FULL RESERVE STUDY

The Plantation on Pelham Property Owners Association, Inc.

Greenville, South Carolina

August 6, 2015

RESERVE™ ADVISORS

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Corporate Office
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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: The Plantation on Pelham Property Owners Association, Inc. (The Plantation on Pelham)
Location: Greenville, South Carolina
Reference: 131017

Property Basics: The Plantation on Pelham Property Owners Association, Inc. is a planned unit development of 87 homes, including 33 townhome units in six buildings. The exteriors of the townhome buildings comprise masonry, fiber cement siding, wood balconies and asphalt shingle roofs. The development was constructed from 2003 to 2007, with the exception of the clubhouse, which was originally constructed in 1821. The development contains asphalt pavement, concrete flatwork, wood fences, a gated entrance, two irrigation systems and a clubhouse.

Reserve Components Identified: 41 Reserve Components.

Inspection Date: August 6, 2015.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Common Funding Plan recognizes multiple threshold funding years in 2017 due to clubhouse renovations, and in 2023 and 2043 due to repaving of the asphalt pavement. Our recommended Townhome Funding Plan recognizes this threshold funding year in 2030 due to replacement of the wood balconies.

Cash Flow Method: We use the Cash Flow Method to compute the Reserve Funding Plan. This method offsets future variable Reserve Expenditures with existing and future stable levels of reserve funding. Our application of this method also considers:

- current and future local costs of replacement
- 1.0% annual rate of return on invested reserves
- 2.5% future Inflation Rate for estimating Future Replacement Costs

Sources for *Local* Costs of Replacement: Our proprietary database, historical costs and published sources, i.e., R.S. Means, Incorporated.

Cash Status of Common Reserve Fund: $29,797 as of March 31, 2015. A potential deficit in reserves might occur by 2017 based upon continuation of the most recent annual reserve contribution of $7,854 and the identified Reserve Expenditures.

Cash Status of Townhome Reserve Fund: $44,698 as of March 31, 2015. A potential deficit in reserves might occur by 2022 based upon continuation of the most recent annual reserve contribution of $15,708 and the identified Reserve Expenditures.

Recommended Common Reserve Funding: The Association budgeted $7,854 for Reserve Contributions in 2015. We recommend the Association budget annual phased increases in Reserve Contributions of approximately $28,000 in 2016 and 2017. We recommend the Association budget stable contributions of $63,900 from 2018 through 2023. By 2024, the Association will have fully funded for replacement of the asphalt pavement. Therefore, the Association may anticipate a decrease in the annual Reserve Contribution to $46,000. Beginning in 2025, the Association can budget less significant increases in reserve funding that in part consider the effects of inflation through 2045, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of $28,046 represents about a twenty-one percent (21.4%) adjustment in the 2015 total Operating Budget of $130,896. This initial

adjustment of $28,046 is equivalent to an increase of $26.86 in the monthly contributions per homeowner.

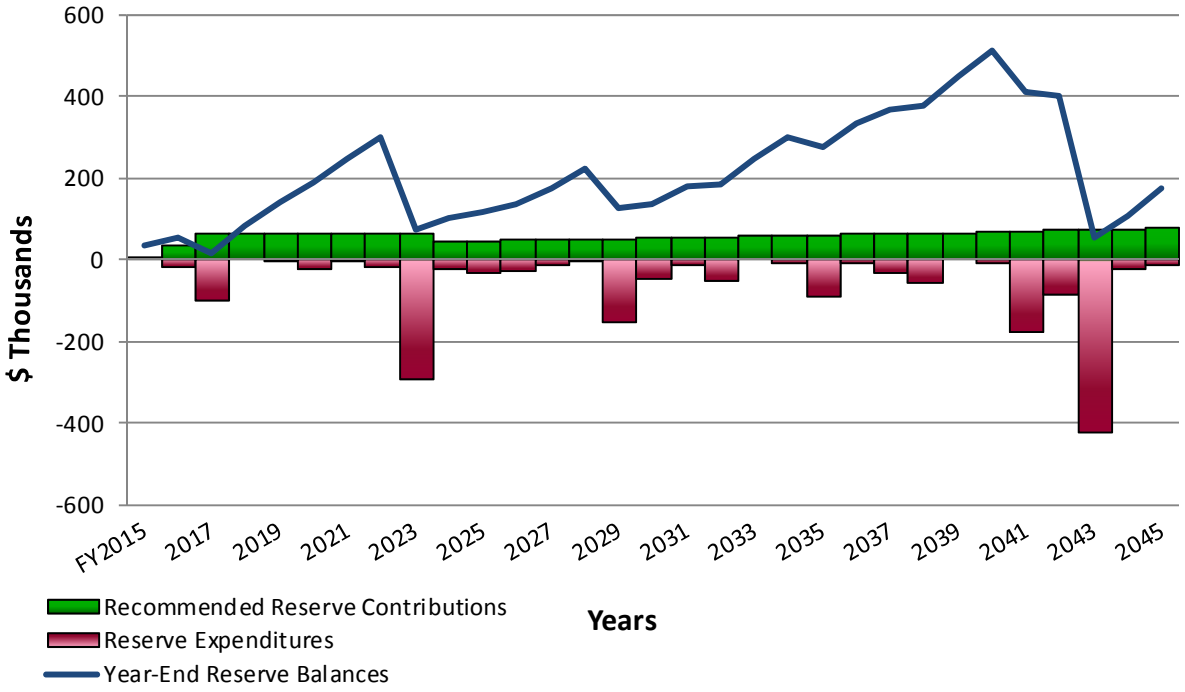
Recommended Townhome Reserve Funding: The Association budgeted $15,708 for Reserve Contributions in 2015. We recommend the Association budget annual phased increases in Reserve Contributions of approximately $14,000 from 2016 through 2020. Beginning in 2021, the Association can budget less significant increases in reserve funding, that in part consider the effects of inflation through 2030. By 2031, the Association will have fully funded for replacement of the wood balconies. Therefore, the Association may anticipate a decrease in the annual Reserve Contribution to $90,000. Beginning in 2032, the Association can again budget less significant increases in reserve funding, that in part consider the effects of inflation through 2045, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of $13,992 represents about an eleven percent (10.7%) adjustment in the 2015 total Operating Budget of $130,896. This initial adjustment of $13,992 is equivalent to an increase of $35.33 in the monthly contributions per townhome unit owner.

Certification: This *Full Reserve Study* exceeds the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

The Plantation on Pelham

Recommended Common Reserve Funding Table and Graph

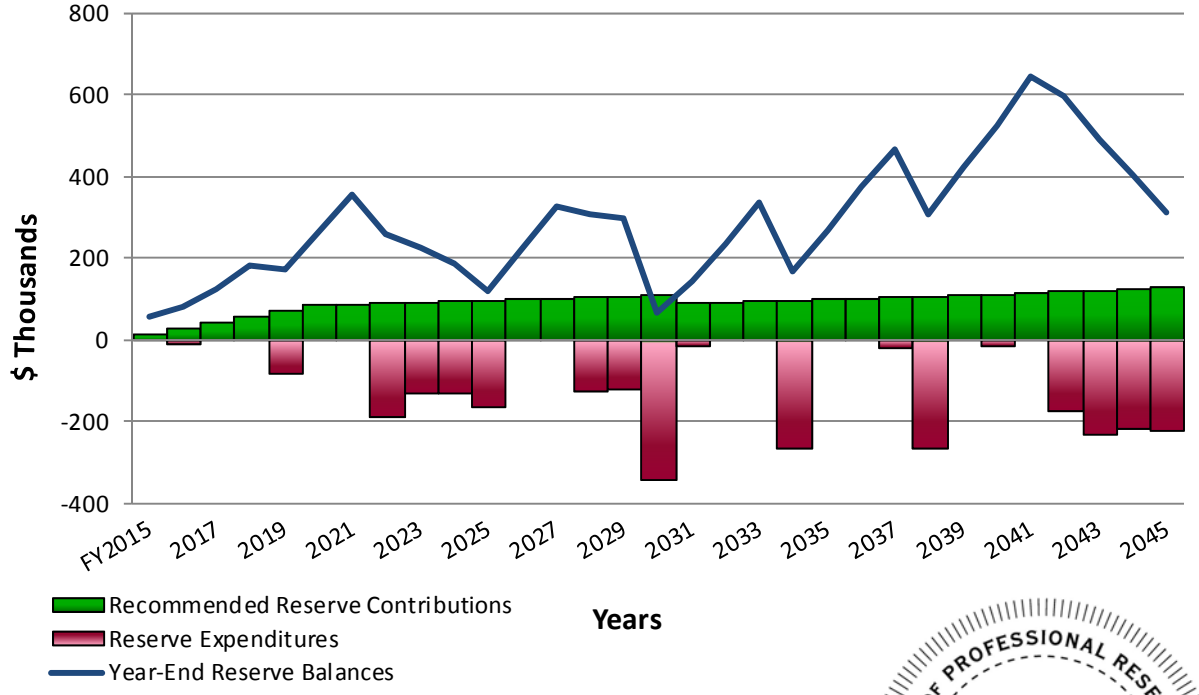
Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2016	35,900	55,109	2026	48,400	137,577	2036	61,900	332,027
2017	63,900	17,616	2027	49,600	175,691	2037	63,400	365,914
2018	63,900	82,012	2028	50,800	223,293	2038	65,000	376,652
2019	63,900	142,881	2029	52,100	126,192	2039	66,600	447,352
2020	63,900	188,012	2030	53,400	135,271	2040	68,300	513,461
2021	63,900	248,867	2031	54,700	179,274	2041	70,000	413,106
2022	63,900	299,496	2032	56,100	185,997	2042	71,800	401,600
2023	63,900	74,172	2033	57,500	245,644	2043	73,600	53,277
2024	46,000	100,321	2034	58,900	301,254	2044	75,400	109,020
2025	47,200	117,487	2035	60,400	274,667	2045	77,300	175,675



The Plantation on Pelham

Recommended Townhome Reserve Funding Table and Graph

Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2016	29,700	79,303	2026	99,400	220,935	2036	101,900	375,525
2017	43,700	124,015	2027	101,900	325,554	2037	104,400	465,090
2018	57,700	183,244	2028	104,400	306,057	2038	107,000	309,452
2019	71,700	174,726	2029	107,000	297,156	2039	109,700	422,795
2020	85,700	262,602	2030	109,700	68,077	2040	112,400	525,068
2021	87,800	353,467	2031	90,000	142,728	2041	115,200	646,095
2022	90,000	257,475	2032	92,300	236,917	2042	118,100	597,417
2023	92,300	223,261	2033	94,600	334,359	2043	121,100	490,650
2024	94,600	187,778	2034	97,000	168,826	2044	124,100	402,686
2025	97,000	119,840	2035	99,400	270,411	2045	127,200	311,519



Respectfully submitted on September 15, 2015 by
RESERVE ADVISORS, INC.

Alan M. Ebert, PRA[1], RS[2], Associate Director of Quality Assurance
Visual Inspection and Report by: Jeffrey B. Dow, PRA, RS

[1] PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at http://www.apra-usa.com.

[2] RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.

2. RESERVE STUDY REPORT

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of

The Plantation on Pelham Property Owners Association, Inc.

Greenville, South Carolina

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 6, 2015.

We present our findings and recommendations in the following report sections and spreadsheets:

- **Identification of Property -** Segregates all property into several areas of responsibility for repair or replacement
- **Reserve Expenditures -** Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- **Reserve Funding Plan -** Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- **Condition Assessment -** Describes the reserve components, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Photographs -** Documentation of Condition of various property elements
- **Methodology -** Lists the national standards, methods and procedures used, financial information relied upon for the Financial Analysis of the Reserve Study
- **Definitions -** Contains definitions of terms used in the Reserve Study, consistent with national standards
- **Professional Service Conditions -** Describes Assumptions and Professional Service Conditions
- **Credentials and Resources**

IDENTIFICATION OF PROPERTY

The Plantation on Pelham Property Owners Association, Inc. is a planned unit development of 87 homes, including 33 townhome units in six buildings. The exteriors of the townhome buildings comprise masonry, fiber cement siding, wood balconies and asphalt shingle roofs. The development was constructed from 2003 to 2007, with the exception of the clubhouse, which was originally constructed in 1821. The development contains asphalt pavement, concrete flatwork, wood fences, a gated entrance, two irrigation systems and a clubhouse. We identify 41 major reserve components that are likely to require capital repair or replacement during the next 30 years.

Our investigation includes Reserve Components or property elements as set forth in your Declaration. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement. Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or Homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management and the Board. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Homeowners
- Property Maintained by Others

We advise the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget.

The Reserve Study identifies Reserve Components as set forth in your Declaration or which were

identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:

- The Plantation on Pelham responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements do not have predictable Remaining Useful Lives. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan. We identify the following Long-Lived Property Elements as excluded from reserve funding at this time.

- Electrical Systems, Common
- Fences, Metal, Replacement
- Foundations
- Railings, Metal, Clubhouse
- Structural Frames
- Walls, Fiber Cement Siding, Townhomes

The operating budget provides money for the repair and replacement of certain Reserve Components. Operating Budget Funded Repairs and Replacements relate to:

- General Maintenance to the Common Elements
- Expenditures less than $3,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Clubhouse, Second Floor, Finishes and Fixtures (Excludes Paint Finishes and Floor Refinishing)
- Fan Coils, Clubhouse
- Fences, Wood, Paint Finishes and Capital Repairs
- Gates, Wood, Service Drive
- Irrigation Systems, Controllers and Pump
- Light Poles and Fixtures, Clubhouse
- Paint Finishes, Touch Up
- Pipes, Interior Building, Water and Sewer, Clubhouse
- Pumps Less Than Five-HP (horsepower)

- Signage, Monuments
- Water Heater, Clubhouse
- Other Repairs normally funded through the Operating Budget

Certain items have been designated as the responsibility of the homeowners at the townhomes to repair or replace at their cost. Property Maintained by Homeowners at the townhomes, including items billed back to Homeowners, relates to unit:

- Arbors, Rear of Units
- Asphalt Pavement, Alley, Micasa Court
- Courtyard Areas
- Doors, Garage
- Electrical Systems
- Fences, Rear of Units
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Light Fixtures, Exterior
- Light Poles and Fixtures, Lot
- Pipes, Interior Building, Water and Sewer
- Windows and Doors

Certain items have been designated as the responsibility of the homeowners at the single family homes to repair or replace at their cost. Property Maintained by Homeowners at the single family homes, including items billed back to Homeowners, relates to unit:

- Fences, Wood, Perimeter Adjacent to Villa Road (Includes Masonry Columns)
- Homes and Lot Improvements

Certain items have been designated as the responsibility of others to repair or replace. Property Maintained by Others relates to:

- Fence, Wood, East Perimeter (Adjacent Property)
- Light Poles and Fixtures, Streets (Duke Energy)
- Pipes, Subsurface Utilities, Sewer (Utility Company)
- Pipes, Subsurface Utilities, Water (City of Greenville)

3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
  - useful life
  - remaining useful life
- Unit cost of replacement
- 2015 local cost of replacement
- Total future costs of replacement anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

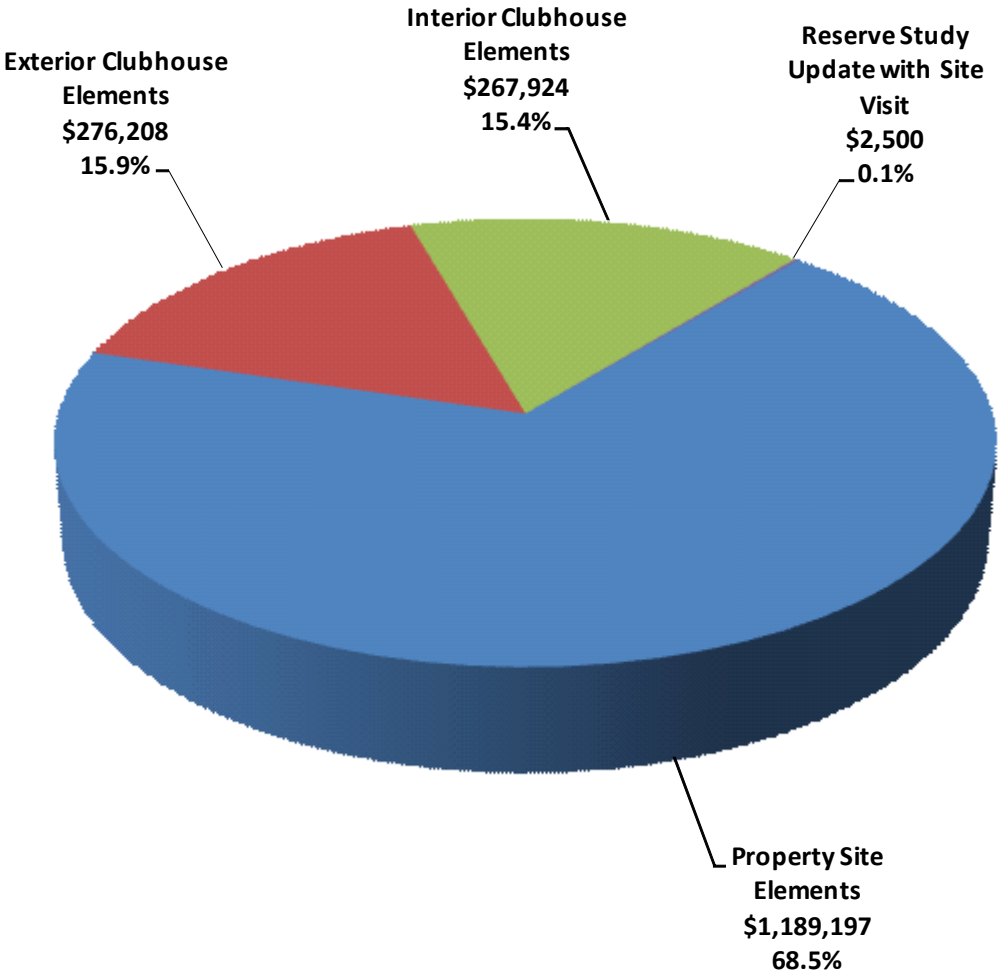
Reserve Funding Plan

- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end
- Predicted reserves based on current funding level

Financial statements prepared by your association, by you or others might rely in part on information contained in this section. For your convenience, we have provided an electronic data file containing the tables of ***Reserve Expenditures*** and ***Reserve Funding Plan***.

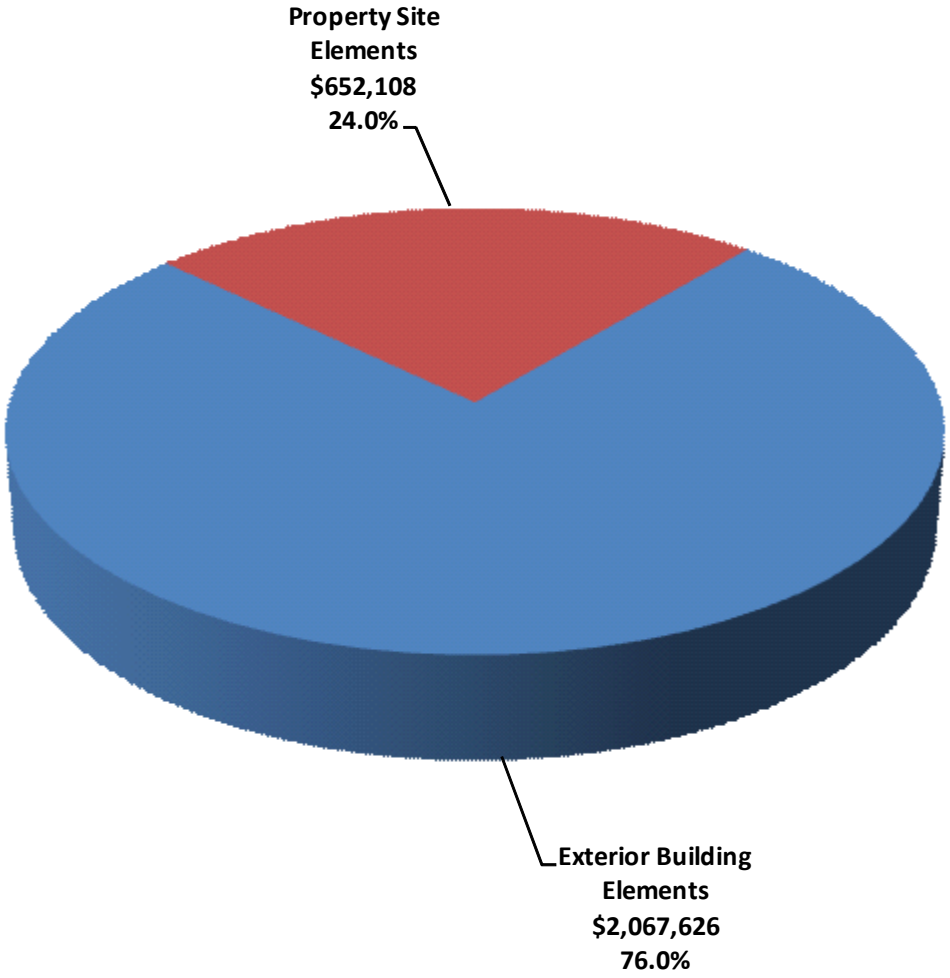
The following chart illustrates the relative importance of the categories noted in ***Reserve Expenditures*** and relative funding during the next 30 years.

The Plantation on Pelham
Future Common Expenditures Relative Cost Illustration



The Plantation on Pelham

Future Townhome Expenditures Relative Cost Illustration



COMMON

RESERVE EXPENDITURES

The Plantation on Pelham
Property Owners Association, Inc.
Greenville, South Carolina

Explanatory Notes:

1) 2.5% is the estimated future Inflation Rate for estimating Future Replacement Costs.
2) FY2015 is Fiscal Year beginning January 1, 2015 and ending December 31, 2015.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2015)	Per Phase (2015)	Total (2015)	30-Year Total (Inflated)	RUL = 0 FY2015	1 2016	2 2017	3 2018	4 2019	5 2020	6 2021	7 2022	8 2023	9 2024	10 2025	11 2026	12 2027	13 2028	14 2029	15 2030
				Property Site Elements																							
4.021	10,725	10,725	Square Yards	Asphalt Pavement, Crack Repair and Patch	2017	3 to 5	2	0.75	8,044	8,044	94,372			8,451			9,101						10,554			11,366	
4.041	10,725	10,725	Square Yards	Asphalt Pavement, Streets, Mill and Overlay	2023	15 to 20	8	12.00	128,700	128,700	413,757									156,808							
4.101	13	13	Each	Catch Basins, Streets, Inspections and Capital Repairs	2023	15 to 20	8	375.00	4,875	4,875	15,673									5,940							
4.110	6,200	930	Linear Feet	Concrete Gutters, Partial	2023	to 65	8 to 30+	28.00	26,040	173,600	83,716									31,727							
4.140	18,800	470	Square Feet	Concrete Sidewalks, Partial	2016	to 65	1 to 30+	8.00	3,760	150,400	55,013		3,854			4,150			4,469			4,813			5,183		
4.285	800	800	Linear Feet	Fence, Wood, Northwest Perimeter	2023	15 to 20	8	35.00	28,000	28,000	90,017									34,115							
4.286	230	230	Linear Feet	Fence, Wood, Retaining Wall	2025	15 to 20	10	25.00	5,750	5,750	19,421											7,360					
4.310	1	1	Panel	Gate Entry System	2017	10 to 15	2	4,000.00	4,000	4,000	17,455			4,202												5,652	
4.320	4	4	Each	Gate Operators	2017	8 to 12	2	3,800.00	15,200	15,200	66,330			15,969												21,477	
4.330	4	4	Each	Gates, Metal	2029	to 25	14	3,000.00	12,000	12,000	16,956															16,956	
4.421	19	19	Zones	Irrigation System	2042	to 40	27	1,850.00	35,150	35,150	68,465																
4.500	1	1	Allowance	Landscape, Partial Replacements	2017	to 3	2	10,000.00	10,000	10,000	149,970			10,506			11,314			12,184			13,121			14,130	
4.740	1,850	1,850	Square Feet	Retaining Wall, Concrete, Inspections and Capital Repairs	2025	10 to 15	10	8.00	14,800	14,800	45,061											18,945					
4.810	6	6	Each	Signage, Street and Traffic	2023	15 to 20	8	750.00	4,500	4,500	14,467									5,483							
4.871	1,500	1,500	Square Feet	Walls, Masonry, Entrance, Paint Finishes and Repairs	2016	4 to 6	1	3.00	4,500	4,500	38,524		4,612					5,219					5,904				
				Exterior Clubhouse Elements																							
5.121	170	170	Square Feet	Balcony, Wood	2016	to 25	1	50.00	8,500	8,500	24,864		8,712														
5.141	1,050	1,050	Square Feet	Deck, Composite	2029	20 to 25	14	15.00	15,750	15,750	22,254															22,254	
5.300	1	1	Allowance	Exterior Renovations, Partial	2017	4 to 6	2	14,000.00	14,000	14,000	101,094			14,709						17,058						19,782	
5.621	2,400	2,400	Square Feet	Pavers, Masonry, Inspections and Partial Replacements	2023	8 to 12	8	1.60	3,840	3,840	10,971									4,679							
5.600	42	42	Squares	Roof, Asphalt Shingles	2024	15 to 20	9	395.00	16,590	16,590	53,841										20,719						
5.800	1,050	175	Square Feet	Windows and Doors, Wood Frames, Partial	2017	to 40	2 to 30+	50.00	8,750	52,500	63,184			9,193						10,661						12,364	
				Interior Clubhouse Elements																							
6.071	1	1	Each	Air Handling and Condensing Units, Split System, 1991	2017	15 to 20	2	5,700.00	5,700	5,700	15,802			5,989													
6.072	1	1	Each	Air Handling and Condensing Units, Split System, 2012	2032	15 to 20	17	5,900.00	5,900	5,900	8,978																
6.421	3,400	3,400	Square Feet	Floor Coverings, Wood, Refinishing	2017	4 to 6	2	3.00	10,200	10,200	73,653			10,716						12,428						14,412	
6.451	1	1	Allowance	Furnishings, Partial (Includes Appliances and Light Fixtures)	2017	to 20	2	9,700.00	9,700	9,700	85,119			10,191					11,530					13,045			
6.521	1	1	Allowance	Kitchen Renovation	2030	to 25	15	25,500.00	25,500	25,500	36,932																36,932
6.801	6,600	6,600	Square Feet	Paint Finishes, Downstairs	2017	10 to 15	2	0.60	3,960	3,960	17,280			4,160												5,595	
6.802	8,200	8,200	Square Feet	Paint Finishes, Upstairs	2017	10 to 15	2	0.60	4,920	4,920	21,470			5,169												6,952	
6.901	1	1	Each	Rest Room Renovation	2030	to 25	15	6,000.00	6,000	6,000	8,690																8,690
		1	Allowance	Reserve Study Update with Site Visit	2017	2	2	2,500.00	2,500	2,500	2,500			2,500													
				Anticipated Expenditures, By Year							$1,735,829	0	17,178	101,755	0	4,150	20,415	5,219	15,999	291,083	20,719	31,118	29,579	13,045	5,183	150,940	45,622

COMMON

RESERVE EXPENDITURES

The Plantation on Pelham
Property Owners Association, Inc.
Greenville, South Carolina

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Life Analysis, Years Remaining	Costs, $ Unit (2015)	Costs, $ Per Phase (2015)	Costs, $ Total (2015)	Costs, $ 30-Year Total (Inflated)	16 2031	17 2032	18 2033	19 2034	20 2035	21 2036	22 2037	23 2038	24 2039	25 2040	26 2041	27 2042	28 2043	29 2044	30 2045
				Property Site Elements																						
4.021	10,725	10,725	Square Yards	Asphalt Pavement, Crack Repair and Patch	2017	3 to 5	2	0.75	8,044	8,044	94,372		12,240			13,181			14,194			15,285				
4.041	10,725	10,725	Square Yards	Asphalt Pavement, Streets, Mill and Overlay	2023	15 to 20	8	12.00	128,700	128,700	413,757													256,949		
4.101	13	13	Each	Catch Basins, Streets, Inspections and Capital Repairs	2023	15 to 20	8	375.00	4,875	4,875	15,673													9,733		
4.110	6,200	930	Linear Feet	Concrete Gutters, Partial	2023	to 65	8 to 30+	28.00	26,040	173,600	83,716													51,989		
4.140	18,800	470	Square Feet	Concrete Sidewalks, Partial	2016	to 65	1 to 30+	8.00	3,760	150,400	55,013	5,582			6,011			6,473			6,971			7,507		
4.285	800	800	Linear Feet	Fence, Wood, Northwest Perimeter	2023	15 to 20	8	35.00	28,000	28,000	90,017													55,902		
4.286	230	230	Linear Feet	Fence, Wood, Retaining Wall	2025	15 to 20	10	25.00	5,750	5,750	19,421															12,061
4.310	1	1	Panel	Gate Entry System	2017	10 to 15	2	4,000.00	4,000	4,000	17,455											7,601				
4.320	4	4	Each	Gate Operators	2017	8 to 12	2	3,800.00	15,200	15,200	66,330											28,884				
4.330	4	4	Each	Gates, Metal	2029	to 25	14	3,000.00	12,000	12,000	16,956															
4.421	19	19	Zones	Irrigation System	2042	to 40	27	1,850.00	35,150	35,150	68,465												68,465			
4.500	1	1	Allowance	Landscape, Partial Replacements	2017	to 3	2	10,000.00	10,000	10,000	149,970		15,216			16,386			17,646			19,003			20,464	
4.740	1,850	1,850	Square Feet	Retaining Wall, Concrete, Inspections and Capital Repairs	2025	10 to 15	10	8.00	14,800	14,800	45,061								26,116							
4.810	6	6	Each	Signage, Street and Traffic	2023	15 to 20	8	750.00	4,500	4,500	14,467													8,984		
4.871	1,500	1,500	Square Feet	Walls, Masonry, Entrance, Paint Finishes and Repairs	2016	4 to 6	1	3.00	4,500	4,500	38,524	6,680					7,558					8,551				
				Exterior Clubhouse Elements																						
5.121	170	170	Square Feet	Balcony, Wood	2016	to 25	1	50.00	8,500	8,500	24,864											16,152				
5.141	1,050	1,050	Square Feet	Deck, Composite	2029	20 to 25	14	15.00	15,750	15,750	22,254															
5.300	1	1	Allowance	Exterior Renovations, Partial	2017	4 to 6	2	14,000.00	14,000	14,000	101,094					22,941						26,604				
5.621	2,400	2,400	Square Feet	Pavers, Masonry, Inspections and Partial Replacements	2023	8 to 12	8	1.60	3,840	3,840	10,971					6,292										
5.600	42	42	Squares	Roof, Asphalt Shingles	2024	15 to 20	9	395.00	16,590	16,590	53,841													33,122		
5.800	1,050	175	Square Feet	Windows and Doors, Wood Frames, Partial	2017	to 40	2 to 30+	50.00	8,750	52,500	63,184					14,338						16,628				
				Interior Clubhouse Elements																						
6.071	1	1	Each	Air Handling and Condensing Units, Split System, 1991	2017	15 to 20	2	5,700.00	5,700	5,700	15,802							9,813								
6.072	1	1	Each	Air Handling and Condensing Units, Split System, 2012	2032	15 to 20	17	5,900.00	5,900	5,900	8,978		8,978													
6.421	3,400	3,400	Square Feet	Floor Coverings, Wood, Refinishing	2017	4 to 6	2	3.00	10,200	10,200	73,653					16,714						19,383				
6.451	1	1	Allowance	Furnishings, Partial (Includes Appliances and Light Fixtures)	2017	to 20	2	9,700.00	9,700	9,700	85,119		14,760					16,699					18,894			
6.521	1	1	Allowance	Kitchen Renovation	2030	to 25	15	25,500.00	25,500	25,500	36,932															
6.801	6,600	6,600	Square Feet	Paint Finishes, Downstairs	2017	10 to 15	2	0.60	3,960	3,960	17,280											7,525				
6.802	8,200	8,200	Square Feet	Paint Finishes, Upstairs	2017	10 to 15	2	0.60	4,920	4,920	21,470											9,349				
6.901	1	1	Each	Rest Room Renovation	2030	to 25	15	6,000.00	6,000	6,000	8,690															
		1	Allowance	Reserve Study Update with Site Visit	2017	2	2	2,500.00	2,500	2,500	2,500															
				Anticipated Expenditures, By Year							$1,735,829	12,262	51,194	0	6,011	89,852	7,558	32,985	57,956	0	6,971	174,965	87,359	424,186	20,464	12,061

RESERVE FUNDING PLAN

COMMON

CASH FLOW ANALYSIS

The Plantation on Pelham

Property Owners Association, Inc.

Greenville, South Carolina

Individual Reserve Budgets & Cash Flows for the Next 30 Years

			FY2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Reserves at Beginning of Year (Note 1)		29,797	35,934	55,109	17,616	82,012	142,881	188,012	248,867	299,496	74,172	100,321	117,487	137,577	175,691	223,293	126,192
	Total Recommended Reserve Contributions (Note 2)		5,891	35,900	63,900	63,900	63,900	63,900	63,900	63,900	63,900	46,000	47,200	48,400	49,600	50,800	52,100	53,400
Plus	Estimated Interest Earned, During Year (Note 3)		246	453	362	496	1,119	1,646	2,174	2,728	1,859	868	1,084	1,269	1,559	1,985	1,739	1,301
Less	Anticipated Expenditures, By Year		0	(17,178)	(101,755)	0	(4,150)	(20,415)	(5,219)	(15,999)	(291,083)	(20,719)	(31,118)	(29,579)	(13,045)	(5,183)	(150,940)	(45,622)
	Anticipated Reserves at Year End		$35,934	$55,109	$17,616	$82,012	$142,881	$188,012	$248,867	$299,496	$74,172	$100,321	$117,487	$137,577	$175,691	$223,293	$126,192	$135,271
					(NOTE 5)						(NOTE 5)							
	Predicted Reserves based on 2015 funding level of:	$7,854	35,934	26,923	(67,178)	(59,957)												

(continued)

Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued

		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
	Reserves at Beginning of Year	135,271	179,274	185,997	245,644	301,254	274,667	332,027	365,914	376,652	447,352	513,461	413,106	401,600	53,277	109,020
	Total Recommended Reserve Contributions	54,700	56,100	57,500	58,900	60,400	61,900	63,400	65,000	66,600	68,300	70,000	71,800	73,600	75,400	77,300
Plus	Estimated Interest Earned, During Year	1,565	1,817	2,147	2,721	2,865	3,018	3,472	3,694	4,100	4,780	4,610	4,053	2,263	807	1,416
Less	Anticipated Expenditures, By Year	(12,262)	(51,194)	0	(6,011)	(89,852)	(7,558)	(32,985)	(57,956)	0	(6,971)	(174,965)	(87,359)	(424,186)	(20,464)	(12,061)
	Anticipated Reserves at Year End	$179,274	$185,997	$245,644	$301,254	$274,667	$332,027	$365,914	$376,652	$447,352	$513,461	$413,106	$401,600	$53,277	$109,020	$175,675
														(NOTE 5)		(NOTE 4)

Explanatory Notes:

1) Year 2015 starting reserves are as of March 31, 2015; FY2015 starts January 1, 2015 and ends December 31, 2015.
2) Reserve Contributions for 2015 are the remaining budgeted 9 months; 2016 is the first year of recommended contributions.
3) 1.0% is the estimated annual rate of return on invested reserves; 2015 is a partial year of interest earned.
4) Accumulated year 2045 ending reserves consider the age, size, overall condition and complexity of the property.
5) Threshold Funding Years (reserve balance at critical point).

TOWNHOMES
RESERVE EXPENDITURES

The Plantation on Pelham
Property Owners Association, Inc.
Greenville, South Carolina

Explanatory Notes:

1) 2.5% is the estimated future Inflation Rate for estimating Future Replacement Costs.
2) FY2015 is Fiscal Year beginning January 1, 2015 and ending December 31, 2015.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2015)	Per Phase (2015)	Total (2015)	30-Year Total (Inflated)	RUL = 0 FY2015	1 2016	2 2017	3 2018	4 2019	5 2020	6 2021	7 2022	8 2023	9 2024	10 2025	11 2026	12 2027	13 2028	14 2029	15 2030
				Exterior Building Elements																							
1.120	4,950	1,650	Square Feet	Balconies, Wood, Phased (Includes Railings)	2028	to 25	13 to 15	51.00	84,150	252,450	356,778														116,002	118,902	121,874
1.240	7,800	2,600	Linear Feet	Gutters and Downspouts, Aluminum, Phased	2023	15 to 20	8 to 10	6.00	15,600	46,800	154,249									19,007	19,482	19,969					
1.280	820	273	Squares	Roofs, Asphalt Shingles, Phased	2023	15 to 20	8 to 10	330.00	90,199	270,600	891,871									109,899	112,646	115,462					
1.760	33	33	Units	Walls and Trim, Paint Finishes	2022	6 to 8	7	3,900.00	128,700	128,700	566,485								152,984								186,396
1.820	24,800	24,800	Square Feet	Walls and Porches, Masonry, Inspections and Repairs	2022	8 to 12	7	0.90	22,320	22,320	98,243								26,531								32,326
				Property Site Elements																							
4.020	4,575	4,575	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2016	3 to 5	1	1.75	8,006	8,006	95,504		8,206						9,517			10,249			11,037		
4.040	4,575	4,575	Square Yards	Asphalt Pavement, Alleys, Mill and Overlay	2019	15 to 20	4	15.50	70,913	70,913	78,274					78,274											
4.045	4,575	4,575	Square Yards	Asphalt Pavement, Alleys, Total Replacement	2034	15 to 20	19	35.50	162,413	162,413	259,641																
4.100	9	9	Each	Catch Basins, Alleys, Inspections and Capital Repairs	2019	15 to 20	4	375.00	3,375	3,375	9,120					3,725											
4.141	6,100	380	Square Feet	Concrete Sidewalks, Partial (Includes Condenser Pads)	2025	to 65	10 to 30+	8.00	3,040	48,800	19,707											3,891					
4.420	48	48	Zones	Irrigation System	2042	to 40	27	1,850.00	88,800	88,800	172,965																
4.600	33	33	Each	Mailboxes	2025	20 to 25	10	400.00	13,200	13,200	16,897											16,897					
				Anticipated Expenditures, By Year							$2,719,734	0	8,206	0	0	81,999	0	0	189,032	128,906	132,128	166,468	0	0	127,039	118,902	340,596

TOWNHOMES

RESERVE EXPENDITURES

The Plantation on Pelham
Property Owners Association, Inc.
Greenville, South Carolina

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Life Analysis, Years Remaining	Costs, $ Unit (2015)	Costs, $ Per Phase (2015)	Costs, $ Total (2015)	Costs, $ 30-Year Total (Inflated)	16 2031	17 2032	18 2033	19 2034	20 2035	21 2036	22 2037	23 2038	24 2039	25 2040	26 2041	27 2042	28 2043	29 2044	30 2045
				Exterior Building Elements																						
1.120	4,950	1,650	Square Feet	Balconies, Wood, Phased (Includes Railings)	2028	to 25	13 to 15	51.00	84,150	252,450	356,778															
1.240	7,800	2,600	Linear Feet	Gutters and Downspouts, Aluminum, Phased	2023	15 to 20	8 to 10	6.00	15,600	46,800	154,249													31,145	31,924	32,722
1.280	820	273	Squares	Roofs, Asphalt Shingles, Phased	2023	15 to 20	8 to 10	330.00	90,199	270,600	891,871													180,082	184,584	189,198
1.760	33	33	Units	Walls and Trim, Paint Finishes	2022	6 to 8	7	3,900.00	128,700	128,700	566,485								227,105							
1.820	24,800	24,800	Square Feet	Walls and Porches, Masonry, Inspections and Repairs	2022	8 to 12	7	0.90	22,320	22,320	98,243								39,386							
				Property Site Elements																						
4.020	4,575	4,575	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2016	3 to 5	1	1.75	8,006	8,006	95,504	11,885						13,783			14,843			15,984		
4.040	4,575	4,575	Square Yards	Asphalt Pavement, Alleys, Mill and Overlay	2019	15 to 20	4	15.50	70,913	70,913	78,274															
4.045	4,575	4,575	Square Yards	Asphalt Pavement, Alleys, Total Replacement	2034	15 to 20	19	35.50	162,413	162,413	259,641				259,641											
4.100	9	9	Each	Catch Basins, Alleys, Inspections and Capital Repairs	2019	15 to 20	4	375.00	3,375	3,375	9,120				5,395											
4.141	6,100	380	Square Feet	Concrete Sidewalks, Partial (Includes Condenser Pads)	2025	to 65	10 to 30+	8.00	3,040	48,800	19,707	4,513						5,234						6,069		
4.420	48	48	Zones	Irrigation System	2042	to 40	27	1,850.00	88,800	88,800	172,965												172,965			
4.600	33	33	Each	Mailboxes	2025	20 to 25	10	400.00	13,200	13,200	16,897															
				Anticipated Expenditures, By Year							$2,719,734	16,398	0	0	265,036	0	0	19,017	266,491	0	14,843	0	172,965	233,280	216,508	221,920

RESERVE FUNDING PLAN

TOWNHOMES

CASH FLOW ANALYSIS

The Plantation on Pelham

Property Owners Association, Inc.

Greenville, South Carolina

Individual Reserve Budgets & Cash Flows for the Next 30 Years

			FY2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Reserves at Beginning of Year (Note 1)		44,968	57,130	79,303	124,015	183,244	174,726	262,602	353,467	257,475	223,261	187,778	119,840	220,935	325,554	306,057	297,156
	Total Recommended Reserve Contributions (Note 2)		11,781	29,700	43,700	57,700	71,700	85,700	87,800	90,000	92,300	94,600	97,000	99,400	101,900	104,400	107,000	109,700
Plus	Estimated Interest Earned, During Year (Note 3)		381	679	1,012	1,529	1,781	2,176	3,065	3,040	2,392	2,045	1,530	1,695	2,719	3,142	3,001	1,817
Less	Anticipated Expenditures, By Year		0	(8,206)	0	0	(81,999)	0	0	(189,032)	(128,906)	(132,128)	(166,468)	0	0	(127,039)	(118,902)	(340,596)
	Anticipated Reserves at Year End		$57,130	$79,303	$124,015	$183,244	$174,726	$262,602	$353,467	$257,475	$223,261	$187,778	$119,840	$220,935	$325,554	$306,057	$297,156	$68,077 (NOTE 5)
	Predicted Reserves based on 2015 funding level of:	$15,708	57,130	65,241	81,680	98,283	32,643	48,756	65,030	(108,510)	(223,359)							

(continued)

Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued

		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
	Reserves at Beginning of Year	68,077	142,728	236,917	334,359	168,826	270,411	375,525	465,090	309,452	422,795	525,068	646,095	597,417	490,650	402,686
	Total Recommended Reserve Contributions	90,000	92,300	94,600	97,000	99,400	101,900	104,400	107,000	109,700	112,400	115,200	118,100	121,100	124,100	127,200
Plus	Estimated Interest Earned, During Year	1,049	1,889	2,842	2,503	2,185	3,214	4,182	3,853	3,643	4,716	5,827	6,187	5,413	4,444	3,553
Less	Anticipated Expenditures, By Year	(16,398)	0	0	(265,036)	0	0	(19,017)	(266,491)	0	(14,843)	0	(172,965)	(233,280)	(216,508)	(221,920)
	Anticipated Reserves at Year End	$142,728	$236,917	$334,359	$168,826	$270,411	$375,525	$465,090	$309,452	$422,795	$525,068	$646,095	$597,417	$490,650	$402,686	$311,519 (NOTE 4)

Explanatory Notes:

1) Year 2015 starting reserves are as of March 31, 2015; FY2015 starts January 1, 2015 and ends December 31, 2015.
2) Reserve Contributions for 2015 are the remaining budgeted 9 months; 2016 is the first year of recommended contributions.
3) 1.0% is the estimated annual rate of return on invested reserves; 2015 is a partial year of interest earned.
4) Accumulated year 2045 ending reserves consider the need to fund for replacement of the fiber cement siding after 2045, and the age, size, overall condition and complexity of the property.
5) Threshold Funding Year (reserve balance at critical point).

4. CONDITION ASSESSMENT

The Condition Assessment of this *Full Reserve Study* includes *Enhanced Solutions and Procedures* for select significant components. These narratives describe the Reserve Components, document specific problems and conditions, and may include detailed solutions and procedures for necessary capital repairs and replacements for the benefit of current and future board members. We advise the Board use this information to help define the scope and procedures for repair or replacement when soliciting bids or proposals from contractors. *However, the Report in whole or part is not and should not be used as a design specification or design engineering service*.

Exterior Building Elements

Balconies, Wood - The Association maintains wood balconies at the front and rear elevations of select units that comprise a total of approximately 4,950 square feet. The balconies are original and in good overall condition. Balcony construction includes the following:

- Deck boards fastened with screws
- Wood railings with horizontal and diagonal pickets. Diagonal picket configurations promote climbing and are potentially dangerous.
- Waterproof membranes
- Wood column supported frames
- Masonry footings

Wood balcony materials treated with a protective finish have useful lives of up to 25 years with proper maintenance. Proper maintenance should include the following activities funded through the operating budget:

- Annual inspections to identify and correct any unsafe conditions
- Securing of loose fasteners and replacement of deteriorated fasteners
- Replacement of deteriorated wood components
- Power washing with an algaecide and application of a sealer/stain

The rates and types of deterioration are not uniform due to the nature of wood. Replacement is normally an ongoing process which eventually leads to a complete replacement for economic or aesthetic reasons. We recommend the Association anticipate a phased replacement of the balcony elements noted above beginning by 2028 and concluding by 2030. We depict this information on Line Item 1.120 of ***Reserve Expenditures***.

Gutters and Downspouts, Aluminum - Approximately 7,800 linear feet of aluminum five-inch seamless gutters and three-inch by four-inch downspouts drain storm water from the roofs of The Plantation on Pelham. These gutters and downspouts are original and in good overall condition. These gutters and downspouts have a useful life of 15- to 20-years. We include the following solutions and procedures for gutter and downspout maintenance and replacements for present and future board members.

The most common and economical type of gutter profile is the metal roll-formed seamless K-style. The five-inch wide K-style gutter is standard but six-inch wide K-style gutters should be used on larger roofs. The size of the gutter is determined by the roof's watershed area, a roof pitch factor and the rainfall intensity number of the Association's region. We recommend sloping gutters 1/16 inch per linear foot and providing fasteners a maximum of every three feet.

Downspouts can drain 100 square feet of roof area per one square inch of downspout cross sectional area. Downspouts should be of the same material as the gutters. We recommend the use of downspout extensions and splash blocks at the downspout discharge to direct storm water away from the foundations. Downspouts that discharge directly onto roofs cause premature deterioration of the roofs due to the high concentration of storm water. We

recommend either routing these downspouts directly to the ground, connecting the downspouts to the gutters of the lower roof or distributing the storm water discharge over a large area.

Maintenance of the gutters and downspouts should include semiannual inspections, repairs at seams and fastening points, verification that the downspouts discharge away from foundations and cleaning. More frequent maintenance may be required for gutters and downspouts in areas of concentrated landscape growth. The Association should fund these expenses through the operating budget. A lack of maintenance resulting in misdirected storm water will result in deterioration of soffits, fascia, siding, foundations, and the gutters and downspouts themselves.

The useful life of gutters and downspouts coincides with that of the asphalt shingle roofs at 15- to 20-years. Therefore, we recommend the Association budget for a phased replacement of the gutters and downspouts in conjunction with the phased roof replacement beginning by 2023 and concluding by 2025. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements. We anticipate a subsequent phased replacement beginning by 2043 and concluding by 2045. We depict this information on Line Item 1.240 of ***Reserve Expenditures***. We base our cost on replacement with .027-inch thick aluminum.

Roofs, Asphalt Shingles - Approximately 820 *squares*[1] of asphalt shingles comprise the roofs of The Plantation on Pelham. The roofs are original and are in good overall condition. Management and the Board do not report a history of leaks. Our visual inspection from the

[1] We quantify the roof area in *squares* where one square is equal to 100 square feet of surface area.

ground notes no visible deterioration. Pages 5.25 and 5.26 of ***Photographs*** depict the asphalt shingle roofs. The existing roof assembly comprises the following:

- Laminate shingles
- Boston style ridge caps
- Rubber seal with plastic base boot flashing at waste pipes
- Soffit, gable and ridge vents
- Metal drip edge
- Enclosed half weaved valleys

The useful life of asphalt shingle roofs in Greenville is from 15- to 20-years. We include the following solutions and procedures pertaining to the components of an asphalt shingle roof system, times of replacement, recommended method of replacement, and coordination of other related work for the benefit of present and future board members.

Insulation and ventilation are two major components of a sloped roof system. Together, proper insulation and ventilation help to control attic moisture and maintain an energy efficient building. Both insulation and ventilation prevent moisture buildup which can cause wood rot, mold and mildew growth, warp sheathing, deteriorate shingles, and eventually damage building interiors. Sufficient insulation helps to minimize the quantity of moisture that enters the attic spaces and adequate ventilation helps to remove any moisture that enters the attic spaces. These two roof system components also help to reduce the amount of energy that is required to heat and cool a building. Proper attic insulation minimizes heat gain and heat loss between the residential living spaces and attic spaces. This reduces energy consumption year-round. Proper attic ventilation removes excessive heat from attic spaces that can radiate into residential living spaces and cause air conditioners to work harder. Properly installed attic insulation and ventilation work together to maximize the useful life of sloped roof systems.

The Association should periodically ensure that the vents are clear of debris and are not blocked from above by attic insulation. If the soffit vents are blocked from above, the Association should install polystyrene vent spaces or baffles between the roof joists at these locations to ensure proper ventilation. The Plantation on Pelham should fund this ongoing maintenance through the operating budget.

Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of its useful life. Even if the shingles are largely watertight, the infiltration of water in one area can lead to permanent damage to the underlying roof sheathing. This type of deterioration requires replacement of saturated sections of sheathing and greatly increases the cost of roof replacement. Roof leaks may occur from interrelated roof system components, i.e., flashings. Therefore, the warranty period, if any, on the asphalt shingles, may exceed the useful life of the roof system.

Warranties are an indication of product quality and are not a product guarantee. Asphalt shingle product warranties vary from 20- to 50-years and beyond. However, the scope is usually limited to only the material cost of the shingles as caused by manufacturing defects. Warranties may cover defects such as thermal splitting, granule loss, cupping, and curling. Labor cost is rarely included in the remedy so if roof materials fail, the labor to tear off and install new shingles is extra. Other limitations of warranties are exclusions for "incidental and consequential" damages resulting from age, hurricanes, hail storms, ice dams, severe winds, tornadoes, earthquakes, etc. There are some warranties which offer no dollar limit for replacement at an additional cost (effectively an insurance policy) but again these warranties also

have limits and may not cover all damages other than a product defect. We recommend a review of the manufacturers' warranties as part of the evaluation of competing proposals to replace a roof system. This evaluation should identify the current costs of remedy if the roof were to fail in the near term future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

Our estimate of remaining useful life considers this possibility and the Association should anticipate the need for capital repairs to the shingles and other roof system components to achieve or maximize the remaining useful life of the roofs. The Association should fund ongoing roof repairs as normal maintenance from the operating budget.

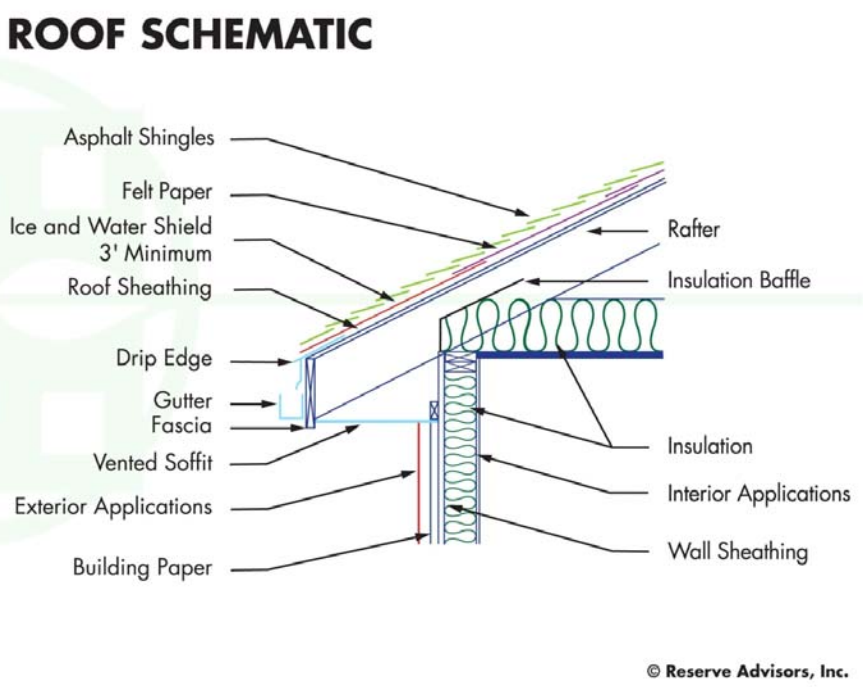
Contractors use one of two methods of replacement for sloped roofs, either an overlayment or a tear-off. Overlayment is the application of new shingles over an existing roof. Although this method is initially more economical, the following disadvantages exist for this type of replacement:

1. Overlaid shingles hide condition defects of the roof system and do not allow for replacement of critical flashings, underlayments and ventilation.
2. Additional layers of shingles absorb and store more heat resulting in premature deterioration of the new shingles and continued deterioration of the underlying shingles and other roof system components.
3. New shingles installed over deteriorated shingles may result in an uneven appearance.

The disadvantages above result in a shorter useful life of 10- to 15-years for overlaid roofs. This shortened useful life and the inevitable eventual replacement of both shingle layers will actually result in increased long-term replacement costs. The costs of an eventual total replacement are deferred onto future homeowners thereby conflicting with the purpose of a reserve study to ensure that homeowners pay their "fair share" of the weathering and aging of this commonly owned property. Therefore, we recommend only the tear-off method of

replacement. The advantages of the tear-off method include the correction of hidden or latent defects and extend the useful life of the new roof.

The tear-off method of replacement includes removal of the existing shingles, flashings if required and underlayments. The contractor should then inspect the roof sheathing for areas of water damage and partially replace the sheathing as needed. Once the roof sheathing is repaired, the contractor can begin installation of the new underlayments, flashings and shingles. The following cross-sectional schematic illustrates an asphalt shingle roof system:



The two types of underlayment most often used in an asphalt shingle roof system are ice and water shield membrane, and organic felt paper of varying weights depending on local building codes. Both types of underlayment protect the roof sheathing from moisture damage

and wind-driven rain. They have a low vapor resistance that impedes the accumulation of moisture between the underlayment and the roof sheathing. Ice and water shield membrane is thicker than organic paper and is used in areas that are subject to ice dams and standing water. The contractor should install ice and water shield membranes (often a modified bitumen product) at the outer 36 inches of the gutter and rake edge roof eaves, and in the roof valleys. Standard 15-pound organic felt paper should provide sufficient protection over the remaining portions of the roof. Underlayments work in conjunction with flashings to form a watertight roof system.

The function of flashing is to provide a watertight junction between the roofing material and the other parts of the structure and between roof sections. Flashing material is usually galvanized metal, although some roofs use copper or synthetic rubber. The Association should require the contractor to augment existing flashings or replace deteriorated flashings at the time of roof replacement at the following locations:

- Changes in the slope
- Valleys
- Roof intersections with a wall, vertical structure, roof penetration, i.e., vent stacks
- Rakes (sloped edges of the roof) and soffits (lower roof edges)

Another critical type of flashing is drip edge flashing. This important flashing sheds water off the edges of the roofs. The drip edge flashing allows storm water to run off the roof into the gutters without coming into contact with the underlayment and eave board. The special profile of a metal drip edge also prevents or minimizes the possibility of rain water blowing back under the shingles. The contractor should install this flashing at the gutter edge before the installation of underlayment and at the rake edge *after* the installation of underlayment.

Asphalt shingles include both fiberglass shingles and organic mat shingles. Both shingle types are made with asphalt. Fiberglass shingles use a fiberglass reinforcing mat while organic

shingles use a wood based cellulose fiber mat. Fiberglass shingles are thinner, lighter and carry a better fire rating than organic shingles. Organic mat shingles are more durable and stay more flexible in cold weather. The contractor should install the shingles atop the underlayment and in conjunction with flashing. Based on a better fire rating, we suggest The Plantation on Pelham use a standard strip, fiberglass, Class A, minimum weight class of 210 pounds per square self-sealing shingle at the time of replacement. The self-sealing strip affixes to the lower exposed edges of the shingles. Heat from ambient weather and sunlight activates the shingle adhesive material and seals the two adjacent courses of shingles together. Contractor proposals should specify the types of proposed materials and types of proposed fasteners. The Association should require the use of nail fasteners, not staples, at the time of replacement. Nail guns are acceptable. Staples are of lesser quality and might not withstand wind forces as well as nails.

The Association should plan to ***coordinate*** the replacement of gutters and downspouts with the adjacent roofs. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements.

Based on the age and condition of the roofs, we recommend The Plantation on Pelham budget for a phased replacement beginning by 2023 and concluding by 2025. We anticipate a subsequent phased replacement beginning by 2043 and concluding by 2045. We note this information on Line Item 1.280 of ***Reserve Expenditures***. We base our cost on replacement with standard laminate Class A 240-260-pounds per square shingles. The Association should fund any repairs prior to the complete replacement of the roofs through the operating budget.

Walls and Trim, Paint Finishes - The buildings include paint finish applications on the following surfaces:

- Balconies and railings
- Fences, Metal
- Fences, Wood
- Fiber cement siding
- Stucco and concrete finishes
- Trim

Periodic application of a protective finish of paint is an essential maintenance activity to maintain the physical appearance and integrity of these elements. The Association applied a finish in 2014 and it is in good overall condition.

The Board is likely familiar with many of the requirements for the periodic application of *paint*[2] products. We include the following solutions and procedures as a summary of the minimum requirements for a successful paint finish application for present and future board members.

Correct and complete *preparation* of the surface before application of the paint finish maximizes the useful life of the paint finish and surface. The contractor should remove all loose, peeled or blistered paint before application of the new paint finish. The contractor should then power wash the surface to remove all dirt or chalking of the prior paint finish.

Summarizing the minimum requirements of the proposed scope of work, all bids should include the following:

1. Name of paint finish product
2. The contractor will involve manufacturer representatives to ensure specifications and warranty
3. The contractor will apply the paint to clean and dry surfaces at the manufacturer's recommended spreading rates

[2]The term *paint* is a generic reference to a specialized mixture of solid pigment in a liquid solution that results in a clear, opaque or solid color protective finish. Product types are too numerous to list but include latex, oil, acrylic and elastomeric based products.

4. The contractor will apply successive coats of the paint finish, with sufficient time elapse between coats, as necessary to ensure uniform appearance
5. The contractor will replace deteriorated or damaged materials prior to the application of the paint finish
6. The contractor will replace deteriorated sealants or caulk prior to the application of the paint finish

The useful life of protective paint finishes in Greenville is from six- to eight-years. Based on the condition of the paint finishes, we recommend the Association budget for the following activities beginning by 2022:

- Paint finish applications
- Replacement of up to one percent (1%), of the siding and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

The Plantation on Pelham should budget subsequent applications and associated replacements every eight years thereafter. We depict this information on Line Item 1.760 of ***Reserve Expenditures***.

Walls and Porches, Masonry - Masonry comprises approximately 24,800 square feet of the exterior walls and porches. The overall condition of the masonry is good. We note the following components and conditions of the masonry:

- No previous repairs evident
- Efflorescence is not visible
- Vinyl clad metal lintels
- No masonry cracks are evident
- No spalled masonry is evident
- No mortar deterioration is evident
- Weeps and flashing at lintels are not visible

We advise a complete inspection of the masonry, and partial repointing with related masonry repairs every 8- to 12-years to forestall deterioration. We elaborate on solutions and procedures necessary for the optimal maintenance of masonry walls in the following discussion.

Masonry generally requires less maintenance than other types of exteriors. However, masonry is not maintenance free. Masonry exteriors should last the life of the building with proper maintenance. The Plantation on Pelham should plan for the periodic inspection of the masonry to identify and repair areas of deterioration. Common types of masonry deterioration include efflorescence, spalling and cracking.

The primary cause of efflorescence, cracks and face spall is water infiltration, therefore prevention of water infiltration is the principal concern for the maintenance of masonry applications. Masonry walls normally shed storm water and condensate from behind the wall through weep holes. However, trapped water within masonry walls can cause corrosion of metal masonry ties, studs, structural members and potentially damage building interiors. The first sign of water infiltration is usually a water stain. Eventually, water infiltration can lead to deterioration of the masonry. If left unrepaired, water infiltration can lead to efflorescence, cracks and face spall as described below.

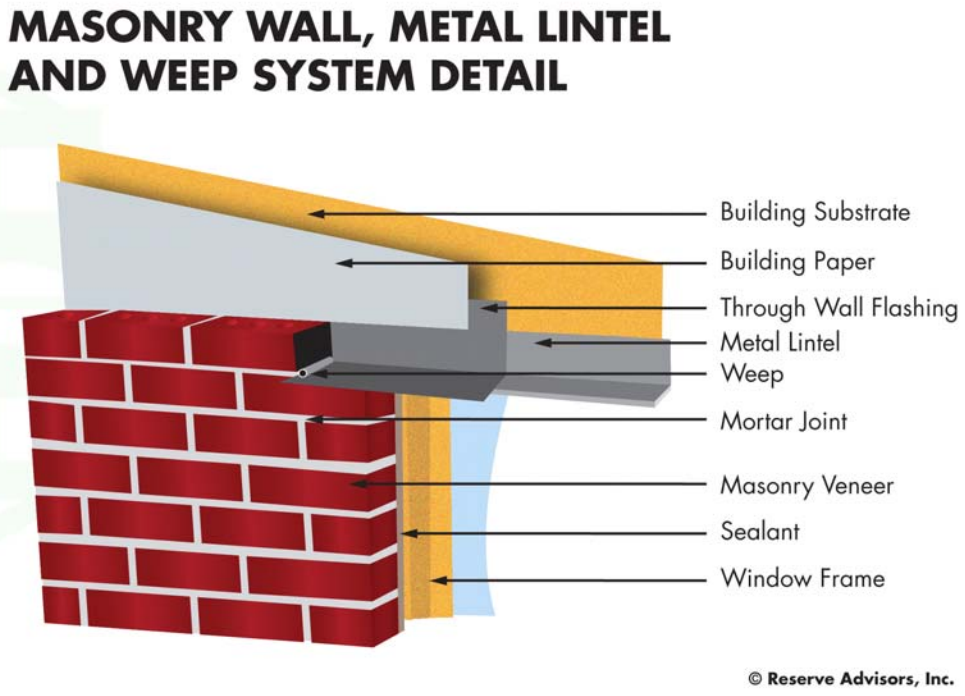
Trapped water can also migrate through areas of cracked mortar or other points within the cavity of a masonry wall. This moisture then typically migrates to the exterior face of the masonry where it evaporates. As the moisture evaporates, it deposits soluble white salts either on the surface as efflorescence or below the surface as subflorescence. Efflorescence mars the appearance of the masonry, is typically harmless but can also indicate a harmful condition known as subflorescence. Subflorescence within a masonry unit can create pressure that will eventually spall the masonry face. In addition, accumulated (trapped) storm water within or behind mortar joints in conjunction with inclement weather can also gradually spall masonry, create mold or damage adjacent components, i.e., windows or interior finishes. Spalling is a form of deterioration where small fragments of masonry break away from the wall system.

Spalls can also occur as a result of a chemical reaction or from movement of a building structure. Spalled masonry may eventually dislodge individual masonry units.

Repointing is a process of raking and cutting out defective mortar to a depth of not less than ½ inch nor more than ¾ inch and replacing it with new mortar. Face grouting is the process of placing mortar over top of the existing mortar. We advise against face grouting because the existing, often deteriorated mortar does not provide a solid base for the new mortar. New mortar spalls at face grouted areas will likely occur. One purpose of a mortar joint is to protect the masonry by relieving stresses within the wall caused by expansion, contraction, moisture migration and settlement. Repointed mortar joints are more effective if the mortar is softer and more permeable than the masonry units, and no harder or less permeable than the existing mortar. The masonry contractor should address these issues within the proposed scope of work.

The contract for repairs should also include attention to other related activities such as repair and partial replacement of window sills, lintel beams and deteriorated masonry. We recommend the contract for masonry repairs include a thorough inspection of horizontal masonry such as copings or sills as these areas are prone to accelerated deterioration. Together, these aggregated capital repairs maximize the useful life of a masonry wall system.

We also recommend inspection, repair and replacement of the vinyl clad lintels. Lintels are structural supports or beams above windows and doors. Fatigued lintels also allow the direct penetration of storm water into the wall assembly. These inspections should locate areas of cracks or other structural damage to the walls around lintels. Structural damage can eventually lead to costly replacements of lintels and surrounding wall systems. The following diagram details a lintel and weep system:



With the onset of deflection, a portion of the lintels may require replacement during the next 30 years. Replacement of lintels includes the following activities:

- Removal of deteriorated lintels and surrounding masonry
- Installation of new pre-primed and painted metal lintels
- Installation of asphaltic flashing above the lintels
- Reinstallation of the masonry with new mortar and weeps

A complete inspection of the exterior walls can only identify the exact scope of masonry repairs and replacements. Based on the age and condition of the masonry, we recommend the Association budget for the following activities:

- Complete inspection of the masonry
- Repointing of up to three percent (3%) of the masonry
- Replacement of up to one percent (1%) of the masonry
- Replacement of up to one percent (1%) of the metal lintels

We recommend the Association anticipate this work by 2022 and every eight years thereafter. The times and extent of the masonry repointing and related work may vary.

However, we judge at this time the estimated amounts noted on Line Item 1.820 of ***Reserve Expenditures*** appropriate to estimate sufficient reserves.

Property Site Elements

Asphalt Pavement, Crack Repair, Patch and Partial Seal Coat - Asphalt pavement comprises approximately 4,575 square yards at the townhome alleys. The pavement at the alleys are original and are in good to fair overall condition. We note multiple areas of cracks and pavement deterioration, and cracked and spalled concrete at the concrete apron. Pages 5.31 through 5.34 of ***Photographs*** depict these conditions.

Asphalt pavement comprises approximately 10,725 square yards of streets throughout the community. The pavement is original and in good overall condition. We note transverse cracks on Lowther Hall Lane and multiple areas of cracks on Micasa Court. Pages 5.2 through 5.4 of ***Photographs*** depict the conditions of the asphalt pavement at the streets.

Management and the Board inform us the Association applied a seal coat and conducted pavement repairs at the townhome alleys in 2013. The Association should plan future applications and repairs every three- to five-years. These activities reduce water infiltration and the effects of inclement weather. We elaborate on solutions and procedures necessary for the optimal maintenance of asphalt pavement in the following discussion.

Asphalt pavement is susceptible to isolated areas of accelerated deterioration at the centerlines and at high traffic areas such as intersections. Depressions often appear at areas where vehicles park such as driveways and parking areas. Isolated areas of depressions, cracks and deterioration indicate the need for crack repairs and patching. The contractor should patch areas that exhibit potholes, alligator or spider web pattern cracks, and areas of pavement that are

severely deteriorated from oil and gasoline deposits from parking vehicles. Area patching requires total replacement of isolated areas of pavement. The contractor should mechanically rout and fill all cracks with hot emulsion. Crack repair minimizes the chance of the cracks transmitting through the pavement.

There are four main types of seal coats available: fog coat, acrylic sealer, chip seals and asphaltic emulsion. A fog coat is a simple mixture of water and asphalt. Acrylic sealers include an acrylic additive to the water and asphalt mixture for greater resistance to abrasion. Fog coats and acrylic sealers are typically spray applied and are only for aesthetic purposes. Chip seal is the most substantial type of seal coat which involves placement of oil and aggregate on the driving surface. Either a roller or normal vehicular traffic works the gravel into the oil. Asphaltic emulsions combine a sharp sand mixture or mineral fibers, and an emulsifying agent with the water and asphalt mixture. Asphaltic emulsions are typically hand applied with squeegees to ensure that the sealer fills surface abrasions and minor cracks. This prevents the infiltration of water through cracks into the underlying pavement base. Seal coats therefore minimize the damaging effects of water from expansion and contraction. We regard asphaltic emulsions as the most effective and economical type of seal coat.

The Plantation on Pelham should repair any isolated areas of deteriorated pavement prior to seal coat applications. Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks; therefore, unrepaired cracks render the seal coat applications useless. Our future estimates of cost include an allowance for repair activities.

We recommend The Plantation on Pelham plan the next application of seal coat at the townhome alleys in 2016 and subsequent applications every three years thereafter except when repaving occurs. Line Item 4.020 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of these activities.

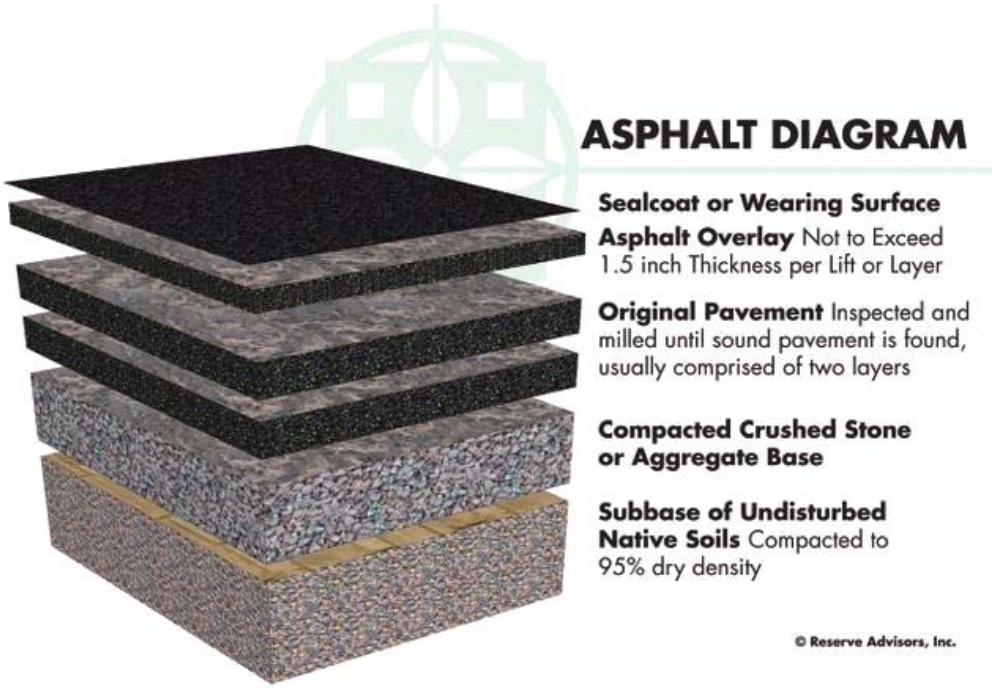
The Plantation on Pelham should budget for crack repairs and patching at the common streets by 2017 and subsequent applications every three years thereafter except when repaving occurs. Line Item 4.021 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of these activities.

Asphalt Pavement, Repaving – As previously stated, asphalt pavement comprises approximately 4,575 square yards at the townhome alleys. The pavement at the alleys are original and are in good to fair overall condition. We note multiple areas of cracks and pavement deterioration, and cracked and spalled concrete at the concrete apron. Pages 5.31 through 5.34 of ***Photographs*** depict these conditions.

As previously stated, asphalt pavement comprises approximately 10,725 square yards of streets throughout the community. The pavement is original and in good overall condition. We note transverse cracks on Lowther Hall Lane and multiple areas of cracks on Micasa Court. Pages 5.2 through 5.4 of ***Photographs*** depict the conditions of the asphalt pavement at the streets.

The useful life of pavement in Greenville is from 15- to 20-years. We include the following repaving solutions and procedures for the benefit of the present and future board members.

Components of asphalt pavement include native soil, aggregate and asphalt. First the contractor creates a base course of aggregate or crushed stone and native soil. The base course is individually compacted to ninety-five percent (95%) dry density prior to the application of the asphalt. Compaction assures a stable base for the asphalt that reduces the possibility of settlement. For street systems, the initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts these components:



The manner of repaving is either a *mill and overlay* or *total replacement*. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing

asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving followed by the total replacement method of repaving for the townhome alleys at The Plantation on Pelham. We recommend the mill and overlay method of repaving for the common streets at The Plantation on Pelham.

A variety of repairs are necessary to deteriorated pavement prior to the application of an overlay. The contractor should use a combination of area patching, crack repair and milling before the overlayment. Properly milled pavement removes part of the existing pavement and permits the overlay to match the elevation of adjacent areas not subject to repaving. Milling also allows the contractor to make adjustments to the slope of the pavement to ensure proper drainage. The contractor should clean the milled pavement to ensure proper bonding of the new overlayment. We recommend an overlayment thickness that averages 1½ inches (not less than one inch or more than two inches). Variable thicknesses are often necessary to create an adequate slope for proper drainage. The contractor should identify and quantify areas of pavement that require area patching, crack repair and milling to help the Association compare proposed services.

Total replacement requires the removal of all existing asphalt. For area patching, we recommend the contractor use a rectangular saw cut to remove the deteriorated pavement. For larger areas such as entire parking areas or driveways, we recommend the contractor grind, mill

or pulverize the existing pavement to remove it. The contractor should then augment and compact the existing aggregate and native soil to create a stable base. Finally the contractor should install the new asphalt in at least two lifts.

The time of replacement is dependent on the useful life, age and condition of the pavement. The useful life is dependent in part on the maintenance applied to the pavement, the amounts and concentration of auto solvents that penetrate the pavement, the exposure to sunlight and detrimental effects of inclement weather. We recommend the Association plan for a phased milling and overlayment of the pavement at the townhome alleys with area patching of up to ten percent (10%) by 2019. We depict this information on Line Item 4.040 of ***Reserve Expenditures***. We recommend the Association plan for total replacement by 2034. We depict this information on Line Item 4.045 of ***Reserve Expenditures***. Or estimates of unit cost include an allowance for the replacement of the concrete apron. The Association should coordinate asphalt repaving with capital repairs to the catch basins at the townhome alleys.

We recommend the Association plan for a phased milling and overlayment of the pavement at the common streets with area patching of up to ten percent (10%) by 2023 and again by 2043. We depict this information on Line Item 4.041 of ***Reserve Expenditures***. The Association should coordinate asphalt repaving at the common streets with related activities such as partial replacement of concrete curbs and gutters, and capital repairs to catch basins.

Catch Basins - The Association maintains nine concrete catch basins at the townhome alleys and 13 catch basins at the common streets that collect storm water from the pavement and conduct it into the storm water system. The overall condition of the catch basins is good without settlement visually apparent. The useful life of catch basins is up to 60 years. However,

achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

The Association should anticipate the occasional displacement or failure of a catch basin and the surrounding pavement from erosion. Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement. The Plantation on Pelham should plan to repair or replace any displaced or failed catch basins concurrently with the surrounding pavement. The exact times and amount of capital repairs or replacements are dependent upon variable natural forces. Based on the age and condition of the catch basins, we recommend the Association anticipate the inspection, capital repair or partial replacement of the nine catch basins at the townhome alleys and the 13 catch basins at the common streets in conjunction with each related repaving event. We include this information on Line Items 4.100 and 4.101 of ***Reserve Expenditures***.

Concrete, Flatwork - The Association maintains various applications of concrete flatwork. These applications of concrete have useful lives of up to 65 years although isolated deterioration of limited areas of concrete is common. Inclement weather, inadequate subsurface preparation and improper concrete mixtures or finishing techniques can result in premature deterioration such as settlement, chips, cracks and spalls. Variable conditions like these result in the need to plan for periodic partial replacements of the concrete flatwork throughout the next 30 years. We comment on the respective quantities, conditions and times of partial replacements of concrete flatwork in the following sections of this narrative.

Concrete Gutters - Concrete gutters line the pavement of the common streets. These gutters comprise approximately 6,200 linear feet and are in good condition overall.

We note areas of cracked and settled sections. Pages 5.5 and 5.6 of ***Photographs*** depict the concrete gutters. We estimate that up to 1,860 linear feet of gutters, or thirty percent (30%) of the total, will require replacement during the next 30 years. We estimate that up to 930 linear feet of gutters, or fifteen percent (15%) of the total, will require replacement in conjunction with each repaving event at the common streets. We depict this information on Line Item 4.110 of ***Reserve Expenditures***. We assume the use of 3,500 pounds per square inch (PSI) concrete.

Concrete Sidewalks, Common - Concrete sidewalks comprise approximately 18,800 square feet at the common streets. The sidewalks are in good to fair overall condition. We note areas of cracked concrete sections. Pages 5.5 through 5.7 of ***Photographs*** depict the common concrete sidewalks. We estimate that up to 4,700 square feet of concrete sidewalks, or twenty-five percent (25%) of the total, will require replacement during the next 30 years. We recommend the Association budget for replacement of 470 square feet of concrete sidewalks every three years beginning in 2016. Line Item 4.140 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of replacements. We base our estimate of replacement on four-inch thick, 3,000 pounds per square inch concrete with 6x6 - W1.4xW1.4 steel reinforcing mesh. We recommend an annual inspection of the sidewalks to identify potential trip hazards. We suggest the Association grind down or mark these hazards with orange safety paint prior to replacement and fund this ongoing activity through the operating budget.

Concrete Sidewalks, Townhomes - Concrete sidewalks comprise approximately 6,100 square feet at the townhomes. This quantity includes the condenser pads at the rear

of the units. The sidewalks are in good overall condition. We estimate that up to 1,520 square feet of concrete sidewalks, or twenty-five percent (25%) of the total, will require replacement during the next 30 years. We recommend the Association budget for replacement of 380 square feet of concrete sidewalks every six years beginning by 2025. Line Item 4.141 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of replacements. We base our estimate of replacement on four-inch thick, 3,000 pounds per square inch concrete with 6x6 - W1.4xW1.4 steel reinforcing mesh. We recommend an annual inspection of the sidewalks to identify potential trip hazards. We suggest the Association grind down or mark these hazards with orange safety paint prior to replacement and fund this ongoing activity through the operating budget.

The times and costs of these replacements may vary. However, the estimated expenditures detailed in ***Reserve Expenditures*** are sufficient to budget appropriate reserves.

Fences, Wood - Approximately 800 linear feet of wood fence are found at the northwest perimeter of the property. The fence is original and in good overall condition. We note isolated repaired areas, and isolated separated and warped wood members. Pages 5.7 and 5.8 of ***Photographs*** depict these conditions.

Approximately 230 linear feet of wood fence are found at the retaining wall behind the townhomes. The fence is original and in good overall condition.

Wood fences have useful lives of 15- to 20-years. The Association should anticipate periodic partial replacements due to the non-uniform nature of wood deterioration. The Association should repair the fences as necessary and fund these activities through the operating

budget. We suggest the Association plan for replacement of the fence at the northwest corner of the property by 2023 and again by 2043. We suggest the Association plan for replacement of the fence at the retaining wall by 2025 and again by 2045. We depict this information on Line Items 4.285 and 4.286 of ***Reserve Expenditures***.

Gate Entry System - The Association utilizes an intercom panel at the entrance to the community for communication between the owners and guests at The Plantation on Pelham. Management and the Board inform us the panel is original and in good operational condition. Gate entry system intercom panels of this type have useful lives of 10- to 15-years. We recommend the Association anticipate replacement by 2017 and every 12 years thereafter in coordination with the gate operators. We depict this information on Line Item 4.310 of ***Reserve Expenditures***.

Gates and Operators - The four metal gates and four bi-parting operators limit access into the community. The gates and operators are original and in good condition. We anticipate a useful life of 8- to 12-years for the operators and recommend the Association budget for replacement by 2017 and every 12 years thereafter. The gates have a longer useful life of up to 25 years. The Plantation on Pelham should anticipate replacement of the gates by 2029. We depict this information on Line Items 4.320 and 4.330 of ***Reserve Expenditures***.

Irrigation Systems - Two irrigation systems water the lawn and landscaped areas at the townhomes, and at the clubhouse and community entrance. The townhome system includes 48 zones and the common system includes 19 zones. The systems are original and reported in good condition. Irrigation systems typically include the following components:

- Electronic controls (timers)
- Impact rotors

- Network of supply pipes
- Pop-up heads
- Pump (2-HP at the common system)
- Valves

Water pressure activates the lawn spray pop-up heads. Controllers operate the main water flow valves. The exact amounts and locations of system components were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection.

The systems as a whole have useful lives of up to 40 years. The systems' network supply pipes will dislodge as tree roots grow and soil conditions change. The Plantation on Pelham should anticipate interim and partial replacements of the systems' network supply pipes and other components as normal maintenance to maximize the useful life of the irrigation systems. The Association should fund these ongoing seasonal repairs through the operating budget. In addition, we recommend The Plantation on Pelham budget for a complete replacement of the townhome system and the common system by 2042. We note this information on Line Items 4.420 and 4.421 of ***Reserve Expenditures***.

Landscape, Partial Replacements - The Association contains trees, shrubbery and other landscape elements. Replacement of these elements is an ongoing need. Many associations budget for these replacements as normal maintenance. Other associations fund ongoing replacements from reserves. Large amounts of landscape may need replacement due to disease, drought or other forces of nature. If the cost of removal and replacement is substantial, funding from reserves is logical. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape. In consideration of these factors and at the request of Management and the Board, we include a landscape allowance of $10,000 plus inflation every three years beginning by 2017 to ensure the accumulation of

sufficient reserves for partial replacements of the landscape. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 4.500 of ***Reserve Expenditures*** sufficient to budget appropriate reserves.

Mailboxes - The Association maintains 33 mailboxes at the townhomes that serve the townhome residents. The mailboxes are original, in good condition and have a useful life of 20- to 25-years. The Plantation on Pelham should budget for replacement of the mailboxes by 2025. We depict this information on Line Item 4.600 of ***Reserve Expenditures***. The Association should verify the new mailboxes meet the specifications of the *United States Postal Service*.

Retaining Wall, Concrete - The Association maintains one retaining wall at the rear of the townhome units that comprises approximately 1,850 square feet of concrete. The retaining wall is original and in good overall condition. Properly constructed retaining walls utilize geosynthetic reinforcement and a drainage system to stabilize the wall and prevent the buildup of hydrostatic pressure behind the wall. Concrete retaining walls have indefinite useful lives with the benefit of periodic inspections and capital repairs. We recommend the Association plan for inspections and capital repairs to the wall every 10- to 15-years, or by 2025 and 2038. We depict this information on Line Item 4.740 of ***Reserve Expenditures***.

Signage, Street and Traffic - The Association maintains six metal street and traffic signs throughout the community. These signs are original and in good overall condition. The functional useful life of the signs is from 15- to 20-years. The community signs contribute to the overall aesthetic appearance of the property to owners and potential buyers. Replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for the replacement

of the signs are discretionary. We recommend the Association plan to replace the signs by 2023 and again by 2043. We note this information on Line Item 4.810 of ***Reserve Expenditures***.

Walls, Masonry, Entrance - The Plantation on Pelham maintains approximately 1,500 square feet of painted masonry walls and columns at the entrance to the community. This masonry is original and in good to fair overall condition. The paint finishes are in fair to poor overall condition at an unknown age. We note isolated cracks and poor paint finishes. Pages 5.10 and 5.11 of ***Photographs*** depict these conditions. We recommend the Association anticipate an inspection, paint applications and capital repairs to the masonry every four- to six-years. These components will require repairs as a result of efflorescence accumulation, delamination of the masonry and mortar deterioration. We recommend The Plantation on Pelham budget for a complete inspection of the masonry, paint finishes and repairs of up to one percent (1.0%) in 2016 and every five years thereafter. Line Item 4.871 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of capital repairs. Our estimate of unit cost includes an allowance for paint applications to the metal gates at the community entrance.

Exterior Clubhouse Elements

Balcony, Wood - The Association maintains a wood balcony at the front elevation of the clubhouse which comprises 170 square feet. The balcony is in poor overall condition at an unknown age. We note a lean towards the front of the balcony away from the clubhouse. We observed posted signage that indicated no person should use the balcony. Page 5.13 of ***Photographs*** depicts the balcony. Balcony construction at the clubhouse includes the following:

- Wood railings with vertical pickets
- Wood cantilevered frame

- Waterproof membrane

Wood balcony materials treated with a protective finish have useful lives of up to 25 years with proper maintenance. Proper maintenance should include the following activities funded through the operating budget:

- Annual inspections to identify and correct any unsafe conditions
- Securing of loose fasteners and replacement of deteriorated fasteners
- Replacement of deteriorated wood components
- Power washing with an algaecide and application of a sealer/stain

The rates and types of deterioration are not uniform due to the nature of wood. Replacement is normally an ongoing process which eventually leads to a complete replacement for economic or aesthetic reasons. Due to the unsafe conditions, we recommend the Association anticipate replacement of the balcony elements noted in 2016, with a subsequent replacement by 2041. We depict this information on Line Item 5.121 of ***Reserve Expenditures***.

Deck, Composite - The Association maintains a composite deck with wood framing at the front elevation of the clubhouse which comprises 1,050 square feet. The deck is in good overall condition at an age of 10 years. We anticipate a useful life of up to 20- to 25-years for the composite deck. We elaborate on composite materials used in deck construction in the following narrative.

The composition of composite materials used in the construction of decks typically includes a combination of wood waste material, plastic and recycled materials. These composite materials are *low maintenance* and do not split, cup or splinter. Composite materials do not require periodic stain or sealer applications.

Composite materials are not structural components and therefore require traditional framing members, such as wood or metal. In addition, some manufacturers require closer

spacing of framing components to minimize sagging. In addition to the added cost of framing, composite deck materials can cost up to twice as much as natural wood.

The wood components in the composite material will absorb moisture. When dispelled, black mold spots can appear that will require chemical cleaning. However, these spots will reappear resulting in the need for cleaning every other month as needed during humid months. The Association should fund these expenses through the operating budget. Scratches and stains caused by pedestrian traffic can permanently damage the product. The color will also fade as it ages.

Based on these factors, we recommend the Association anticipate replacement of the deck by 2029. We note this information on Line Item 5.141 of ***Reserve Expenditures***. Our estimate of unit cost includes an allowance for the repairs and/or replacement of up to twenty-five percent (25%) of the wood framing at the time of deck replacement.

Exterior Renovations - The clubhouse exterior comprises the following:

- 1,500 square feet of brick stairs and walls
- 6,200 square feet of wood siding
- 1,300 square feet of stucco finishes
- 900 linear feet of window and door sealants
- 80 linear feet of metal railings
- Six vinyl shutters

The Association performed an exterior clubhouse renovation in 2011 and the elements are in fair overall condition. The useful lives of the clubhouse exterior elements vary significantly. However, due to the relatively small quantities and interrelated nature of these elements, we recommend the Association combine their replacements into coordinated exterior renovations.

We recommend the Association anticipate exterior renovations every four- to six-years. These *complete* renovations should include the following:

- Inspection of the brick veneer including partial repointing of up to five percent (5%)
- Application of paint finish including partial replacement of up to one percent (1%) of the stucco
- Application of paint finish including partial replacement of up to one percent (5%) of the wood siding and trim, including the balcony and railings
- Application of paint finish to the metal railings
- Replacement of the window and door joint sealants as needed
- Replacement of up to fifty percent (50%) of the vinyl shutters

Based on the age and visual condition of these exterior clubhouse elements, we recommend the Association budget for the next coordinated exterior renovation by 2017 and every six years thereafter. Line Item 5.300 of ***Reserve Expenditures*** notes this information.

Pavers, Masonry - The clubhouse area utilizes approximately 2,400 square feet of mortar-set masonry pavers. The pavers are in good overall condition at an unknown age. Masonry pavers have a long functional useful life. However, over time, the negative effects of inclement weather, erosion and pedestrian traffic will create areas of deterioration. We advise the Association budget for inspections and partial replacements of up to twenty percent (20%) every 8- to 12-years. We include an allowance for this work by 2023 and every 12 years thereafter in conjunction with exterior renovations of the clubhouse. We depict this information on Line Item 5.621 of ***Reserve Expenditures***. We suggest the Association conduct interim resetting and replacement of minor areas of pavers as normal maintenance, funded from the operating budget.

Roof, Asphalt Shingles - The clubhouse roof comprises approximately 42 squares of asphalt shingles. The roof is in good overall condition at an age of 10 years. The useful life of an asphalt shingle roof is from 15- to 20-years. We recommend the Association anticipate

complete replacement of the clubhouse roof by 2024 and again by 2043. We note this information on Line Item 5.600 of ***Reserve Expenditures***. The previous narrative "**Roofs, Asphalt Shingles**" details our recommendations concerning roof replacement.

Windows and Doors - The clubhouse windows and doors comprise approximately 1,050 square feet, and are in good to fair overall condition at varied ages. Construction of the windows and doors at the clubhouse includes the following:

- Wood frames
- Single pane glass
- Double hung windows
- Hinged doors

The useful life of wood frame windows and exterior doors is up to 40 years. The useful life of the windows and doors is based on the occurrence of water infiltration, thermal inefficiencies compared to present technology, type of frame, availability of replacement parts and aesthetics. Based on these factors and the varied ages, we recommend the Association anticipate the phased replacement of up to 175 square feet, or seventeen percent (16.7%), of the windows and doors by 2017 and every six years thereafter. We depict this information on Line Item 5.800 of ***Reserve Expenditures***.

Interior Clubhouse Elements

Air Handling and Condensing Units, Split Systems - The Association maintains two split system air conditioners to provide heated or cooled air, depending on the season, to the clubhouse. A split system air conditioner consists of an outside condensing unit, an interior evaporator coil, refrigerant lines and an interior electric air handling unit. The condensing units have cooling capacities of 3.5-tons and four-tons. The 3.5-ton split system uses R-22 refrigerant

and is reported in good operational condition at an age of 24 years. The four-ton split system uses R-410A refrigerant and is reported in good operational condition at an age of three years.

With periodic maintenance, the useful life of these units is from 15- to 20-years. We base the time of replacement of a split system on its anticipated useful life and frequency of service interruptions. The condensing unit may require replacement prior to replacement of the related interior forced air unit. However, The Plantation on Pelham should coordinate the replacement of the interior forced air unit, evaporator coil, refrigerant lines and exterior condensing unit. We recommend the Association anticipate replacement of the 1991 system by 2017 and again by 2037. We recommend the Association anticipate replacement of the 2012 system by 2032. We include this information on Line Items 6.071 and 6.072 of ***Reserve Expenditures***. Our cost is based on a 13 Seasonal Energy Efficiency Ratio (SEER) as required by The Department of Energy since January of 2006.

Floor Coverings, Wood, Refinish - Wood floors comprise approximately 3,400 square feet in the clubhouse. This quantity includes the first and second floors. Well maintained wood floors have an indeterminately long useful life and we do not anticipate *replacement* during the next 30 years. Instead, we recommend The Plantation on Pelham budget to *refinish* the floors every four- to six-years to maximize their remaining useful lives. We recommend the Association plan to refinish the wood floors by 2017 and every six years thereafter. We note this information on Line Item 6.421 of ***Reserve Expenditures***.

Furnishings - Furnishings in the clubhouse include the following elements:

- Chairs
- Clock
- Dresser
- Kitchen appliances

- Light fixtures
- Loveseats
- Pictures and decorations
- Rugs
- Sofas
- Tables
- Window treatments

These elements are in good to fair overall condition at varied ages. The useful lives of these interior building elements vary significantly up to 20 years. We estimate the present replacement cost of these elements at approximately $39,000. Due to varied uses, ages and useful lives, we recommend the Association budget $9,700 plus inflation for phased replacements of up to twenty-five percent (25%) of the furnishings every five years beginning by 2017. Line Item 6.451 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of replacements.

Kitchen - The Association maintains a kitchen located in the clubhouse. Components of the kitchen include:

- Tile floor coverings
- Cabinets and countertops
- Appliances
- Plumbing fixtures

The components are in good overall condition at an age of 10 years. The useful life of kitchen components varies up to 25 years. Periodic renovations of the kitchen are an astute practice to maintain a positive overall appearance of the Association. We recommend the Association budget for renovation of the kitchen by 2030. We note this information on Line Item 6.521 of ***Reserve Expenditures***.

Paint Finishes - The clubhouse interior has approximately 6,600 square feet of paint finishes on the downstairs walls and ceilings, and 8,200 square feet of paint finishes on the

upstairs walls and ceilings. These finishes are in fair overall condition at an unknown age. The useful life of a paint finish on interior walls and ceilings of this type is from 10- to 15-years. However, the actual times of paint applications are discretionary based on desired appearance and varied rates of use. We recommend the Association continue to maintain a uniformly clean and consistent appearance of interior paint finishes throughout the common areas. Normal maintenance should include interim partial or touchup paint applications as needed.

A successful application of paint requires complete preparation of the surface through removal of all loose, peeled or blistered paint before application of the new paint finish. The contractor should then wet wipe the surface to remove all dust and dirt. The contractor should follow the manufacturer's directions for paint application and protect other surrounding elements from paint spatter. The contractor should specify the name of the paint, proposed method and steps of paint application in their bid. Based on the age and condition of the paint, we recommend the application of a paint finish by 2017 and every 12 years thereafter. We depict this information on Line Items 6.801 and 6.802 of ***Reserve Expenditures***. Because the clubhouse was constructed before 1978, the Association should verify that the contractor will comply with the Environmental Protection Agency's (EPA) 'Renovation, Repair & Painting Rule' (http://www.epa.gov/lead/pubs/renovation.htm).

Rest Room - The Association maintains a common area rest room located on the first floor of the clubhouse. Components of the rest room include:

- Tile floor coverings
- Paint finishes on the walls and ceiling
- Light fixtures
- Countertop
- Plumbing fixtures

The components are in good overall condition at an age of 10 years. The useful life of rest room components varies up to 25 years. Periodic renovations are an astute practice to maintain a positive overall appearance of the Association. We recommend the Association budget for a renovation by 2030. We note this information on Line Item 6.901 of ***Reserve Expenditures***. The Association should verify the rest room renovations comply with the Americans with Disabilities Act.

Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study in two- to three-years are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. Many variables change after the study is conducted that may result in significant overfunding or underfunding the reserve account. Variables that may affect the Reserve Funding Plan include, but are not limited to:

- Deferred or accelerated capital projects based on Board discretion
- Changes in the interest rates on reserve investments
- Changes in the *local* construction inflation rate
- Additions and deletions to the Reserve Component Inventory
- The presence or absence of maintenance programs
- Unusually mild or extreme weather conditions
- Technological advancements

Periodic updates incorporate these variable changes since the last Reserve Study or Update.

The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.

5. PHOTOGRAPHS

Photographs document the conditions of various property components as of the date of our visual inspection, August 6, 2015. The Condition Assessment contains references to these photographs.

The following is an overview image of the subject property:

The next pages contain the photographs related to the Condition Assessment.

Asphalt pavement – Rivoli Lane

Asphalt pavement – Rivoli Lane

Asphalt pavement – Faraway Place

Asphalt pavement – Lowther Hall Lane

Asphalt pavement – Lowther Hall Lane

Asphalt pavement – Lowther Hall Lane

Note: Transverse crack

Asphalt pavement – Lowther Hall Lane

Note: Transverse crack

Asphalt pavement – Micasa Court

Note: Crack at cul-de-sac

Asphalt pavement – Micasa Court

Note: Cracks at cul-de-sac

Catch basin

Concrete gutter and sidewalk

Concrete gutter and sidewalk

Cracked concrete gutter sections and concrete sidewalk sections

Cracked and settled concrete gutter section

Cracked concrete sidewalk sections

Cracked concrete sidewalk section

Wood fence at northwest perimeter of property

Wood fence at northwest perimeter of property

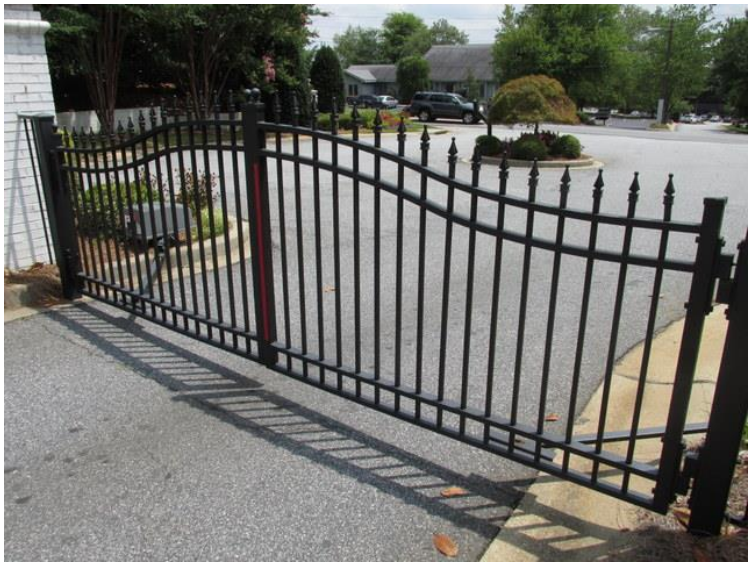
Note: Separated and warped wood member

Wood fence at northwest perimeter of property

Note: Replaced section

Wood fence at retaining wall

Metal gates and operator at community entrance



Metal gates at community entrance

Wood gates at service drive

Note: Association should fund maintenance and replacement of gates through the operating budget

Concrete retaining wall

Typical street and traffic signage

Masonry wall at community entrance

Note: Poor paint finishes

Masonry wall at community entrance

Note: Poor paint finishes

Masonry wall at community entrance

Note: Poor paint finishes

Masonry wall at community entrance

Note: Step crack and poor paint finishes

Clubhouse exterior

Clubhouse exterior

Clubhouse exterior

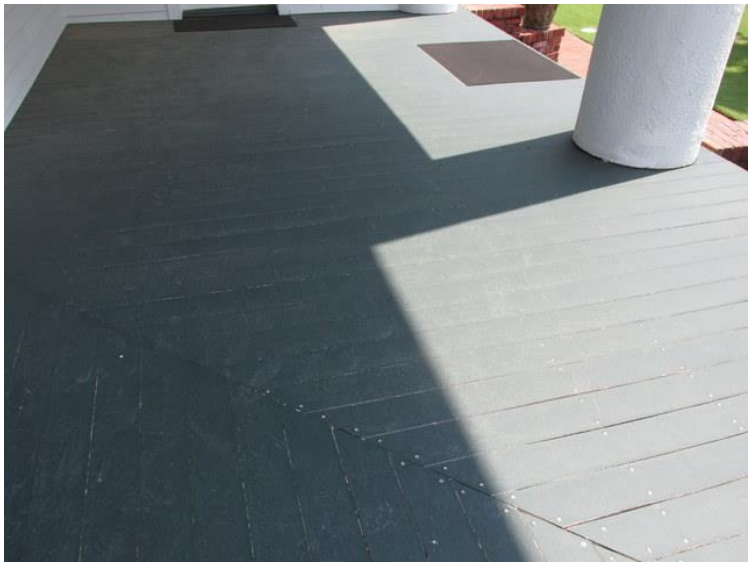
Clubhouse exterior

Wood balcony at front elevation of clubhouse

Wood balcony at front elevation of clubhouse

Wood balcony at front elevation of clubhouse

Note: Lean towards front



Composite decking at clubhouse

Composite decking at clubhouse

Light pole and fixture at clubhouse

Masonry pavers and wall at clubhouse

Masonry pavers at clubhouse

Masonry wall at clubhouse

Note: Mortar deterioration and vegetation growth

Masonry at clubhouse

Note: Mortar deterioration, spalled masonry and vegetation growth

Masonry at clubhouse

Note: Mortar deterioration and efflorescence

Masonry at clubhouse

Note: Mortar deterioration

Asphalt shingle roof at clubhouse

Split system condensing units

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Interior finishes and fixtures at clubhouse

Kitchen finishes and fixtures at clubhouse

Kitchen finishes and fixtures at clubhouse

Rest room finishes and fixtures at clubhouse

Exterior view of townhome units

Exterior view of townhome units

Exterior view of townhome units

Exterior view of townhome end unit

Exterior view of townhome end unit

Exterior view of townhome end unit

Exterior view of townhome units

Exterior view of townhome units

Typical wood balcony and railings

Typical wood balcony and railings

Wood railings at front porch of unit

Wood balcony and railings at rear of unit

Aluminum gutter and downspout assembly

Asphalt shingle roof

Asphalt shingle roof

Asphalt shingle roof

Asphalt shingle roof

Asphalt shingle roof

Exterior fiber cement siding at townhomes

Exterior fiber cement siding at townhomes

Exterior fiber cement siding at townhomes

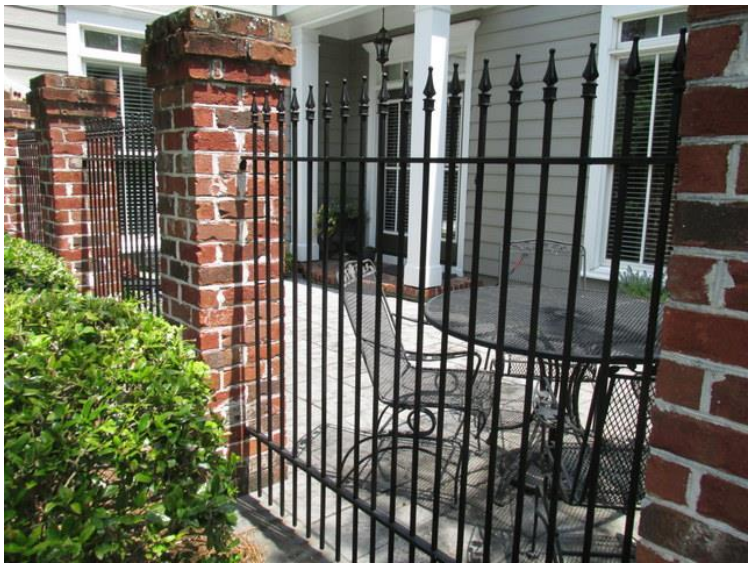
Paint finishes at underside of balcony

Paint finishes at underside of balcony

Exterior fiber cement siding at townhomes

Metal fence at unit courtyard

Wood fence at unit courtyard



Metal fence at unit courtyard

Exterior masonry wall

Exterior masonry wall

Exterior masonry wall and vinyl cladding at lintel

Exterior masonry wall and vinyl cladding at lintel

Masonry porch

Asphalt pavement at alley

Asphalt pavement at alley

Note: Crack formation at edge

Asphalt pavement at alley

Note: Cracks

Asphalt pavement at alley

Asphalt pavement at alley

Note: Cracks and pavement deterioration

Asphalt pavement at alley

Note: Cracks and pavement deterioration

Asphalt pavement at alley

Note: Cracks and pavement deterioration

Concrete apron at entrance to alley

Note: Cracks and concrete spalls

Asphalt pavement and catch basin at alley

Typical mailbox at townhomes

6. METHODOLOGY

Reserves for replacement are the amounts of money required for future expenditures to repair or replace Reserve Components that wear out before the entire facility or project wears out. Reserving funds for future repair or replacement of the Reserve Components is also one of the most reliable ways of protecting the value of the property's infrastructure and marketability.

The Plantation on Pelham can fund capital repairs and replacements in any combination of the following:

1. Increases in the operating budget during years when the shortages occur
2. Loans using borrowed capital for major replacement projects
3. Level monthly reserve assessments annually adjusted upward for inflation to increase reserves to fund the expected major future expenditures
4. Special assessments

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that Homeowners pay their "fair share" of the weathering and aging of the commonly owned property each year. Level reserve assessments preserve the property and enhance the resale value of the homes.

This Reserve Study is in compliance with and exceeds the National standards[1] set forth by the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Full Reserve Study." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

[1] Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

Information Furnished by the Association for Common Fund	
2015 unaudited Cash Status of the Reserve Fund	29,797
2015 Remaining Budgeted Reserve Contribution	5,891
Anticipated Interest on Reserve Fund	246
Less Anticipated Reserve Expenditures	0
Projected 2015 Year-End Reserve Balance	$35,934

Information Furnished by the Association for Townhome Fund	
2015 unaudited Cash Status of the Reserve Fund	44,968
2015 Remaining Budgeted Reserve Contribution	11,781
Anticipated Interest on Reserve Fund	381
Less Anticipated Reserve Expenditures	0
Projected 2015 Year-End Reserve Balance	$57,130

The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan

Local[2] costs of material, equipment and labor

Current and future costs of replacement for the Reserve Components

Costs of demolition as part of the cost of replacement

Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for construction costs in Greenville, South Carolina at an annual inflation rate of 2.5%. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

The past and current maintenance practices of The Plantation on Pelham and their effects on remaining useful lives

The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components.

The anticipated effects of appreciation of the reserves over time in accord with an anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.0% (We

[2] See Credentials for addition information on our use of published sources of cost data.

did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).

Interest rates on reserves are steady or increasing in concert with the certificates of deposit and money market rates. Slight increases exist in the savings rates of one, two or three-year CDs. Without significant differences in these savings rates, shorter term investments are the choice of many investors. We recommend consultation with a professional investment adviser before investing reserves to determine an appropriate investment strategy to maximize a safe return on reserve savings. The following table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

Interest Rate and Inflation Data	2014				2015			
Average or Last Actual = (A)	2014:1 (A)	2014:2 (A)	2014:3 (A)	2014:4 (A)	2015:1 (A)	2015:2 (A)	2015:3 (E)	2015:4 (E)
1-Year Treasury Bill	0.13%	0.15%	0.13%	0.01%	0.25%	0.27%	0.30%	0.35%
10-Year Treasury Note	2.80%	2.65%	2.40%	2.25%	1.90%	2.50%	2.70%	2.80%
30-Year Treasury Bond	3.90%	3.50%	3.35%	3.00%	2.55%	3.20%	3.40%	3.50%
Consumer Price Index (annualized rate)	1.50%	2.00%	2.40%	2.60%	0.00%	0.00%	1.00%	1.80%
Residential Construction Producer Price Index-Inflation Rate, Bureau of Labor Statistics (Year over Year to YE 2014 Showing no meaningful change)								0.0%

Savings Rates Results RANGE as found in http://www.bankrate.com	0.10 to 1.10%	Money Market Savings	0.5 to 1.5%	for 2-Year Certificate of Deposit
	0.23 to 1.25%	1-Year Certificate of Deposit	0.6 to 1.5%	for 3-Year Certificate of Deposit
Estimated Near Term Yield Rate for Reserve Savings		1.0%		
Est. Near Term Local Inflation Rate for Future Capital Expenditures		2.5%		**06/10/2015**

Updates to this Reserve Study will continue to monitor historical facts and trends concerning the external market conditions.

7. DEFINITIONS

Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 305,000 condominium and homeowners associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners

Cash Flow Method - A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

Component Method - A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components.

Current Cost of Replacement - That amount required today derived from the quantity of a *Reserve Component* and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current *local* market prices for *materials*, *labor* and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.

Fully Funded Balance - The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation.

Funding Goal (Threshold) - The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.

Future Cost of Replacement - *Reserve Expenditure* derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.

Long-Lived Property Component - Property component of The Plantation on Pelham responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.

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

Remaining Useful Life - The estimated remaining functional or useful time in years of a *Reserve Component* based on its age, condition and maintenance.

Reserve Component - Property elements with: 1) The Plantation on Pelham responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

Reserve Component Inventory - Line Items in ***Reserve Expenditures*** that identify a *Reserve Component*.

Reserve Contribution - An amount of money set aside or *Reserve Assessment* contributed to a *Reserve Fund* for future *Reserve Expenditures* to repair or replace *Reserve Components*.

Reserve Expenditure - Future Cost of Replacement of a Reserve Component.

Reserve Fund Status - The accumulated amount of reserves in dollars at a given point in time, i.e., at year end.

Reserve Funding Plan - The portion of the Reserve Study identifying the *Cash Flow Analysis* and containing the recommended Reserve Contributions and projected annual expenditures, interest earned and reserve balances.

Reserve Study - A budget planning tool that identifies the current status of the reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures.

Useful Life - The anticipated total time in years that a *Reserve Component* is expected to serve its intended function in its present application or installation.

8. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, Inc. will perform its services as an independent contractor in accordance with our professional practice standards. Our compensation is not contingent upon our conclusions.

Our inspection and analysis of the subject property is limited to visual observations and is noninvasive. We will inspect sloped roofs from the ground. We will inspect flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. The report is based upon a "snapshot in time" at the moment of our observation. Conditions can change between the time of inspection and the issuance of the report. Reserve Advisors does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, structural, latent or hidden defects which may or may not be present on or within the property. Our opinions of estimated costs and remaining useful lives are not a guarantee of the actual costs of replacement, a warranty of the common elements or other property elements, or a guarantee of remaining useful lives.

We assume, without independent verification, the accuracy of all data provided to us. You agree to indemnify and hold us harmless against and from any and all losses, claims, actions, damages, expenses or liabilities, including reasonable attorneys' fees, to which we may become subject in connection with this engagement, because of any false, misleading or incomplete information which we have relied upon as supplied by you or others under your direction, or which may result from any improper use or reliance on the report by you or third parties under your control or direction. Your obligation for indemnification and reimbursement shall extend to any controlling person of Reserve Advisors, Inc., including any director, officer, employee, affiliate, or agent. Liability of Reserve Advisors, Inc. and its employees, affiliates, and agents for errors and omissions, if any, in this work is limited to the amount of its compensation for the work performed in this engagement.

Report - Reserve Advisors, Inc. will complete the services in accordance with the Proposal. The Report represents a valid opinion of our findings and recommendations and is deemed complete. However, we will consider any additional information made available to us in the interest of promptly issuing a Revised Report if changes are requested within six months of receiving the Report. We retain the right to withhold a Revised Report if payment for services is not rendered in a timely manner. All files, work papers or documents developed by us during the course of the engagement remains our property.

Your Obligations - You agree to provide us access to the subject property during our on-site visual inspection and tour. You will provide to us to the best of your ability and if reasonably available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete our Study. You agree to pay our actual attorneys' fees and any other costs incurred in the event we have to initiate litigation to collect on any unpaid balance for our services.

Use of Our Report and Your Name - Use of this Report is limited to only the purpose stated herein. Any use or reliance for any other purpose, by you or third parties, is invalid. Our Reserve Study Report in whole or part is not and cannot be used as a design specification, design engineering services or an appraisal. You may show our report in its entirety to those third parties who need to review the information contained herein. The Client and other third parties viewing this report should not reference our name or our report, in whole or in part, in any document prepared and/or distributed to third parties without our written consent. ***This report contains intellectual property developed by Reserve Advisors, Inc. specific to this engagement and cannot be reproduced or distributed to those who conduct reserve studies without the written consent of Reserve Advisors, Inc.***

We reserve the right to include our client's name in our client lists, but we will maintain the confidentiality of all conversations, documents provided to us, and the contents of our reports, subject to

legal or administrative process or proceedings. These conditions can only be modified by written documents executed by both parties.

Payment Terms, Due Dates and Interest Charges - The retainer payment is due upon authorization and prior to shipment of the report. The final payment of the fee is due immediately upon receipt of the Report. Subsequent changes to the report can be made for up to six months from the initial report date. Any outstanding balance after 30 days of the invoice date is subject to an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court in the State of Wisconsin.

CONDITIONS OF OUR SERVICE ASSUMPTIONS

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, we make no guarantee nor assume liability for the accuracy of any data, opinions, or estimates identified as furnished by others that we used in formulating this analysis.

We did not make any soil analysis or geological study with this report; nor were any water, oil, gas, coal, or other subsurface mineral and use rights or conditions investigated.

Substances such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials could, if present, adversely affect the validity of this study. Unless otherwise stated in this report, the existence of hazardous substance, that may or may not be present on or in the property, was not considered. Our opinions are predicated on the assumption that there are no hazardous materials on or in the property. We assume no responsibility for any such conditions. We are not qualified to detect such substances, quantify the impact, or develop the remedial cost.

We have made a visual inspection of the property and noted visible physical defects, if any, in our report. Our inspection and analysis was made by employees generally familiar with real estate and building construction; however, we did not do any invasive testing. Accordingly, we do not opine on, nor are we responsible for, the structural integrity of the property including its conformity to specific governmental code requirements, such as fire, building and safety, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

Our opinions of the remaining useful lives of the property elements do not represent a guarantee or warranty of performance of the products, materials and workmanship.

9. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

Founded in 1991, Reserve Advisors, Inc. is the leading provider of reserve studies, insurance appraisals, developer turnover transition studies, expert witness services, and other engineering consulting services. Clients include community associations, resort properties, hotels, clubs, non-profit organizations, apartment building owners, religious and educational institutions, and office/commercial building owners in 48 states, Canada and throughout the world.

The **architectural engineering consulting firm** was formed to take a leadership role in helping fiduciaries, boards, and property managers manage their property like a business with a long range master plan known as a Reserve Study.

Reserve Advisors employs the **largest staff of Reserve Specialists** with bachelor's degrees in engineering dedicated to Reserve Study services. Our principals are founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our principals is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and historical analyses are keys to determining accurate remaining useful life estimates of building components.

No Conflict of Interest - As consulting specialists, our **independent opinion** eliminates any real or perceived conflict of interest because we do not conduct or manage capital projects.

TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, Inc., and by utilizing the experience of other staff members, each of whom has served hundreds of clients. We conduct Team Reviews, an internal quality assurance review of each assignment, including: the inspection; building component costing; lifing; and technical report phases of the assignment. Each Team Review requires the attendance of several engineers, a Review Coordinator, Director of Quality Assurance and other participatory peers. Due to our extensive experience with building components, we do not have a need to utilize subcontractors.

OUR GOAL

To help our clients fulfill their fiduciary responsibilities to maintain property in good condition.

VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

Reserve Advisors, Inc. has conducted reserve studies for a multitude of different communities and building types. We've analyzed thousands of buildings, from as small as a 3,500 square-foot day care center to the 100-story John Hancock Center in Chicago. We also routinely inspect buildings with various types of mechanical systems such as simple electric heat, to complex systems with air handlers, chillers, boilers, elevators, and life safety security systems.

We're familiar with all types of building exteriors as well. Our well versed staff regularly identifies optimal repair and replacement solutions for such building exterior surfaces such as adobe, brick, stone, concrete, stucco, EIFS, wood products, stained glass and aluminum siding, and window wall systems.

OLD TO NEW

Reserve Advisors experience includes ornate and vintage buildings as well as modern structures. Our specialists are no strangers to older buildings. We're accustomed to addressing the unique challenges posed by buildings that date to the 1800's. We recognize and consider the methods of construction employed into our analysis. We recommend appropriate replacement programs that apply cost effective technologies while maintaining a building's character and appeal.

QUALIFICATIONS
THEODORE J. SALGADO
Principal Owner

CURRENT CLIENT SERVICES

Theodore J. Salgado is a co-founder of Reserve Advisors, Inc., which is dedicated to serving community associations, city and country clubs, religious organizations, educational facilities, and public and private entities throughout the United States. He is responsible for the production, management, review, and quality assurance of all reserve studies, property inspection services and consulting services for a nationwide portfolio of more than 6,000 clients. Under his direction, the firm conducts reserve study services for community associations, apartment complexes, churches, hotels, resorts, office towers and vintage architecturally ornate buildings .

PRIOR RELEVANT EXPERIENCE

Before founding Reserve Advisors, Inc. with John P. Poehlmann in 1991, Mr. Salgado, a professional engineer registered in the State of Wisconsin, served clients for over 15 years through American Appraisal Associates, the world's largest full service valuation firm. Mr. Salgado conducted facilities analyses of hospitals, steel mills and various other large manufacturing and petrochemical facilities and casinos.

He has served clients throughout the United States and in foreign countries, and frequently acted as project manager on complex valuation, and federal and state tax planning assignments. His valuation studies led to negotiated settlements on property tax disputes between municipalities and property owners.

Mr. Salgado has authored articles on the topic of reserve studies and facilities maintenance. He also co-authored *Reserves*, an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and maintaining appropriate reserves. Mr. Salgado has also written in-house computer applications manuals and taught techniques relating to valuation studies.

EXPERT WITNESS

Mr. Salgado has testified successfully before the Butler County Board of Tax Revisions in Ohio. His depositions in pretrial discovery proceedings relating to reserve studies of Crestview Estates Condominium Association in Wauconda, Illinois, Rivers Point Row Property Owners Association, Inc. in Charleston, South Carolina and the North Shore Club Associations in South Bend, Indiana have successfully assisted the parties in arriving at out of court settlements.

EDUCATION - Milwaukee School of Engineering - B.S. Architectural Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

American Association of Cost Engineers - Past President, Wisconsin Section
Association of Construction Inspectors - Certified Construction Inspector
Association of Professional Reserve Analysts - Past President & Professional Reserve Analyst (PRA)
Community Associations Institute - Member and Volunteer Leader of multiple chapters
Concordia Seminary, St. Louis - Member, National Steering Committee
Milwaukee School of Engineering - Member, Corporation Board
Professional Engineer, Wisconsin, Registered in 1982

JOHN P. POEHLMANN, RS
Principal

John P. Poehlmann is a co-founder of Reserve Advisors, Inc. He is responsible for the finance, accounting, marketing, and overall administration of Reserve Advisors, Inc. He also regularly participates in internal Quality Control Team Reviews of Reserve Study reports.

Mr. Poehlmann directs corporate marketing, including business development, advertising, press releases, conference and trade show exhibiting, and electronic marketing campaigns. He frequently speaks throughout the country at seminars and workshops on the benefits of future planning and budgeting for capital repairs and replacements of building components and other assets.

PRIOR RELEVANT EXPERIENCE

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. An international organization, Community Associations Institute (CAI) is a nonprofit 501(c)(3) trade association created in 1973 to provide education and resources to America's 335,000 residential condominium, cooperative and homeowner associations and related professionals and service providers.

He is a founding member of the Institute's Reserve Committee. The Reserve Committee developed national standards and the Reserve Specialist (RS) Designation Program for Reserve Study providers. Mr. Poehlmann has authored numerous articles on the topic of Reserve Studies, including Reserve Studies for the First Time Buyer, Minimizing Board Liability, Sound Association Planning Parallels Business Concepts, and Why Have a Professional Reserve Study. He is also a contributing author in Condo/HOA Primer, a book published for the purpose of sharing a wide background of industry knowledge to help boards in making informed decisions about their communities.

INDUSTRY SERVICE AWARDS

CAI Wisconsin Chapter Award
CAI National Rising Star Award
CAI Michigan Chapter Award

EDUCATION

University of Wisconsin-Milwaukee - Master of Science Management
University of Wisconsin - Bachelor of Business Administration

PROFESSIONAL AFFILIATIONS

Community Associations Institute (CAI) - Founding member of Reserve Committee; former member of National Board of Trustees; Reserve Specialist (RS) designation; Member of multiple chapters

Association of Condominium, Townhouse, & Homeowners Associations (ACTHA) – member

ALAN M. EBERT, P.E., PRA, RS
Associate Director of Quality Assurance

CURRENT CLIENT SERVICES

Alan M. Ebert, a Geological Engineer, is an Advisor for Reserve Advisors, Inc. Mr. Ebert is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

The following is a partial list of clients served by Alan Ebert demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

Brownsville Winter Haven Located in Brownsville, Texas, this unique homeowners association contains 525 units. The Association maintains three pools and pool houses, a community and management office, landscape and maintenance equipment, and nine irrigation canals with associated infrastructure.

Rosemont Condominiums This unique condominium is located in Alexandria, Virginia and dates to the 1940's. The two mid-rise buildings utilize decorative stone and brick masonry. The development features common interior spaces, multi-level wood balconies and common asphalt parking areas.

Stillwater Homeowners Association Located in Naperville, Illinois, Stillwater Homeowners Association maintains four tennis courts, an Olympic sized pool and an upscale ballroom with commercial-grade kitchen. The community also maintains three storm water retention ponds and a detention basin.

Birchfield Community Services Association This extensive Association comprises seven separate parcels which include 505 townhome and single family homes. This Community Services Association is located in Mt. Laurel, New Jersey. Three lakes, a pool, a clubhouse and management office, wood carports, aluminum siding, and asphalt shingle roofs are a few of the elements maintained by the Association.

Oakridge Manor Condominium Association Located in Londonderry, New Hampshire, this Association includes 104 units at 13 buildings. In addition to extensive roads and parking areas, the Association maintains a large septic system and significant concrete retaining walls.

Memorial Lofts Homeowners Association This upscale high rise is located in Houston, Texas. The 20 luxury units include large balconies and decorative interior hallways. The 10-story building utilizes a painted stucco facade and TPO roof, while an on-grade garage serves residents and guests.

PRIOR RELEVANT EXPERIENCE

Mr. Ebert earned his Bachelor of Science degree in Geological Engineering from the University of Wisconsin-Madison. His relevant course work includes foundations, retaining walls, and slope stability. Before joining Reserve Advisors, Inc., Mr. Ebert was an oilfield engineer and tested and evaluated hundreds of oil and gas wells throughout North America.

EDUCATION

University of Wisconsin-Madison - B.S. Geological Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute
Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts
Professional Engineering License - Wisconsin 2012

JEFFREY B. DOW, P.E., RS
Responsible Advisor

CURRENT CLIENT SERVICES

Jeffrey B. Dow, a Civil engineer, is an Advisor for ***Reserve Advisors, Inc***. Mr. Dow is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations. Mr. Dow frequently serves as the ***Quality Assurance Review Coordinator*** for Recreational, Townhome and Mid Rise communities.

The following is a partial list of clients served by Jeffrey Dow demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

Alson Court Condominium Owners Association, Inc. This historic Charlotte, NC building was constructed in 1939 and comprises all-brick construction and a clay tile roof. The unique layout of the building, which includes a number of entrances and lobbies, allows for two picturesque courtyards. The property includes two detached garages.

Charleston Oceanfront Villas Homeowners Association This oceanfront condominium offers spectacular views of Folly Beach, SC and the Atlantic Ocean. The four-story stucco building contains 96 luxury residential units Significant amenities include private balconies, large garage on the first floor and two pools.

Le Club at Old Cutler Condominium Association, Inc. This condominium community comprises 334 units in 14 buildings in Miami, FL. Amenities of this property include a large pond with a lighted lake walk, large clubhouse with fitness room, pool, sauna, playground and tennis courts.

Marco Towers Club, Inc. Located on exclusive Marco Island just south of Naples, FL, this 8-story mid-rise features solid concrete construction and was the designated hurricane shelter for its community for many years. It houses 57 condominiums with balconies offering views of the adjacent intercoastal waterway. The property also includes a party room, office and detached garages.

Mountaintop Community Association This mountain golf community is located in Highlands, NC and comprises high-end residential units. The community includes a wastewater treatment plant, lift stations, two domestic water wells, three bridges and asphalt pavement roadways.

The Academy at Ocean Reef Located in Key Largo, FL, this private institution serves kindergarten through the eighth grade and includes offices, a science lab, a music room, a television production room, six classrooms, an atrium and other learning facilities.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Inc., Mr. Dow successfully completed the bachelors program in Civil Engineering from Florida State University. He also has four years of experience as a land development engineer in the Washington, D.C. area and Tampa, FL, where he gained knowledge in the design of residential and commercial property, utility layout and stormwater detention.

EDUCATION

Florida State University - B.S. Civil Engineering, Cum Laude

PROFESSIONAL AFFILIATIONS

Professional Engineer (P.E.) - State of Florida, 2008
Reserve Specialist (RS) - Community Associations Institute

MATTHEW R. BEILMAN, RS
Review Coordinator

CURRENT CLIENT SERVICES

Matthew Beilman, a Civil Engineer, is an Advisor for ***Reserve Advisors, Inc***. Mr. Beilman is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

The following is a partial list of clients served by Matthew Beilman demonstrating his breadth of experiential knowledge of community associations and other entities in construction and related buildings systems.

Fairfield Village Community Association A unique community association located in Cypress, Texas, comprises nine lakes, perimeter fences, retaining walls and tennis courts. A fitness center with gymnasium, daycare center and a pool are additional amenities for more than 5,000 residents of the community.

Four Seasons Jackson Hole A resort property located in Teton Village Wyoming that includes both condominium units and hotel space. The property provides numerous amenities including multiple swimming pools, restaurants and spas. The building includes complex mechanical systems and a concrete tile roof system.

Fourth Presbyterian Church A historical church located on Michigan Avenue in Chicago, Illinois. Originally constructed in 1914 the church retains most of its original architectural features including a limestone masonry façade, stained glass windows and slate tile roof. An 80,000 square foot addition was completed in 2012 which utilizes cutting edge design while preserving historical features of the original structure.

Fries & Schuele Originally constructed in 1913, this apartment complex in Cleveland Ohio was converted to condominium units in 2007. The development includes a two level underground parking garage beneath an open courtyard, metal frame concrete balconies and a historical masonry and tile façade.

The Point and Townhouses at River Shores This attractive community in West Bend, Wisconsin comprises a townhome association and a mid-rise community association. The mid-rise building is constructed of various exterior wall finishes, flat roofs and balconies, and contains various mechanical systems.

Ronald McDonald House Birmingham Located in Birmingham, United Kingdom this purpose built accommodation facility is one of the largest of the Ronald McDonald Charities Chapters with 60 guest suites in a seven-story building. The sustainable design and distinct architecture has become the standard for other purpose built Ronald McDonald Houses throughout the United Kingdom.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Inc., Mr. Beilman attended the University of Wisconsin in Madison, Wisconsin where he attained his Bachelor of Science degree in Civil Engineering with a second major in Economics. His studies focused on construction engineering, project estimating and structural analysis. Mr. Beilman also helped in the design of municipal projects and the inspection of construction while interning at Mead &Hunt in Milwaukee and the design of large scale retaining walls while interning at Allan Block Corporation in Minneapolis.

EDUCATION

University of Wisconsin, Madison - B.S. Civil Engineering
University of Wisconsin, Milwaukee - M.A Economics

PROFESSIONAL AFFILIATIONS

Reserve Specialist (RS) - Community Associations Institute

RESOURCES

Reserve Advisors, Inc. utilizes numerous resources of national and local data to conduct its Professional Services. A concise list of several of these resources follows:

Association of Construction Inspectors, (ACI) the largest professional organization for those involved in construction inspection and construction project management. ACI is also the leading association providing standards, guidelines, regulations, education, training, and professional recognition in a field that has quickly become important procedure for both residential and commercial construction, found on the web at www.iami.org. Several advisors and a Principal of Reserve Advisors, Inc. hold Senior Memberships with ACI.

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE) the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., devoted to the arts and sciences of heating, ventilation, air conditioning and refrigeration; recognized as the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines, found on the web at www.ashrae.org. Reserve Advisors, Inc. actively participates in its local chapter and holds individual memberships.

Community Associations Institute, (CAI) America's leading advocate for responsible communities noted as the only national organization dedicated to fostering vibrant, responsive, competent community associations. Their mission is to assist community associations in promoting harmony, community, and responsible leadership.

Marshall & Swift / Boeckh, (MS/B) the worldwide provider of building cost data, co-sourcing solutions, and estimating technology for the property and casualty insurance industry found on the web at www.msbinfo.com.

R.S. Means CostWorks, North America's leading supplier of construction cost information. As a member of the Construction Market Data Group, Means provides accurate and up-to-date cost information that helps owners, developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects found on the web at www.rsmeans.com.

Reserve Advisors, Inc., library of numerous periodicals relating to reserve studies, condition analyses, chapter community associations, and historical costs from thousands of capital repair and replacement projects, and product literature from manufacturers of building products and building systems.