

Fairlington Meadows

April 4, 2023 • Arlington, VA

FULL RESERVE STUDY



Fairlington Meadows
Arlington, Virginia

Dear Board of Directors of Fairlington Meadows:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Fairlington Meadows in Arlington, Virginia and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 4, 2023.

This *Full Reserve Study* exceeds the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a “Level I Full Reserve Study.”

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Fairlington Meadows plan for a successful future.

As part of our long-term thinking and everyday commitment to our clients, we are available to answer any questions you may have regarding this study.

Respectfully submitted on August 2, 2023 by

Reserve Advisors, LLC

Visual Inspection and Report by: Tim C. Yachnik

Review by: Alan M. Ebert, RS¹, PRA², Director of Quality Assurance



¹ 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 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>.





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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Fairlington Meadows (Meadows)

Location: Arlington, Virginia

Reference: 140365

Property Basics: Fairlington Meadows is a condominium and townhome style development which consists of 342 units in 57 buildings. The buildings were built in 1944 and were converted to condominiums in 1974.

Reserve Components Identified: 39 Reserve Components.

Inspection Date: April 4, 2023.

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 the following threshold funding years:

- 2024, 2027 and 2035 due to replacements of the slate roofs
- 2040 due to replacement of the wood fences
- 2044 due to inspections and repairs of the masonry façade following partial replacements of the electrical system

Methodology: 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
- 2.0% anticipated annual rate of return on invested reserves
- 3.0% 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.

Unaudited Cash Status of Reserve Fund:

- \$573,166 as of January 31, 2023
- 2023 budgeted Reserve Contributions of \$480,000
- A potential deficit in reserves might occur by 2035 based upon continuation of the most recent annual reserve contribution of and the identified Reserve Expenditures.

Project Prioritization: We note anticipated Reserve Expenditures for the next 30 years in the **Reserve Expenditures** tables and include a **Five-Year Outlook** table following the **Reserve Funding Plan** in Section 3. We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Phased replacement of the slate roofs
- Partial replacements of the electrical system
- Paint applications to the trim
- Phased replacements of the entrance door systems
- Partial replacements of the concrete curbs and gutters



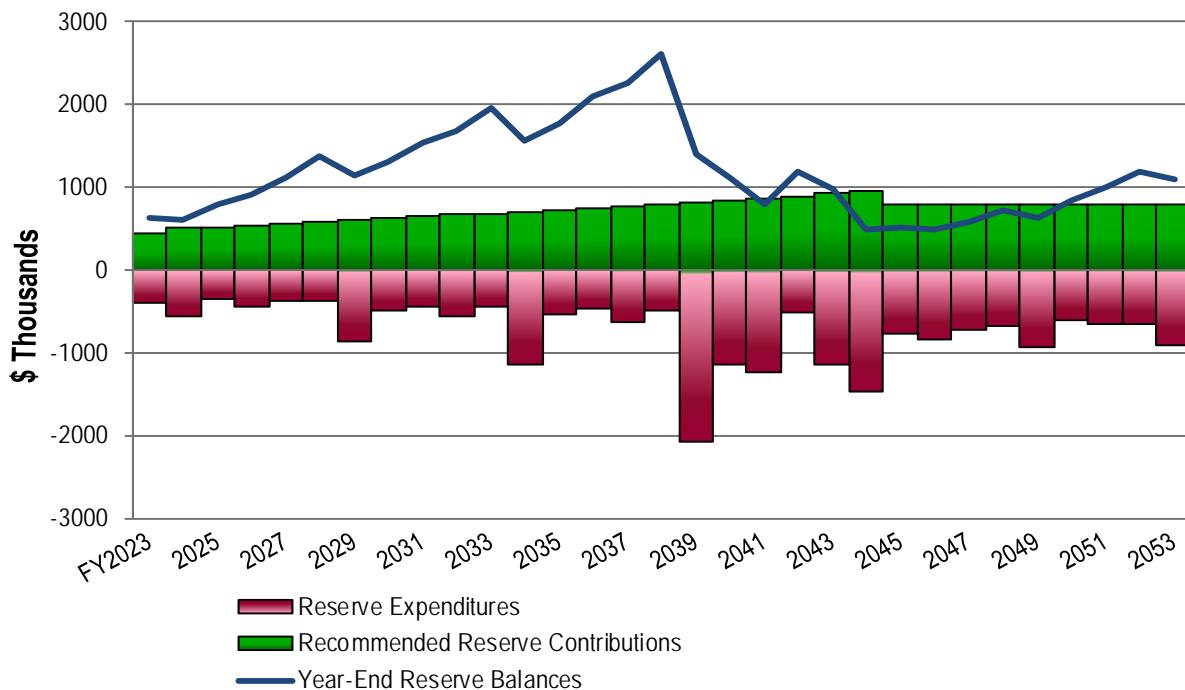
Recommended Reserve Funding: We recommend the following in order to achieve a stable and equitable Cash Flow Methodology Funding Plan:

- Phased increases of \$22,400 from 2024 through 2028
- Inflationary increases from 2029 through 2044
- Decrease to \$805,000 by 2045 due to fully funding for inspections and repairs of the masonry façade
- Stable contributions of \$1,105,700 from 2046 through 2053, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$22,400 represents an average monthly increase of \$5.46 per unit owner and about a two percent (1.5%) adjustment in the 2023 total Operating Budget of \$1,540,985.

Meadows

Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2024	502,400	605,311	2034	706,900	1,553,046	2044	950,100	481,754
2025	524,800	794,200	2035	728,100	1,772,605	2045	805,000	519,844
2026	547,200	910,102	2036	749,900	2,092,264	2046	805,000	487,697
2027	569,600	1,122,784	2037	772,400	2,271,829	2047	805,000	579,827
2028	592,000	1,367,898	2038	795,600	2,617,019	2048	805,000	729,287
2029	609,800	1,136,154	2039	819,500	1,402,411	2049	805,000	625,949
2030	628,100	1,307,878	2040	844,100	1,130,163	2050	805,000	837,202
2031	646,900	1,532,526	2041	869,400	787,263	2051	805,000	1,011,317
2032	666,300	1,674,867	2042	895,500	1,187,663	2052	805,000	1,187,796
2033	686,300	1,951,564	2043	922,400	979,646	2053	805,000	1,102,408





2. RESERVE STUDY REPORT

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

Fairlington Meadows

Arlington, Virginia

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 4, 2023.

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
- **Five-Year Outlook** - Identifies reserve components and anticipated reserve expenditures during the first five years
- **Reserve Component Detail** - Describes the reserve components, includes photographic documentation of the condition of various property elements, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Methodology** - Lists the national standards, methods and procedures used to develop 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



Our investigation includes Reserve Components or property elements as set forth in your Declaration. The Expenditure tables in Section 3 list the elements contained in this study. 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 Unit Owners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management and the Board. These classes of property include:

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

We advise the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget. The Reserve Study identifies Reserve Components as set forth in your Declaration or which were identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:

- Meadows responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements – These elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the 30-year scope of the study. 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 the 30-year Reserve Expenditures at this time:

- Walls, Siding, Vinyl, Dormers (Replaced from 2012 through 2023)
- Electrical System, Pool House
- Foundations
- Roofs, Slate, Buckingham, Replacement
 - South Stafford Street, 3305-3309, 3355-3359, 3401-3403 and 3443-3447
 - 35 Street South, 4229-4231 and 4277-4281
- Structural Frames

Operating Budget - Provides money for the repair and replacement of certain Reserve Components. The Association may develop independent criteria for use of operating and reserve funds. For purposes of calculating appropriate Reserve Contributions, we identify the following list of Operating Budget Funded Repairs and Replacements:

- General Maintenance to the Common Elements
- Expenditures less than \$6,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Catch Basins, Landscape
- Chimney Caps (*Board requested; we are informed they fund for repairs and replacements as needed*)
- Doors, Interior and Miscellaneous Exterior
- Electric Vehicle Charging Stations
- Fence, Wood, Split Rail
- Fire Extinguishers
- Landscape, General Maintenance
- Light Fixtures, Exteriors, Condominiums
- Office, Renovations
- Paint Finishes, Touch Up
- Pavers, Masonry
- Pergola, Wood
- Pipes, Common, Interim Repairs and Waste Rodding
- Pipes, Subsurface Utilities, Inspections and Clean Out
- Pool, Mechanical Equipment, Interim Replacements
- Pumps Less Than Five-HP (horsepower)
- Rest Rooms, Fixtures, Interim Replacements
- Rest Rooms, Floor Coverings, Interim Replacements
- Rest Rooms, Interim Paint Finishes
- Retaining Wall, Concrete, Inspections and Repairs
- Roofs, Slate, Inspections and Capital Repairs (*Note: The Association informs that they have the roofs inspected quarterly and conduct the necessary repairs to the slate and flashing through the operating budget.*)
- Rip Rap, Augmentation and Replenishment

- Security System (*Board requested; we informed they fund for repairs and replacements as needed*)
- Shade Structures, Interim Canvas Replacements
- Signage, Parking Area Identification
- Staff, Storage and Service Areas
- Shutters, Vinyl
- Walls, Concrete, Inspections and Repairs, Pool House
- Walls, Masonry, Interim Repairs (*Note: The Association informs that they inspect the masonry walls, in-house, up to four times a year and fund the repairs through the operating budget.*)
- Water Heaters, Pool House
- Window Wells
- Other Repairs normally funded through the Operating Budget



Concrete walls overview



Landscape catch basin



Rip rap



Window well- Note rust



Pavers overview



Pergola

Unit Owners' Responsibility - Items designated as the responsibility of the unit owners to repair or replace at their cost. Property Maintained by Unit Owners, including items billed back to Unit Owners, relates to unit:

- Electrical Systems (Including Circuit Protection Panels)
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Light Fixtures, Exterior (Excluding Quantities at Condominium Entrances)
- Pipes (Within Units)
- Windows and Doors (Including Window Well Covers)

Others' Responsibility - Items designated as the responsibility of others to repair or replace. Property Maintained by Others relates to:

- Asphalt Pavement Street System, Public Streets (Arlington County)
- Concrete Sidewalks, Along Public Streets (Arlington County)



3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
 - useful life
 - remaining useful life
- 2023 local cost of replacement
 - Per unit
 - Per phase
 - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

Reserve Funding Plan

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

Five-Year Outlook

- Line item numbers
- Reserve component inventory of only the expenditures anticipated to occur within the first five years
- Schedule of estimated future costs for each reserve component anticipated to occur within the first five years

The purpose of a Reserve Study is to provide an opinion of reasonable annual Reserve Contributions. Prediction of exact timing and costs of minor Reserve Expenditures typically will not significantly affect the 30-year cash flow analysis. Adjustments to the times and/or costs of expenditures may not always result in an adjustment in the recommended Reserve Contributions.

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***.

RESERVE EXPENDITURES

Explanatory Notes:

- 1) **3.0%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) FY2023 is Fiscal Year beginning January 1, 2023 and ending December 31, 2023.

Fairlington Meadows
Arlington, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038	
						Useful	Remaining	Unit (2023)	Per Phase (2023)	Total (2023)																		
Exterior Building Elements																												
1.180	27	3 Each		Doors, Entrance, Phased	2025	to 30	2 to 10	9,000.00	27,000	243,000	1.3%			28,644	29,504	30,389	31,300	32,239	33,207	34,203	35,229	36,286						
1.240	25,000	3,571 Linear Feet		Gutters and Downspouts, Aluminum, Partial	2035	20 to 25	12 to 30+	10.00	35,714	250,000	1.4%																50,920	
1.519	40	40 Squares		Roofs, Asbestos (Replace with Slate)	2025	to 45	2	6,470.00	258,800	258,800	1.2%			274,561														
1.521	1,200	50 Squares		Roofs, Slate, Replacement, Phased (Incl. Pool House) (2023 is Budgeted)	2023	60 to 80	0 to 23	5,470.00	273,500	6,564,000	44.0%	100,000	281,705		298,861	307,827	317,061	326,573	336,371	346,462	356,855	367,561	378,588	389,946	401,644	413,693	426,104	
1.820	256,500	128,250 Square Feet		Walls, Masonry, Inspections and Repairs, Phased	2029	8 to 12	6 to 11	1.50	192,375	384,750	6.9%							229,706									266,292	
1.905	1	1 Allowance		Walls, Trim, Paint Finishes	2024	4 to 6	1	180,000.00	180,000	180,000	7.3%		185,400						214,929								249,162	
Interior Building Elements																												
2.200	670	670 Square Yards		Floor Coverings, Carpet	2024	8 to 12	1	71.00	47,570	47,570	0.9%		48,997														65,848	
2.560	108	108 Each		Light Fixtures (2023 is Budgeted)	2023	to 20	0	139.00	15,012	15,012	0.2%	14,985																
2.700	108	108 Each		Mailboxes	2052	to 35	29	150.00	16,200	16,200	0.2%																	
2.800	26,500	26,500 Square Feet		Paint Finishes (2023 is Budgeted)	2023	8 to 12	0	1.80	47,700	47,700	0.9%	45,279															66,028	
Building Services Elements																												
3.300	1	1 Allowance		Electrical System, Main Panels, Phased	2024	annually	1 to 7	20,000.00	20,000	20,000	4.3%		20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878	27,685	28,515	29,371	30,252	31,159	
3.560	1	1 Allowance		Life Safety System, Emergency Devices	2030	to 25	7	21,500.00	21,500	21,500	0.1%								26,442									
3.605	108	27 Units		Pipes, Domestic Water, Waste and Vent, Phased	2050	to 80+	27 to 30	7,500.00	202,500	810,000	8.2%																	
Property Site Elements																												
4.020	12,700	12,700 Square Yards		Asphalt Pavement, Crack Repair, Patch, Seal Coat, and Striping	2026	3 to 5	3	2.10	26,670	26,670	1.7%				29,143			31,845			34,798					38,025		41,551
4.040	12,700	12,700 Square Yards		Asphalt Pavement, Mill and Overlay, Parking Areas (2023 is Budgeted)	2023	15 to 20	0	18.00	228,600	228,600	2.8%	225,000																
4.110	6,900	1,040 Linear Feet		Concrete Curbs and Gutters, Partial	2026	to 65	3 to 30+	36.00	37,440	248,400	0.5%				40,912													
4.140	44,300	2,220 Square Feet		Concrete Sidewalks, Partial	2026	to 65	3 to 30+	11.50	25,530	509,450	1.1%				27,897					32,341						37,492		
4.220	1,300	1,300 Linear Feet		Fence, Chain Link, (Incl. Fabric Windscreen)	2030	to 25	7	27.00	35,100	35,100	0.2%								43,169									
4.285	13,700	6,850 Linear Feet		Fences, Wood, Phased	2040	15 to 20	17 to 18	53.00	363,050	726,100	5.3%																	
4.560	190	190 Each		Light Poles and Fixtures	2046	to 25	23	180.00	34,200	34,200	0.3%																	
4.650	1	1 Allowance		Pipes, Subsurface Utilities	2043	to 85+	20	18,000.00	18,000	18,000	0.1%																	
4.660	1	1 Allowance		Playground Equipment	2037	15 to 20	14	127,000.00	127,000	127,000	2.2%																192,099	
4.760	140	140 Square Feet		Retaining Walls, Timber	2040	to 25	17	65.00	9,100	9,100	0.1%																	
4.830	1,300	1,300 Square Yards		Sport Courts, Tennis, Color Coat	2025	4 to 6	2	10.50	13,650	13,650	0.5%			14,481						16,788							19,462	
4.840	430	430 Linear Feet		Sport Courts, Tennis, Fence	2045	to 25	22	46.00	19,780	19,780	0.2%																	
4.860	1,560	1,560 Square Yards		Sport Courts, Basketball and Tennis, Surface Replacement	2045	to 25	22	52.50	81,900	81,900	0.7%																	
4.950	1	1 Allowance		Vehicle, Maintenance	2032	10 to 15	9	25,000.00	25,000	25,000	0.3%										32,619							
Pool House Elements																												
5.070	1	1 Each		Air Handling and Condensing Units, Split System	2033	15 to 20	10	11,000.00	11,000	11,000	0.2%																14,783	
5.500	2	2 Each		Rest Rooms, Renovation	2046	to 25	23	14,000.00	28,000	28,000	0.2%																	

RESERVE EXPENDITURES

Fairlington Meadows Arlington, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	
						Useful	Remaining	Unit (2023)	Per Phase (2023)	Total (2023)																	
Exterior Building Elements																											
1.180	27	3 Each		Doors, Entrance, Phased	2025	to 30	2 to 10	9,000.00	27,000	243,000	1.3%																
1.240	25,000	3,571 Linear Feet		Gutters and Downspouts, Aluminum, Partial	2035	20 to 25	12 to 30+	10.00	35,714	250,000	1.4%	57,311			64,504				72,600						81,712		
1.519	40	40 Squares		Roofs, Asbestos (Replace with Slate)	2025	to 45	2	6,470.00	258,800	258,800	1.2%																
1.521	1,200	50 Squares		Roofs, Slate, Replacement, Phased (Incl. Pool House) (2023 is Budgeted)	2023	60 to 80	0 to 23	5,470.00	273,500	6,564,000	44.0%	438,887	452,054	465,615	479,584	493,971	508,791	524,054	539,776	555,969	572,648						
1.820	256,500	128,250 Square Feet		Walls, Masonry, Inspections and Repairs, Phased	2029	8 to 12	6 to 11	1.50	192,375	384,750	6.9%	308,705					357,874							414,874			
1.905	1	1 Allowance		Walls, Trim, Paint Finishes	2024	4 to 6	1	180,000.00	180,000	180,000	7.3%	288,847					334,853							388,186			
Interior Building Elements																											
2.200	670	670 Square Yards		Floor Coverings, Carpet	2024	8 to 12	1	71.00	47,570	47,570	0.9%						88,494										
2.560	108	108 Each		Light Fixtures (2023 is Budgeted)	2023	to 20	0	139.00	15,012	15,012	0.2%				27,113												
2.700	108	108 Each		Mailboxes	2052	to 35	29	150.00	16,200	16,200	0.2%														38,176		
2.800	26,500	26,500 Square Feet		Paint Finishes (2023 is Budgeted)	2023	8 to 12	0	1.80	47,700	47,700	0.9%						88,736										
Building Services Elements																											
3.300	1	1 Allowance		Electrical System, Main Panels, Phased	2024	annually	1 to 7	20,000.00	20,000	20,000	4.3%	32,094	33,057	34,049	35,070	36,122	37,206	38,322	39,472	40,656	41,876	43,132	44,426	45,759	47,131	48,545	
3.560	1	1 Allowance		Life Safety System, Emergency Devices	2030	to 25	7	21,500.00	21,500	21,500	0.1%																
3.605	108	27 Units		Pipes, Domestic Water, Waste and Vent, Phased	2050	to 80+	27 to 30	7,500.00	202,500	810,000	8.2%												449,811	463,305	477,205	491,521	
Property Site Elements																											
4.020	12,700	12,700 Square Yards		Asphalt Pavement, Crack Repair, Patch, Seal Coat, and Striping	2026	3 to 5	3	2.10	26,670	26,670	1.7%			45,404					54,215				59,242			64,735	
4.040	12,700	12,700 Square Yards		Asphalt Pavement, Mill and Overlay, Parking Areas (2023 is Budgeted)	2023	15 to 20	0	18.00	228,600	228,600	2.8%					412,877											
4.110	6,900	1,040 Linear Feet		Concrete Curbs and Gutters, Partial	2026	to 65	3 to 30+	36.00	37,440	248,400	0.5%					67,621											
4.140	44,300	2,220 Square Feet		Concrete Sidewalks, Partial	2026	to 65	3 to 30+	11.50	25,530	509,450	1.1%			43,463				50,386						58,411			
4.220	1,300	1,300 Linear Feet		Fence, Chain Link, (Incl. Fabric Windscreen)	2030	to 25	7	27.00	35,100	35,100	0.2%																
4.285	13,700	6,850 Linear Feet		Fences, Wood, Phased	2040	15 to 20	17 to 18	53.00	363,050	726,100	5.3%		600,066	618,068													
4.560	190	190 Each		Light Poles and Fixtures	2046	to 25	23	180.00	34,200	34,200	0.3%							67,497									
4.650	1	1 Allowance		Pipes, Subsurface Utilities	2043	to 85+	20	18,000.00	18,000	18,000	0.1%					32,510											
4.660	1	1 Allowance		Playground Equipment	2037	15 to 20	14	127,000.00	127,000	127,000	2.2%															308,262	
4.760	140	140 Square Feet		Retaining Walls, Timber	2040	to 25	17	65.00	9,100	9,100	0.1%		15,041														
4.830	1,300	1,300 Square Yards		Sport Courts, Tennis, Color Coat	2025	4 to 6	2	10.50	13,650	13,650	0.5%		22,561											30,321			
4.840	430	430 Linear Feet		Sport Courts, Tennis, Fence	2045	to 25	22	46.00	19,780	19,780	0.2%							37,901									
4.860	1,560	1,560 Square Yards		Sport Courts, Basketball and Tennis, Surface Replacement	2045	to 25	22	52.50	81,900	81,900	0.7%							156,929									
4.950	1	1 Allowance		Vehicle, Maintenance	2032	10 to 15	9	25,000.00	25,000	25,000	0.3%						46,507										
Pool House Elements																											
5.070	1	1 Each		Air Handling and Condensing Units, Split System	2033	15 to 20	10	11,000.00	11,000	11,000	0.2%													24,434			
5.500	2	2 Each		Rest Rooms, Renovation	2046	to 25	23	14,000.00	28,000	28,000	0.2%							55,260									

RESERVE EXPENDITURES

Explanatory Notes:

- 1) **3.0%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) FY2023 is Fiscal Year beginning January 1, 2023 and ending December 31, 2023.

Fairlington Meadows Arlington, Virginia				Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038
Line Item	Total Quantity	Per Phase Quantity	Units		Reserve Component Inventory	Useful	Remaining	Unit (2023)	Per Phase (2023)																	
Pool Elements																										
6.200	5,120	5,120	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2025	8 to 12	2	2.00	10,240	10,240	0.2%		10,864													14,600
6.250	1,500	1,500	Square Feet	Concrete Flatwork, Stamped	2052	to 35	29	18.50	27,750	27,750	0.3%															
6.300	3,760	3,760	Square Feet	Covers, Vinyl	2024	6 to 8	1	3.00	11,280	11,280	0.3%	11,618								14,718						
6.400	460	460	Linear Feet	Fences, Chain Link	2032	to 25	9	25.00	11,500	11,500	0.1%									15,005						
6.500	1	1	Allowance	Furniture	2034	to 12	11	48,000.00	48,000	48,000	0.7%														66,443	
6.600	2	1	Allowance	Mechanical Equipment, Phased	2027	to 15	4 to 11	14,500.00	14,500	29,000	0.4%			16,320											20,071	
6.800	3,440	3,440	Square Feet	Pool Finishes, Plaster, Tile and Coping	2032	8 to 12	9	9.00	30,960	30,960	0.4%									40,396						
6.870	1	1	Each	Shade Structure, Funbrella	2029	8 to 12	6	6,000.00	6,000	6,000	0.1%						7,164									
6.871	1	1	Each	Shade Structure, Pavilion	2031	10 to 15	8	9,500.00	9,500	9,500	0.2%								12,034							
6.900	3,440	3,440	Square Feet	Structures and Deck, Total Replacement	2039	to 65	16	170.00	584,800	584,800	4.1%															
Anticipated Expenditures, By Year (\$22,897,603 over 30 years)											385,264	548,320	349,768	448,172	377,046	371,546	866,337	480,574	450,375	555,715	445,508	1,140,117	541,468	468,507	636,044	498,814

RESERVE EXPENDITURES

Fairlington Meadows Arlington, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	
						Useful	Remaining	Unit (2023)	Per Phase (2023)	Total (2023)																	
Pool Elements																											
6.200	5,120	5,120	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2025	8 to 12	2	2.00	10,240	10,240	0.2%							19,621									
6.250	1,500	1,500	Square Feet	Concrete Flatwork, Stamped	2052	to 35	29	18.50	27,750	27,750	0.3%														65,395		
6.300	3,760	3,760	Square Feet	Covers, Vinyl	2024	6 to 8	1	3.00	11,280	11,280	0.3%		18,644								23,618						
6.400	460	460	Linear Feet	Fences, Chain Link	2032	to 25	9	25.00	11,500	11,500	0.1%																
6.500	1	1	Allowance	Furniture	2034	to 12	11	48,000.00	48,000	48,000	0.7%								94,732								
6.600	2	1	Allowance	Mechanical Equipment, Phased	2027	to 15	4 to 11	14,500.00	14,500	29,000	0.4%			24,685							30,360						
6.800	3,440	3,440	Square Feet	Pool Finishes, Plaster, Tile and Coping	2032	8 to 12	9	9.00	30,960	30,960	0.4%													62,624			
6.870	1	1	Each	Shade Structure, Funbrella	2029	8 to 12	6	6,000.00	6,000	6,000	0.1%	9,628													12,940		
6.871	1	1	Each	Shade Structure, Pavilion	2031	10 to 15	8	9,500.00	9,500	9,500	0.2%					17,158										22,387	
6.900	3,440	3,440	Square Feet	Structures and Deck, Total Replacement	2039	to 65	16	170.00	584,800	584,800	4.1%	938,432															
Anticipated Expenditures, By Year (\$22,897,603 over 30 years)												2,073,904	1,141,423	1,231,284	514,654	1,151,876	1,462,461	776,827	847,123	723,440	668,502	921,756	608,234	649,187	650,294	913,063	

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

Fairlington Meadows Arlington, Virginia	Individual Reserve Budgets & Cash Flows for the Next 30 Years																
	FY2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
Reserves at Beginning of Year	(Note 1)	573,166	638,912	605,311	794,200	910,102	1,122,784	1,367,898	1,136,154	1,307,878	1,532,526	1,674,867	1,951,564	1,553,046	1,772,605	2,092,264	2,271,829
Total Recommended Reserve Contributions	(Note 2)	440,000	502,400	524,800	547,200	569,600	592,000	609,800	628,100	646,900	666,300	686,300	706,900	728,100	749,900	772,400	795,600
Estimated Interest Earned, During Year	(Note 3)	11,010	12,319	13,857	16,874	20,128	24,660	24,793	24,198	28,123	31,756	35,905	34,699	32,927	38,266	43,209	48,404
Anticipated Expenditures, By Year		(385,264)	(548,320)	(349,768)	(448,172)	(377,046)	(371,546)	(866,337)	(480,574)	(450,375)	(555,715)	(445,508)	(1,140,117)	(541,468)	(468,507)	(636,044)	(498,814)
Anticipated Reserves at Year End		<u>\$638,912</u>	<u>\$605,311</u>	<u>\$794,200</u>	<u>\$910,102</u>	<u>\$1,122,784</u>	<u>\$1,367,898</u>	<u>\$1,136,154</u>	<u>\$1,307,878</u>	<u>\$1,532,526</u>	<u>\$1,674,867</u>	<u>\$1,951,564</u>	<u>\$1,553,046</u>	<u>\$1,772,605</u>	<u>\$2,092,264</u>	<u>\$2,271,829</u>	<u>\$2,617,019</u>
Predicted Reserves based on 2023 funding level of: \$480,000		638,912	582,687	725,875	772,539	891,973	1,019,351	649,538	661,949	705,109	642,739	690,431	37,521	(23,811)	(12,679)		

(continued)

	Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued															
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	
Reserves at Beginning of Year	2,617,019	1,402,411	1,130,163	787,263	1,187,663	979,646	481,754	519,844	487,697	579,827	729,287	625,949	837,202	1,011,317	1,187,796	
Total Recommended Reserve Contributions	819,500	844,100	869,400	895,500	922,400	950,100	805,000	805,000	805,000	805,000	805,000	805,000	805,000	805,000	805,000	
Estimated Interest Earned, During Year	39,796	25,075	18,984	19,554	21,459	14,469	9,917	9,976	10,570	12,962	13,418	14,487	18,302	21,773	22,675	
Anticipated Expenditures, By Year	(2,073,904)	(1,141,423)	(1,231,284)	(514,654)	(1,151,876)	(1,462,461)	(776,827)	(847,123)	(723,440)	(668,502)	(921,756)	(608,234)	(649,187)	(650,294)	(913,063)	
Anticipated Reserves at Year End	<u>\$1,402,411</u>	<u>\$1,130,163</u>	<u>\$787,263</u>	<u>\$1,187,663</u>	<u>\$979,646</u>	<u>\$481,754</u>	<u>\$519,844</u>	<u>\$487,697</u>	<u>\$579,827</u>	<u>\$729,287</u>	<u>\$625,949</u>	<u>\$837,202</u>	<u>\$1,011,317</u>	<u>\$1,187,796</u>	<u>\$1,102,408</u>	
						(NOTE 5)									(NOTE 4)	

Explanatory Notes:

- 1) Year 2023 starting reserves are as of January 31, 2023; FY2023 starts January 1, 2023 and ends December 31, 2023.
- 2) Reserve Contributions for 2023 are the remaining budgeted 11 months; 2024 is the first year of recommended contributions.
- 3) 2.0% is the estimated annual rate of return on invested reserves; 2023 is a partial year of interest earned.
- 4) Accumulated year 2053 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

RESERVE EXPENDITURES

Fairlington Meadows Arlington, Virginia

Line Item	Reserve Component Inventory	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028
<u>Exterior Building Elements</u>							
1.180	Doors, Entrance, Phased			28,644	29,504	30,389	31,300
1.519	Roofs, Asbestos (Replace with Slate)			274,561			
1.521	Roofs, Slate, Replacement, Phased (Incl. Pool House) (2023 is Budgeted)	100,000	281,705		298,861	307,827	317,061
1.905	Walls, Trim, Paint Finishes		185,400				
<u>Interior Building Elements</u>							
2.200	Floor Coverings, Carpet		48,997				
2.560	Light Fixtures (2023 is Budgeted)	14,985					
2.800	Paint Finishes (2023 is Budgeted)	45,279					
<u>Building Services Elements</u>							
3.300	Electrical System, Main Panels, Phased		20,600	21,218	21,855	22,510	23,185
<u>Property Site Elements</u>							
4.020	Asphalt Pavement, Crack Repair, Patch, Seal Coat, and Striping				29,143		
4.040	Asphalt Pavement, Mill and Overlay, Parking Areas (2023 is Budgeted)	225,000					
4.110	Concrete Curbs and Gutters, Partial				40,912		
4.140	Concrete Sidewalks, Partial				27,897		
4.830	Sport Courts, Tennis, Color Coat			14,481			
<u>Pool Elements</u>							
6.200	Concrete Deck, Inspections, Partial Replacements and Repairs			10,864			
6.300	Covers, Vinyl		11,618				
6.600	Mechanical Equipment, Phased					16,320	
Anticipated Expenditures, By Year (\$22,897,603 over 30 years)		385,264	548,320	349,768	448,172	377,046	371,546

4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Full Reserve Study* includes enhanced solutions and procedures for select significant components. This section describes the Reserve Components, documents specific problems and condition assessments, 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



Building front elevation



Building front elevation



Building side elevation

Doors, Entrance

Line Item: 1.180

Quantity: The Association maintains the entrance door systems at the 27 B Buildings

History: Original to conversion; unknown exact age of most recent refurbishment. The Association informs that they plan to replace the entrance doors in the near term.

Condition: Good to fair overall with isolated finish deterioration evident



Entrance door

Useful Life: Up to 30 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair any damage, base corrosion or alignment issues
 - Replace deteriorated hardware and loose weather stripping
 - Periodic touch-up paint finish applications as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Gutters and Downspouts, Aluminum

Line Item: 1.240

Quantity: Approximately 25,150 linear feet of aluminum gutters and downspouts

History: Various ages. The Association has been replacing the gutters and downspouts in conjunction with the ongoing roof project.

Condition: Good to fair overall with isolated dented sections evident.



Aluminum gutters and downspouts



Dented downspout

Useful Life: 20- to 25-years

Component Detail Notes: The size of the gutter is determined by the roof's watershed area, a roof pitch factor and the rainfall intensity number of the Association's region. We recommend sloping gutters 1/16 inch per linear foot and providing fasteners a maximum of every three feet.

Downspouts can drain 100 square feet of roof area per one square inch of downspout cross sectional area. We recommend the use of downspout extensions and splash blocks at the downspout discharge to direct storm water away from the foundations.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
 - Clean out debris and leaves that collect in the gutters
 - Repair and refasten any loose gutter fasteners
 - Repair and seal any leaking seams or end caps
 - Verify downspouts discharge away from foundations

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Roofs, Slate

Line Items: 1.519 and 1.521

Quantity and History: The Association maintains approximately 2,560 *squares*¹ total of slate roofs. This is comprised of approximately 1,200 squares that are original to construction, approximately 145 squares of Buckingham slate that have an indeterminate useful life based on engineering reports, approximately 1,175 squares that have been replaced from 2012 through 2023, and approximately 40 squares of asbestos shingle roofs. The Association informs that they plan to replace the 1,240 squares in the near future. This quantity includes the pool house.

Condition: Varies from good to fair overall with missing shingles, previous repairs, flashing deterioration, shingle deterioration, organic growth and shingle lift evident from our visual inspection from the ground. Management and the Board report a limited history of leaks.



Roof overview



Damaged shingles



Shingle deterioration



Shingle deterioration

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



Previous repairs and shingle lift



Previous repairs



Previous repairs



Missing shingles



Flashing deterioration



Organic growth

Useful Life: Up to 45 years for asbestos roofs and 60- to 80-years for slate roofs with the benefit of periodic inspections and repairs funded through the operating budget.



Component Detail Notes: 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.

Preventative Maintenance Notes: We recommend the Association maintain a service and inspection contract with a qualified professional and record all documentation of repairs conducted. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Record any areas of water infiltration, flashing deterioration, damage or loose shingles
 - Implement repairs as needed if issues are reoccurring
 - Ensure proper ventilation and verify vents are clear of debris and not blocked from attic insulation
 - Trim tree branches that are near or in contact with roof
 - Periodic cleaning at areas with organic growth (We do not recommend pressure washing as it may cause further damage to tiles.)

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We do not assume the need to replace the Buckingham slate roofs over the next 30 years and consider these a long-lived element. For the remaining slate roofs, our estimate of cost is based on information provided by the Association and includes replacement of the trim at the dormers and replacement of the aluminum gutters and downspouts. Our estimate of cost for replacement of the asbestos shingle roofs includes an additional allowance for abatement of the asbestos shingles and a larger anticipated asbestos removal and disposal cost. The portion of the overall cost for removal associated with disposal of the asbestos shingles may vary based on location, hauling distance and other related factors.

Walls, Masonry

Line Item: 1.820

Quantity: Approximately 256,500 square feet of masonry comprises the exterior walls. This quantity includes the masonry stoops.

History: Unknown age of most recent repair event

Condition: Good to fair overall with the following evident:

- No reported history of recent water infiltration
- Previous repairs are evident

- Efflorescence is visible (Efflorescence is not a safety concern. However, it can be an indication of water infiltration, masonry saturation, improper drainage behind the façade or another underlying issue.)
- Masonry exhibits cracks
- Masonry exhibits spalls
- Mortar deterioration is evident



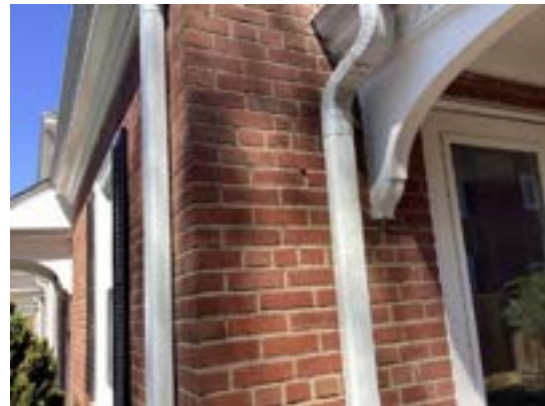
Previous repairs



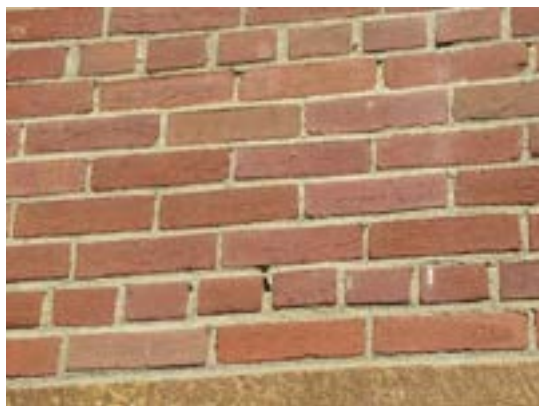
Masonry cracks



Masonry cracks



Mortar deterioration



Mortar deterioration



Masonry spall



Masonry spall



Efflorescence

Useful Life: We advise a complete inspection of the masonry and related masonry repairs every 8- to 12-years to forestall deterioration.

Component Detail Notes: Common types of masonry deterioration include efflorescence, spalling, joint deterioration 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.

Repointing is a process of raking and cutting out defective mortar to a depth of not less than 1/2 inch nor more than 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 following diagram details a typical masonry façade system and may not reflect the actual configuration at the Association:



Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We anticipate a lower than typical unit cost due to the good maintenance practices of the Association. Our cost includes the following activities:

- Complete inspection of the masonry
- Repointing of up to ten percent (10%) of the masonry
- Replacement of a limited amount of the masonry (The exact amount of area in need of replacement will be discretionary based on the actual future conditions and the desired appearance.)
- Replacement of up to twenty-five percent (25%) of the sealants at the window and door perimeters

Walls, Trim, Paint Finishes

Line Item: 1.905

Quantity: We include paint finishes at the various trim elements

History: Unknown exact age of most recent paint application

Condition: Fair overall with trim damage and deterioration evident.



Soffit and fascia overview



Trim deterioration



Trim deterioration



Trim damage

Useful Life: Four- to six-years

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

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is partially based on information provided by the Association. We assume the following activities per event:

- Paint finish applications
- Replacement of a limited quantity of the soffit, fascia and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

Interior Building Elements

Floor Coverings, Carpet

Line Item: 2.200

Quantity: Approximately 670 square yards at the B-style buildings (Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.)

History: Unknown exact age. The Association plans to replace all the carpet floor coverings in 2024

Condition: Good to fair overall with isolated stains evident



Carpet floor coverings



Carpet floor coverings



Carpet stains

Useful Life: 8- to 12-years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Light Fixtures

Line Item: 2.560

Quantity: Approximately 108 interior ceiling mounted light fixtures

History: Unknown exact age. The Association reports that all the interior light fixtures will be replaced in April 2023

Condition: We assume good condition overall at the time of replacement

Useful Life: Up to 20 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is based on information provided by the Association.

Mailboxes

Line Item: 2.700

Quantity: 108 unit mailboxes

History: Replaced in approximately 2017

Condition: Reported good to fair overall



Mailboxes

Useful Life: Up to 35 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Paint Finishes

Line Item: 2.800

Quantity: Approximately 26,500 square feet walls and ceiling at the B buildings

History: Unknown age of most recent paint application. The Association plans to conduct a paint finish application in April 2023.

Condition: Fair overall isolated scuffs evident



Hallway overview



Wall scuffs



Wall scuffs

Useful Life: 8- to 12-years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is based on information provided by the Association.

Building Services Elements

Electrical System

Line Item: 3.300

History: Primarily original to conversion in 1974 to construction. The Association upgraded the electrical system at the clubhouse when the pool heaters were installed in 2020. Due to the 70 year useful life, the electrical system at the clubhouse is considered a *Long-Lived Element* at this time.

Condition: Reported satisfactory without operational deficiencies.

Useful Life: Up to and sometimes beyond 70 years. At the request of the Board we include an annual allowance for partial replacements.

Component Detail Notes: We give a brief overview of electrical system components in the following sections of this narrative:

Primary Switchgear - The primary switchgear is located where the electric supply comes into the building. Switchgear can include associated controls, regulating, metering and protective devices, and is used for the transmission, distribution and conversion of electric power for use within the building. Switchgear components have a useful life of up to and sometimes beyond 70 years. Replacement is often determined by a desired upgrade of the entire electrical system.

Transformer - A transformer is an electric device with two or more coupled windings used to convert a power supply from one voltage to another voltage. Transformers within a building lower the supplied electrical voltage to a level that can be utilized by the building's equipment and unit owners. Transformers do not utilize mechanical components and therefore have a long useful life. However, the Association should anticipate periodic replacement of a limited quantity of transformers.

Distribution Panel - The distribution panel is an electric switchboard or panel used to control, energize or turn off electricity in total or for individual circuits. The panel also distributes electricity to individual and controllable circuits. One or more distribution panels may exist and further distribute electricity to individual panel boards for each unit. The distribution panel is enclosed in a box and contains circuit breakers, fuses and switches. Distribution panels have a useful life of up to and sometimes beyond 70 years.

Circuit Protection - Once electricity is distributed throughout the building and is at a usable voltage level, the electricity is divided into circuits. Each circuit requires circuit protection. Circuit protection is necessary to prevent injury and fires, and minimize damage to electrical components and disturbances to the electrical system. Abnormalities in the circuit can include overloads, short circuits and surges. Circuit protection devices are commonly referred to as circuit breakers and fuses. For the protection of the circuits in the units and common areas, we

recommend the use of only circuit breakers as they are safer than fuses. However, the use of fuses is common for equipment like emergency systems and individual items of equipment. Fuses with a low capacity rating can easily be replaced with fuses of a higher rating resulting in an unprotected, overloaded and unsafe circuit. The circuit protection panels have a useful life of up to and sometimes beyond 70 years.

Conductors - Conductors are the electrical wires that convey electricity to the units, light fixtures, receptacles and appliances.

Conductor Insulation and Conduit - Conductor insulation provides protection against the transfer of electricity. Conductor insulation can eventually become brittle and damaged from rodents or heat from many years of service. Conductor conduit is a pipe or tube used to enclose insulated electric wires to protect them from damage. Steel conductor conduit, although galvanized, will eventually rust if used in damp conditions. The useful life of conductor insulation and conduit is indeterminate.

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. We also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect system for signs of electrical overheating, deterioration, and/or panel corrosion
 - Clean and vacuum exterior and interior switchboards
- Five-Year Cycles:
 - Check power meters, lamps, indicators, and transformers for deficiencies
 - Inspect wiring, relays, power supply units, and timers
 - Verify surge protection is intact
- As-needed:
 - Test outlets and ground-fault circuit interrupters (GFCI's) for faulty components
 - Examine the insulation at switchgears for signs of deterioration or cracking
 - Ensure all conductors are clean and dry with no moisture build-up
 - Check and inspect for loose wire connections
 - Clean and clear dust and debris away from system components
 - Check for flickering or dimming light fixtures as these could indicate a short in the wiring, arcing, or an over-extension of the electrical system
 - Conduct thermal image scanning if system experiences numerous or consistent outages
 - Keep an accurate record of all repairs to the electrical system

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget to replace the main switchgear, distribution and circuit protection panels. Updates of this Reserve Study will consider possible changes in the scope and times of component replacements based on the conditions, including the need for replacement of the wires.

We recommend the Association conduct thermoscans of the distribution panels and circuit protection panels, and inspections of the transformers for any indications of arcing, burning or overheating on a regular basis, funded through the operating budget. Verification of the integrity of all connection points minimizes the potential for arcing and fires.

Life Safety System

Line Item: 3.560

Quantity: The life safety system at Meadows includes the following components:

- Detectors
- Emergency light fixtures
- Wiring

History: Unknown exact ages

Conditions: Reported satisfactory without operational deficiencies.

Useful Life: Up to 25 years for the devices

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. In accordance with *NFPA 72* (National Fire Alarm and Signaling Code) we also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the age of the components, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
 - Inspect and test all components and devices, including, but not limited to, annunciators, detectors, audio/visual fixtures, signal transmitters and magnetic door holders
 - Test backup batteries
- As-needed:
 - Ensure clear line of access to components such as pull stations
 - Ensure detectors are properly positioned and clean of debris

Priority/Criticality: Defer only upon opinion of independent professional or engineer



Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Changes in technology or building codes may make a replacement desirable prior to the end of the functional life. Our estimate of future cost considers only that amount necessary to duplicate the same functionality. Local codes or ordinances at the actual time of replacement may require a betterment as compared to the existing system. A betterment could result in a higher, but at this time unknown, cost of replacement.

Pipes

Line Item: 3.605

Quantity: Based on the layout and configuration of the units, we have estimated the quantity of the interior building plumbing. Future updates of this Reserve Study will incorporate additional information if it becomes available.

History:

- Domestic Water – Original to conversion
- Sanitary Waste Disposal and Vent – Original to conversion

Condition:

- Domestic Water – Reported satisfactory without operational deficiencies
- Sanitary Waste Disposal and Vent – Reported satisfactory

Component Detail Notes:

Domestic Water - The useful life of domestic supply and return pipes is up to and sometimes beyond 70 years.

Sanitary Waste Disposal and Vent - The 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.

Pipes, Remaining - We anticipate a useful life of up to and sometimes beyond 100 years for the remaining pipes, which may include fire standpipes, gas supply lines, interior sprinkler pipes, among others. Therefore, we do not foresee the need to budget for replacement of these pipes within the 30-year scope of this study. Future updates of this study will revisit the need to include partial replacement of these pipes.

Preventative Maintenance Notes: The required preventative maintenance may vary in frequency and scope based on the building's age and demands of the piping systems. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Quarterly:
 - Inspect all visible piping for corrosion and leaks, including common areas or areas immediately surrounding pipes such as insulation, ceiling tiles or the floor for moisture, water accumulation, mold or mildew
- Annually:
 - Verify system pressure is sufficient (pressurized piping systems)
 - Check accessible valves for proper operation
 - Test backflow prevention devices
 - Inspect and obtain certification for pressure relief valves
 - Test drain line flow rates
 - Mechanically or chemically clean waste lines as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for a single riser section assumes replacement of all pipes located within each wall opening, associated branch piping, fittings and minimal interior finishes. However, the cost does not include temporary housing for affected residents, pipes within the units or significant interior finishes. Our estimate provides funds to replace approximately one hundred percent (100%) of the riser sections during 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.

Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Meadows 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.

We recommend the Association budget for replacement of the following items through the operating budget:

- Replacement of valves on an as-needed basis
- Minor pipe repairs and replacements
- Invasive investigation of the condition of the piping system prior to beginning more aggregate replacements
- Rodding of waste pipe systems

Property Site Elements

Asphalt Pavement, Repaving

Line Items: 4.020 and 4.040

Quantity: Approximately 12,700 square yards at the parking areas

History: The Association was in the process of repaving the parking areas at the time of inspection.

Condition: We assume the asphalt pavement will be in good condition overall when repaving is finished.



Asphalt pavement parking lot overview



Asphalt pavement parking lot overview



Asphalt pavement parking lot overview



Asphalt pavement parking lot overview

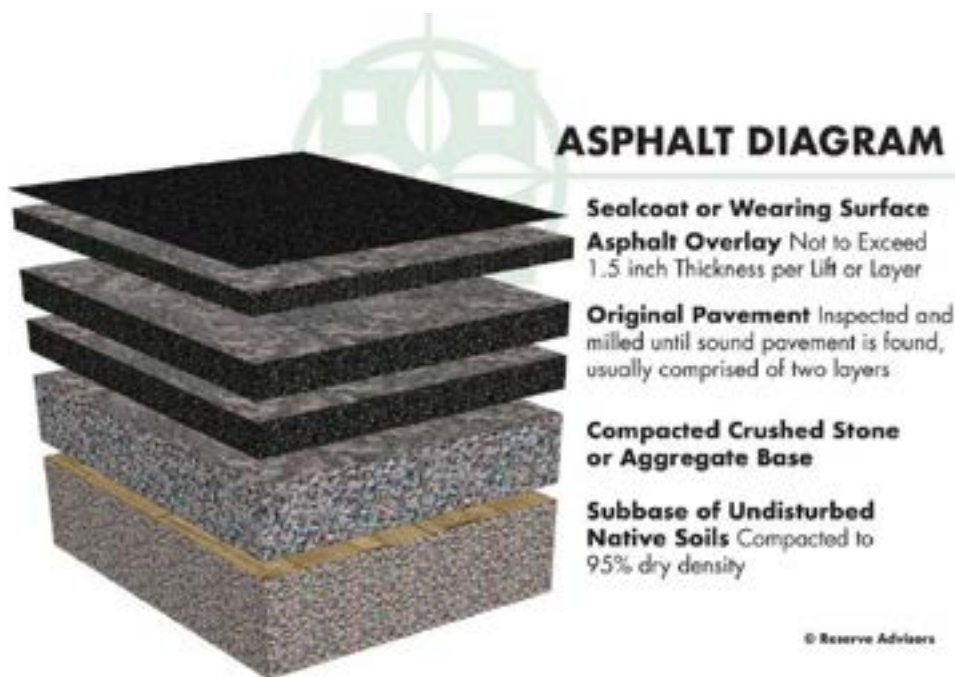
Useful Life: 15- to 20-years with the benefit of crack repair, patch, seal coat, and striping events every three- to five-years

Component Detail Notes: Proposals should include mechanically routing and filling all cracks with hot emulsion. Repairs should also include patching at areas exhibiting

settlement, potholes, or excessive cracking. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks; therefore, unrepaired cracks render the seal coat applications useless. These activities minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement.

The initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish.

The following diagram depicts the typical components although it may not reflect the actual configuration at Meadows:



The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving at Meadows.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect for settlement, large cracks and trip hazards, and ensure proper drainage
 - Repair areas which could cause vehicular damage such as potholes
- As needed:
 - Perform crack repairs and patching

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for crack repairs and patching of up to two percent (2%) of the pavement. Our cost for milling and overlayment includes area patching of up to ten percent (10%).

Concrete Curbs and Gutters

Line Item: 4.110

Quantity: Approximately 6,900 linear feet

Condition: Good to fair overall with cracks and spalled concrete evident.



Concrete curb and gutter



Concrete cracks



Concrete spalls

Useful Life: Up to 65 years although interim deterioration of areas is common

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair major cracks, spalls and trip hazards
 - Mark with orange safety paint prior to replacement or repair
 - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 2,080 linear feet of curbs and gutters, or thirty percent (30.1%) of the total, will require replacement during the next 30 years.

Concrete Sidewalks

Line Item: 4.140

Quantity: Approximately 44,300 square feet

Condition: Good to fair overall



Sidewalk cracks



Sidewalk cracks



Sidewalk cracks and spalls

Useful Life: Up to 65 years although interim deterioration of areas is common

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair major cracks, spalls and trip hazards
 - Mark with orange safety paint prior to replacement or repair
 - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 13,320 square feet of concrete sidewalks, or thirty percent (30.1%) of the total, will require replacement during the next 30 years.

Fence, Chain Link

Line Item: 4.220

Quantity: Approximately 1,300 linear feet of chain link fence with a fabric windscreen

History: Unknown exact age

Condition: Good to fair overall with isolated fabric tears evident



Chain link fence



Chain link fence - Note fabric tear

Useful Life: Up to 25 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair loose sections, and damage
 - Repair leaning sections and clear vegetation from fence areas which could cause damage

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost includes replacement of the fabric windscreen.

Fences, Wood

Line Item: 4.285

Quantity: Approximately 13,700 linear feet at the rear of the units

History: Replaced from 2019 through 2020

Condition: Good to fair overall



Wood fence



Wood fence

Useful Life: 15- to 20-years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair loose sections, finish deterioration and damage
 - Repair leaning sections and clear vegetation from fence areas which could cause damage

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The Association should anticipate periodic partial replacements due to the non-uniform nature of wood deterioration. Along with these partial replacements, the Association should apply periodic paint applications as needed and fund these activities through the operating budget. Our estimate of cost is based on information provided by the Association.

Light Poles and Fixtures

Line Item: 4.560

Quantity: 190 poles with LED light fixtures

History: Replaced in 2021

Condition: Good overall



Light pole and fixture

Useful Life: Up to 25 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- As-needed:
 - Inspect and repair broken or dislodged fixtures, and leaning or damaged poles
 - Replaced burned out bulbs as needed

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We anticipate a lower than typical unit cost because the Association utilizes in-house labor.

Pipes, Subsurface Utilities

Line Item: 4.650

Condition: Reported satisfactory

Useful Life: Up to and likely beyond 85 years

Component Detail Notes: 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.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- As-needed:
 - Video inspect waste pipes for breaks and damaged piping

- Monitor for water and gas leaks through pressure losses and present odors
- Partially replace damaged section of pipes

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. At this time we do not anticipate replacement of continuous lengths of subsurface utility pipes. Rather we recommend the Association budget for repairs to isolated occurrences of breached utilities. Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Management could budget sufficient reserves for these utility repairs 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 repairs to budget sufficient reserves.

Playground Equipment

Line Item: 4.660

Quantity: Playground equipment includes the following elements:

- Playsets and swings
- Rubber surface with a timber border

History: Replaced in approximately 2021.

Condition: Good overall



Playground equipment overview



Playground equipment overview

Useful Life: 15- to 20-years

Component Detail Notes: Safety is the major purpose for maintaining playground equipment. We recommend an annual inspection of the playground equipment to identify and repair as normal maintenance loose connections and fasteners or damaged elements. We suggest the Association learn more about the specific requirements of playground equipment at PlaygroundSafety.org. We recommend the use of a specialist for the design or replacement of the playground equipment environment.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair loose connections and fasteners or damaged elements
 - Inspect for safety hazards and adequate coverage of ground surface cover

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We include an allowance in the unit cost for replacement of the safety surface and border.

Retaining Walls, Timber

Line Item: 4.760

Quantity: Approximately 140 square feet of retaining walls at the unit rears

History: Installed in approximately 2020.

Condition: Good overall



Timber retaining wall

Useful Life: Up to 25 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair leaning sections or damaged areas
 - Inspect and repair erosion at the wall base and backside

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Sport Courts, Tennis, Fence

Line Item: 4.840

Quantity: Approximately 430 linear feet

History: Replaced in approximately 2020

Condition: Good overall



Chain link fence



Chain link fence

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Sport Courts, Tennis

Line Items: 4.830 and 4.860

Quantity: The Association maintains approximately 1,560 square yards of asphalt sport courts total. This is comprised of approximately 1,300 square yards at the two tennis courts and approximately 260 square yards at the basketball court.

History: Resurfaced in approximately 2020.

Condition: Good overall



Tennis court overview



Tennis court overview



Basketball court overview



Basketball goal

Useful Life: Up to 25 years for replacement of the surface with the benefit of color coat applications and repairs every four- to six-years

Preventative Maintenance Notes: Prior to the application of the color coat, the Association should require the contractor to rout and fill all cracks with hot emulsion. This deters water infiltration and further deterioration of the asphalt playing surface.



We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair large cracks, trip hazards and possibly safety hazards
 - Verify gate and fencing is secure
 - Verify lighting is working properly if applicable
 - Inspect and repair standards and windscreens as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget for the replacement of standards through the operating budget.

Vehicle, Maintenance

Line Item: 4.950

Quantity: The Association maintains one maintenance vehicle

History: Replaced in 2020

Condition: Reported satisfactory overall without operational deficiencies

Useful Life: 10-to 15-years

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is based on information provided by the Association.

Pool House Elements



Pool house overview

Air Handling and Condensing Units, Split System

Line Item: 5.070

Quantity: One split system

History: Replaced in approximately 2016

Condition: Reported satisfactory without operational deficiencies



Split system condensing unit

Useful Life: 15- to 20-years

Component Detail Notes: A split system air conditioner consists of an outside condensing unit, an interior evaporator coil, refrigerant lines and an interior air handling unit. The condensing unit has a cooling capacity of six-tons.



Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. We also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
 - Lubricate motors and bearings
 - Change or clean air filters as needed
 - Inspect condenser base and piping insulation
 - Inspect base pan, coil, cabinet and clear obstructions as necessary
- Annually:
 - Clean coils and drain pans, clean fan assembly, check refrigerant charge, inspect fan drive system and controls
 - Inspect and clean accessible ductwork as needed
 - Clean debris from inside cabinet, inspect condenser compressor and associated tubing for damage

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The condensing unit may require replacement prior to replacement of the related interior forced air unit. For purposes of this Reserve Study, we assume coordination of replacement of the interior forced air unit, evaporator coil, refrigerant lines and exterior condensing unit.

Rest Rooms

Line Item: 5.500

Quantity: The rest room components include:

- Drainage floor coverings
- Paint finishes
- Light fixtures
- Plumbing fixtures

History: The Association informs that the floor coverings, partitions and a limited quantity of plumbing fixtures were replaced in 2021.

Condition: Good to fair overall



Rest room overview



Rest room paint finishes



Floor coverings



Counter overview

Useful Life: Renovation every 25 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association funds for interim paint finishes and replacements of the fixtures through the operating budget

Pool Elements



Pool overview

Concrete Deck

Line Item: 6.200

Quantity: Approximately 5,120 square feet

History: Unknown age of most recent repair event

Condition: Fair overall with periodic cracks evident.



Concrete pool deck overview



Concrete pool deck overview



Concrete cracks



Concrete cracks



Concrete cracks



Concrete cracks

Useful Life: The useful life of a concrete pool deck is up to 60 years or more with timely repairs. We recommend the Association conduct inspections, partial replacements and repairs to the deck every 8- to 12-years.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
 - Inspect and repair large cracks, trip hazards, and possible safety hazards
 - Inspect and repair pool coping for cracks, settlement, heaves or sealant deterioration
 - Repair concrete spalling
 - Schedule periodic pressure cleanings as needed

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget for the following per event:

- Selective cut out and replacements of up to ten percent (10%) of concrete
- Crack repairs as needed
- Mortar joint repairs
- Caulk replacement

Concrete Flatwork

Line Item: 6.250

Quantity: Approximately 1,500 square feet of stamped concrete flatwork.

Condition: Good to fair overall



Stamped concrete overview

Useful Life: Up to 35 years although interim deterioration of areas is common

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair major cracks, spalls and trip hazards
 - Mark with orange safety paint prior to replacement or repair
 - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Covers, Vinyl

Line Item: 6.300

Quantity: The Association maintains two pool covers comprising approximately 3,760 square feet total

History: Unknown exact age

Condition: Reported fair overall

Useful Life: Six- to eight-years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Fences, Chain Link

Line Item: 6.400

Quantity: Approximately 460 linear feet

History: Unknown exact age

Condition: Good to fair overall



Chain link pool fence



Chain link pool fence

Useful Life: Up to 25 years



Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair loose sections, and damage
 - Repair leaning sections and clear vegetation from fence areas which could cause damage

Priority/Criticality: Not recommended to defer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Furniture

Line Item: 6.500

Quantity: The pool furniture includes the following:

- Chairs
- Lounges
- Tables
- Ladders and life safety equipment

History: Replaced in 2022

Condition: Reported good overall

Useful Life: Up to 12 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend interim re-strapping, refinishing, cushion replacements, reupholstering and other repairs to the furniture as normal maintenance to maximize its useful life.

Mechanical Equipment

Line Item: 6.600

Quantity: The mechanical equipment includes the following:

- Controls
- Interconnected pipe, fittings and valves
- Pumps, filters, and heaters

History: The heaters were installed in 2020. The remaining equipment is at an unknown age. The Association plans to replace one of the pool pumps in 2023. We recommend the Association fund this event outside of the reserves

Condition: Reported satisfactory without operational deficiencies



Pool mechanical equipment



Pool heaters

Useful Life: Up to 15 years

Preventative Maintenance Notes: We recommend the Association maintain a maintenance contract with a qualified professional and follow the manufacturer's specific recommended maintenance and local, state and/or federal inspection guidelines.

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Failure of the pool mechanical equipment as a single event is unlikely. Therefore, we include replacement of up to fifty percent (50%) of the equipment per event. We consider interim replacement of motors and minor repairs as normal maintenance.

Pool Finishes, Plaster and Tile

Line Item: 6.800

Quantity: Approximately 3,440 square feet of plaster based on the horizontal surface area and approximately 330 linear feet of tile

History: Replaced in 2022

Condition: Good to fair overall



Pool plaster overview

Useful Life: 8- to 12-years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
 - Inspect and patch areas of significant plaster delamination, coping damage and structure cracks
 - Inspect main drain connection and anti-entrapment covers, pressure test circulation piping and valves
 - Test handrails and safety features for proper operation

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost is partially based on information provided by the Association and includes replacement of up to ten percent (10%) of the tile and coping. Removal and replacement of the finish provides the opportunity to inspect the pool structures and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structures, we recommend the Association budget for the following:

- Removal and replacement of the plaster finishes
- Partial replacements of the scuppers and coping as needed
- Replacement of tiles as needed
- Replacement of joint sealants as needed
- Concrete structure repairs as needed

Shade Structures

Line Items: 6.870 and 6.871

Quantity: The Association maintains two shade structures at the pool area

History: Installed in 2019

Condition: Good to fair overall



Shade structure overview



Shade structure overview

Useful Life: 8- to 12-years for the Funbrella structure and 10- to 15- years for the pavilion structure.

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend coordinating subsequent replacement of the pavilion shade structure with replacement of the stamped concrete. We recommend the Association budget for interim canvas replacements through the operating budget.

Structures and Deck

Line Item: 6.900

Quantity: 3,440 square feet of horizontal surface area

History: Original to conversion in 1974.

Conditions: Visually appear in good condition. The concrete floors and walls have a plaster finish. This finish makes it difficult to thoroughly inspect the concrete structures during a noninvasive visual inspection.

Useful Life: Up to 65 years



Component Detail Notes: The need to replace a pool structure depends on the condition of the concrete structure, the condition of the embedded or concealed water circulation piping, possible long-term uneven settlement of the structure, and the increasing cost of repair and maintenance. Deterioration of any one of these component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend Meadows plan to replace the following components:

- Concrete deck and fences
- Pool structures
- Subsurface piping

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study 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. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. 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.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.

Meadows 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 Unit Owners 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 the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level I Full Reserve Study." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

- 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 rate³. Isolated or regional markets of greater

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

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

³ Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.



construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Meadows and their effects on remaining useful lives
- Financial information provided by the Association pertaining to the cash status of the reserve fund and budgeted reserve contribution
- The anticipated effects of appreciation of the reserves over time in accord with a return or yield on investment of your cash equivalent assets. (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).
- 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.

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



6. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

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

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

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

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

TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, 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. 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 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 a 2,600,000-square foot 98-story highrise. 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 and 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.



TIM C. YACHNIK
Responsible Advisor

CURRENT CLIENT SERVICES

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



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

Trevor House Condominium Association – Located in Oakton, Virginia, this community was built from 1984 to 1986 and consists of 128 units across 9 buildings. Features of this community include asphalt streets, concrete flatwork, stone patios, wood balconies, life safety systems, retaining walls and wood fences.

Avalon East Community Association, Inc. is a homeowners association located in Pikesville, Maryland that dates back to 1997. Avalon East contains a variety of unique features including a clubhouse, tennis courts, pool, wading pool and a handicap ramp. The clubhouse contains a fitness center, locker rooms, community room, kitchen and an aesthetic sitting room with a fireplace.

Rockmanor Office Park Condominium Association – This commercial style development located in Rockville, Maryland, consists of 48 units in five two-story buildings. The Association maintains the masonry exteriors, sloped asphalt shingle roofs, composite breezeways, asphalt pavement and entrance lobbies.

Mirror Ridge Homeowners Association – Constructed from 1988 to 1990, Mirror Ridge is comprised of 299 single family homes. The association located in Sterling, Virginia is responsible for asphalt streets, parking areas, storm water management and three playgrounds.

Hearthstone of Ellicott Mills Condominium, Inc. is a townhome association constructed in 2004 that is comprised of 35 units. The townhomes in Ellicott Mills, Maryland consist of asphalt shingle roofs, brick masonry, metal roofs and vinyl siding. The association maintains a small clubhouse and storm water management system made up of a dry and wet retention pond as well as a concrete spillway.

Lonsdale Condominium – Located in Washington, DC, this five-story midrise dates back to 1910. The building was converted to condominiums in 1980 to house 46 units. The mid-rise features a unique blend of painted masonry exteriors, historical cornice, modified bitumen roofs, a decorative marble floor lobby and an elevator system.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Yachnik attended the University of Maryland where he attained his Bachelor of Science degree in Chemical Engineering. His studies largely focused on optimization and design for engineering processes and product development.

EDUCATION

University of Maryland, College Park - B.S. Chemical Engineering



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

CURRENT CLIENT SERVICES

Alan M. Ebert, a Professional Engineer, is the Director of Quality Assurance for Reserve Advisors. Mr. Ebert is responsible for the management, review and quality assurance of reserve studies. In this role, he assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Mr. Ebert has been involved with thousands of Reserve Study assignments. The following is a partial list of clients served by Alan Ebert demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.



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

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

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

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

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

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

PRIOR RELEVANT EXPERIENCE

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

EDUCATION

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

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Professional Engineering License – Wisconsin, North Carolina, Illinois, Colorado

Reserve Specialist (RS) - Community Associations Institute

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



RESOURCES

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

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

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

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

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

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

Reserve Advisors' 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.



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 Meadows 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) Meadows 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, LLC ("RA") performs its services as an independent contractor in accordance with our professional practice standards and its compensation is not contingent upon our conclusions. The purpose of our reserve study is to provide a budget planning tool that identifies the current status of the reserve fund, and an opinion recommending an annual funding plan to create reserves for anticipated future replacement expenditures of the property.

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects 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 inspection. RA may note visible physical defects in the Report. The inspection is made by employees generally familiar with real estate and building construction. Except to the extent readily apparent to RA, RA cannot and shall not opine on the structural integrity of or other physical defects in the property under any circumstances. Without limitation to the foregoing, RA cannot and shall not opine on, nor is RA responsible for, the property's conformity to specific governmental code requirements for fire, building, earthquake, and/or occupancy.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the Report. RA does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials or structural defects that are latent or hidden defects which may or may not be present on or within the property. RA does not make any soil analysis or geological study as part of its services, nor does RA investigate vapor, water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions, and RA assumes no responsibility for any such conditions. The Report contains opinions of estimated replacement costs or deferred maintenance expenses and remaining useful lives, which are neither a guarantee of the actual costs or expenses of replacement or deferred maintenance nor a guarantee of remaining useful lives of any property element.

RA assumes, without independent verification, the accuracy of all data provided to it. You agree to indemnify and hold RA 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 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 director, officer, employee, affiliate, or agent of RA. Liability of RA 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.

RA assumes, without independent verification, the accuracy of all data provided to it. Except to the extent resulting from RA's willful misconduct in connection with the performance of its obligations under this agreement, you agree to indemnify, defend, and hold RA and its affiliates, officers, managers, employees, agents, successors and assigns (each, an "RA Party") harmless from and against (and promptly reimburse each RA Party for) any and all losses, claims, actions, demands, judgments, orders, damages, expenses or liabilities, including, without limitation, reasonable attorneys' fees, asserted against or to which any RA Party may become subject in connection with this engagement, including, without limitation, as a result of any false, misleading or incomplete information which RA relied upon that was 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. NOTWITHSTANDING ANY OTHER PROVISION HEREIN TO THE CONTRARY, THE AGGREGATE LIABILITY (IF ANY) OF RA WITH RESPECT TO THIS AGREEMENT AND RA'S OBLIGATIONS HEREUNDER IS LIMITED TO THE AMOUNT OF THE FEES ACTUALLY RECEIVED BY RA FROM YOU FOR THE SERVICES AND REPORT PERFORMED BY RA UNDER THIS AGREEMENT, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE. YOUR REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND ARE YOUR SOLE REMEDIES FOR ANY FAILURE OF RA TO COMPLY WITH ITS OBLIGATIONS HEREUNDER OR OTHERWISE. RA SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, ANY LOST PROFITS AND LOST SAVINGS, LOSS OF USE OR INTERRUPTION OF BUSINESS, HOWEVER CAUSED, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE), BREACH OF WARRANTY, STRICT LIABILITY OR OTHERWISE, EVEN IF RA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL RA BE LIABLE FOR THE COST OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES. RA DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED OR OF ANY NATURE, WITH REGARD TO THE SERVICES AND THE REPORT, INCLUDING, WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



Report - RA completes the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations and is deemed complete. RA will consider any additional information made available to RA within 6 months of issuing the Report and issue a revised Report based on such additional information if a timely request for a revised Report is made by you. RA retains the right to withhold a revised Report if payment for services was not tendered in a timely manner. All information received by RA and all files, work papers or documents developed by RA during the course of the engagement shall remain the property of RA and may be used for whatever purpose it sees fit.

Your Obligations - You agree to provide us access to the subject property for an on-site visual inspection. You agree to provide RA all available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete the Report. You agree to pay actual attorneys' fees and any other costs incurred to collect on any unpaid balance for RA's services.

Use of Our Report and Your Name - Use of the Report is limited to only the purpose stated herein. You acknowledge that RA is the exclusive owner of all intellectual property rights in and relating to the Report. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and that you will be liable for the consequences of any unauthorized use or distribution of the Report. Use or possession of the Report by any unauthorized third party is prohibited. The Report in whole or in part ***is not and cannot be used as a design specification for design engineering purposes or as an appraisal.*** You may show the Report in its entirety to the following third parties: members of your organization (including your directors, officers, tenants and prospective purchasers), your accountants, attorneys, financial institutions and property managers who need to review the information contained herein, and any other third party who has a right to inspect the Report under applicable law. Without the written consent of RA, you shall not disclose the Report to any other third party. By engaging our services, you agree that the Report contains intellectual property developed (and owned solely) by RA and agree that you will not reproduce or distribute the Report ***to any party that conducts reserve studies without the written consent of RA.***

RA will include (and you hereby agree that RA may include) your name in our client lists. RA reserves the right to use (and you hereby agree that RA may use) property information to obtain estimates of replacement costs, useful life of property elements or otherwise as RA, in its sole discretion, deems appropriate.

Payment Terms, Due Dates and Interest Charges - The retainer payment is due upon authorization and prior to inspection. The balance is due net 30 days from the report shipment date. Any balance remaining 30 days after delivery of the Report shall accrue an interest charge of 1.5% per month. Unless this agreement is earlier terminated by RA in the event you breach or otherwise fail to comply with your obligations under this agreement, RA's obligations under this agreement shall commence on the date you execute and deliver this agreement and terminate on the date that is 6 months from the date of delivery of the Report by RA. Notwithstanding anything herein to the contrary, each provision that by its context and nature should survive the expiration or early termination of this agreement shall so survive, including, without limitation, any provisions with respect to payment, intellectual property rights, limitations of liability and governing law.

Miscellaneous – Neither party shall be liable for any failures or delays in performance due to fire, flood, strike or other labor difficulty, act of God, act of any governmental authority, riot, embargo, fuel or energy shortage, pandemic, wrecks or delays in transportation, or due to any other cause beyond such party's reasonable control; provided, however, that you shall not be relieved from your obligations to make any payment(s) to RA as and when due hereunder. In the event of a delay in performance due to any such cause, the time for completion or date of delivery will be extended by a period of time reasonably necessary to overcome the effect of such delay. You may not assign or otherwise transfer this agreement, in whole or in part, without the prior written consent of RA. RA may freely assign or otherwise transfer this agreement, in whole or in part, without your prior consent. This agreement shall be governed by the laws of the State of Wisconsin without regard to any principles of conflicts of law that would apply the laws of another jurisdiction. Any dispute with respect to this agreement shall be exclusively venued in Milwaukee County Circuit Court or in the United States District Court for the Eastern District of Wisconsin. Each party hereto agrees and hereby waives the right to a trial by jury in any action, proceeding or claim brought by or on behalf of the parties hereto with respect to any matter related to this agreement.