

# Parkwood Village

## Homeowners Association

Inspected: November 12, 2024 • Revised on: July 23, 2025  
Madison, WI

RESERVE STUDY



Parkwood Village Homeowners Association  
Madison, Wisconsin

Dear Board of Directors of Parkwood Village Homeowners Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Parkwood Village Homeowners Association in Madison, Wisconsin and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, November 12, 2024.

This *Reserve Study* exceeds the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level II 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. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Parkwood Village Homeowners Association 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 July 23, 2025 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Heather M. Christensen, RS<sup>1</sup>

Review by: Alan M. Ebert, RS, PRA<sup>2</sup>, Director of Quality Assurance



<sup>1</sup> 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.

<sup>2</sup> 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:** Parkwood Village Homeowners Association (Parkwood Village)

**Location:** Madison, Wisconsin

**Reference:** 085830

**Property Basics:** Parkwood Village Homeowners Association is an apartment style development which consists of 96 units in 18 two-story buildings. The buildings were built from 1971 to 1972 and the community includes a pool and clubhouse.

**Reserve Components Identified:** 33 Reserve Components.

**Inspection Date:** November 12, 2024. We conducted previous inspections in 2009, 2012, 2016 and 2020.

**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 these threshold funding years in 2036 due to the replacement of the vinyl siding, and in 2040 due to the repaving of the streets and parking areas.

**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
- 2.7% anticipated annual rate of return on invested reserves
- 3.3% 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:**

- \$300,500 as of December 31, 2024
- 2024 budgeted Reserve Contributions of \$128,546
- 2025 budgeted Reserve Contributions of \$132,736

**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:

- Replacement of the roofs as deferral may result in increased water infiltration and cost
- Systematic preventative maintenance to the masonry facade to minimize the potential for water infiltration
- Continued partial replacement and maintenance to the fences
- Pool plaster replacement

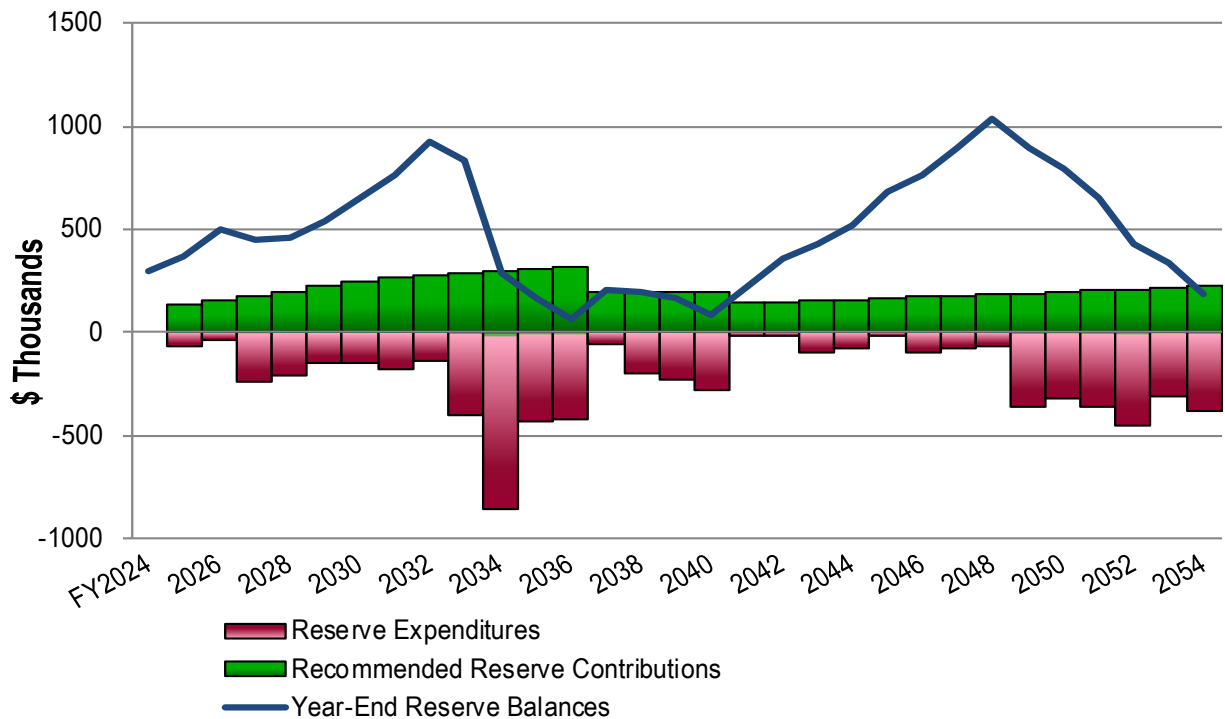
**Recommended Reserve Funding:** We recommend the following in order to achieve a stable and equitable Cash Flow Methodology Funding Plan:

- Phased increases of \$22,500 each year, from 2026 through 2031
- Inflationary increases from 2032 through 2036
- Decrease to \$192,000 by 2037 due to fully funding for replacement of the vinyl siding
- Stable contributions of \$192,000 from 2038 through 2040

- Decrease to \$146,000 by 2041 due to fully funding for repaving of the streets and parking areas
- Inflationary increases thereafter through 2054, the limit of this study's Cash Flow Analysis
- Initial recommended adjustment in Reserve Contributions of \$22,464 represents an average monthly increase of \$19.50 per owner and about a seven percent (7.4%) adjustment in the 2025 Total Budget of \$304,375.

Parkwood Village  
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2025	132,736 (Budgeted)	371,462	2035	304,700	167,754	2045	166,200	679,103
2026	155,200	501,650	2036	314,800	65,546	2046	171,700	769,227
2027	177,700	451,783	2037	192,000	203,976	2047	177,400	893,690
2028	200,200	455,101	2038	192,000	200,141	2048	183,300	1,035,542
2029	222,700	538,310	2039	192,000	165,556	2049	189,300	894,265
2030	245,200	650,082	2040	192,000	80,680	2050	195,500	792,671
2031	267,700	760,829	2041	146,000	214,013	2051	202,000	657,350
2032	276,500	925,195	2042	150,800	355,257	2052	208,700	426,111
2033	285,600	835,849	2043	155,800	424,583	2053	215,600	340,692
2034	295,000	290,133	2044	160,900	515,879	2054	222,700	188,684







## 2. RESERVE STUDY REPORT

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

**Parkwood Village Homeowners Association**

**Madison, Wisconsin**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, November 12, 2024. We conducted previous inspections in 2009, 2012, 2016 and 2020.

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 or which were identified as part of your request for proposed services. 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 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. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by 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. Reserve Components are defined by CAI as property elements with:

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

The following tables depict the items excluded from the Reserve Expenditure plan:

## **Excluded Components**

for  
**Parkwood Village**  
**Homeowners Association**  
Madison, Wisconsin

### **Operating Budget Components**

Repairs normally funded through the Operating Budget and Expenditures less than \$5,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)

The 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.

- Air Handling Unit, Furnance, Clubhouse
- Balconies, Deck Boards, Interim
- Chimney Caps, Metal
- Furniture, Clubhouse
- Landscape
- Light Fixtures, Building Exteriors
- Louvers
- Mailboxes
- Paint Finishes, Clubhouse Interior
- Pedestrian Ramp, Clubhouse
- Pipes, Interior Building, Water and Sewer, Clubhouse
- Playground Equipment, Swing Set
- Security System, Clubhouse
- Signage
- Site Furniture
- Storage Room, Clubhouse
- Valves, Small Diameter (We assume replacement as needed in lieu of an aggregate replacement of all the small diameter valves as a single event)
- Water Heater, Clubhouse

### **Long-Lived Components**

These elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the scope of this 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.

	<b>Useful Life</b>	<b>Estimated Cost</b>
• Electrical Systems, Common	to 80+	N/A
• Foundations	Indeterminate	N/A
• Pipes, Subsurface Utilities, Common	to 85+	N/A
• Structural Frames, Type 2 Buildings and Clubhouse	Indeterminate	N/A



**Excluded Components**

for  
**Parkwood Village**  
**Homeowners Association**  
Madison, Wisconsin

Owners Responsibility Components	
Certain items have been designated as the responsibility of the Owners to repair or replace at their cost, including items billed back.	
• Decks and Patios	
• Electrical Systems (Including Circuit Protection Panels)	
• Garage Doors	
• Heating, Ventilating and Air Conditioning (HVAC) Units	
• Interiors	
• Pipes (Within Units)	
• Structural Frame Repairs, Type 1 Buildings	
• Windows and Doors	

Others Responsibility Components	
Certain items have been designated as the responsibility of Others to repair or replace.	
• Asphalt Walking Path, North Perimeter <sup>1</sup>	
• Chain Link Fence, West Perimeter <sup>2</sup>	
• Fence, West Perimeter <sup>2</sup>	
• Walking Path, North Perimeter <sup>1</sup>	
<sup>1</sup> City of Madison	
<sup>2</sup> Madison Metropolitan School District	

### 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
- 2024 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

#### 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

Parkwood Village  
Homeowners Association  
Madison, Wisconsin

Explanatory Notes:

- 1) 3.3% is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) FY2024 is Fiscal Year beginning January 1, 2024 and ending December 31, 2024.
- 3) 2055+ indicates a component which is considered long-lived

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditure	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029	6 2030	7 2031	8 2032	9 2033	10 2034	11 2035	12 2036	13 2037	14 2038	15 2039
				Exterior Building Elements																							
1.120	15	3 Each	Balconies, Wood, Phased		2025	25 to 35	1 to 25	3,500.00	10,500	52,500	2.7%		10,847	11,204	11,574	11,956	8,234										
1.210	1	1 Allowance	Foundations, Capital Repairs, Partial		2025	3 to 4	1	10,000.00	10,000	10,000	2.5%		10,330			11,387			12,552			13,836			15,251		
1.240	4	1 Allowance	Gutters and Downspouts, Aluminum, Capital Repairs, Phased		2033	20 to 30	9 to 12	15,000.00	15,000	60,000	1.3%									20,091		20,754	21,439	22,146			
1.280	490	245 Squares	Roofs, Asphalt Shingles, Phased (2004 - 2007)		2027	20 to 25	3 to 4	450.00	110,250	220,500	11.2%				121,529	125,539											
1.281	440	220 Squares	Roofs, Asphalt Shingles, Phased (2008 - 2009)		2029	20 to 25	5 to 6	450.00	99,000	198,000	10.7%						116,449	120,292									
1.282	390	195 Squares	Roofs, Asphalt Shingles, Phased (2010 - 2012)		2031	20 to 25	7 to 8	450.00	87,750	175,500	10.2%								110,141	113,776							
1.820	26,500	3,315 Square Feet	Walls, Masonry, Inspections and Repairs, Phased		2026	6 to 10	2 to 9	1.55	5,138	41,075	3.9%			5,483	5,664	5,851	6,044	6,243	6,449	6,662	6,882	7,109	7,344	7,586	7,836	8,095	8,362
1.860	130,000	32,500 Square Feet	Walls, Siding, Vinyl, Phased (Atop Insulation Board and T1-11) (Incl. Soffit and Fascia)		2033	35 to 40	9 to 12	8.00	260,000	1,040,000	21.8%									348,238	359,730	371,601	383,864				
				Property Site Elements																							
4.020	9,700	9,700 Square Yards	Asphalt Pavement, Crack Repair and Patch		2027	to 5	3	0.70	6,790	6,790	1.0%				7,485				8,523				9,705				
4.040	9,700	3,233 Square Yards	Asphalt Pavement, Mill and Overlay, Phased		2058	15 to 20	34 to 30+	19.00	61,433	184,300	0.0%																
4.045	9,700	3,233 Square Yards	Asphalt Pavement, Total Replacement, Phased		2038	15 to 20	14 to 16	35.00	113,167	339,500	8.2%														178,288	184,172	
4.100	15	5 Each	Catch Basins, Inspections and Capital Repairs, Phased		2038	15 to 20	14 to 16	1,000.00	5,000	15,000	0.4%														7,877	8,137	
4.140	10,900	550 Square Feet	Concrete Sidewalks, Partial		2025	to 65	1 to 30+	13.50	7,425	147,150	1.8%		7,670			8,455			9,320			10,273			11,324		
4.170	96	5 Each	Concrete Stoops, Partial		2025	to 65	1 to 30+	2,100.00	10,500	201,600	2.6%		10,847			11,956			13,179			14,528			16,014		
4.285	100	100 Linear Feet	Fence, Wood, Grand Canyon Drive (2025 is Repairs and Staining, is Budgeted)		2025	15 to 25	1	75.00	7,500	7,500	0.5%		5,000							10,045							
4.286	30	5 Each	Fences, Wood, Patios, Near Term, Phased (Incl. Posts, Cross Members, Pickets and Gates)		2025	15 to 25	1 to 6	2,300.00	11,500	69,000	3.3%		11,880	12,272	12,676	13,095	13,527	13,973									
4.287	96	4 Each	Fences, Wood, Patios, Subsequent, Phased (Incl. Pickets and Gates)		2031	15 to 25	7 to 30+	1,150.00	4,416	110,400	2.1%								5,543	5,726	5,915	6,110	6,312	6,520	6,735	6,957	7,187
4.288	96	16 Each	Fences, Wood, Patios, Staining, Remaining, Phased (Will Replace with Treated Cedar)		2025	4 to 6	1 to 6	450.00	7,200	43,200	0.7%		7,438	7,683	7,937	8,198	8,469	8,749									
4.560	1	1 Allowance	Light Poles and Fixtures (Including Building Mounted) (Near Term is Remaining)		2027	25 to 30	3	18,000.00	18,000	18,000	0.9%				15,432												
4.650	1	1 Allowance	Pipes, Subsurface Utilities, Partial		2027	to 85+	3	8,000.00	8,000	8,000	1.4%				8,818				10,041				11,434			13,020	
4.760	170	170 Square Feet	Retaining Wall, Timber (Materials Only)		2035	15 to 20	11	22.00	3,740	3,740	0.1%												5,345				
				Clubhouse Elements																							
5.501	40	40 Square Yards	Floor Coverings, Laminate		2027	18 to 25	3	96.00	3,840	3,840	0.2%				4,233												
5.502	1	1 Allowance	Kitchenette		2027	18 to 25	3	3,600.00	3,600	3,600	0.2%				3,968												
5.504	1	1 Allowance	Rest Room, Renovation		2027	to 25	3	3,800.00	3,800	3,800	0.2%				4,189												
5.800	250	250 Square Feet	Windows and Doors		2048	to 35	24	85.00	21,250	21,250	0.7%																
				Pool Elements																							
6.200	2,800	2,800 Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs		2027	8 to 12	3	2.00	5,600	5,600	0.5%				6,173												
6.300	1,800	1,800 Square Feet	Cover, Vinyl		2033	8 to 15	9	3.00	5,400	5,400	0.3%									7,233							
6.400	200	200 Linear Feet	Fence, Chain Link		2034	to 35	10	30.00	6,000	6,000	0.1%											8,301					
6.500	1	1 Allowance	Furniture		2028	to 12	4	11,000.00	11,000	11,000	0.9%				12,525												
6.600	2	1 Allowance	Mechanical Equipment, Phased		2025	to 15	1 to 8	6,500.00	6,500	13,000	0.8%		6,715						8,428							10,578	
6.800	1,500	1,500 Square Feet	Pool Finish, Plaster		2027	8 to 12	3	18.50	27,750	27,750	2.3%				30,589												
6.801	160	160 Linear Feet	Pool Finish, Tile		2054	15 to 25	30	40.00	6,400	6,400	0.3%																
6.900	1,500	1,500 Square Feet	Structure and Deck, Total Replacement		2034	to 60	10	200.00	300,000	300,000	6.2%											415,073					
				Anticipated Expenditures, By Year (\$6,700,880 over 30 years)								0	70,725	36,642	240,267	208,963	152,723	149,257	175,748	134,592	398,403	855,713	433,179	420,116	57,160	201,218	231,456



RESERVE EXPENDITURES

Parkwood Village Homeowners Association Madison, Wisconsin				Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentag e of Future Expenditure	16 2040	17 2041	18 2042	19 2043	20 2044	21 2045	22 2046	23 2047	24 2048	25 2049	26 2050	27 2051	28 2052	29 2053	30 2054
Line Item	Total Quantity	Per Phase Quantity	Units		Useful	Remaining	Unit (2024)	Per Phase (2024)	Total (2024)																
Reserve Component Inventory																									
Exterior Building Elements																									
1.120	15	3 Each	Balconies, Wood, Phased	2025	25 to 35	1 to 25	3,500.00	10,500	52,500	2.7%										23,643	24,423	25,229	26,061	26,921	
1.210	1	1 Allowance	Foundations, Capital Repairs, Partial	2025	3 to 4	1	10,000.00	10,000	10,000	2.5%	16,811			18,531			20,427			22,517			24,820		
1.240	4	1 Allowance	Gutters and Downspouts, Aluminum, Capital Repairs, Phased	2033	20 to 30	9 to 12	15,000.00	15,000	60,000	1.3%															
1.280	490	245 Squares	Roofs, Asphalt Shingles, Phased (2004 - 2007)	2027	20 to 25	3 to 4	450.00	110,250	220,500	11.2%										248,249	256,441				
1.281	440	220 Squares	Roofs, Asphalt Shingles, Phased (2008 - 2009)	2029	20 to 25	5 to 6	450.00	99,000	198,000	10.7%												237,872	245,722		
1.282	390	195 Squares	Roofs, Asphalt Shingles, Phased (2010 - 2012)	2031	20 to 25	7 to 8	450.00	87,750	175,500	10.2%														224,986	232,411
1.820	26,500	3,315 Square Feet	Walls, Masonry, Inspections and Repairs, Phased	2026	6 to 10	2 to 9	1.55	5,138	41,075	3.9%	8,638	8,923	9,218	9,522	9,836	10,161	10,496	10,842	11,200	11,570	11,952	12,346	12,753	13,174	13,609
1.860	130,000	32,500 Square Feet	Walls, Siding, Vinyl, Phased (Atop Insulation Board and T1-11) (Incl. Soffit and Fascia)	2033	35 to 40	9 to 12	8.00	260,000	1,040,000	21.8%															
Property Site Elements																									
4.020	9,700	9,700 Square Yards	Asphalt Pavement, Crack Repair and Patch	2027	to 5	3	0.70	6,790	6,790	1.0%				12,583				14,328				16,315			
4.040	9,700	3,233 Square Yards	Asphalt Pavement, Mill and Overlay, Phased	2058	15 to 20	34 to 30+	19.00	61,433	184,300	0.0%															
4.045	9,700	3,233 Square Yards	Asphalt Pavement, Total Replacement, Phased	2038	15 to 20	14 to 16	35.00	113,167	339,500	8.2%	190,249														
4.100	15	5 Each	Catch Basins, Inspections and Capital Repairs, Phased	2038	15 to 20	14 to 16	1,000.00	5,000	15,000	0.4%	8,406														
4.140	10,900	550 Square Feet	Concrete Sidewalks, Partial	2025	to 65	1 to 30+	13.50	7,425	147,150	1.8%	12,483			13,760			15,167			16,719		18,429			
4.170	96	5 Each	Concrete Stoops, Partial	2025	to 65	1 to 30+	2,100.00	10,500	201,600	2.6%	17,652			19,458			21,448			23,643		26,061			
4.285	100	100 Linear Feet	Fence, Wood, Grand Canyon Drive (2025 is Repairs and Staining, is Budgeted)	2025	15 to 25	1	75.00	7,500	7,500	0.5%												18,021			
4.286	30	5 Each	Fences, Wood, Patios, Near Term, Phased (Incl. Posts, Cross Members, Pickets and Gates)	2025	15 to 25	1 to 6	2,300.00	11,500	69,000	3.3%											26,749	27,632	28,543	29,485	30,458
4.287	96	4 Each	Fences, Wood, Patios, Subsequent, Phased (Incl. Pickets and Gates)	2031	15 to 25	7 to 30+	1,150.00	4,416	110,400	2.1%	7,424	7,669	7,922	8,183	8,453	8,732	9,021	9,318	9,626	9,943					
4.288	96	16 Each	Fences, Wood, Patios, Staining, Remaining, Phased (Will Replace with Treated Cedar)	2025	4 to 6	1 to 6	450.00	7,200	43,200	0.7%															
4.560	1	1 Allowance	Light Poles and Fixtures (Including Building Mounted) (Near Term is Remaining)	2027	25 to 30	3	18,000.00	18,000	18,000	0.9%													44,677		
4.650	1	1 Allowance	Pipes, Subsurface Utilities, Partial	2027	to 85+	3	8,000.00	8,000	8,000	1.4%				14,825				16,881				19,222			
4.760	170	170 Square Feet	Retaining Wall, Timber (Materials Only)	2035	15 to 20	11	22.00	3,740	3,740	0.1%															
Clubhouse Elements																									
5.501	40	40 Square Yards	Floor Coverings, Laminate	2027	18 to 25	3	96.00	3,840	3,840	0.2%								8,103							
5.502	1	1 Allowance	Kitchenette	2027	18 to 25	3	3,600.00	3,600	3,600	0.2%								7,596							
5.504	1	1 Allowance	Rest Room, Renovation	2027	to 25	3	3,800.00	3,800	3,800	0.2%								8,018							
5.800	250	250 Square Feet	Windows and Doors	2048	to 35	24	85.00	21,250	21,250	0.7%									46,320						
Pool Elements																									
6.200	2,800	2,800 Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2027	8 to 12	3	2.00	5,600	5,600	0.5%					10,720										14,832
6.300	1,800	1,800 Square Feet	Cover, Vinyl	2033	8 to 15	9	3.00	5,400	5,400	0.3%							11,031								
6.400	200	200 Linear Feet	Fence, Chain Link	2034	to 35	10	30.00	6,000	6,000	0.1%															
6.500	1	1 Allowance	Furniture	2028	to 12	4	11,000.00	11,000	11,000	0.9%	18,493											27,302			
6.600	2	1 Allowance	Mechanical Equipment, Phased	2025	to 15	1 to 8	6,500.00	6,500	13,000	0.8%							13,278						16,666		
6.800	1,500	1,500 Square Feet	Pool Finish, Plaster	2027	8 to 12	3	18.50	27,750	27,750	2.3%					53,121										73,498
6.801	160	160 Linear Feet	Pool Finish, Tile	2054	15 to 25	30	40.00	6,400	6,400	0.3%															16,951
6.900	1,500	1,500 Square Feet	Structure and Deck, Total Replacement	2034	to 60	10	200.00	300,000	300,000	6.2%															
Anticipated Expenditures, By Year (\$6,700,880 over 30 years)											280,156	16,592	17,140	96,862	82,131	18,893	100,868	75,087	67,146	356,283	319,564	356,636	454,371	311,233	381,759

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
Parkwood Village		FY2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Homeowners Association																	
Madison, Wisconsin																	
Reserves at Beginning of Year	(Note 1)	N/A	300,500	371,462	501,650	451,783	455,101	538,310	650,082	760,829	925,195	835,849	290,133	167,754	65,546	203,976	200,141
Total Recommended Reserve Contributions	(Note 2)	N/A	132,736	155,200	177,700	200,200	222,700	245,200	267,700	276,500	285,600	295,000	304,700	314,800	192,000	192,000	192,000
Estimated Interest Earned, During Year	(Note 3)	N/A	8,951	11,630	12,700	12,080	13,232	15,830	18,794	22,458	23,457	14,998	6,099	3,108	3,590	5,383	4,871
Anticipated Expenditures, By Year		N/A	(70,725)	(36,642)	(240,267)	(208,963)	(152,723)	(149,257)	(175,748)	(134,592)	(398,403)	(855,713)	(433,179)	(420,116)	(57,160)	(201,218)	(231,456)
Anticipated Reserves at Year End		<u>\$300,500</u>	<u>\$371,462</u>	<u>\$501,650</u>	<u>\$451,783</u>	<u>\$455,101</u>	<u>\$538,310</u>	<u>\$650,082</u>	<u>\$760,829</u>	<u>\$925,195</u>	<u>\$835,849</u>	<u>\$290,133</u>	<u>\$167,754</u>	<u>\$65,546</u>	<u>\$203,976</u>	<u>\$200,141</u>	<u>\$165,556</u>
														(NOTE 5)			

(continued)		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued															
		2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	
Reserves at Beginning of Year		165,556	80,680	214,013	355,257	424,583	515,879	679,103	769,227	893,690	1,035,542	894,265	792,671	657,350	426,111	340,692	
Total Recommended Reserve Contributions		192,000	146,000	150,800	155,800	160,900	166,200	171,700	177,400	183,300	189,300	195,500	202,000	208,700	215,600	222,700	
Estimated Interest Earned, During Year		3,280	3,925	7,583	10,388	12,527	15,917	19,292	22,150	25,698	25,705	22,470	19,315	14,432	10,214	7,051	
Anticipated Expenditures, By Year		(280,156)	(16,592)	(17,140)	(96,862)	(82,131)	(18,893)	(100,868)	(75,087)	(67,146)	(356,283)	(319,564)	(356,636)	(454,371)	(311,233)	(381,759)	
Anticipated Reserves at Year End		<u>\$80,680</u>	<u>\$214,013</u>	<u>\$355,257</u>	<u>\$424,583</u>	<u>\$515,879</u>	<u>\$679,103</u>	<u>\$769,227</u>	<u>\$893,690</u>	<u>\$1,035,542</u>	<u>\$894,265</u>	<u>\$792,671</u>	<u>\$657,350</u>	<u>\$426,111</u>	<u>\$340,692</u>	<u>\$188,684</u>	(NOTE 4)
		(NOTE 5)															

Explanatory Notes:

- 1) Year 2024 ending reserves are projected by Management as of December 31, 2024; FY2024 starts January 1, 2024 and ends December 31, 2024.
- 2) 2026 is the first year of recommended contributions.
- 3) 2.7% is the estimated annual rate of return on invested reserves
- 4) Accumulated year 2054 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Years (reserve balance at critical point).

**FIVE-YEAR OUTLOOK****Parkwood Village  
Homeowners Association**  
Madison, Wisconsin

Line Item	Reserve Component Inventory	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029
<b><u>Exterior Building Elements</u></b>							
1.120	Balconies, Wood, Phased		10,847	11,204	11,574	11,956	8,234
1.210	Foundations, Capital Repairs, Partial		10,330			11,387	
1.280	Roofs, Asphalt Shingles, Phased (2004 - 2007)				121,529	125,539	
1.281	Roofs, Asphalt Shingles, Phased (2008 - 2009)						116,449
1.820	Walls, Masonry, Inspections and Repairs, Phased			5,483	5,664	5,851	6,044
<b><u>Property Site Elements</u></b>							
4.020	Asphalt Pavement, Crack Repair and Patch				7,485		
4.140	Concrete Sidewalks, Partial		7,670			8,455	
4.170	Concrete Stoops, Partial		10,847			11,956	
4.285	Fence, Wood, Grand Canyon Drive (2025 is Repairs and Staining, is Budgeted)		5,000				
4.286	Fences, Wood, Patios, Near Term, Phased (Incl. Posts, Cross Members, Pickets and Gates)		11,880	12,272	12,676	13,095	13,527
4.288	Fences, Wood, Patios, Staining, Remaining, Phased (Will Replace with Treated Cedar)		7,438	7,683	7,937	8,198	8,469
4.560	Light Poles and Fixtures (Including Building Mounted) (Near Term is Remaining)				15,432		
4.650	Pipes, Subsurface Utilities, Partial				8,818		
<b><u>Clubhouse Elements</u></b>							
5.501	Floor Coverings, Laminate				4,233		
5.502	Kitchenette				3,968		
5.504	Rest Room, Renovation				4,189		
<b><u>Pool Elements</u></b>							
6.200	Concrete Deck, Inspections, Partial Replacements and Repairs				6,173		
6.500	Furniture					12,525	
6.600	Mechanical Equipment, Phased		6,715				
6.800	Pool Finish, Plaster				30,589		
<b>Anticipated Expenditures, By Year (\$6,700,880 over 30 years)</b>		<b>0</b>	<b>70,725</b>	<b>36,642</b>	<b>240,267</b>	<b>208,963</b>	<b>152,723</b>



## 4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *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 overview (front elevation)



Building overview (front elevation)



Building overview (rear elevation)



Building overview (partial front/side elevation)

## Balconies, Wood

---

**Line Item:** 1.120

**Quantity:** 15 Juliet-style wood balconies which comprise a total of 480 square feet. We are informed that the balconies utilize aluminum metal pan flooring.

**History:** One balcony was replaced in 2020. The Association inspects, paints and repairs the balconies every one to two years. Due to the limited size, the Association is considering reconfiguration/removal in the future. Updates to this Study will reflect any future changes in design or scope.

**Condition:** Fair overall with weathered and deteriorated wood and peeling paint evident.



**Balcony overview**



**Peeling finishes and wood deterioration**



**Weathered and deteriorated wood components**



**Weathered and deteriorated wood components**





**Weathered and deteriorated wood components**



**Balcony soffit and trim**

**Useful Life:** 25- to 35-years. The rates and types of deterioration are not uniform due to the nature of wood. Replacement is normally an ongoing process which eventually leads to a complete replacement for economic or aesthetic reasons.

**Component Detail Notes:** Balcony construction includes the following:

- Wood railings with vertical pickets
- Wood cantilevered frames

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

- Annually:
  - Inspect to identify and correct any unsafe conditions
  - Secure loose fasteners and replace deteriorated fasteners
  - Replace deteriorated wood components
  - Check railing stability and fasteners
- Every three years:
  - Power wash with algaecide and application of sealer/stain if applicable

**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, our estimate of cost includes replacement in like-kind.

## Foundations, Capital Repairs

---

**Line Item:** 1.210

**Quantity, History and Condition:** Parkwood Village is responsible for 80 of the 96 foundations. Individual unit owners are responsible for the remaining 16 foundations. Management informs us the Association has conducted capital repairs at the foundations

of the buildings at the perimeter at the property. These repairs have historically included installing steel brackets and the addition of piers from within the basements. We are informed that the need for these repairs has decreased since our 2020 site visit. However, we note several indicators of excessive settlement including roof deflections and masonry cracks, movement and apparent out-of-plumb locations. We include related recommendations in our narrative “Walls, Masonry”.



**Previous foundation repair**

**Useful Life:** The foundations have indeterminate useful lives, however we include periodic capital repairs every 3- to 4-years based on conversations with Management.

**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 estimates of cost reflect recent historic expenditures, as provided by Management.

## **Gutters and Downspouts, Aluminum**

---

**Line Item:** 1.240

**Quantity:** Approximately 9,500 linear feet of aluminum five-inch seamless gutters and small and large capacity downspouts.

**History:** Replaced from approximately 1998 through 2000. We are informed that over the past several years a majority of the nail in type gutter hangers have been replaced with screw in type hangers, and that the seamless aluminum gutter and downspout assemblies are inspected and repaired as needed during cleaning.

Management informs us that the Association will budget for partial replacement in coordination with siding replacements, and annual repairs/replacements are funded as normal maintenance.

**Condition:** Fair to poor overall with frequent deflection, fastener rust, leakage at seams and dented sections evident.





**Evidence of leakage at seams at clubhouse**



**Multiple fastener holes**



**Deflected gutters**



**Evidence of leakage at seams**



**Split downspout**



**Damaged downspout**

**Useful Life:** 20- to 30-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. Downspouts that discharge directly onto roofs cause premature deterioration of the roofs due to the high concentration of storm water. We recommend either routing these downspouts directly to the ground, connecting the downspouts to the gutters of the lower roof or distributing the storm water discharge over a large area.

The useful life of gutters and downspouts coincides with that of the sloped roofs. Coordinated replacement will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements.

**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, Asphalt Shingles

---

**Line Items:** 1.280, 1.281 and 1.282

**Quantity and History:** Approximately 1,325 *squares*<sup>1</sup> overall. See tables below for age and quantity breakdown (data provided by Management):

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

Location	Quantity (Squares)	Year(s) of Replacement
2	13	2011
4	13	2011
6	12	2009
8	12	2009
10	12	2008
12	12	2008
14	19	2007
16	19	2006
18	12	2009
20	12	2009
22	13	2009
24	13	2009
26	13	2011
28	13	2011
30	12	2011
32	12	2011
34	13	2006
36	13	2006
38	19	2008
102	13	2007
104	13	2007
106	12	2007
108	12	2007
110	12	2007
112	12	2007
114	12	2007
116	12	2007
118	13	2004
120	13	2004
122	13	2007, 2009
124	13	2007, 2009
126	13	2007, 2010
128	13	2007, 2010
130	13	2011

Location	Quantity (Squares)	Year(s) of Replacement
132	13	2011
134	18	2009
136	12	2011, 2012
138	11	2011, 2012
140	13	2009
142	16	2009
144	12	2010
146	11	2010
202	13	2009
204	13	2009
206	12	2004, 2012
208	11	2004, 2012
210	13	2012
212	13	2012
214	13	2012
216	13	2012
218	11	2009
220	12	2009
222	13	2005
224	13	2005
226	13	2005
228	13	2005
230	18	2010
232	13	2011
238	12	2009
240	18	2007
242	11	2007, 2011
244	12	2007, 2011
246	16	2011
254	12	2009
256	13	2009
258	18	2006
260	13	2006
262	13	2006

Location	Quantity (Squares)	Year(s) of Replacement
264	13	2004
266	13	2004
6602	18	2010
6604	13	2010
6606	13	2010
6608	18	2007
6610	11	2007
6612	12	2007
6614	13	2007
6616	13	2007
6618	13	2007
6620	13	2007
6622	13	2008
6624	13	2007, 2008
6626	11	2008
6628	12	2008
6630	11	2012
6632	12	2012
6634	13	2006
6636	13	2006
6638	13	2006
6640	13	2006
6642	13	2011
6644	13	2011
6646	13	2007, 2011
6648	13	2007, 2011
6650	13	2010
6652	13	2010

**Two years indicate front and rear roof replacements**

**Condition:** Fair to poor overall with shingle lift, staining, granular loss and weathering evident from our visual inspection from the ground. We note downspout discharge directly onto shingles. This configuration may result in accelerated shingle deterioration and granular loss at these locations.

In addition, we note roof deflection apparently due to building movement and/or settlement, particularly at garages. We note several indicators of excessive settlement including roof deflections and masonry cracks, movement and apparent out-of-plumb locations. We include related recommendations in our narrative "Walls, Masonry".

Management reports leaks primarily due to flashing issues, at chimneys, and at gutters/roof transitions lacking kick-out flashing. We recommend the Association conduct annual roof inspections and conduct this preventive maintenance practice through the operating budget.



**Asphalt shingle roof overview, note deflection in roofs likely due to building settlement**



**Clubhouse roof overview**



**Shingle lift at clubhouse**



**Weathered shingles, repairs and apparent garage settlement**



**Roof (building) deflection, note lifted flashing and downspout discharge onto shingles**



**Lifted flashing detail**





**Roof (building) deflection**



**Shingle lift and weathered shingles**



**Shingle lift and weathered shingles**



**Three-tab shingles, note weathering and granular loss**



**Shingle lift and weathered shingles**

**Useful Life:** 20- to 25-years

**Component Detail Notes:** The existing roof assembly comprises the following:

- Laminate shingles with the exception of Unit 264 and 256 which have three-tab shingles
- Boston style ridge caps
- Lead boot flashing at waste pipes
- Soffit and ridge vents
- Metal drip edge
- Open valleys with metal W flashing and enclosed half weaved valleys

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

The vents should be clear of debris and not blocked from above by attic insulation. If the soffit vents are blocked from above, installation of polystyrene vent spaces or baffles between the roof joists at these locations can ensure proper ventilation.

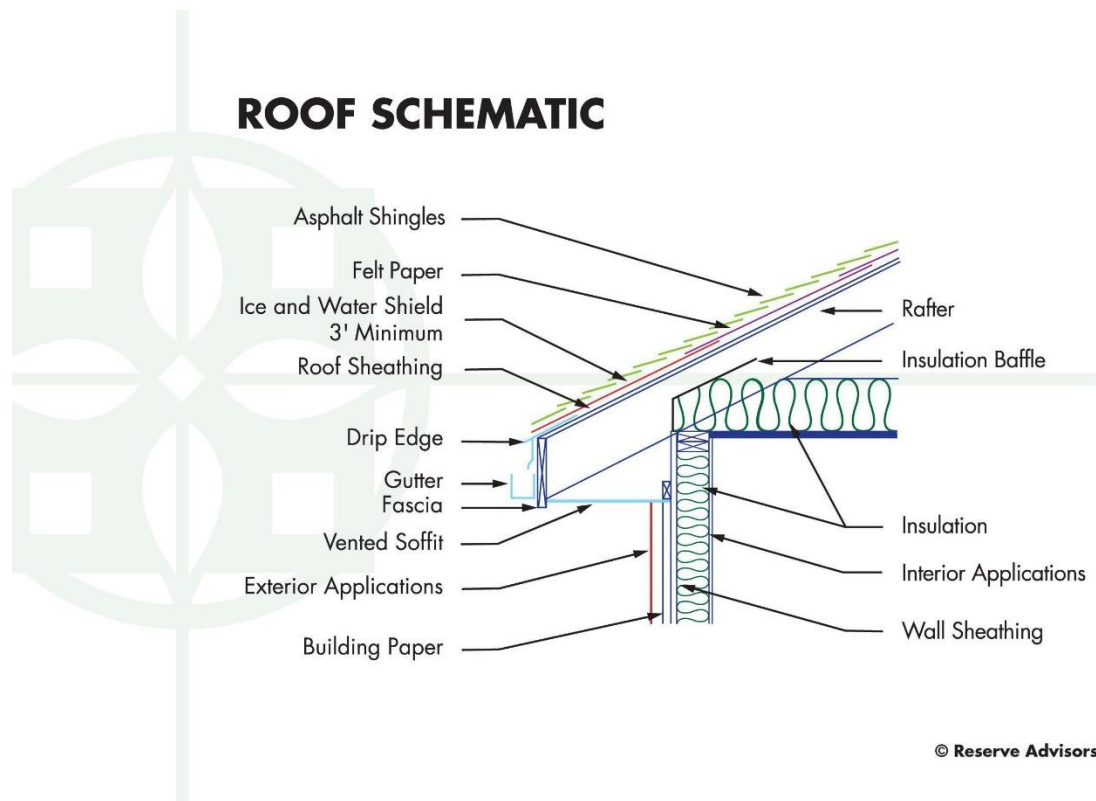
Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of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

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



identify the current costs of remedy if the roof were to fail in the near future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

The following cross-sectional schematic illustrates a typical asphalt shingle roof system although it may not reflect the actual configuration at Parkwood Village:



Contractors use one of two methods for replacement of sloped roofs, either an overlayment or a tear-off. Overlayment is the application of new shingles over an existing roof. However, there are many disadvantages to overlayment including hidden defects of the underlying roof system, absorption of more heat resulting in accelerated deterioration of the new and old shingles, and an uneven visual appearance. Therefore, we recommend only the tear-off method of replacement. The tear-off method of replacement includes removal of the existing shingles, flashings if required and underlayments.

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

**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
  - Trim tree branches that are near or in contact with roof
- As-needed:
  - Ensure proper ventilation and verify vents are clear of debris and not blocked from attic insulation

**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.

## **Walls, Masonry**

---

**Line Item:** 1.820

**Quantity:** Approximately 26,500 square feet of masonry comprises the exterior walls and includes the clubhouse. Our quantity estimate reflects a five percent decrease in area due to partial replacements with vinyl siding in recent years.

**History:** Management informs us of repairs and/or masonry removal at four to five locations due to leaning. In addition, we note temporary shoring at Unit 208, and the use of metal brackets to secure the masonry. The Association plans to conduct limited repairs in 2024, and we anticipate this work be funded as normal maintenance.

**Condition:** Fair to poor overall with the following evident:

- Extensive previous repairs evident
- Masonry exhibits cracks and spalls
- Mortar deterioration and missing mortar is evident
- Mortar joints are tooled
- Weeps and flashing at lintels are not visible

We note several locations of significant apparent settlement, particularly at Unit 206 through 226 resulting in masonry and mortar cracks, separation between brick beds and mortar (horizontal separation), loose masonry sections around windows, and columns/wall lines appearing out-of-plumbing.

The masonry was recently inspected by a structural engineer and Management reports that two lintels will required near term sanding and painting. The Association will fund these activities through the operating budget. In addition, the Association plans to conduct annual repairs, and will replace masonry at deteriorated lintels with vinyl siding as the need arises.



**Repairs and shoring efforts at Unit 208**



**Previous repairs, separation of mortar and masonry, and stoop settlement. Unit 212 shown.**



**Masonry bowing and mortar bed separation at Unit 212**



**Mortar and masonry step cracks and previous repairs**



**Apparent building settlement, masonry out-of-plumb**



**Masonry and mortar step cracks, note previous repairs**





**Step cracks at two elevations, Unit 216 shown**



**Step cracks at Unit 220**



**Apparent building settlement, masonry out-of-plumb, Unit 224 shown**



**Vertical cracks, Unit 246 shown**



**Mortar deterioration at Unit 214**



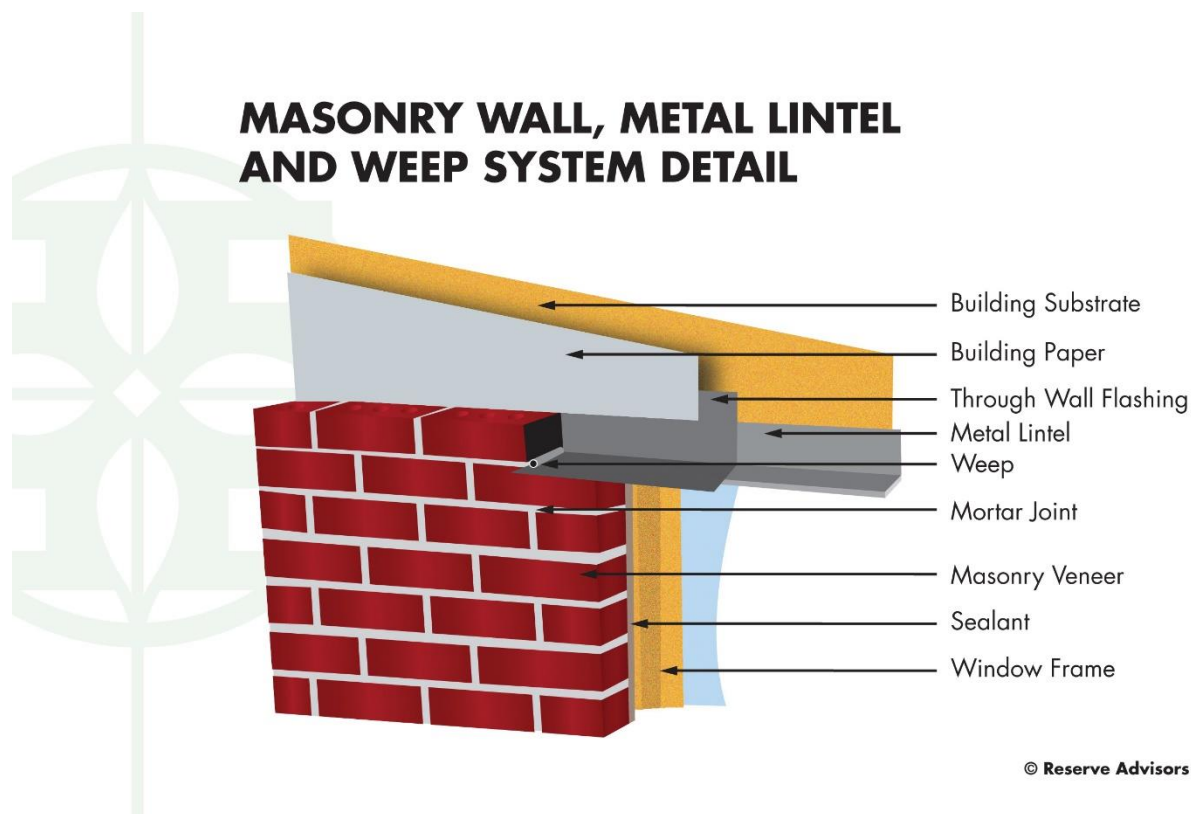
**Mortar deterioration and missing mortar at Unit 214**

**Useful Life:** We advise a complete inspection of the masonry and related masonry repairs every 6- to 10-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  $\frac{1}{2}$  inch nor more than  $\frac{3}{4}$  inch and replacing it with new mortar. Face grouting is the process of placing mortar over top of the existing mortar. We advise against face grouting because the existing, often deteriorated mortar does not provide a solid base for the new mortar. New mortar spalls at face grouted areas will likely occur. One purpose of a mortar joint is to protect the masonry by relieving stresses within the wall caused by expansion, contraction, moisture migration and settlement. Repointed mortar joints are more effective if the mortar is softer and more permeable than the masonry units, and no harder or less permeable than the existing mortar. The masonry contractor should address these issues within the proposed scope of work.

The 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 recommend future repairs include the following activities:

- Complete inspection of the masonry



- Repointing of up to five percent (5%) 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.)
- Installation of lintels and flashings as necessary
- Partial replacements of sealants as necessary

## Walls, Siding, Vinyl

---

**Line Item:** 1.860

**Quantity:** Approximately 130,000 square feet of vinyl siding comprises the exterior walls and includes the clubhouse and soffit and fascia at the buildings. Our quantity estimate reflects a limited increase in area due to partial replacements of the masonry with vinyl siding in recent years.

**History:** The vinyl siding was installed atop ½" insulation nailed over the original T1-11 plywood siding, from approximately 1998 to 2000. The Association plans to leave the original plywood siding and insulation board in place at the time of vinyl siding replacement.

**Condition:** Fair overall with warps, bulges, loose sections and damage evident.



Partial replacements, note varied colors



Warped/bulging siding, Unit 224 shown





**Gaps, note separation between Units 230 and 232**



**Siding bulges**



**Minor damage at clubhouse**



**Siding lift at Unit 214**



**Trim damage**

**Useful Life:** 35- to 40-years

**Component Detail Notes:** The siding at Parkwood Village consists of the following:

- Clapboard double four-inch profile
- J-channel trim at window and door perimeters, and other penetrations

- Water-vapor permeable building paper does not exist

The following diagram details the use of building wrap in a vinyl siding system:



The Association should install new vinyl siding as recommended by the *Vinyl Institute, Inc.* The vinyl siding should be installed over a continuous weather resistant barrier and properly integrated flashing around all penetrations. Fasteners used should include aluminum, galvanized steel or other corrosion-resistant fasteners. Siding panels should overlap by approximately one inch. Joints should be staggered so that no two courses are aligned vertically, unless separated by at least three courses. The siding should not be caulked where the siding meets trim accessories, such as J-channel, or at overlap joints. J-channel should be installed a minimum of ½ inch off of roof lines.

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

- Annually:
  - Inspect and repair loose siding, warping or damage from wind driven objects or lawn care equipment
  - Periodically clean siding as necessary at areas of organic growth. A non-abrasive household cleaner or manufacturer specified vinyl siding cleaner will remove more intense stains. We do not recommend pressure cleaning at vinyl siding due to the siding's brittle nature.

**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 cost information provided to Management by a local contractor.

## Property Site Elements

### Asphalt Pavement, Repaving

---

**Line Items:** 4.020, 4.040, and 4.045

**Quantity:** Approximately 9,700 square yards of streets, parking areas and driveways throughout the community.

**History:**

- Repaving: Repaved from 2018 through 2020.
- Repairs: Limited cracking filling and patching since repaving

**Condition:** Good to fair overall with isolated cracks, settlement and patches evident.



Asphalt pavement overview



Asphalt pavement overview





**Pavement overview, note centerline drainage cracks and previous repairs**



**Pavement cracks**



**Isolated significant patch**

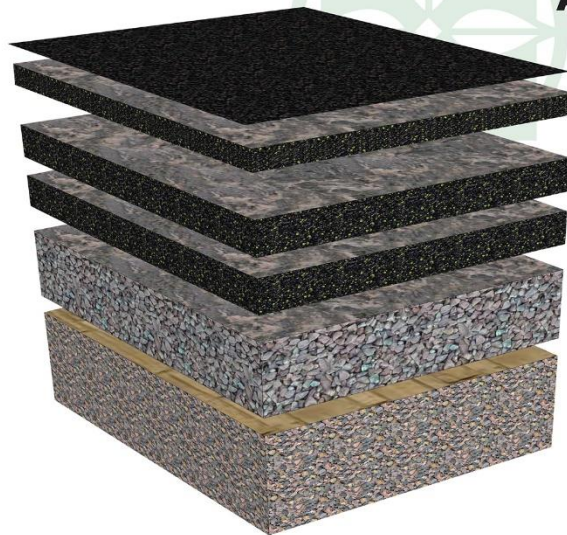


**Isolated pavement deterioration**

**Useful Life:** 15- to 20-years with the benefit of crack repair, patch, and seal coat events every up 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 Parkwood Village:



## ASPHALT DIAGRAM

**Sealcoat or Wearing Surface**

**Asphalt Overlay** Not to Exceed  
1.5 inch Thickness per Lift or Layer

**Original Pavement** Inspected and  
milled until sound pavement is found,  
usually comprised of two layers

**Compacted Crushed Stone  
or Aggregate Base**

**Subbase of Undisturbed  
Native Soils** Compacted to  
95% dry density

© Reserve Advisors

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 total replacement method of repaving at Parkwood Village.

**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 mill and overlay estimate of cost reflects partial total replacement of up to twenty percent (25%).

## Catch Basins

---

**Line Item:** 4.100

**Quantity:** Approximately 15 catch basins<sup>2</sup>

**History:** Re-set and repaired in coordination with recent repaving. One catch basin was added at this time.

**Condition:** Good to fair overall with settlement evident.



Catch basin settlement, note pavement cracks



Catch basin settlement, note pavement deterioration



Catch basin settlement, note pavement cracks



Minor catch basin settlement, note pavement cracks

<sup>2</sup> We utilize the terminology catch basin to refer to all storm water collection structures including curb inlets.



**Useful Life:** The useful life of catch basins is up to 65 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

**Component Detail Notes:** Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement.

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

- Annually:
  - Inspect and repair any settlement and collar cracks
  - Ensure proper drainage and inlets are free of debris
  - If property drainage is not adequate in heavy rainfall events, typically bi-annual cleaning of the catch basins is recommended

**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 plan for inspections and capital repairs to the catch basins in conjunction with repaving.

## Concrete Sidewalks

---

**Line Item:** 4.140

**Quantity:** Approximately 10,900 square feet

**History and Condition:** Fair overall with periodic cracks, settlement, spalled concrete, undermining, heaves and previous repairs evident. We are informed of repairs as needed with significant repairs in 2019 and 2020.



Concrete sidewalk overview at clubhouse



Sidewalk cracks



**Sidewalk cracks near clubhouse**



**Concrete deterioration**



**Soil undermining at Unit 112 sidewalk**



**Sidewalk cracks Units 106 - 108**

**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 5,500 square feet of concrete sidewalks, or fifty-one percent (50.5%) of the total, will require replacement during the next 30 years.



## Concrete Stoops

---

**Line Item:** 4.170

**Quantity:** 96 stoops

**Condition:** Fair overall with frequent settlement and spalled concrete evident. We significant apparent stoop settlement and movement, in addition to several other indicators of excessive settlement including roof deflections and masonry cracks, movement and apparent out-of-plumb locations. We include related recommendations in our narrative "Walls, Masonry".



**Typical concrete stoop**



**Significant stoop settlement, note cracks along wall and slab, Unit 226 shown**



**Stoop spalls**



**Stoop spalls**



**Stoop 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 recommend the Association plan for replacement of up to 50 stoops, or approximately fifty-two percent (52.1%) of the total, during the next 30 years.

## **Fences, Wood**

---

**Line Items:** 4.285 through 4.288

**Quantity:** **Quantity:** Approximately 100 linear feet of fence along Grand Canyon Drive and approximately 3,100 linear feet of fence at the rear of each individual unit.

### **History:**

- Grand Canyon Drive fence: The perimeter fence along was installed in 1999 with post replacement in 2016. The Association plans to add bottom boards and steel supports in 2025 to repair the deflection, including staining. We include this budgeted cost.
- Unit patio fences: Approximately sixty percent (60%) of the fences have been replaced and the Association plans to budget for replacement of five fences per year. The remaining fences will be rebuilt including posts, cross members, pickets and gates, and Management anticipates the need for



only rebuilding pickets and gates during the next cycle of fence repair/replacement.

- Paint finishes: The Association power washed and stains up to four fences per year. All work related to fences has been completed with in-house labor, per Management and the current round of finishes will include fences as-needed since portions will be replaced near term. In addition, the Association will replace the pickets with pressure-treated lumber and does not anticipate future paint or stain applications.

**Condition:** The fences vary in age and condition, and the older fence exhibit wood deterioration and rot, and peeling and deteriorated paint throughout. The recent replaced fences are in good condition.



**Grand Canyon Drive fence, note deflection and faded finishes**



**Replaced wood fence posts at patio**



**Fence wood deterioration**



**Fence deterioration and damage**



**Fence deterioration**



**Fence deterioration**



**Replaced fence in good condition**

**Useful Life:** Every four- to six-years for paint finishes and 15- to 25-years for replacement

**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 and fund these activities through the operating budget. Our estimates of cost are provided by Management.



## Light Poles and Fixtures

---

**Line Item:** 4.560

**Quantity:** Six metal poles with light fixtures and eight building mounted fixtures

**History:** The age was unavailable at the time of our inspection. The Association has replaced eight building fixtures in recent years.

**Condition:** Fair overall with finish deterioration evident.



**Light pole and fixture**



**Light fixture**

**Useful Life:** 25- to 30-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. Our estimates of cost are provided by the Association.

## Pipes, Subsurface Utilities

---

**Line Item:** 4.650

**History and Condition:** Reported satisfactory; however, Management informs us the pipes are beginning to age.

**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, Parkwood Village 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.

## **Retaining Wall, Timber**

---

**Line Item:** 4.760

**Quantity:** Approximately 170 square feet along Great Canyon Drive

**History:** Replaced in 2015 with in-house labor.

**Condition:** Good to fair





**Timber retaining wall**

**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 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.

## Clubhouse Elements



**Clubhouse rear elevation**



**Clubhouse interior overview** (*photo from 2020 inspection*)

*We were unable to access the clubhouse at the time of our most recent inspection, however Management informs us that no work has been completed to the clubhouse*

*finishes since our 2020 site visit, and the conditions are the same. We include a selection of our 2020 inspection photos to show examples of finishes.*

## **Floor Coverings, Laminate**

---

**Line Item:** 5.501

**Quantity:** Approximately 40 square yards at the main room

**History:** Management informs us the wood laminate flooring was installed in 2011

**Condition:** Fair overall with gaps at seams. The Board finds the flooring satisfactory.



**Gaps at seams (photo from 2020 inspection)**



**Gaps at seams (photo from 2020 inspection)**

**Useful Life:** 18- 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.

## **Kitchenette**

---

**Line Item:** 5.502

**History:** Components are of unknown age with the exception of the fridge, sink and counters which were added in 2012

**Condition:** Fair overall, reported in working condition; however, components appear dated.



**Kitchenette** (*photo from 2020 inspection*)

**Useful Life:** Renovation 18- to 25-years

**Component Detail Notes:** Components of the kitchen include:

- Appliances
- Cabinets and countertop
- Sink

**Priority/Criticality:** Per Board discretion

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

## **Rest Room**

---

**Line Item:** 5.504

**History:** Components were replaced around 2012 as part of the overall clubhouse renovation

**Condition:** Good to fair overall



**Rest room** (*photo from 2020 inspection*)

**Useful Life:** 18- to 25-years

**Component Detail Notes:** Components include:

- Concrete floor coverings
- Paint wall coverings
- Paint ceiling finishes
- Light fixtures
- Plumbing fixtures

**Priority/Criticality:** Per Board discretion

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

## Windows and Doors

---

**Line Item:** 5.800

**Quantity:** Approximately 250 square feet

**History:** Replaced in 2013.

**Condition:** Good to fair overall



***Windows and doors***

**Useful Life:** Up to 35 years

**Priority/Criticality:** Not recommended to defer

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



## Pool Elements



**Pool overview**

### Concrete Deck

---

**Line Item:** 6.200

**Quantity:** Approximately 2,800 square feet

**History:** Last inspected and repaired in 2016.

**Condition:** Good to fair overall with cracks, sealant deterioration and minor settlement evident.



**Pool deck overview, note sealant deterioration**



**Deck cracks**



**Previous cracks repairs**



**Coping crack**

**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 and conduct coating repairs in areas with delamination
  - 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

## **Cover, Vinyl**

---

**Line Item:** 6.300

**Quantity:** Approximately 1,800 square feet

**History:** Replaced in 2020.

**Condition:** Reported satisfactory overall

**Useful Life:** 8- to 15-years

**Priority/Criticality:** Per Board discretion

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

## **Fence, Chain Link**

---

**Line Item:** 6.400

**Quantity:** Approximately 200 linear feet

**History:** Age unknown

**Condition:** Fair overall with webbing warp and rusted components evident.



**Pool chain link fence**



**Webbing warp**





**Rust corrosion**



**Fence and gate rust**

**Useful Life:** Up to 35 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, per Management:

- Chairs (18)
- Lounges (20)
- Ladders and life safety equipment

**History:** Varied ages

**Condition:** Reported satisfactory overall

**Useful Life:** Up to 12 years



**Covered furnishings**

**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:

- Automatic chlorinator and controls
- Interconnected pipe, fittings and valves
- Pump, filters, and heater
- Electrical panel
- Exhaust fan

**History: History:** Varied ages, the filter was replaced in 2023, the heater in 2017, and the pump in 2011.

**Condition:** Reported satisfactory without operational deficiencies

**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 Items:** 6.800 and 6.801

**Quantity:** Approximately 1,500 square feet of plaster based on the horizontal surface area and approximately 160 linear feet of tile

**History:**

- Plaster finish: Replaced in 2012. The Association power washes the pool finishes annually. Floor staining is reportedly due to previous acid-washing.
- Tile: Age unknown

**Condition:** Fair overall with staining noted. Management does not report cracks at the pool structure or water loss.

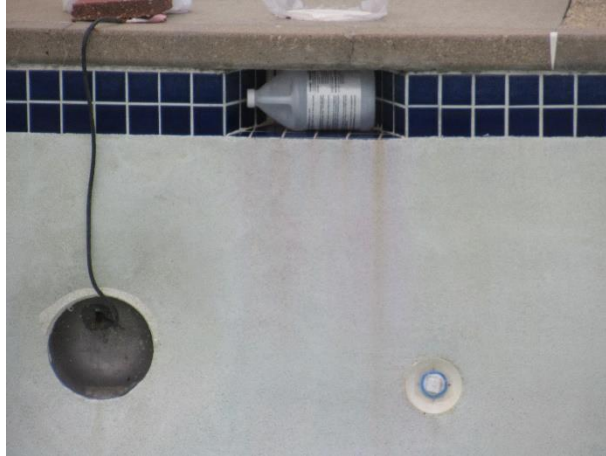


**Pool overview**



**Pool finishes**





**Staining/discoloration**

**Useful Life:** 8- to 12-years for the plaster and 15- to 25-years for the tile

**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 includes an allowance for replacement of the pool lights. We recommend the Association budget for full tile replacement every other plaster replacement event. Removal and replacement of the finish provides the opportunity to inspect the pool structure and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structure, we recommend the Association budget for the following:

- Removal and replacement of the plaster finish
- 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

## Structure and Deck

---

**Line Item:** 6.900

**Quantity:** Approximately 1,500 square feet of horizontal surface area

**History:** Original. Management does not report cracks at the pool structure or water loss.

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

**Useful Life:** Up to 60 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 Parkwood Village plan to replace the following components:

- Concrete deck
- Pool structure
- 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 every 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.

Parkwood Village 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 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 standards<sup>1</sup> set forth by the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level II Reserve Study Update." 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
- Local<sup>2</sup> 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 Madison, Wisconsin at an annual inflation rate<sup>3</sup>. Isolated or regional markets of

<sup>1</sup> Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

<sup>2</sup> See Credentials for additional information on our use of published sources of cost data.

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



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

- The past and current maintenance practices of Parkwood Village 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.

**HEATHER M. CHRISTENSEN, RS**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Heather M. Christensen, a Structural Engineer, is an Advisor for Reserve Advisors. Ms. Christensen is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services on townhomes, homeowner associations, planned unit developments and recreational associations. Ms. Christensen serves as the Quality Assurance Review Coordinator for all types of developments and has been with Reserve Advisors since 2011.



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

**Lawrence Square Townhomes Association** - A townhome association in Chicago, Illinois with 30 units in four buildings, this development displays uniqueness with shaped EIFS, vinyl siding, masonry walls and flat roofs. These buildings are connected with two bridges at the second stories, overlooking individual garages and private asphalt parking and streets.

**Lakelands Club Consolidated Homeowners Association** - This planned unit development located in Plainfield, Illinois includes amenities shared by 85 residential units. Construction began in 2003 and includes a clubhouse, pool, lake, irrigation system, gates, fences and asphalt pavement streets and walking paths.

**Windemere Place Condominium Association** - A condominium association in Grosse Pointe Farms, Michigan located on the lake, this planned unit development includes 31 single family homes and lots. Windemere Place was built from 1982 to 1992 and includes older, historic elements. The development contains concrete flatwork, brick privacy walls, a pool and pool house.

**3110 Wisconsin Condominium Association** - This high rise condominium located in downtown Washington, DC comprises 30 units in a nine-story building. The two-story units comprise concrete balconies, and the unit owners share a common lobby, elevators, hallways, parking garage and parking lot.

**Pembroke North Homeowners Association** - Located in Wayne, Pennsylvania, this development contains 54 units in three LEED buildings. The building exteriors comprise flat membrane roofs, masonry siding and elevated garden plazas. The development contains a parking structure, asphalt pavement, finished interior lobbies and hallways, and a geothermal system.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Ms. Christensen attended the Milwaukee School of Engineering in Milwaukee (MSOE), Wisconsin where she attained her Master of Science degree in Structural Engineering and her Bachelor of Science degree in Architectural Engineering. She also worked for Computerized Structural Design, Inc. and Pierce Engineers where she worked on structural design projects for steel and concrete structures. Heather's involvement with Engineers Without Borders includes the design and construction of bridges and schools in Guatemala, where she serves as a structural engineering mentor to the MSOE student chapter.

**EDUCATION**

Milwaukee School of Engineering - M.S. Structural Engineering  
Milwaukee School of Engineering - B.S. Architectural Engineering

**PROFESSIONAL AFFILIATIONS**

*Engineers Without Borders (EWB)* - Professional Mentor  
*Reserve Specialist (RS)* - Community Associations Institute  
*American Society of Civil Engineers* - Associate Member

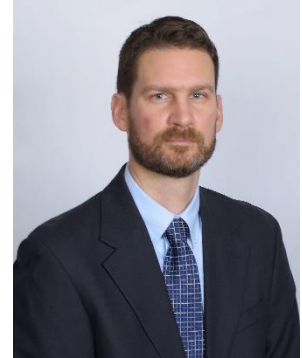


**ALAN M. EBERT, P.E., PRA, RS**  
**Director of Quality Assurance**

**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](http://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](http://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](http://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](http://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 Parkwood Village 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) Parkwood Village 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 subject property. The purpose of our energy benchmarking services is to track, collect and summarize the subject property's energy consumption over time for your use in comparison with other buildings of similar size and establishing a performance baseline for your planning of long-term energy efficiency goals.

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. Our energy benchmarking services with respect to the subject property is limited to collecting energy and utility data and summarizing such data in the form of an Energy Star Portfolio Manager Report or any other similar report, and hereby expressly excludes any recommendations with respect to the results of such energy benchmarking services or the accuracy of the energy information obtained from utility companies and other third-party sources with respect to the subject property. The reserve report and any energy benchmarking report (i.e., any Energy Star Portfolio Manager Report) (including any subsequent revisions thereto pursuant to the terms hereof, collectively, the "Report") are 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, occupancy or otherwise.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the Report. RA does not provide invasive testing on any mechanical systems that provide energy to the property, nor can RA opine on any system components that are not easily accessible during the inspection. 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. 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 or to whom you provided the Report. 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 will complete the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations with respect to the reserve study 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. RA reserves the right to, and you acknowledge and agree that RA may, use any data provided by you in connection with the services, or gathered as a result of providing such services, including in connection with creating and issuing any Report, in a de-identified and aggregated form for RA's business purposes.

**Your Obligations** - You agree to provide us access to the subject property for an 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. Additionally, you agree to provide historical replacement schedules, utility bills and historical energy usage files that RA requests and deems necessary to complete the energy benchmarking services, and you agree to provide any utility release(s) reasonably requested by RA permitting RA to obtain any such data and/or information from any utility representative or other third party. 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 including, but not limited to, any government entity or agency, or any utility companies. 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** - If reserve study and energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and prior to the inspection by RA, and any balance is due net 30 days from the Report shipment date. If only energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and any balance is due net 30 days from the Report shipment date. In any case, 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. We reserve the right to limit or decline refunds in our sole discretion. Refunds vary based on the applicable facts and circumstances.

**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.