintenance, these walls should not require replacement in their entirety.
3.4	Peripheral & Separation Fencing Maintenance Allowance	1	LS	$35,000.00	$35,000	3	2020	100%	$36,050	2023	100%	$39,393	2026	100%	$43,046	This component was established to address periodic maintenance to the fencing surrounding the patios (terraces) on top of the garage waterproof membrane. This maintenance should include replacement of deteriorated timbers, re-securing of any loose or out of plumb posts, pressure washing, and the application of an appropriate wood preservative. The price reflects previous projects. We understand that a staining project was completed in 2017, which stained new sections of fencing for a price of $4,175 by Chesapeake Finishing.
3.5	Peripheral Fencing	1,636	LF	$55.40	$90,634	30	2042	100%	$178,875							All fencing surrounding the private patios at ground level was replaced throughout the complex during the garage/terrace restoration. Fencing is pressure-treated wood board on board, and appears to be well constructed and in continuing good condition. All wood has been sealed. Periodic maintenance should be performed under Component 3.4 above. The quantity and price reflects the contract provided by Frederick Fence Co, Inc. dated 12/6/2016, which reportedly added 236 linear feet of 60" pressure-treated fencing.
3.6	Separation Fencing	1,900	LF	$54.00	$102,600	30	2042	100%	$202,490							All fencing surrounding the private patios at ground level was replaced throughout the complex during the garage/terrace restoration. Fencing is pressure-treated wood board on board, and in good condition. All wood has been sealed. Periodic maintenance should be performed under Component 3.4 above. Note that the replacement cost has been removed from the total projected cost of the next Garage/Terrace Membrane Project scheduled in 6.1 through 6.4.
3.7	Storm Water Drainage & Erosion Control Allowance	1	LS	$20,000.00	$20,000	5	2022	100%	$21,855	2027	100%	$25,335	2032	100%	$29,371	This category is being established to address periodic erosion control and drainage control issues throughout this heavily contoured site. The installation of the "rain garden" by Rob Graham Landscape Architects at the north end of the property has reduced erosion from runoff in that area. Additionally, a drainage system was installed to direct water away from the tennis courts. However this system appears to be undersized for the location and, while it has been generally successful, we anticipate that additional provision will be required near-term. We suggest the addition of a low, cast concrete and modular block retaining wall along the eastern and part of southern side of the court. This project should be performed in conjunction with the tennis court restoration scheduled near to mid-term. We have increased the budget and frequency due to the increased annual precipitation anticipated.
3.8	Wood Footbridge	1	LS	$10,000.00	$10,000	30	2028	100%	$13,048	2058	100%	$31,670				A pressure-treated wood footbridge, 4' by 46' long is constructed across a drainage swale at the rear of the property. The structure of the bridge is 6" by 6" timber posts with 2" by 12" nominal joists. The wood decking and railings are constructed of 2" by 4" dimensional lumber. The bridge appears to be in generally good condition with no significant deficiencies observed. A few minor issues were observed, which should be addressed under operations. Additionally, aluminum anti-slip plates should be installed to prevent injury. Periodic pressure-washing at medium pressure, application of an appropriate wood preservative, and replacement of deteriorated boards will improve appearance and may increase service life.
3.9	Site Brick Retaining Wall Interim Repair Allowance	2,600	SF	$110.00	$286,000	4	2019	10%	$28,600	2023	10%	$32,190	2027	10%	$36,230	Brick retaining walls with rowlock copings are constructed at the grade differentials at the front and rear of the property. Most walls appear to be in generally fair condition having been either re-built or having had extensive repairs. The walls at the rear of Buildings 14100-14110 that were seriously deflected have been replaced by building another wall adjacent to the deflected wall to protect nearby vegetation. The deflected walls were then either completely removed or partially removed below soil level. Additional walls at the rear are deflecting and may eventually require this type of mitigation. The wall below the tennis court was observed to have some missing mortar and some minor cracking and the walls located adjacent and integral to the pool decks were observed to be in very poor condition. We have scheduled a repair and tuckpointing project near-term.
3.10	Tennis Court Restoration Project	2	EA	$30,000.00	$60,000	20	2022	100%	$65,564	2042	100%	$118,415				The tennis courts were restored in 1996. They appear to be in fair condition with some surface cracking occurring and some evidence of water ponding. We observed some staining and some apparent movement cracking at the cut and fill line of the site. This type of cracking can be expected to continue. We have scheduled repairs in 3.11 below to achieve additional service life until restoration, which should include the construction of a low retaining wall to aid in the redirection of storm water. Since net tension is the most common cause of court damage, homeowners should be advised that tension on the nets should be released when not in use, and nets should not be over-tensioned when in use. The full restoration has been deferred in favor of additional repairs and color coating.

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3.11	**Tennis Court Color Coat & Repair**	**2**	**EA**	**$6,000.00**	**$12,000**	**5**	**2019**	**67%**	**$8,040**	**2027**	**100%**	**$15,201**	**2032**	**100%**	**$17,622**	**The tennis court color coat appeared to be in generally good condition, but the current cracking requires near-term repairs. Color coat and fiberglass patching is scheduled near-term to enable to courts to achieve additional service life. The full service life of color coat is dependent on periodic maintenance being performed including sweeping and debris removal. Management provided the cost projection for the repairs.**
3.12	**Tennis Court Fencing**	**480**	**LF**	**$30.00**	**$14,400**	**20**	**2022**	**100%**	**$15,735**	**2042**	**100%**	**$28,420**				**Ten-foot-high, vinyl-coated chain link fencing is installed on painted metal posts around the perimeter of the tennis courts. It appears to be in serviceable condition. Replacement is scheduled to coincide with the restoration project. Possibly, the structure could be refurbished and only the mesh replaced.**
4 ROOFING SYSTEMS																
4.1	**Re-Roofing Project**	**110,000**	**SF**	**$6.33**	**$696,300**	**20**	**2026**	**100%**	**$856,361**	**2046**	**100%**	**1,546,684**				**The 5/12 pitched roofs had replacement asphalt shingle coverings installed in phases between 2003 and 2006 by Colbert Roofing, Inc. including the dens, mansards, and gabled sections. Significant construction detail correction and wood replacement was included, and all gutters and downspouts were also replaced. All roofing appears to be in continuing good condition, and no active roofing problems were reported. We understand that many of the mansards were shingled with flawed shingles, which have since been replaced under warranty. The next replacement cycle is based on normal removal and replacement of the old roof coverings as well as deficient sheathing, flashings, gutters and downspouts, and felt. Soffits and aluminum cladding, which were replaced in the previous restoration are not anticipated to require replacement in the next restoration. Extensive detail correction and ancillary repairs are not anticipated for the next re-roofing cycle.**
4.2	**Re-Roofing Staging**	**1**	**LS**	**$363,000.00**	**$363,000**	**20**	**2026**	**100%**	**$446,444**	**2046**	**100%**	**$806,328**				**A major expense was incurred during the 2003 through 2006 re-roofing projects involving access to the roofs and the logistics of re-roofing the various sections and slopes. This expense will occur again and is based on the previous cost. The Board requested that the cost be identified separately for clarity.**
4.3	**Re-Roofing Projects, Flat Roofs**	**8**	**EA**	**$12,000.00**	**$96,000**	**20**	**2021**	**100%**	**$101,846**	**2041**	**100%**	**$183,946**				**Each building is designed with two small flat sections, which provide a location for the corridor HVAC systems. The roof sections are accessed through roof hatches in the stairwell ceilings. All sections were replaced in 2001 principally with modified bitumen. New hatches were installed in 2014. Two roofs were repaired when HVAC systems were replaced in 2012 and 2014. A roofing evaluation performed in 2015 by SRG Structural Rehabilitation Group, LLC. identified many specific deficiencies, which generally appear to have been addressed when possible. However, the membranes are approaching the end of their service lives. The drainage provision for each of the roofs is no longer sufficient to deal with the increased levels of precipitation due to climate change. Because ductwork installed in roofing penetrations is subject to flooding due to the inadequate drainage provision, we have scheduled the re-roofing project to be performed near-term. Because of the complicated nature of the flat roofing sections, engineering may be required to properly address the replacement project and to establish realistic cost projections. It may be necessary to reconstruct the roofs with larger drains and it may also be necessary to eliminate the parapet walls. If reconstruction is performed, it may be prudent to provide additional roofing penetrations to accommodate HVAC returns in addition to the existing ductwork to help control moisture within the common hallways, which was reported to be problematic.**
4.4	**Re-Roofing Projects, Standing-Seam Metal**	**5,600**	**SF**	**$30.25**	**$169,400**	**40**	**2026**	**100%**	**$208,341**	**2066**	**100%**	**$679,615**				**The entrance structure and hallways to each building and the gatehouse have original standing-seam, 6/12 pitched, metal roofing, which appears to be in good condition having been repaired and coated in the past. No leaks were reported. Because of continuing maintenance and current condition, we have increased the service life by five years.**
4.5	**Pool Building Re-Roofing**	**1,400**	**SF**	**$6.33**	**$8,862**	**30**	**2020**	**100%**	**$9,128**	**2050**	**100%**	**$22,156**				**The 5/12 pitched pool building roof was replaced recently by Colbert Roofing Corporation in May of 2018. Pre-finished aluminum gutters and downspouts are installed at all proper roof terminations. Downspouts appear to be properly directed away from building foundations. Re-roofing projects include replacement of shingles, deteriorated sheathing, and gutters and downspouts. The replacement price is based on the contract provided by Management.**
4.6	**Chimney Crown Waterproofing Allowance**	**1**	**LS**	**$45,000.00**	**$45,000**	**15**	**2019**	**100%**	**$45,000**	**2029**	**100%**	**$60,476**	**2039**	**100%**	**$81,275**	**Each chimney has one to four flues with caps and spark arrestors. In 1998 the crowns of the chimneys were coated with a fifteen-year, liquid-applied, waterproofing material. A 2016 report provided by Colbert Roofing Corporation identified the flues as double walled steel with a steel shroud that terminated at the masonry crown. These were reported to be mostly original though some have been retrofitted. The masonry crown was reported to have been coated with a liquid applied membrane. We inspected several chimneys and confirmed the Colbert report. Additionally, it is important to note that the chimneys are constructed with metal crickets and step flashing, which were observed to be sealed against the brick with a flexible sealant. Several of the chimneys were observed to be stained with efflorescence and some localized water damage was observed on the porch roofing and trim. We were able to thoroughly inspect one of these chimneys but were not able to identify any specific location of water intrusion. We suggest an engineering study be conducted to determine the areas of intrusion, best course for remediation, and to developed a budget for the re-coating of all chimneys.**
4.7	**Interim Roofing Life-Extension Maintenance**	**1**	**LS**	**$31,880.00**	**$31,880**	**5**	**2019**	**20%**	**$6,376**	**2029**	**100%**	**$42,844**	**2039**	**100%**	**$57,579**	**In 2011, at the request of the Board, we added this allowance intended to improve life-extension maintenance for the roofing between restoration projects. The near-term expenditure is to continue to prevent water intrusion around chimneys and throughout the flat roof sections of the building.**

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5 BUILDING EXTERIORS																
5.1	Brick Tuckpointing, Repair, & Cleaning Allowance	1	LS	$44,000.00	$44,000	10	2019	50%	$22,000	2029	100%	$59,132	2039	100%	$79,469	There is approximately 120,000 square feet of brick surface on the buildings, gate house, site walls, and at the pool building. Generally, the brick and mortar appears to be in continuing good condition. A few locations were observed to have minor amounts of cracking. The are many areas of atmospheric staining, particularly on the chimneys. A tuckpointing and repair project was accomplished in 2002. Repairs to the minor amount of step and shear cracking currently existing should be performed in 2019. This should include the repair of the pool house building, which was observed to have some relatively severe step and sheer cracking, particularly above the arched wall penetrations. Addressing the discoloration of the chimneys remains unresolved. We have scheduled additional periodic brick tuckpointing and repair projects throughout the study period to address maintenance of the brick and mortar as the buildings age.
5.2	Window & Door Restoration & Sealant Allowance	1	LS	$181,000.00	$181,000	10	2023	25%	$50,929	2033	25%	$68,445	2043	25%	$91,984	This project represents a complete removal and replacement of all soft sealants at all windows and doors. The last complete project was accomplished in 2002 with additional work performed on the bay windows by Culbertson in 2006. We have increased the frequency of the allowance to address the age of the building.
5.3	Balcony Restoration Project	140	EA	$4,286.00	$600,040	35	2022	100%	$655,680	2057	100%	1,844,993				The balconies are recessed pre-cast concrete planks of varying sizes in two- three- and four-level tiers, and are moderately protected from the weather. Railings are pre-finished metal (aluminum) and are mechanically attached to the leading edge of the deck and surface attached at each end at the balcony walls. Balconies were evaluated in 2008 and again in 2015 by Structural Rehabilitation Group and were judged to be in generally good condition for their age. The 2015 inspection included all 134 balconies and took place following removal of all glued-down carpeting (40 balconies). Twenty-eight balconies have tiles, so their slabs could not be inspected. The inspection covered 40 randomly selected balconies. The railings do not meet current code requirements for the spacing of the pickets, and other safety issues, but are "grandfathered" if not removed. We understand that if railings are removed for repairs, they must be replaced, which would be a large additional expense. The railing finish is weathered, and some limited peeling is present, but a dozen or more have been repainted by homeowners, which has greatly improved the appearance. At Management's request we have postponed the project because the balconies have been determined to be in currently serviceable condition.
5.4	Entrance Canopies	2	EA	$8,250.00	$16,500	15	2026	100%	$20,293	2041	100%	$31,616				An approximately 12' by 20' vinyl coated fabric canopy with a ceiling and brass posts is installed at each front entrance. They appear to be in good condition. We have extended their service life.
5.5	Exterior Doors Allowance	1	LS	$30,000.00	$30,000	5	2019	7%	$2,100	2024	7%	$2,434	2029	7%	$2,822	Most exterior common doors are painted metal and glass and appear to be in fair to good condition. This allowance covers twenty doors. Some are located at stairwells, and we have also included the doors at the pool building. Some doors will be replaced near-term in Component 8.7 below. We have budgeted an allowance throughout the study period to address replacements as necessary. At least one door jam was observed to be badly rusted and may require replacement near-term.
5.6	Storefront Doors & Windows Allowance	3,715	SF	$44.00	$163,460	10	2023	25%	$45,994	2033	25%	$61,812	2043	25%	$83,070	Double-pane, insulated glass panels mounted in anodized aluminum frame windows and doors are installed at each building entrance and at the gatehouse. All windows and doors appear to be in continuing good condition. We understand that Mt. Airy Glass & Door Service, Inc. replaced 10 windows in May of 2018 for a cost of $7,755. No significant deficiencies were observed.
6 PARKING GARAGE COMPONENTS																
6.1	Terrace/Membrane Restoration Allowance, Phase 1	1	EA	$750,000.00	$750,000	30	2042	100%	1,480,190							The cost of this project, which was begun in 2011, was covered by special assessment and had not previously been included in the reserve fund plan at the direction of the Board. Now that the work has been completed, it is being included as a regular component for the next cycle. The parking garages are constructed beneath each building and extend beyond the building footprint at the front elevation of the buildings. The approximate membrane size is 55' deep x 270' wide. The recent project included the installation of pedestrian pavers to protect the membrane. Amenities constructed on top of the garage decks include brick walls and portable planters, concrete flatwork, wood separation fencing, and landscaped areas. The garage roof actually extends beyond the terrace planters by several feet and extends under the wood fencing, which is mounted to the deck by metal brackets. The project appears to have been well executed and all amenities are attractive and in continuing good condition. The service life has been increased to thirty years. The original budget of $2,000,000 was exceeded by about $3,000,000, which was in part the result of original construction defects. The Board's opinion is that not all of this work would be required in a second cycle project, so the total project cost has been evaluated by individual line item and adjusted accordingly. The privacy fencing cost was removed and is covered by 3.5 & 3.6 above. The budgets include engineering fees at 25% of the total. The budget has been reduced to $750,000 per phase at the request of Management.
6.2	Terrace/Membrane Restoration Allowance, Phase 2	1	EA	$750,000.00	$750,000	30	2043	100%	1,524,596							Refer to 6.1 above for details.
6.3	Terrace/Membrane Restoration Allowance, Phase 3	1	EA	$750,000.00	$750,000	30	2044	100%	1,570,333							Refer to 6.1 above for details.

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6.4	Terrace/Membrane Restoration Allowance, Phase 4	1	EA	$750,000.00	$750,000	30	2045	100%	1,617,443							Refer to 6.1 above for details.
6.5	Garage Door Repair/Replacement Allowance	4	EA	$8,250.00	$33,000	20	2024	100%	$38,256	2044	100%	$69,095				20', painted, light-weight aluminum overhead doors provide access to each of the four parking garages. Cristar refurbished or replaced all doors between 2003 and 2004, and all doors are currently in generally fair to good working condition. We understand that minor repairs and re-painting are ongoing. We have extended the service life.
7 MECHANICAL, ELECTRICAL, & PLUMBING																
7.1	Corridor HVAC Systems	8	EA	$25,000.00	$200,000	15	2029	50%	$134,392	2031	50%	$142,576	2044	50%	$209,378	All eight units were installed in 2001. Two of these units were replaced in 2013 and two in 2014. An additional two were replaced in 2015 and two were replaced in 2016. The budget was provided by Management and includes the use of a crane for the installation. The systems were fully operational during the evaluation. However, we understand that the installation did not include hallway returns to the units. This results in a limited drying capacity, and localized areas mold and mildew occur annually, which requires cleaning. Because the units are elevated and roofing drainage issues exist, it may be possible to construct new elevated roofs that eliminate the parapet wall. If this approach is adopted, it may provide some additional room for the addition of ducted returns. Engineering may be required to determine if this approach is possible.
7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	26	EA	$2,500.00	$65,000	15	2019	7.90%	$5,135	2020	7.90%	$5,289	2021	7.90%	$5,448	Common area conditioned air is provided by 26 (12 in each set of two buildings, and one in the gatehouse) through-wall, General Electric, Zoneline, Model No. A235H15D5BMI heat pumps installed in 2001. Two units were replaced in 2013 and two in 2014 and the unit in the management office was replaced with a Fujitsu ductless split system. Management requested that two per year be scheduled until all have been replaced. The budget was provided by Management. It is likely that future replacements will be ductless split systems due to the ease of installation and general efficiency.
7.3	Community Room Split-System HVAC	1	EA	$8,000.00	$8,000	20	2022	100%	$8,742	2042	100%	$15,789				Conditioned air is provided to the Community Room by a Bryant, 2-1/2 ton, split-system heat pump, Model No. 697 CN030-B with a Bryant, Model No. FK4CLUF003 air handler installed in 1998. The system is reportedly functioning well but is significantly past its service life. However, due to its generally trouble free operation, we have extended the service life. Replacement should be accomplished when necessary.
7.4	Fitness Split-System HVAC	1	EA	$8,000.00	$8,000	20	2022	100%	$8,742	2042	100%	$15,789				Conditioned air is provided to the Fitness Room by a Bryant, 2-ton, heat pump, Model No. 693DN024-D with a Bryant, Model No. FB4ANF024 air handler installed in 2002. The system is reportedly functioning well.
7.5	Mail Room 11400-11410 Split-System HVAC	1	EA	$8,000.00	$8,000	20	2022	100%	$8,742	2042	100%	$15,789				Conditioned air is provided to the 11400-11410 mail room by a Bryant, 1-1/2 ton, Model No. 593CJ018-C, split-system air conditioner installed in 2002. The system is reportedly functioning well.
7.6	Mail Room 11420-11430 Split-System HVAC	1	EA	$8,000.00	$8,000	20	2032	100%	$11,748	2052	100%	$21,219				This system was replace in 2012 as scheduled. Conditioned air is provided to the 11420-11430 mail room by an original Carrier, 1-1/2 ton Model No. 38GS018340 air conditioner.
7.7	Garage Exhaust Fans Repair & Replacement Allowance	6	EA	$1,695.00	$10,170	5	2020	33%	$3,457	2025	33%	$4,007	2030	33%	$4,646	Garages are provided with original through-the-wall, louvered, belt-driven, propeller-type exhaust fans. Two garages have two fans and two garages have one fan. The fans were observed to be operational at the time of the site visit, and their service was rotated to extend service life. With proper maintenance, the fans should provide additional service.
7.8	Electrical Service Preventative Maintenance	1	LS	$6,752.00	$6,752	5	2020	100%	$6,955	2030	100%	$9,346	2035	100%	$10,835	A preventive maintenance program should be conducted every five years by a licensed electrician. That maintenance involves inspection of all switchgear, panelboards and connections, cleaning (where required), thermographic scans, and retorqing connections. (It is important to note that arcing failures occur where connections have loosened as a result of thermal cycling.) The last service was performed in 2015. Management provided the cost information based on the actual project and requested the rescheduling at 5-year intervals.
7.9	Electrical Modernization Project Allowance	1	LS	$320,000.00	$320,000	45	2026	100%	$393,560	2071	100%	1,488,283				Building electrical service is located in Buildings 11410 and 11420 on the garage level. Primary service is 3-phase, 4-wire through four, 800-amp panelboards manufactured by General Electric. Condominium unit distribution and metering is provided by two groups of Bryant meter stacks. Twelve, 225-amp Sylvania load centers located throughout the four buildings provide electrical distribution to common components. While additional years of service are anticipated, due to the expense and complicated nature of electrical modernization, it is prudent to developed a plan and budget well in advance of the project. We suggest an electrical engineer be consulted to develop a scope and plan of action as well as a budget. Anticipating the increased use of electric vehicles, the modernization should include the installation of charging ports as has been discussed by the Board of Directors.
7.10	Building-Mounted Lighting Fixture Allowance	1	LS	$33,000.00	$33,000	30	2032	50%	$24,231	2047	50%	$37,751				This category includes building-mounted carriage fixtures at door entrances, double floodlights at patios and mounted to poles, and porch lights. Most lighting appeared to be in good to serviceable condition. We did not observe light fixtures after dark, and no problems were reported. We have budgeted an allowance throughout the study period to address replacements as necessary. Management requested the near-term allowance.
7.11	Light Poles & Fixtures	43	EA	$3,025.00	$130,075	35	2039	100%	$234,930							Painted metal poles approximately 6' to 8' high with carriage fixtures and cast bases provide illumination for the parking areas, walkways, and pool area. Aluminum poles approximately 8' high with mushroom-type security fixtures provide illumination at Drive. All poles and fixtures appeared to be in serviceable condition. Lighting was not observed after dark. No problems with lighting were reported. The Board requested the replacement scheduling, which is intended to replace the fixtures only.

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
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TABLE 1
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MASON & MASON
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www.masonreserves.com 800-776-6980 Fax 800-776-6408

Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost For 3rd Cycle	DISCUSSION
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
7.12	Garage Lighting Fixtures	248	EA	$182.00	$45,136	45	2026	100%	$55,512	2071	100%	$209,922				Lighting throughout the parking garages and mechanical rooms appears to be in serviceable condition with no deficiencies observed or reported.
7.13	Trash Compactors	4	EA	$18,000.00	$72,000	40	2024	100%	$83,468	2064	100%	$272,275				Trash compaction is provided by original Autopac electric-hydraulic compactors located at the garage level. The units are serviced by Trashmasters, Inc. No problems were reported and the units were reported to be operating reliably. As such, we have extended the service life.
7.14	Plumbing Fixtures Allowance	1	LS	$18,500.00	$18,500	35	2026	100%	$22,753	2061	100%	$64,023				This category consists of sinks, commodes, urinals, showers, and partitions of the shower rooms, and the commodes and sinks of the restrooms at the Party Room and Fitness Room. We understand that Vito Plumbing is refurbishing the Fitness Room restrooms in 2017 for a price of $14,750. This excludes the pool house facilities, which are addressed in Item 11.11.
7.15	Domestic Water Piping Allowance	1	LS	$300,000.00	$300,000	45	2025	100%	$358,216	2070	100%	1,354,627				We understand that the common plumbing within the buildings is copper, and there have been some problems with pinhole leaks in the past. We understand that Raine & Sons performed some repairs to the system in 2006. Isolation valves have been installed, tier valves are being replaced, and a filter screen added on the water main. This system is a long-term component, and replacement can be expensive and disruptive. Due to its age, the piping will be reaching the end of its statistical service life during the twenty-year study period. Pipe sampling and evaluation can be performed to determine the status of the pipe wall thickness and likelihood of failure. These systems are usually maintained under the operating budget as failures occur. A single replacement project planned well ahead of time is the most cost-effective method of funding pipe replacement. The alternative involves the process of accessing the pipe runs, cleaning them out with an abrasive under pressure, and then injecting an epoxy liquid, under pressure, using heated compressed air. The epoxy coating was certified by the National Sanitation Foundation and meets NSF Standard 61 for potable water. This product was also listed under the Uniform Plumbing Code (UPC). The process typically costs much less than full replacement and experience has demonstrated that it is far less intrusive on residences. Funding is set aside for eventual lining of the domestic water piping as opposed to full replacement. The basic asset value is set for full replacement with the percentage needed to line the piping indicated in the tables. A lined copper piping system is expected to last indefinitely as long as the epoxy lining is not damaged from incorrect repair practices. The lined piping system cannot tolerate the heat generated from a blow torch eliminating soldered connections as a repair option should the need arrive.
7.19	Sanitary Piping Allowance, Phase 1	1	LS	$62,700.00	$62,700	60	2040	50%	$58,320							Waste and vent piping is cast iron, bell and spigot. Management reported that there have been no problems. Vito Plumbing jet cleaned the main sanitary stacks of all buildings in 2006. This system is a long-term component, and funding should be accumulated for repairs and replacements as the buildings age. These systems are usually not replaced all at one time, but are addressed as failures occur. Scale build-up can be problematic for older waste systems. A single replacement project planned well ahead of time is the most cost-effective method of funding pipe replacements. Management requested a four-year phased allowance.
7.20	Sanitary Piping Allowance, Phase 2	1	LS	$62,700.00	$62,700	60	2041	50%	$60,070							Refer to 7.19 above for details.
7.21	Sanitary Piping Allowance, Phase 3	1	LS	$62,700.00	$62,700	60	2042	50%	$61,872							Refer to 7.19 above for details.
7.22	Sanitary Piping Allowance, Phase 4	1	LS	$62,700.00	$62,700	60	2043	50%	$63,728							Refer to 7.19 above for details.
7.23	Condensate Discharge Riser Allowance	1	LS	$124,000.00	$124,000	45	2019	5%	$6,200	2030	100%	$171,645	2075	100%	$649,092	These PVC risers remove condensate from the HVAC units of the individual condominiums and route the water to the storm drain system. Each riser serves a tier of units. Management reported problems with algae growth within the pipes resulting in clogging and backups. There are no provisions for access to the top of the riser, which would help with biannual applications of growth retardant chemicals. We have extended the service life by five years. The near-term expenditure was requested by Management to address the installation of cleanouts. Management provided the budget for the project.
7.24	Pool Building Water Heater	1	EA	$6,700.00	$6,700	20	2033	100%	$10,134	2048	100%	$15,789				Management reported that the water heater was replaced in 2018 with an A.O. Smith 80-gallon water heater, model, DRE-80 100 serial 1820110402620. The unit is in new condition.
7.25	Pumps, Valves & Fittings Allowance	1	LS	$3,300.00	$3,300	2	2019	100%	$3,300	2021	100%	$3,501	2023	100%	$3,714	This category includes the four domestic water booster pumps and miscellaneous valves and fittings throughout the four buildings. Electric motors have been repaired or replaced as needed. We have scheduled this allowance to address repairs and replacements throughout the study period.
7.26	Maintenance Equipment Allowance	1	LS	$8,360.00	$8,360	3	2020	100%	$8,611	2023	100%	$9,409	2026	100%	$10,282	Management established a budget to address replacement of small maintenance equipment used in the daily maintenance of the buildings and grounds. Equipment currently includes a snow blower and a pressure washer.

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
8 FIRE, LIFE SAFETY, & SECURITY																
8.1	Emergency Generators	2	EA	$47,370.00	$94,740	35	2050	100%	$236,858							The 2015 replacement project to be performed by Bethesda Generator Systems will provide power for lighting, exit signs, the fire alarm system, the party room and office lights, and garage doors utilizing two Kohler 40kW, Model 40REOZJC, 120/208V, three-phase diesel generators. As a part of the replacement project, the existing underground fuel storage tanks will be removed and the site restored. Fuel will now be provided by 48-hour sub base fuel tanks. Generators are located inside wooden enclosures at the rear of each of the two sets of buildings. The generators will be fully sound attenuated with an outdoor weather housing.
8.2	Dryer Duct Service	1	LS	$9,000.00	$9,000	5	2020	100%	$9,270	2025	100%	$10,746	2030	100%	$12,458	Management requested the inclusion of this important safety item into reserves. The clothing dryer ducts should be inspected and cleaned every three to five years since they are a potential fire hazard. The budget and timing were established by the Board. Cleaning has been scheduled for 2020.
8.3	Entrance Telephone Access System	2	EA	$6,800.00	$13,600	30	2043	100%	$27,646							The telephone access control systems at each of the two entrances were replaced in 2013. The replacement cost is based on proposal. These systems generally require replacement due to parts attrition and obsolescence. No problems were reported or observed.
8.4	Fire Alarm System Modernization	4	EA	$150,000.00	$600,000	25	2039	100%	1,083,667							The fire alarm control panels are located in electrical rooms located on the garage level serving two buildings each. The system in Building 11420 was replaced in 2010. The other three buildings had a complete renovation project in 2013-2014 performed by Dynalectric Company Electrical Contractors. The fire alarm panels are Gamewell/FCI addressable with LCD annunciators. All new devices were installed at the locations of the existing devices. Horn/strobes replaced the existing bells in corridors and within units and are "wireless" in that they are attached to the existing building wiring and do not have their own individual wiring system. The cost is based on proposal.
8.5	Fire Sprinkler System & Check Valves Replacement Allowance	1	LS	$9,588.00	$9,588	7	2020	100%	$9,876	2027	100%	$12,146	2034	100%	$14,938	The parking garage is protected by a dry-pipe sprinkler system. We understand that all sprinkler heads were replaced by Simplex Grinnell due to a voluntary recall. These are long-life systems and generally require only minor repairs and replacements. As the systems age, some heads and piping can be expected to fail. These systems are not usually replaced in their entirety. We have scheduled an allowance to address repairs and replacements of sprinkler heads, controls, valves, air compressors, and piping as necessary. Management reported that the check valves will be replaced in 2020 by Raine & Son, LLC. for $6,838. It was reported that this will occur every seven years by code. As such, we have scheduled repairs and maintenance to coincide with check valve replacement projects.
8.6	Fire & Life Safety Equipment Allowance	1	LS	$40,000.00	$40,000	10	2025	20%	$9,552	2027	25%	$12,668	2035	20%	$12,838	This category includes ceiling-mounted, hard-wired smoke detectors, illuminated exit signs, and dry chemical fire extinguishers mounted in recessed cabinets throughout the building. We understand that the exit signs were replaced in 2007. All hard-wired smoke detectors were replaced in 2015 with lithium battery units. We have budgeted an allowance throughout the study period to address replacements of equipment as necessary.
8.7	Fobs & Building Security Improvements	1	LS	$120,788.00	$120,788	10	2027	100%	$153,011	2037	100%	$205,633	2047	100%	$276,354	An enhanced security project scheduled near-term will include a FOB proximity reader system. Approximately twenty doors have the system installed. This project included four motor-driven doors, twelve high-resolution cameras, extensive cabling, and related equipment for controlling doors and recording video. Cameras have been installed at various doors and in the four garages. The cost and project details were provided by Management.
9 ELEVATORS																
9.1	Elevator Modernization, Phase 1	1	LS	$164,000.00	$164,000	20	2028	100%	$213,983	2048	100%	$386,477				Each building is served by a single ThyssenKrupp hydraulic elevator. The modernization of all four units has now been completed. The project included replacement of the relay logic controllers and signaling equipment. Building 11410 had the hydraulic cylinder replaced with an Otis unit in 2003. The remaining units were not replaced. These modernizations also included a substantial amount of building work; Installation of a fire damper and louver in the existing machine room door for ventilation; patching and painting the drywall machine room ceiling; installation of three access doors in the machine room; modifying the existing pit ladder to meet code; installation of a new main line shunt trip circuit breaker with auxiliary contacts in a NEMA12 enclosure, lockable in the off position only and run conduit and wire from the breaker to the controller, installing a new 120-volt disconnect switch for car lights and fan, lockable in the off position only, and running conduit and wire from the new switch to the controller, installing a GFCI receptacle in the machine room, installing two new light fixtures and a GFCI receptacle in the pit, installing a 1900 box in the machine and running conduit to the controller for phone lines, installing a new addressable, stand-alone fire alarm system to activate fireman's emergency recall operation including smoke detectors at each lobby, a smoke detector and horn/strobe in the machine room, and fire alarm panel mounted in the main lobby, and installing a heat detector. We have scheduled a four-year phased modernization based on the statistical service life of these systems. No problems were reported with any of the elevators.
9.2	Elevator Modernization, Phase 2	1	LS	$164,000.00	$164,000	20	2029	100%	$220,402	2049	100%	$398,071				Refer to 9.1 above.
9.3	Elevator Modernization, Phase 3	1	LS	$164,000.00	$164,000	20	2030	100%	$227,014	2050	100%	$410,013				Refer to 9.1 above.
9.4	Elevator Modernization, Phase 4	1	LS	$164,000.00	$164,000	20	2031	100%	$233,825	2051	100%	$422,314				Refer to 9.1 above.

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
10 BUILDING INTERIORS																
10.1	Interior Finishes, Fixtures, Furnishings, & Equipment	1	LS	$900,000.00	$900,000	10	2020	4.40%	$40,788	2025	20%	$214,929	2030	20%	$249,162	This category includes all interior finishes, including carpeting, tile, rubberized flooring, flooring coating, and wall coverings. It also includes the various illumination systems (both utility and decorative), wall hangings, and other various decor. Gym and office equipment, furnishings, and the mailbox modules have also been included. Due to the difficulty of assigning the various refurbishment projects to the appropriate categories, Management requested a single line item. The budget and timing reflect that requested by Management.
11 POOL FACILITY																
11.1	Pool Restoration Project	1,704	SF	$75.00	$127,800	35	2029	100%	$171,753	2064	100%	$483,288				The swimming pool is an in-ground, cast-in-place concrete structure. Most outdoor pools of this type, in this area, require a major renovation between thirty and forty years of age. We understand that a full restoration project was accomplished in 2001 and that the required dual-drains were installed for safety. No problems were reported currently. Structural renovations have become increasingly expensive in recent years due to ADA compliance.
11.2	Pool White Coat	1,704	SF	$4.99	$8,503	7	2022	100%	$9,291	2036	100%	$14,054	2050	100%	$21,258	The pool white coat was replaced in 2015 by Community Pool Service. The project included installation of deep end transition line, which is a current health department compliance item. Pool white coating seals the pool surface and helps prevent water infiltration into the structure of the pool. White coat generally has a service life of seven years. No issues were reported and the pool was closed and covered for the season and was not observed.
11.3	Pool Coping	158	LF	$35.20	$5,562	3	2022	5%	$304	2025	5%	$332	2029	5%	$374	Standard cast stone bullnose coping is installed around the perimeter of the pools. We have scheduled an allowance throughout the study period to address replacements of cracked, loose, or "hollow" tiles. Diligent maintenance of both the coping and the soft joint sealant between the coping and the pool deck will prevent water infiltration behind the pool shell, which, if not controlled, will result in freeze/thaw damage.
11.4	Pool Fencing	346	LF	$72.25	$24,999	35	2019	100%	$24,999	2064	100%	$94,534				Vinyl coated chain link mesh mounted on galvanized structure is constructed at the perimeter of the pool deck. We understand that coated aluminum fencing will be installed in 2019 but no specific information was available.
11.5	Pool Cover	2,020	SF	$2.03	$4,101	10	2025	100%	$4,896	2035	100%	$6,580	2045	100%	$8,843	We understand that the cover was replaced in 2015 with a Merlin Dura-Mesh Safety Cover by Community Pool Service. The cost is based on proposal. The cover appears to be in excellent condition.
11.6	Pool Perimeter Equipment	1	LS	$7,700.00	$7,700	35	2029	100%	$10,348	2064	100%	$29,118				Pool perimeter equipment consists of a fixed lifeguard stand, two stainless steel ladders, a diving board, and one stainless steel handrail. The equipment was stored for winter and was not observed. No problems were reported.
11.7	Pool Furniture Allowance	1	LS	$14,300.00	$14,300	10	2021	100%	$15,171	2031	100%	$20,388	2041	100%	$27,400	This category includes lounges, chairs, trash receptacles, tables, and umbrellas. We have budgeted an allowance throughout the study period to address replacements. The furnishings were reported to be in good condition.
11.8	Pool Pump	1	EA	$9,000.00	$9,000	20	2025	100%	$10,746	2040	100%	$16,743				The pool is served by a 5 hp Challenger metal pump and plastic strainer assembly. The equipment appears to be quite dated and replacement has been scheduled mid-term.
11.9	Pool Filters	2	EA	$3,125.00	$6,250	15	2025	100%	$7,463	2038	100%	$10,959	2051	100%	$16,094	The pool is filtered by two Triton permanent media filters. The filters were installed in 2010 and are reported to be in continuing good condition.
11.10	Pool Chlorinator	1	EA	$1,000.00	$1,000	10	2025	100%	$1,194	2035	100%	$1,605	2045	100%	$2,157	Chlorination is accomplished by a FlexFlo chemical feeder, Model No. 1-A45-6. The equipment is scheduled for mid-term replacement based on service age.
11.11	Pool House Interior Renovation Project	1	LS	$66,130.00	$66,130	15	2019	100%	$66,130	2034	100%	$103,028	2049	100%	$160,515	Manders Decorating Company, Inc. has been enlisted to modernize the pool house interiors. We understand that the renovation is comprehensive and will include the refurbishment of all plumbing fixtures and showers, furnishings, office millwork, flooring, light fixtures, and office doors. The price and scheduling was provided by management.
12 CONSULTING FEES																
12.1	Near-Term Project Engineering Fees	1	LS	$38,000.00	$38,000	1	2019	100%	$38,000							At the request of the Board, we have included engineering fees which may include a chimney and masonry evaluation, flat roofing replacement scope development, electrical modernization planning, and plumbing modernization/pipe sampling.
12.2	Reserve Fund Plan, Level II and Level III Updates	1	LS	$6,725.00	$6,725	1	2019	100%	$6,725	2021	45%	$3,211	2023	100%	$7,569	At the request of Management, we have included Level II Condition Assessment and Reserve Fund Plan Updates at four-year intervals and Level III Administrative Updates within the interim years.

CALENDAR OF EXPENDITURES
TABLE 2 EXPLANATION

This table is a yearly plan of action of replacements and costs. A description of the columns in the table follows:

Column 1 **Year** is the year of the projected replacement and expenditure.

Column 2 **Component No.** itemizes the components and is consistent throughout the tables.

Column 3 **Component** is a brief description of the component.

Column 4 **Present Cost** is the cost for the cycle in today's dollars.

Column 5 **Future Cost (Inflated)** is the cost for the cycle in future dollars.

Column 6 **Total Annual Expenditures** gives the total expenditures by year.

Column 7 **Action** is an area provided for the Board to make notations as to action taken on each component.

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CALENDAR OF EXPENDITURES
TABLE 2
2019 Through 2038

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YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2019	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2019					2019	
	1.3	Asphalt Seal Coat	$6,254	$6,254	TOTAL EXPENDITURES	
	1.4	Asphalt Full-Depth Repair Allowance	$11,040	$11,040		
	1.5	Asphalt Footpath	$24,087	$24,087		
	2.1	Concrete Sidewalks and Flatwork	$4,972	$4,972		
	2.3	Concrete Pool Deck	$12,614	$12,614		
	3.9	Site Brick Retaining Wall Interim Repair Allowance	$28,600	$28,600		
	3.11	Tennis Court Color Coat & Repair	$8,040	$8,040		
	4.6	Chimney Crown Waterproofing Allowance	$45,000	$45,000		
	4.7	Interim Roofing Life-Extension Maintenance	$6,376	$6,376		
	5.1	Brick Tuckpointing, Repair, & Cleaning Allowance	$22,000	$22,000		
	5.5	Exterior Doors Allowance	$2,100	$2,100		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$5,135		
	7.23	Condensate Discharge Riser Allowance	$6,200	$6,200		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$3,300		
	11.4	Pool Fencing	$24,999	$24,999		
	11.11	Pool House Interior Renovation Project	$66,130	$66,130		
	12.1	Near-Term Project Engineering Fees	$38,000	$38,000		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$6,725	$6,725		
					$321,572	
2020					2020	
	3.4	Peripheral & Separation Fencing Maintenance Allo	$35,000	$36,050	TOTAL EXPENDITURES	
	4.5	Pool Building Re-Roofing	$8,862	$9,128		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$5,289		
	7.7	Garage Exhaust Fans Repair & Replacement Allow	$3,356	$3,457		
	7.8	Electrical Service Preventative Maintenance	$6,752	$6,955		
	7.26	Maintenance Equipment Allowance	$8,360	$8,611		
	8.2	Dryer Duct Service	$9,000	$9,270		
	8.5	Fire Sprinkler System & Check Valves Replacemer	$9,588	$9,876		
	10.1	Interior Finishes, Fixtures, Furnishings, & Equipm	$39,600	$40,788		
					$129,423	
2021					2021	
	4.3	Re-Roofing Projects, Flat Roofs	$96,000	$101,846	TOTAL EXPENDITURES	
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$5,448		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$3,501		
	11.7	Pool Furniture Allowance	$14,300	$15,171		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$3,026	$3,211		
					$129,177	

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

CALENDAR OF EXPENDITURES
TABLE 2
2019 Through 2038

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2019	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2022					2022	
	3.2	Signage Allowance	$3,410	$3,726	TOTAL EXPENDITURES	
	3.3	Stone Embankment Wall Repair Allowance	$4,409	$4,818		
	3.7	Storm Water Drainage & Erosion Control Allowanc	$20,000	$21,855		
	3.10	Tennis Court Restoration Project	$60,000	$65,564		
	3.12	Tennis Court Fencing	$14,400	$15,735		
	5.3	Balcony Restoration Project	$600,040	$655,680		
	7.3	Community Room Split-System HVAC	$8,000	$8,742		
	7.4	Fitness Split-System HVAC	$8,000	$8,742		
	7.5	Mail Room 11400-11410 Split-System HVAC	$8,000	$8,742		
	11.2	Pool White Coat	$8,503	$9,291		
	11.3	Pool Coping	$278	$304		
					$803,198	
2023					2023	
	3.4	Peripheral & Separation Fencing Maintenance Allo	$35,000	$39,393	TOTAL EXPENDITURES	
	3.9	Site Brick Retaining Wall Interim Repair Allowance	$28,600	$32,190		
	5.2	Window & Door Restoration & Sealant Allowance	$45,250	$50,929		
	5.6	Storefront Doors & Windows Allowance	$40,865	$45,994		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$3,714		
	7.26	Maintenance Equipment Allowance	$8,360	$9,409		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$6,725	$7,569		
					$189,198	
2024					2024	
	1.3	Asphalt Seal Coat	$6,254	$7,251	TOTAL EXPENDITURES	
	1.4	Asphalt Full-Depth Repair Allowance	$15,000	$17,389		
	2.1	Concrete Sidewalks and Flatwork	$8,287	$9,606		
	2.2	Concrete Curbs & Gutters	$2,789	$3,234		
	2.4	Concrete Fire Pads	$3,128	$3,626		
	5.5	Exterior Doors Allowance	$2,100	$2,434		
	6.5	Garage Door Repair/Replacement Allowance	$33,000	$38,256		
	7.13	Trash Compactors	$72,000	$83,468		
					$165,263	
2025					2025	
	7.7	Garage Exhaust Fans Repair & Replacement Allow	$3,356	$4,007	TOTAL EXPENDITURES	
	7.15	Domestic Water Piping Allowance	$300,000	$358,216		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$3,940		
	8.2	Dryer Duct Service	$9,000	$10,746		
	8.6	Fire & Life Safety Equipment Allowance	$8,000	$9,552		
	10.1	Interior Finishes, Fixtures, Furnishings, & Equipm	$180,000	$214,929		
	11.3	Pool Coping	$278	$332		
	11.5	Pool Cover	$4,101	$4,896		
	11.8	Pool Pump	$9,000	$10,746		
	11.9	Pool Filters	$6,250	$7,463		
	11.10	Pool Chlorinator	$1,000	$1,194		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$3,026	$3,614		
					$629,637	

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

CALENDAR OF EXPENDITURES
TABLE 2
2019 Through 2038

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2019	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2026					**2026**	
	3.4	**Peripheral & Separation Fencing Maintenance Allo**	**$35,000**	**$43,046**	**TOTAL EXPENDITURES**	
	4.1	**Re-Roofing Project**	**$696,300**	**$856,361**		
	4.2	**Re-Roofing Staging**	**$363,000**	**$446,444**		
	4.4	**Re-Roofing Projects, Standing-Seam Metal**	**$169,400**	**$208,341**		
	5.4	**Entrance Canopies**	**$16,500**	**$20,293**		
	7.9	**Electrical Modernization Project Allowance**	**$320,000**	**$393,560**		
	7.12	**Garage Lighting Fixtures**	**$45,136**	**$55,512**		
	7.14	**Plumbing Fixtures Allowance**	**$18,500**	**$22,753**		
	7.26	**Maintenance Equipment Allowance**	**$8,360**	**$10,282**		
					2,056,590	
2027					**2027**	
	3.7	**Storm Water Drainage & Erosion Control Allowanc**	**$20,000**	**$25,335**	**TOTAL EXPENDITURES**	
	3.9	**Site Brick Retaining Wall Interim Repair Allowance**	**$28,600**	**$36,230**		
	3.11	**Tennis Court Color Coat & Repair**	**$12,000**	**$15,201**		
	7.25	**Pumps, Valves & Fittings Allowance**	**$3,300**	**$4,180**		
	8.5	**Fire Sprinkler System & Check Valves Replacemer**	**$9,588**	**$12,146**		
	8.6	**Fire & Life Safety Equipment Allowance**	**$10,000**	**$12,668**		
	8.7	**Fobs & Building Security Improvements**	**$120,788**	**$153,011**		
	12.2	**Reserve Fund Plan, Level II and Level III Updates**	**$6,725**	**$8,519**		
					$267,290	
2028					**2028**	
	3.8	**Wood Footbridge**	**$10,000**	**$13,048**	**TOTAL EXPENDITURES**	
	7.2	**Through-Wall Heat Pump/Mini-Split HVAC Units**	**$5,135**	**$6,700**		
	9.1	**Elevator Modernization, Phase 1**	**$164,000**	**$213,983**		
					$233,731	
2029					**2029**	
	2.1	**Concrete Sidewalks and Flatwork**	**$8,287**	**$11,136**	**TOTAL EXPENDITURES**	
	2.2	**Concrete Curbs & Gutters**	**$2,789**	**$3,749**		
	2.3	**Concrete Pool Deck**	**$74,642**	**$100,312**		
	2.4	**Concrete Fire Pads**	**$3,128**	**$4,203**		
	3.4	**Peripheral & Separation Fencing Maintenance Allo**	**$35,000**	**$47,037**		
	4.6	**Chimney Crown Waterproofing Allowance**	**$45,000**	**$60,476**		
	4.7	**Interim Roofing Life-Extension Maintenance**	**$31,880**	**$42,844**		
	5.1	**Brick Tuckpointing, Repair, & Cleaning Allowance**	**$44,000**	**$59,132**		
	5.5	**Exterior Doors Allowance**	**$2,100**	**$2,822**		
	7.1	**Corridor HVAC Systems**	**$100,000**	**$134,392**		
	7.2	**Through-Wall Heat Pump/Mini-Split HVAC Units**	**$5,135**	**$6,901**		
	7.25	**Pumps, Valves & Fittings Allowance**	**$3,300**	**$4,435**		
	7.26	**Maintenance Equipment Allowance**	**$8,360**	**$11,235**		
	9.2	**Elevator Modernization, Phase 2**	**$164,000**	**$220,402**		
	11.1	**Pool Restoration Project**	**$127,800**	**$171,753**		
	11.3	**Pool Coping**	**$278**	**$374**		
	11.6	**Pool Perimeter Equipment**	**$7,700**	**$10,348**		
	12.2	**Reserve Fund Plan, Level II and Level III Updates**	**$3,026**	**$4,067**		
					$895,618	

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

CALENDAR OF EXPENDITURES
TABLE 2
2019 Through 2038

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2019	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2030					2030	
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$7,108	TOTAL EXPENDITURES	
	7.7	Garage Exhaust Fans Repair & Replacement Allow	$3,356	$4,646		
	7.8	Electrical Service Preventative Maintenance	$6,752	$9,346		
	7.23	Condensate Discharge Riser Allowance	$124,000	$171,645		
	8.2	Dryer Duct Service	$9,000	$12,458		
	9.3	Elevator Modernization, Phase 3	$164,000	$227,014		
	10.1	Interior Finishes, Fixtures, Furnishings, & Equipm	$180,000	$249,162		
					$681,380	
2031					2031	
	1.2	Asphalt Restoration Project	$78,910	$112,506	TOTAL EXPENDITURES	
	1.4	Asphalt Full-Depth Repair Allowance	$20,000	$28,515		
	1.5	Asphalt Footpath	$24,087	$34,342		
	3.9	Site Brick Retaining Wall Interim Repair Allowance	$28,600	$40,777		
	7.1	Corridor HVAC Systems	$100,000	$142,576		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$7,321		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$4,705		
	9.4	Elevator Modernization, Phase 4	$164,000	$233,825		
	11.7	Pool Furniture Allowance	$14,300	$20,388		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$6,725	$9,588		
					$634,544	
2032					2032	
	3.2	Signage Allowance	$3,410	$5,008	TOTAL EXPENDITURES	
	3.3	Stone Embankment Wall Repair Allowance	$4,409	$6,474		
	3.4	Peripheral & Separation Fencing Maintenance Allo	$35,000	$51,399		
	3.7	Storm Water Drainage & Erosion Control Allowanc	$20,000	$29,371		
	3.11	Tennis Court Color Coat & Repair	$12,000	$17,622		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$7,541		
	7.6	Mail Room 11420-11430 Split-System HVAC	$8,000	$11,748		
	7.10	Building-Mounted Lighting Fixture Allowance	$16,500	$24,231		
	7.26	Maintenance Equipment Allowance	$8,360	$12,277		
	11.3	Pool Coping	$278	$408		
2033					2033	
	5.2	Window & Door Restoration & Sealant Allowance	$45,250	$68,445	TOTAL EXPENDITURES	
	5.6	Storefront Doors & Windows Allowance	$40,865	$61,812		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$7,767		
	7.24	Pool Building Water Heater	$6,700	$10,134		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$4,992		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$3,026	$4,577		
					$157,727	

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

CALENDAR OF EXPENDITURES
TABLE 2
2019 Through 2038

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2019	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2034					2034	
	2.1	Concrete Sidewalks and Flatwork	$8,287	$12,910	TOTAL EXPENDITURES	
	2.2	Concrete Curbs & Gutters	$2,789	$4,346		
	2.4	Concrete Fire Pads	$3,128	$4,873		
	5.5	Exterior Doors Allowance	$2,100	$3,272		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$8,000		
	8.5	Fire Sprinkler System & Check Valves Replacemer	$9,588	$14,938		
	11.11	Pool House Interior Renovation Project	$66,130	$103,028		
					$151,366	
2035					2035	
	3.1	Entrance Wall Lettering	$2,500	$4,012	TOTAL EXPENDITURES	
	3.9	Site Brick Retaining Wall Interim Repair Allowance	$28,600	$45,895		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$8,240		
	7.7	Garage Exhaust Fans Repair & Replacement Allow	$3,356	$5,386		
	7.8	Electrical Service Preventative Maintenance	$6,752	$10,835		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$5,296		
	7.26	Maintenance Equipment Allowance	$8,360	$13,415		
	8.2	Dryer Duct Service	$9,000	$14,442		
	8.6	Fire & Life Safety Equipment Allowance	$8,000	$12,838		
	10.1	Interior Finishes, Fixtures, Furnishings, & Equipm	$180,000	$288,847		
	11.3	Pool Coping	$278	$446		
	11.5	Pool Cover	$4,101	$6,580		
	11.10	Pool Chlorinator	$1,000	$1,605		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$6,725	$10,792		
					$428,628	
2036					2036	
	3.4	Peripheral & Separation Fencing Maintenance Allo	$35,000	$57,850	TOTAL EXPENDITURES	
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$8,487		
	11.2	Pool White Coat	$8,503	$14,054		
					$80,391	
2037					2037	
	1.3	Asphalt Seal Coat	$6,254	$10,648	TOTAL EXPENDITURES	
	1.4	Asphalt Full-Depth Repair Allowance	$5,000	$8,512		
	3.7	Storm Water Drainage & Erosion Control Allowanc	$20,000	$34,049		
	3.11	Tennis Court Color Coat & Repair	$12,000	$20,429		
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$8,742		
	7.25	Pumps, Valves & Fittings Allowance	$3,300	$5,618		
	8.6	Fire & Life Safety Equipment Allowance	$10,000	$17,024		
	8.7	Fobs & Building Security Improvements	$120,788	$205,633		
	12.2	Reserve Fund Plan, Level II and Level III Updates	$3,026	$5,152		
					$315,808	
2038					2038	
	7.2	Through-Wall Heat Pump/Mini-Split HVAC Units	$5,135	$9,004	TOTAL EXPENDITURES	
	7.26	Maintenance Equipment Allowance	$8,360	$14,659		
	11.3	Pool Coping	$278	$488		
	11.9	Pool Filters	$6,250	$10,959		
					$35,111	

CURRENT FUNDING ANALYSIS CASH FLOW METHOD
TABLE 3.0 EXPLANATION

and, if applicable,

ALTERNATIVE FUNDING ANALYSIS CASH FLOW METHOD
TABLE 3.1, 3.2, 3,3 (etc.) EXPLANATION

Table 3.0 shows the financial picture over the twenty-year study period, using the current annual contribution and the reserve fund balance reported at the beginning of the study year. If the results of the study indicate a need to increase the annual contribution to maintain adequate balances throughout the study period, Table 3.1, and possibly, 3.2 will be provided for consideration. Alternatives might also be provided if a community is over-funded and desires to adjust the annual contribution downward.

Alternative funding may be achieved by increasing the annual contribution to a fixed yearly amount or by applying an annual escalation factor to increase contributions over time, or a combination of both methods. An inflation factor and interest income factor may be included in the calculations on this page.

A description of the columns in the table follows:

Column 1	Year
Column 2	Total Asset Base of all common capital assets included in the reserve fund with costs adjusted for inflation.
Column 3	Beginning Reserve Fund Balance is the reserve fund balance after all activity in the prior year is completed.
Column 4	Annual Contribution, on Table 3, is the amount contributed annually to the reserve fund as reported by the Board of Directors. On the Alternative Funding Analysis tables (3.1, 3.2, etc.), the annual contribution is projected to maintain positive balances throughout the study period.
Column 5	Interest Income, which is indicated in the heading of the table, is applied to the reserve fund balance and is accrued monthly throughout each year after the yearly expenditures are deducted. The interest income percentage may be varied to reflect actual experience of the community investments.
Column 6	Capital Expenditures are annual totals of expenditures for each year of the study period adjusted by the inflation percentage listed in the heading of the table.
Column 7	Ending Reserve Fund Balance is the result of the beginning reserve fund balance plus the annual contribution, plus interest income, less capital expenditures for the year.
Column 8	Balance to Asset Base Ratio, expressed as a percentage, is the ratio between the ending reserve fund balance and the total asset base for that year. The ratio is useful to the analysts in understanding general financial condition, but there is no standard ratio as each community's condition and complexity varies.

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

FUNDING ANALYSIS
HYBRID APPROACH
CASH FLOW METHOD
TABLE 3

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

In Dollars

Beginning Reserve Fund Balance:	Annual Contribution To Reserves:	Contribution Percentage Increase:	Annual Inflation Factor:	Annual Interest Income Factor:
2,418,914	699,664	0.85%	3.00%	2.50%

YEAR	TOTAL ASSET BASE	BEGINNING RESERVE FUND BALANCE	ANNUAL CONTRIBUTION	INTEREST INCOME	CAPITAL EXPENDITURES	ENDING RESERVE FUND BALANCE
1	2	3	4	5	6	7
2019	11,180,868	2,418,914	706,369	66,438	321,571	2,870,150
2020	11,516,294	2,870,150	712,380	80,543	129,424	3,533,650
2021	11,861,783	3,533,650	718,442	97,408	129,177	4,220,323
2022	12,217,637	4,220,323	724,556	105,694	803,199	4,247,375
2023	12,584,166	4,247,375	730,722	114,809	189,198	4,903,708
2024	12,961,691	4,903,708	736,940	131,817	165,264	5,607,201
2025	13,350,541	5,607,201	743,212	143,380	629,635	5,864,158
2026	13,751,058	5,864,158	749,536	130,567	2,056,592	4,687,669
2027	14,163,589	4,687,669	755,915	125,226	267,290	5,301,519
2028	14,588,497	5,301,519	762,347	141,293	233,731	5,971,429
2029	15,026,152	5,971,429	768,835	149,325	895,618	5,993,971
2030	15,476,936	5,993,971	775,378	152,897	681,379	6,240,866
2031	15,941,244	6,240,866	781,976	159,867	634,543	6,548,165
2032	16,419,482	6,548,165	788,630	174,097	166,079	7,344,814
2033	16,912,066	7,344,814	795,341	194,448	157,727	8,176,876
2034	17,419,428	8,176,876	802,110	215,668	151,367	9,043,287
2035	17,942,011	9,043,287	808,936	233,903	428,629	9,657,496
2036	18,480,271	9,657,496	815,819	254,263	80,391	10,647,188
2037	19,034,680	10,647,188	822,762	276,185	315,807	11,430,328
2038	19,605,720	11,430,328	829,764	299,901	35,110	12,524,882
STUDY PERIOD TOTALS			15,329,970	3,247,729	8,471,731	

FULLY FUNDED BALANCE GOAL

FUNDING ANALYSIS COMPONENT METHOD
TABLE 4 EXPLANATION

Table 4 is a yearly list of annual contributions toward each component, which must be made to achieve 100% funding. The reserve fund balance is the balance at the beginning of the study year. The beginning reserve fund balance is applied, proportionately, to each component prior to calculating the yearly contribution for each component. Future costs (inflation) are factored into the replacement cycles. The annual contribution for each year is calculated in the bottom row of the study labeled Annual Component Contribution Totals. Interest and inflation are calculated at the same annual rates as the Cash Flow Method (Table 3).

Column 1	Component Number is consistent throughout the tables.
Column 2	Component is a brief description of the component.
Columns 3 - 22	Years lists the annual contribution amount toward each component throughout the twenty-year study period, which is totaled at the bottom of the component table.

COMPONENT METHOD SUMMARY

The component method summary computes the beginning reserve fund balance, the annual component contribution, the annual expenditures, and interest income. It then provides the ending reserve fund balance for each year of the study.

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Beginning Reserve Fund Balance:

In Dollars **2,418,914**

Component Number	COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
1 ASPHALT COMPONENTS																					
1.2	Asphalt Restoration Project	5,371	5,371	5,371	5,371	5,371	5,371	5,371	5,371	5,371	5,371	5,371	5,371	8,419	8,419	8,419	8,419	8,419	8,419	8,419	8,419
1.3	Asphalt Seal Coat	2,919	1,360	1,360	1,360	1,360	693	693	693	693	693	693	693	693	693	693	693	693	693	1,962	1,962
1.4	Asphalt Full-Depth Repair Allowance	6,013	3,262	3,262	3,262	3,262	3,724	3,724	3,724	3,724	3,724	3,724	3,724	1,314	1,314	1,314	1,314	1,314	1,314	3,137	3,137
1.5	Asphalt Footpath	9,562	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,496
2 CONCRETE COMPONENTS																					
2.1	Concrete Sidewalks and Flatwork	3,041	1,802	1,802	1,802	1,802	2,089	2,089	2,089	2,089	2,089	2,422	2,422	2,422	2,422	2,422	2,807	2,807	2,807	2,807	2,807
2.2	Concrete Curbs & Gutters	607	607	607	607	607	703	703	703	703	703	815	815	815	815	815	945	945	945	945	945
2.3	Concrete Pool Deck	13,629	8,821	8,821	8,821	8,821	8,821	8,821	8,821	8,821	8,821	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186	1,186
2.4	Concrete Fire Pads	680	680	680	680	680	788	788	788	788	788	914	914	914	914	914	1,060	1,060	1,060	1,060	1,060
3 SITE FEATURES																					
3.1	Entrance Wall Lettering	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	279	279	279	279
3.2	Signage Allowance	563	563	563	440	440	440	440	440	440	440	440	440	440	592	592	592	592	592	592	592
3.3	Stone Embankment Wall Repair Allowance	1,047	1,047	1,047	569	569	569	569	569	569	569	569	569	569	765	765	765	765	765	765	765
3.4	Peripheral & Separation Fencing Maintena	16,929	12,632	12,632	12,632	13,803	13,803	13,803	15,083	15,083	15,083	16,482	16,482	16,482	13,738	13,738	13,738	13,738	20,271	20,271	20,271
3.5	Peripheral Fencing	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750
3.6	Separation Fencing	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535	4,535
3.7	Storm Water Drainage & Erosion Control A	3,068	3,068	3,068	4,752	4,752	4,752	4,752	4,752	5,509	5,509	5,509	5,509	5,509	6,387	6,387	6,387	6,387	6,387	7,404	7,404
3.8	Wood Footbridge	867	867	867	867	867	867	867	867	867	708	708	708	708	708	708	708	708	708	708	708
3.9	Site Brick Retaining Wall Interim Repair Al	16,343	7,644	7,644	7,644	8,604	8,604	8,604	8,604	9,683	9,683	9,683	9,683	10,899	10,899	10,899	10,899	12,267	12,267	12,267	12,267
3.10	Tennis Court Restoration Project	9,203	9,203	9,203	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560
3.11	Tennis Court Color Coat & Repair	3,719	1,715	1,715	1,715	1,715	1,715	1,715	1,715	3,306	3,306	3,306	3,306	3,306	3,832	3,832	3,832	3,832	3,832	2,232	2,232
3.12	Tennis Court Fencing	2,569	2,569	2,569	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094
4 ROOFING SYSTEMS																					
4.1	Re-Roofing Project	58,701	58,701	58,701	58,701	58,701	58,701	58,701	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560	59,560
4.2	Re-Roofing Staging	30,603	30,603	30,603	30,603	30,603	30,603	30,603	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050	31,050
4.3	Re-Roofing Projects, Flat Roofs	20,805	20,805	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083	7,083
4.4	Re-Roofing Projects, Standing-Seam Meta	14,293	14,293	14,293	14,293	14,293	14,293	14,293	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884	9,884
4.5	Pool Building Re-Roofing	3,622	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496	496
4.6	Chimney Crown Waterproofing Allowance	20,580	5,318	5,318	5,318	5,318	5,318	5,318	5,318	5,318	5,318	7,147	7,147	7,147	7,147	7,147	7,147	7,147	7,147	7,147	7,147
4.7	Interim Roofing Life-Extension Maintenanc	5,357	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	5,064	5,064	5,064	5,064	5,064	5,064	5,064	5,064	5,064	5,064
5 BUILDING EXTERIORS																					
5.1	Brick Tuckpointing, Repair, & Cleaning All	11,694	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	5,200	6,989	6,989	6,989	6,989	6,989	6,989	6,989	6,989	6,989	6,989
5.2	Window & Door Restoration & Sealant Allo	6,475	6,475	6,475	6,475	6,019	6,019	6,019	6,019	6,019	6,019	6,019	6,019	6,019	6,019	8,089	8,089	8,089	8,089	8,089	8,089
5.3	Balcony Restoration Project	92,040	92,040	92,040	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956	32,956
5.4	Entrance Canopies	1,987	1,987	1,987	1,987	1,987	1,987	1,987	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736	1,736
5.5	Exterior Doors Allowance	1,496	457	457	457	457	529	529	529	529	529	614	614	614	614	614	711	711	711	711	711
5.6	Storefront Doors & Windows Allowance	6,185	6,185	6,185	6,185	5,436	5,436	5,436	5,436	5,436	5,436	5,436	5,436	5,436	5,436	7,305	7,305	7,305	7,305	7,305	7,305

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Beginning Reserve Fund Balance:

In Dollars **2,418,914**

Component Number	COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
6 PARKING GARAGE COMPONENTS																					
6.1	Terrace/Membrane Restoration Allowance	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708	43,708
6.2	Terrace/Membrane Restoration Allowance	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395	44,395
6.3	Terrace/Membrane Restoration Allowance	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185	45,185
6.4	Terrace/Membrane Restoration Allowance	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137	44,137
6.5	Garage Door Repair/Replacement Allowan	3,619	3,619	3,619	3,619	3,619	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661
7 MECHANICAL, ELECTRICAL, & PLUMBING																					
7.1	Corridor HVAC Systems	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	69,450	69,450	13,619	13,619	13,619	13,619	13,619	13,619	13,619	13,619
7.2	Through-Wall Heat Pump/Mini-Split HVAC	6,959	5,374	875	875	875	875	875	875	875	6,808	7,012	7,223	7,439	7,663	7,892	8,129	8,373	8,624	8,883	9,150
7.3	Community Room Split-System HVAC	1,217	1,217	1,217	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608
7.4	Fitness Split-System HVAC	1,217	1,217	1,217	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608
7.5	Mail Room 11400-11410 Split-System HVA	1,227	1,227	1,227	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608	608
7.6	Mail Room 11420-11430 Split-System HVA	537	537	537	537	537	537	537	537	537	537	537	537	537	817	817	817	817	817	817	817
7.7	Garage Exhaust Fans Repair & Replaceme	1,830	752	752	752	752	752	871	871	871	871	871	1,010	1,010	1,010	1,010	1,010	1,171	1,171	1,171	1,171
7.8	Electrical Service Preventative Maintenanc	3,266	822	822	822	822	822	822	822	822	822	822	2,032	2,032	2,032	2,032	2,032	2,356	2,356	2,356	2,356
7.9	Electrical Modernization Project Allowanc	29,128	29,128	29,128	29,128	29,128	29,128	29,128	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880	17,880
7.10	Building-Mounted Lighting Fixture Allowa	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	1,385	2,073	2,073	2,073	2,073	2,073	2,073	2,073
7.11	Light Poles & Fixtures	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864	5,864
7.12	Garage Lighting Fixtures	3,808	3,808	3,808	3,808	3,808	3,808	3,808	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522	2,522
7.13	Trash Compactors	8,461	8,461	8,461	8,461	8,461	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960
7.14	Plumbing Fixtures Allowance	1,561	1,561	1,561	1,561	1,561	1,561	1,561	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144	1,144
7.15	Domestic Water Piping Allowance	31,306	31,306	31,306	31,306	31,306	31,306	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274	16,274
7.19	Sanitary Piping Allowance, Phase 1	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
7.20	Sanitary Piping Allowance, Phase 2	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276	1,276
7.21	Sanitary Piping Allowance, Phase 3	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241	1,241
7.22	Sanitary Piping Allowance, Phase 4	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210
7.23	Condensate Discharge Riser Allowance	16,826	13,545	13,545	13,545	13,545	13,545	13,545	13,545	13,545	13,545	13,545	7,798	7,798	7,798	7,798	7,798	7,798	7,798	7,798	7,798
7.24	Pool Building Water Heater	567	567	567	567	567	567	567	567	567	567	567	567	567	567	867	867	867	867	867	867
7.25	Pumps, Valves & Fittings Allowance	2,434	1,705	1,809	1,809	1,919	1,919	2,036	2,036	2,160	2,160	2,292	2,292	2,431	2,431	2,580	2,580	2,737	2,737	2,903	2,903
7.26	Maintenance Equipment Allowance	4,044	3,017	3,017	3,017	3,297	3,297	3,297	3,603	3,603	3,603	3,937	3,937	3,937	4,302	4,302	4,302	4,701	4,701	4,701	5,137
8 FIRE, LIFE SAFETY, & SECURITY																					
8.1	Emergency Generators	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056	5,056
8.2	Dryer Duct Service	4,298	2,016	2,016	2,016	2,016	2,016	2,337	2,337	2,337	2,337	2,337	2,709	2,709	2,709	2,709	2,709	3,141	3,141	3,141	3,141
8.3	Entrance Telephone Access System	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676	676
8.4	Fire Alarm System Modernization	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730	41,730
8.5	Fire Sprinkler System & Check Valves Rep	4,638	1,586	1,586	1,586	1,586	1,586	1,586	1,586	1,951	1,951	1,951	1,951	1,951	1,951	1,951	2,399	2,399	2,399	2,399	2,399
8.6	Fire & Life Safety Equipment Allowance	994	994	994	994	994	994	6,171	6,171	1,448	1,448	1,448	1,448	1,448	1,448	1,448	1,448	8,293	8,293	1,946	1,946
8.7	Fobs & Building Security Improvements	14,307	14,307	14,307	14,307	14,307	14,307	14,307	14,307	18,084	18,084	18,084	18,084	18,084	18,084	18,084	18,084	18,084	18,084	24,303	24,303

Reserve Fund Plan for
SAMPLE GARDEN CONDOMINIUM
Rockville, Maryland

FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.
www.masonreserves.com 800-776-6980 Fax 800-776-6408

Beginning Reserve Fund Balance:

In Dollars **2,418,914**

Component Number	COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
9 ELEVATORS																					
9.1	Elevator Modernization, Phase 1	12,230	12,230	12,230	12,230	12,230	12,230	12,230	12,230	12,230	14,882	14,882	14,882	14,882	14,882	14,882	14,882	14,882	14,882	14,882	14,882
9.2	Elevator Modernization, Phase 2	13,940	13,940	13,940	13,940	13,940	13,940	13,940	13,940	13,940	13,940	15,329	15,329	15,329	15,329	15,329	15,329	15,329	15,329	15,329	15,329
9.3	Elevator Modernization, Phase 3	11,402	11,402	11,402	11,402	11,402	11,402	11,402	11,402	11,402	11,402	11,402	15,789	15,789	15,789	15,789	15,789	15,789	15,789	15,789	15,789
9.4	Elevator Modernization, Phase 4	11,164	11,164	11,164	11,164	11,164	11,164	11,164	11,164	11,164	11,164	11,164	11,164	16,263	16,263	16,263	16,263	16,263	16,263	16,263	16,263
10 BUILDING INTERIORS																					
10.1	Interior Finishes, Fixtures, Furnishings, &	14,218	40,316	40,316	40,316	40,316	40,316	46,737	46,737	46,737	46,737	46,737	54,181	54,181	54,181	54,181	54,181	62,811	62,811	62,811	62,811
11 POOL FACILITY																					
11.1	Pool Restoration Project	8,192	8,192	8,192	8,192	8,192	8,192	8,192	8,192	8,192	8,192	8,633	8,633	8,633	8,633	8,633	8,633	8,633	8,633	8,633	8,633
11.2	Pool White Coat	1,643	1,643	1,643	838	838	838	838	838	838	838	838	838	838	838	838	838	838	1,267	1,267	1,267
11.3	Pool Coping	97	97	97	106	106	106	89	89	89	89	131	131	131	143	143	143	156	156	156	171
11.4	Pool Fencing	13,511	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136
11.5	Pool Cover	510	510	510	510	510	510	579	579	579	579	579	579	579	579	579	579	778	778	778	778
11.6	Pool Perimeter Equipment	494	494	494	494	494	494	494	494	494	494	520	520	520	520	520	520	520	520	520	520
11.7	Pool Furniture Allowance	3,035	3,035	1,793	1,793	1,793	1,793	1,793	1,793	1,793	1,793	1,793	1,793	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410
11.8	Pool Pump	900	900	900	900	900	900	919	919	919	919	919	919	919	919	919	919	919	919	919	919
11.9	Pool Filters	625	625	625	625	625	625	713	713	713	713	713	713	713	713	713	713	713	713	713	1,047
11.10	Pool Chlorinator	124	124	124	124	124	124	141	141	141	141	141	141	141	141	141	141	190	190	190	190
11.11	Pool House Interior Renovation Project	28,084	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	5,656	8,812	8,812	8,812	8,812	8,812
12 CONSULTING FEES																					
12.1	Near-Term Project Engineering Fees																				
12.2	Reserve Fund Plan, Level II and Level III U	2,983	1,564	3,687	3,687	1,760	1,760	4,150	4,150	1,981	1,981	4,671	4,671	2,230	2,230	5,257	5,257	2,510	2,510	5,916	5,916
ANNUAL COMPONENT CONTRIBUTION TOTALS		891,531	805,952	788,716	721,964	721,353	716,252	715,941	701,222	702,023	710,449	775,991	784,007	734,704	735,281	742,925	747,524	763,673	770,886	777,098	778,150

COMPONENT METHOD SUMMARY	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BEGINNING RESERVE FUND BALANCE	2,418,914	3,062,210	3,827,174	4,594,259	4,639,058	5,298,371	5,993,120	6,240,752	5,052,770	5,624,859	6,253,516	6,302,619	6,575,329	6,851,796	7,604,302	8,391,939	9,210,516	9,788,900	10,737,461	11,480,890
PLUS ANNUAL COMPONENT CONTRIBUTION	891,531	805,952	788,716	721,964	721,353	716,252	715,941	701,222	702,023	710,449	775,991	784,007	734,704	735,281	742,925	747,524	763,673	770,886	777,098	778,150
CAPITAL EXPENDITURES	321,571	129,424	129,177	803,199	189,198	165,264	629,635	2,056,592	267,290	233,731	895,618	681,379	634,543	166,079	157,727	151,367	428,629	80,391	315,807	35,110
SUBTOTAL	2,988,874	3,738,738	4,486,713	4,513,024	5,171,213	5,849,359	6,079,426	4,885,382	5,487,503	6,101,577	6,133,889	6,405,247	6,675,490	7,420,998	8,189,500	8,988,096	9,545,560	10,479,395	11,198,752	12,223,930
PLUS INTEREST INCOME @ 2.50%	73,336	88,436	107,546	126,033	127,158	143,761	161,326	167,388	137,356	151,939	168,731	170,082	176,305	183,305	202,439	222,420	243,341	258,065	282,138	300,952
FULLY FUNDED RESERVE FUND BALANCE	3,062,210	3,827,174	4,594,259	4,639,058	5,298,371	5,993,120	6,240,752	5,052,770	5,624,859	6,253,516	6,302,619	6,575,329	6,851,796	7,604,302	8,391,939	9,210,516	9,788,900	10,737,461	11,480,890	12,524,882

FULLY FUNDED BALANCE GOAL

PERCENT FUNDED FOR CURRENT CYCLE	80%	TOTAL EXPENDITURES	8,471,731	TOTAL CONTRIBUTIONS	15,085,642	STUDY PERIOD TOTAL INTEREST	3,492,057	AVERAGE ANNUAL CONTRIBUTION	754,282

PHOTOGRAPHS
WITH
DESCRIPTIVE NARRATIVES

MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.

PHOTO #1
The asphalt installed in 2015 by Doitright Paving appears to be in generally good condition. However, some relatively odd areas of deflection were observed, which should be excavated, and the sub-base should be reconstructed. Repairs to the sub-base are an important part of asphalt maintenance and should be conducted routinely to maximize service life.

PHOTO #2
The 2013 asphalt overlay appears to be in generally good condition except for one section, which was overlaid with asphalt that was insufficiently thick. Because both ages of asphalt require repair, we have combined the asphalt restoration and repair projects.

PHOTO #3
The asphalt footpath is in generally fair condition. Some areas are in the process of being covered by eroded soils and other sections have some tree root damage. We have scheduled a full restoration of the path, which should include the removal of tree roots and an overlay of at least two inches of asphalt to build up the surface above the adjacent earth.

PHOTO #4
The concrete throughout the site is in generally very good condition. We have scheduled a few minor repairs for the 2019 cycle. Any potential tripping hazards should be corrected as soon as practicable.

PHOTO #5
The brick retaining walls throughout the site are in generally good condition. However, the walls located within the pool complex were observed to be somewhat deteriorated. We have scheduled a repair and tuckpointing project near-term to address any wall deficiencies throughout the site.

PHOTO #6
The tennis court was observed to have some transverse and lateral cracking throughout as well as cracking around the net post footings. We have scheduled a repair and color coat project near-term, which should be considered a life extension project until the full restoration, scheduled mid-term. The restoration should include an additional drainage provision, which may include the construction of a low retaining wall.

PHOTO #7
The asphalt shingle roofing appears to be in very good condition and the pool house roofing was recently replaced. No significant deficiencies were observed or reported.

PHOTO #8
The flat roofs were constructed with centrally located roofing drains, which historically have been adequate. However, with the increased rainfall experience over the past few years, the drainage has become inadequate. We suggest an engineering study be performed to determine the best course of action to promote drainage. The membranes throughout are nearing the end of their service lives and have been scheduled for replacement.

PHOTO #9
Localized water intrusion has been a problem in several locations and has manifested in efflorescent staining on the chimneys and some moderate damage to ancillary building components. An examination reveled that all chimneys are constructed with flashing and crickets. However, the water intrusion suggests that there is inadequate water proofing, which may be in part due to the cricket flashing having been installed under the shingles.

PHOTO #10
All chimney crowns have a liquid applied coating, which appears to be in good condition. However, the crowns and membrane should be water tested to determine definitively where the water intrusion is occurring.

PHOTO #11
An example of stained brick and damaged porch drywall as a result of water intrusion. If not addressed, structural damage may occur.

PHOTO #12
Cast concrete pavers were reported to be sand bedded on top of the liquid applied garage membrane. The system was reported to be reliable with no leaking reported.

PHOTO #13
All corridor HVAC systems have been replaced. The units have been installed on steel beams, elevated above the flat roofs. The systems were installed without the benefit of air returns, which limits their ability to dry inside air. Engineering should be conducted to determine how to construct returns in conjunction with the roofing replacement project.

PHOTO #14
The domestic water supply booster pumps are seldom used because the city water supply is adequate most of the time. In addition to very light demand, the pumps are cycled, so that the demand is spread evenly between the two. This will significantly increase service life.

PHOTO #15
The elevator carriages and all infrastructure were observed to be in excellent well maintained condition.

PHOTO #16
The fire alarm and suppression systems were reported to have been modernized and generally up to code. We understand that the suppression system check valves will be replaced in 2020 and every seven years thereafter.

PHOTO #17
The interior refurbishment projects have been completed with the exception of the mailroom and garage lobby tile and the pool house interiors. These projects have been scheduled near-term at Management's request.

PHOTO #18
The pool was closed for the season and not observed. Management reported that the pool was in serviceable condition and the restoration has been scheduled mid-term.