

# Avalon at Seven Meadows Community Association, Inc.

Katy, TX • February 22, 2023

FULL RESERVE STUDY





Avalon at Seven Meadows Community Association, Inc.  
Katy, Texas

Dear Board of Directors of Avalon at Seven Meadows Community Association, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Avalon at Seven Meadows Community Association, Inc. in Katy, Texas and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, February 22, 2023.

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

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Avalon at Seven Meadows Community Association, Inc. 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 March 15, 2023 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Mitchell D. Korn

Review by: Alan M. Ebert, RS<sup>1</sup>, 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:** Avalon at Seven Meadows Community Association, Inc. (Avalon at Seven Meadows)

**Location:** Katy, Texas

**Reference:** 060793

**Property Basics:** Avalon at Seven Meadows Community Association, Inc. is a homeowners association which is responsible for the common elements shared by 299 single family homes. The community was built in 2004.

**Reserve Components Identified:** 22 Reserve Components.

**Inspection Date:** February 22, 2023.

**Funding Goal:** The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2027 due to the sediment removal of the ponds. In addition, the Reserve Funding Plan recommends 2053 year end accumulated reserves of approximately \$1,253,500. We judge this amount of accumulated reserves in 2053 necessary to fund the likely repairs and partial replacement of the concrete streets after 2053. These future needs, although beyond the limit of the Cash Flow Analysis of this Reserve Study, are reflected in the amount of accumulated 2053 year end reserves.

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

- Current and future local costs of replacement
- 2.0% anticipated annual rate of return on invested reserves
- 3.5% future Inflation Rate for estimating Future Replacement Costs

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

**Unaudited Cash Status of Reserve Fund:**

- \$283,561 as of January 1, 2023
- 2023 budgeted Reserve Contributions of \$75,000
- A potential deficit in reserves might occur by 2027 based upon continuation of the most recent annual reserve contribution of and the identified Reserve Expenditures.

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

- Repairs and partial replacements to the concrete streets
- Sediment removal
- Inspections and capital repairs to the bulkheads
- Replacement of the steel entry gates

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

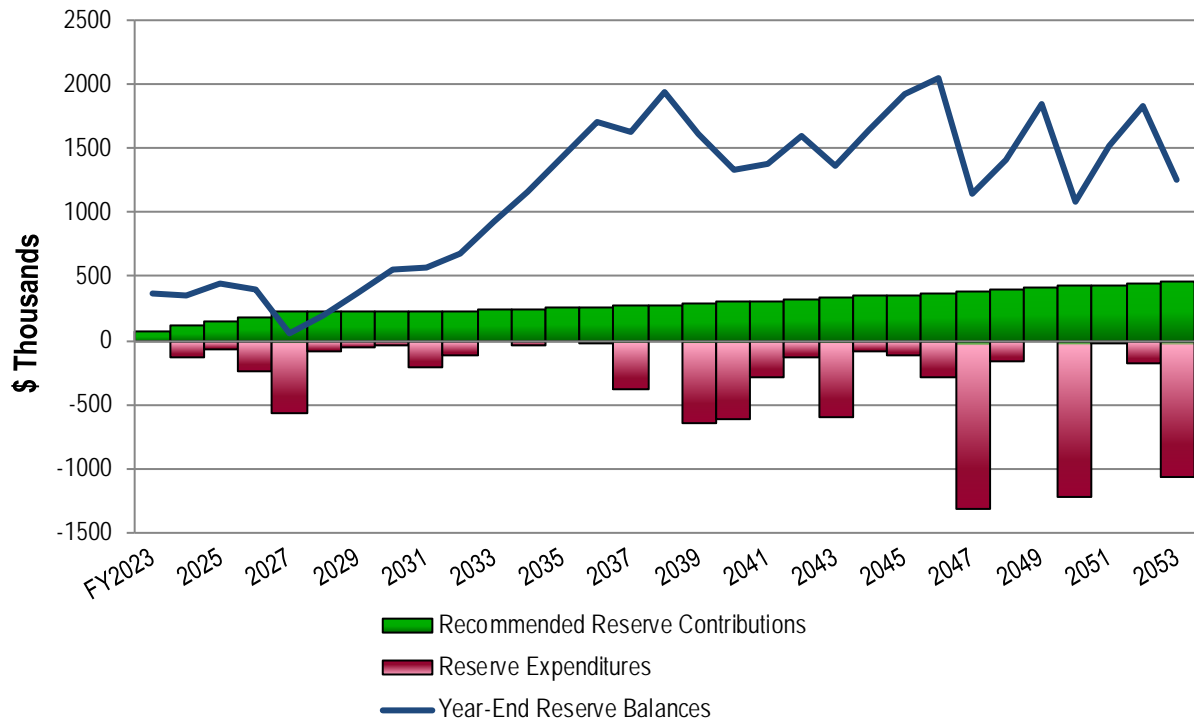
- Phased increases of \$36,000 from 2024 through 2027



- Stable contributions of \$219,000 from 2028 through 2031
- Inflationary increases thereafter through 2053, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$36,000 represents an average monthly increase of \$10.03 per homeowner and about a five percent (5.4%) adjustment in the 2023 total Operating Budget of \$671,226.

**Avalon at Seven Meadows**  
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2024	111,000	354,936	2034	242,800	1,154,477	2044	342,500	1,646,110
2025	147,000	442,451	2035	251,300	1,431,380	2045	354,500	1,919,964
2026	183,000	396,582	2036	260,100	1,707,450	2046	366,900	2,045,464
2027	219,000	60,021	2037	269,200	1,621,120	2047	379,700	1,150,285
2028	219,000	196,163	2038	278,600	1,934,928	2048	393,000	1,404,810
2029	219,000	361,682	2039	288,400	1,606,832	2049	406,800	1,843,774
2030	219,000	545,130	2040	298,500	1,327,316	2050	421,000	1,080,115
2031	219,000	561,487	2041	308,900	1,370,259	2051	435,700	1,516,210
2032	226,700	681,100	2042	319,700	1,593,184	2052	450,900	1,822,265
2033	234,600	931,668	2043	330,900	1,362,379	2053	466,700	1,247,160





## 2. RESERVE STUDY REPORT

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

**Avalon at Seven Meadows Community Association, Inc.**

**Katy, Texas**

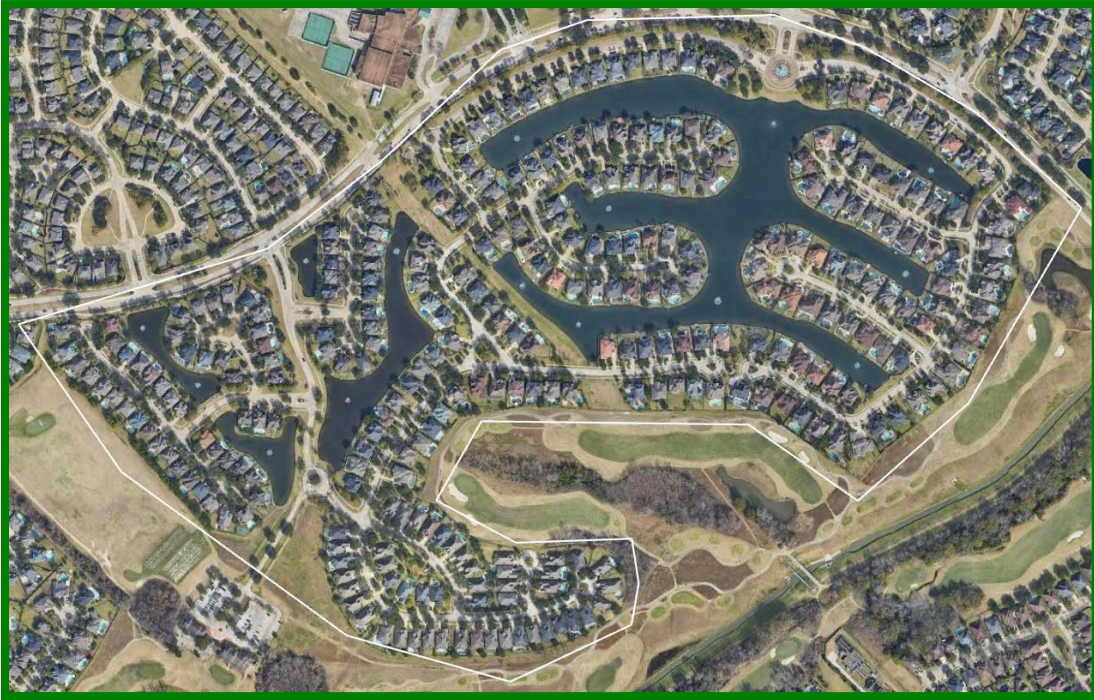
and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, February 22, 2023.

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

- **Identification of Property** - Segregates all property into several areas of responsibility for repair or replacement
- **Reserve Expenditures** - Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- **Reserve Funding Plan** - Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- **Five-Year Outlook** - Identifies reserve components and anticipated reserve expenditures during the first five years
- **Reserve Component Detail** - Describes the reserve components, includes photographic documentation of the condition of various property elements, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Methodology** - Lists the national standards, methods and procedures used to develop the Reserve Study
- **Definitions** - Contains definitions of terms used in the Reserve Study, consistent with national standards
- **Professional Service Conditions** - Describes Assumptions and Professional Service Conditions
- **Credentials and Resources**



## IDENTIFICATION OF PROPERTY



Our investigation includes Reserve Components or property elements as set forth in your Declaration. The Expenditure tables in Section 3 list the elements contained in this study. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement.

Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or Homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management and the Board. These classes of property include:

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

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

- Avalon at Seven Meadows responsibility

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

**Long-Lived Property Elements** – These elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the 30-year scope of the study. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan. We identify the following Long-Lived Property Elements as excluded from the 30-year Reserve Expenditures at this time.

- Electrical Systems, Common
- Pipes, Subsurface Utilities

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

- General Maintenance to the Common Elements
- Expenditures less than \$6,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Catch Basins, Landscape
- Fountain, Interim Maintenance
- Gravel Path, Replenishment
- Irrigation System, Controls and Maintenance
- Landscape
- Pavilion, Mailbox Station
- Paint Finishes, Touch Up
- Signage
- Other Repairs normally funded through the Operating Budget



**Gravel path**



**Mailbox station pavilion**



**Homeowners' Responsibility** - Items designated as the responsibility of the homeowners to repair or replace at their cost. Property Maintained by Homeowners, including items billed back to Homeowners, relates to:

- Homes and Lots
- Fences, at Lots
- Retaining Walls, at Lots

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

- Light Poles and Fixtures (Utility Provider)



### **3. RESERVE EXPENDITURES and FUNDING PLAN**

The tables following this introduction present:

#### **Reserve Expenditures**

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

#### **Reserve Funding Plan**

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

#### **Five-Year Outlook**

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

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

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

### RESERVE EXPENDITURES

Avalon at Seven Meadows  
Community Association, Inc.  
Katy, Texas

**Explanatory Notes:**

- 1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) FY2023 is Fiscal Year beginning January 1, 2023 and ending December 31, 2023.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038				
						Useful	Remaining	Unit (2023)	Per Phase (2023)	Total (2023)																					
4.100	87	87	Each	Catch Basins, Inspections and Capital Repairs	2031	15 to 20	8	650.00	56,550	56,550	2.5%																			74,466	
4.140	16,700	840	Square Feet	Concrete Sidewalks, Partial	2026	to 65	3 to 30+	11.50	9,660	192,050	1.2%				10,710																15,108
4.180	480,000	7,680	Square Feet	Concrete Streets, Partial (2024-2034)	2024	to 65	1 to 30+	12.50	96,000	6,000,000	2.6%		99,360																		126,414
4.181	480,000	19,200	Square Feet	Concrete Streets, Partial (2035 - 2045)	2037	to 65	14 to 30+	12.50	240,000	6,000,000	10.0%																				388,487
4.182	480,000	28,800	Square Feet	Concrete Streets, Partial (2046 - 2053)	2047	to 65	24 to 30+	12.50	360,000	6,000,000	31.6%																				
4.240	2,000	2,000	Linear Feet	Fence, Steel, Paint Finishes	2025	6 to 8	2	11.00	22,000	22,000	1.9%			23,567																	29,984
4.245	2,000	2,000	Linear Feet	Fence, Steel, Replacement	2039	to 35	16	51.00	102,000	102,000	2.0%																				
4.299	1	1	Allowance	Fountain	2030	8 to 12	7	35,000.00	35,000	35,000	2.3%										44,530										
4.310	5	5	Panels	Gate Entry System	2025	10 to 15	2	5,900.00	29,500	29,500	1.0%			31,601																	
4.320	16	16	Each	Gate Operators	2032	to 10	9	4,100.00	65,600	65,600	4.5%																				89,406
4.330	16	16	Each	Gates	2027	to 20	4	6,700.00	107,200	107,200	4.2%					123,014															
4.420	215,000	43,000	Square Feet	Irrigation System, Phased	2044	to 40+	21 to 25	1.00	43,000	215,000	5.5%																				
4.600	24	24	Each	Mailbox Stations	2029	to 25	6	2,000.00	48,000	48,000	0.7%										59,004										
4.620	11,680	11,680	Square Feet	Pavers, Masonry, Resetting and Partial Replacements	2026	15 to 20	3	4.50	52,560	52,560	2.0%					58,274															
4.640	4,640	4,640	Linear Feet	Perimeter Walls, Panelized Masonry, Inspections and Capital Repairs	2024	8 to 12	1	6.00	27,840	27,840	1.6%		28,814																		40,646
4.641	4,640	2,320	Linear Feet	Perimeter Walls, Panelized Masonry, Replacement, Phased	2039	30 to 35	16 to 17	118.00	273,760	547,520	11.1%																				
4.660	1	1	Allowance	Playground Equipment	2027	15 to 20	4	62,000.00	62,000	62,000	2.5%					71,146															
4.700	15	8	Each	Ponds, Aerators, Phased	2026	10 to 15	3 to 5	7,600.00	57,000	114,000	3.9%				67,410																54,158
4.730	132,850	19,930	Square Yards	Ponds, Sediment Removal, Partial	2027	to 30	4	16.00	318,880	2,125,600	4.2%					365,922															
4.740	15,150	15,150	Square Feet	Retaining Wall, Bulkheads, Inspection and Capital Repairs	2026	10 to 15	3	6.00	90,900	90,900	3.1%					100,782															
4.800	1	1	Allowance	Signage, Renovation	2028	15 to 20	5	26,300.00	26,300	26,300	1.1%																				31,236
4.820	1	1	Allowance	Site Furniture	2025	15 to 25	2	11,400.00	11,400	11,400	0.4%			12,212																	

Anticipated Expenditures, By Year (\$8,671,828 over 30 years)

0	128,174	67,380	237,176	560,082	85,394	59,004	44,530	213,600	119,390	0	40,646	0	15,108	388,487	0
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## RESERVE EXPENDITURES

**Avalon at Seven Meadows  
Community Association, Inc.**  
Katy, Texas

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053	
						Useful	Remaining	Unit (2023)	Per Phase (2023)	Total (2023)																	
4.100	87	87	Each	Catch Basins, Inspections and Capital Repairs	2031	15 to 20	8	650.00	56,550	56,550	2.5%																143,160
4.140	16,700	840	Square Feet	Concrete Sidewalks, Partial	2026	to 65	3 to 30+	11.50	9,660	192,050	1.2%			17,943				21,311									25,311
4.180	480,000	7,680	Square Feet	Concrete Streets, Partial (2024-2034)	2024	to 65	1 to 30+	12.50	96,000	6,000,000	2.6%																
4.181	480,000	19,200	Square Feet	Concrete Streets, Partial (2035 - 2045)	2037	to 65	14 to 30+	12.50	240,000	6,000,000	10.0%				477,550												
4.182	480,000	28,800	Square Feet	Concrete Streets, Partial (2046 - 2053)	2047	to 65	24 to 30+	12.50	360,000	6,000,000	31.6%							821,999					911,364				1,010,446
4.240	2,000	2,000	Linear Feet	Fence, Steel, Paint Finishes	2025	6 to 8	2	11.00	22,000	22,000	1.9%								48,535								61,749
4.245	2,000	2,000	Linear Feet	Fence, Steel, Replacement	2039	to 35	16	51.00	102,000	102,000	2.0%	176,867															
4.299	1	1	Allowance	Fountain	2030	8 to 12	7	35,000.00	35,000	35,000	2.3%		62,814														88,605
4.310	5	5	Panels	Gate Entry System	2025	10 to 15	2	5,900.00	29,500	29,500	1.0%		52,943														
4.320	16	16	Each	Gate Operators	2032	to 10	9	4,100.00	65,600	65,600	4.5%				126,116												177,899
4.330	16	16	Each	Gates	2027	to 20	4	6,700.00	107,200	107,200	4.2%								244,773								
4.420	215,000	43,000	Square Feet	Irrigation System, Phased	2044	to 40+	21 to 25	1.00	43,000	215,000	5.5%						88,556	91,655	94,863	98,183	101,620						
4.600	24	24	Each	Mailbox Stations	2029	to 25	6	2,000.00	48,000	48,000	0.7%																
4.620	11,680	11,680	Square Feet	Pavers, Masonry, Resetting and Partial Replacements	2026	15 to 20	3	4.50	52,560	52,560	2.0%								115,953								
4.640	4,640	4,640	Linear Feet	Perimeter Walls, Panelized Masonry, Inspections and Capital Repairs	2024	8 to 12	1	6.00	27,840	27,840	1.6%																70,479
4.641	4,640	2,320	Linear Feet	Perimeter Walls, Panelized Masonry, Replacement, Phased	2039	30 to 35	16 to 17	118.00	273,760	547,520	11.1%	474,696	491,310														
4.660	1	1	Allowance	Playground Equipment	2027	15 to 20	4	62,000.00	62,000	62,000	2.5%								141,566								
4.700	15	8	Each	Ponds, Aerators, Phased	2026	10 to 15	3 to 5	7,600.00	57,000	114,000	3.9%				105,877	113,418											
4.730	132,850	19,930	Square Yards	Ponds, Sediment Removal, Partial	2027	to 30	4	16.00	318,880	2,125,600	4.2%																
4.740	15,150	15,150	Square Feet	Retaining Wall, Bulkheads, Inspection and Capital Repairs	2026	10 to 15	3	6.00	90,900	90,900	3.1%				168,846												
4.800	1	1	Allowance	Signage, Renovation	2028	15 to 20	5	26,300.00	26,300	26,300	1.1%										62,153						
4.820	1	1	Allowance	Site Furniture	2025	15 to 25	2	11,400.00	11,400	11,400	0.4%							24,299									
<b>Anticipated Expenditures, By Year (\$8,671,828 over 30 years)</b>												651,563	607,067	292,666	126,116	590,968	88,556	115,954	280,662	1,306,521	163,773	0	1,213,608	25,311	177,899	1,072,195	



## RESERVE FUNDING PLAN

**CASH FLOW ANALYSIS  
Avalon at Seven Meadows  
Community Association, Inc.**

		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
Katy, Texas		FY2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Reserves at Beginning of Year	(Note 1)	283,561	364,982	354,936	442,451	396,582	60,021	196,163	361,682	545,130	561,487	681,100	931,668	1,154,477	1,431,380	1,707,450	1,621,120
Total Recommended Reserve Contributions	(Note 2)	75,000	111,000	147,000	183,000	219,000	219,000	219,000	219,000	219,000	226,700	234,600	242,800	251,300	260,100	269,200	278,600
Estimated Interest Earned, During Year	(Note 3)	6,421	7,128	7,895	8,307	4,521	2,536	5,523	8,978	10,957	12,303	15,968	20,655	25,603	31,078	32,956	35,208
Anticipated Expenditures, By Year		0	(128,174)	(67,380)	(237,176)	(560,082)	(85,394)	(59,004)	(44,530)	(213,600)	(119,390)	0	(40,646)	0	(15,108)	(388,487)	0
Anticipated Reserves at Year End		<u>\$364,982</u>	<u>\$354,936</u>	<u>\$442,451</u>	<u>\$396,582</u>	<u>\$60,021</u>	<u>\$196,163</u>	<u>\$361,682</u>	<u>\$545,130</u>	<u>\$561,487</u>	<u>\$681,100</u>	<u>\$931,668</u>	<u>\$1,154,477</u>	<u>\$1,431,380</u>	<u>\$1,707,450</u>	<u>\$1,621,120</u>	<u>\$1,934,928</u>

(NOTE 5)

(continued)

		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued														
		2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Reserves at Beginning of Year		1,934,928	1,606,832	1,327,316	1,370,259	1,593,184	1,362,379	1,646,110	1,919,964	2,045,464	1,150,285	1,404,810	1,843,774	1,080,115	1,516,210	1,822,265
Total Recommended Reserve Contributions		288,400	298,500	308,900	319,700	330,900	342,500	354,500	366,900	379,700	393,000	406,800	421,000	435,700	450,900	466,700
Estimated Interest Earned, During Year		35,067	29,051	26,709	29,341	29,263	29,787	35,308	39,262	31,641	25,298	32,164	28,949	25,706	33,054	30,390
Anticipated Expenditures, By Year		(651,563)	(607,067)	(292,666)	(126,116)	(590,968)	(88,556)	(115,954)	(280,662)	(1,306,521)	(163,773)	0	(1,213,608)	(25,311)	(177,899)	(1,072,195)
Anticipated Reserves at Year End		<u>\$1,606,832</u>	<u>\$1,327,316</u>	<u>\$1,370,259</u>	<u>\$1,593,184</u>	<u>\$1,362,379</u>	<u>\$1,646,110</u>	<u>\$1,919,964</u>	<u>\$2,045,464</u>	<u>\$1,150,285</u>	<u>\$1,404,810</u>	<u>\$1,843,774</u>	<u>\$1,080,115</u>	<u>\$1,516,210</u>	<u>\$1,822,265</u>	<u>\$1,247,160</u>

(NOTE 4)

**Explanatory Notes:**

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

## RESERVE EXPENDITURES

**Avalon at Seven Meadows  
Community Association, Inc.**  
Katy, Texas

Line Item	Reserve Component Inventory	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028
4.140	Concrete Sidewalks, Partial				10,710		
4.180	Concrete Streets, Partial (2024-2034)		99,360				
4.240	Fence, Steel, Paint Finishes			23,567			
4.310	Gate Entry System			31,601			
4.330	Gates					123,014	
4.620	Pavers, Masonry, Resetting and Partial Replacements				58,274		
4.640	Perimeter Walls, Panelized Masonry, Inspections and Capital Repairs		28,814				
4.660	Playground Equipment					71,146	
4.700	Ponds, Aerators, Phased				67,410		54,158
4.730	Ponds, Sediment Removal, Partial					365,922	
4.740	Retaining Wall, Bulkheads, Inspection and Capital Repairs				100,782		
4.800	Signage, Renovation						31,236
4.820	Site Furniture			12,212			
<b>Anticipated Expenditures, By Year (\$8,671,828 over 30 years)</b>		0	128,174	67,380	237,176	560,082	85,394

## 4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Full Reserve Study* includes enhanced solutions and procedures for select significant components. This section describes the Reserve Components, documents specific problems and condition assessments, and may include detailed solutions and procedures for necessary capital repairs and replacements for the benefit of current and future board members. We advise the Board use this information to help define the scope and procedures for repair or replacement when soliciting bids or proposals from contractors. *However, the Report in whole or part is not and should not be used as a design specification or design engineering service.*

### Catch Basins

---

**Line Item:** 4.100

**Quantity:** 87 catch basins<sup>1</sup>

**History:** Original; the Association note they have performed some repairs in recent years. We are informed of previous street drainage issues..=

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



Catch basin



Concrete deterioration at Lakes West

<sup>1</sup> We utilize the terminology catch basin to refer to all storm water collection structures including curb inlets.



**Catch basins**

**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 concrete street repairs.

## Concrete Sidewalks

---

**Line Item:** 4.140

**Quantity:** Approximately 16,700 square feet at the common areas

**History and Condition:** Good to fair overall with isolated cracks and trip hazards evident. Sidewalks closer to the lakes have shown accelerated deterioration.





**Sidewalk cracks**



**Sidewalk cracks at the villas**



**Sidewalk cracks at the Villas**



**Sidewalk cracks at the Villas**



**Sidewalk trip hazard**



**Sidewalk trip hazard**

**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 5,040 square feet of concrete sidewalks, or thirty percent (30.2%) of the total, will require replacement during the next 30 years.

## Concrete Streets

---

**Line Item:** 4.180 through 4.182

**Quantity:** Approximately 480,000 square feet

**History and Condition:** Fair overall with periodic cracks, settlement, spalled concrete and deterioration evident. We note accelerated deterioration at the Villas. We recommend prioritizing this area in the near term repair project



**Street cracks at the Lakes**



**Street deterioration at the Lakes**





**Centerline cracking at Lakes West**



**Street cracks at the Manors**



**Street cracks at the Manors**



**Concrete curb spalling at the Manors**



**Street spalls at the Manors**



**Centerline cracking at the Lakes**





**Street spalls at the Manors**



**Street deterioration at the Villas**



**Street spalls at the Villas**



**Street deterioration at the Villas**



**Street spalls at the Villas**



**Street spalls at the Villas**





**Street spalls at the Villas**



**Street spalls at the Villas**



**Concrete curb cracks at the Villas**



**Street cracks at the Lakes**



**Street spalls at the Villas**



**concrete curb cracks at the Villas**





**Street spalls at the Estates**



**Street cracks at the Estates**



**Street cracks at the Estates**



**Street cracks at the Estates**



**Street spalls at the Lakes**



**Street cracks at the Lakes**





**Street cracks at Lakes West**



**Street cracks at Lakes West**

**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 failed or deteriorated joint sealant as needed
  - Inspect and repair major cracks, spalls and trip hazards
  - Mark with orange safety paint prior to replacement or repair

**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 147,200 square feet of concrete streets, or thirty percent (30%) of the total, will require replacement during the next 30 years. As concrete ages, it is common to experience an increased rate of deterioration. Therefore, we recommend the Association budget for an increase rate of replacement over the next thirty years. However, the near term expenditure in 2024 may be higher than what condition warrants. The Association should fully evaluate the pavement ahead of the first community wide repair project to more closely define this project. Updates of this Reserve Study would consider possible changes in the anticipated rates of replacement. The following table provides an example of this method:

Years	% of Streets Replaced, Per Phase	Approximate % of Streets Replaced, Overall
Through 2034	1.60%	3.20%
2035 - 2045	4.00%	8.00%
2046 - 2053	6.00%	18.00%

## Fence, Steel

---

**Line Items:** 4.240 and 4.245

**Quantity:** Approximately 2,000 linear feet at the perimeter facing South Fry Road

**History:**

- Fence: Original
- Paint finishes: Varied ages. The Association notes they have painted the fences periodically over time.

**Condition:** The fence is in good to fair overall condition and the protective finishes are in fair overall condition



Fence finish deterioration at the lakes



Fence finish deterioration



Steel fence at the lakes



Fence rust





**Fence finish deterioration at the manors**



**Fence rust at the manors**



**Fence rust at the manors**



**Fence finish deterioration at the villas**

**Useful Life:** Six- to eight-years for paint finishes and up to 35 years for replacement

**Component Detail Notes:** Steel components at grade and key structural connections are especially prone to failure if not thoroughly maintained. Secure and rust free fasteners and connections will prevent premature deterioration. Preparation of the steel before application of the paint finish is critical to maximize the useful life of the finish.

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

- Annually:
  - Inspect and repair loose fasteners or 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.

## Fountain

---

**Line Item:** 4.299

**History:** Original

**Condition:** Good to fair overall with isolated paint finish deterioration evident



**Main entrance fountain**



**Paint finish deterioration**

**Useful Life:** Every 8- to 12-years

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

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

- Inspections and capital repairs to the masonry
- Partial replacement of the mechanical equipment
- Replacement of plaster and partial replacement of the tile

## Gate Entry System

---

**Line Item:** 4.310

**Quantity:** Five panels

**History:** Original

**Condition:** Reported in good to fair overall condition





**Gate entry callbox**

**Useful Life:** 10- to 15-years

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

- Monthly:
  - Inspect panel for damage and ensure the panel is mounted securely, tighten or replace any loose or damaged fasteners.
  - Inspect panel for proper operation of buttons, displays, microphone and speaker.
- Annually:
  - Check power connections, and if applicable, functionality of battery power supply systems

**Priority/Criticality:** Per Board discretion

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

## **Gates and Operators**

---

**Line Items:** 4.320 and 4.330

**Quantity:** 16 steel gates and 16 operators

**History:**

- Gates: Original
- Operators: Installed in 2022.

**Condition:**

- Gates: good to fair overall condition

- Operators: Reported in good overall condition



**Gate operator at the villas**



**Steel gates at the villas**



**Steel gates at the villas**



**Steel gate at the manors**

**Useful Life:** Up to 10 years for the operators and up to 20 years for the gates

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

- Semi-annually:
  - Ensure gates operate freely
  - Inspect for any wear, rust and loose fasteners
  - Inspect and correct tension in belts and chains, and lubricate hinges and chains as necessary
  - Check alignment of pulleys
  - Check for no oil leakage at the gear box
  - Check the control board for water damage. Clean and remove insects and other pests as needed.



- Check all wiring for insulation damage and loose connections. If applicable, check functionality of battery power supply systems

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

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

## **Irrigation System**

---

**Line Item:** 4.420

**Quantity:** Approximately 215,000 square feet at the common areas

**History:** Original

**Condition:** Satisfactory operational condition and Management and the Board do not report any deficiencies

**Useful Life:** Up to and sometimes beyond 40 years

**Component Detail Notes:** Irrigation systems typically include the following components:

- Electronic controls (timer)
- Impact rotors
- Network of supply pipes
- Pop-up heads
- Valves

Avalon at Seven Meadows should anticipate interim and partial replacements of the system network supply pipes and other components as normal maintenance to maximize the useful life of the irrigation system. The Association should fund these ongoing seasonal repairs through the operating budget.

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

- Semi-annually:
  - Conduct seasonal repairs which includes valve repairs, controller repairs, partial head replacements and pipe repairs
  - Blow out irrigation water lines and drain building exterior faucets each fall 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. We depict replacement in a phased manner.

## Mailbox Stations

---

**Line Item:** 4.600

**Quantity:** Approximately 24 stations located throughout the community

**History:** Original

**Condition:** Good to fair overall



**Mailbox stations**



**Mailbox station**

**Useful Life:** Up to 25 years

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

- As-needed:
  - Inspect and repair damage, vandalism, and finish deterioration
  - Verify posts are anchored properly

**Priority/Criticality:** Per Board discretion

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

## Pavers, Masonry

---

**Line Item:** 4.620

**Quantity:** Approximately 11,680 square feet at each of the gated entryways

**History:** Original

**Condition:** Good to fair overall with spalled masonry evident.





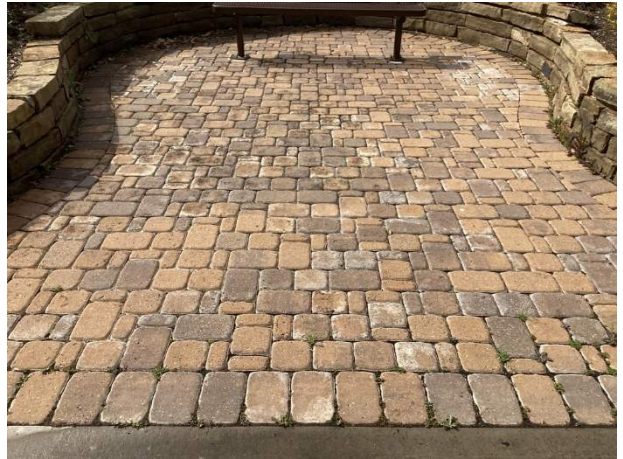
**Pavers overview at the lakes**



**Pavers overview at main entrance**



**Paver spalls**

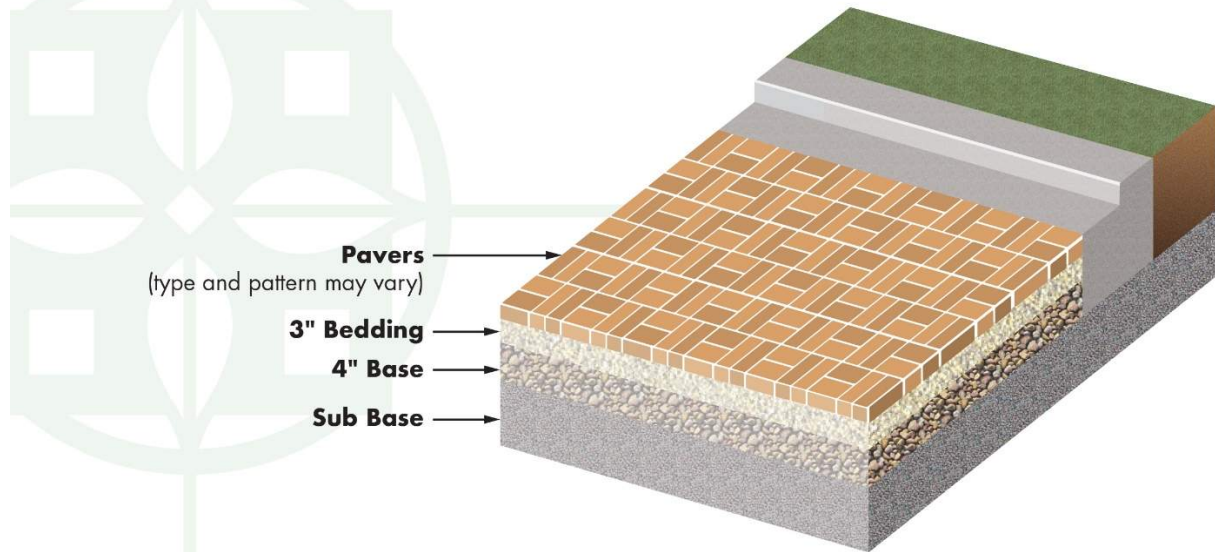


**Pavers overview**

***Useful Life:*** 15- to 20-years

***Component Detail Notes:*** The following diagram depicts the typical components of a masonry paver system although it may not reflect the actual configuration at Avalon at Seven Meadows:

## MASONRY PAVER DIAGRAM



© Reserve Advisors

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

- Annually:
  - Inspect and repair settlement, trip hazards and paver spalls at heavy traffic areas
  - Re-set and/or reseal damaged pavers as necessary
  - Periodically clean and remove overgrown vegetation as needed

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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes complete resetting of the pavers with replacement of up to ten percent (10%). We suggest the Association conduct interim resetting and replacement of minor areas of pavers as normal maintenance, funded from the operating budget.

### Perimeter Walls, Panelized Masonry

**Line Item:** 4.640 and 4.641

**Quantity:** Approximately 22,440 square feet of surface area and approximately 4,640 linear feet at the perimeters facing South Fry Road and Meadowbrook Farms Club Drive

**History:** Original



**Condition:** Fair overall with periodic masonry cracks, mortar cracks, spalled brick and support wire deterioration evident. We note accelerated deterioration at the 2ft perimeter wall columns below the steel fences. We recommend near term repairs to reduce the risk for collapse.



**Panelized masonry perimeter wall overview**



**Panelized masonry perimeter wall under fencing**



**Wall exposed support wire at the manors**



**Wall exposed support wire at the manors**





**Dislodged masonry at the manors**



**Wall exposed support wire**



**Wall damage**



**Wall deterioration**



**Wall displacement**



**Wall cracks at the manors**





**Wall cracks at the manors**



**Wall cracks at the manors**



**Wall cracks at the manors**



**Panelized masonry perimeter wall overview at the manors**

**Useful Life:** Every 8- to 12-years for inspections and capital repairs and every 30 to 35 years for replacement

**Component Detail Notes:** These walls comprise brick masonry panels with a thickness of one brick and do not utilize a foundation for support. Rather, the panels are supported internally with ladder wire and externally by traditional masonry columns. These types of walls are prone to damage primarily as a result of water infiltration due to precipitation or errant spray from irrigation systems. Water infiltration within the panels or columns results in deterioration of the internal metal support wire. Sag, cracks, spalls and mortar deterioration are evidence of water infiltration and the likely need to replace the panels. Therefore, we anticipate a significantly shorter useful life when compared to typical brick masonry walls.

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

- As-needed:

- Inspect for significant damage or spalling, numerous locations of mortar deterioration and excessive efflorescence. If these conditions exist, perform near term repairs and remediation, utilizing reserve funds if project scope warrants.
- Ensure irrigation heads are directed away from the walls and tree roots do not undermine the support columns

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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost estimate is for complete inspection and replacement of up to five percent (5%) of the masonry. We depict replacement in a phased manner.

## **Playground Equipment**

---

**Line Item:** 4.660

**Quantity:** Playground equipment includes the following elements:

- Playsets and swings
- Wood surface
- Site furniture including a trash receptacle and benches

**History:** Original

**Condition:** Good to fair overall



**Playground equipment overview**



**Playground equipment**





**Site furniture at playground**

**Useful Life:** 15- to 20-years

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

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

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

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

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

## **Ponds, Aerators**

---

**Line Item:** 4.700

**Quantity:** 15 aerators

**History:** Original; the Association notes they replaced one aerator in 2022

**Condition:** Reported satisfactory without operational deficiencies



**Pond aerator**

**Useful Life:** 10- to 15-years

**Component Detail Notes:** The use of small pumps, motors and aerators circulates pond water and increases the amount of entrained oxygen in the water, increasing water quality and reducing algae growths.

**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 near term projects are to replace the remaining 14 aerators.

## **Ponds, Sediment Removal**

---

**Line Item:** 4.730

**Quantity:** Approximately 132,850 square yards of water surface area

**History:** Original

**Condition:** Fair overall; the Association notes they are currently concerned with the level of the ponds.





**Pond overview at the villas**



**Pond overview at lakes west**



**Lake overview**



**Pond overview**



**Pond overview**

**Useful Life:** Based on the visual condition, construction, adjacent deciduous trees and visibly apparent erosion, we recommend the Association anticipate the need to remove pond sediment up to every 30 years.

**Component Detail Notes:** The gradual build-up of natural debris, including tree leaves, branches and silt, may eventually change the topography of areas of the pond. Silt typically accumulates at inlets, outlets and areas of shoreline erosion. Sediment removal of ponds becomes necessary if this accumulation alters the quality of pond water or the functionality of the ponds as storm water management structures. Sediment removal is the optimal but also the most capital intensive method of pond management. Excavation equipment used for sediment removal includes clamshells, draglines and suction pipe lines. Sediment removal can also include shoreline regrading. Regrading includes removal of collapsed and eroded soil, and redefining the shoreline.

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

- Annually:
  - Inspect and remediate shoreline erosion and areas of sediment accumulation
  - Clear and remove debris and vegetation overgrowth at pond edges, and inlet and outlet structures
  - Inspect for algae blooms and remedy as needed through a chemical treatment program or aeration

**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. For reserve budgeting purposes, we estimate the need to remove an average depth of one yard from approximately fifteen percent (15%) of the surface area. However, the actual volume of material to remove may vary dependent upon an invasive analysis at the time of removal. A visual inspection of a body of water cannot reveal the amount of accumulated silt. This is especially true on larger bodies of water. It is therefore inaccurate to assume an entire body of water will require sediment removal. It is more cost effective to spot remove in areas of intense silt accumulation as noted through bathymetric surveys. The amount or depth of silt is determined through prodding into the silt until a relatively solid base is found or through bathymetric surveys. A bathymetric survey establishes a base of data about the depth of the body of water over many locations against which the data of future surveys is compared. These invasive procedures are beyond the scope of a Reserve Study and require multiple visits to the site. We recommend Avalon at Seven Meadows contract with a local engineer for periodic bathymetric surveys. Future updates of the Reserve Study can incorporate future anticipated expenditures based on the results of the bathymetric surveys.

Unit costs per cubic yard to remove can vary significantly based on the type of equipment used, quantity of removed material and disposal of removed material. Sediment removal costs must also include mobilization, or getting the equipment to and from the site. Also, the portion of the overall cost to remove associated with mobilization varies based on the volume removed. Costs for sediment disposal also vary depending on the site. Compact sites will require hauling and in some cases disposal fees.



## Retaining Wall, Masonry

---

**Line Item:** 4.740

**Quantity:** Approximately 15,150 square feet along the shoreline of the lakes at the common areas

**History:** Original

**Condition:** Good to fair overall with isolated wall displacement evident.



**Bulkhead at the pond near the lakes**



**Wall displacement at lakes west**



**Masonry retaining wall**



**Masonry displacement at the villas**



**Bulkhead overview**



**Masonry displacement at bulkhead**

**Useful Life:** Masonry retaining walls have indeterminate useful lives. However, we recommend the Association plan for inspections and capital repairs every 10- to 15-years to forestall deterioration.

**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 an inspection, partial resetting and replacement of up to ten percent (10%). Updates of this Reserve Study will continue to monitor the rate of deterioration and incorporate any available inspection reports.

## Signage

---

**Line Item:** 4.800

**Quantity:** The property identification signage includes the following elements:

- Light Fixtures
- Masonry

**History:** Original

**Condition:** Good overall





**Entrance monument at the lakes**



**Entrance monument at the villas**



**Entrance monument at the manors**



**Entrance monument**



**Masonry cracked at front entrance planters**



**Entrance monument at the estates**

**Useful Life:** 8- to 12-years

**Component Detail Notes:** Community signage contributes to the overall aesthetic appearance of the property to owners and potential buyers. Renovation or replacement



of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for replacement or renovation are discretionary.

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

- Annually:
  - Inspect and repair damage, vandalism and loose components
  - Verify lighting is working properly
  - Touch-up paint finish applications if applicable

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for renovation includes repairs to the masonry and replacement of the remaining components listed above.

## Site Furniture

---

**Line Item:** 4.820

**Quantity:**

- Benches (8)
- Picnic table (1)
- Trash receptacles (4)
- Dog waste stations (4)

**History:** Original

**Condition:** Good to fair overall



**Dog water station**



**Bench at lakes west**





**Picnic table**

**Useful Life:** 15- 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.

## **Reserve Study Update**

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

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

Periodic updates incorporate these variable changes since the last Reserve Study or Update. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.

## 5.METHODOLOGY

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

Avalon at Seven Meadows can fund capital repairs and replacements in any combination of the following:

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

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

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

- The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan
- 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 Katy, Texas at an annual inflation rate<sup>3</sup>. Isolated or regional markets of greater

<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.



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

- The past and current maintenance practices of Avalon at Seven Meadows and their effects on remaining useful lives
- Financial information provided by the Association pertaining to the cash status of the reserve fund and budgeted reserve contribution
- The anticipated effects of appreciation of the reserves over time in accord with a return or yield on investment of your cash equivalent assets. (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).
- The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components.

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



## 6. CREDENTIALS

### HISTORY AND DEPTH OF SERVICE

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

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

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

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

### TOTAL STAFF INVOLVEMENT

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

### OUR GOAL

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

### VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

Reserve Advisors has conducted reserve studies for a multitude of different communities and building types. We've analyzed thousands of buildings, from as small as a 3,500-square foot day care center to a 2,600,000-square foot 98-story highrise. We also routinely inspect buildings with various types of mechanical systems such as simple electric heat, to complex systems with air handlers, chillers, boilers, elevators, and life safety and security systems.

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

### OLD TO NEW

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



**MITCHELL D. KORN**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Mitchell D. Korn, an associate engineer, is an advisor for Reserve Advisors. Mr. Korn is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowners associations.



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

**Hollyhock Residential Association, Inc.** This single family home community contains 648 single family homes was built in 2015 and is located in Frisco, Texas. Features of this community include an extensive amenity area which includes a swimming pool and splash pad, clubhouse with a fully equipped exercise room, multiple playgrounds, masonry retaining walls, and a panelized masonry perimeter wall.

**Post Oak Townhomes** A townhome community in San Antonio, Texas containing 28 units in six buildings. The townhomes consist of stone masonry, fiber cement siding, thermoplastic flat roofs, and asphalt shingle roofs. The features of this community include a swimming pool, a private asphalt driveway, masonry and timber retaining walls, concrete flatwork, and wood perimeter fences.

**Stonebriar Homeowners Association, Inc.** A prestigious single family home gated community built in 1989 that contains over 600 homes located in Frisco, Texas. Features of this community include extensive concrete streets and related infrastructure, masonry and panelized masonry perimeter walls, and multiple ponds.

**Bordeaux Village Homeowners Association, Inc.** A classically styled 1950's condominium development in Dallas, Texas containing 210 units in 18 buildings. The townhomes consist of stone masonry, fiber cement siding, and asphalt shingle roofs. The features of this community include wood decks with privacy fencing, a swimming pool, a clubhouse, a wood perimeter fence, and private concrete driveways with covered parking areas.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Mr. Korn completed his bachelor's degree in mechanical engineering at Iowa State University. During his summers, he worked with the lead engineer and maintenance team at a dairy production plant where he oversaw the design of new custom safety equipment for the various production lines. Following the completion of his studies, he worked as a project manager in the retail displays industry.

**EDUCATION**

Iowa State University - B.S. Mechanical Engineering

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

**CURRENT CLIENT SERVICES**

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

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



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

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

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

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

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

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

**PRIOR RELEVANT EXPERIENCE**

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

**EDUCATION**

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

**PROFESSIONAL AFFILIATIONS/DESIGNATIONS**

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

*Reserve Specialist (RS)* - Community Associations Institute

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





## RESOURCES

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

**Association of Construction Inspectors**, (ACI) the largest professional organization for those involved in construction inspection and construction project management. ACI is also the leading association providing standards, guidelines, regulations, education, training, and professional recognition in a field that has quickly become important procedure for both residential and commercial construction, found on the web at [www.iami.org](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 Avalon at Seven Meadows responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.

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

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

**Reserve Component** - Property elements with: 1) Avalon at Seven Meadows responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

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

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

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

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

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

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

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





## 8. PROFESSIONAL SERVICE CONDITIONS

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

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. The report is based upon a "snapshot in time" at the moment of inspection. RA may note visible physical defects in the Report. The inspection is made by employees generally familiar with real estate and building construction. Except to the extent readily apparent to RA, RA cannot and shall not opine on the structural integrity of or other physical defects in the property under any circumstances. Without limitation to the foregoing, RA cannot and shall not opine on, nor is RA responsible for, the property's conformity to specific governmental code requirements for fire, building, earthquake, and/or occupancy.

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

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

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



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

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

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

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

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

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