

# Atascocita Community Improvement Association

Humble, TX • September 22, 2022

RESERVE STUDY



Atascocita Community Improvement Association  
Humble, Texas

Dear Board of Directors of Atascocita Community Improvement Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Atascocita Community Improvement Association in Humble, Texas and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 22, 2022.

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 Atascocita Community Improvement 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 October 4, 2022 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Casey M. Lewis, 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>.



Long-term thinking. Everyday commitment.



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# 1. RESERVE STUDY EXECUTIVE SUMMARY

**Client:** Atascocita Community Improvement Association (Atascocita)

**Location:** Humble, Texas

**Reference:** 140499

**Property Basics:** Atascocita Community Improvement Association is a homeowners association which is responsible for the common elements shared by 2,500 single family homes. The community was built in 1975. The community contains two swimming pools, sport courts, playgrounds and a marina.

**Reserve Components Identified:** 55 Reserve Components.

**Inspection Date:** September 22, 2022. We conducted previous inspections in 2014 and 2019.

**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 does not recognize a critical year.

**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
- 0.7% 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:**

- \$273,610 as of August 31, 2022
- 2022 budgeted Reserve Contributions of \$112,900

**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:

- Repaving at the marina due to noted conditions
- Partial replacement of the concrete sidewalks and parking areas due to cracks and trip hazards
- Replacement of the playground equipment due to age and noted conditions
- Replacement of the concrete surface at the Pinehurst sport courts due to settlement and uneven playing surfaces
- Replacement or modification of the water slide at the Pinehurst pool due to the staircase being out of code



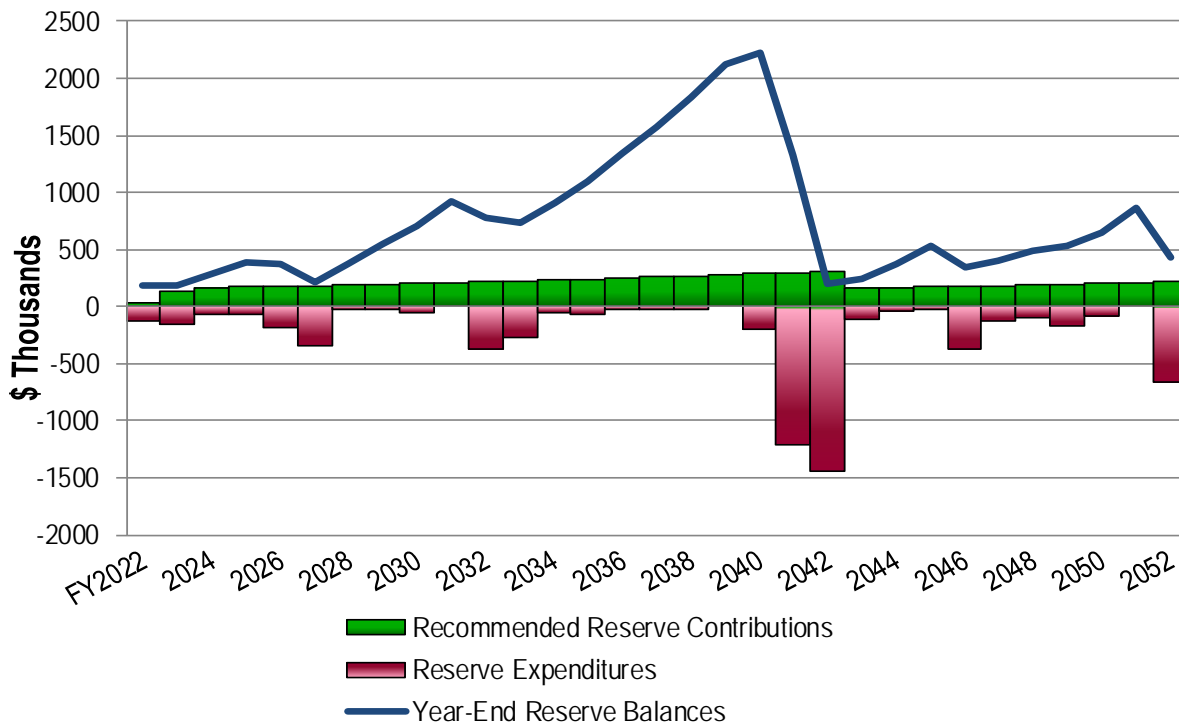
**Recommended Reserve Funding:** We recommend the following in order to achieve a stable and equitable Cash Flow Methodology Funding Plan:

- Phased increases of \$26,000 from 2023 through 2024
- Inflationary increases from 2025 through 2042
- Decrease to \$160,000 by 2043 due to fully funding for replacement of the pool structures
- Initial adjustment in Reserve Contributions of \$26,000 represents an average monthly increase of \$0.87 per homeowner and about a two percent (1.7%) adjustment in the 2022 total Operating Budget of \$1,542,203.

Our revised findings reflect both external market and internal property changes. The result is an overall increase in the recommended Reserve Funding Plan since our last Reserve Study in 2019. The overall increase relates primarily to a higher estimated future inflation rate.

**Atascocita**  
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2023	138,900	181,219	2033	224,800	728,035	2043	160,000	247,294
2024	164,900	280,108	2034	232,700	911,830	2044	165,600	377,377
2025	170,700	380,736	2035	240,800	1,097,079	2045	171,400	532,094
2026	176,700	372,443	2036	249,200	1,335,387	2046	177,400	339,209
2027	182,900	214,802	2037	257,900	1,574,957	2047	183,600	395,938
2028	189,300	376,910	2038	266,900	1,828,933	2048	190,000	493,600
2029	195,900	546,769	2039	276,200	2,118,902	2049	196,700	528,605
2030	202,800	705,782	2040	285,900	2,226,743	2050	203,600	650,376
2031	209,900	921,357	2041	295,900	1,324,853	2051	210,700	866,366
2032	217,200	773,771	2042	306,300	193,394	2052	218,100	432,671





## 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

### **Atascocita Community Improvement Association**

### **Humble, Texas**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 22, 2022. We conducted previous inspections in 2014 and 2019.

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:

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

Long-Lived Property 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.

- Concrete Boat Ramp, Total Replacement (2021)
- Electrical Systems, Common
- Foundations, Common Buildings
- Pipes, Subsurface Utilities, Common Areas
- Sport Court, Tennis, Replacement, Shores (2017)
- Structural Frames, Common Buildings

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. 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 \$5,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Asphalt Pavement, Crack Repair and Patch
- Basketball and Tennis Court Standards
- Boat Ramp, Concrete, Partial Replacements
- Catch Basins, Inspections and Capital Repairs
- Fence, Chain Link, Baseball Backstop
- Fences, Wood, Pool Mechanical Equipment
- Fences, Wood, Split Rail, Shores Parking Area
- Landscape
- Light Fixtures, Pool Houses
- Light Poles and Fixtures, Parking Areas
- Paint Finishes, Touch Up
- Pipes, Interior Building, Pool Houses
- Pool Houses, Masonry, Inspections and Repairs
- Sport Courts, Interim Tile Replacements
- Other Repairs normally funded through the Operating Budget



Certain items have been 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 unit:

- Homes and Lots

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

- Light Poles and Fixtures, Streets (Electric Company)
- Street Systems (City of Humble)

### **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
- 2022 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

Atascocita Community  
Improvement Association  
Humble, Texas

**Explanatory Notes:**

- 1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2022** is Fiscal Year beginning January 1, 2022 and ending December 31, 2022.

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 FY2022	1 2023	2 2024	3 2025	4 2026	5 2027	6 2028	7 2029	8 2030	9 2031	10 2032	11 2033	12 2034	13 2035	14 2036	15 2037
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																	
<b>Property Site Elements</b>																											
4.120	37,500	4,690	Square Feet	Concrete Parking Areas, Partial	2025	to 65	3 to 30+	12.00	56,280	450,000	6.2%			62,399												82,167	
4.140	3,500	815	Square Feet	Concrete Sidewalks, Partial	2023	to 65	1 to 30+	11.00	8,965	38,500	0.6%	9,279														13,089	
4.225	120	120	Square Feet	Dock, Fishing Pier, Wood, Shores Park	2032	15 to 25	10	55.00	6,600	6,600	0.4%										9,310						
4.360	1	1	Each	Gazebo	2028	to 25	6	9,500.00	9,500	9,500	0.2%						11,678										
4.420	55	5	Zones	Irrigation System, Phased	2025	to 40+	3 to 30+	1,800.00	9,000	99,000	1.7%			9,978					11,451					13,140		15,078	
4.500	1	1	Allowance	Landscape, FM 1960 Entrance	2023	n/a	1	10,000.00	10,000	10,000	0.2%	10,350															
4.501	1	1	Allowance	Landscape, Lake Houston Parkway	2023	n/a	1	5,000.00	5,000	5,000	0.1%	5,175															
4.502	1	1	Allowance	Landscape, Shores Pool Area	2023	n/a	1	5,000.00	5,000	5,000	0.1%	5,175															
4.660	1	1	Allowance	Playground Equipment, Pinehurst	2026	15 to 20	4	50,000.00	50,000	50,000	2.7%				57,376												
4.661	1	1	Allowance	Playground Equipment, Shores	2026	15 to 20	4	95,000.00	95,000	95,000	5.1%				109,015												
4.800	1	1	Allowance	Signage, Renovation, Entrance Monuments	2034	15 to 20	12	5,400.00	5,400	5,400	0.1%														8,160		
4.801	3	3	Each	Signage, Replacement, Entrance Monuments (Proposed)	2023	n/a	1	9,000.00	27,000	27,000	0.4%	27,945															
4.820	1	1	Allowance	Site Furniture, Playgrounds	2026	15 to 25	4	18,500.00	18,500	18,500	1.0%				21,229												
4.830	11,970	11,970	Square Feet	Sport Courts, Tennis, Color Coat, Shores	2024	4 to 6	2	1.00	11,970	11,970	1.6%		12,823					15,762							19,376		
4.840	440	440	Linear Feet	Sport Courts, Fence, Pinehurst	2027	to 25	5	36.00	15,840	15,840	1.0%					18,813											
4.841	440	440	Linear Feet	Sport Courts, Fence, Shores	2042	to 25	20	36.00	15,840	15,840	0.5%																
4.850	6	6	Each	Sport Court, Light Poles and Fixtures, Pinehurst	2027	to 35	5	3,700.00	22,200	22,200	0.4%						26,367										
4.851	6	6	Each	Sport Courts, Light Poles and Fixtures, Shores	2027	to 35	5	3,700.00	22,200	22,200	0.4%						26,367										
4.861	11,970	11,970	Square Feet	Sport Courts, Concrete Replacement, Pinehurst	2027	to 40	5	12.00	143,640	143,640	2.7%						170,599										
4.862	11,970	11,970	Square Feet	Sport Courts, Tile Surface Replacement, Pinehurst (2023 Budgeted Pickleball Conversion)	2023	10 to 15	1	6.00	71,820	71,820	3.5%	5,000					85,300										
<b>Pool Elements</b>																											
6.200	3,590	3,590	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs, Pinehurst	2032	8 to 12	10	5.50	19,745	19,745	1.3%														27,852		
6.201	4,900	4,900	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs, Shores	2032	8 to 12	10	5.50	26,950	26,950	1.8%														38,016		
6.395	750	750	Linear Feet	Fences, Steel, Paint Finishes and Capital Repairs	2027	6 to 8	5	17.00	12,750	12,750	1.0%						15,143								19,266		
6.400	750	750	Linear Feet	Fences, Steel, Replacement	2042	to 35	20	62.00	46,500	46,500	1.4%																
6.500	2	1	Allowance	Furniture, Phased	2023	to 12	1 to 7	14,000.00	14,000	28,000	1.8%	14,490							17,812						21,895		
6.600	2	1	Allowance	Mechanical Equipment, Near Term, Phased	2023	to 15	1 to 2	15,000.00	15,000	30,000	0.5%	15,525	16,068														
6.601	3	1	Allowance	Mechanical Equipment, Subsequent, Phased	2028	to 15	6 to 16	14,300.00	14,300	42,900	2.0%						17,578							20,878			
6.800	3,800	3,800	Square Feet	Pool Finishes, Plaster, Pinehurst (2023 Reaming Expense)	2022	8 to 12	0	11.50	43,700	43,700	3.2%	23,000												61,643			
6.801	330	330	Linear Feet	Pool Finishes, Tile and Coping, Pinehurst	2032	15 to 25	10	80.00	26,400	26,400	0.6%														37,240		
6.802	3,800	3,800	Square Feet	Pool Finishes, Plaster, Shores	2032	8 to 12	10	11.50	43,700	43,700	2.9%														61,643		
6.803	330	330	Linear Feet	Pool Finishes, Tile and Coping, Shores	2032	15 to 25	10	80.00	26,400	26,400	0.6%														37,240		
6.840	4	4	Each	Pool Houses, Rest Rooms, Renovations	2040	to 20	18	6,000.00	24,000	24,000	0.7%																
6.860	35	35	Squares	Roofs, Asphalt Shingle, Pool Houses	2032	15 to 20	10	380.00	13,300	13,300	0.9%														18,761		
6.865	1	1	Allowance	Security System, Access Systems (Budgeted)	2023	10 to 15	1	26,000.00	26,000	26,000	2.0%	26,910														40,663	
6.870	600	600	Square Feet	Shade Structure, Canvas, Shores	2024	5 to 10	2	10.00	6,000	6,000	0.3%			6,427													
6.871	600	600	Square Feet	Shade Structure, Canvas and Structure, Shores	2034	to 20	12	30.00	18,000	18,000	0.4%														27,199		
6.900	3,930	3,930	Square Feet	Structures and Deck, Total Replacement, Pinehurst	2041	to 60	19	140.00	550,200	550,200	16.5%																
6.901	3,930	3,930	Square Feet	Structures and Deck, Total Replacement, Shores	2042	to 60	20	140.00	550,200	550,200	17.1%																
6.980	1	1	Each	Water Slide, Replacement, Pinehurst	2023	to 20	1	29,000.00	29,000	29,000	1.4%	30,015															
6.981	1	1	Each	Water Slide, Replacement, Shores	2032	to 20	10	42,000.00	42,000	42,000	2.8%														59,245		
<b>Marina Elements</b>																											
8.040	1,410	1,410	Square Yards	Asphalt Pavement, Mill and Overlay (Budgeted)	2022	15 to 20	0	25.00	35,250	35,250	0.6%	35,250															

## RESERVE EXPENDITURES

### Atascocita Community Improvement Association Humble, 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 2038	17 2039	18 2040	19 2041	20 2042	21 2043	22 2044	23 2045	24 2046	25 2047	26 2048	27 2049	28 2050	29 2051	30 2052	
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																	
<b>Property Site Elements</b>																											
4.120	37,500	4,690	Square Feet	Concrete Parking Areas, Partial	2025	to 65	3 to 30+	12.00	56,280	450,000	6.2%				108,199												142,477
4.140	3,500	815	Square Feet	Concrete Sidewalks, Partial	2023	to 65	1 to 30+	11.00	8,965	38,500	0.6%					18,463											
4.225	120	120	Square Feet	Dock, Fishing Pier, Wood, Shores Park	2032	15 to 25	10	55.00	6,600	6,600	0.4%																18,525
4.360	1	1	Each	Gazebo	2028	to 25	6	9,500.00	9,500	9,500	0.2%																
4.420	55	5	Zones	Irrigation System, Phased	2025	to 40+	3 to 30+	1,800.00	9,000	99,000	1.7%				17,303			19,855									22,784
4.500	1	1	Allowance	Landscape, FM 1960 Entrance	2023	n/a	1	10,000.00	10,000	10,000	0.2%																
4.501	1	1	Allowance	Landscape, Lake Houston Parkway	2023	n/a	1	5,000.00	5,000	5,000	0.1%																
4.502	1	1	Allowance	Landscape, Shores Pool Area	2023	n/a	1	5,000.00	5,000	5,000	0.1%																
4.660	1	1	Allowance	Playground Equipment, Pinehurst	2026	15 to 20	4	50,000.00	50,000	50,000	2.7%																114,166
4.661	1	1	Allowance	Playground Equipment, Shores	2026	15 to 20	4	95,000.00	95,000	95,000	5.1%																216,916
4.800	1	1	Allowance	Signage, Renovation, Entrance Monuments	2034	15 to 20	12	5,400.00	5,400	5,400	0.1%																
4.801	3	3	Each	Signage, Replacement, Entrance Monuments (Proposed)	2023	n/a	1	9,000.00	27,000	27,000	0.4%																
4.820	1	1	Allowance	Site Furniture, Playgrounds	2026	15 to 25	4	18,500.00	18,500	18,500	1.0%																42,242
4.830	11,970	11,970	Square Feet	Sport Courts, Tennis, Color Coat, Shores	2024	4 to 6	2	1.00	11,970	11,970	1.6%					23,818											29,278
4.840	440	440	Linear Feet	Sport Courts, Fence, Pinehurst	2027	to 25	5	36.00	15,840	15,840	1.0%																44,460
4.841	440	440	Linear Feet	Sport Courts, Fence, Shores	2042	to 25	20	36.00	15,840	15,840	0.5%						31,518										
4.850	6	6	Each	Sport Court, Light Poles and Fixtures, Pinehurst	2027	to 35	5	3,700.00	22,200	22,200	0.4%																
4.851	6	6	Each	Sport Courts, Light Poles and Fixtures, Shores	2027	to 35	5	3,700.00	22,200	22,200	0.4%																
4.861	11,970	11,970	Square Feet	Sport Courts, Concrete Replacement, Pinehurst	2027	to 40	5	12.00	143,640	143,640	2.7%																
4.862	11,970	11,970	Square Feet	Sport Courts, Tile Surface Replacement, Pinehurst (2023 Budgeted Pickleball Conversion)	2023	10 to 15	1	6.00	71,820	71,820	3.5%																133,405
<b>Pool Elements</b>																											
6.200	3,590	3,590	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs, Pinehurst	2032	8 to 12	10	5.50	19,745	19,745	1.3%																55,420
6.201	4,900	4,900	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs, Shores	2032	8 to 12	10	5.50	26,950	26,950	1.8%																75,643
6.395	750	750	Linear Feet	Fences, Steel, Paint Finishes and Capital Repairs	2027	6 to 8	5	17.00	12,750	12,750	1.0%																31,186
6.400	750	750	Linear Feet	Fences, Steel, Replacement	2042	to 35	20	62.00	46,500	46,500	1.4%						92,525										
6.500	2	1	Allowance	Furniture, Phased	2023	to 12	1 to 7	14,000.00	14,000	28,000	1.8%					26,915											33,085
6.600	2	1	Allowance	Mechanical Equipment, Near Term, Phased	2023	to 15	1 to 2	15,000.00	15,000	30,000	0.5%																
6.601	3	1	Allowance	Mechanical Equipment, Subsequent, Phased	2028	to 15	6 to 16	14,300.00	14,300	42,900	2.0%	24,796															29,450
6.800	3,800	3,800	Square Feet	Pool Finishes, Plaster, Pinehurst (2023 Reaming Expense)	2022	8 to 12	0	11.50	43,700	43,700	3.2%																122,657
6.801	330	330	Linear Feet	Pool Finishes, Tile and Coping, Pinehurst	2032	15 to 25	10	80.00	26,400	26,400	0.6%																
6.802	3,800	3,800	Square Feet	Pool Finishes, Plaster, Shores	2032	8 to 12	10	11.50	43,700	43,700	2.9%																122,657
6.803	330	330	Linear Feet	Pool Finishes, Tile and Coping, Shores	2032	15 to 25	10	80.00	26,400	26,400	0.6%																
6.840	4	4	Each	Pool Houses, Rest Rooms, Renovations	2040	to 20	18	6,000.00	24,000	24,000	0.7%																44,580
6.860	35	35	Squares	Roofs, Asphalt Shingle, Pool Houses	2032	15 to 20	10	380.00	13,300	13,300	0.9%																37,330
6.865	1	1	Allowance	Security System, Access Systems (Budgeted)	2023	10 to 15	1	26,000.00	26,000	26,000	2.0%																61,444
6.870	600	600	Square Feet	Shade Structure, Canvas, Shores	2024	5 to 10	2	10.00	6,000	6,000	0.3%																12,789
6.871	600	600	Square Feet	Shade Structure, Canvas and Structure, Shores	2034	to 20	12	30.00	18,000	18,000	0.4%																
6.900	3,930	3,930	Square Feet	Structures and Deck, Total Replacement, Pinehurst	2041	to 60	19	140.00	550,200	550,200	16.5%																1,057,760
6.901	3,930	3,930	Square Feet	Structures and Deck, Total Replacement, Shores	2042	to 60	20	140.00	550,200	550,200	17.1%																1,094,782
6.980	1	1	Each	Water Slide, Replacement, Pinehurst	2023	to 20	1	29,000.00	29,000	29,000	1.4%																59,724
6.981	1	1	Each	Water Slide, Replacement, Shores	2032	to 20	10	42,000.00	42,000	42,000	2.8%																117,885
<b>Marina Elements</b>																											
8.040	1,410	1,410	Square Yards	Asphalt Pavement, Mill and Overlay (Budgeted)	2022	15 to 20	0	25.00	35,250	35,250	0.6%																

## RESERVE EXPENDITURES

Atascocita Community  
Improvement Association  
Humble, Texas

**Explanatory Notes:**

- 1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2022** is Fiscal Year beginning January 1, 2022 and ending December 31, 2022.

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 FY2022	1 2023	2 2024	3 2025	4 2026	5 2027	6 2028	7 2029	8 2030	9 2031	10 2032	11 2033	12 2034	13 2035	14 2036	15 2037
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																	
8.045	1,410	1,410	Square Yards	Asphalt Pavement, Total Replacement	2042	15 to 20	20	42.00	59,220	59,220	1.8%																
8.055	1	1	Allowance	Boat Ramp, Rip Rap (Budgeted)	2022	15 to 20	0	27,500.00	27,500	27,500	1.3%	27,500															
8.100	205	205	Linear Feet	Bulkhead, Timber, Inspections and Capital Repairs	2024	10 to 15	2	57.00	11,685	11,685	0.6%		12,517														
8.105	205	205	Linear Feet	Bulkhead, Timber, Replacement	2033	to 40	11	285.00	58,425	58,425	1.3%											85,299					
8.125	1	1	Allowance	Canals, Dredging (Budgeted)	2022	10 to 15	0	10,000.00	10,000	10,000	1.1%	10,000										14,106					
8.180	820	820	Linear Feet	Canopies, Canvas	2024	5 to 10	2	10.00	8,200	8,200	0.7%		8,784														
8.181	820	820	Linear Feet	Canopies, Canvas and Structure	2030	to 20	8	30.00	24,600	24,600	1.5%									32,394							
8.400	170	170	Square Feet	Dock and Pilings, Wood, Total Replacement	2033	to 25	11	46.00	7,820	7,820	0.2%												11,417				
8.550	790	790	Square Feet	Dock and Walkway, Wood, Interim Deck Board Replacements	2024	12 to 18	2	13.00	10,270	10,270	0.6%		11,001														
8.655	1	1	Allowance	Gate System (Budgeted)	2022	n/a	0	25,150.00	25,150	25,150	0.4%	25,150															
8.656	1	1	Each	Gate, Subsequent	2047	to 25	25	4,500.00	4,500	4,500	0.2%																
8.657	1	1	Each	Gate Entry System, Subsequent	2037	10 to 15	15	8,000.00	8,000	8,000	0.6%															13,403	
8.658	1	1	Each	Gate Operator, Subsequent	2032	to 10	10	4,000.00	4,000	4,000	0.4%											5,642					
8.750	620	620	Square Feet	Walkway, Wood, Total Replacement	2033	to 25	11	55.00	34,100	34,100	0.8%												49,785				
<b>Anticipated Expenditures, By Year (\$6,401,315 over 30 years)</b>												120,900	149,864	67,620	72,377	187,620	342,589	29,256	29,263	48,156	0	370,698	275,775	54,625	62,558	19,376	28,481

**RESERVE EXPENDITURES**

**Atascocita Community  
Improvement Association  
Humble, 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 2038	17 2039	18 2040	19 2041	20 2042	21 2043	22 2044	23 2045	24 2046	25 2047	26 2048	27 2049	28 2050	29 2051	30 2052
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																
8.045	1,410	1,410	Square Yards	Asphalt Pavement, Total Replacement	2042	15 to 20	20	42.00	59,220	59,220	1.8%					117,835										
8.055	1	1	Allowance	Boat Ramp, Rip Rap (Budgeted)	2022	15 to 20	0	27,500.00	27,500	27,500	1.3%					54,719										
8.100	205	205	Linear Feet	Bulkhead, Timber, Inspections and Capital Repairs	2024	10 to 15	2	57.00	11,685	11,685	0.6%						24,907									
8.105	205	205	Linear Feet	Bulkhead, Timber, Replacement	2033	to 40	11	285.00	58,425	58,425	1.3%															
8.125	1	1	Allowance	Canals, Dredging (Budgeted)	2022	10 to 15	0	10,000.00	10,000	10,000	1.1%					19,898										28,068
8.180	820	820	Linear Feet	Canopies, Canvas	2024	5 to 10	2	10.00	8,200	8,200	0.7%			15,231										21,485		
8.181	820	820	Linear Feet	Canopies, Canvas and Structure	2030	to 20	8	30.00	24,600	24,600	1.5%													64,456		
8.400	170	170	Square Feet	Dock and Pilings, Wood, Total Replacement	2033	to 25	11	46.00	7,820	7,820	0.2%															
8.550	790	790	Square Feet	Dock and Walkway, Wood, Interim Deck Board Replacements	2024	12 to 18	2	13.00	10,270	10,270	0.6%										24,271					
8.655	1	1	Allowance	Gate System (Budgeted)	2022	n/a	0	25,150.00	25,150	25,150	0.4%															
8.656	1	1	Each	Gate, Subsequent	2047	to 25	25	4,500.00	4,500	4,500	0.2%										10,635					
8.657	1	1	Each	Gate Entry System, Subsequent	2037	10 to 15	15	8,000.00	8,000	8,000	0.6%														22,454	
8.658	1	1	Each	Gate Operator, Subsequent	2032	to 10	10	4,000.00	4,000	4,000	0.4%					7,959										11,227
8.750	620	620	Square Feet	Walkway, Wood, Total Replacement	2033	to 25	11	55.00	34,100	34,100	0.8%															
<b>Anticipated Expenditures, By Year (\$6,401,315 over 30 years)</b>												24,796	0	193,216	1,210,177	1,443,054	107,637	37,696	19,855	373,324	129,435	95,441	165,261	85,941	0	656,326

## **RESERVE FUNDING PLAN**

**CASH FLOW ANALYSIS  
Atascocita Community  
Improvement Association  
Humble, Texas**

		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
		FY2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Reserves at Beginning of Year	<i>(Note 1)</i>	273,610	190,885	181,219	280,108	380,736	372,443	214,802	376,910	546,769	705,782	921,357	773,771	728,035	911,830	1,097,079	1,335,387
Total Recommended Reserve Contributions	<i>(Note 2)</i>	37,633	138,900	164,900	170,700	176,700	182,900	189,300	195,900	202,800	209,900	217,200	224,800	232,700	240,800	249,200	257,900
Estimated Interest Earned, During Year	<i>(Note 3)</i>	541	1,298	1,609	2,305	2,627	2,048	2,064	3,222	4,369	5,675	5,912	5,238	5,720	7,007	8,484	10,151
Anticipated Expenditures, By Year		(120,900)	(149,864)	(67,620)	(72,377)	(187,620)	(342,589)	(29,256)	(29,263)	(48,156)	0	(370,698)	(275,775)	(54,625)	(62,558)	(19,376)	(28,481)
Anticipated Reserves at Year End		<u>\$190,885</u>	<u>\$181,219</u>	<u>\$280,108</u>	<u>\$380,736</u>	<u>\$372,443</u>	<u>\$214,802</u>	<u>\$376,910</u>	<u>\$546,769</u>	<u>\$705,782</u>	<u>\$921,357</u>	<u>\$773,771</u>	<u>\$728,035</u>	<u>\$911,830</u>	<u>\$1,097,079</u>	<u>\$1,335,387</u>	<u>\$1,574,957</u>

(continued)

		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued														
		2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Reserves at Beginning of Year		1,574,957	1,828,933	2,118,902	2,226,743	1,324,853	193,394	247,294	377,377	532,094	339,209	395,938	493,600	528,605	650,376	866,366
Total Recommended Reserve Contributions		266,900	276,200	285,900	295,900	306,300	160,000	165,600	171,400	177,400	183,600	190,000	196,700	203,600	210,700	218,100
Estimated Interest Earned, During Year		11,872	13,769	15,157	12,387	5,295	1,537	2,179	3,172	3,039	2,564	3,103	3,565	4,112	5,290	4,531
Anticipated Expenditures, By Year		(24,796)	0	(193,216)	(1,210,177)	(1,443,054)	(107,637)	(37,696)	(19,855)	(373,324)	(129,435)	(95,441)	(165,261)	(85,941)	0	(656,326)
Anticipated Reserves at Year End		<u>\$1,828,933</u>	<u>\$2,118,902</u>	<u>\$2,226,743</u>	<u>\$1,324,853</u>	<u>\$193,394</u>	<u>\$247,294</u>	<u>\$377,377</u>	<u>\$532,094</u>	<u>\$339,209</u>	<u>\$395,938</u>	<u>\$493,600</u>	<u>\$528,605</u>	<u>\$650,376</u>	<u>\$866,366</u>	<u>\$432,671</u>

**Explanatory Notes:**

- 1) Year 2022 starting reserves are as of August 31, 2022; FY2022 starts January 1, 2022 and ends December 31, 2022.
- 2) Reserve Contributions for 2022 are the remaining budgeted 4 months; 2023 is the first year of recommended contributions.
- 3) 0.7% is the estimated annual rate of return on invested reserves; 2022 is a partial year of interest earned.
- 4) Accumulated year 2052 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

## FIVE-YEAR OUTLOOK

### Atascocita Community Improvement Association Humble, Texas

Line Item	Reserve Component Inventory	RUL = 0 FY2022	1 2023	2 2024	3 2025	4 2026	5 2027
<u>Property Site Elements</u>							
4.120	Concrete Parking Areas, Partial				62,399		
4.140	Concrete Sidewalks, Partial		9,279				
4.420	Irrigation System, Phased				9,978		
4.500	Landscape, FM 1960 Entrance		10,350				
4.501	Landscape, Lake Houston Parkway		5,175				
4.502	Landscape, Shores Pool Area		5,175				
4.660	Playground Equipment, Pinehurst					57,376	
4.661	Playground Equipment, Shores					109,015	
4.801	Signage, Replacement, Entrance Monuments (Proposed)		27,945				
4.820	Site Furniture, Playgrounds					21,229	
4.830	Sport Courts, Tennis, Color Coat, Shores			12,823			
4.840	Sport Courts, Fence, Pinehurst						18,813
4.850	Sport Court, Light Poles and Fixtures, Pinehurst						26,367
4.851	Sport Courts, Light Poles and Fixtures, Shores						26,367
4.861	Sport Courts, Concrete Replacement, Pinehurst						170,599
4.862	Sport Courts, Tile Surface Replacement, Pinehurst (2023 Budgeted Pickleball Conversion)		5,000				85,300
<u>Pool Elements</u>							
6.395	Fences, Steel, Paint Finishes and Capital Repairs						15,143
6.500	Furniture, Phased		14,490				
6.600	Mechanical Equipment, Near Term, Phased		15,525	16,068			
6.800	Pool Finishes, Plaster, Pinehurst (2023 Reaming Expense)	23,000					
6.865	Security System, Access Systems (Budgeted)		26,910				
6.870	Shade Structure, Canvas, Shores			6,427			
6.980	Water Slide, Replacement, Pinehurst		30,015				
<u>Marina Elements</u>							
8.040	Asphalt Pavement, Mill and Overlay (Budgeted)	35,250					
8.055	Boat Ramp, Rip Rap (Budgeted)	27,500					
8.100	Bulkhead, Timber, Inspections and Capital Repairs			12,517			
8.125	Canals, Dredging (Budgeted)	10,000					
8.180	Canopies, Canvas			8,784			
8.550	Dock and Walkway, Wood, Interim Deck Board Replacements			11,001			
8.655	Gate System (Budgeted)	25,150					
<b>Anticipated Expenditures, By Year (\$6,401,315 over 30 years)</b>		120,900	149,864	67,620	72,377	187,620	342,589

## 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.*

### Property Site Elements

#### Concrete Parking Areas

---

**Line Item:** 4.120

**Quantity:** Approximately 37,500 square feet

**Condition:** Fair overall with periodic cracks and settlement evident.



**Parking area overview**



**Cracks**



**Curb damage**



**Parking area overview**



**Cracks**

**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 18,760 square feet of concrete, or fifty percent (50%) of the total, will require replacement during the next 30 years.

## Concrete Sidewalks

---

**Line Item:** 4.140

**Quantity:** Approximately 3,500 square feet

**Condition:** Fair overall with frequent settlement and trip hazards evident.



**Concrete sidewalk**



**Sidewalk settlement and trip hazards**

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

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

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

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 2,445 square feet of concrete sidewalks, or seventy percent (69.9%) of the total, will require replacement during the next 30 years.

## Dock, Fishing Pier, Wood

---

**Line Item:** 4.225

**Quantity:** 120 square feet at Shores Park

**History:** The railings and frame were repaired in 2021

**Condition:** Good to fair with loose boards evident



**Fishing pier**

**Useful Life:** 15- to 25-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. We recommend the Association budget for interim repairs through the operating budget.

## **Gazebo**

---

**Line Item:** 4.360

**Quantity:** One each

**History:** Exact age unknown; Poured concrete floor and painted in 2021

**Condition:** Good to fair overall condition



**Gazebo overview**



**Shingle roof**



**Gazebo concrete floor**

**Useful Life:** Up to 25 years with periodic maintenance

**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 budget for paint applications and repairs through the operating budget. Our cost for renovation includes allowances for replacement of the asphalt shingle roof and repairs at the gazebo structure.

## **Irrigation System, Replacement**

---

**Line Item:** 4.420

**Quantity:** 55 active zones

**History:** Primarily original



**Condition:** Satisfactory operational condition and Management and the Board does 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

Atascocita Community 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.

## Landscape

---

**Line Items:** 4.500 through 4.502

**Component Detail Notes:** The Association contains a large quantity of trees, shrubbery and other landscape elements. Replacement of these elements is an ongoing need. Many associations budget for these replacements as normal maintenance. Other associations fund ongoing replacements from reserves. Large amounts of landscape may need replacement due to disease, drought or other forces of nature. If the cost of removal and replacement is substantial, funding from reserves is logical. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape.

**Useful Life:** At the request of Management and the Board, we include a landscape allowance for partial replacements in 2023. Subsequent partial replacement should be funded through the operating budget.

**Priority/Criticality:** Per Board discretion

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

## Playground Equipment

---

**Line Items:** 4.660 and 4.661

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

- Playsets and swings
- Safety surfaces with plastic and timber borders

**History:** Exact age unknown; One spring rider and deck replaced in 2021

**Condition:** Fair overall with periodic rust and sharp points evident.



**Pinehurst playground equipment overview**



**Recently replaced platform**



**Frame rust**



**Frame rust**



**Sharp point at swing**



**Shores playground equipment overview**



**Frame rust**



**Frame rust**

**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. We recommend the Association budget for interim repairs through the operating budget.

## Signage, Entrance Monuments

---

**Line Item:** 4.800

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

- Light fixtures
- Concrete
- Masonry

**History:** Various ages. The Association plans to install 3 new monuments in 2023 that were removed in recent years.

**Condition:** Fair overall with cracks evident



Entrance monument



Entrance monument



**Concrete cracks**



**Sign lighting**

**Useful Life:** 15- to 20-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 concrete and masonry and replacement of the remaining components listed above. Future updates to this study will include renovation of the new monuments.

## Site Furniture

---

**Line Item:** 4.820

**Quantity:** The Association maintains the following site furniture located near both playground areas:

- Benches
- Picnic tables
- Trash receptacles

**History:** Unknown

**Condition:** Good to fair overall



**Site furniture**

**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.

## **Sport Courts, Fences**

---

**Line Items:** 4.840 and 4.841

**Quantity:** Each set of courts includes 440 linear feet of fence

**History:** The Pinehurst fence is unknown in age and the Shores fence was replaced in 2017

**Condition:** The Pinehurst fence is in fair to poor condition and the Shores fence is in good condition



**Pinehurst fence**



**Shores fence**

**Useful Life:** Up to 25 years

**Priority/Criticality:** Per Board discretion

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

## **Sport Courts, Light Poles and Fixtures**

---

**Line Items:** 4.850 and 4.851

**Quantity:** Each court utilizes six light poles and fixtures

**History:** Exact age unknown

**Condition:** Fair overall condition with rust evident



**Pinehurst light poles and fixtures**



**Shores light poles and fixtures**



**Rust at Pinehurst courts**

**Useful Life:** Up to 35 years

**Priority/Criticality:** Per Board discretion

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

## **Sport Courts, Surface**

---

**Line Items:** 4.830, 4.861, 4.862

**Quantity:** Each court comprises approximately 11,970 square feet of concrete. The Shores tennis courts utilize a color coat application and the Pinehurst tennis and pickleball courts utilize a rubber tile surface.

### **History:**

- Pinehurst: The Association conducted surface repairs and installed a rubber tile court system in 2014. The tiles were recently recycle and used for a pickleball court, and the Association plans to update the remaining tennis court to pickleball in 2023.
- Shores: The courts were replaced in 2017 and the color coat is original to replacement

### **Condition:**

- Pinehurst: The tiles are in fair overall condition. We were unable to visually inspect the concrete surface, however, we note areas of uneven concrete.
- Shores: Good overall condition



**Pinehurst pickle ball court overview**



**Tennis court to be converted to pickle ball at Pinehurst**



**Shores tennis court overview**



**Shores tennis court overview**

**Useful Life:** Up to 40 years for replacement of the concrete surfaces, 10- to 15-years for the tiles, and color coat applications every four- to six-years

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

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

## Pool Elements

### Concrete Decks

---

**Line Items:** 6.200 and 6.201

**Quantity:** Approximately 3,590 square feet at the Pinehurst pool and 4,900 square feet at the Shores pool

**History:** Resurface and repaired in 2022

**Condition:** Good overall with no significant deterioration



Concrete pool deck overview at Pinehurst



Concrete pool deck overview at Shores

**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 in conjunction with coating replacements.

**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
- Coating replacement

## Fences, Steel

---

**Line Items:** 6.395 and 6.400

**Quantity:** 750 linear feet

**History:** The fences were replaced in 2014 and painted in 2020

**Condition:** Good overall



**Steel pool fence**



**Steel pool fence**

**Useful Life:** Six- to eight-years for paint finishes and up to 35 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 fasteners or sections, and damage
  - Repair leaning sections and clear vegetation from fence areas which could cause damage

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

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

## Furniture

---

**Line Item:** 6.500

**Quantity:** The pool furniture includes the following:

- Chairs
- Lounges
- Tables
- Picnic tables
- Lifeguard chairs
- Ladders and life safety equipment

**History:** The age was unavailable at the time of our inspection. The Board is considering near term partial replacement of the furniture

**Condition:** Fair overall



**Picnic tables**



**Lounges**



**Frame finish deterioration**



**Life guard chair**



**Pool furniture**

**Useful Life:** Up to 12 years

**Priority/Criticality:** Per Board discretion

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

## **Mechanical Equipment**

---

**Line Items:** 6.600 and 6.601

**Quantity:** The mechanical equipment includes the following:

- Automatic chlorinators
- Controls
- Interconnected pipe, fittings and valves

- Pumps and filters

**History:** Original; Reported deteriorated. New controllers in recent years.

**Condition:** The pumps and filters are reported unsatisfactory overall and will likely require near term replacement



**Pool mechanical equipment Pinehurst**



**Pool mechanical equipment at Shores**

**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. Our subsequent costs includes replacement of up to thirty-three percent (33%) of the equipment per event. Our near term cost includes phased replacement of the pumps, filters, valves and pipes. We consider interim replacement of motors and minor repairs as normal maintenance.

## **Pool Finishes, Plaster and Tile**

---

**Line Items:** 6.800 through 6.803

**Quantity:** Each pool comprises 3,930 square feet of plaster based on the horizontal surface area and approximately 300 linear feet of tile and coping

**History:**

- Plaster finishes: The Shores pool was replaced in 2022 and the Pinehurst was in process of being replastered at the time of our inspection
- Tile and coping: Unknown

**Condition:** Good overall



**Pinehurst pool plaster overview**



**Wading pool**



**Shores pool plaster overview**



**Shores pool plaster overview**

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

**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. We recommend the Association budget for full tile and coping replacement every other plaster replacement event. Removal and replacement

of the finish provides the opportunity to inspect the pool structures and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structures, we recommend the Association budget for the following:

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

## **Pool Houses, Rest Rooms**

---

**Line Item:** 6.840

**Quantity:** Four rest rooms, components include:

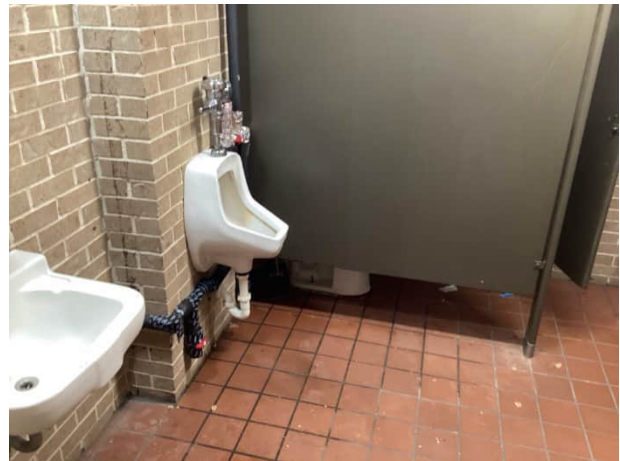
- Light fixtures
- Plumbing fixtures
- Tile floor coverings

**History:** Renovated in 2022

**Condition:** Good overall condition



**Rest room**



**Rest room**

**Useful Life:** Renovation up to every 20 years

**Priority/Criticality:** Per Board discretion

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

## **Roofs, Asphalt Shingles**

---

**Line Item:** 6.860

**Quantity:** Approximately 35 squares<sup>1</sup>

**History:** Replaced in 2014

**Condition:** Good to fair overall condition



**Roof overview**



**Roof overview**



**Roof overview**

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

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

## Security System, Access System

---

**Line Item:** 6.865

**Quantity, History:** The Association plans to upgrade the access systems at the amenity center in 2023

**Condition:** Reported unsatisfactory

**Useful Life:** 10- 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 information provided by the Association.

## Shade Structure

---

**Line Items:** 6.870 and 6.871

**Quantity:** One shade structure at the Shores pool comprises approximately 600 square feet

**History:**

- Canvas: Original to installation
- Frame: Installed in 2014

**Condition:** Good overall



Shade structure overview



Shade structure overview

**Useful Life:** Up to 20 years with interim replacement of the canvas every five- to ten-years



**Priority/Criticality:** Per Board discretion

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

## Structures and Decks

---

**Line Items:** 6.900

**Quantity:** Each pool comprises approximately 3,390 square feet of horizontal surface area

**History:** Original

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

**Useful Life:** Up to 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 The Association plan to replace the following components:

- Concrete decks
- Pool structures
- Subsurface piping

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

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

## Water Slides

---

**Line Items:** 6.980 and 6.981

**Quantity:** One water slide at each pool

**History:** The Shores pool water slide was replaced in 2014. The Pinehurst water slide is at an unknown age and was repaired in 2022.

**Conditions:** The Shores water slide is in good condition and the Pinehurst waterslide is in fair condition. Additionally, the Pinehurst slide is reported out of code due to the steep staircase.



**Pinehurst water slide overview**



**Recently replaced sealant in good condition**



**Shores water slide overview**



**Shores water slide overview**

**Useful Life:** Up to 20 years

**Component Detail Notes:** Safety is the major purpose for maintaining the water slide. We recommend an annual inspection of the water slide to identify and repair as normal maintenance loose connections and fasteners or damaged elements. We recommend the use of a specialist for the design or replacement of the water slide environment.

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

- Weekly:
  - Inspect and repair loose connections and fasteners or damaged elements. Check handrails for stability.
  - Inspect for safety hazards

- Annually:
  - Drain all lines if applicable
  - Clean with non-abrasive cleaner and wax as needed
  - Reseal joints 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.

## Marina Elements

### Asphalt Pavement, Repaving

---

**Line Item:** 8.040 and 8.045

**Quantity:** Approximately 1,410 square yards

**History:** Unknown age, the Association plans to mill and overlay the pavement in 2022

**Condition:** Poor condition with significant cracks, deterioration and settlement



**Cracks and deterioration**



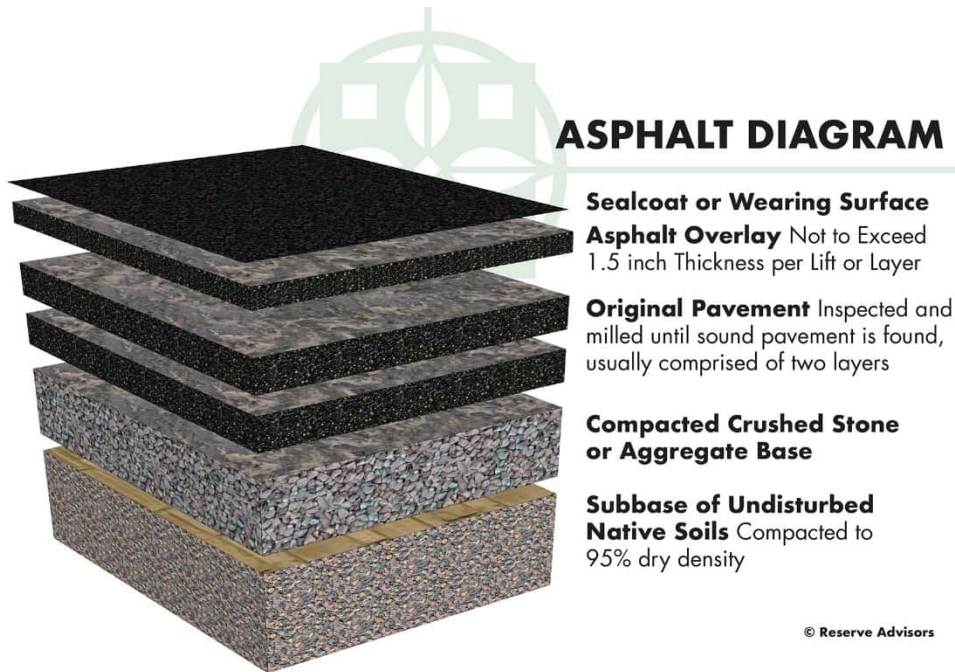
**Cracks and settlement**



**Pavement overview**

**Useful Life:** 15- to 20-years with the benefit of timely crack repairs and patching

**Component Detail Notes:** 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 Atascocita Community:



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



application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving followed by total replacement at Atascocita.

**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 is partially based on historic information provided by the Association.

## **Boat Ramp, Rip Rap**

---

**Line Item:** 8.045

**History:** The Association plans to install rip rap at the base of the boat ramp in 2022

**Condition:** Reported unsatisfactory

**Useful Life:** We recommend the Association budget for replacements every 15- to 20-years coordinated with dredging

**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 is based on information provided by the Association.

## **Bulkheads, Wood**

---

**Line Items:** 8.100 and 8.105

**Quantity:** Approximately 205 linear feet

**History:** Unknown

**Conditions:** Good to fair overall with erosion behind bulkhead and wood deterioration evident.



**Erosion at bulkhead backside**

**Useful Life:** Inspections and capital repairs every 10- to 15-years and complete replacement at up to 40 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 cost includes allowances for a complete inspection and partial replacement of up to twenty percent (20%) of the bulkheads.

## Canals, Dredging

---

**Line Item:** 8.125

**History:** The Association plans to dredge the canal at the marina and Shores park in 2022

**Condition:** Reported unsatisfactory

**Useful Life:** Based on discussion with the Board, we recommend the Association budget for dredging projects up to every 10 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 cost is based on information provided by the Association.

## Canopies

---

**Line Item:** 8.080 and 8.081

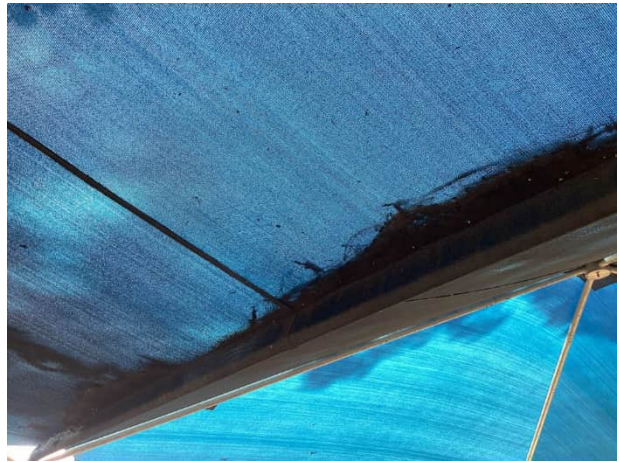
**Quantity:** Two each comprising 820 square feet

**History:** The structures were replaced in 2011 and the canvases were replaced in recent years

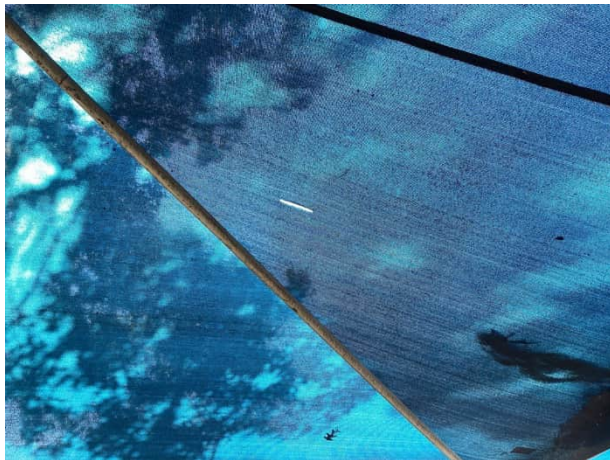
**Condition:** Good to fair overall condition with tears in the canvases, debris accumulation and finish deterioration evident



Canopy overview



Debris accumulation in valley



Torn canvas



Finish deterioration and fastener rust



**Canopy overview**

**Useful Life:** Up to 20 years with interim replacement of the canvases every five- to ten-years

**Priority/Criticality:** Per Board discretion

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

### **Dock and Walkway, Wood**

---

**Line Items:** 8.400, 8.550 and 8.750

**Quantity:** The dock includes 170 square feet of surface area and the walkway includes 620 square feet of surface area

**History:** The dock was replaced in 2011 and the walkway age is unknown

**Condition:** Good to fair overall condition



**Walkway**



**Dock**

**Useful Life:** Up to 25 years with replacement of the deck boards every 12- to 18-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 cost for replacement of the dock includes allowances for complete replacement of the decking and partial replacement of up to fifty percent (50%) of the structure and pilings. Our cost for replacement of the walkway includes allowances for complete replacement of the decking and partial replacement of up to twenty percent (20%) of the structure and pilings. We recommend the Association coordinate replacement of the walkway with the timber bulkheads.

## **Gate System**

---

**Line Items:** 8.655 through 8.658

**History:** The Association plans to install a sliding gate system with one gate, operator and telephone access system in 2022

**Useful Life:** Up to 25 years for the gate, 10- to 15-years for the entry system and up to 10 years for the operator

**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 information provided by the Association.

## 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.

Atascocita Community 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 annual 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 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 Humble, 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 Atascocita Community 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.

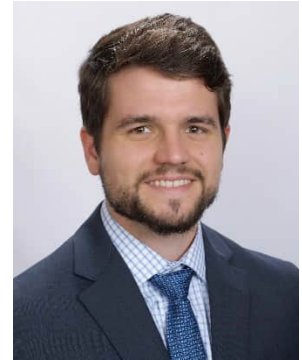
### OLD TO NEW

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.

**CASEY M. LEWIS, RS**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Casey M. Lewis, an engineer, is an advisor for Reserve Advisors. Mr. Lewis 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. Lewis demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

**Bleu Ciel Condominium Association, Inc.** A luxury highrise in Dallas, Texas, Bleu Ceil Condominium comprises a uniquely shaped tower with 136 units. Residents of the Association have access to a swimming pool, plaza deck and multiple interior common areas including a spa, fitness center, wine tasting and storage rooms. The site also includes a garage located at the lower levels of the tower.

**Waterside Estates Homeowners Association, Inc.** This single family home community contains over 1,400 residential homes and is located in Richmond, Texas. Features of this community include swimming pools, water slides, multiple playgrounds, walking trails, panelized masonry perimeter walls, wood fences, and two tennis courts.

**Silver Oaks Condominium Association, Inc.** A townhome community in Cedar Park, Texas containing 82 units in 22 buildings. The townhomes consist of stone masonry, stucco siding and asphalt shingle roofs. The features of this community include private asphalt streets, masonry retaining walls, concrete flatwork, wood balconies and metal fences.

**Hide-A-Way Lake Club** A Homeowners Association located in Hideaway, Texas, containing 1,704 single family homes. Amenities of this community include a 27 hole golf course, multiple lakes, ponds, swimming pools and amenity buildings including a clubhouse, marina and event venue.

**Wintergreen Trail Townhomes** A townhome style community of 51 units in 12 buildings located in The Woodlands, Texas. The townhomes comprise of fiber cement siding, wood trim and asphalt roofs. Features of the property include concrete flatwork and wood fences surrounding the property.

**Camp John Marc** A special needs summer camp in Meridian, Texas that comprises over 100 acres that includes 22 cabins, numerous multipurpose use structures, extensive site infrastructure, maintenance buildings and equipment, animal storage structures and a packaged sewer treatment facility.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Mr. Lewis completed his bachelor's degree in industrial engineering at Texas Tech University. During his summers, he worked in the homebuilding industry where he oversaw and managed the construction of single family homes in the Houston, Texas area. Following the completion of his studies, he worked as an industrial engineer in the space launch industry.

**EDUCATION**

Texas Tech University - B.S. Industrial Engineering

**PROFESSIONAL AFFILIATIONS**

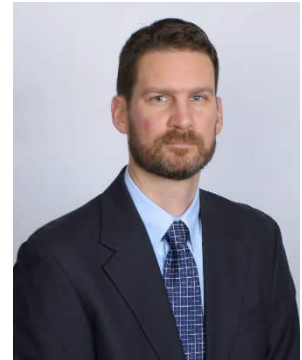
*Reserve Specialist (RS) - CAI*

**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 Atascocita Community 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) Atascocita Community 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 our report. The inspection is made by employees generally familiar with real estate and building construction but in the absence of invasive testing RA cannot opine on, nor is RA responsible for, the structural integrity of the property including its conformity to specific governmental code requirements for fire, building, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

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 water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions. RA assumes no responsibility for any such conditions. The Report contains opinions of estimated costs and remaining useful lives which are neither a guarantee of the actual costs of replacement 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.

**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, however, considers any additional information made available to us within 6 months of issuing the Report if a timely request for a revised Report is made. 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 this Report is limited to only the purpose stated herein. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and you shall hold RA harmless from any consequences of such use. Use by any unauthorized third party is unlawful. 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 our Report in its entirety to the following third parties: members of your organization, your accountant, attorney, financial institution and property manager who need to review the information contained herein. Without the written consent of RA, you shall not disclose the Report to any other third party. The Report contains intellectual property developed by RA and **shall not be reproduced or distributed to any party that conducts reserve studies without the written consent of RA.**

RA will include your name in our client lists. RA reserves the right to 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** - 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. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court for the State of Wisconsin.