

Revised
RESERVE STUDY
Harrison Place
Owners Association



Cary, North Carolina
Inspected - July 17, 2019
Revised - September 17, 2019



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Harrison Place Owners Association
Cary, North Carolina

Dear Board of Directors of Harrison Place Owners Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Harrison Place Owners Association in Cary, North Carolina and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, July 17, 2019.

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 Harrison Place Owners 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 September 17, 2019 by

Reserve Advisors Engineering, PLLC (P-1327)

Visual Inspection and Report by: Rachel K. Footitt

Review by: Alan M. Ebert, P.E. (NC-043524) PRA¹, RS², Director of Quality Assurance



¹ RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.

² PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at <http://www.apra-usa.com>.



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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Harrison Place Owners Association (Harrison Place)

Location: Cary, North Carolina

Reference: 000185

Property Basics: Harrison Place Owners Association is a planned unit development which is responsible for the common elements shared by 79 single family homes. The common elements of the Association were built in 1989.

Reserve Components Identified: 27 Reserve Components.

Inspection Date: July 17, 2019. We conducted the original inspection on October 23, 2009.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2049 due to replacement of Light Poles and Fixtures, Pool House and Tennis Court and Pool Structure and Deck, Total Replacement.

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

- Current and future local costs of replacement
- 1.7% anticipated annual rate of return on invested reserves
- 3.0% future Inflation Rate for estimating Future Replacement Costs

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

Cash Status of Reserve Fund:

- \$162,252 as of May 31, 2019
- 2019 budgeted Reserve Contributions of \$22,176

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:

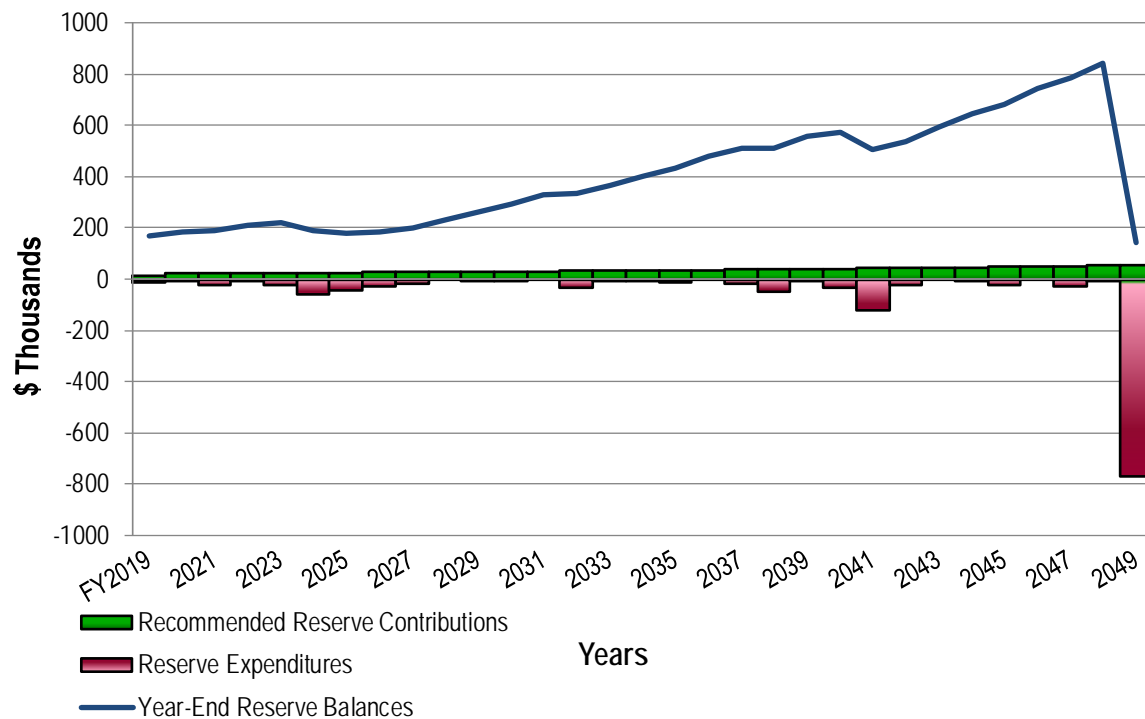
- Asphalt Pavement, Mill and Overlay
- Mechanical Equipment
- Pool Finish Replacement and Tile Repairs

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

- Increase to \$23,500 in 2020
- Inflationary increases from 2021 through 2049, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$1,324 represents an average monthly increase of \$1.40 per homeowner and about a two percent (2.3%) adjustment in the 2019 total Operating Budget of \$56,824.

Harrison Place
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2020	23,500	185,106	2030	31,500	292,757	2040	42,300	573,708
2021	24,200	189,452	2031	32,400	330,409	2041	43,600	508,058
2022	24,900	209,960	2032	33,400	335,633	2042	44,900	538,172
2023	25,600	219,188	2033	34,400	367,755	2043	46,200	593,914
2024	26,400	189,896	2034	35,400	404,303	2044	47,600	644,751
2025	27,200	180,290	2035	36,500	434,878	2045	49,000	683,107
2026	28,000	184,529	2036	37,600	480,191	2046	50,500	745,649
2027	28,800	198,777	2037	38,700	511,135	2047	52,000	784,924
2028	29,700	232,109	2038	39,900	511,680	2048	53,600	844,243
2029	30,600	259,509	2039	41,100	555,562	2049	55,200	140,570





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

Harrison Place Owners Association

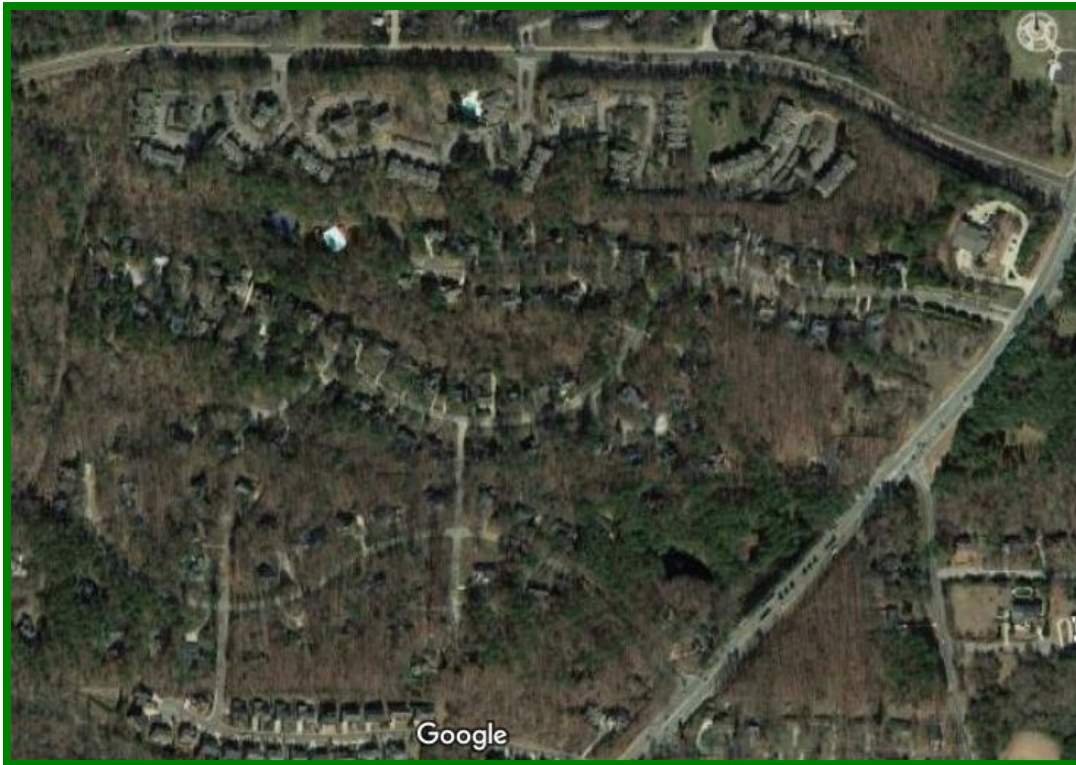
Cary, North Carolina

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, July 17, 2019. We conducted the original inspection on October 23, 2009.

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 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:

- Harrison Place 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 reserve funding at this time.

- Electrical Systems, Common
- Foundations
- Irrigation System (Replaced in 2014)
- Pipes, Interior Building, Domestic Water, Sanitary Waste, Common
- Pipes, Subsurface Utilities
- Retaining Walls, Gabion
- Structural Frames

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 \$1,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Landscape
- Paint Finishes, Touch Up
- Railings, Metal
- Retaining Walls, Gabion, Inspection and Capital Repairs
- Water Heaters, Pool House
- 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:

- Homes and Lots

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

- Asphalt Pavement Street System (Municipality)

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
- 2019 local cost of replacement
 - Per unit
 - Per phase
 - Replacement of total quantity
- Total future costs of replacement anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

Reserve Funding Plan

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

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

Harrison Place
Owners Association
Cary, North Carolina

Explanatory Notes:

- 1) 3.0% is the estimated Inflation Rate for estimating Future Replacement Costs.
2) FY2019 is Fiscal Year beginning January 1, 2019 and ending December 31, 2019.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				RUL = 0 FY2019	1 2020	2 2021	3 2022	4 2023	5 2024	6 2025	7 2026	8 2027	9 2028	10 2029	11 2030	12 2031	13 2032	14 2033	15 2034
						Useful	Remaining	Unit (2019)	Per Phase (2019)	Total (2019)	30-Year Total (Inflated)																
Property Site Elements																											
4.020	1,350	1,350	Square Yards	Asphalt Pavement, Crack Repair, Patch, Seal Coat and Striping	2025	3 to 5	6	1.50	2,025	2,025	20,931						2,418			2,721					3,063		
4.040	1,350	1,350	Square Yards	Asphalt Pavement, Mill and Overlay	2021	15 to 25	2	15.00	20,250	20,250	21,483			21,483													
4.045	1,350	1,350	Square Yards	Asphalt Pavement, Total Replacement	2041	15 to 25	22	30.50	41,175	41,175	78,896																
4.110	400	40	Linear Feet	Concrete Curbs and Gutters, Partial	2021	to 65	2 to 30+	36.00	1,440	14,400	4,287			1,528													
4.140	2,400	200	Square Feet	Concrete Sidewalks and Stairs, Partial	2020	to 65	1 to 30+	10.50	2,100	25,200	19,384		2,163				2,508					2,907					
4.400	2	2	Each	Irrigation System, Controls	2033	to 15	14	1,700.00	3,400	3,400	13,155														5,143		
4.560	7	7	Each	Light Poles and Fixtures, Entrance Monument	2041	to 25	22	200.00	1,400	1,400	2,683																
4.561	3	3	Each	Light Poles and Fixtures, Entrance Strip	2022	to 25	3	2,000.00	6,000	6,000	20,284				6,556												
4.562	11	11	Each	Light Poles and Fixtures, Pool House and Tennis Court	2024	to 25	5	3,000.00	33,000	33,000	118,356					38,256											
4.760	150	150	Square Feet	Retaining Wall, Timber (Replace with Masonry)	2020	15 to 20	1	36.00	5,400	5,400	15,608		5,562														
4.800	1	1	Allowance	Signage, Renovation	2040	15 to 25	21	10,600.00	10,600	10,600	19,719																
4.840	320	320	Linear Feet	Tennis Court, Fence	2026	to 25	7	41.00	13,120	13,120	16,136							16,136									
4.860	720	720	Square Yards	Tennis Court, Sport Court Replacement	2038	15 to 20	19	38.00	27,360	27,360	47,976																
Pool House Elements																											
5.001	1	1	Each	Gate, Pool Access	2027	to 15	8	1,400.00	1,400	1,400	4,536								1,773								
5.240	240	240	Square Feet	Floor Coverings, Concrete, Inspections and Repairs, Rest Rooms	2022	to 30	3	2.00	480	480	2,177				525									705			
5.580	620	620	Square Feet	Paint Finishes, Rest Rooms	2022	8 to 12	3	1.00	620	620	2,811				677									910			
5.599	1	1	Allowance	Rest Rooms, Fixtures	2032	to 25	13	11,500.00	11,500	11,500	16,888													16,888			
5.600	12	12	Squares	Roof, Metal (Includes Gutters and Downspouts)	2026	to 30	7	725.00	8,700	8,700	10,700							10,700									
5.740	1,720	1,720	Square Feet	Walls, Plywood Siding, Paint Finishes and Partial Repairs	2019	4 to 6	0	2.00	3,440	3,440	39,176	3,440				3,988					4,623				5,359		
5.745	1,720	1,720	Square Feet	Walls, Siding, Plywood, Replacement	2042	to 30	23	5.50	9,460	9,460	18,670																
5.800	265	265	Square Feet	Windows and Doors, Wood Frames	2024	to 35	5	55.00	14,575	14,575	16,896						16,896										
Pool Elements																											
6.200	3,915	3,915	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2027	8 to 12	8	1.90	7,439	7,439	22,087								9,423								
6.400	260	260	Linear Feet	Fence, Chain Link	2027	to 25	8	20.00	5,200	5,200	18,484								6,587								
6.600	1	1	Allowance	Mechanical Equipment (2025 is for Total Replacement)	2025	to 15	6	6,000.00	6,000	6,000	57,568						35,000										
6.800	1,735	1,735	Square Feet	Pool Finish, Plaster Replacement and Tile Repairs (2019 is for Painting of Swim Lanes only)	2019	8 to 12	0	6.00	10,410	10,410	53,951	7,000				11,717								15,287			
6.801	210	210	Linear Feet	Pool Finish, Tile	2023	15 to 25	4	35.00	7,350	7,350	22,355					8,272											
6.900	1,735	1,735	Square Feet	Structure and Deck, Total Replacement	2049	to 60	30	160.00	277,600	277,600	673,808																
Anticipated Expenditures, By Year											\$1,359,005	10,440	7,725	23,011	7,758	19,989	59,140	39,926	26,836	17,783	0	7,344	2,907	0	33,790	8,206	5,359

RESERVE EXPENDITURES

Harrison Place Owners Association Cary, North Carolina				Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				16 2035	17 2036	18 2037	19 2038	20 2039	21 2040	22 2041	23 2042	24 2043	25 2044	26 2045	27 2046	28 2047	29 2048	30 2049
Line Item	Total Quantity	Per Phase Quantity	Units		Useful	Remaining	Unit (2019)	Per Phase (2019)	Total (2019)	30-Year Total (Inflated)															
Reserve Component Inventory																									
Property Site Elements																									
4.020	1,350	1,350	Square Yards	Asphalt Pavement, Crack Repair, Patch, Seal Coat and Striping	2025	3 to 5	6	1.50	2,025	2,025	20,931		3,447							4,367				4,915	
4.040	1,350	1,350	Square Yards	Asphalt Pavement, Mill and Overlay	2021	15 to 25	2	15.00	20,250	20,250	21,483														
4.045	1,350	1,350	Square Yards	Asphalt Pavement, Total Replacement	2041	15 to 25	22	30.50	41,175	41,175	78,896						78,896								
4.110	400	40	Linear Feet	Concrete Curbs and Gutters, Partial	2021	to 65	2 to 30+	36.00	1,440	14,400	4,287						2,759								
4.140	2,400	200	Square Feet	Concrete Sidewalks and Stairs, Partial	2020	to 65	1 to 30+	10.50	2,100	25,200	19,384	3,370				3,907				4,529					
4.400	2	2	Each	Irrigation System, Controls	2033	to 15	14	1,700.00	3,400	3,400	13,155												8,012		
4.560	7	7	Each	Light Poles and Fixtures, Entrance Monument	2041	to 25	22	200.00	1,400	1,400	2,683						2,683								
4.561	3	3	Each	Light Poles and Fixtures, Entrance Strip	2022	to 25	3	2,000.00	6,000	6,000	20,284											13,728			
4.562	11	11	Each	Light Poles and Fixtures, Pool House and Tennis Court	2024	to 25	5	3,000.00	33,000	33,000	118,356													80,100	
4.760	150	150	Square Feet	Retaining Wall, Timber (Replace with Masonry)	2020	15 to 20	1	36.00	5,400	5,400	15,608					10,046									
4.800	1	1	Allowance	Signage, Renovation	2040	15 to 25	21	10,600.00	10,600	10,600	19,719					19,719									
4.840	320	320	Linear Feet	Tennis Court, Fence	2026	to 25	7	41.00	13,120	13,120	16,136														
4.860	720	720	Square Yards	Tennis Court, Sport Court Replacement	2038	15 to 20	19	38.00	27,360	27,360	47,976			47,976											
Pool House Elements																									
5.001	1	1	Each	Gate, Pool Access	2027	to 15	8	1,400.00	1,400	1,400	4,536							2,763							
5.240	240	240	Square Feet	Floor Coverings, Concrete, Inspections and Repairs, Rest Rooms	2022	to 30	3	2.00	480	480	2,177							947							
5.580	620	620	Square Feet	Paint Finishes, Rest Rooms	2022	8 to 12	3	1.00	620	620	2,811							1,224							
5.599	1	1	Allowance	Rest Rooms, Fixtures	2032	to 25	13	11,500.00	11,500	11,500	16,888														
5.600	12	12	Squares	Roof, Metal (Includes Gutters and Downspouts)	2026	to 30	7	725.00	8,700	8,700	10,700														
5.740	1,720	1,720	Square Feet	Walls, Plywood Siding, Paint Finishes and Partial Repairs	2019	4 to 6	0	2.00	3,440	3,440	39,176				6,213					7,203				8,350	
5.745	1,720	1,720	Square Feet	Walls, Siding, Plywood, Replacement	2042	to 30	23	5.50	9,460	9,460	18,670							18,670							
5.800	265	265	Square Feet	Windows and Doors, Wood Frames	2024	to 35	5	55.00	14,575	14,575	16,896														
Pool Elements																									
6.200	3,915	3,915	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2027	8 to 12	8	1.90	7,439	7,439	22,087		12,664												
6.400	260	260	Linear Feet	Fence, Chain Link	2027	to 25	8	20.00	5,200	5,200	18,484											11,897			
6.600	1	1	Allowance	Mechanical Equipment (2025 is for Total Replacement)	2025	to 15	6	6,000.00	6,000	6,000	57,568	9,628								12,940					
6.800	1,735	1,735	Square Feet	Pool Finish, Plaster Replacement and Tile Repairs (2019 is for Painting of Swim Lanes only)	2019	8 to 12	0	6.00	10,410	10,410	53,951						19,947								
6.801	210	210	Linear Feet	Pool Finish, Tile	2023	15 to 25	4	35.00	7,350	7,350	22,355						14,083								
6.900	1,735	1,735	Square Feet	Structure and Deck, Total Replacement	2049	to 60	30	160.00	277,600	277,600	673,808													673,808	
Anticipated Expenditures, By Year										\$1,359,005	12,998	0	16,111	47,976	6,213	33,672	118,368	23,604	0	7,203	21,836	0	25,625	8,012	767,173

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS
Harrison Place
Owners Association
Cary, North Carolina

Individual Reserve Budgets & Cash Flows for the Next 30 Years

	FY2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Reserves at Beginning of Year (Note 1)	162,252	166,369	185,106	189,452	209,960	219,188	189,896	180,290	184,529	198,777	232,109	259,509	292,757	330,409	335,633	367,755
Total Recommended Reserve Contributions (Note 2)	12,936	23,500	24,200	24,900	25,600	26,400	27,200	28,000	28,800	29,700	30,600	31,500	32,400	33,400	34,400	35,400
Plus Estimated Interest Earned, During Year (Note 3)	1,621	2,962	3,157	3,366	3,617	3,448	3,120	3,075	3,231	3,632	4,144	4,655	5,252	5,614	5,928	6,507
Less Anticipated Expenditures, By Year	(10,440)	(7,725)	(23,011)	(7,758)	(19,989)	(59,140)	(39,926)	(26,836)	(17,783)	0	(7,344)	(2,907)	0	(33,790)	(8,206)	(5,359)
Anticipated Reserves at Year End	<u>\$166,369</u>	<u>\$185,106</u>	<u>\$189,452</u>	<u>\$209,960</u>	<u>\$219,188</u>	<u>\$189,896</u>	<u>\$180,290</u>	<u>\$184,529</u>	<u>\$198,777</u>	<u>\$232,109</u>	<u>\$259,509</u>	<u>\$292,757</u>	<u>\$330,409</u>	<u>\$335,633</u>	<u>\$367,755</u>	<u>\$404,303</u>

(continued)

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

	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Reserves at Beginning of Year	404,303	434,878	480,191	511,135	511,680	555,562	573,708	508,058	538,172	593,914	644,751	683,107	745,649	784,924	844,243
Total Recommended Reserve Contributions	36,500	37,600	38,700	39,900	41,100	42,300	43,600	44,900	46,200	47,600	49,000	50,500	52,000	53,600	55,200
Plus Estimated Interest Earned, During Year	7,073	7,713	8,355	8,621	8,995	9,518	9,118	8,818	9,542	10,440	11,192	12,042	12,900	13,731	8,300
Less Anticipated Expenditures, By Year	(12,998)	0	(16,111)	(47,976)	(6,213)	(33,672)	(118,368)	(23,604)	0	(7,203)	(21,836)	0	(25,625)	(8,012)	(767,173)
Anticipated Reserves at Year End	<u>\$434,878</u>	<u>\$480,191</u>	<u>\$511,135</u>	<u>\$511,680</u>	<u>\$555,562</u>	<u>\$573,708</u>	<u>\$508,058</u>	<u>\$538,172</u>	<u>\$593,914</u>	<u>\$644,751</u>	<u>\$683,107</u>	<u>\$745,649</u>	<u>\$784,924</u>	<u>\$844,243</u>	<u>\$140,570</u>

(NOTES 4&5)

Explanatory Notes:

- 1) Year 2019 starting reserves are as of May 31, 2019; FY2019 starts January 1, 2019 and ends December 31, 2019.
- 2) Reserve Contributions for 2019 are the remaining budgeted 7 months; 2020 is the first year of recommended contributions.
- 3) 1.7% is the estimated annual rate of return on invested reserves; 2019 is a partial year of interest earned.
- 4) Accumulated year 2049 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**Harrison Place
Owners Association**
Cary, North Carolina

Line Item	Reserve Component Inventory	RUL = 0 FY2019	1 2020	2 2021	3 2022	4 2023	5 2024
<u>Property Site Elements</u>							
4.040	Asphalt Pavement, Mill and Overlay			21,483			
4.110	Concrete Curbs and Gutters, Partial			1,528			
4.140	Concrete Sidewalks and Stairs, Partial		2,163				
4.561	Light Poles and Fixtures, Entrance Strip				6,556		
4.562	Light Poles and Fixtures, Pool House and Tennis Court						38,256
4.760	Retaining Wall, Timber (Replace with Masonry)		5,562				
<u>Pool House Elements</u>							
5.240	Floor Coverings, Concrete, Inspections and Repairs, Rest Rooms				525		
5.580	Paint Finishes, Rest Rooms				677		
5.740	Walls, Plywood Siding, Paint Finishes and Partial Repairs	3,440					3,988
5.800	Windows and Doors, Wood Frames						16,896
<u>Pool Elements</u>							
6.800	Pool Finish, Plaster Replacement and Tile Repairs (2019 is for Painting of Swim Lanes only)	7,000				11,717	
6.801	Pool Finish, Tile					8,272	
Anticipated Expenditures, By Year		10,440	7,725	23,011	7,758	19,989	59,140

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

Asphalt Pavement, Crack Repair, Patch and Seal Coat

Line Item: 4.020

Quantity: Approximately 1,350 square yards

History: Resealed in 2012

Condition: Fair to poor overall with cracks and settlement evident

Useful Life: Three- to five-years

Component Detail Notes: Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless.

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 and includes an allowance for crack repairs and patching of up to two percent (2%) of the pavement.

Asphalt Pavement, Repaving

Line Items: 4.040 and 4.045

Quantity: Approximately 1,350 square yards

History: Original

Condition: Fair to poor overall with cracks and settlement evident



Asphalt pavement overview



Cracks in pavement



Settlement of pavement



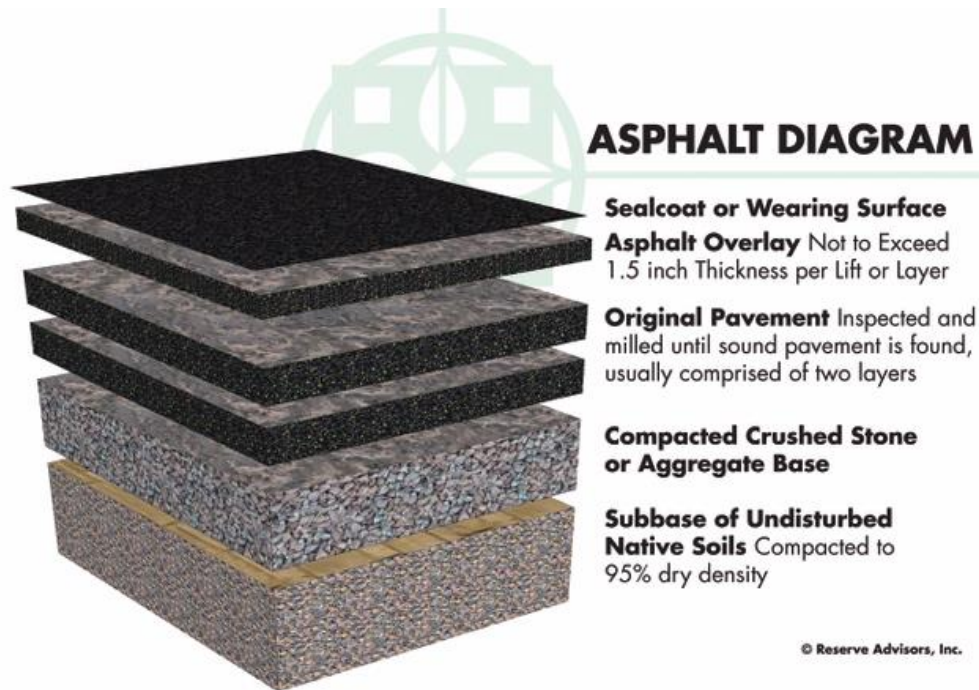
Settlement of pavement – Note slippage



Cracks and settlement of pavement

Useful Life: 15- to 25-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 Harrison Place:



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 followed by total replacement at Harrison Place.

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 milling and overlayment includes area patching of up to ten percent (10%).

Concrete Curbs and Gutters

Line Item: 4.110

Quantity: Approximately 400 linear feet

Condition: Fair overall with cracks and spalled concrete evident



Concrete curb and gutter – Note crack



Concrete gutter – Note spalled concrete

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

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 80 linear feet of curbs and gutters, or twenty percent (20%) of the total, will require replacement during the next 30 years.

Concrete Sidewalks and Stairs

Line Item: 4.140

Quantity: Approximately 2,400 square feet

Condition: Fair overall with cracks and trip hazards evident



Concrete sidewalk



Concrete stairs



Sidewalk – Note trip hazard



Sidewalk – Note cracks and settlement

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

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 1,200 square feet of concrete sidewalks, or fifty percent (50%) of the total, will require replacement during the next 30 years.

Irrigation System, Controllers

Line Item: 4.400

Quantity: Two each

History: The controls were replaced in 2018. The entire irrigation system was replaced in 2014.

Condition: Reported to be in good condition

Useful Life: Up to 15 years

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

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

Light Poles and Fixtures, Entrance Monument

Line Item: 4.560

Quantity: Seven metal poles with light fixtures

History: Replaced in 2016

Condition: Good overall



Light fixture at entrance monument

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.

Light Poles and Fixtures, Entrance Strip

Line Item: 4.561

Quantity: Three decorative metal poles with light fixtures

History: Original

Condition: Good to fair overall with isolated damage evident



Light pole and fixture



Base of pole – Note damage

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.

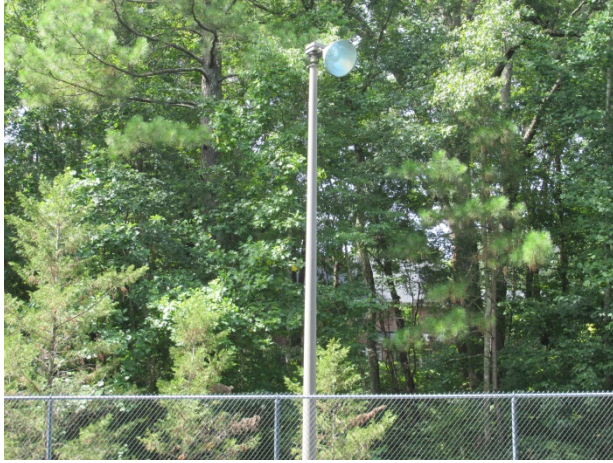
Light Poles and Fixtures, Pool House and Tennis Court

Line Item: 4.562

Quantity: 11 poles with light fixtures

History: Original

Condition: Good to fair overall



Tennis court light pole and fixture



Tennis court fixture



Pool house lot light pole and fixture

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.

Retaining Wall, Timber

Line Item: 4.760

Quantity: Approximately 150 square feet

History: Original

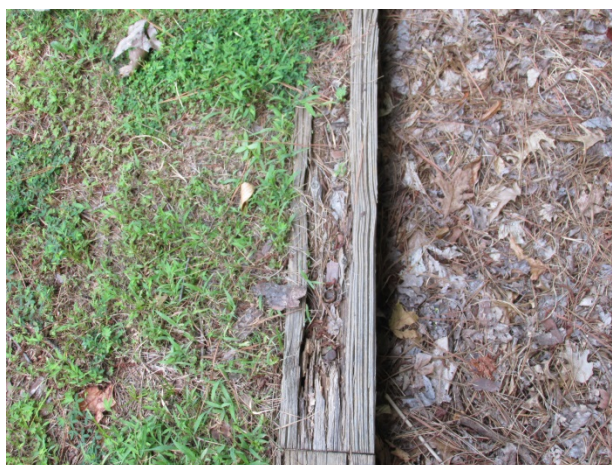
Condition: Fair to poor overall with wood rot evident



Wood retaining wall



Wood retaining wall – Note water stains



Wood retaining wall – Note wood rot

Useful Life: 15- to 20-years

Component Detail Notes: We advise Harrison Place replace with a modular, interlocking dry-set masonry retaining wall system. The cost of dry-set masonry retaining walls is similar to the cost of timber walls. However, dry-set masonry retaining walls offer a longer useful life of up to 35 years and lower total maintenance costs.

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.

Signage

Line Item: 4.800

Quantity: One property identification sign and two entrance monuments

History: Renovated in 2016

Condition: Good overall



Property identification sign



Entrance monument



Monument stonework

Useful Life: 15- to 25-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. The signage includes the following elements:

- Masonry, Stone

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 and includes repointing and repairs to the masonry.

Tennis Court, Fence

Line Item: 4.840

Quantity: Approximately 320 linear feet

History: Original

Condition: Good overall with isolated warped webbing evident



Tennis court fence



Fence – Note warped webbing



Fence – Note warped webbing

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.

Tennis Court, Sport Court

Line Item: 4.860

Quantity: Approximately 720 square yards comprising one tennis court

History: Installed in 2013

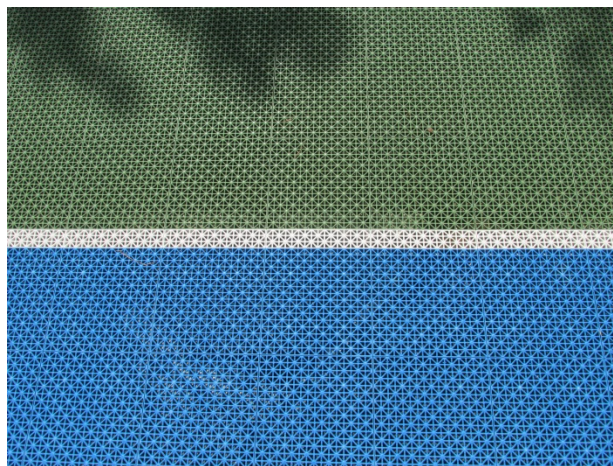
Condition: Good overall with no significant deterioration evident



Tennis court overview



Tennis court overview



Plastic mat

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. The Board replaced the surface with Sport Court which has no need for color coats. The Sport Court is made of interlocking squares which can be replaced as needed when damaged.

Pool House Elements



Pool house overview

Gate, Pool Access

Line Item: 5.001

Quantity: One gate

History: Replaced in 2012

Condition: The gate is in good overall condition



Metal gate

Useful Life: Up to 15 years

Component Detail Notes: The Board has informed us of plans to potentially replace the gate in 2019. The pool house is vandalized often and requires repairs to security components such as the gate more frequently than would be typical.

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

Expenditure Detail Notes: Expenditure timing and costs are based on information provided by the Board and are depicted in the **Reserve Expenditures** table in Section 3.

Floor Coverings, Concrete, Inspections and Repairs, Rest Rooms

Line Item: 5.240

Quantity: Approximately 240 square feet at the rest rooms

History: Original

Condition: Good to fair overall

Useful Life: Up to 30 years with interim inspections and repairs every 10 years.

Priority/Criticality: Per Board discretion

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

Paint Finishes, Rest Rooms

Line Item: 5.580

Quantity: Approximately 620 square feet on the walls, ceilings, and doors

History: Repainted in 2012

Condition: Good overall to fair overall



Rest room overview



Painted wall and door

Useful Life: 8- to 12-years

Priority/Criticality: Per Board discretion

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

Rest Rooms, Fixtures

Line Item: 5.599

Quantity: Two common

History: Components were replaced in 2012

Condition: Good overall

Useful Life: Renovation up to every 25 years

Component Detail Notes: Components include:

- Drinking Fountains
- Light fixtures
- Partitions
- Showers (Including outdoor shower)
- Sinks and counter tops
- Toilets and urinals

Priority/Criticality: Per Board discretion

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

Roof, Metal (Includes Gutters and Downspouts)

Line Item: 5.600

Quantity: Approximately 12 *squares*¹ at the pool house and maintenance shed

History: The metal roofs are original. The gutters and downspouts were replaced in 2012

Condition: Good to fair condition. We note damage to the metal roof and gutter on one corner of the pool house due to repeated vandalism.



Metal roof overview



Metal roof and gutter – Note dent in gutter

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



Gutter and downspout

Useful Life: up to 30 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.

Walls, Plywood Siding, Paint Finishes and Partial Repairs

Line Item: 5.740

Quantity: Approximately 1,720 square feet of plywood siding and trim

History: Repainted and partial repairs done in 2012

Condition: Good to fair overall with isolated chipped paint evident



Plywood siding and trim



Paint finish – Note chipped paint



Paint finish – Note weathered paint

Useful Life: Four- to six-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 assume the following activities per event:

- Paint finish applications
- Replacement of 100 square feet, or up to five percent (5%), of the plywood siding and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

Walls, Siding Plywood, Replacement

Line Item: 5.745

Quantity: Approximately 1,720 square feet of the exterior walls

History: Original with partial repairs done in 2012

Condition: Good to fair overall with isolated damage evident



Plywood siding



Siding – Note damage under wall mounted drinking fountains



Damage to siding on the maintenance shed

Useful Life: Up to 30 years. However, failure to conduct paint applications and repairs in a timely manner will reduce the remaining useful life of the siding.

Component Detail Notes: As previously stated, timely paint applications and repairs are critical to maximize the remaining useful life of the siding. See “**Walls, Plywood Siding, Paint Finishes and Partial Repairs**” for our recommendations on these applications. We recommend Harrison Place consider fiber cement siding as a replacement material.

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.

Windows and Doors

Line Item: 5.800

Quantity: Approximately 265 square feet

History: Original. One window was replaced in 2012

Condition: Good to fair overall condition



Door



Windows

Useful Life: Up to 35 years

Component Detail Notes: Construction of the windows and doors at the clubhouse includes the following:

- Wood frames
- Single pane glass
- Fixed windows
- Hinged doors

Priority/Criticality: Not recommended to defer

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

Pool Elements

Concrete Deck

Line Item: 6.200

Quantity: Approximately 3,915 square feet

History: Repairs done in 2017

Condition: Good condition with isolated cracks evident



Pool deck overview



Concrete deck – Note chipped concrete



Concrete deck – Note crack

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

Component Detail Notes: We recommend the Association budget for the following:

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

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.

Fence, Chain Link

Line Item: 6.400

Quantity: Approximately 260 linear feet

History: Original

Condition: Fair overall condition with rust evident



Chain link fence



Fence post – Note rust and chipped paint



Fence – Note rust and chipped paint

Useful Life: Up to 25 years

Priority/Criticality: Not recommended to defer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The Board plans to paint the fence in the near future in order to extend the useful life.

Mechanical Equipment

Line Item: 6.600

Quantity:

- Automatic chlorinator
- Controls
- Filters
- Interconnected pipe, fittings and valves
- Pump

History: Original

Condition: Reported satisfactory



Mechanical equipment



Automatic chlorinator



Pump

Useful Life: Up to 15 years

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost is based on information provided by the Association. We consider interim replacement of motors and minor repairs as normal maintenance. The Board intends to perform a total replacement of all mechanical equipment in the next five years. The cost they have provided for this is shown as a one time event in the Reserve Expenditures table in 2025

Pool Finishes, Plaster and Tile

Line Items: 6.800 and 6.801

Quantity: Approximately 1,735 square feet of pool plaster and 210 linear feet of tile

History: The pool plaster was replaced in 2014

Condition: Good overall



Pool overview



Pool plaster



Tile

Useful Life: 8- to 10-years for the pool plaster and 15- to 25-years for the tile

Component Detail Notes: Removal and replacement 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 pool 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

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 replacement every other pool plaster replacement event.

Structure and Deck

Line Item: 6.900

Quantity: Approximately 1,735 square feet of horizontal surface area

History: Original

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

Useful Life: Up to 60 years

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

- Concrete deck
- Pool structure
- Subsurface piping

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

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

Reserve Study Update

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

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



Periodic updates incorporate these variable changes since the last Reserve Study or Update. We recommend the Board budget for an Update to this Reserve Study 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.

Harrison Place can fund capital repairs and replacements in any combination of the following:

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

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

This Reserve Study is in compliance with and exceeds the National standards¹ set forth by the Community Associations Institute (CAI) and 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
- Local² costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for construction costs in Cary, North

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

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

Carolina at an annual inflation rate³. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Harrison Place 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.

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



6. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

Reserve Advisors Engineering, PLLC is the leading provider of reserve studies and other engineering consulting services.

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 principals are founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our principals is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and 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, and routinely inspects 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.

QUALIFICATIONS

THEODORE J. SALGADO

Principal Owner

CURRENT CLIENT SERVICES

Theodore J. Salgado is the founder of Reserve Advisors Engineering, PLLC. He is responsible for the production, management, review, and quality assurance of all reserve studies, property inspection services and consulting services. Under his direction, the firm conducts reserve study services for community associations.



EXPERT WITNESS

Mr. Salgado has testified successfully before the Butler County Board of Tax Revisions in Ohio. His depositions in pretrial discovery proceedings relating to reserve studies of Crestview Estates Condominium Association in Wauconda, Illinois, Rivers Point Row Property Owners Association, Inc. in Charleston, South Carolina and the North Shore Club Associations in South Bend, Indiana have successfully assisted the parties in arriving at out of court settlements.

EDUCATION - Milwaukee School of Engineering - B.S. Architectural Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

American Association of Cost Engineers - Past President, Wisconsin Section

Association of Construction Inspectors - Certified Construction Inspector

Association of Professional Reserve Analysts - Past President & Professional Reserve Analyst (PRA)

Community Associations Institute - Member and Volunteer Leader of multiple chapters

Concordia Seminary, St. Louis - Member, National Steering Committee

Milwaukee School of Engineering - Member, Corporation Board

Professional Engineer, Wisconsin (1982) and North Carolina (2014)

Ted continually maintains his professional skills through American Society of Civil Engineers, ASHRAE, Association of Construction Inspectors, and continuing education to maintain his professional engineer licenses.



RACHEL K. FOOTITT
Responsible Advisor

CURRENT CLIENT SERVICES

Rachel Footitt is an Associate Engineer for Reserve Advisors. Ms. Footitt is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

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

Moss Creek Townhomes Homeowners Association, Inc. - Located in Concord, North Carolina, this community consists of multiple sections containing 243 residential units. The townhomes vary in size and style and are comprised of brick, vinyl siding, asphalt shingle roofs and wood balconies at the unit rears.

The Landing Owners Association, Inc. - A large single family home community located on Lake Wylie in Lake Wylie, South Carolina. Features of this property include docks, a pool and club house, and extensive walking paths.

The Oaks Regime - This condominium community was built in the 1980's and is located in Hendersonville, North Carolina. The property contains 198 units comprising 69 buildings featuring different style units, as well as walking paths, recreational courts, an indoor pool, and a large quantity of stone retaining walls.

Siena Park Property Owners' Association – This single family home community located in Myrtle Beach, South Carolina constructed in the early 2000's includes a park area and multiple ponds. The Association shares responsibility of several elements with a neighboring community.

Providence Downs South Homeowners Association - This single family home community contains over 300 residential homes and is located in Waxhaw, North Carolina. The Master Association maintains the shared common elements including a luxurious clubhouse, a pool featuring a large waterslide and lazy river, as well as multiple recreational courts.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Footitt successfully completed the bachelors program in Civil Engineering at University of North Carolina at Charlotte. In the past, she has worked for the City of Charlotte's Engineering and Property Management department. She has also spent time working on Leadership in Energy and Environmental Design (LEED) programs with UNCC's Sustainably Integrated Building and Sites program.

EDUCATION

University of North Carolina at Charlotte – B.S. in Civil Engineering



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

CURRENT CLIENT SERVICES

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

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

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

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

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

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

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

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

PRIOR RELEVANT EXPERIENCE

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

EDUCATION

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

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

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

Reserve Specialist (RS) - Community Associations Institute

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



RESOURCES

Reserve Advisors Engineering, PLLC 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. Several advisors and a Principal of Reserve Advisors Engineering, PLLC hold Senior Memberships with ACI.

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

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

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

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

Reserve Advisors Engineering, PLLC, 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 Harrison Place 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) Harrison Place 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 Engineering, PLLC (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 Engineering 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 Engineering 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 Engineering Report is limited to only the purpose stated herein. You hereby acknowledge that any use or reliance by you on the Engineering 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 Engineering 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 Engineering 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 Engineering Report to any other third party. The Engineering 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 Engineering 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.