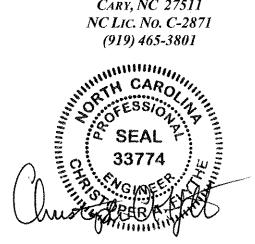
### **FULL RESERVE STUDY**

THE GABLES CONDOMINIUMS CHAPEL HILL, NC

Prepared for: THE GABLES UNIT OWNERS ASSOCIATION & ALLENTON MANAGEMENT DURHAM, NC

Prepared by:

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**OCTOBER 11, 2015** 

1.0	INTRODUCTION	1
2.0	EXECUTIVE SUMMARY	2
3.0	PURPOSE & SCOPE	
3.1	PURPOSE	
3.2	Scope	
3.3	SOURCES OF INFORMATION	
4.0	DESCRIPTION	6
5.0	OBSERVATIONS	6
6.0	RESERVE FUND ANALYSIS	10
7.0	CONCLUSION	
8.0	LIMITATIONS	12
	NDIX A: RESERVE FUND PROJECTIONS NDIX B: PROJECT PHOTOGRAPHS	

#### **1.0 INTRODUCTION**

The Gables Unit Owners Association (Association) authorized Criterium–Giles Engineers to conduct a Reserve Fund Study for The Gables Condominiums property located in Chapel Hill, North Carolina. Studies of this nature are important to ensure a community has sufficient funds for long-term, periodic capital expenditure requirements. Anticipating large expenditures over an extended period of time through a structured analysis and scheduling process assists the Association in meeting financial requirements without increasing the service fees above permitted maximums, borrowing the funds, or levying special financial assessments to the home owners.

Typically, a community association has two broad cash requirements: the general operating reserves and the capital repair and replacement reserves. In this report, we will focus on those items falling under the capital repair and replacement reserve criteria. We have projected a capital repair and replacement reserve for twenty (20) years. The first ten years are the most reliable. Such a study should be updated every five years.

This report is structured to analyze components of the community for which the Association is responsible and to assess a useful expected life and useful remaining life to those components. The anticipated scheduled repair or replacement of the component and the anticipated expense for the activity are then analyzed in conjunction with the current capital reserves funding program for the community. Funding program recommendations are made with the objective of limiting substantial cash excesses while minimizing financial burdens that can result from significant cash inadequacies.

This report is intended to be used as a tool to determine reserve fund allocation requirements for the community, to manage future Association obligations, and to inform the community of future financial needs in general. The report that follows has been prepared from the perspective of what an owner of this property would benefit from knowing. Some items, beyond those of immediate concern, may be discussed. Therefore, the report should be read in its entirety in order to fully understand all of the information that has been obtained.

### 2.0 EXECUTIVE SUMMARY

The Gables Condominiums project is comprised of 16 residential condominiums. The condominiums are housed in a 6-story building which includes a 2<sup>nd</sup> story parking garage at 620 Martin Luther King Jr. Boulevard in Chapel Hill, NC. The condominiums were constructed in 1985 according to Orange County Real Estate records.

The association has responsibility for the interior common areas of the building, the exterior façade of the building and the mechanical equipment servicing the common areas.

The buildings, common areas and grounds are generally in good condition. Based on our evaluation, the current level of funding is not projected to maintain a positive balance through the term of this study. We have provided alternatives for annual reserve contribution schedules that provide sufficient funding to meet capital expenditure requirements in the next twenty years. A more detailed analysis of the reserve fund has been provided in Appendix A.

Some significant expenditures are expected over the term of the study. Some of the more notable examples are listed below:

- Replace building roof
- Paint and repair exterior surfaces and interior corridors
- Replace/repair mechanical equipment
- Replace windows

There are, of course, other capital expenditures to be expected over the next twenty years. Those items that will require attention are discussed later in this report. For your convenience, we have prepared the following summary of the condition of the major systems of the property.

PROPERTY SUMMARY										
SYSTEM	CONDITION	ACTIVITY REQUIRED	ANTICIPATED YEAR OF ACTIVITY							
SITE										
Asphalt	F	Seal/repair/resurface	2016-2030							
Concrete flatwork	G	repair sections	2022-2030							
Drainage system	G	improve/maintain	2017-2032							
BUILDING EXTERIOR										
Roof	G	replace	2022-2025							
Masonry and trim	G/F	paint/repair	2016-2034							
AMENITIES										
Pool	G	resurface	2022-2034							

 Table 2.1 Property Summary

### 3.0 PURPOSE & SCOPE

3.1 Purpose

3.2 Scope

The purpose of this study is to perform a reserve fund analysis and to determine a capital needs plan. It is intended to be used as a tool for The Gables Condominiums in determining the allocation requirements into the reserve fund in order to meet future anticipated capital expenditures for the community.

This report forecasts obligations for the community twenty years into the future. It should be noted that events might occur that could have an effect on the underlying component or system useful life assumptions used in this study. Likewise, inevitable market fluctuations can have an impact on component or system replacement and repair costs. Therefore, a study such as this should be updated from time to time, usually on a three to five-year cycle, in order to reflect the most accurate needs and obligations of the community.

This study has been performed according to the scope as generally defined by The Gables Condominiums, Criterium-Giles Engineers Inc., Allenton Management, and the standards of the Community Associations Institute. The findings and recommendations are based on interviews with the community's management personnel; a review of available documents; and an investigation of the buildings and site.

The "Cash Flow Method" of calculating reserves has been utilized, whereby contributions to the reserve fund are designed to offset the variable annual expenditures. Funding alternates are recommended which are designed to achieve a "Baseline Funding" goal by maintaining a positive balance for the term of the study.

The guidelines used to determine which physical components within the community are to be included in the component inventory are based on the following general criteria:

- 1. The component must be a common element, or otherwise noted to be the responsibility of the Association to replace.
- 2. The component must have an estimated remaining useful life of twenty years or less. As the site ages, additional components may need to be added.
- 3. The funding for replacement should be from one source only, not funded from another area of the budget or through a maintenance contract.
- 4. The cost of replacement should be high enough to make it financially unsound to fund it from the operating budget.

Our reserve study analysis included evaluating the following association property:

• **Building:** The association is responsible for maintenance and replacement of the roofing and the exterior façade on the condominium building. The association is also responsible for maintaining the interior common area corridors in the building.

- **Mechanical Systems:** The association is responsible for maintaining the elevator, common electrical/plumbing systems, access control system, and fire alarm/suppression systems.
- Site and Grounds: The association is responsible for the parking area, rails and fencing, pool, and pool furnishings and equipment.

The above list was obtained from the site inspection and discussions with the management firm prior to the inspection.

This study estimates the funding levels required for maintaining the long-term viability of the facility. Our approach involves:

- 1. Examining association managed equipment, building and site facilities.
- 2. Predicting their remaining service life and, approximating how frequently they will require repair or replacement.
- 3. Estimating repair or replacement costs (in 2015 dollars) for each capital item.
- 4. Using data developed in Steps 1, 2 and 3 to project Capital Reserve balances for Years 1 through 20.

The statements in this report are opinions about the present condition of the subject community. They are based on visual evidence available during a diligent investigation of all reasonably accessible areas falling under the responsibility of the Association. We did not remove any surface materials, perform any destructive testing, or move any furnishings. This study is not an exhaustive technical evaluation. Such an evaluation would entail a significantly larger scope than this effort. For additional limitations, see Section 8.0.

Onsite inspections of the property occurred on the following date:

• July 21, 2015

The following people were interviewed during our study:

- Arnold Spell, Allenton Management
- Gerry Williams, Allenton Management

The following documents were made available to us and reviewed:

- Orange County real estate records
- Association governing documents
- Association budget and balance sheet

3.3 Sources of Information

We based our cost estimates on some or all of the following:

- Our data files on similar projects
- Local contractor estimates
- R.S. Means Construction Cost Data

For your reference, the following definitions may be helpful:

*Excellent:* Component or system is in "as new" condition, requiring no rehabilitation and should perform in accordance with expected performance.

*Good:* Component or system is sound and performing its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.

*Fair:* Component or system falls into one or more of the following categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.

*Poor:* Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

*Adequate:* A component or system is of a capacity that is defined as enough for what is required, sufficient, suitable, and/or conforms to standard construction practices.

All ratings are determined by comparison to other buildings of similar age and construction type. Further, some details of workmanship and materials will be examined more closely in higher quality buildings where such details typically become more relevant.

All directions (left, right, rear, etc.), when used, are taken from the viewpoint of an observer standing in front of a building and facing it.

*Repair/Replacement Reserves* - Non-annual maintenance items that will require significant expenditure over the life of the buildings. Included are items that will reach the end of their estimated useful life during the course of this forecast, or, in the opinion of the investigator, will require attention during that time.

### 4.0 DESCRIPTION

#### 5.0 OBSERVATIONS

The Gables Condominiums project is comprised of 16 residential condominiums. The condominiums are housed in a 6-story building which includes a 2<sup>nd</sup> story parking garage at 620 Martin Luther King Jr. Boulevard in Chapel Hill, NC. The condominiums were constructed in 1985 according to Orange County Real Estate records.

The association has responsibility for the interior common areas of the building, the exterior façade of the building and the mechanical equipment servicing the common areas.

Exterior surfaces are primarily comprised brick masonry. The building roof is predominately clad in a thermoplastic olefin (TPO) membrane with asphalt shingles covering the sloped roof portions. Rainwater is routed through roof drains and scuppers that discharge at grade around the perimeter of the building. The building is constructed over a concrete slab on grade with footings and grade beams.

The following key observations were made about the current condition of the more significant and costly common elements of the property.

### Site and Grounds

The asphalt paved parking area does not appear to have a previous sealcoat, and is generally fair condition. Sections of alligator cracking and some minor isolated cracking were noted in the asphalt paving.

Typically, we recommend the application of an oil resistant sealant to all asphalt paved surfaces on a seven year cycle. At this same time, all cracks should be properly filled, patched, and sealed. We have allocated funds to seal, stripe and repair cracks beginning in 2016.

If sealant and crack repairs are accomplished in the interim, we anticipate the asphalt paving in the community to have an estimated useful life of approximately 20-25 years. We have allocated funds to resurface the asphalt paving in 2024. In order to maintain the drainage pattern and prevent ponding along the curb and gutter, we recommend milling of the previous asphalt layer. The resurfacing includes milling of the top 1-1/2" surface.

The parking garage is paved in concrete, concrete walkways provide pedestrian access to the building entrance, and the pool deck is constructed of concrete. No indications of major structural failure were observed in the concrete paving. We did note some upheaval of the concrete walkway near the stairs at the front of the building. We do not anticipate significant repair expenses for the parking garage concrete paving will be required over the 20 year term of this study. We have provided funds to replace approximately 5% of the concrete surface every 8 years beginning in 2022.

The limited areas of curb and gutter should be maintained out of the general operating budget.

We have not included funds to replace the short sections of coated and

uncoated chain link fence below the pool, as it should last beyond the term of this study.

Catch basins and piping are located in the parking areas, and downspout pipe extensions were noted around the building. We observed erosion at the outlet of the pipe extension at the southwest corner of the building along the steep slope. We have included funds for repair and maintenance of the storm system every 5 years beginning in 2017, which will likely include flushing of the pipes, replacement or installation of small drainage systems, or stabilizing areas of erosion.

There is a crack in the brick retaining wall adjacent to the pool that should be monitored. We have not included funds for replacement of this wall, as this likely will not be required, and would be at a considerable expense. However, should the crack worsen or additional cracks become visible, replacement may be required and can be added during a future update.

Two brick entrance monuments with composite plaques and ground lighting are located at the street entrance. The signage is in good condition, but should be replaced on an approximately 10 year cycle. We have included funds for the next replacement in 2024.

### **Building Exteriors**

The building exterior is constructed primarily in a brick masonry veneer. The majority of the exterior surfaces are in good condition with minimal cracking noted. We noted loose mortar caused by corrosion and expansion of the steel lintels above the windows adjacent to the main entrance. We have provided funds to repair sections of the brick veneer, repair and paint the steel lintels, and replace caulking/sealant at lintels and around windows every 6 years beginning in 2016.

The building roof is lightly pitched toward roof drains/scuppers that route stormwater through piping/downspouts to the municipal storm sewer system. The building roof is predominately clad in a thermoplastic olefin (TPO) membrane. Sloped portions are covered in an asphaltic fiberglass, 3-tab shingle. The pool shelter also includes a shingled roof. The TPO roof was reportedly installed in 2000, while the shingles were last replaced in 2004. Typically, these types of roofing systems have expected useful lives of approximately 20-25 years, and we have allocated funds for replacing the TPO roof are clad in copper roofing. We do not anticipate the copper roofing sections will require replacement during the term of this study.

We strongly recommend that any re-roofing project closely follow procedures outlined by the National Roofing Contractors Association's *Roofing and Waterproofing Manual*, Fifth Edition. A re-roofing sequence should include removal of the existing roofing material, replacement of any inadequate roof sheathing and the replacement of any damaged flashing. Re-roofing would also include repairing and replacing roof drains and guttering as needed. Minor repairs to the flashing, parapet cap flashing and roof penetrations will likely be required in the interim; we have assumed these minor repairs would be funded from an annual maintenance budget.

We have included funds to replace the large galvanized chimney cap when the TPO membrane is replaced, and at the same cycle, beginning in 2022.

The 6<sup>th</sup> floor patios are limited common elements per the most recent amendment to the governing documents. As we understand it, the maintenance of the waterproofing membrane and drainage system is the responsibility of the Association. We have included funds to remove the floating paver floor, replace the membrane, and repair/improve the drainage system every 20 years beginning in 2033.

The balconies include enamel coated metal railings that generally appeared to be in good condition. Metal railings are also located around the pool and at the stairway near the front entrance, and a metal stairway is located at the rear of the building. The railings were most recently re-painted in 2013 and have been done so approximately every 10 years. Funds are included for the next paint cycle in 2023.

Double pane, wood windows with exterior metal clad are provided for each unit and along some corridors on the main floor. Some of the windows appear to have been previously replaced. Windows generally provide a useful life of approximately 30 years. Due to the quantity, the lifespan will vary. Therefore, we have included funds to replace approximately  $\frac{1}{2}$  of the windows every 15 years beginning in 2025. Funds are also included to replace the front entry door.

A fabric awning on metal frame is installed over the front entry of the building. Awnings are also located on the  $6^{th}$  floor, with some recently replaced. The awnings generally appeared to be in good to fair condition and have an expected useful life of approximately 10 years. We have allocated funds for replacing approximately  $\frac{1}{2}$  of the awnings every 5 years beginning in 2019.

### **Building Interiors**

The association is responsible for maintaining open-air corridors in the building. These include the entrance foyer, lobbies, elevators, mechanical rooms, stairwells and corridors.

The flooring of the corridors is predominately covered in exterior-grade carpet. We have allocated funds to replace the carpeting on a 10 year cycle beginning in 2023.

The interior wall surfaces are primarily comprised of painted masonry with painted wood doors and trim. The stairwells include painted brick walls and metal railings. Smooth finished drywall ceilings are provided along the corridors. To maintain a clean, bright appearance, the walls and trim in the corridors will require periodic repainting. We understand there is regular touch-up painting. We have included funds for full repainting of the walls every 10 years beginning in 2023. Touch-up painting of the stairwells is included.

The interior of the passenger elevator cabs includes prefabricated laminate wall panels. We have allocated funds to refurbish the elevator cabs on a 25 year cycle beginning in 2020.

The corridors, entrance, and common areas include wall sconces and recessed can lighting. These lighting fixtures generally appeared to be in good condition. We have allocated funds for their replacement on a 20 year cycle beginning in 2026. We have assumed that the florescent light fixtures would be repaired as needed through an annual maintenance budget.

### <u>Mechanical</u>

The association is responsible for maintaining the mechanical equipment that serves the common areas of the building including the fire alarm, elevators, plumbing and electrical equipment.

Vertical transportation in the building is provided by a Dover hydraulic elevator with a 25 horsepower motor and control panel located in an elevator room at the bottom floor. The elevators appeared to be operating smoothly and inspections were current. The elevator drive motor, controls, cables and door operators have varying useful lives and components are typically replaced as needed. We have included an allocation of funds for replacing the controls, motors/pumps on a 25 year cycle beginning in 2018.

The Simplex model 2001 fire alarm/life safety system includes a fire alarm control panel located in the electrical room and smoke detectors and pulls in the common areas. It is likely that the fire alarm control panel will require significant repairs or upgrade on an approximately 20-25 year cycle. We have allocated funds for these repairs beginning in 2018.

The life safety fixtures including smoke detectors and pulls have expected useful lives of approximately 15 to 20 years and we have allocated funds for their replacement in 2018.

The building includes a DoorKing secured entry system at the entrances. We have allocated funds for future repairs of the electronic locks and to replace/upgrade the access control systems on an 8 year cycle beginning in 2022.

The parking garage includes a metal linkage door with a 2004 model, Liftmaster 1/2-Horsepower door opener. We understand there have been several repairs required for the door in the recent past, and is in need of an upgrade. We have included funds to replace the door and opener on a 12 year cycle beginning in 2016.

The association is responsible for common area plumbing and electrical

systems, including wiring and piping leading to each unit. While these systems should have an expected useful life beyond the term of this study, we have allocated funds as a contingency to repair the systems as needed on a 30 year cycle beginning in 2035.

### Amenities

The association is responsible for maintaining the pool, furnishings, and equipment.

The pool surface appears to be in good condition, while the tile is in fair condition with gaps between the coping and top of tile. The pool has been painted several times, most recently in 2014. Typically, pools should be drained, minor cracks repaired, recoated (possibly quartz plaster), and tiles repaired on an approximately 10-12 year cycle. We have included funds for a full re-coating in lieu of surface painting in 2022.

Pool and outdoor furniture consisted of plastic and outdoor fabric chaise lounges, chairs, and tables, which appear to be in good condition. We have budgeted for replacement of the furniture every 12 years, beginning in 2024. The fund allocation would also include replacing the pool ladders and rails.

Pool equipment consists of a Triton TR-140 sand filter and Century 2.25-Horsepower pump that was operational at the time of inspection. There was moderate corrosion of the copper tubing, likely from the corrosive nature of the chemicals in the room. These components are generally replaced as they fail. We have allocated funds to replace components of the pool pump and filtration system every 4 years beginning in 2019.

A pool cover for winter use was in storage and will be replaced in 2015. The warranty for pool covers is generally 10 years; we have included funds for replacement in 2025.

We have provided funds to replace the Charbroil propane gas grill every 6 years beginning in 2019.

Using software developed by Criterium Engineers and KPMG Peat Marwick, we have analyzed capital reserves draw-down for the projected capital expenditures to determine the amount needed. The following is a projected reserve fund analysis for non-annual items as discussed in the report. This projection takes into consideration a reasonable return on invested moneys and inflation. Please review this thoroughly and let us know of any changes that may be desired.

The intent of this reserve fund projection is to help the Association develop a reserve fund to provide for anticipated repair or replacements of various system components during the next twenty years.

The capital items listed are those that are typically the responsibility of the Association and are derived from a list provided the Association with

### 6.0 RESERVE FUND ANALYSIS

several items added as a result of the inspection. However, association bylaws vary, and therefore, which components are the responsibilities of the owner and which are the responsibilities of the Association can vary. The Association should confirm that the items listed should be financed by the reserve fund.

This projection provides the following:

- An input sheet that defines all the criteria used for the financial alternatives, including the assumed inflation rate of 3% annually and rate of return on deposited reserve funds of 1.0% annually.
- A table that lists anticipated replacement and/or repair items complete with estimated remaining life expectancies, projected costs of replacement and/or repair, a frequency in years of when these items require replacement and/or repair, and a projection based on this frequency.
- A table and graph that represent end of year balances versus capital expenditures based on your current funding program and reserve balances, and alternatives to your current program. The provided graphs illustrate what effects the funding methods will have over the presented twenty-year period versus the anticipated capital expenditures.
- Note that based on our developed list of capital items and taking inflation into account; the current funding level is not adequate.
- The Association should bear in mind that unanticipated expenditures can always arise and maintenance of a significant reserve fund balance can be viewed as a way to avoid special assessments.

We have included alternatives to your current reserve funding program and recommend that the board adopt an alternative that best reflects the objectives of the community. In summary they are as follows:

Current Reserve Funding Rate: \$8,850 per year (\$46.09.00/unit/month) Current Reserve Balance: \$27,855 (projected 01/01/16 balance)

- <u>Alternative 1:</u> Beginning in 2016, increase the annual reserve contribution to \$10,560. Then, increase the annual contribution by \$1,152 every year for the next 20 years. In addition, two special assessments each in the amount of \$80,000 are projected to be required in 2022 and 2026. This alternative is projected maintain a positive balance through the term of this study.
- <u>Alternative 2</u>: Beginning in 2016, increase the annual reserve contribution to \$13,440. Then, increase the annual contribution by 8% every year for the next 12 years. In addition, one special assessment in the amount of \$80,000 is projected to be required in 2022. This alternative is projected maintain a positive balance through the term of this study.

	• <u>Alternative 3:</u> Beginning in 2016, increase the annual reserve contribution to \$15,360. Then, increase the annual contribution by 5% every year for the next 20 years. In addition, one special assessment in the amount of \$96,000 is projected to be required in 2022. This alternative is projected maintain a positive balance through the term of this study.
	Please note that the reserve fund study does not include typical annual maintenance items. Our assumption is that you already have an annual operating budget that provides for these typical, repetitive items. This includes miscellaneous repairs, lawn and grounds maintenance, routine minor painting, etc. We have focused on those significant, non-annual items where careful financial planning is important.
	Finally, please note that the estimates we have developed are based on 2015 dollars. Our reserve fund study does adjust for an estimated annual inflation and a given return on investment assuming that the indicated fund balances are maintained.
7.0 CONCLUSION	The alternatives provided above will provide sufficient funding to meet estimated capital expenditures during the next twenty years. Further detail of the reserve fund analysis is provided in Appendix A.
8.0 LIMITATIONS	The observations described in this study are valid on the date of the investigation and have been made under the conditions noted in the report. We prepared this study for the exclusive use of The Gables Condominiums. Criterium-Giles Engineers Inc. does not intend any other individual or party to rely upon this study without our express written consent. If another individual or party relies on this study, they shall indemnify and hold Criterium-Giles Engineers Inc. harmless for any damages, losses, or expenses they may incur as a result of its use.
	This study is limited to the visual observations made during our inspection. We did not remove surface materials, conduct any destructive or invasive testing, move furnishings or equipment, or undertake any digging or excavation. Accordingly, we cannot comment on the condition of systems that we could not see, such as buried structures and utilities, nor are we responsible for conditions that could not be seen or were not within the scope of our services at the time of the investigation. We did not undertake to completely assess the stability of the buildings or the underlying foundation soil since this effort would require excavation and destructive testing. Likewise, this is not a seismic assessment.
	We did not investigate the following areas:
	<ul> <li>Buried utilities or infrastructure</li> <li>Concealed structural members or systems</li> <li>Unit interiors</li> </ul>
	We do not render an opinion on uninvestigated portions of the community.

We did not perform any computations or other engineering analysis as part of this evaluation, nor did we conduct a comprehensive code compliance investigation. This study is not to be considered a warranty of condition, and no warranty is implied. The appendices are an integral part of this report and must be included in any review.

Members of the Criterium-Giles Engineers team working on this reserve study are not members of, or otherwise associated with the association. Criterium-Giles Engineers has disclosed any other involvement with the association that could result in conflicts of interest.

Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues, will be deemed reliable by Criterium-Giles Engineers. The reserve balance presented in the Reserve Study is based upon information provided and was not audited. Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection. Criterium-Giles Engineers is not aware of any additional material issues which, if not disclosed, would cause a distortion of the association's situation.

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

We have performed no design work as part of this study, nor have we obtained competitive quotations or estimates from contractors as this also is beyond the scope of the project. The actual cost to remedy deficiencies and deferred maintenance items that we have identified may vary significantly from estimates and competitive quotations from contractors.

If you have any questions about this study or the reserve fund analysis, please feel free to contact us. Thank-you for the opportunity to be of assistance to you.

Respectfully submitted,

meto at

Christopher A. Flythe, PE, RS Project Engineer Criterium-Giles Engineers Inc.

The Gables Condominiums Chapel Hill, NC Page 13 Appendix A: RESERVE FUND PROJECTIONS



### **Itemized Worksheet**

To Be Replaced ite seal and stripe asphalt mill and resurface asphalt replace sections of concrete flatwork repair/improve storm drainage systems	Quantity 750 SY 750 SY 30 SY 1 LS 1 LS	Unit cost \$1.75 \$20.00 \$105.00 \$3,500.00	Requirement (*) \$1,312.50 \$15,000.00 \$3,150.00	Balance \$249.46 \$1,938.70	(yrs**) 7	Life (yrs)	Information Source
seal and stripe asphalt mill and resurface asphalt replace sections of concrete flatwork	750 SY 30 SY 1 LS	\$20.00 \$105.00 \$3,500.00	\$15,000.00			0	
mill and resurface asphalt replace sections of concrete flatwork	750 SY 30 SY 1 LS	\$20.00 \$105.00 \$3,500.00	\$15,000.00				
replace sections of concrete flatwork	30 SY 1 LS	\$105.00 \$3,500.00			25	8	
	1 LS	\$3,500.00		\$149.68	8		every 8 years
		. ,	\$3,500.00	\$532.19	5	1	every o years
entrance signage repairs/replacement	1 L3	\$1,500.00	\$1,500.00	\$57.02	10	8	
Building Exterior		\$1,500.00	ψ1,500.00	ψ07.02	10	0	
repair masonry, paint/repair exterior trim	1 LS	\$14,500.00	\$14,500.00	\$2,755.99	6	0	
replace TPO roof membrane	36 SQ	\$550.00	\$19,800.00	\$2,634.35	20	6	
replace asphalt shingle roof	45 SQ	\$270.00	\$12,150.00	\$1,270.13	20	9	
replace galvanized chimney cap	43 SQ 1 LS	\$1,400.00	\$1,400.00	\$186.27	20	6	
		. ,	• •			17	
replace roof membrane at 6th floor patios paint/repair metal railings and stairway	9 SQ 1 LS	\$1,000.00 \$8,750.00	\$9,000.00 \$8,750.00	\$256.59 \$498.93	20 10	1/	
						1	
replace portion of windows	122 EA	\$450.00	\$54,900.00	\$3,478.25	15	10 approx. 1/2	
replace fabric awnings	250 SF	\$18.00	\$4,500.00	\$342.12	5	3 approx. 1/2	
suilding Interior			***	*		_	
replace corridor carpet	3,800 SF	\$5.00	\$19,000.00	\$1,083.39	10	7	
paint corridor walls/ceilings, stairwells	1 allow	. ,	\$9,500.00	\$541.69	10	7	
refurbish elevator cab	1 LS	\$7,000.00	\$7,000.00	\$1,117.60	25	4	
replace lighting fixtures	16 EA	\$275.00	\$4,400.00	\$418.15	20	10	
Iechanical							
replace elevator motor and controls	1 SYS	\$17,500.00	\$17,500.00	\$3,060.10	25	2	
replace/upgrade fire alarm control panel	1 SYS	\$3,000.00	\$3,000.00	\$524.59	25	2	
replace smoke detectors and pulls	36 EA	\$150.00	\$5,400.00	\$923.73	20	2	
replace/upgrade access control system	1 SYS	\$7,500.00	\$7,500.00	\$356.38	8	6	
replace parking garage door and controller	1 LS	\$14,000.00	\$14,000.00	\$2,660.96	12	0	
plumbing/electrical repair contingency	1 cont	\$25,000.00	\$25,000.00	\$1,742.29	30	19	
menities							
resurface pool	375 SF	\$18.00	\$6,750.00	\$641.48	12	6	
replace pool furnishings	1 LS	\$2,500.00	\$2,500.00	\$158.39	12	8	
replace components of pump and filtration equip.	1 LS	\$2,600.00	\$2,600.00	\$123.54	4	3	
replace pool cover	1 Est.	\$4,800.00	\$4,800.00	\$91.23	10	9	
replace propane grill	1 EA	\$650.00	\$650.00	\$61.77	6	3	
Other							
		Totals	\$279,062.50	\$27,855.00			
		Total Over Term	\$435,837.50				

\* Costs are typically 10%± \*\* Reserve study is based on a 20 year projection of non-annual maintenance



General Information:

- Organization: The Gables 1
- 620 Martin Luther King Jr. Blvd Chapel Hill, NC 2 Address:

3	Number of Units	16
4	Age of Building (in years)	30
5a	Study Period (in years)	20
5b	Normal Fiscal Year starts:	<b>January 1, 2016</b>
5c	Partial Fiscal Year starts:	<b>January 1, 2016</b>
5d	Partial Year Length:	12 months
6	Site Inspection Date	July 21, 2015
7	Reserve Funds at start	\$27,855
8	Rate of Return on invested Reserve Funds (%)	1.0%
9	Inflation Rate (%)	3.0%

10 Current Funding Levels

Existing Funding Levels					
Reserve Fund Contribution		Total/Month \$738	Total Annual <b>\$8,850</b>	Per Unit/Month	Per Unit/Year <b>\$553.13</b>
	Years Out		Total Annual	Per Unit	
Planned Special Assessment	0		\$0	\$0	
Balance Computed	(\$386,902)				

### 11 Alternative Reserve Fund Contribution

Monthly Amount, (Last Year)\$2,704\$32,448\$2,02Balance Required Final Year\$29,599\$32,448\$2,02Special Assessments:Years OutTotal/YearPer UnitFirst Assessment7Jan 2022\$80,000			Total/Month	Total Annual	Per Unit/Month	Per Unit/Yea
Balance Required Final Year.       \$29,599         Special Assessments:       Years Out       Total/Year       Per Unit         First Assessment.       7       Jan 2022       \$80,000	• • • • •					\$660.00
Special Assessments:     Years Out     Total/Year     Per Unit       First Assessment     7     Jan 2022     \$80,000	Monthly Amount, (Last Year)	•••••	\$2,704	\$32,448		\$2,028.00
First Assessment         7         Jan 2022         \$80,000	Balance Required Final Year	•••••	\$29,599			
	Special Assessments:	Years Out		Total/Year	Per Unit	
Second Assessment	First Assessment	7	Jan 2022	\$80,000		
	Second Assessment	11	Jan 2026	\$80,000		
Balance Computed \$34,096	Balance Computed	\$34,096				
	ternative 2 Escalating Funding at 8% per Ye	ear				
ternative 2 Escalating Funding at 8% per Year			Total/Month	Total Annual	Per Unit/Month	Per Unit/Ye

		Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year)		\$1,120	\$13,440		\$840.00
Monthly Amount, (Last Year)		\$2,820	\$33,844		\$2,115.26
Balance Required Final Year		\$29,599	_		
Base Escalation %	8.00%				
Special Assessments:	Years Out		Total/Year	Per Unit	
First Assessment	7	Jan 2022	\$80,000		
Second Assessment	0		\$0		
Balance Computed	\$51,812		_		

Alternative 3 Escalating Funding with Special A	ssessments				
		Total/Month	Total Annual	Per Unit/Month	Per Unit/Yea
Monthly Amount, (First Year)	•••••	\$1,280	\$15,360		\$960.00
Monthly Amount, (Last Year)		\$3,234	\$38,814		\$2,425.87
Balance Required Final Year		\$29,599			
Base Escalation %	5.00%				
Special Assessments:	Years Out		Total/Year	Per Unit	
First Assessment	7	Jan 2022	\$96,000		
Second Assessment	0		\$0		
Belance Computed	\$50,629	17			10/1-

Fiscal Years: Normal: Jan 2016 Partial: Jan 2016 (12 months)	2016 1	2017 2	2018 3	2019 4	2020 5	2021 6	2022 7	2023 8	2024 9	2025 10	2026 11	2027 12	2028 13	2029 14	2030 15	2031 16
Existing Funding Levels																
Beginning Reserve Fund Balance: Revenue: Special Assessments: Investment Earnings: Capital Expenditures: Ending Reserve Balance:	\$27,855 \$8,850 \$69 \$29,813 \$6,961	\$6,961 \$8,850 \$0 \$122 \$3,605 \$12,328	\$12,328 \$8,850 \$0 \$27,477 (\$6,299)	(\$6,299) \$8,850 \$0 \$0 \$8,469 (\$5,917)	(\$5,917) \$8,850 \$0 \$0 \$7,879 (\$4,946)	(\$4,946) \$8,850 \$0 \$39 \$0 \$3,943	\$3,943 \$8,850 \$0 \$67,583 (\$54,790)	(\$54,790) \$8,850 \$0 \$50,625 (\$96,565)	(\$96,565) \$8,850 \$0 \$29,769 (\$117,484)	(\$117,484) \$8,850 \$0 \$22,964 (\$131,598)	(\$131,598) \$8,850 \$0 \$79,694 (\$202,442)	(\$202,442) \$8,850 \$0 \$8,444 (\$202,036)	(\$202,036) \$8,850 \$0 \$0 \$40,634 (\$233,820)	(\$233,820) \$8,850 \$0 \$6,608 (\$231,579)	(\$231,579) \$8,850 \$0 \$18,094 (\$240,823)	(\$240,823) \$8,850 \$0 \$5,063 (\$237,037)
Alternative 1, Level Funding w	vith Steps			A	verage Cap. E	xpenditure	\$29,599									
Beginning Reserve Fund Balance: Revenue: Special Assessment #1: Special Assessment #2: Investment Earnings: Capital Expenditures: Ending Reserve Balance:	\$27,855 \$10,560 \$0 \$86 \$29,813 \$8,689	\$8,689 \$11,712 \$0 \$0 \$168 \$3,605 \$16,963	\$16,963 \$12,864 \$0 \$0 \$24 \$27,477 \$2,374	\$2,374 \$14,016 \$0 \$0 \$79 \$8,469 \$8,000	\$8,000 \$15,168 \$0 \$0 \$153 \$7,879 \$15,443	\$15,443 \$16,320 \$0 \$318 \$0 \$32,080	\$32,080 \$17,472 \$80,000 \$0 \$620 \$67,583 \$62,589	\$62,589 \$18,624 \$0 \$306 \$50,625 \$30,894	\$30,894 \$19,776 \$0 \$209 \$29,769 \$21,110	\$21,110 \$20,928 \$0 \$191 \$22,964 \$19,264	\$19,264 \$22,080 \$0 \$80,000 \$0 \$79,694 \$41,650	\$41,650 \$23,232 \$0 \$0 \$564 \$8,444 \$57,003	\$57,003 \$24,384 \$0 \$0 \$408 \$40,634 \$41,160	\$41,160 \$25,536 \$0 \$601 \$6,608 \$60,689	\$60,689 \$26,688 \$0 \$0 \$693 \$18,094 \$69,975	\$69,975 \$27,840 \$0 \$928 \$5,063 \$93,679
Alternative 2, Escalating Fund	ling at 8% pe	r Year														
Beginning Reserve Fund Balance: Revenue: Special Assessment #1: Special Assessment #2: Investment Earnings: Capital Expenditures: Ending Reserve Balance:	\$27,855 \$13,440 \$0 \$115 \$29,813 \$11,597	\$11,597 \$14,515 \$0 \$225 \$3,605 \$22,733	\$22,733 \$15,676 \$0 \$109 \$27,477 \$11,041	\$11,041 \$16,931 \$0 \$0 \$195 \$8,469 \$19,698	\$19,698 \$18,285 \$0 \$301 \$7,879 \$30,405	\$30,405 \$19,748 \$0 \$0 \$502 \$0 \$50,655	\$50,655 \$21,328 \$80,000 \$0 \$844 \$67,583 \$85,243	\$85,243 \$23,034 \$0 \$577 \$50,625 \$58,229	\$58,229 \$24,877 \$0 \$533 \$29,769 \$53,869	\$53,869 \$26,867 \$0 \$578 \$22,964 \$58,350	\$58,350 \$29,016 \$0 \$77 \$79,694 \$7,748	\$7,748 \$31,337 \$0 \$0 \$306 \$8,444 \$30,948	\$30,948 \$33,844 \$0 \$0 \$242 \$40,634 \$24,399	\$24,399 \$33,844 \$0 \$516 \$6,608 \$52,152	\$52,152 \$33,844 \$0 \$0 \$679 \$18,094 \$68,581	\$68,581 \$33,844 \$0 \$974 \$5,063 \$98,335
Alternative 3, Escalating Fund	ing with Spe	cial Assessn	nents													
Beginning Reserve Fund Balance: Revenue: Special Assessment #1: Special Assessment #2: Investment Earnings: Capital Expenditures: Ending Reserve Balance:	\$27,855 \$15,360 \$0 \$134 \$29,813 \$13,537	\$13,537 \$16,128 \$0 \$261 \$3,605 \$26,320	\$26,320 \$16,934 \$0 \$158 \$27,477 \$15,935	\$15,935 \$17,781 \$0 \$252 \$8,469 \$25,500	\$25,500 \$18,670 \$0 \$363 \$7,879 \$36,654	\$36,654 \$19,604 \$0 \$563 \$0 \$56,821	\$56,821 \$20,584 \$96,000 \$0 \$1,058 \$67,583 \$106,879	\$106,879 \$21,613 \$0 \$0 \$779 \$50,625 \$78,647	\$78,647 \$22,694 \$0 \$0 \$716 \$29,769 \$72,287	\$72,287 \$23,828 \$0 \$732 \$22,964 \$73,883	\$73,883 \$25,020 \$0 \$192 \$79,694 \$19,400	\$19,400 \$26,271 \$0 \$372 \$8,444 \$37,600	\$37,600 \$27,584 \$0 \$245 \$40,634 \$24,795	\$24,795 \$28,964 \$0 \$0 \$472 \$6,608 \$47,622	\$47,622 \$30,412 \$0 \$0 \$599 \$18,094 \$60,539	\$60,539 \$31,932 \$0 \$874 \$5,063 \$88,282



Fiscal Years:				
Normal: Jan 2016	2032	2033	2034	2035
Partial: Jan 2016 (12 months)	17	18	19	20

### Existing Funding Levels

Beginning Reserve Fund Balance:	(\$237,037)	(\$233,803)	(\$301,397)	(\$338,939)
Revenue:	\$8,850	\$8,850	\$8,850	\$8,850
Special Assessments:	\$0	\$0	\$0	\$0
Investment Earnings:	\$0	\$0	\$0	\$0
Capital Expenditures:	\$5,616	\$76,444	\$46,391	\$56,814
Ending Reserve Balance:	(\$233,803)	(\$301,397)	(\$338,939)	(\$386,902)

#### Alternative 1, Level Funding w

Beginning Reserve Fund Balance:	\$93,679	\$118,225	\$72,644	\$58,124
Revenue:	\$28,992	\$30,144	\$31,296	\$32,448
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$1,171	\$719	\$575	\$338
Capital Expenditures:	\$5,616	\$76,444	\$46,391	\$56,814
Ending Reserve Balance:	\$118,225	\$72,644	\$58,124	\$34,096

#### Alternative 2, Escalating Fundi

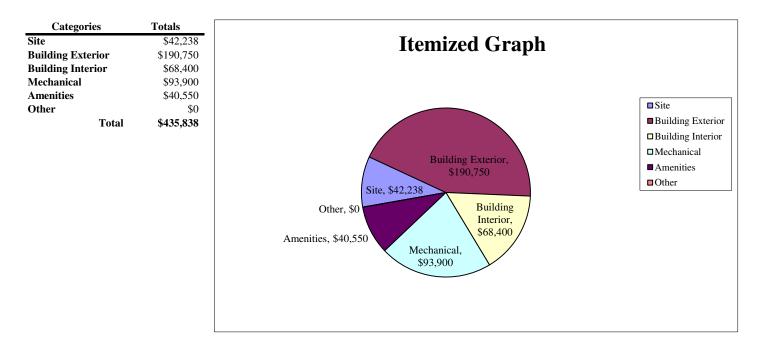
Beginning Reserve Fund Balance:	\$98,335	\$127,828	\$86,081	\$74,269
Revenue:	\$33,844	\$33,844	\$33,844	\$33,844
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$1,266	\$852	\$735	\$513
Capital Expenditures:	\$5,616	\$76,444	\$46,391	\$56,814
Ending Reserve Balance:	\$127,828	\$86,081	\$74,269	\$51,812

#### Alternative 3, Escalating Fundi

Beginning Reserve Fund Balance:	\$88,282	\$117,356	\$76,879	\$68,128
Revenue:	\$33,529	\$35,205	\$36,966	\$38,814
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$1,162	\$761	\$675	\$501
Capital Expenditures:	\$5,616	\$76,444	\$46,391	\$56,814
Ending Reserve Balance:	\$117,356	\$76,879	\$68,128	\$50,629

### **Itemized Graph**





# **Itemized Funding**



				Monthly	Annual		
			Balance	Reserve	Reserve	Full	
	Reserve	Beginning	Requiring	Funding	Funding	Funding	Percent
Categories	Requirement	Balance	Funding	Required	Required	Balance	Funded
Site	\$42,238	\$2,927	\$39,310	\$440	\$5,281	\$15,400	
<b>Building Exterior</b>	\$190,750	\$11,423	\$179,327	\$1,041	\$12,493	\$60,098	
<b>Building Interior</b>	\$68,400	\$3,161	\$65,239	\$476	\$5,708	\$16,630	
Mechanical	\$93,900	\$9,268	\$84,632	\$1,093	\$13,110	\$48,762	
Amenities	\$40,550	\$1,076	\$39,474	\$238	\$2,856	\$5,663	
Other	\$0	\$0	\$0	\$0	\$0	\$0	
Totals	\$435,838	\$27,855	\$407,983	\$3,287	\$39,448	\$146,553	19.0%

### Annual Expense By Year



Year:	2016	2017	2018	2019 4	2020	2021	2022 7	2023 8	2024 9	2025	2026	2027 12	2028 13	2029	2030	2031 16	2032 17	2033 18
Year Number: Site	1	2	3	4	5	6	/	8	9	10	11	12	13	14	15	16	17	18
seal and stripe asphalt	1,313	0	0	0	0	0	0	1,313	0	0	0	0	0	0	1,313	0	0	0
mill and resurface asphalt	1,515	0	0	0	0	0	0	1,515	15,000	0	0	0	0	0	1,515	0	0	0
replace sections of concrete flatwork	0	0	0	0	0	0	3,150	0	13,000	0	0	0	0	0	3,150	0	0	0
repair/improve storm drainage systems	0	3,500	0	0	0	0	3,150	0	0	0	0	3,500	0	0	5,150	0	3,500	0
entrance signage repairs/replacement	0	5,500	0	0	0	0	3,500 0	0	1,500	0	0	3,500	0	0	0	0	3,500	0
Building Exterior	0	0	0	0	0	0	0	0	1,500	0	0	0	0	0	0	0	0	0
repair masonry, paint/repair exterior tri	14,500	0	0	0	0	0	14,500	0	0	0	0	0	14,500	0	0	0	0	0
replace TPO roof membrane	0	0	Ő	0	0	0	19,800	0	0	0	Ő	Ő	0	Ő	Ő	Ő	0	0
replace asphalt shingle roof	0	0	Ő	0	0	0	0	0	0	12,150	Ő	Ő	0	Ő	Ő	Ő	0	0
replace galvanized chimney cap	0	0	0	Ő	0	õ	1,400	0	õ	0	0	0	Ő	0	0	õ	0	0
replace roof membrane at 6th floor pat	0	0	0	õ	0	õ	0	0	Õ	0	Ő	Õ	õ	Õ	Õ	õ	0	9,000
paint/repair metal railings and stairway	0	0	0	0	0	0	0	8,750	0	0	0	0	0	0	0	0	0	8,750
replace portion of windows	0	0	0	0	0	0	0	0	0	0	54,900	0	0	0	0	0	0	0
replace fabric awnings	0	0	0	4,500	0	0	0	0	4,500	0	0	0	0	4,500	0	0	0	0
Building Interior																		
replace corridor carpet	0	0	0	0	0	0	0	19,000	0	0	0	0	0	0	0	0	0	19,000
paint corridor walls/ceilings, stairwells	0	0	0	0	0	0	0	9,500	0	0	0	0	0	0	0	0	0	9,500
refurbish elevator cab	0	0	0	0	7,000	0	0	0	0	0	0	0	0	0	0	0	0	0
replace lighting fixtures	0	0	0	0	0	0	0	0	0	0	4,400	0	0	0	0	0	0	0
Mechanical																		
replace elevator motor and controls	0	0	17,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
replace/upgrade fire alarm control pane	0	0	3,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
replace smoke detectors and pulls	0	0	5,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
replace/upgrade access control system	0	0	0	0	0	0	7,500	0	0	0	0	0	0	0	7,500	0	0	0
replace parking garage door and contro	14,000	0	0	0	0	0	0	0	0	0	0	0	14,000	0	0	0	0	0
plumbing/electrical repair contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amenities																		
resurface pool	0	0	0	0	0	0	6,750	0	0	0	0	0	0	0	0	0	0	0
replace pool furnishings	0	0	0	0	0	0	0	0	2,500	0	0	0	0	0	0	0	0	0
replace components of pump and filtra	0	0	0	2,600	0	0	0	2,600	0	0	0	2,600	0	0	0	2,600	0	0
replace pool cover	0	0	0	0	0	0	0	0	0	4,800	0	0	0	0	0	0	0	0
replace propane grill	0	0	0	650	0	0	0	0	0	650	0	0	0	0	0	650	0	0
Other																		
Total Costs	29,813	3,500	25,900	7,750	7,000	0	56,600	41,163	23,500	17,600	59,300	6,100	28,500	4,500	11,963	3,250	3,500	46,250
Total Costs Adjusted For 3% Inflation	29,813	3,605	27,477	8,469	7,879	0	67,583	50,625	29,769	22,964	79,694	8,444	40,634	6,608	18,094	5,063	5,616	76,444
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### CRITERIUM ENGINEERS

### Annual Expense By Yea

Total Costs Adjusted For 3% Inflation	46,391	56,814
Total Costs	27,250	32,400
Other		
replace propane grill Other	0	0
replace pool cover	0	4,800
replace components of pump and filtra	0	2,600
replace pool furnishings	0	0
resurface pool	6,750	0
Amenities	6 750	0
plumbing/electrical repair contingency	0	25,000
replace parking garage door and contro	0	0
replace/upgrade access control system	0	0
replace smoke detectors and pulls	0	0
replace/upgrade fire alarm control pan	0	0
replace elevator motor and controls	0	0
Mechanical		
replace lighting fixtures	0	0
refurbish elevator cab	0	0
paint corridor walls/ceilings, stairwells	0	0
replace corridor carpet	0	0
Building Interior		
replace fabric awnings	4,500	0
replace portion of windows	0	0
paint/repair metal railings and stairway	0	0
replace roof membrane at 6th floor pat	0	0
replace galvanized chimney cap	0	0
replace asphalt shingle roof	0	0
replace TPO roof membrane	0	0
repair masonry, paint/repair exterior tri	14,500	0
Building Exterior		
entrance signage repairs/replacement	1,500	0
repair/improve storm drainage systems	0	0
replace sections of concrete flatwork	0	0
mill and resurface asphalt	0	0
seal and stripe asphalt	0	0
Site		
Year Number:	19	20
Year:	2034	2035

# **Existing Funding Levels**



Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments	Investment Earnings	Capital Expenditures	Ending Balance
2016	1	\$27,855	\$8,850	\$0	\$69	\$29,813	\$6,961
2017	2	\$6,961	\$8,850	\$0	\$122	\$3,605	\$12,328
2018	3	\$12,328	\$8,850	\$0	\$0	\$27,477	(\$6,299)
2019	4	(\$6,299)	\$8,850	\$0	\$0	\$8,469	(\$5,917)
2020	5	(\$5,917)	\$8,850	\$0	\$0	\$7,879	(\$4,946)
2021	6	(\$4,946)	\$8,850	\$0	\$39	\$0	\$3,943
2022	7	\$3,943	\$8,850	\$0	\$0	\$67,583	(\$54,790)
2023	8	(\$54,790)	\$8,850	\$0	\$0	\$50,625	(\$96,565)
2024	9	(\$96,565)	\$8,850	\$0	\$0	\$29,769	(\$117,484)
2025	10	(\$117,484)	\$8,850	\$0	\$0	\$22,964	(\$131,598)
2026	11	(\$131,598)	\$8,850	\$0	\$0	\$79,694	(\$202,442)
2027	12	(\$202,442)	\$8,850	\$0	\$0	\$8,444	(\$202,036)
2028	13	(\$202,036)	\$8,850	\$0	\$0	\$40,634	(\$233,820)
2029	14	(\$233,820)	\$8,850	\$0	\$0	\$6,608	(\$231,579)
2030	15	(\$231,579)	\$8,850	\$0	\$0	\$18,094	(\$240,823)
2031	16	(\$240,823)	\$8,850	\$0	\$0	\$5,063	(\$237,037)
2032	17	(\$237,037)	\$8,850	\$0	\$0	\$5,616	(\$233,803)
2033	18	(\$233,803)	\$8,850	\$0	\$0	\$76,444	(\$301,397)
2034	19	(\$301,397)	\$8,850	\$0	\$0	\$46,391	(\$338,939)
2035	20	(\$338,939)	\$8,850	\$0	\$0	\$56,814	(\$386,902)



2030 15

(240,823)

18,094

8,850

2027

(202,036)

8,444

8,850

12

2028

(233,820)

40,634

8,850

13

2029

(231,579)

6,608

8,850

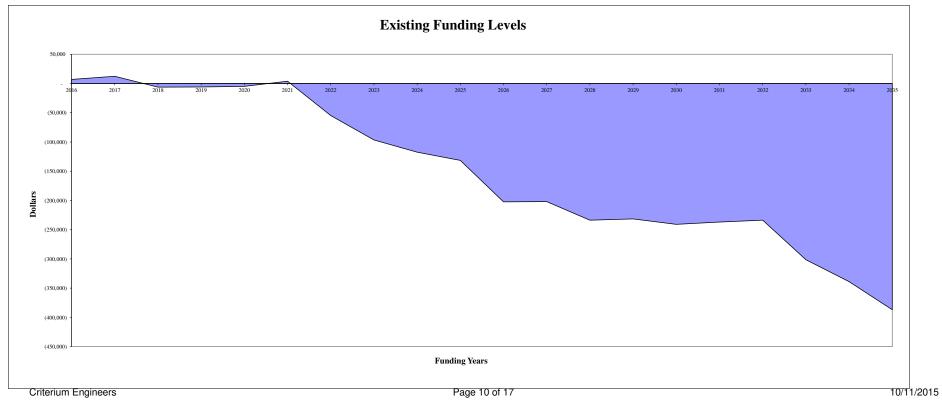
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### Existing Funding Levels

Beginning Balance as of start of year beginning Jan 2016: \$27,855

CONTRIBUTIONS			[	SPE	CIAL ASS	ESSMENTS						
AMOUNT					Tota	als						
\$8,850.00 per year				Per Year	\$0	Per Unit	\$0					
per unit per year	r											
\$737.50 per month												
per unit per mor	nth											
Projected Annual Funding and Exper	ditures:											
Year:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Year Number:	1	2	3	4	5	6	7	8	9	10	11	
End of Year Reserve Fund Balance	6,961	12,328	(6,299)	(5,917)	(4,946)	3,943	(54,790)	(96,565)	(117,484)	(131,598)	(202,442)	
Capital Expenditures:	29,813	3,605	27,477	8,469	7,879	-	67,583	50,625	29,769	22,964	79,694	
Total Revenue (all sources)	8,919	8,972	8,850	8,850	8,850	8,889	8,850	8,850	8,850	8,850	8,850	
Year:	2031	2032	2033	2034	2035							

Year:	2031	2032	2033	2034	2035
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	(237,037)	(233,803)	(301,397)	(338,939)	(386,902)
Capital Expenditures:	5,063	5,616	76,444	46,391	56,814
Total Revenue (all sources)	8,850	8,850	8,850	8,850	8,850



### Alternative 1: Level Funding with Steps



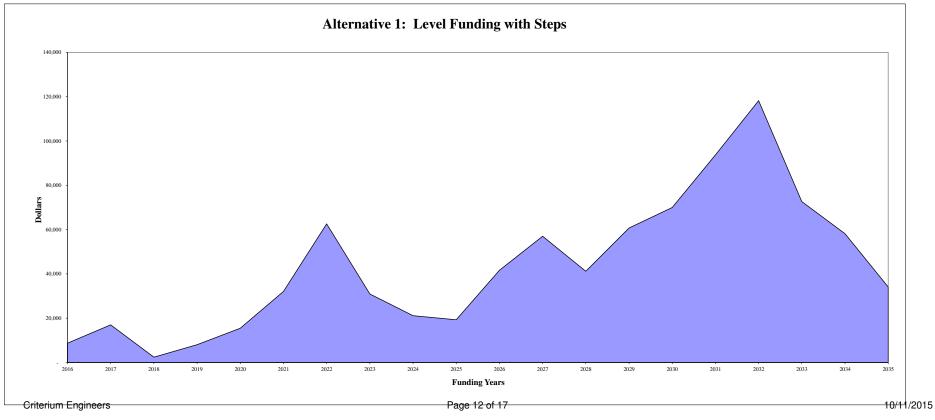
Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2016	1	\$27,855	\$10,560	\$0	\$0	\$86	\$29,813	\$8,689
2017	2	\$8,689	\$11,712	\$0	\$0	\$168	\$3,605	\$16,963
2018	3	\$16,963	\$12,864	\$0	\$0	\$24	\$27,477	\$2,374
2019	4	\$2,374	\$14,016	\$0	\$0	\$79	\$8,469	\$8,000
2020	5	\$8,000	\$15,168	\$0	\$0	\$153	\$7,879	\$15,443
2021	6	\$15,443	\$16,320	\$0	\$0	\$318	\$0	\$32,080
2022	7	\$32,080	\$17,472	\$80,000	\$0	\$620	\$67,583	\$62,589
2023	8	\$62,589	\$18,624	\$0	\$0	\$306	\$50,625	\$30,894
2024	9	\$30,894	\$19,776	\$0	\$0	\$209	\$29,769	\$21,110
2025	10	\$21,110	\$20,928	\$0	\$0	\$191	\$22,964	\$19,264
2026	11	\$19,264	\$22,080	\$0	\$80,000	\$0	\$79,694	\$41,650
2027	12	\$41,650	\$23,232	\$0	\$0	\$564	\$8,444	\$57,003
2028	13	\$57,003	\$24,384	\$0	\$0	\$408	\$40,634	\$41,160
2029	14	\$41,160	\$25,536	\$0	\$0	\$601	\$6,608	\$60,689
2030	15	\$60,689	\$26,688	\$0	\$0	\$693	\$18,094	\$69,975
2031	16	\$69,975	\$27,840	\$0	\$0	\$928	\$5,063	\$93,679
2032	17	\$93,679	\$28,992	\$0	\$0	\$1,171	\$5,616	\$118,225
2033	18	\$118,225	\$30,144	\$0	\$0	\$719	\$76,444	\$72,644
2034	19	\$72,644	\$31,296	\$0	\$0	\$575	\$46,391	\$58,124
2035	20	\$58,124	\$32,448	\$0	\$0	\$338	\$56,814	\$34,096



### Alternative 1: Level Funding with Steps

Beginning Balance as of start of year beginning Jan 2016: \$27,855

CONTRIBUT	Γ		SI	PECIAL ASS	ESSMENTS	5			SET	FINGS (ana	yzed by yea	r)			
FIRST YR LAST YR							Tot	als			Starting an	nount (\$):	880		
\$10,560.00 \$32,448.00	per year			First Ja	in 2022	Per Year	\$80,000	Per Unit			Increme	ent by (\$):	96		
	per unit per y	vear		Second Ja	in 2026	Per Year	\$80,000	Per Unit				Every	1 y	ear	
\$880.00 \$2,704.00	per month										F	requency:	20 t	ime	
	, per unit per 1	nonth													
Projected Annual Funding and Expe															
Year:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	8,689	16,963	2,374	8,000	15,443	32,080	62,589	30,894	21,110	19,264	41,650	57,003	41,160	60,689	69,975
Capital Expenditures:	29,813	3,605	27,477	8,469	7,879	-	67,583	50,625	29,769	22,964	79,694	8,444	40,634	6,608	18,094
Total Revenue (all sources)	10,646	11,880	12,888	14,095	15,321	16,638	98,092	18,930	19,985	21,119	102,080	23,796	24,792	26,137	27,381
Year:	2031	2032	2033	2034	2035										
Year Number:	16	17	18	19	20										
End of Year Reserve Fund Balance	93,679	118,225	72,644	58,124	34,096										
Capital Expenditures:	5,063	5,616	76,444	46,391	56,814										
Total Revenue (all sources)	28,768	30,163	30,863	31,871	32,786										



### Alternative 2: Escalating Funding at 8% per Year



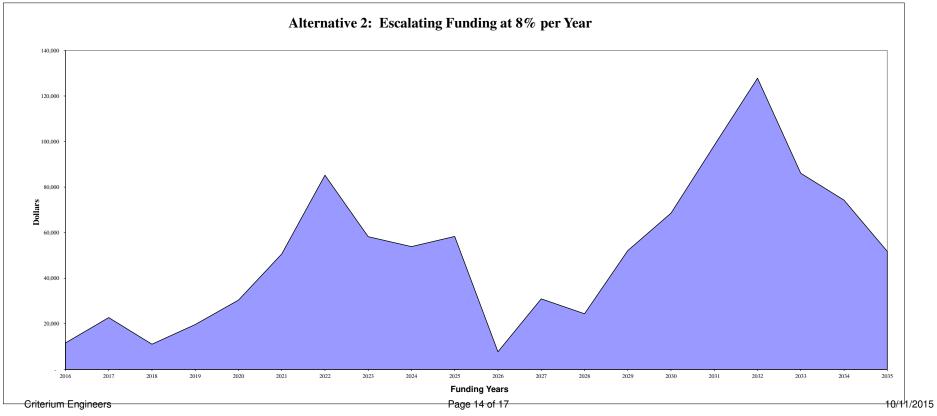
Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2016	1	\$27,855	\$13,440	\$0	\$0	\$115	\$29,813	\$11,597
2017	2	\$11,597	\$14,515	\$0	\$0	\$225	\$3,605	\$22,733
2018	3	\$22,733	\$15,676	\$0	\$0	\$109	\$27,477	\$11,041
2019	4	\$11,041	\$16,931	\$0	\$0	\$195	\$8,469	\$19,698
2020	5	\$19,698	\$18,285	\$0	\$0	\$301	\$7,879	\$30,405
2021	6	\$30,405	\$19,748	\$0	\$0	\$502	\$0	\$50,655
2022	7	\$50,655	\$21,328	\$80,000	\$0	\$844	\$67,583	\$85,243
2023	8	\$85,243	\$23,034	\$0	\$0	\$577	\$50,625	\$58,229
2024	9	\$58,229	\$24,877	\$0	\$0	\$533	\$29,769	\$53,869
2025	10	\$53,869	\$26,867	\$0	\$0	\$578	\$22,964	\$58,350
2026	11	\$58,350	\$29,016	\$0	\$0	\$77	\$79,694	\$7,748
2027	12	\$7,748	\$31,337	\$0	\$0	\$306	\$8,444	\$30,948
2028	13	\$30,948	\$33,844	\$0	\$0	\$242	\$40,634	\$24,399
2029	14	\$24,399	\$33,844	\$0	\$0	\$516	\$6,608	\$52,152
2030	15	\$52,152	\$33,844	\$0	\$0	\$679	\$18,094	\$68,581
2031	16	\$68,581	\$33,844	\$0	\$0	\$974	\$5,063	\$98,335
2032	17	\$98,335	\$33,844	\$0	\$0	\$1,266	\$5,616	\$127,828
2033	18	\$127,828	\$33,844	\$0	\$0	\$852	\$76,444	\$86,081
2034	19	\$86,081	\$33,844	\$0	\$0	\$735	\$46,391	\$74,269
2035	20	\$74,269	\$33,844	\$0	\$0	\$513	\$56,814	\$51,812



### Alternative 2: Escalating Funding at 8% per Year

Beginning Balance as of start of year beginning Jan 2016: \$27,855

CONTRIBUT FIRST YR LAST YR	IONS				SI	PECIAL ASS	ESSMENTS Tot				SET Starting an	ΓINGS (ana nount (\$):	lyzed by ye 1120	ear)	
	er year			First Ja	in 2022	Per Year	\$80,000	Per Unit			0	nt by (%):	8		
p	er unit per y	ear		Second		Per Year	\$0	Per Unit	\$0			Step (%):			
\$1,120.00 \$2,820.35 p	er month											Every	1	year	
p	er unit per n	nonth								l	F	requency:	12	time	
Projected Annual Funding and Expen		2017	2010	2010	2020	2021	2022	2022	2024	2025	2026	2025	2020	2020	2020
Year:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Year Number:	1	2	3	4	5	6	05.242	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance Capital Expenditures:	11,597 29,813	22,733 3,605	11,041 27,477	19,698 8,469	30,405 7,879	50,655	85,243 67,583	58,229 50,625	53,869 29,769	58,350 22,964	7,748 79,694	30,948 8,444	24,399 40,634	52,152 6,608	68,581 18,094
Total Revenue (all sources)	13,555	14,740	15,786	17,126	18,586	20,249	102,172	23,610	25,410	22,904	29,093	31,644	34,086	34,361	34,523
Year:	2031	2032	2033	2034	2035										
Year Number:	16	17	18	19	20										
End of Year Reserve Fund Balance	98,335	127,828	86,081	74,269	51,812										
Capital Expenditures:	5,063	5,616	76,444	46,391	56,814										
Total Revenue (all sources)	34,818	35,110	34,696	34,580	34,357										



### Alternative 3: Escalating Funding with Special Assessments



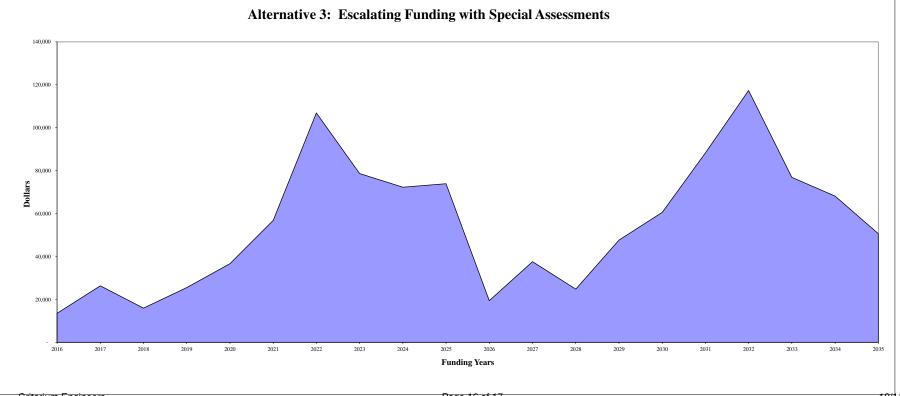
Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2016	1	\$27,855	\$15,360	\$0	\$0	\$134	\$29,813	\$13,537
2017	2	\$13,537	\$16,128	\$0	\$0	\$261	\$3,605	\$26,320
2018	3	\$26,320	\$16,934	\$0	\$0	\$158	\$27,477	\$15,935
2019	4	\$15,935	\$17,781	\$0	\$0	\$252	\$8,469	\$25,500
2020	5	\$25,500	\$18,670	\$0	\$0	\$363	\$7,879	\$36,654
2021	6	\$36,654	\$19,604	\$0	\$0	\$563	\$0	\$56,821
2022	7	\$56,821	\$20,584	\$96,000	\$0	\$1,058	\$67,583	\$106,879
2023	8	\$106,879	\$21,613	\$0	\$0	\$779	\$50,625	\$78,647
2024	9	\$78,647	\$22,694	\$0	\$0	\$716	\$29,769	\$72,287
2025	10	\$72,287	\$23,828	\$0	\$0	\$732	\$22,964	\$73,883
2026	11	\$73,883	\$25,020	\$0	\$0	\$192	\$79,694	\$19,400
2027	12	\$19,400	\$26,271	\$0	\$0	\$372	\$8,444	\$37,600
2028	13	\$37,600	\$27,584	\$0	\$0	\$245	\$40,634	\$24,795
2029	14	\$24,795	\$28,964	\$0	\$0	\$472	\$6,608	\$47,622
2030	15	\$47,622	\$30,412	\$0	\$0	\$599	\$18,094	\$60,539
2031	16	\$60,539	\$31,932	\$0	\$0	\$874	\$5,063	\$88,282
2032	17	\$88,282	\$33,529	\$0	\$0	\$1,162	\$5,616	\$117,356
2033	18	\$117,356	\$35,205	\$0	\$0	\$761	\$76,444	\$76,879
2034	19	\$76,879	\$36,966	\$0	\$0	\$675	\$46,391	\$68,128
2035	20	\$68,128	\$38,814	\$0	\$0	\$501	\$56,814	\$50,629



### Alternative 3: Escalating Funding with Special Assessments

Beginning Balance as of start of year beginning Jan 2016: \$27,855

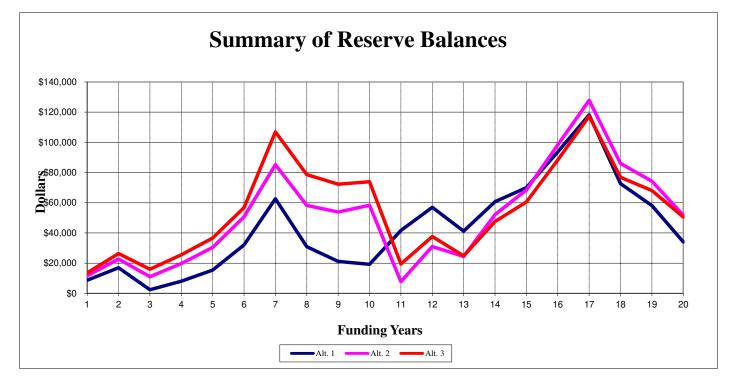
CONTRIBUT FIRST YR LAST YR	TIONS		Γ		SI	PECIAL ASS	ESSMENTS Tot				SETT Starting an	ΓINGS (ana nount (\$):	lyzed by ye 1280	ar)	
\$15,360.00 \$38,813.96	per year			First Ja	in 2022	Per Year	\$96,000	Per Unit			0	nt by (%):	5		
	per unit per y	year		Second		Per Year	\$0	Per Unit	\$0			Step (%):	0		
\$1,280.00 \$3,234.50	per month	·										Every	3	vear	
	per unit per 1	month									Fi	requency:	3	time	
Projected Annual Funding and Expe															
Year:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	13,537	26,320	15,935	25,500	36,654	56,821	106,879	78,647	72,287	73,883	19,400	37,600	24,795	47,622	60,539
Capital Expenditures:	29,813	3,605	27,477	8,469	7,879	-	67,583	50,625	29,769	22,964	79,694	8,444	40,634	6,608	18,094
Total Revenue (all sources)	15,494	16,389	17,092	18,034	19,033	20,166	117,642	22,392	23,409	24,560	25,212	26,643	27,830	29,435	31,011
Year:	2031	2032	2033	2034	2035										
Year Number:	16	2032	2033	19	2033										
End of Year Reserve Fund Balance	88,282	117,356	76,879	68,128	50,629										
Capital Expenditures:	5,063	5,616	76,444	46,391	56,814										
Total Revenue (all sources)	32,806	34,691	35,967	37,640	39,315										



# **Summary of Reserve Balances**



	Year	Yearly			
Year	<u>Number</u>	<u>Expenditures</u>	<u>Alt. 1</u>	<u>Alt. 2</u>	<u>Alt. 3</u>
2016	1	\$29,813	\$8,689	\$11,597	\$13,537
2017	2	\$3,605	\$16,963	\$22,733	\$26,320
2018	3	\$27,477	\$2,374	\$11,041	\$15,935
2019	4	\$8,469	\$8,000	\$19,698	\$25,500
2020	5	\$7,879	\$15,443	\$30,405	\$36,654
2021	6	\$0	\$32,080	\$50,655	\$56,821
2022	7	\$67,583	\$62,589	\$85,243	\$106,879
2023	8	\$50,625	\$30,894	\$58,229	\$78,647
2024	9	\$29,769	\$21,110	\$53,869	\$72,287
2025	10	\$22,964	\$19,264	\$58,350	\$73,883
2026	11	\$79,694	\$41,650	\$7,748	\$19,400
2027	12	\$8,444	\$57,003	\$30,948	\$37,600
2028	13	\$40,634	\$41,160	\$24,399	\$24,795
2029	14	\$6,608	\$60,689	\$52,152	\$47,622
2030	15	\$18,094	\$69,975	\$68,581	\$60,539
2031	16	\$5,063	\$93,679	\$98,335	\$88,282
2032	17	\$5,616	\$118,225	\$127,828	\$117,356
2033	18	\$76,444	\$72,644	\$86,081	\$76,879
2034	19	\$46,391	\$58,124	\$74,269	\$68,128
2035	20	\$56,814	\$34,096	\$51,812	\$50,629



### Appendix B: PROJECT PHOTOGRAPHS

**Location:** The Gables Condominiums Chapel Hill, NC **Photo Taken by:** Christopher A. Flythe, PE **Date:** July 21, 2015





**Location:** The Gables Condominiums Chapel Hill, NC **Photo Taken by:** Christopher A. Flythe, PE **Date:** July 21, 2015





**Photo Taken by:** Christopher A. Flythe, PE





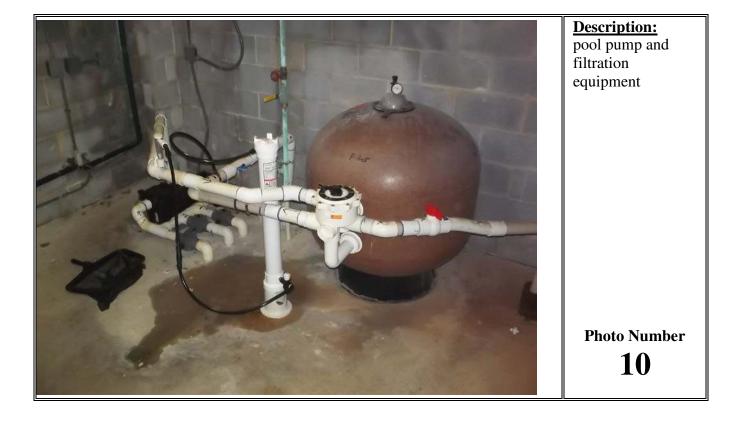
**Photo Taken by:** Christopher A. Flythe, PE





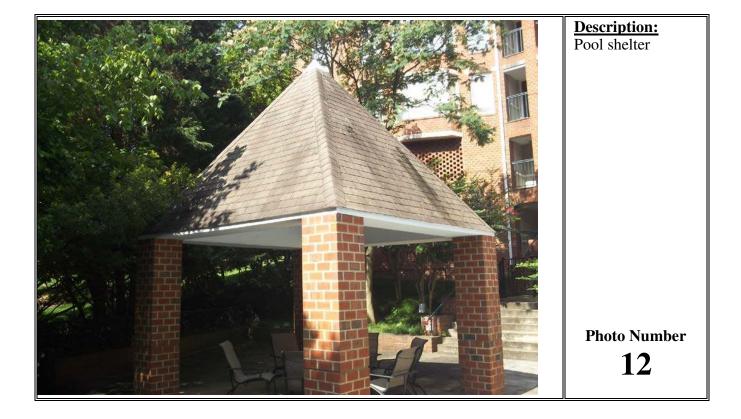
**Photo Taken by:** Christopher A. Flythe, PE





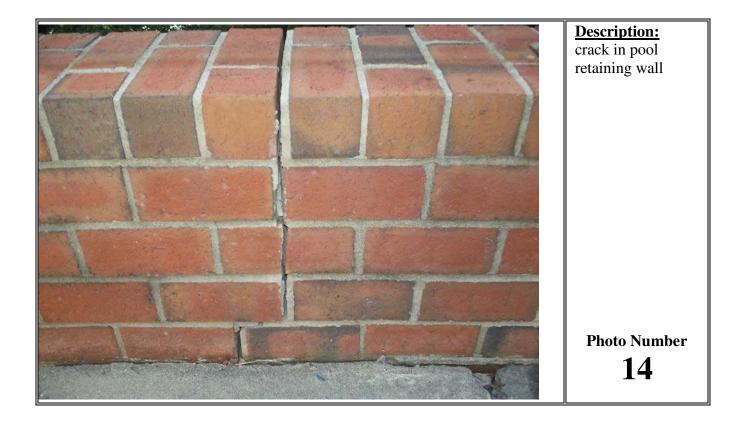
**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE



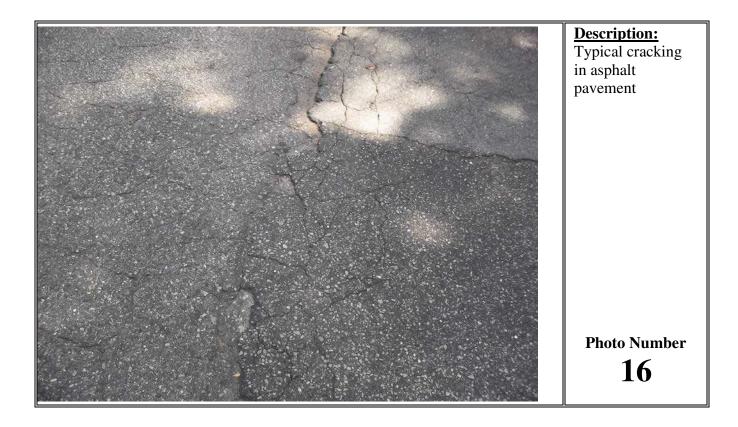


**Photo Taken by:** Christopher A. Flythe, PE **Date:** July 21, 2015



Description: Concrete walkway upheaval at front entrance

Photo Number 15



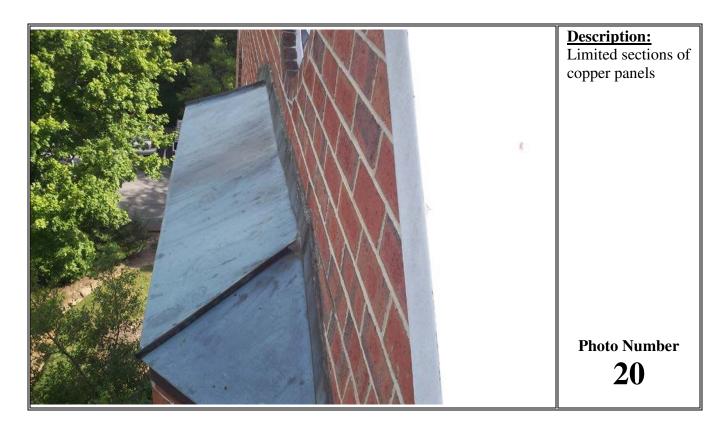
**Photo Taken by:** Christopher A. Flythe, PE





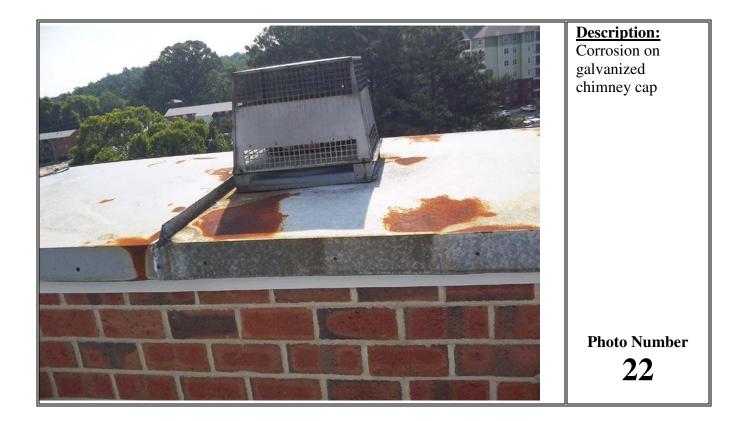
**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE





**Photo Taken by:** Christopher A. Flythe, PE



