

Precision 20/20
Full Reserve Study
for
Colonial Village
(Village II) a Condominium
Arlington, Virginia
July 8, 2013





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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Colonial Village (Village II) a Condominium (Colonial Village II)

Location: Arlington, Virginia

Reference: 080181

Property Basics: Colonial Village (Village II) a Condominium is a townhome style development of 255 units in 41 buildings. The exteriors of the buildings comprise brick masonry, and asphalt shingle, simulated slate and flat roofs. The buildings were built in the 1930's and were converted to condominiums in 1984.

Reserve Components Identified: 26 Reserve Components.

Inspection Date: July 8, 2013. Reserve Advisors conducted the original Reserve Study in 2008.

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 Funding Plan recognizes this threshold funding year in 2019 due to replacement of the flat roofs and masonry repairs.

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
- 1.2% annual rate of return on invested reserves
- 2.0% 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.

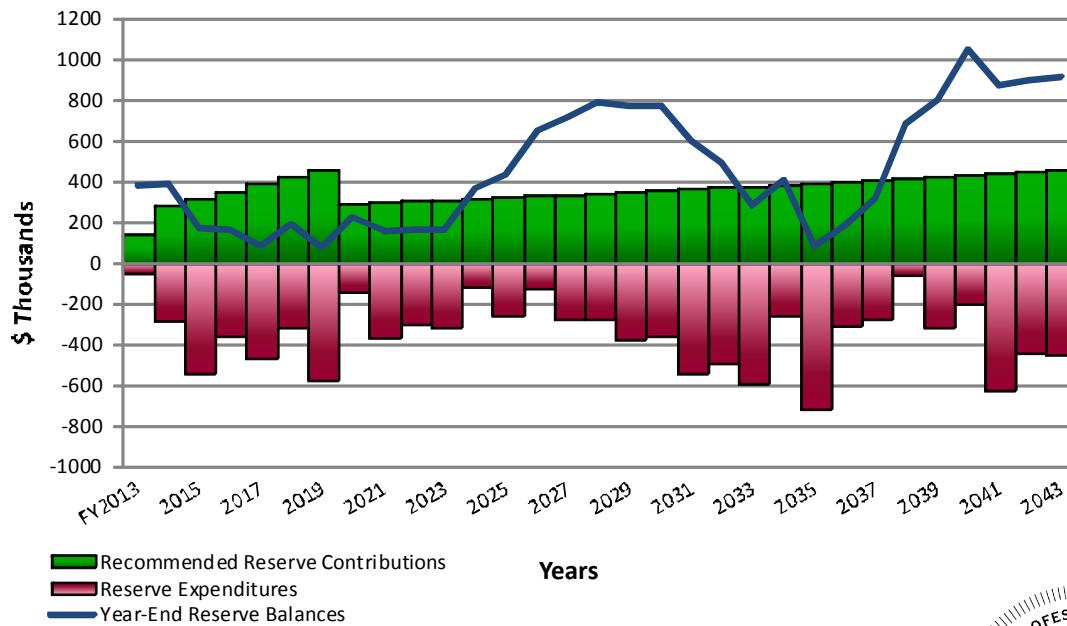
Cash Status of Reserve Fund: \$286,778 as of May 31, 2013.

Recommended Reserve Funding: The Association budgeted \$247,000 for Reserve Contributions in 2013. We recommend that the Association budget annual phased increases in Reserve Contributions of \$35,000 from 2014 through 2019. By 2020, the Association will have fully funded for replacement of the flat roofs and masonry repairs. Therefore, the Association may anticipate a decrease in the annual Reserve Contribution to \$292,000. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation through 2043, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of \$35,000 represents about a four percent (3.7%) adjustment in the 2013 total Operating Budget of \$948,239. This initial adjustment of \$35,000 is equivalent to an average monthly increase of \$11.44 per unit owner.

Certification: This Precision 20/20 Full Reserve Study exceeds the Community Associations Institute (CAI) and Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

Colonial Village II
Recommended Reserve Funding Table and Graph

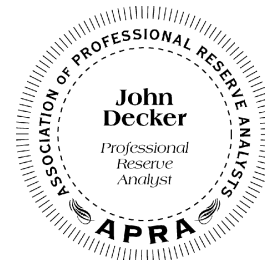
Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2014	282,000	388,581	2024	316,100	362,510	2034	385,300	408,285
2015	317,000	170,292	2025	322,400	434,020	2035	393,000	82,748
2016	352,000	161,924	2026	328,800	644,549	2036	400,900	178,543
2017	387,000	84,492	2027	335,400	712,800	2037	408,900	312,109
2018	422,000	191,954	2028	342,100	791,167	2038	417,100	679,341
2019	457,000	73,467	2029	348,900	771,566	2039	425,400	797,523
2020	292,000	226,109	2030	355,900	775,152	2040	433,900	1,043,508
2021	297,800	158,328	2031	363,000	601,707	2041	442,600	872,640
2022	303,800	166,699	2032	370,300	488,442	2042	451,500	893,823
2023	309,900	161,072	2033	377,700	280,515	2043	460,500	913,848



Respectfully submitted on August 26, 2013 by
RESERVE ADVISORS, INC.



Theodore J. Salgado, PRA¹, RS², Principal
Visual Inspection and Report by: John C. Decker, 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 *Precision 20/20 Full Reserve Study* of

Colonial Village (Village II) a Condominium

Arlington, Virginia

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, July 8, 2013. Reserve Advisors conducted the original Reserve Study in 2008.

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

Colonial Village (Village II) a Condominium is a townhome style development of 255 units in 41 buildings. The exteriors of the buildings comprise brick masonry, and asphalt shingle, simulated slate and flat roofs. The buildings were built in the 1930's and were converted to condominiums in 1984. We identify 26 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. 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 that 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:

- Colonial Village II 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, Wiring, Common
- Foundations
- Structural Frames

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 \$5,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Crawl Spaces
- Landscape
- Light Fixtures, Exterior Building
- Paint Finishes, Touch Up
- Pumps Less Than Five-HP (horsepower)
- Shutters
- Storage Rooms
- Trash Rooms
- Unit Heaters
- Valves, Small Diameter
- Other Repairs normally funded through the Operating Budget

Property Maintained by Homeowners relates to unit:

- Electrical Systems
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Windows and Doors

Certain items have been designated as the responsibility of others to repair or replace.

Property Maintained by Others relates to:

- Laundry Equipment (Leased)



3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities replaced during the next 30 years
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of replacement
- Life analysis showing
 - useful life
 - remaining useful life
- Unit cost of replacement
- 2013 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

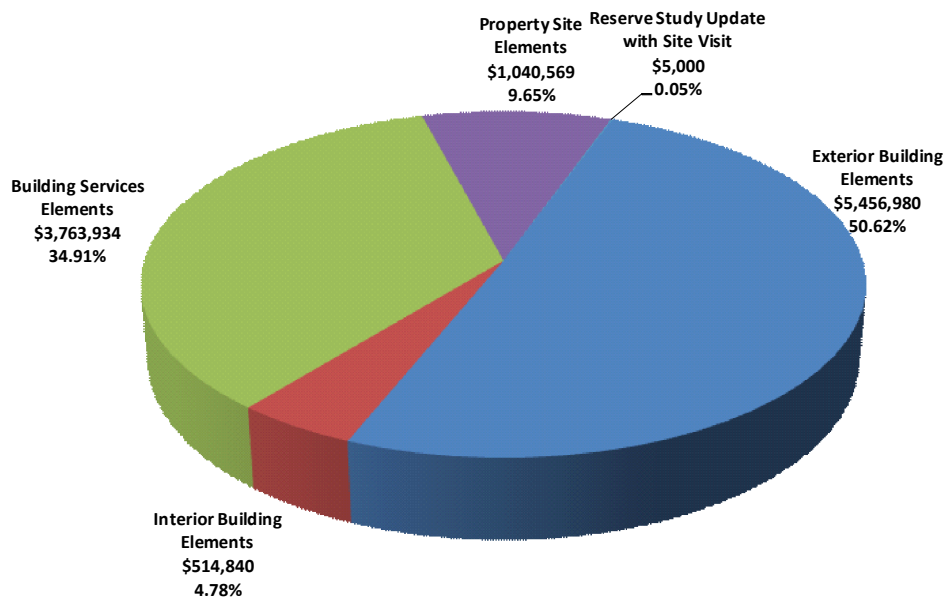
- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end

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 most important category of Reserve Components noted in *Reserve Expenditures* is the Exterior Building Elements. The following chart illustrates the relative importance of the Reserve Expenditures and relative funding during the next 30 years.

Colonial Village II Future Expenditures Relative Cost Illustration



RESERVE EXPENDITURES

Colonial Village
(Village II) a Condominium
Arlington, Virginia

Explanatory Notes:

- 1) **2.0%** is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) FY2013 is Fiscal Year beginning January 1, 2013 and ending December 31, 2013.

Line Item	Quantities:			Reserve Component Inventory	Estimated 1st Year of Replacement	Life Analysis, Years		Unit Cost, \$	2013 Cost of Replacement per Phase, \$	Total Future Costs of Replacement, \$	RUL = 0 FY2013	1 2014	2 2015	3 2016	4 2017	5 2018	6 2019	7 2020	8 2021	9 2022	10 2023	11 2024	12 2025	13 2026	14 2027	15 2028	16 2029	17 2030	18 2031	19 2032	20 2033				
	30-Year Total	Per Phase	Units			Useful	Remaining																												
Exterior Building Elements																																			
1.180	51	5 Each	Doors, Common Entrances, Phased	2014	to 30	1	2,500.00	12,750	142,401		13,005	13,265	13,530	13,801	14,077	14,359	14,646	14,939	15,237	15,542															
1.193	15	1 Allowance	Foundations and Basements, Waterproofing and Drainage Improvements	2014	to 2	1	15,000.00	15,000	307,272		15,300		15,918		16,561		17,230		17,926		18,651		19,404		20,188		21,004		21,852						
1.280	420	210 Squares	Roofs, Asphalt Shingles (Includes Gutters and Downspouts)	2015	15 to 20	2	710.00	149,100	385,630			155,124																							
1.400	718	103 Squares	Roofs, Flat, Remaining, Phased (Includes Gutters, Downspouts and Scuppers)	2013	15 to 20	0	1,400.00	143,600	974,422	50,460	146,472	149,401	152,389	155,437	158,546	161,717																			
1.401	850	94 Squares	Roofs, Flat, Subsequent Phased (Includes Gutters, Downspouts and Scuppers)	2028	15 to 20	15	1,400.00	132,222	1,735,873																177,954	181,513	185,143	188,846	192,623	196,475					
1.520	70	70 Squares	Roofs, Synthetic Slate (Includes Gutters and Downspouts)	2019	to 35	6	1,600.00	112,000	126,130							126,130																			
1.819	3	3 Each	Walls, Masonry, Chimneys, Rebuild Remaining	2014	to 50	1	28,300.00	84,900	86,598		86,598																								
1.820	58,000	14,500 Square Feet	Walls, Masonry, N. Rhodes Street, Inspections and Repairs, Near Term, Phased	2016	n/a	3	5.00	72,500	317,107				76,938	78,476	80,046	81,647																			
1.821	435,000	36,250 Square Feet	Walls, Masonry, All Buildings, Inspections and Repairs, Phased	2020	8 to 12	7	2.10	76,125	1,335,293									87,444	89,193	90,976	92,796							106,593	108,725	110,900	113,118				
1.980	93	93 Each	Windows, Common	2024	to 40	11	400.00	37,200	46,254													46,254													
Interior Building Elements																																			
2.200	3,030	1,010 Square Yards	Floor Coverings, Carpet	2022	8 to 12	9	55.00	55,550	245,961											66,387													80,926		
2.300	600	300 Square Yards	Floor Coverings, Vinyl Tile, Laundry Rooms	2027	10 to 15	14	45.00	13,500	41,787																	17,813									
2.560	155	155 Each	Light Fixtures, Hallways	2042	to 30	29	95.00	14,725	26,149																										
2.700	255	255 Each	Mailboxes	2022	to 35	9	100.00	25,500	30,475											30,475															
2.800	105,000	35,000 Square Feet	Paint Finishes	2022	6 to 10	9	1.10	38,500	170,468											46,011														56,087	
Building Services Elements																																			
3.300	40	6 Each	Electrical Meter Panels, Remaining, Phased	2015	to 55	2	5,000.00	28,571	235,067			29,726		30,927		32,176		33,476		34,828		36,235				37,699									
3.401	2	1 Allowance	Key Fob System	2026	to 15	13	50,000.00	50,000	151,731																	64,680									
3.605	195	13 Units	Pipes, Domestic Water And Waste, Partial	2015	to 70+	2	11,000.00	143,000	2,987,922				148,777	154,788		161,041		167,547		174,316		181,359				188,685		196,308		204,239		212,490			
3.940	30	2 Each	Water Heaters, 200-MBH, Phased	2014	12 to 15	1	9,500.00	19,000	389,214		19,380		20,163		20,978		21,825		22,707		23,624		24,579		25,571		26,605		27,679						
Property Site Elements																																			
4.140	15,850	1,585 Square Feet	Concrete Sidewalks and Steps, Partial	2015	to 65	2	10.00	15,850	218,593				16,490		17,500		18,571		19,707		20,914						22,194						23,552		
4.559	38	19 Each	Light Fixtures, Bollard	2015	to 20	2	650.00	12,350	31,942				12,849																						
4.560	92	46 Each	Light Poles and Fixtures	2016	to 25	3	1,300.00	59,800	167,573				63,460																						
4.729	3,200	640 Linear Feet	Railings and Fences, Metal, Paint Finishes	2016	6 to 8	3	10.00	6,400	43,679				6,792						7,649								8,614								
4.731	640	128 Linear Feet	Railings and Fences, Metal, Phased Replacement	2015	to 40	2	60.00	7,680	45,150			7,990		8,479		8,998		9,549		10,134															
4.740	9,300	3,100 Square Feet	Retaining Walls, Brick, Inspection and Capital Repairs	2016	8 to 12	3	4.00	12,400	48,754				13,159													16,041									
4.774	1,320	120 Linear Feet	Sanitary Sewer Pipes, Partial	2017	to 90	4	250.00	30,000	484,878					32,473		35,150				38,047							40,376					42,847		44,578	
1	1	1 Allowance	Reserve Study Update with Site Visit	2015	2	2	5,000.00	5,000	5,000			5,000																							
Anticipated Expenditures, By Year									\$10,781,323	50,460	280,755	538,622	362,349	465,902	316,187	577,070	141,145	367,874	297,368	317,482	117,785	255,641	124,704	275,245	272,703	377,821	361,539	544,657	490,067	590,213					

RESERVE EXPENDITURES

Colonial Village (Village II) a Condominium Arlington, Virginia

Line Item	21 2034	22 2035	23 2036	24 2037	25 2038	26 2039	27 2040	28 2041	29 2042	30 2043
Reserve Component Inventory										
<u>Exterior Building Elements</u>										
1.180	Doors, Common Entrances, Phased									
1.193	22,735		23,653		24,609		25,603		26,638	
1.280	Roofs, Asphalt Shingles (Includes Gutters and Downspouts) 230,506									
1.400	Roofs, Flat, Remaining, Phased (Includes Gutters, Downspouts and Scuppers)									
1.401	200,405	204,413	208,501							
1.520	Roofs, Synthetic Slate (Includes Gutters and Downspouts)									
1.819	Walls, Masonry, Chimneys, Rebuild Remaining									
1.820	Walls, Masonry, N. Rhodes Street, Inspections and Repairs, Near Term, Phased									
1.821						129,937	132,535	135,186	137,890	
1.980	Windows, Common									
<u>Interior Building Elements</u>										
2.200	Floor Coverings, Carpet 98,648									
2.300	Floor Coverings, Vinyl Tile, Laundry Rooms 23,974									
2.560	Light Fixtures, Hallways 26,149									
2.700	Mailboxes									
2.800	Paint Finishes 68,370									
<u>Building Services Elements</u>										
3.300	Electrical Meter Panels, Remaining, Phased									
3.401	Key Fob System 87,051									
3.605		221,075	230,007		239,299		248,966		259,025	
3.940	28,798		29,961		31,172		32,431		33,741	
Water Heaters, 200-MBH, Phased										
<u>Property Site Elements</u>										
4.140	Concrete Sidewalks and Steps, Partial 24,994 26,524 28,147									
4.559	Light Fixtures, Bollard 19,093									
4.560	Light Poles and Fixtures 104,113									
4.729	9,700									10,924
Railings and Fences, Metal, Paint Finishes										
Railings and Fences, Metal, Phased Replacement										
Retaining Walls, Brick, Inspection and Capital Repairs 19,554										
4.774		46,379	48,253		50,203		52,231		54,341	
Sanitary Sewer Pipes, Partial										
Reserve Study Update with Site Visit										
Anticipated Expenditures, By Year										
	261,638	721,466	306,663	278,260	55,781	316,026	198,895	624,896	440,853	451,256

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

Colonial Village
(Village II) a Condominium

Arlington, Virginia

Individual Reserve Budgets & Cash Flows for the Next 30 Years

	FY2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Reserves at Beginning of Year (Note 1)	286,778	382,736	388,581	170,292	161,924	84,492	191,954	73,467	226,109	158,328	166,699	161,072	362,510	434,020	644,549	712,800
Total Recommended Reserve Contributions (Note 2)	144,083	282,000	317,000	352,000	387,000	422,000	457,000	292,000	297,800	303,800	309,900	316,100	322,400	328,800	335,400	342,100
Plus Estimated Interest Earned, During Year (Note 3)	2,335	4,600	3,333	1,981	1,470	1,649	1,583	1,787	2,293	1,939	1,955	3,123	4,751	6,433	8,096	8,970
Less Anticipated Expenditures, By Year	(50,460)	(280,755)	(538,622)	(362,349)	(465,902)	(316,187)	(577,070)	(141,145)	(367,874)	(297,368)	(317,482)	(117,785)	(255,641)	(124,704)	(275,245)	(272,703)
Anticipated Reserves at Year End	<u>\$382,736</u>	<u>\$388,581</u>	<u>\$170,292</u>	<u>\$161,924</u>	<u>\$84,492</u>	<u>\$191,954</u>	<u>\$73,467</u>	<u>\$226,109</u>	<u>\$158,328</u>	<u>\$166,699</u>	<u>\$161,072</u>	<u>\$362,510</u>	<u>\$434,020</u>	<u>\$644,549</u>	<u>\$712,800</u>	<u>\$791,167</u>

(NOTE 5)

(continued)

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

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Reserves at Beginning of Year	791,167	771,566	775,152	601,707	488,442	280,515	408,285	82,748	178,543	312,109	679,341	797,523	1,043,508	872,640	893,823
Total Recommended Reserve Contributions	348,900	355,900	363,000	370,300	377,700	385,300	393,000	400,900	408,900	417,100	425,400	433,900	442,600	451,500	460,500
Plus Estimated Interest Earned, During Year	9,320	9,225	8,212	6,502	4,586	4,108	2,929	1,558	2,926	5,913	8,808	10,980	11,428	10,536	10,781
Less Anticipated Expenditures, By Year	(377,821)	(361,539)	(544,657)	(490,067)	(590,213)	(261,638)	(721,466)	(306,663)	(278,260)	(55,781)	(316,026)	(198,895)	(624,896)	(440,853)	(451,256)
Anticipated Reserves at Year End	<u>\$771,566</u>	<u>\$775,152</u>	<u>\$601,707</u>	<u>\$488,442</u>	<u>\$280,515</u>	<u>\$408,285</u>	<u>\$82,748</u>	<u>\$178,543</u>	<u>\$312,109</u>	<u>\$679,341</u>	<u>\$797,523</u>	<u>\$1,043,508</u>	<u>\$872,640</u>	<u>\$893,823</u>	<u>\$913,848</u>

(NOTE 4)

Explanatory Notes:

- 1) Year 2013 starting reserves are as of May 31, 2013; FY2013 starts January 1, 2013 and ends December 1, 2013.
- 2) Reserve Contributions for 2013 are the remaining budgeted 7 months; 2014 is the first year of recommended contributions.
- 3) 1.2% is the estimated annual rate of return on invested reserves; 2013 is a partial year of interest earned.
- 4) Accumulated year 2043 ending reserves consider the need to fund for continued replacement of the pipes shortly after 2043, 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 *Precision 20/20 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

Doors, Entrances - Colonial Village II maintains a total of 51 front entrance common doors and service doors throughout the community. These doors are in fair to poor overall condition. We observe extensive wood deterioration and several locations of threshold gaps. Page 5.3 of *Photographs* depicts these conditions. The useful life of these doors is up to 30 years. We suggest that the Association budget for phased replacement of the doors beginning in 2014 and concluding by 2023. We include this information on Line Item 1.180 of *Reserve Expenditures*.

Foundations and Basements - Colonial Village II has a history of water infiltration into the common area basements. We observe active water infiltration, evidence of past water infiltration and previous repairs. Pages 5.3 and 5.4 of *Photographs* depict these conditions. Management informs us that the Association recently conducted repairs including waterproofing of basement walls and drainage improvements. In consideration of the water infiltration evident, we recommend the Association continue to budget for waterproofing and drainage improvements



to the basements. We recommend the Association budget an allowance of \$15,000 plus inflation in 2014 and every two years thereafter. We include these anticipated expenditures on Line Item 1.193 of *Reserve Expenditures*.

Roofs, Asphalt Shingles - Approximately 210 *squares*¹ of asphalt shingles comprise a portion of the roofs of Colonial Village II. The roofs include approximately 1,940 linear feet of gutters and downspouts. The gutters and downspouts are primarily aluminum and steel. The roofs are fair overall condition. Management informs us of no history of leaks. Our visual inspection from the ground notes shingle lift and deteriorated shingles. Page 5.5 of *Photographs* depicts these conditions. The useful life of asphalt shingle roofs in Arlington is from 15- to 20-years.

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.

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



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.

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 ice and snow. 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)

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 Colonial Village II 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.

Based on their age and condition, we recommend that Colonial Village II plan to replace the roofs, including the gutters and downspouts as needed, by 2015 and again by 2035. 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.

Roofs, Flat - Colonial Village II maintains flat roof sections in addition to the asphalt shingle and simulated slate roofs. These flat roofs consist of approximately 850 squares of roofing. Many of the roofs utilize copper gutters, downspouts and scuppers. The roofs vary greatly in age. The majority of the roofs were replaced in 1984, 1991 and 1998 and are generally in fair to poor overall condition. Management informs us of a history of leaks. The exception is 1752 and 1746 N. Rhodes, and 1744 and 1776 Troy which were reroofed in 2012, and 1735 and 1739 Troy which will be reroofed in 2013. The useful life of a flat roof is from 15- to 20-years.

The time or need to replace roofs becomes apparent with multiple or recurring leaks. Colonial Village II should determine whether the origin of the leaks is from the membrane or flashings. The Association may incur less cost by repairs to the flashings than replacement of an entire roof. Water travels to the lowest point and opening in the roof structure, sometimes finding its way dozens of feet from the origin of the leak in the membrane. Therefore, because



the difficulty in finding several or many breaks in a membrane, replacement eventually becomes the more economical option rather than repair.

All flat roofs including built-up, EPDM (ethylene propylene diene monomer) and modified bitumen have useful lives of 15- to 20-years. Based on the information furnished by Representatives of the Association, we include the contract amount for reroofing of 1735 and 1739 Troy in 2013. Based on the age and history of leaks, we recommend the Association anticipate the phased replacement of the remaining roofs which date to 1984 through 1998 in a phased manner beginning in 2014 and concluding by 2019. Subsequent phased replacement of all flat roofing is likely beginning by 2028 and concluding by 2036. We recommend the Association replace the existing roofs with the most economical type of flat roof with consideration given to competitive bids and proposals from several roofing contractors. Our estimate of cost is based on the historic cost of reroofing but increased to include replacement of gutters, downspouts and scuppers as needed. Line Items 1.400 and 1.401 of *Reserve Expenditures* depict this information.

Roofs, Synthetic Slate - Approximately 70 squares of synthetic slate shingles comprise a portion the roofs of Colonial Village II. The roofs are in fair overall condition at an age of 29 years. Management informs us of no history of leaks. Our visual inspection from the ground notes deterioration and missing shingles. Page 5.6 of *Photographs* depicts these conditions. The useful life of a simulated slate roof is from up to 35 years. The occurrence of roof leaks will increase as more slate shingles crack, break and dislodge. As the shingles age they will begin flaking about their edges or delaminating followed by the occurrences of broken or dislodged



shingles. This deterioration will result in increased maintenance costs such that replacement becomes the least costly long-term alternative as compared to ongoing repairs.

A synthetic slate roof system comprises three overlapping layers of shingles nailed onto a 60- or 90-pound layer of roofing paper. We cannot determine the weights of roofing papers due to the noninvasive, nondestructive nature of our visual inspection. However, replacement standards should conform to the local building code and manufacturer's specifications at the time of actual replacement. The manner of construction is such that the roofing paper is the primary line of defense from water infiltration. The shingles act to shade the roofing paper from harmful sunlight and to protect the roof from heavy winds.

The function of flashing is to provide a watertight junction between the roofing materials and roof penetrations. Plumbing vent stacks are one example where counter flashing and collars are often used. A short list of these points is the interface of sloped and flat roofs, at the leading edges of all roofs (*as drip edge flashing*), and any openings in the sloped roof such as plumbing stack vents and roof vents.

Based on their age and visual condition, we advise the Association prepare for replacement of the synthetic slate roofs by 2019. We depict this information on Line Item 1.520 of *Reserve Expenditures*.

Walls, Masonry - Masonry comprises approximately 58,000 square feet at the building along N. Rhodes Street and approximately 87,000 square feet at the remaining buildings, including the chimneys. We note the following conditions with commentary of the different masonry systems:

N. Rhodes Street Building

- Virginia Historic Landmark
- Extensive mortar loss and deterioration
- Lintel rust and deflected lintels
- Sill deterioration
- Brick spall

Remaining Buildings

- Previous repairs at the upper portions of the masonry walls
- Minor mortar deterioration
- Lintel rust
- Efflorescence

Chimneys

- Six chimneys total, including the incinerator chimney
- Three chimneys were recently repaired
- The three remaining older chimneys exhibit significant mortar and brick deterioration

Pages 5.7 through 5.10 of *Photographs* depict these conditions. 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. Colonial Village II 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.

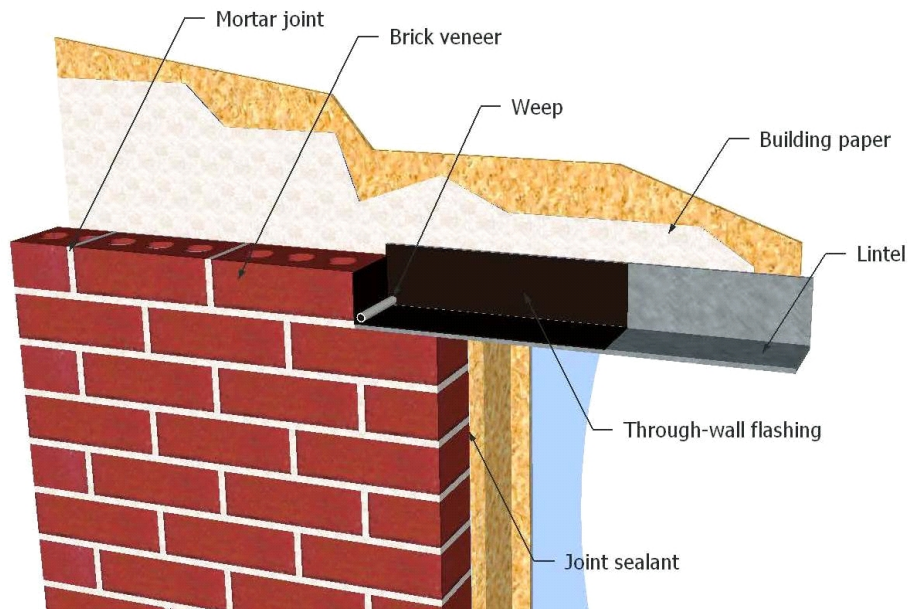
Trapped water can also migrate through areas of cracked mortar or other points within the cavity of a masonry wall. This moisture then typically migrates to the exterior face of the masonry where it evaporates. As the moisture evaporates, it deposits soluble white salts either on the surface as efflorescence 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 $\frac{1}{2}$ inch nor more than $\frac{3}{4}$ 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 steel 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 rust on the lintels and cracks or other structural damage to the walls around lintels. The contractor should remove any areas of rust, prime and paint these lintels. Paint protects and maximizes the remaining useful life of the lintels and therefore the exterior wall systems. Structural damage can eventually lead to costly replacements of lintels and surrounding wall systems. The following diagram details a metal lintel and weep system:



With the onset of rust and deflection, a portion of the metal lintels will also 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.

In consideration of the observed condition of the chimneys, we recommend the Association budget rebuilding of the three remaining unrepaired chimneys in 2014. Our estimate of cost is based, in part, on a bid provided by Management.



For near term repairs to the building along N. Rhodes Street, we recommend the Association budget for the following activities in a phased manner beginning by 2016 and concluding by 2019:

- Complete inspection of the masonry
- Repointing of up to ten percent (10%) of the masonry
- Replacement of up to one percent (1%) of the masonry
- Replacement of up to ten percent (10%) of the metal lintels
- Paint applications to the metal lintels

For the subsequent repairs to all buildings, we recommend the Association budget for the following activities in a phased manner beginning by 2020, concluding by 2023 and every 10 years thereafter:

- Complete inspection of the masonry
- Repointing of up to seven percent (7%) of the masonry
- Replacement of up to one percent (1%) of the masonry
- Replacement of up to five percent (5%) of the metal lintels
- Paint applications to the metal lintels

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 Items 1.819 through 1.821 of *Reserve Expenditures* appropriate to estimate sufficient reserves.

Windows - Colonial Village II maintains 93 single panel aluminum frame windows at the common area basements. The windows are in fair condition and likely date to conversion of the property to condominiums. The useful life of the windows is dependent on the occurrence of water infiltration, thermal inefficiencies compared to present technology, type of frame, availability of replacement parts and aesthetics. We recommend the Association anticipate a useful life of up to 40 years for the windows and budget for their replacement by 2024. We note this information on Line Item 1.980 of *Reserve Expenditures*.



Interior Building Elements

Floor Coverings, Carpet - Carpet comprises 1,010 square yards of the common area hallway floor coverings. The carpet is in good condition at an age of one year. We note no visible deterioration. We suggest that the Association budget to replace the carpet every 8- to 12-years to maintain a positive appearance of the common areas. We include the following solutions and procedures pertaining to replacement of the carpet for the benefit of present and future board members.

The appearance, texture and longevity of carpet are determined by the type of fiber, pile and color. There are many types of fibers available. Due to the high volume of traffic in the common areas, we suggest the use of a nylon fiber as it is durable, resilient and stain resistant. There are also multiple types of carpet piles available. Loop piles, such as berber, or angle cut piles with woven patterns are ideal for high traffic areas. We suggest the use of mid-tone colors to mask traffic patterns and stains.

The contractor should follow the manufacturer's installation guidelines and the Standard for Installation of Commercial Carpet as provided by the Carpet and Rug Institute. Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.

We advise that the Association anticipate replacement of the carpet by 2022 and every 10 years thereafter. We base our replacement cost on Line Item 2.200 of *Reserve Expenditures* on a medium traffic weight nylon carpet of 32 ounces of fiber per square yard. Colonial Village II should continue to fund vacuuming, spot removal and schedule periodic cleanings through the operating budget to maximize the life of the carpet.



Floor Coverings, Vinyl Tile, Laundry Rooms - Vinyl comprises 300 square yards of the floor coverings in the common area laundry rooms. The vinyl floor coverings are in good condition at an age of one year. Colonial Village II should anticipate a useful life of 10- to 15-years for the vinyl floor coverings in these traffic pattern common areas. Based on the age and condition of the vinyl floor coverings, we recommend the Association budget for their replacement by 2027 and again by 2042. We depict this information on Line Item 2.300 of *Reserve Expenditures*.

Light Fixtures, Hallways - There are approximately 155 interior light fixtures located throughout the common hallways. The interior light fixtures in satisfactory condition at an age of two years and have useful lives of up to 30 years. Colonial Village II may desire replacement for aesthetic reasons or to coordinate their replacement with more significant renovations or paint applications. We consider the times of such replacements discretionary. For the purposes of this study, we recommend a total replacement of the light fixtures by 2042 in coordination with carpet and paint replacements. We include this information on Line Item 2.560 of *Reserve Expenditures*.

Mailboxes - The unit mailboxes are located in the lobby at Colonial Village II. The mailboxes are in good to fair overall condition. Mailboxes of this type have useful lives of up to 35 years. Based on their condition and age, we recommend the Association anticipate replacement of the mailboxes by 2022. We include this information on Line Item 2.700 of *Reserve Expenditures*. The Association should verify the new mailboxes meet the specifications of the United States Postal Service. Replacement could potentially require a wall renovation to allow for larger mailboxes.



Paint Finishes - The common area have approximately 35,000 square feet of paint finishes on the walls and ceilings. These finishes are in good condition at an age of one year. We note no visible deterioration. The useful life of a paint finish on interior walls and ceilings is from 6- to 10-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. Due to the high volume of traffic in the common entry areas, Colonial Village II may anticipate a diminished useful life of the paint finishes in these isolated 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 2022 and every 10 years thereafter. We depict this information on Line Item 2.800 of *Reserve Expenditures*.

Building Services Elements

Electrical Meter Panels - Colonial Village II maintains a total of 41 electric meter panels on the exterior of the buildings. The meter panels are in fair visual condition at an age of 29 years. The exception is one meter panel which was recently replaced. Meter panels have a useful life of up to 55 years. However, replacement prior to 55 years is common due to improper



socket operation. In consideration of the age of the panels, we recommend the Association anticipate the phased replacement of the remaining 40 meter panels beginning by 2015 and concluding by 2027. We depict this information on Line Item 3.300 of *Reserve Expenditures*.

Key Fob System - Colonial Village II installed an extensive key fob system with a limited number of security cameras in 2011. The key fob system is in good operational condition. As the system ages, service interruptions will increase in frequency. We anticipate a useful life of up to 15 years for the system. The Association should anticipate replacement of the key fob system by 2026 and every 15 years thereafter. We include this information on Line Item 3.401 of *Reserve Expenditures*. The Association should anticipate interim replacements of a limited quantity of components as normal maintenance to achieve a uniform useful life for the entire system.

Pipes - The Association is responsible for maintenance and replacement of the piping systems arranged in vertical and horizontal segments for the 255 units at Colonial Village II. These pipes comprise the following:

- Domestic Cold Water
- Domestic Hot Water Supply and Return
- Vent Plumbing Fixtures
- Sanitary Waste Disposal

The exact locations and conditions of the pipes were not ascertained due to the nature of their location and the non-invasive nature of our inspection. We comment on the respective quantities and conditions of the piping systems in the following sections of this narrative.

Domestic Water - The supply and return copper domestic water pipes are original. Management report active leaks, pin hole leaks and previous repairs. We were also informed

of significant mineral deposits on the insides of the pipes. Copper piping is the predominant type of pipe used in new construction for domestic water piping. With low mineral content in the water, the useful life of copper domestic water pipes is up to and sometimes beyond 70 years. However, there is recent evidence that copper piping prematurely develops pinhole leaks. Studies have shown that changes in water treatment practices, recently required in response to EPA (U.S. Environmental Protection Agency) regulations, are dramatically increasing the risk of pitting corrosion in many geographic locations. Utility companies are implementing higher chloride levels to prevent outbreaks of waterborne disease. These higher chloride levels can accelerate corrosion of copper pipes and indeterminately reduce their useful life.

Sanitary Waste Disposal - The cast iron sanitary waste disposal are original. The useful life of these sanitary waste disposal pipes is up to and sometimes beyond 70 years. These pipes typically deteriorate from the inside out as a result of sewer gases, condensation and rust.

Valves - The piping systems include various valves. Identification of a typical useful life and remaining useful life for individual valves is difficult. Associations typically replace valves on an as needed basis in our experience. Therefore, we recommend the Association replace valves as needed through the operating budget.

We base our cost to replace the pipes serving one unit on the following factors:

- Our cost assumes replacement of all the pipes located within each wall opening
- Our cost *includes* the replacement of associated branch piping, fittings and minimal interior finishes
- Our cost *excludes* replacement of expansion joints, significant interior finishes and temporary housing for affected residents if required



- Our cost *excludes* replacement of the pipes within the units

The Association budgets an amount in the annual operating budget for minor pipe repairs and replacements. We recommend that the Association continue to fund interim pipe replacements, prior to more aggregate replacements identified in the following paragraphs, from the operating budget. We also recommend the Association contract for an invasive investigation of the condition of the piping system prior to beginning more aggregate replacements, funded through the operating budget.

We recommend the Association budget to replace the pipes in 13 units by 2015 and every two years thereafter. Our estimate includes replacement of the pipes in seventy-six percent (76.5%) of the units in the next 30 years. An invasive analysis of the piping systems will provide various replacement options. Replacement of the systems as an aggregate event will likely require the use of special assessments or loans to fund the replacements. We depict this information on Line Item and 3.605 of *Reserve Expenditures*.

Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Colonial Village II could budget sufficient reserves for the beginning of these pipe replacements and have the opportunity to adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual pipe replacements to budget sufficient reserves.

Water Heaters - Colonial Village II utilizes 17 commercial grade gas-fired water heaters with an input capacity of 200-MBH (thousand British Thermal Units per hour) each to produce



domestic hot water. The water heaters vary greatly in age and condition. The useful life of water heaters of this capacity is from 12- to 15-years. The useful life is dependent on use, demand per unit and the quality of water. In consideration of the varied ages of the water heaters, we recommend the Association anticipate the phased replacement up to two water heaters in 2014 and every two years thereafter. We depict this information on Line Item 3.940 of *Reserve Expenditures*.

Property Site Elements

Concrete Sidewalks and Steps - Concrete sidewalks and steps comprise 26,400 square feet throughout the community. The sidewalks are in good overall condition. We note limited cracks and deterioration. The Association has conducted extensive previous partial replacements. 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 estimate that up to 15,840 square feet of concrete sidewalks and steps, or sixty percent (60%) of the total, will require replacement during the next 30 years. We recommend the Association budget for replacement of 1,585 square feet of concrete sidewalks and steps every three years beginning by 2015. 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 psi (pounds per square inch) concrete with 6x6 -



W1.4xW1.4 steel reinforcing mesh. We recommend an annual inspection of the sidewalks and steps to identify potential trip hazards. We suggest that 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.

Light Poles and Fixtures - The Association uses 19 metal bollard light fixtures throughout the property. These fixtures are in fair to poor condition and have useful lives of up to 20 years. Based on their condition, the Association should anticipate the need for replacement by 2015 and again by 2035. We note this information on Line Item 4.559 of *Reserve Expenditures*.

Light Poles and Fixtures - The Association uses 46 metal light fixtures atop wood poles to illuminate the property. These elements are in fair condition and have useful lives of up to 25 years. The Association should anticipate the need for replacement by 2016 and again by 2041. We note this information on Line Item 4.560 of *Reserve Expenditures*.

Railings and Fences, Metal - Approximately 640 linear feet of metal railings and fences are found at the steps and sidewalks. The railings and fences are older and in fair overall condition. The Association has replaced a limited quantity of the railings. The protective finishes are original and in good overall condition. Railings and fences of this type have a long useful life but are not maintenance free. Periodic maintenance should include periodic applications of protective paint finish to the metal surfaces and partial replacement of deteriorated sections as needed. Metal components at grade and key structural connections are



especially prone to failure if not thoroughly maintained. Secure and rust free fasteners and connections will prevent premature deterioration. We recommend paint applications every six- to eight-years and we anticipate a useful life of up to 40 years for the railings and fences.

Periodic applications of paint to the metal will help maximize the useful life. Preparation of the metal before application of the paint finish is important. The paint contractor should remove all soil, dirt, oil, grease and other foreign materials before application of the paint finish to maximize its useful life. The contractor should also remove paint blisters and rust prior to the paint finish application. We recommend the use of a power wire brush, scraper and/or sander as effective means of removal. The Association should require the application of a primer on bare metal. The primer for metal surfaces should include a rust inhibitor for added protection. We recommend the Association refinish the fences by 2016 and every seven years thereafter. We anticipate replacement of the railings and fences in a phased manner beginning by 2015 and concluding by 2027. We depict this information on Line Items 4.729 and 4.731 of *Reserve Expenditures*.

Retaining Wall, Brick - The Association maintains several brick masonry retaining walls which comprises approximately 3,100 square feet. The retaining walls are in fair overall condition. We note lean, significant cracks and spall. Page 5.16 of *Photographs* depicts these conditions. Properly constructed brick masonry retaining walls have an indefinite useful life with the benefit of periodic capital repairs. We recommend the Association anticipate the complete inspection of the walls and capital repairs every 8- to 12-years. Capital repairs should include repointing of deteriorated mortar and partial replacement of leaning section of wall or areas of significant brick spall. We recommend the Association conduct this work by 2016 and every 10



years thereafter. We depict this information on Line Item 4.740 of *Reserve Expenditures*. The Association should fund for repairs or partial replacements through the operating budget.

Sanitary Sewer Pipes - The Association maintains the subsurface utility pipes throughout the property. The exact amounts and locations of the subsurface utility pipes were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection. We anticipate a useful life of up to and likely beyond 90 years. We recommend Colonial Village II budget for repairs to isolated occurrences of breached utilities. For budgetary purposes, we include an allowance for possible partial replacement of up to 120 linear feet of sanitary sewer pipes by 2017 followed by a steadily increasing rate of replacement as the pipes continue to age. We note this information on Line Item 4.774 of *Reserve Expenditures*.

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, July 8, 2013. 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



Building elevation



Building elevation



Common door



Significant deterioration of the door at Building 739



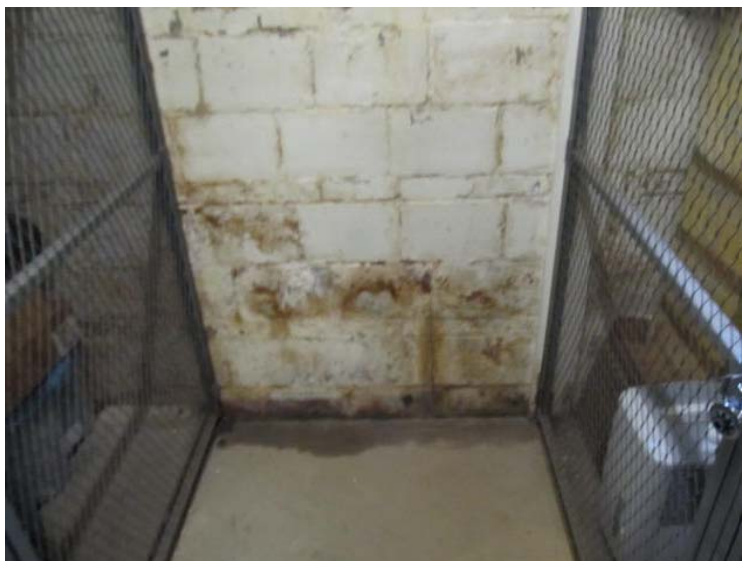
Gaps at the common door threshold at Building 1728



Active water infiltration at basement



Evidence of past water infiltration at basement



Active water infiltration at basement



Remediated basement



Asphalt shingle roof



Typical asphalt shingle lift and deterioration



Metal gutter and downspout



Synthetic slate roof



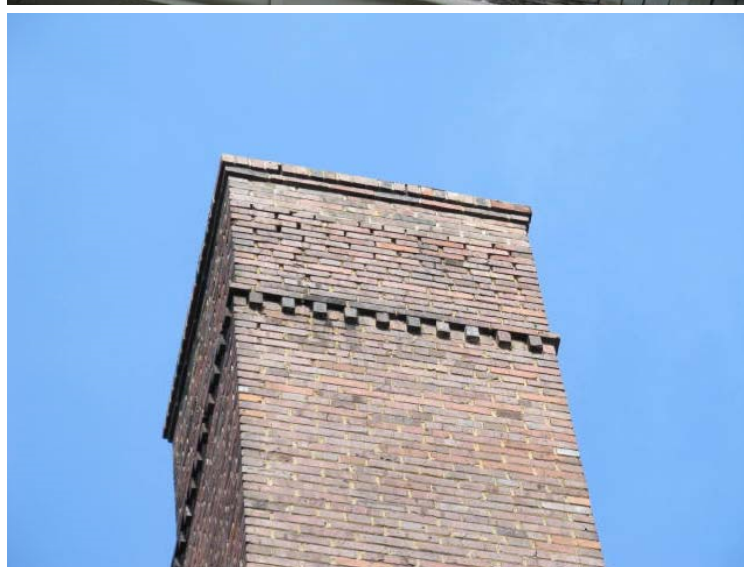
Synthetic slate roof



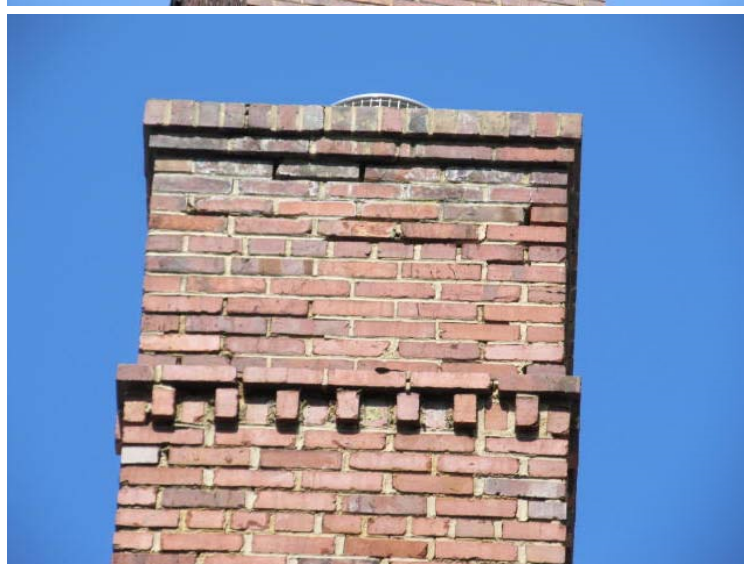
Missing synthetic slate shingle at Building 1806



Chimney in need of rebuilding at Building
1782 North Troy Street



Incinerator chimney in need of rebuilding
at Building 1762 N. Rhodes Street



Chimney in need of rebuilding at Building
1728 North Rhodes Street



Mortar loss and deterioration at 1853 N. Rhodes Street



Mortar loss and deterioration at 1742 N. Rhodes Street



Metal lintel deflection and rust at N. Rhodes Street



Sill deterioration at 1742 N. Rhodes Street



Brick spall at 1744 N. Rhodes Street



Mortar deterioration below sill at 1758 N. Rhodes Street



Lintel rust and minor brick spall at 1782 N. Troy Street



Minor efflorescence at 1741 N. Troy Street



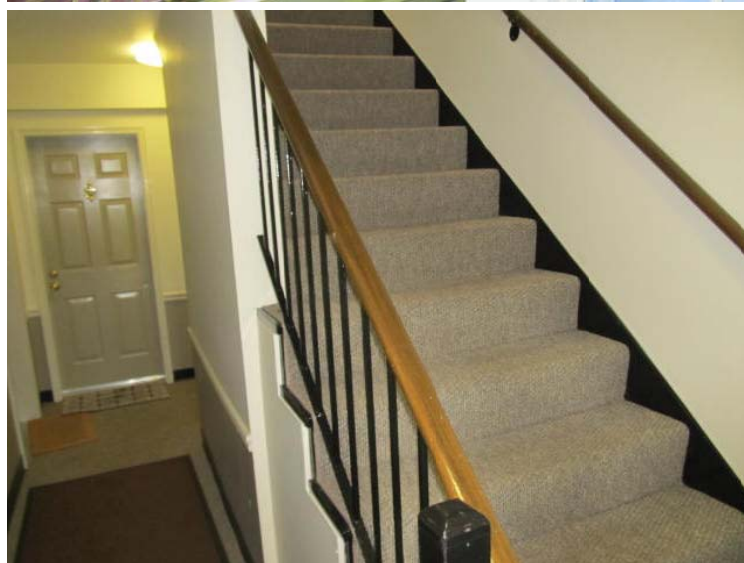
More significant efflorescence at 1739 N. Troy Street



Copper downspout



Copper scupper and downspout



Common hallway



Laundry room



Mailboxes



Electric meter panel



Domestic water pipes



Domestic water pipes



Discolored insulation at pipes is early indication of leak



Water heaters



Sidewalk crack



Concrete steps



Bollard light fixture



Light pole and fixture



Metal railings



Slight retaining wall lean



Retaining wall cracks and deterioration



Retaining wall cracks and deterioration



Location of recent drainage improvements



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.

Colonial Village II 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 standards¹ set forth by 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

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



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:

Information Furnished by the Association	
2013 unaudited Cash Status of the Reserve Fund	\$286,778
2013 Remaining Budgeted Reserve Contribution	\$144,083
Anticipated Interest on Reserve Fund	\$2,335
Less Anticipated Reserve Expenditures	(50,460)
Projected 2013 Year-End Reserve Balance	\$382,736

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

Local² 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 Arlington, Virginia at an annual inflation rate of 2.0%. 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 Colonial Village II 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 accordance with anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.2% (We 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

² See Credentials for additional information on our use of published sources of cost data.



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								
Average or Last Actual = (A)	<u>2011:1 (A)</u>	<u>2011:2 (A)</u>	<u>2011:3 (A)</u>	<u>2011:4 (E)</u>	<u>2012:1 (A)</u>	<u>2012:2 (A)</u>	<u>2012:3 (A)</u>	<u>2012:4 (E)</u>
90-Day Treasury Bill	0.05%	0.4%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
1-Year Treasury Bill	0.30	0.15	0.10	0.10	0.30	0.19	0.18	0.18
10-Year Treasury Note	2.50	2.25	2.20	1.85	2.50	1.50	1.45	1.70
30-Year Treasury Bond	4.50	4.50	3.60	2.80	4.50	2.55	2.50	2.90
Consumer Price Index (annualized rate)	2.1%	3.6%	3.8%	3.2%	2.1%	1.7%	2.2%	2.0%
"Residential Construction" Producer Price Index-Inflation Rate, Bureau of Labor Statistics (BLS - 12 months)								2.3%
National Market Savings Rates as found in	0.1%	for Money Market Savings			0.8%	for 2-Year Certificate of Deposit		
http://www.bankrate.com	0.4%	for 1-Year Certificate of Deposit			1.2%	for 3-Year Certificate of Deposit		
Estimated Near Term Yield Rate for Reserve Savings	1.2%							
Est. Near Term Local Inflation Rate for Future Capital Expenditures	2.0%							
								10/17/2012

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 Colonial Village II 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) Colonial Village II 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. We will consider any additional information made available to us in the interest of promptly issuing a Final Report (if requested). However, the Report represents a valid opinion of our findings and recommendations and is deemed complete and final if no Final Report or changes are requested within six months of our inspection. We retain the right to withhold the Report or Final 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 our Report(s) 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 bachelors 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 a 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

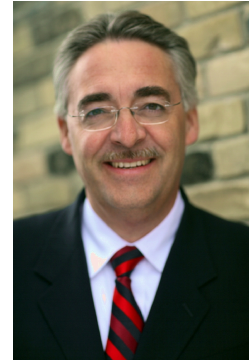
Reserve Advisors experience includes ornate and vintage buildings as well as modern structures. Our specialists are no strangers to older buildings. We're accustomed to addressing the unique challenges posed by buildings that date to the 1800's. We recognize and consider the methods of construction employed 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 exhibiting, and direct mail promotions. 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.

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. Community Associations Institute (CAI) is a national, nonprofit 501(c)(6) trade association created in 1973 to provide education and resources to America's 305,000 residential condominium, cooperative and homeowner associations and related professionals and service providers. The Institute is dedicated to fostering vibrant, responsive, competent community associations that promote harmony, community, and responsible leadership.

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 Planning for Replacement of Property Doesn't Have to Be Like a Trip to the Dentist, Reserve Studies for the First Time Buyer, Sound Association Planning Parallels Business Concepts, and Reserve Studies Minimize Liability. He has worked with a variety of publications, including the Chicago Tribune, The Milwaukee Journal/Sentinel, Common Ground, Common Interest, and Condo Management. He also co-authored "Reserves", an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and the benefits of maintaining appropriate reserves. The videotape is available through Reserve Advisors or CAI's website, www.caionline.org and libraries in the State of Virginia.

INDUSTRY SERVICE AWARDS

CAI National Rising Star Award - To an individual whose leadership abilities and professional contributions have earmarked them for even greater accomplishments in the future.

CAI Michigan Chapter Award - "Given to the individual who contributed their time, expertise, and resources toward improving the quality of services offered by the chapter. Mr. Poehlmann was unanimously selected as the winner of the 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



QUALIFICATIONS
JOHN C. DECKER, P.E., PRA, RS
Responsible Advisor

CURRENT CLIENT SERVICES

John C. Decker, a Professional Engineer (P.E.) in civil engineering, is an Advisor for *Reserve Advisors, Inc.* Mr. Decker 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 and Transition Study Reports for apartments, high rises, condominiums, townhomes and homeowners associations. John Decker frequently serves as the *Quality Assurance Review Coordinator* for Recreational, Townhome, Mid Rise and High Rise communities. Mr. Decker has experience leading Associations to a negotiated settlement concerning appropriate reserve at the time of developer turnover.

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

East Rich Street Lofts This vintage mid-rise was built in the early 1900's and recently converted to condominiums. The combination of vintage and current styling make it an important fixture in downtown Columbus, Ohio.

Central Park Condominium Association In the north suburbs of Chicago is this mid-rise building built in 1971. At four stories tall this stunning property features spacious floor plans and a high level of finish.

Fairlington Village A 1703-unit residential development in Arlington, Virginia. This property was originally constructed between 1942 and 1945 and was selected for the National Register for Historic Places by the Federal Government. The development includes six pools, 13 tennis courts and a community center.

The Brownstone Located in downtown Chicago is this 23-story, 75-unit building. The building contains underground parking, rooftop pool and a fitness center.

Savoy Park Located in suburban Virginia, these recently constructed mid-rise buildings have an underground parking structure, pool and tasteful and spacious courtyards.

Regency Park 130-unit, 28-building townhome community located in the northern suburbs of Detroit is a comfortable development constructed amongst mature pine trees and an adjacent golf club.

Park Lane Upscale condominium and townhome development of 153 units in a five-story mid-rise building and 17 townhome units. This gated community includes a unique below grade recreation center, tennis courts and an outdoor pool.

Museum Park Tower I Located in downtown Chicago, this 19 story high rise includes 221 luxury units in this modern building constructed in the early 2000's. The building includes a multistory underground parking garage.

PRIOR RELEVANT EXPERIENCE

Before joining *Reserve Advisors, Inc.*, Mr. Decker was a Staff Engineer for a construction engineering firm. He was responsible supervision of a team of engineering technicians who provided field and laboratory testing services of construction materials for large-scale commercial construction projects.

EDUCATION

University of Wisconsin, Platteville - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Professional Engineer (P.E.) Registration - Wisconsin 2007

Reserve Specialist (RS) - Community Associations Institute

Professional Reserves Analyst (PRA) - Association of Professional Reserve Analysts



QUALIFICATIONS
MEGAN C. KONECNY, RS, PRA
Review Coordinator

CURRENT CLIENT SERVICES

Megan C. Konecny, an environmental/civil engineer, is an Advisor for *Reserve Advisors, Inc.* Ms. Konecny is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services on apartments, townhomes, high rise condominium towers and planned unit developments. Ms. Konecny frequently serves as the *Quality Assurance Review Coordinator for Multi-story, Recreational and Townhome communities.*

The following is a partial list of clients served by Megan Konecny demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

Archbishop Spalding High School - A private high school located southwest of Annapolis, Maryland with an enrollment of 1,050 students. The property includes athletic facilities, an auditorium, gymnasium, library, cafeteria with kitchen, chapel, and approximately 50 classrooms.

Olympic Club - A private athletic club with historic clubhouses located in downtown San Francisco and overlooking the Pacific Ocean. Exclusive amenities include 45 holes of golf, swimming pools, gymnasiums, squash, handball and tennis courts and a fitness center. The United States Golf Association recognizes the Olympic Club as one of the first 100 golf clubs established in the United States. The Club has hosted four U.S Open Championships and is scheduled to host again in 2012.

East Meadows - Community of 74 units in 17 single family style buildings and 12 three-story multiple unit buildings located in a wooded area west of Detroit, Michigan. Professional services included loan scenario development to assist the Association evaluate the most prudent method of financing its exterior restoration.

Park Lane Condominium Associations - A gated community located in Chicago suburb that includes 136 units in one intricate three-story building and 17 townhome style units in four buildings. The development includes under-building garage parking, an outdoor pool, tennis courts, and a unique sub level recreation center that features a roof top pergola.

Jonathan's Landing Golf Club - Located just north of West Palm Beach, Jonathan's Landing is a premier member owned, private club. Exclusive amenities include 54 holes of championship golf, two club houses and ten Har-Tur tennis courts.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Inc., Ms. Konecny attended Marquette University in Milwaukee, Wisconsin where she specialized in Environmental Engineering. There, she participated the design of a Chicago subdivision that included preliminary grading of the site, design of the storm sewer system and stormwater management with Cowhey Gundmunson Ledger, Limited. Ms. Konecny also worked with Everitt Knitting where she provided inspection services and resolved production problems.

EDUCATION

Marquette University - B.S. Civil with emphasis in Environmental Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute

Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts



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 <http://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 <http://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 <http://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 <http://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.