RESERVE STUDY

Park Tower Condominium Association

June 19, 2024 • Chicago, IL

RESERVE™ ADVISORS

Long-term thinking. Everyday commitment.

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Corporate Office
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Park Tower Condominium Association
Chicago, Illinois

Dear Board of Directors of Park Tower Condominium Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Park Tower Condominium Association in Chicago, Illinois and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, June 19, 2024.

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

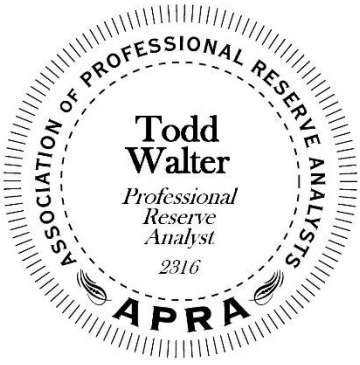
An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Park Tower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

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

Respectfully submitted on July 26, 2024 by

Reserve Advisors, LLC

Visual Inspection and Report by: Todd M. Walter, RS[1], PRA[2]
Review by: Alan M. Ebert, RS, PRA, 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: Park Tower Condominium Association (Park Tower)
Location: Chicago, Illinois
Reference: 91089

Property Basics: Park Tower Condominium Association is a condominium style development consisting of 728 residential and 16 commercial units in a 54-story building. The building was built in 1974 and was converted to condominiums in 1979.

Reserve Components Identified: 122 Reserve Components.

Inspection Date: June 19, 2024. We conducted previous inspections in 1992, 1994, 1996, 2007, 2014, 2016, 2020 and 2022.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes these threshold funding years in 2035 due to the replacement of the piping systems, in 2037 due to the replacement of the piping systems, and in 2051 due to the restoration of the curtain wall system.

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

- Current and future local costs of replacement
- 4.8% 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:

- $4,633,104 as of May 31, 2024
- 2025[1] budgeted Reserve Contributions of $2,066,800

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

- Replacement of the remaining original domestic hot water piping systems to minimize the potential for leaks
- The initial phases of replacement of the HVAC risers to minimize the potential for leaks
- Replacement of dated roofing systems to minimize the potential for leaks

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

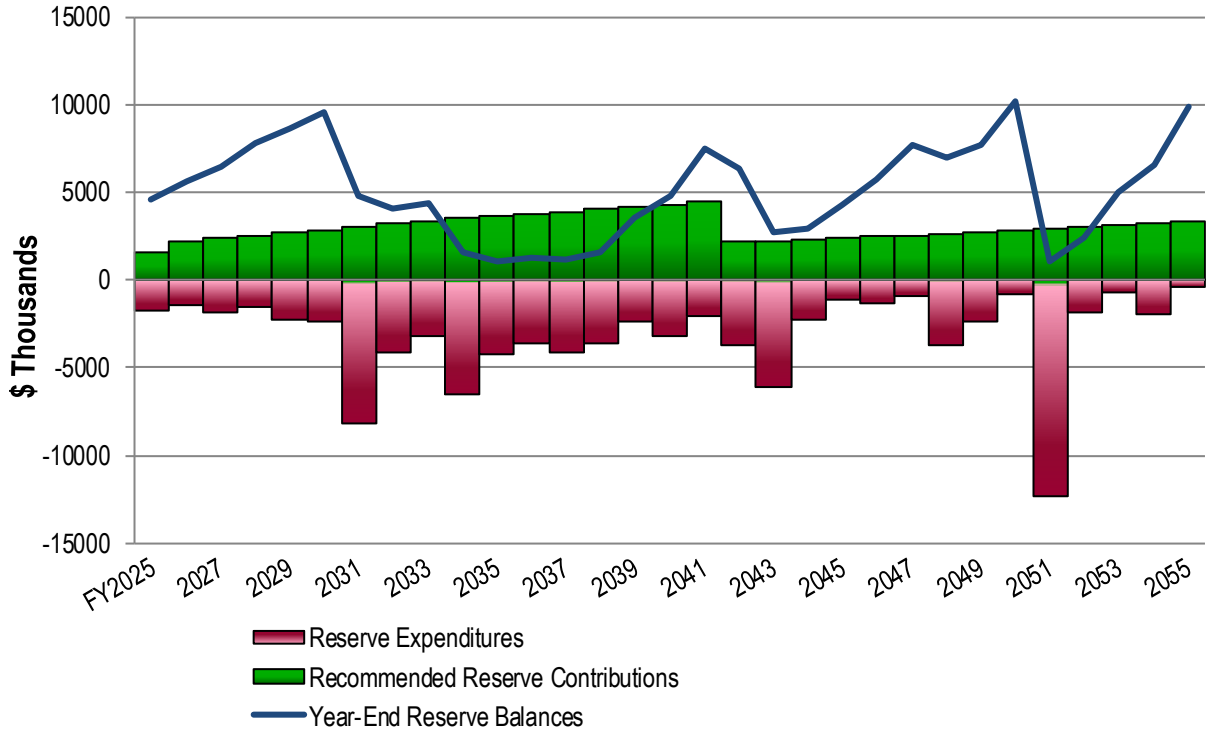
- Phased increases of $162,000 from 2026 through 2034
- Inflationary increases from 2035 through 2041

[1] The Fiscal Year (FY 2025) for Park Tower began March 1, 2024 and ends February 28, 2025. For brevity, we refer to the Fiscal Year by its ending year, i.e. Fiscal Year 2024-25 is FY 2025 or simply 2025.

- Decrease to $2,155,000 by 2042 due to fully funding for replacement of the majority of the remaining original piping systems
- Inflationary increases thereafter through 2055, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of $161,000 represents an average monthly increase of $18.43 per owner and about a two percent (2.1%) adjustment in the 2025 total Operating Budget of $7,673,100.

Park Tower
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2026	2,227,800	5,671,887	2036	3,766,300	1,284,105	2046	2,472,900	5,688,659
2027	2,388,800	6,486,873	2037	3,898,100	1,120,021	2047	2,559,500	7,694,134
2028	2,549,800	7,828,819	2038	4,034,500	1,576,078	2048	2,649,100	6,967,082
2029	2,710,800	8,635,493	2039	4,175,700	3,518,416	2049	2,741,800	7,717,901
2030	2,871,800	9,583,794	2040	4,321,800	4,849,705	2050	2,837,800	10,210,200
2031	3,032,800	4,767,526	2041	4,473,100	7,536,707	2051	2,937,100	1,076,872
2032	3,193,800	4,051,238	2042	2,155,000	6,315,064	2052	3,039,900	2,367,428
2033	3,354,800	4,431,541	2043	2,230,400	2,683,921	2053	3,146,300	4,981,134
2034	3,515,800	1,579,085	2044	2,308,500	2,913,749	2054	3,256,400	6,511,770
2035	3,638,900	1,064,005	2045	2,389,300	4,312,975	2055	3,370,400	9,899,110



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

Park Tower Condominium Association

Chicago, Illinois

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, June 19, 2024. We conducted previous inspections in 1992, 1994, 1996, 2007, 2014, 2016, 2020 and 2022.

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

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

IDENTIFICATION OF PROPERTY

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

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

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

We advise the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget. Reserve Components are defined by CAI as property elements with:

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

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

The following photographs depict select exclusions:

Boiler stack rust

Column cladding

Electrical utility vault at west perimeter

Fire hose and extinguisher

High rise elevator room air handling unit

Smoke damper system

Soffit finish damage

Stairwell

Excluded Components

for

Park Tower

Condominium Association

Chicago, Illinois

Operating Budget Components

Repairs normally funded through the Operating Budget and Expenditures less than $23,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)

The operating budget provides money for the repair and replacement of certain Reserve Components. The Association may develop independent criteria for use of operating and reserve funds.

- Air Conditioning and Heating Systems, Miscellaneous (Including Common Fan Coil Units, Baseboard Radiators and Window Units)
- Air Handling and Condensing Units, Elevator Room, High Rise (Condensing unit replaced in 2023)
- Asphalt Pavement, Crack Repair, Patch and Seal Coat Applications
- Boiler Stack (The stack exhibits areas of rust. We assume timly paint applications and repairs to defer total replacement.)
- Boilers, Main, Condensate System
- Chemical Treatment Systems
- Column Cladding (The Association maintains the cladding through an annual service contract.)
- Doors, Automatic Openers/Closers
- Doors, Interior and Miscellaneous Exterior
- Duct Cleaning
- Electrical System, Thermoscans
- Elevator Cab Finishes, Refuse
- Engineer's Apartment (Classified as Operating Budget funded at the direction of Management)
- Examinations, Periodic Ground Level Inspections of the Exterior Walls as Required by the Chicago Exterior Facade Ordinance (On-going Reports)
- Exhaust Systems (Except Garage, Main Kitchen and Main Rest Room)
- Fire Hoses and Extinguishers (We assume timely testing and replacements as needed through the operating budget.)
- Floors, Terrazzo, Interim Honing
- Garage, Foyers
- Hallways, 2nd Floor and Basement, Renovations
- Landscape
- Light Fixtures, Building Exterior, Miscellaneous
- Loading Dock
- Motors
- Paint Finishes, Touch Up
- Pipes, Annual Expenditures (Including Rodding, Replacement of Horizontal Branch Pipes during Renovations and Sprinkler System Components at the
- Pipes, Garage Drains (Classified as Operating Budget Funded per Management)
- Plaza, Annual Repairs and Seal Applications
- Pool, Furnishings
- Pools, Paint Finishes and Interim Repairs
- Pumps Less Than Five-HP (horsepower)
- Racquetball Court (Classified as Operating Budget funded at the direction of Management)
- Seepage Investigation, Garage Lower Level, East and West Walls (Future updates of this Reserve Study will include expenditures for remediation based on the results of the investigation.)

Excluded Components

for

Park Tower

Condominium Association

Chicago, Illinois

Operating Budget Components (Continued)
• Service Areas (Including 1st floor service hallways. The Association replaced the flooring in these hallways in 2021.)
• Signage, Miscellaneous
• Smoke Damper System (Indeterminate Remaining Useful Life) (The need for systematic component replacements varies greatly. Management informs us that the Association conducts inspections and repairs as needed through the operating budget. We classify as operating budget funded per Management.)
• Snow Removal Equipment (Except Tractor)
• Soffits (Paint finishes and repairs through the operating budget per Management) (The soffits exhibit areas of significant finish deterioration.)
• Staff Areas
• Stairwells, Paint Finishes and Light Fixtures (Classified as Operating Budget funded at the direction of Management)
• Storage Areas
• Sun Deck, Brick Pavers
• Sun Deck, Furnishings and Grills
• Valves, Small Diameter (Including Riser Shut Off) (Except near term fire standpipe) (We assume replacement as needed in lieu of an aggregate replacement of all of the small diameter valves as a single event.)
• Variable Frequency Drives, Interim
• Walls, Curtain Wall, Annual Repairs (Including Interior Gaskets and Handles)

Long-Lived Components

These elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the scope of this study. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan.	Useful Life	Estimated Cost
• Electrical Systems, Wires and Bus Bars, Common (Indeterminate Remaining Useful Life)	Indeterminate	N/A
• Foundation	Indeterminate	N/A
• Lobby, Revolving Doors (Replaced 2023)	to 45	$70,000
• Pipes, Interior Building, Fire Standpipes and Gas Supply (Indeterminate Remaining Useful Life)	Indeterminate	N/A
• Pipes, Subsurface Utilities	Indeterminate	N/A
• Pool Structures, Main and Outdoor	Indeterminate	N/A
• Roof Anchors/Davits and Remaining Track System (Installed 2017) (We assume timely inspections, testing and repairs through the operating budget.)	Indeterminate	N/A
• Roof, Pool Enclosure (Replaced 2023)	to 40	$300,000
• Storage Tanks, Domestic Hot Water, Commercial at Main Boiler Room (2018) and Low Zone Residential at Main Boiler Room (2024)	to 45	$180,000
• Structural Frame	Indeterminate	N/A
• Trash Chute and Doors (Replaced 2005 to 2014)	Indeterminate	N/A
• Walls, Curtain Wall (Indeterminate Remaining Useful Life) (We opine that aggregate replacement of system components other than the sealants if necessary would require the use of means other than reserves to fund.)	Indeterminate	N/A

Excluded Components

for

Park Tower

Condominium Association

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Owners Responsibility Components

Certain items have been designated as the responsibility of the Owners to repair or replace at their cost, including items billed back.

- Doors
- Electric Vehicle Charging Stations (The Association installed electric vehicle charging station infrastructure in 2021.)
- Electrical Systems (Including Circuit Protection Panels and Wires from Meters to Units)
- Heating, Ventilating and Air Conditioning (HVAC) Units (Fan Coil Units and Fin Tube Baseboard Radiation at Corner Units)
- Interiors
- Pipes (Within Units, Horizontals)
- Walls, Curtain Wall, Screens

Others Responsibility Components

Certain items have been designated as the responsibility of Others to repair or replace.

- Commercial Interiors (Except Market and HVAC) (Including Window Systems) (Commercial Entities)
- Laundry Equipment and Room Finishes (Vendor) (We assume that the vendor will fund at least partially fund replacement of room finishes.)
- Parking Area, Southeast (Commercial Entity)
- Sidewalk and Driveway, South Perimeter (Neighboring Entity)
- Sidewalks, Public (Municipality) (Including Utility Vault) (We assume that the Association will fund any shared expenses as needed through the operating budget. We assume that the electric utility maintains the vault.)

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
- 2025 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***.

Years 2025 to 2040

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Explanatory Notes:
1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
2) **FY2025** is Fiscal Year beginning March 1, 2024 and ending February 28, 2025.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030	6 2031	7 2032	8 2033	9 2034	10 2035	11 2036	12 2037	13 2038	14 2039	15 2040
				Exterior Building Elements																							
1.260	1	**1**	Allowance	Lighting System, Main Roof Level	2044	to 20	19	60,000.00	60,000	60,000	**0.1%**																
1.400	10,300	**10,300**	Square Feet	Roofs, Tower, Main and Mechanical Penthouse, Modified Bitumen	2037	15 to 20	12	64.00	659,200	659,200	**1.0%**													996,096			
1.401	800	**800**	Square Feet	Roof, Lobby Canopy, Thermoplastic	2031	15 to 20	6	45.00	36,000	36,000	**0.1%**							44,253									
1.402	900	**900**	Square Feet	Roofs, 2nd Floor Walkway (Incl. Gutter System), Thermoplastic	2040	15 to 20	15	74.00	66,600	66,600	**0.1%**																111,578
1.403	2,200	**2,200**	Square Feet	Roofs, 2nd Floor, Racquetball Court and Exercise Room	2027	15 to 20	2	43.00	94,600	94,600	**0.3%**			101,338													
1.404	2,600	**2,600**	Square Feet	Roof, 2nd Floor, Center/East, Thermoplastic	2037	15 to 20	12	39.00	101,400	101,400	**0.2%**													153,222			
1.405	9,500	**9,500**	Square Feet	Roof, 2nd Floor, Northwest, Thermoplastic	2030	15 to 20	5	37.00	351,500	351,500	**1.3%**						417,472										
1.406	2,100	**2,100**	Square Feet	Roof, 2nd Floor, Southwest, Thermoplastic	2035	15 to 20	10	39.00	81,900	81,900	**0.4%**											115,528					
1.407	15,000	**15,000**	Square Feet	Roof, 2nd Floor, Concrete, Waterproof Coating and Repairs	2025	10 to 15	0	15.00	225,000	225,000	**1.1%**	182,500												339,990			
1.408	2,300	**2,300**	Square Feet	Roof, 2nd Floor, Sun Deck, Planters	2037	to 30	12	125.00	287,500	287,500	**0.5%**													434,432			
1.409	1	**1**	Allowance	Roof, 2nd Floor, Sun Deck, Wood Decking (Incl. Pergolas, Siding), Repairs/Paint	2034	to 6	9	49,000.00	49,000	49,000	**0.3%**										66,782						82,092
1.410	1	**1**	Allowance	Roof, 2nd Floor, Sun Deck, Wood Decking (Incl. Pergolas, Siding), Replacement	2028	to 25	3	375,000.00	375,000	375,000	**1.4%**				415,769												
1.411	340	**340**	Linear Feet	Roof, 2nd Floor, Sun Deck, Steel Railings (Incl. East of Pool Enclosure)	2026	to 45	1	260.00	88,400	88,400	**0.1%**		91,494														
1.412	3,900	**3,900**	Square Feet	Roof, 2nd Floor, Membrane (Beneath Decking and Pavers)	2028	15 to 20	3	38.00	148,200	148,200	**0.5%**				164,312												
1.413	4,700	**4,700**	Square Feet	Roof, Pool Enclosure, Inspections, Sealants and Repairs	2034	10 to 15	9	13.00	61,100	61,100	**0.2%**										83,273						
1.660	7,000	**7,000**	Square Feet	Walls, Concrete, Mechanical Penthouse, Repairs and Coating	2028	to 12	3	12.00	84,000	84,000	**0.4%**				93,132										131,372		
1.729	1	**1**	Allowance	Walls, Curtain Wall, Inspections and Infiltration Remediation (2027 is Evaluation)	2025	to 2	0	42,000.00	42,000	42,000	**1.0%**	42,000		107,000		48,196						59,245		63,465		67,985	
1.730	203,000	**203,000**	Square Feet	Walls, Curtain Wall, Inspections, Extensive Sealants and Capital Repairs	2031	to 20	6	21.00	4,263,000	4,263,000	**16.4%**							5,240,315									
1.820	23,000	**23,000**	Square Feet	Walls, Masonry, Inspections and Systematic Repairs	2027	to 8	2	6.00	138,000	138,000	**1.0%**			147,829								194,663					
1.844	5,500	**5,500**	Square Feet	Walls, Metal Siding, Racquetball Court, Exercise Room and Mall Atrium	2033	to 45	8	40.00	220,000	220,000	**0.3%**									289,698							
1.981	4,300	**4,300**	Square Feet	Windows and Doors, Lobby, Party Room and Aerobic Exercise Room	2031	to 60	6	130.00	559,000	559,000	**0.7%**							687,154									
1.982	2,100	**2,100**	Square Feet	Windows and Doors, 2nd Floor Walkway and Weight Exercise Room	2030	to 45	5	120.00	252,000	252,000	**0.3%**						299,297										
1.983	1,700	**1,700**	Square Feet	Windows and Doors, Pool	2029	to 45	4	148.00	251,600	251,600	**0.3%**					288,717											
1.984	1	**1**	Allowance	Windows and Doors, Mall (Entrances)	2029	to 60	4	60,000.00	60,000	60,000	**0.1%**					68,851											
1.985	1	**1**	Allowance	Windows and Doors, Mall, Skylight	2030	to 40	5	89,000.00	89,000	89,000	**0.1%**						105,704										
				Interior Building Elements																							
2.011	1	**1**	Allowance	Hallway Renovation Project, Near Term, Remaining Cost	2025	n/a	0	300,000.00	300,000	300,000	**0.3%**	300,000															
2.100	4	**4**	Each	Elevator Cab Finishes, Traction, Passenger (Near Term Includes Limited at 5-8)	2025	to 20	0	25,000.00	100,000	100,000	**0.5%**	300,000															
2.101	2	**2**	Each	Elevator Cab Finishes, Traction, Service	2042	to 20	17	23,000.00	46,000	46,000	**0.1%**																
2.102	2	**2**	Each	Elevator Cab Finishes, Hydraulic, Garage/Mall	2034	to 20	9	22,000.00	44,000	44,000	**0.2%**										59,967						
2.155	1	**1**	Allowance	Exercise Equipment, Cardiovascular	2027	to 5	2	59,000.00	59,000	59,000	**0.6%**			63,202					75,064					89,153			
2.165	1	**1**	Allowance	Exercise Equipment, Strength Training	2030	to 15	5	77,000.00	77,000	77,000	**0.3%**						91,452										
2.180	1	**1**	Allowance	Exercise Rooms, Renovations	2027	to 15	2	72,000.00	72,000	72,000	**0.4%**			77,128												116,546	
2.200	6,200	**6,200**	Square Yards	Floor Coverings, Carpet, Hallways	2036	8 to 12	11	94.00	582,800	582,800	**2.2%**												850,870				
2.300	2,800	**2,800**	Square Feet	Floor Coating, 2nd Floor Walkway and Pool Area (Replace with Epoxy)	2036	to 15	11	14.00	39,200	39,200	**0.2%**												57,231				
2.301	52	**52**	Floors	Floor Coverings, Vinyl, Service Elevator Foyers/Trash Areas, Residential Floors	2048	to 25	23	1,800.00	93,600	93,600	**0.2%**																
2.560	620	**620**	Each	Light Fixtures, Hallways	2045	to 25	20	380.00	235,600	235,600	**0.5%**																
2.600	1	**1**	Allowance	Lobby, Renovations	2029	to 20	4	200,000.00	200,000	200,000	**0.7%**					229,505											
2.700	728	**728**	Units	Mailboxes (Residential)	2029	to 35	4	170.00	123,760	123,760	**0.1%**					142,017											
2.711	1	**1**	Allowance	Mall, Corridors, Renovations (Furniture is Near Term)	2026	to 25	1	132,000.00	132,000	132,000	**0.5%**		22,000			151,473											
2.712	1	**1**	Allowance	Mall, Market, Renovations	2027	to 15	2	97,000.00	97,000	97,000	**0.5%**			103,909												157,013	
2.713	1	**1**	Allowance	Mall, Office, Renovations	2031	to 10	6	41,000.00	41,000	41,000	**0.2%**							50,399									68,689

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	16 2041	17 2042	18 2043	19 2044	20 2045	21 2046	22 2047	23 2048	24 2049	25 2050	26 2051	27 2052	28 2053	29 2054	30 2055
				Exterior Building Elements																						
1.260	1	**1**	Allowance	Lighting System, Main Roof Level	2044	to 20	19	60,000.00	60,000	60,000	**0.1%**				115,350											
1.400	10,300	**10,300**	Square Feet	Roofs, Tower, Main and Mechanical Penthouse, Modified Bitumen	2037	15 to 20	12	64.00	659,200	659,200	**1.0%**															
1.401	800	**800**	Square Feet	Roof, Lobby Canopy, Thermoplastic	2031	15 to 20	6	45.00	36,000	36,000	**0.1%**										85,077					
1.402	900	**900**	Square Feet	Roofs, 2nd Floor Walkway (Incl. Gutter System), Thermoplastic	2040	15 to 20	15	74.00	66,600	66,600	**0.1%**															
1.403	2,200	**2,200**	Square Feet	Roofs, 2nd Floor, Racquetball Court and Exercise Room	2027	15 to 20	2	43.00	94,600	94,600	**0.3%**						194,822									
1.404	2,600	**2,600**	Square Feet	Roof, 2nd Floor, Center/East, Thermoplastic	2037	15 to 20	12	39.00	101,400	101,400	**0.2%**															
1.405	9,500	**9,500**	Square Feet	Roof, 2nd Floor, Northwest, Thermoplastic	2030	15 to 20	5	37.00	351,500	351,500	**1.3%**									802,590						
1.406	2,100	**2,100**	Square Feet	Roof, 2nd Floor, Southwest, Thermoplastic	2035	15 to 20	10	39.00	81,900	81,900	**0.4%**														222,103	
1.407	15,000	**15,000**	Square Feet	Roof, 2nd Floor, Concrete, Waterproof Coating and Repairs	2025	10 to 15	0	15.00	225,000	225,000	**1.1%**									513,749						
1.408	2,300	**2,300**	Square Feet	Roof, 2nd Floor, Sun Deck, Planters	2037	to 30	12	125.00	287,500	287,500	**0.5%**															
1.409	1	**1**	Allowance	Roof, 2nd Floor, Sun Deck, Wood Decking (Incl. Pergolas, Siding), Repairs/Paint	2034	to 6	9	49,000.00	49,000	49,000	**0.3%**						100,912									
1.410	1	**1**	Allowance	Roof, 2nd Floor, Sun Deck, Wood Decking (Incl. Pergolas, Siding), Replacement	2028	to 25	3	375,000.00	375,000	375,000	**1.4%**											917,234				
1.411	340	**340**	Linear Feet	Roof, 2nd Floor, Sun Deck, Steel Railings (Incl. East of Pool Enclosure)	2026	to 45	1	260.00	88,400	88,400	**0.1%**															
1.412	3,900	**3,900**	Square Feet	Roof, 2nd Floor, Membrane (Beneath Decking and Pavers)	2028	15 to 20	3	38.00	148,200	148,200	**0.5%**								326,946							
1.413	4,700	**4,700**	Square Feet	Roof, Pool Enclosure, Inspections, Sealants and Repairs	2034	10 to 15	9	13.00	61,100	61,100	**0.2%**					121,576										
1.660	7,000	**7,000**	Square Feet	Walls, Concrete, Mechanical Penthouse, Repairs and Coating	2028	to 12	3	12.00	84,000	84,000	**0.4%**								185,314							
1.729	1	**1**	Allowance	Walls, Curtain Wall, Inspections and Infiltration Remediation (2027 is Evaluation)	2025	to 2	0	42,000.00	42,000	42,000	**1.0%**	72,827		78,015		83,571		89,523		95,900						117,885
1.730	203,000	**203,000**	Square Feet	Walls, Curtain Wall, Inspections, Extensive Sealants and Capital Repairs	2031	to 20	6	21.00	4,263,000	4,263,000	**16.4%**											10,427,121				
1.820	23,000	**23,000**	Square Feet	Walls, Masonry, Inspections and Systematic Repairs	2027	to 8	2	6.00	138,000	138,000	**1.0%**		256,334									337,542				
1.844	5,500	**5,500**	Square Feet	Walls, Metal Siding, Racquetball Court, Exercise Room and Mall Atrium	2033	to 45	8	40.00	220,000	220,000	**0.3%**															
1.981	4,300	**4,300**	Square Feet	Windows and Doors, Lobby, Party Room and Aerobic Exercise Room	2031	to 60	6	130.00	559,000	559,000	**0.7%**															
1.982	2,100	**2,100**	Square Feet	Windows and Doors, 2nd Floor Walkway and Weight Exercise Room	2030	to 45	5	120.00	252,000	252,000	**0.3%**															
1.983	1,700	**1,700**	Square Feet	Windows and Doors, Pool	2029	to 45	4	148.00	251,600	251,600	**0.3%**															
1.984	1	**1**	Allowance	Windows and Doors, Mall (Entrances)	2029	to 60	4	60,000.00	60,000	60,000	**0.1%**															
1.985	1	**1**	Allowance	Windows and Doors, Mall, Skylight	2030	to 40	5	89,000.00	89,000	89,000	**0.1%**															
				Interior Building Elements																						
2.011	1	**1**	Allowance	Hallway Renovation Project, Near Term, Remaining Cost	2025	n/a	0	300,000.00	300,000	300,000	**0.3%**															
2.100	4	**4**	Each	Elevator Cab Finishes, Traction, Passenger (Near Term Includes Limited at 5-8)	2025	to 20	0	25,000.00	100,000	100,000	**0.5%**				192,250											
2.101	2	**2**	Each	Elevator Cab Finishes, Traction, Service	2042	to 20	17	23,000.00	46,000	46,000	**0.1%**		82,555													
2.102	2	**2**	Each	Elevator Cab Finishes, Hydraulic, Garage/Mall	2034	to 20	9	22,000.00	44,000	44,000	**0.2%**														119,323	
2.155	1	**1**	Allowance	Exercise Equipment, Cardiovascular	2027	to 5	2	59,000.00	59,000	59,000	**0.6%**		105,886					125,759					149,362			
2.165	1	**1**	Allowance	Exercise Equipment, Strength Training	2030	to 15	5	77,000.00	77,000	77,000	**0.3%**					153,214										
2.180	1	**1**	Allowance	Exercise Rooms, Renovations	2027	to 15	2	72,000.00	72,000	72,000	**0.4%**											176,109				
2.200	6,200	**6,200**	Square Yards	Floor Coverings, Carpet, Hallways	2036	8 to 12	11	94.00	582,800	582,800	**2.2%**								1,285,724							
2.300	2,800	**2,800**	Square Feet	Floor Coating, 2nd Floor Walkway and Pool Area (Replace with Epoxy)	2036	to 15	11	14.00	39,200	39,200	**0.2%**									89,506						
2.301	52	**52**	Floors	Floor Coverings, Vinyl, Service Elevator Foyers/Trash Areas, Residential Floors	2048	to 25	23	1,800.00	93,600	93,600	**0.2%**								206,492							
2.560	620	**620**	Each	Light Fixtures, Hallways	2045	to 25	20	380.00	235,600	235,600	**0.5%**					468,794										
2.600	1	**1**	Allowance	Lobby, Renovations	2029	to 20	4	200,000.00	200,000	200,000	**0.7%**							426,302								
2.700	728	**728**	Units	Mailboxes (Residential)	2029	to 35	4	170.00	123,760	123,760	**0.1%**															
2.711	1	**1**	Allowance	Mall, Corridors, Renovations (Furniture is Near Term)	2026	to 25	1	132,000.00	132,000	132,000	**0.5%**										311,948					
2.712	1	**1**	Allowance	Mall, Market, Renovations	2027	to 15	2	97,000.00	97,000	97,000	**0.5%**											237,258				
2.713	1	**1**	Allowance	Mall, Office, Renovations	2031	to 10	6	41,000.00	41,000	41,000	**0.2%**									93,616						

Years 2025 to 2040

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Explanatory Notes:

1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
2) **FY2025** is Fiscal Year beginning March 1, 2024 and ending February 28, 2025.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030	6 2031	7 2032	8 2033	9 2034	10 2035	11 2036	12 2037	13 2038	14 2039	15 2040
2.714	2	**2**	Each	Mall, Rest Rooms, Renovations	2036	to 25	11	25,000.00	50,000	50,000	**0.1%**												72,998				
2.800	220,000	**220,000**	Square Feet	Paint Finishes, Hallways (Incl. Elevator Foyer Wall Coverings)	2036	8 to 12	11	1.70	374,000	374,000	**1.4%**												546,029				
2.840	2	**1**	Allowance	Party Room, Renovations, Phased (Incl. Kitchen)	2027	to 20	2 to 11	48,000.00	48,000	96,000	**0.4%**			51,419									70,079				
2.900	2	**2**	Each	Rest/Locker Rooms, 2nd Floor, Renovations	2037	to 25	12	33,000.00	66,000	66,000	**0.1%**													99,731			
2.911	1	**1**	Allowance	Signage (Near Term is Lower Levels)	2026	to 25	1	85,000.00	85,000	85,000	**0.2%**		30,000														
2.991	1	**1**	Allowance	Wall Repairs, Fiber Line Installation	2025	n/a	0	124,000.00	124,000	124,000	**0.1%**	124,000															
				Building Services Elements																							
3.020	2	**2**	Each	Air Handling Units, Residential Corridors, Total Replacement	2038	to 60	13	390,000.00	780,000	780,000	**1.3%**														1,219,886		
3.021	1	**1**	Each	Air Handling Unit, Lobby, Total Replacement (Incl. Return Air Fan)	2038	to 60	13	245,000.00	245,000	245,000	**0.4%**														383,169		
3.022	1	**1**	Each	Air Handling Unit, Mall Corridors (Replacement)	2027	to 35	2	130,000.00	130,000	130,000	**0.1%**			139,259													
3.023	3	**3**	Each	Air Handling Units, Party Room, Laundry Room and Basement (Replacement)	2027	to 35	2	62,000.00	186,000	186,000	**0.2%**			199,248													
3.024	1	**1**	Each	Air Handling Unit, Pool (Incl. Return Air Fan) (Replacement)	2027	to 30	2	137,000.00	137,000	137,000	**0.5%**			146,758													
3.025	1	**1**	Each	Air Handling Unit, Racquetball Court, Rooftop Unit (Near Term is Remaining)	2025	to 25	0	25,000.00	25,000	25,000	**0.1%**	15,000															
3.026	1	**1**	Each	Air Handling Unit, Elevator Room, Low Rise	2026	to 25	1	26,000.00	26,000	26,000	**0.1%**		26,910														
3.105	2	**2**	Each	Boilers, Building Heat, 29,291-MBH	2034	to 60	9	1,250,000	2,500,000	2,500,000	**3.6%**										3,407,243						
3.106	1	**1**	Allowance	Boilers, Building Heat, Feed Water System (Tank and Pumps)	2034	to 35	9	76,000.00	76,000	76,000	**0.1%**										103,580						
3.160	4	**4**	Each	Boilers, Domestic Hot Water, Residential, High Zone, 800-MBH	2031	to 15	6	52,000.00	208,000	208,000	**0.7%**							255,685									
3.161	3	**3**	Each	Boilers, Domestic Hot Water, Residential, Low Zone, 1,255-MBH	2034	to 15	9	61,000.00	183,000	183,000	**0.7%**										249,410						
3.162	2	**2**	Each	Boilers, Domestic Hot Water, Commercial, 660-MBH	2026	to 15	1	35,000.00	70,000	70,000	**0.4%**		72,450													113,309	
3.170	1	**1**	Allowance	Building Automation System	2026	to 15	1	167,000.00	167,000	167,000	**0.5%**		172,845														
3.200	2	**2**	Each	Chillers, 600-tons, Capital Repairs	2026	to 10	1	71,000.00	142,000	142,000	**0.5%**		146,970														
3.205	2	**2**	Each	Chillers, 600-tons, Replacement	2035	to 35	10	760,000.00	1,520,000	1,520,000	**2.2%**											2,144,110					
3.260	1	**1**	Each	Cooling Tower, Residential, 1,051-tons, Capital Repairs (Liner, Fill, Baffles)	2038	10 to 15	13	80,000.00	80,000	80,000	**0.3%**														125,116		
3.265	1	**1**	Each	Cooling Tower, Residential, 1,051-tons, Replacement	2043	to 35	18	720,000.00	720,000	720,000	**1.4%**																
3.266	1	**1**	Each	Cooling Tower, Commercial, Replacement	2049	to 35	24	90,000.00	90,000	90,000	**0.2%**																
3.300	1	**1**	Allowance	Electrical System, Main Panels	2040	to 70+	15	650,000.00	650,000	650,000	**1.1%**																1,088,977
3.320	2	**2**	Each	Elevators, Hydraulic, Garage/Mall, Pumps and Controls	2035	to 30	10	95,000.00	190,000	190,000	**0.3%**											268,014					
3.321	2	**2**	Each	Elevators, Hydraulic, Garage/Mall, Cylinders	2046	to 45	21	64,000.00	128,000	128,000	**0.3%**																
3.322	1	**1**	Each	Elevator, Hydraulic, Refuse, Controls	2050	to 30	25	156,000.00	156,000	156,000	**0.4%**																
3.323	1	**1**	Each	Elevator, Hydraulic, Refuse, Pump and Cylinder	2042	to 30	17	78,000.00	78,000	78,000	**0.1%**																
3.360	4	**4**	Each	Elevators, Traction, Passenger, Controls and Equipment	2032	to 30	7	490,000.00	1,960,000	1,960,000	**2.6%**								2,493,667								
3.361	2	**2**	Each	Elevators, Traction, Service, Controls and Equipment	2033	to 30	8	550,000.00	1,100,000	1,100,000	**1.5%**									1,448,490							
3.380	2	**2**	Each	Exhaust Fans, Main Kitchen and Rest Room (Near Term is Rest Room Components)	2025	to 45	0	99,000.00	198,000	198,000	**0.5%**	162,500												299,192			
3.393	7	**7**	Each	Expansion Tanks (Main Building Heating and Cooling System)	2034	to 60	9	36,000.00	252,000	252,000	**0.4%**										343,450						
3.460	2	**2**	Each	Heat Exchangers, Building Heating, Main	2034	to 35	9	185,000.00	370,000	370,000	**0.5%**										504,272						
3.461	3	**3**	Each	Heat Exchangers, Remaining (Pool Air Handler, Fin Tubes, Low Level)	2034	to 35	9	61,000.00	183,000	183,000	**0.3%**										249,410						
3.555	1	**1**	Allowance	Life Safety System, Control Panels (Incl. Detectors)	2037	to 15	12	95,000.00	95,000	95,000	**0.4%**													143,552			
3.560	1	**1**	Allowance	Life Safety System, Devices (Audio Fixtures, Voice Panels at Stairwells)	2031	to 25	6	215,000.00	215,000	215,000	**0.9%**							264,290									
3.561	1	**1**	Allowance	Life Safety System, Valves at Fire Standpipes	2025	n/a	0	33,000.00	33,000	33,000	**0.0%**	33,000															
3.580	470	**470**	Each	Light Fixtures, Exit and Emergency (Incl. Remote Emergency) (Near Term is Limited)	2026	to 25	1	310.00	145,700	145,700	**0.3%**		40,000														
3.598	1	**1**	Allowance	Pipes, Risers, Building Heating, Cooling and Condensate, Invasive Study	2026	n/a	1	37,000.00	37,000	37,000	**0.0%**		38,295														
3.599	1	**1**	Allowance	Pipes, Risers, Building Heating, Cooling and Condensate, 01/03 Tier (Remaining)	2025	n/a	0	362,170.00	362,170	362,170	**0.4%**	362,170															
3.600	2,292	**287**	Each	Pipes, Riser Sections, Building Heating, Cooling and Condensate, Phased	2029	to 80+	4 to 11	2,900.00	830,850	6,646,800	**9.0%**					953,419	986,789	1,021,327	1,057,073	1,094,071	1,132,363	1,171,996	1,213,016				

RESERVE EXPENDITURES

Park Tower
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Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	16 2041	17 2042	18 2043	19 2044	20 2045	21 2046	22 2047	23 2048	24 2049	25 2050	26 2051	27 2052	28 2053	29 2054	30 2055
2.714	2	**2**	Each	Mall, Rest Rooms, Renovations	2036	to 25	11	25,000.00	50,000	50,000	**0.1%**															
2.800	220,000	**220,000**	Square Feet	Paint Finishes, Hallways (Incl. Elevator Foyer Wall Coverings)	2036	8 to 12	11	1.70	374,000	374,000	**1.4%**								825,087							
2.840	2	**1**	Allowance	Party Room, Renovations, Phased (Incl. Kitchen)	2027	to 20	2 to 11	48,000.00	48,000	96,000	**0.4%**					95,510									130,170	
2.900	2	**2**	Each	Rest/Locker Rooms, 2nd Floor, Renovations	2037	to 25	12	33,000.00	66,000	66,000	**0.1%**															
2.911	1	**1**	Allowance	Signage (Near Term is Lower Levels)	2026	to 25	1	85,000.00	85,000	85,000	**0.2%**					169,132										
2.991	1	**1**	Allowance	Wall Repairs, Fiber Line Installation	2025	n/a	0	124,000.00	124,000	124,000	**0.1%**															
				Building Services Elements																						
3.020	2	**2**	Each	Air Handling Units, Residential Corridors, Total Replacement	2038	to 60	13	390,000.00	780,000	780,000	**1.3%**															
3.021	1	**1**	Each	Air Handling Unit, Lobby, Total Replacement (Incl. Return Air Fan)	2038	to 60	13	245,000.00	245,000	245,000	**0.4%**															
3.022	1	**1**	Each	Air Handling Unit, Mall Corridors (Replacement)	2027	to 35	2	130,000.00	130,000	130,000	**0.1%**															
3.023	3	**3**	Each	Air Handling Units, Party Room, Laundry Room and Basement (Replacement)	2027	to 35	2	62,000.00	186,000	186,000	**0.2%**															
3.024	1	**1**	Each	Air Handling Unit, Pool (Incl. Return Air Fan) (Replacement)	2027	to 30	2	137,000.00	137,000	137,000	**0.5%**														371,527	
3.025	1	**1**	Each	Air Handling Unit, Racquetball Court, Rooftop Unit (Near Term is Remaining)	2025	to 25	0	25,000.00	25,000	25,000	**0.1%**						51,486									
3.026	1	**1**	Each	Air Handling Unit, Elevator Room, Low Rise	2026	to 25	1	26,000.00	26,000	26,000	**0.1%**								57,359							
3.105	2	**2**	Each	Boilers, Building Heat, 29,291-MBH	2034	to 60	9	1,250,000	2,500,000	2,500,000	**3.6%**															
3.106	1	**1**	Allowance	Boilers, Building Heat, Feed Water System (Tank and Pumps)	2034	to 35	9	76,000.00	76,000	76,000	**0.1%**															
3.160	4	**4**	Each	Boilers, Domestic Hot Water, Residential, High Zone, 800-MBH	2031	to 15	6	52,000.00	208,000	208,000	**0.7%**						428,362									
3.161	3	**3**	Each	Boilers, Domestic Hot Water, Residential, Low Zone, 1,255-MBH	2034	to 15	9	61,000.00	183,000	183,000	**0.7%**								403,719							
3.162	2	**2**	Each	Boilers, Domestic Hot Water, Commercial, 660-MBH	2026	to 15	1	35,000.00	70,000	70,000	**0.4%**												177,210			
3.170	1	**1**	Allowance	Building Automation System	2026	to 15	1	167,000.00	167,000	167,000	**0.5%**	289,576														
3.200	2	**2**	Each	Chillers, 600-tons, Capital Repairs	2026	to 10	1	71,000.00	142,000	142,000	**0.5%**						292,439									
3.205	2	**2**	Each	Chillers, 600-tons, Replacement	2035	to 35	10	760,000.00	1,520,000	1,520,000	**2.2%**															
3.260	1	**1**	Each	Cooling Tower, Residential, 1,051-tons, Capital Repairs (Liner, Fill, Baffles)	2038	10 to 15	13	80,000.00	80,000	80,000	**0.3%**													209,614		
3.265	1	**1**	Each	Cooling Tower, Residential, 1,051-tons, Replacement	2043	to 35	18	720,000.00	720,000	720,000	**1.4%**			1,337,392												
3.266	1	**1**	Each	Cooling Tower, Commercial, Replacement	2049	to 35	24	90,000.00	90,000	90,000	**0.2%**									205,500						
3.300	1	**1**	Allowance	Electrical System, Main Panels	2040	to 70+	15	650,000.00	650,000	650,000	**1.1%**															
3.320	2	**2**	Each	Elevators, Hydraulic, Garage/Mall, Pumps and Controls	2035	to 30	10	95,000.00	190,000	190,000	**0.3%**															
3.321	2	**2**	Each	Elevators, Hydraulic, Garage/Mall, Cylinders	2046	to 45	21	64,000.00	128,000	128,000	**0.3%**						263,607									
3.322	1	**1**	Each	Elevator, Hydraulic, Refuse, Controls	2050	to 30	25	156,000.00	156,000	156,000	**0.4%**										368,666					
3.323	1	**1**	Each	Elevator, Hydraulic, Refuse, Pump and Cylinder	2042	to 30	17	78,000.00	78,000	78,000	**0.1%**		139,985													
3.360	4	**4**	Each	Elevators, Traction, Passenger, Controls and Equipment	2032	to 30	7	490,000.00	1,960,000	1,960,000	**2.6%**															
3.361	2	**2**	Each	Elevators, Traction, Service, Controls and Equipment	2033	to 30	8	550,000.00	1,100,000	1,100,000	**1.5%**															
3.380	2	**2**	Each	Exhaust Fans, Main Kitchen and Rest Room (Near Term is Rest Room Components)	2025	to 45	0	99,000.00	198,000	198,000	**0.5%**															
3.393	7	**7**	Each	Expansion Tanks (Main Building Heating and Cooling System)	2034	to 60	9	36,000.00	252,000	252,000	**0.4%**															
3.460	2	**2**	Each	Heat Exchangers, Building Heating, Main	2034	to 35	9	185,000.00	370,000	370,000	**0.5%**															
3.461	3	**3**	Each	Heat Exchangers, Remaining (Pool Air Handler, Fin Tubes, Low Level)	2034	to 35	9	61,000.00	183,000	183,000	**0.3%**															
3.555	1	**1**	Allowance	Life Safety System, Control Panels (Incl. Detectors)	2037	to 15	12	95,000.00	95,000	95,000	**0.4%**												240,499			
3.560	1	**1**	Allowance	Life Safety System, Devices (Audio Fixtures, Voice Panels at Stairwells)	2031	to 25	6	215,000.00	215,000	215,000	**0.9%**														583,054	
3.561	1	**1**	Allowance	Life Safety System, Valves at Fire Standpipes	2025	n/a	0	33,000.00	33,000	33,000	**0.0%**															
3.580	470	**470**	Each	Light Fixtures, Exit and Emergency (Incl. Remote Emergency) (Near Term is Limited)	2026	to 25	1	310.00	145,700	145,700	**0.3%**			270,636												
3.598	1	**1**	Allowance	Pipes, Risers, Building Heating, Cooling and Condensate, Invasive Study	2026	n/a	1	37,000.00	37,000	37,000	**0.0%**															
3.599	1	**1**	Allowance	Pipes, Risers, Building Heating, Cooling and Condensate, 01/03 Tier (Remaining)	2025	n/a	0	362,170.00	362,170	362,170	**0.4%**															
3.600	2,292	**287**	Each	Pipes, Riser Sections, Building Heating, Cooling and Condensate, Phased	2029	to 80+	4 to 11	2,900.00	830,850	6,646,800	**9.0%**															

Years 2025 to 2040

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Explanatory Notes:

1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
2) **FY2025** is Fiscal Year beginning March 1, 2024 and ending February 28, 2025.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030	6 2031	7 2032	8 2033	9 2034	10 2035	11 2036	12 2037	13 2038	14 2039	15 2040
3.604	3	**1**	Allowance	Pipes, Riser Sections, Domestic Hot Water, Remaining Phased	2026	to 70+	1 to 3	595,000.00	595,000	1,785,000	**1.9%**		678,000	609,000	498,300											
3.605	2,754	**344**	Each	Pipes, Riser Sections, Domestic Cold Water, Waste and Vent, Phased	2037	to 70+	12 to 19	2,700.00	929,475	7,435,800	**13.3%**													1,404,501	1,453,658	1,504,536	1,557,195
3.700	2	**2**	Each	Pumps, Building Cooling, Commercial at Cooling Tower, 7.5-HP (Incl. Controls, VFDs)	2040	to 25	15	21,000.00	42,000	42,000	**0.1%**																70,365
3.701	1	**1**	Each	Pump, Building Cooling, Residential, Cooling Tower, 75-HP (Incl. Controls)	2035	to 30	10	59,000.00	59,000	59,000	**0.1%**											83,225					
3.702	2	**2**	Each	Pumps, Building Heating, Commercial, 10-HP (Incl. Controls)	2028	to 30	3	23,000.00	46,000	46,000	**0.2%**				51,001											
3.703	3	**3**	Each	Pumps, HVAC, Residential, Fan Coil Loop/Dual Temperature, 100-HP (Incl. Controls, VFDs)	2049	to 35	24	72,000.00	216,000	216,000	**0.5%**																
3.704	2	**2**	Each	Pumps, Building Heating, Residential, Fin Tubes, 10-HP (Incl. Controls) (2025 is 1)	2025	to 30	0	33,000.00	66,000	66,000	**0.2%**	33,000															
3.705	3	**3**	Each	Pumps, Domestic Cold Water, 30- to 60-HP (Incl. Controls, VFDs)	2038	to 25	13	70,000.00	210,000	210,000	**0.3%**														328,431		
3.706	2	**2**	Each	Pumps, Fire Suppression, 40- to 100-HP (Incl. Controls, Jockey Pumps)	2029	to 60	4	103,000.00	206,000	206,000	**0.2%**					236,390										
3.707	2	**2**	Each	Pumps, Gas Booster, 10-HP (Incl. Controls)	2040	to 25	15	37,000.00	74,000	74,000	**0.1%**																123,976
3.708	2	**2**	Each	Pumps, Sewage Ejection, 10-HP (Incl. Controls)	2039	to 25	14	17,000.00	34,000	34,000	**0.1%**															55,036	
3.820	3	**1**	Allowance	Security System, Camera System, Phased	2027	to 15	2 to 10	29,000.00	29,000	87,000	**0.4%**			31,066				35,648				40,907				46,942	
3.821	2	**1**	Allowance	Security System, Fob Reader System, Phased	2028	to 15	3 to 10	18,000.00	18,000	36,000	**0.1%**				19,957							25,391					
3.861	1	**1**	Each	Storage Tank, Domestic Hot Water, High Zone	2028	to 45	3	135,000.00	135,000	135,000	**0.2%**				149,677												
3.900	1	**1**	Each	Trash Compactor	2039	to 25	14	17,500.00	17,500	17,500	**0.0%**															28,327	
3.920	30	**9**	Each	Valves, Large Diameter, Phased (Fire Pumps, Main Water, Main Mech.)	2025	to 50	3 to 5	9,600.00	86,400	288,000	**0.4%**	42,000			95,793	99,146	102,616										
				Property Site Elements																							
4.045	1,750	**1,750**	Square Yards	Asphalt Pavement, East and North (Shared), Total Replacement	2037	15 to 20	12	36.00	63,000	63,000	**0.3%**													95,197			
4.140	1	**1**	Allowance	Concrete, On-Grade at Site, Partial (Sidewalks, Pavement, Curbs)	2029	to 50	4	24,000.00	24,000	24,000	**0.2%**					27,541						33,854					
4.300	1	**1**	Allowance	Fence, Steel, East Perimeter	2026	to 35	1	50,000.00	50,000	50,000	**0.1%**		51,750														
4.959	1	**1**	Allowance	Plaza, Waterproof Membrane and Concrete, Interim Repairs/Sealants (Incl. Circle Drive)	2026	to 6	1	50,000.00	50,000	50,000	**0.4%**		25,000		55,436						68,145						83,767
4.960	11,000	**11,000**	Square Feet	Plaza, Waterproof Membrane and Concrete, Replacement (Incl. Circle Drive)	2043	to 30	18	115.00	1,265,000	1,265,000	**2.5%**																
4.961	1,500	**1,500**	Square Feet	Plaza, Waterproof Membrane, Planters (Except at Lobby Entrance)	2034	to 30	9	118.00	177,000	177,000	**0.3%**										241,233						
4.971	1	**1**	Each	Tractor (Incl. Attachments)	2027	to 15	2	31,000.00	31,000	31,000	**0.1%**			33,208													
				Pool Elements																							
6.553	1	**1**	Allowance	Hot Tub (Jacuzzi), Insert	2029	to 20	4	39,000.00	39,000	39,000	**0.1%**					44,753											
6.600	2	**1**	Allowance	Mechanical Equipment, Phased	2027	to 15	2 to 8	34,000.00	34,000	68,000	**0.3%**			36,422						44,772						55,036	
6.800	2,100	**2,100**	Square Feet	Pool, Main/Indoor, Vinyl Liner and Repairs	2030	to 15	5	78.00	163,800	163,800	**1.0%**						194,543										
6.801	1	**1**	Allowance	Pool, Outdoor, Plaster Finish and Repairs (Kiddie Pool)	2031	8 to 12	6	35,000.00	35,000	35,000	**0.2%**							43,024									
				Garage Elements																							
7.300	63,000	**63,000**	Square Feet	Concrete, Elevated Floor, Inspections and Capital Repairs (1P Level)	2032	to 10	7	2.70	170,100	170,100	**1.0%**								216,415								
7.360	63,000	**3,780**	Square Feet	Concrete, On-grade, Partial (2P Level) (Incl. Drain Repairs)	2030	to 90	5 to 30+	34.00	128,520	2,142,000	**0.7%**						152,641									208,035	
7.400	2	**2**	Each	Doors and Operators, Vehicular	2033	10 to 15	8	30,000.00	60,000	60,000	**0.4%**									79,009							
7.401	6	**6**	Each	Doors and Operators, Fire	2031	to 50	6	22,000.00	132,000	132,000	**0.2%**							162,262									
7.460	1	**1**	Allowance	Exhaust System (Fans, Louvers and Carbon Monoxide Detectors)	2031	to 30	6	135,000.00	135,000	135,000	**0.2%**							165,949									
7.499	126,000	**126,000**	Square Feet	Fire Suppression System, Heads	2025	n/a	0	1.20	151,200	151,200	**0.2%**	151,200															
7.500	126,000	**126,000**	Square Feet	Fire Suppression System, Piping	2036	to 60	11	4.30	541,800	541,800	**0.8%**												791,012				
7.600	200	**200**	Each	Light Fixtures	2035	to 30	10	280.00	56,000	56,000	**0.1%**											78,994					
7.660	150,000	**150,000**	Square Feet	Paint Finishes	2033	to 20	8	1.10	165,000	165,000	**0.7%**									217,273							
7.799	26,000	**26,000**	Square Feet	Traffic Coating, Elevated Floor, Overlay at Drive Lanes (1P Level)	2032	to 10	7	8.30	215,800	215,800	**0.9%**								274,558								
7.800	63,000	**63,000**	Square Feet	Traffic Coating, Elevated Floor, Total Replacement (1P Level)	2042	to 20	17	9.00	567,000	567,000	**1.1%**																

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Life Analysis, Years Remaining	Costs, $ Unit (2025)	Costs, $ Per Phase (2025)	Costs, $ Total (2025)	Percentage of Future Expenditures	16 2041	17 2042	18 2043	19 2044	20 2045	21 2046	22 2047	23 2048	24 2049	25 2050	26 2051	27 2052	28 2053	29 2054	30 2055
3.604	3	**1**	Allowance	Pipes, Riser Sections, Domestic Hot Water, Remaining Phased	2026	to 70+	1 to 3	595,000.00	595,000	1,785,000	**1.9%**															
3.605	2,754	**344**	Each	Pipes, Riser Sections, Domestic Cold Water, Waste and Vent, Phased	2037	to 70+	12 to 19	2,700.00	929,475	7,435,800	**13.3%**	1,611,697	1,668,106	1,726,490	1,786,917											
3.700	2	**2**	Each	Pumps, Building Cooling, Commercial at Cooling Tower, 7.5-HP (Incl. Controls, VFDs)	2040	to 25	15	21,000.00	42,000	42,000	**0.1%**															
3.701	1	**1**	Each	Pump, Building Cooling, Residential, Cooling Tower, 75-HP (Incl. Controls)	2035	to 30	10	59,000.00	59,000	59,000	**0.1%**															
3.702	2	**2**	Each	Pumps, Building Heating, Commercial, 10-HP (Incl. Controls)	2028	to 30	3	23,000.00	46,000	46,000	**0.2%**														124,746	
3.703	3	**3**	Each	Pumps, HVAC, Residential, Fan Coil Loop/Dual Temperature, 100-HP (Incl. Controls, VFDs)	2049	to 35	24	72,000.00	216,000	216,000	**0.5%**									493,199						
3.704	2	**2**	Each	Pumps, Building Heating, Residential, Fin Tubes, 10-HP (Incl. Controls) (2025 is 1)	2025	to 30	0	33,000.00	66,000	66,000	**0.2%**								145,604							
3.705	3	**3**	Each	Pumps, Domestic Cold Water, 30- to 60-HP (Incl. Controls, VFDs)	2038	to 25	13	70,000.00	210,000	210,000	**0.3%**															
3.706	2	**2**	Each	Pumps, Fire Suppression, 40- to 100-HP (Incl. Controls, Jockey Pumps)	2029	to 60	4	103,000.00	206,000	206,000	**0.2%**															
3.707	2	**2**	Each	Pumps, Gas Booster, 10-HP (Incl. Controls)	2040	to 25	15	37,000.00	74,000	74,000	**0.1%**															
3.708	2	**2**	Each	Pumps, Sewage Ejection, 10-HP (Incl. Controls)	2039	to 25	14	17,000.00	34,000	34,000	**0.1%**															
3.820	3	**1**	Allowance	Security System, Camera System, Phased	2027	to 15	2 to 10	29,000.00	29,000	87,000	**0.4%**			53,867				61,814				70,933				81,397
3.821	2	**1**	Allowance	Security System, Fob Reader System, Phased	2028	to 15	3 to 10	18,000.00	18,000	36,000	**0.1%**		32,304							41,100						
3.861	1	**1**	Each	Storage Tank, Domestic Hot Water, High Zone	2028	to 45	3	135,000.00	135,000	135,000	**0.2%**															
3.900	1	**1**	Each	Trash Compactor	2039	to 25	14	17,500.00	17,500	17,500	**0.0%**															
3.920	30	**9**	Each	Valves, Large Diameter, Phased (Fire Pumps, Main Water, Main Mech.)	2025	to 50	3 to 5	9,600.00	86,400	288,000	**0.4%**															
				Property Site Elements																						
4.045	1,750	**1,750**	Square Yards	Asphalt Pavement, East and North (Shared), Total Replacement	2037	15 to 20	12	36.00	63,000	63,000	**0.3%**												159,489			
4.140	1	**1**	Allowance	Concrete, On-Grade at Site, Partial (Sidewalks, Pavement, Curbs)	2029	to 50	4	24,000.00	24,000	24,000	**0.2%**	41,616						51,156						62,884		
4.300	1	**1**	Allowance	Fence, Steel, East Perimeter	2026	to 35	1	50,000.00	50,000	50,000	**0.1%**															
4.959	1	**1**	Allowance	Plaza, Waterproof Membrane and Concrete, Interim Repairs/Sealants (Incl. Circle Drive)	2026	to 6	1	50,000.00	50,000	50,000	**0.4%**												126,578			
4.960	11,000	**11,000**	Square Feet	Plaza, Waterproof Membrane and Concrete, Replacement (Incl. Circle Drive)	2043	to 30	18	115.00	1,265,000	1,265,000	**2.5%**			2,349,724												
4.961	1,500	**1,500**	Square Feet	Plaza, Waterproof Membrane, Planters (Except at Lobby Entrance)	2034	to 30	9	118.00	177,000	177,000	**0.3%**															
4.971	1	**1**	Each	Tractor (Incl. Attachments)	2027	to 15	2	31,000.00	31,000	31,000	**0.1%**		55,635													
				Pool Elements																						
6.553	1	**1**	Allowance	Hot Tub (Jacuzzi), Insert	2029	to 20	4	39,000.00	39,000	39,000	**0.1%**							83,129								
6.600	2	**1**	Allowance	Mechanical Equipment, Phased	2027	to 15	2 to 8	34,000.00	34,000	68,000	**0.3%**					67,653						83,163				
6.800	2,100	**2,100**	Square Feet	Pool, Main/Indoor, Vinyl Liner and Repairs	2030	to 15	5	78.00	163,800	163,800	**1.0%**		293,968												444,206	
6.801	1	**1**	Allowance	Pool, Outdoor, Plaster Finish and Repairs (Kiddie Pool)	2031	8 to 12	6	35,000.00	35,000	35,000	**0.2%**	60,690										85,609				
				Garage Elements																						
7.300	63,000	**63,000**	Square Feet	Concrete, Elevated Floor, Inspections and Capital Repairs (1P Level)	2032	to 10	7	2.70	170,100	170,100	**1.0%**		305,274										430,620			
7.360	63,000	**3,780**	Square Feet	Concrete, On-grade, Partial (2P Level) (Incl. Drain Repairs)	2030	to 90	5 to 30+	34.00	128,520	2,142,000	**0.7%**							283,530							
7.400	2	**2**	Each	Doors and Operators, Vehicular	2033	10 to 15	8	30,000.00	60,000	60,000	**0.4%**				115,350											168,408
7.401	6	**6**	Each	Doors and Operators, Fire	2031	to 50	6	22,000.00	132,000	132,000	**0.2%**															
7.460	1	**1**	Allowance	Exhaust System (Fans, Louvers and Carbon Monoxide Detectors)	2031	to 30	6	135,000.00	135,000	135,000	**0.2%**															
7.499	126,000	**126,000**	Square Feet	Fire Suppression System, Heads	2025	n/a	0	1.20	151,200	151,200	**0.2%**															
7.500	126,000	**126,000**	Square Feet	Fire Suppression System, Piping	2036	to 60	11	4.30	541,800	541,800	**0.8%**															
7.600	200	**200**	Each	Light Fixtures	2035	to 30	10	280.00	56,000	56,000	**0.1%**															
7.660	150,000	**150,000**	Square Feet	Paint Finishes	2033	to 20	8	1.10	165,000	165,000	**0.7%**													432,328		
7.799	26,000	**26,000**	Square Feet	Traffic Coating, Elevated Floor, Overlay at Drive Lanes (1P Level)	2032	to 10	7	8.30	215,800	215,800	**0.9%**												546,312			
7.800	63,000	**63,000**	Square Feet	Traffic Coating, Elevated Floor, Total Replacement (1P Level)	2042	to 20	17	9.00	567,000	567,000	**1.1%**		1,017,581													

Years 2025 to 2040

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Explanatory Notes:

1) **3.5%** is the estimated Inflation Rate for estimating Future Replacement Costs.
2) **FY2025** is Fiscal Year beginning March 1, 2024 and ending February 28, 2025.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030	6 2031	7 2032	8 2033	9 2034	10 2035	11 2036	12 2037	13 2038	14 2039	15 2040
7.900	1	**1**	Allowance	Unit Heaters (or Air Handling Units) (Near Term is Remaining Original)	2031	to 30	6	175,000.00	175,000	175,000	**0.3%**							215,120									
	1	**1**	Allowance	**Reserve Study Update with Site Visit**	2027	2	2	12,000.00	12,000	12,000	**0.0%**			12,000													
				Anticipated Expenditures, By Year ($95,759,239 over 30 years)								1,747,370	1,395,714	1,858,785	1,543,377	2,290,008	2,350,514	8,185,427	4,116,778	3,173,312	6,509,130	4,215,927	3,601,234	4,118,531	3,641,633	2,352,764	3,186,639

RESERVE EXPENDITURES

Park Tower
Condominium Association
Chicago, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Costs, $ Unit (2025)	Per Phase (2025)	Total (2025)	Percentage of Future Expenditures	16 2041	17 2042	18 2043	19 2044	20 2045	21 2046	22 2047	23 2048	24 2049	25 2050	26 2051	27 2052	28 2053	29 2054	30 2055
7.900	1	**1**	Allowance	Unit Heaters (or Air Handling Units) (Near Term is Remaining Original)	2031	to 30	6	175,000.00	175,000	175,000	**0.3%**							30,000								
	1	**1**	Allowance	**Reserve Study Update with Site Visit**	2027	2	2	12,000.00	12,000	12,000	**0.0%**															
				Anticipated Expenditures, By Year ($95,759,239 over 30 years)								2,076,405	3,701,294	6,072,457	2,209,867	1,159,450	1,331,628	867,684	3,719,774	2,335,160	765,691	12,334,969	1,830,070	704,826	1,995,129	367,690

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS
Park Tower
Condominium Association
Chicago, Illinois

Individual Reserve Budgets & Cash Flows for the Next 30 Years

		FY2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Reserves at Beginning of Year	*(Note 1)*	4,633,104	4,599,075	5,671,887	6,486,873	7,828,819	8,635,493	9,583,794	4,767,526	4,051,238	4,431,541	1,579,085	1,064,005	1,284,105	1,120,021	1,576,078	3,518,416
Total Recommended Reserve Contributions	*(Note 2)*	**1,550,100**	**2,227,800**	**2,388,800**	**2,549,800**	**2,710,800**	**2,871,800**	**3,032,800**	**3,193,800**	**3,354,800**	**3,515,800**	**3,638,900**	**3,766,300**	**3,898,100**	**4,034,500**	**4,175,700**	**4,321,800**
Estimated Interest Earned, During Year	*(Note 3)*	163,241	240,726	284,971	335,524	385,882	427,015	336,359	206,690	198,815	140,874	61,947	55,034	56,347	63,190	119,402	196,128
Anticipated Expenditures, By Year		(1,747,370)	(1,395,714)	(1,858,785)	(1,543,377)	(2,290,008)	(2,350,514)	(8,185,427)	(4,116,778)	(3,173,312)	(6,509,130)	(4,215,927)	(3,601,234)	(4,118,531)	(3,641,633)	(2,352,764)	(3,186,639)
Anticipated Reserves at Year End		$4,599,075	$5,671,887	$6,486,873	$7,828,819	$8,635,493	$9,583,794	$4,767,526	$4,051,238	$4,431,541	$1,579,085	$1,064,005 *(NOTE 5)*	$1,284,105	$1,120,021 *(NOTE 5)*	$1,576,078	$3,518,416	$4,849,705

(continued)

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

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
Reserves at Beginning of Year	4,849,705	7,536,707	6,315,064	2,683,921	2,913,749	4,312,975	5,688,659	7,694,134	6,967,082	7,717,901	10,210,200	1,076,872	2,367,428	4,981,134	6,511,770
Total Recommended Reserve Contributions	**4,473,100**	**2,155,000**	**2,230,400**	**2,308,500**	**2,389,300**	**2,472,900**	**2,559,500**	**2,649,100**	**2,741,800**	**2,837,800**	**2,937,100**	**3,039,900**	**3,146,300**	**3,256,400**	**3,370,400**
Estimated Interest Earned, During Year	290,307	324,651	210,914	131,195	169,376	234,413	313,659	343,622	344,179	420,190	264,541	80,726	172,232	269,365	384,630
Anticipated Expenditures, By Year	(2,076,405)	(3,701,294)	(6,072,457)	(2,209,867)	(1,159,450)	(1,331,628)	(867,684)	(3,719,774)	(2,335,160)	(765,691)	(12,334,969)	(1,830,070)	(704,826)	(1,995,129)	(367,690)
Anticipated Reserves at Year End	$7,536,707	$6,315,064	$2,683,921	$2,913,749	$4,312,975	$5,688,659	$7,694,134	$6,967,082	$7,717,901	$10,210,200	$1,076,872 *(NOTE 5)*	$2,367,428	$4,981,134	$6,511,770	$9,899,110 *(NOTE 4)*

Explanatory Notes:

1) Year 2025 starting reserves are as of May 31, 2024; FY2025 starts March 1, 2024 and ends February 28, 2025.
2) Reserve Contributions for 2025 are the remaining budgeted 9 months; 2026 is the first year of recommended contributions.
3) **4.8%** is the estimated annual rate of return on invested reserves; 2025 is a partial year of interest earned.
4) Accumulated year 2055 ending reserves consider the age, size, overall condition and complexity of the property.
5) Threshold Funding Years (reserve balance at critical point).

*Refer to the Reserve Expenditures pages for the full list of reserve elements

FIVE-YEAR OUTLOOK

Park Tower
Condominium Association
Chicago, Illinois

Line Item	Reserve Component Inventory	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030
	Exterior Building Elements						
1.403	Roofs, 2nd Floor, Racquetball Court and Exercise Room			101,338			
1.405	Roof, 2nd Floor, Northwest, Thermoplastic						417,472
1.407	Roof, 2nd Floor, Concrete, Waterproof Coating and Repairs	182,500					
1.410	Roof, 2nd Floor, Sun Deck, Wood Decking (Incl. Pergolas, Siding), Replacement				415,769		
1.411	Roof, 2nd Floor, Sun Deck, Steel Railings (Incl. East of Pool Enclosure)		91,494				
1.412	Roof, 2nd Floor, Membrane (Beneath Decking and Pavers)				164,312		
1.660	Walls, Concrete, Mechanical Penthouse, Repairs and Coating				93,132		
1.729	Walls, Curtain Wall, Inspections and Infiltration Remediation (2027 is Evaluation)	42,000		107,000		48,196	
1.820	Walls, Masonry, Inspections and Systematic Repairs			147,829			
1.982	Windows and Doors, 2nd Floor Walkway and Weight Exercise Room						299,297
1.983	Windows and Doors, Pool					288,717	
1.984	Windows and Doors, Mall (Entrances)					68,851	
1.985	Windows and Doors, Mall, Skylight						105,704
	Interior Building Elements						
2.011	Hallway Renovation Project, Near Term, Remaining Cost	300,000					
2.100	Elevator Cab Finishes, Traction, Passenger (Near Term Includes Limited at 5-8)	300,000					
2.155	Exercise Equipment, Cardiovascular			63,202			
2.165	Exercise Equipment, Strength Training						91,452
2.180	Exercise Rooms, Renovations			77,128			
2.600	Lobby, Renovations					229,505	
2.700	Mailboxes (Residential)					142,017	
2.711	Mall, Corridors, Renovations (Furniture is Near Term)		22,000			151,473	
2.712	Mall, Market, Renovations			103,909			
2.840	Party Room, Renovations, Phased (Incl. Kitchen)			51,419			
2.911	Signage (Near Term is Lower Levels)		30,000				
2.991	Wall Repairs, Fiber Line Installation	124,000					
	Building Services Elements						
3.022	Air Handling Unit, Mall Corridors (Replacement)			139,259			
3.023	Air Handling Units, Party Room, Laundry Room and Basement (Replacement)			199,248			
3.024	Air Handling Unit, Pool (Incl. Return Air Fan) (Replacement)			146,758			
3.025	Air Handling Unit, Racquetball Court, Rooftop Unit (Near Term is Remaining)	15,000					
3.026	Air Handling Unit, Elevator Room, Low Rise		26,910				
3.162	Boilers, Domestic Hot Water, Commercial, 660-MBH		72,450				

FIVE-YEAR OUTLOOK

Park Tower
Condominium Association
Chicago, Illinois

Line Item	Reserve Component Inventory	RUL = 0 FY2025	1 2026	2 2027	3 2028	4 2029	5 2030
3.170	Building Automation System		172,845				
3.200	Chillers, 600-tons, Capital Repairs		146,970				
3.380	Exhaust Fans, Main Kitchen and Rest Room (Near Term is Rest Room Components)	162,500					
3.561	Life Safety System, Valves at Fire Standpipes	33,000					
3.580	Light Fixtures, Exit and Emergency (Incl. Remote Emergency) (Near Term is Limited)		40,000				
3.598	Pipes, Risers, Building Heating, Cooling and Condensate, Invasive Study		38,295				
3.599	Pipes, Risers, Building Heating, Cooling and Condensate, 01/03 Tier (Remaining)	362,170					
3.600	Pipes, Riser Sections, Building Heating, Cooling and Condensate, Phased					953,419	986,789
3.604	Pipes, Riser Sections, Domestic Hot Water, Remaining Phased		678,000	609,000	498,300		
3.702	Pumps, Building Heating, Commercial, 10-HP (Incl. Controls)				51,001		
3.704	Pumps, Building Heating, Residential, Fin Tubes, 10-HP (Incl. Controls) (2025 is 1)	33,000					
3.706	Pumps, Fire Suppression, 40- to 100-HP (Incl. Controls, Jockey Pumps)					236,390	
3.820	Security System, Camera System, Phased			31,066			
3.821	Security System, Fob Reader System, Phased				19,957		
3.861	Storage Tank, Domestic Hot Water, High Zone				149,677		
3.920	Valves, Large Diameter, Phased (Fire Pumps, Main Water, Main Mech.)	42,000			95,793	99,146	102,616
	Property Site Elements						
4.140	Concrete, On-Grade at Site, Partial (Sidewalks, Pavement, Curbs)					27,541	
4.300	Fence, Steel, East Perimeter		51,750				
4.959	Plaza, Waterproof Membrane and Concrete, Interim Repairs/Sealants (Incl. Circle Drive)		25,000		55,436		
4.971	Tractor (Incl. Attachments)			33,208			
	Pool Elements						
6.553	Hot Tub (Jacuzzi), Insert					44,753	
6.600	Mechanical Equipment, Phased			36,422			
6.800	Pool, Main/Indoor, Vinyl Liner and Repairs						194,543
	Garage Elements						
7.360	Concrete, On-grade, Partial (2P Level) (Incl. Drain Repairs)						152,641
7.499	Fire Suppression System, Heads	151,200					
	Reserve Study Update with Site Visit			12,000			
	Anticipated Expenditures, By Year ($95,759,239 over 30 years)	1,747,370	1,395,714	1,858,785	1,543,377	2,290,008	2,350,514

4. RESERVE COMPONENT DETAIL

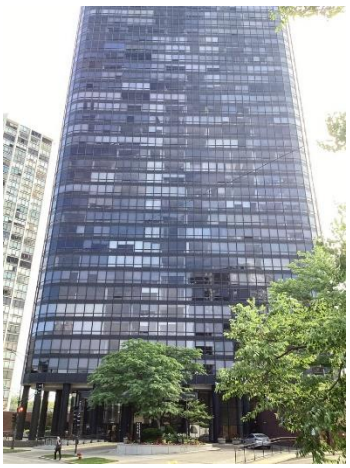
The Reserve Component Detail of this *Reserve Study* includes enhanced solutions and procedures for select significant components. This section describes the Reserve Components, documents specific problems and condition assessments, and may include detailed solutions and procedures for necessary capital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

Exterior Building Elements

East elevation

North and east elevations

North elevation



South and west elevations

Lighting System, Main Roof Level

Line Item: 1.260

Component Detail Notes: The Association will complete installation of perimeter light fixtures at the main roof level, mounted to the penthouse structure walls. Park Tower will utilize Association staff to complete the installation.

Light fixture mock up

Useful Life: Up to 20 years for the fixtures

Priority/Criticality: Per Board discretion

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

Roofs (Including Sun Deck Components)

Line Item: 1.400 through 1.412

Quantity, History and Condition: Park Tower maintains the following flat membrane roofing systems *excluding* the 2nd floor roofs and sun deck components:

- **Tower, Main and Mechanical Penthouse** – 10,300 square feet of modified bitumen roofing, replaced 2017, good to fair overall with areas of perimeter sealant deterioration, depressions, granular loss and previous repairs evident
- **Lobby Canopy** – 800 square feet of flat membrane roofing, replaced 2012

The Building Engineer does not report a recent history of leaks from these roofing systems. The roofs are maintained by *Knickerbocker Roofing*.

Lobby canopy roof

Depression at tower roof

Penthouse roof at perimeter

Perimeter sealant deterioration at tower roof

Perimeter sealant deterioration at tower roof

Tower roof system at perimeter

Tower roof system at repairs

Park Tower maintains the following 2nd floor sun deck and roof components:

- **2nd Floor Walkway** – 900 square feet of thermoplastic roofing, installed 2021, reported satisfactory condition (includes a gutter system)
- **2nd Floor, Racquetball Courts and Exercise Room** – 2,200 square feet of flat membrane roofing, replaced approximately 2010, reported satisfactory condition
- **2nd Floor, Center/East** – 2,600 square feet of thermoplastic roofing, replaced 2018, good overall
- **2nd Floor, Northwest** – 9,500 square feet of thermoplastic roofing, installed 2012, fair overall, exhibits areas that lack drainage, previous repairs and membrane bulge
- **2nd Floor, Southwest** – 2,100 square feet of thermoplastic roofing, replaced approximately 2016, fair overall with areas that lack drainage and previous repairs evident
- **2nd Floor, Concrete** - approximately 15,000 square feet of concrete roofing systems at the 2nd floor with a surface applied waterproof coating, surface coating replaced in 2024, we include the remaining project cost in the near term, we opine that the cost appears low and recommend that the Association budget for a higher cost for future events in part to account for increased concrete repairs as the development ages
- **2nd Floor, Sun Deck, Planters** - approximately 2,300 square feet (excluding the two integral planters at the wood deck area), planters include landscaping with underlying waterproof membranes, waterproof membranes replaced from 2017 to 2019, repairs recently completed to remediate leaks
- **2nd Floor, Sun Deck, Wood Decking** - 3,800 square feet of wood decking with 1,800 square feet of wood pergolas, also includes wood siding at the planter walls, includes two integral planters, installed 1997, significant partial replacement of the wood in 2007, paint application and repairs completed in 2023 , the wood decking exhibits a significant amount of weathering
- **2nd Floor, Sun Deck, Steel Railings** - approximately 340 linear feet of steel railings south and east of the sun deck and east of the pool area

(pool area railings include glass panels), railings are original, the inset mounts accelerate masonry damage and steel corrosion, the railings east of the pool area exhibit extensive corrosion and areas of glass damage (We opine that the railing construction likely contributes to the masonry wall deterioration. We recommend installation of factory finished systems with a mount design that minimizes masonry deterioration.)

- **2nd Floor, Membrane (beneath decking)** – 3,900 square feet of flat membrane roofing beneath the wood decking and brick pavers, installed 2007

East or center roof at 2nd floor

Concrete repairs beneath traffic coating at 2nd floor roof

Concrete repairs beneath waterproof coating at 2nd floor roof

Waterproof coating at drains at 2nd floor roof

Waterproof coating at perimeter at 2nd floor roof

Paver settlement and cracks at 2nd floor roof

Northwest 2nd floor roof at depression

Northwest 2nd floor roof at depressions

Northwest 2nd floor roof at lack of drainage

Patches at northwest 2nd floor roof

Southwest 2nd floor roof system at repairs

Flashing repairs at 2nd floor planter

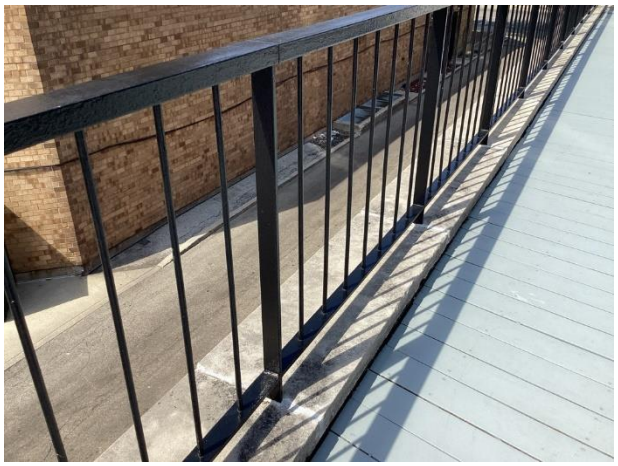
Membrane at perimeter at 2nd floor planter

Perimeter flashing at 2nd floor planter

Glass damage at steel corrosion at 2nd floor east railing

Rust at inset post at 2nd floor railing

Steel corrosion and inset post at 2nd floor east perimeter



Steel railing at south perimeter of 2nd floor

Pergola at 2nd floor

Siding at planter at 2nd floor

Weathered wood decking at 2nd floor roof

Weathered wood decking at 2nd floor roof

Wood siding at planter

Walkway roof

Useful Life:

- Tower, Main and Mechanical Penthouse – 15- to 20-years
- Lobby Canopy – 15- to 20-years
- 2nd Floor Walkway, Racquetball Courts and Exercise Room – 15- to 20-years
- 2nd Floor, Center/East – 15- to 20-years
- 2nd Floor, Northwest – 15- to 20-years
- 2nd Floor, Southwest – 15- to 20-years
- 2nd Floor, Concrete – 10- to 15-years
- 2nd Floor, Sun Deck, Planters – up to 30 years.
- 2nd Floor, Sun Deck, Wood Decking – up to 25 years (including the wood siding and pergolas) (We assume paint applications and repairs up to every six years. However, future updates of this Reserve Study will adjust the future expenditures based on the materials installed.)
- 2nd Floor, Sun Deck, Steel Railings – up to 45 years (We assume interim paint applications and repairs as needed through the operating budget.)
- 2nd Floor, Membrane (beneath decking) – 15- to 20-years

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

- Semi-annually:
    - Note drainage issues with water ponding after 48 hours of rainfall event. Verify scuppers and drains are free of debris. Replace damaged or missing drain covers.
    - Inspect perimeter flashing for loose fasteners, deflections, and sealant damage
    - Verify membrane surface is free of ruptures or damage, and areas of extensive blistering or bubbling
    - Remove oil spills or contaminants from mechanical equipment

- In areas of possible foot traffic, remove any sharp debris or trash and note areas of crushed insulation
- If frequency of leaks increase or location of water infiltration is unknown, we recommend the consideration of a thermal image inspection

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.

Roof, Pool Enclosure

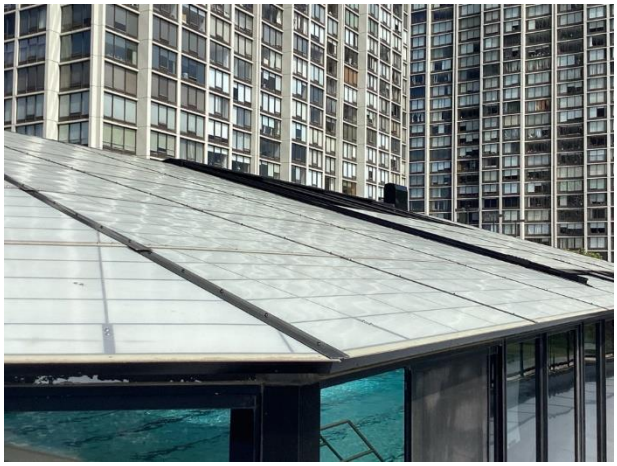
Line Item: 1.413

Quantity, History and Condition: The pool enclosure or roof includes approximately 4,700 square feet of *Kalwall* translucent panels with a steel structure. The system includes a vision skylight at the center.

The Association replaced the roof system in 2023.

The roof system is in reported satisfactory condition.

Pool enclosure roof



Pool enclosure roof

Pool enclosure

Useful Life: The enclosure panels have a useful life of up to 40 years with the benefit of repairs and replacement of sealants every 10- to 15-years. The structural frame has an indeterminate remaining useful life.

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, Concrete, Mechanical Penthouse

Line Item: 1.660

Quantity, History and Condition: The Park Tower mechanical penthouse exterior includes approximately 7,000 square feet of concrete structural components. The Association completed concrete repairs and coating applications in 2018. The Building Engineer informs us that the Association may coat/paint the concrete in the near term.

The concrete exhibits a significant amount of unrepaired cracks. Based on the conditions, we recommend that the Association budget for systematic preventative maintenance repairs.

Crack at joint at penthouse structure

Cracks at penthouse structure

Cracks at penthouse structure

Cracks at penthouse structure

Useful Life: We recommend concrete inspections, coating applications and repairs up to every 12 years.

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

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

- Complete inspection
- Partial depth replacement of a limited amount of concrete
- Crack repairs as needed
- Coating application

Walls, Curtain Wall (Including Sealants)

Line Items: 1.729 and 1.730

Quantity, History and Condition: The envelope of the building comprises approximately 203,000 square feet of curtain wall system at the residential units. The system includes:

- Single pane glazing (fixed and operable windows)
    - Owners have the option to install insulating glass, such as provided by *Signa Systems*.
- Aluminum frames, frame covers and mullions
- Factory finished spandrel panels
- Approximately 228,000 linear feet of wet sealants at metal/metal and metal/glass interfaces

The Association completed an extensive restoration of the curtain wall system, including replacement of the sealants, in 2010. Recent curtain wall system expenditures primarily relate to inspections and remediation of water infiltration.

Management continues to inform us of limited water infiltration from the curtain wall system, primarily at operable windowsills. The Association replaces weather stripping at operable windows to remediate the water infiltration. We continue to include periodic expenditures for inspections and water infiltration remediation prior to extensive curtain wall system restorations. We partially base the expenditures on information provided by Management, including an increased cost in 2027 for an extensive evaluation of the conditions of the sealants.

The Association completed an Ongoing Inspection and Repair Program Report for the City of Chicago in 2022. The report notes:

- Isolate de-bonded sealant
- Deteriorated, shrunken and warped weather stripping
- Blocked weeps

The curtain wall system exhibits isolated areas of exterior sealant deterioration. The weather stripping at unit interiors varies greatly in condition.

The spandrel panels and frames exhibit dirt/pollutant build-up. The spandrel panel conditions detract from the overall building aesthetics.

Curtain wall at operable window

Curtain wall at interior seal

Curtain wall at interior seal

Curtain wall at interior seal

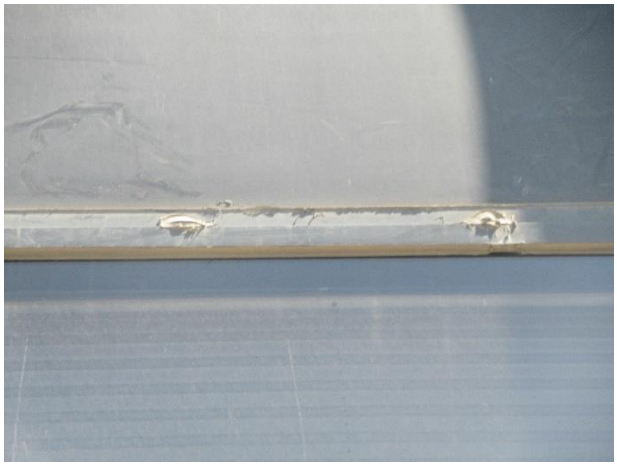
Glass/metal and metal/metal sealants

Glass/metal and metal/metal sealants

Spandrel panel conditions

Glass/metal and metal/metal sealants

Glass/metal and metal/metal sealants



Sealant at panel base

Sealant cracks at vertical mullion base

Spandrel panel conditions

Spandrel panel conditions

Useful Life: Properly maintained curtain walls have an indeterminate remaining useful life with the benefit of timely maintenance and repairs. We recommend inspections, extensive sealant replacements and repairs up to every 20 years. We recognize that select sealants may achieve a longer useful life and thus we include partial replacement of sealants during each event.

We opine that aggregate replacement of system components other than the sealants if necessary, would require the use of means other than reserves to fund.

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 exact amount of repairs and thus the exact cost is indeterminate pending the physical inspection of the elevations at the time of the expenditures. Rather than complete replacement, we assume the following activities per event:

- Complete inspection of the curtain wall
- Replacement of eighty percent (80%) of the sealants
- Replacement of a limited amount of glazings
- Invasive inspection of a limited amount of anchors and refastening of aluminum components as needed
- Cleaning of the spandrel panels
- Touch-up finish applications
- Sidewalk protection
- Engineering allowance

Walls, Masonry

Line Item: 1.820

Quantity, History and Condition: Masonry comprises approximately 23,000 square feet of the base structure exterior walls. The Association completed significant restoration

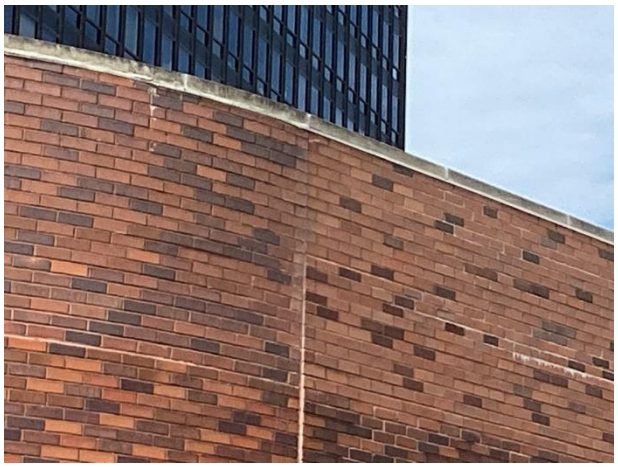
of the masonry walls at the west elevation concurrent with replacement of the plaza from 2016 to 2017. The Association installed base through wall flashings at the bike room and garage perimeters in 2021. The Association also recently completed masonry repairs to sections of north elevation wall at the 2nd floor roof area.

We note the following components and conditions of the masonry:

- Face brick masonry
- Parapet wall caps include varied flashing/weep systems
- Parapet wall caps exhibit areas of joint deterioration
- Flashing at the base of the masonry is evident (through wall flashing is not evident at locations other than the base of the walls)
- Masonry exhibits areas of joint deterioration, cracks, spall and damage at elevations not addressed during the plaza project
- Sealant deterioration is evident at control joints
- Parapet walls exhibit evidence of water infiltration

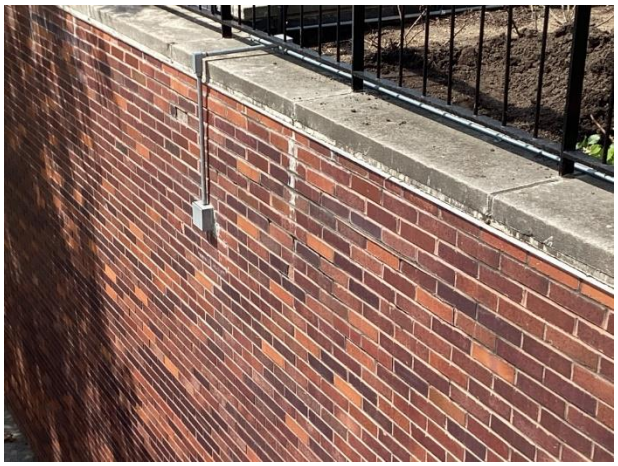
Based on the conditions, we strongly recommend that the Association budget for near term additional systematic preventative maintenance repairs.

Complete reconstruction of parapet walls would result in a significantly greater cost. The exact cost of repairs is indeterminate at this time pending an engineering analysis to determine the required scope of repairs.



Evidence of water infiltration at masonry

Flashing at wall caps



Masonry crack and spall

Masonry crack

Masonry spall and joint deterioration

Recent masonry repairs and flashing installation

Replaced masonry and flashing installation

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

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

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

- Complete inspection of the masonry
- Repointing of up to fifteen percent (15%) of the masonry
- Replacement of a limited amount of masonry
- Flashing and weep installation/replacement at caps and shelf angles as needed
- Parapet wall cap joint repairs as needed

Walls, Metal Siding

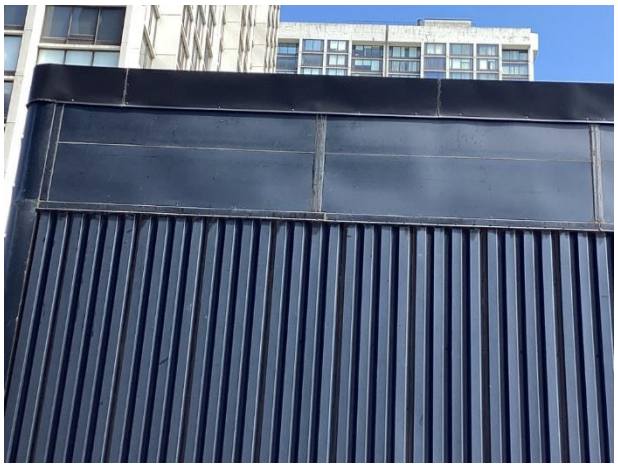
Line Item: 1.844

Quantity, History and Condition: The exterior elevations of the racquetball courts and mall atrium include approximately 5,000 square feet of factory finished metal siding.

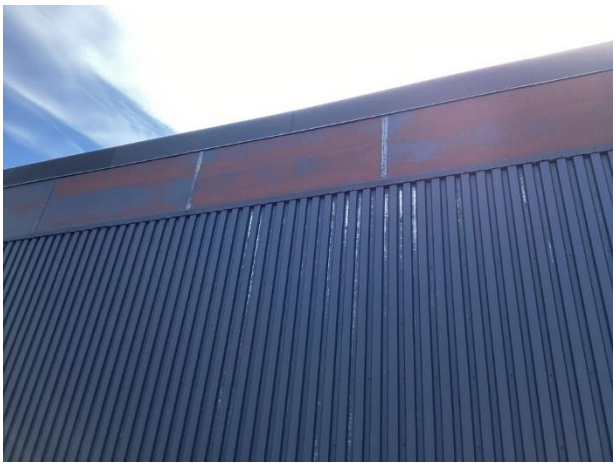
The siding is in fair overall condition. Areas of finish damage/deterioration at evident. The finish coloration varies. The Building Engineer informs us that the Association may paint select locations in the near term.

The siding exhibits areas of damage and isolated corrosion at the base of the panels.

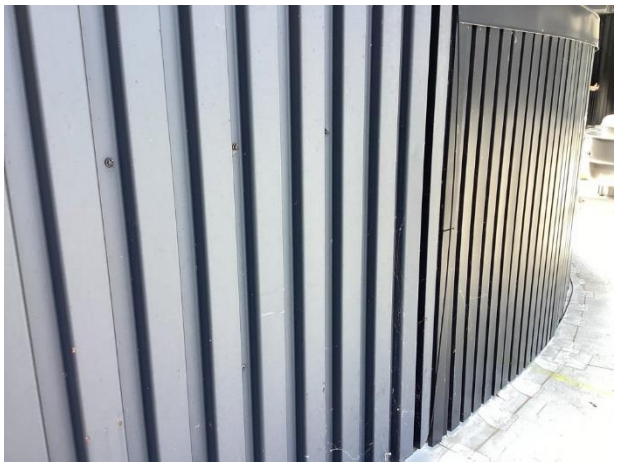
Metal siding at base



Metal siding at racquetball court



Siding color variations



Siding color variations

Useful Life: Up to 45 years (We recognize that the Association may paint the metal to defer total replacement. Paint application introduces a costly cyclical expenditure.)

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 Items: 1.981 through 1.985

Quantity, History and Condition: The Association maintains the following window and door systems:

- **Lobby, Revolving Doors** - two total, replaced in 2023
- **Lobby, Party Room and Aerobic Exercise Room** - 4,300 square feet of single pane aluminum frame systems at the 1st and 2nd floors, primarily original
- **2nd Floor Walkway and Weight Exercise Room** - 2,100 square feet of dual pane aluminum frame systems, likely date to 1997
- **Pool** - 1,700 square feet of dual pane aluminum frame systems, sliding glass doors, conditions and ages vary with isolated seal failure evident, the Building Engineer informs us that the Association recently replaced select sliding door systems
- **Mall** – Management informs us that the commercial entities are responsible for their window systems, the Association maintains the common entrance areas, the common entrance areas comprise aluminum frame systems, primarily original, fair overall with areas of damage evident
- **Mall, Skylight** - dual pane aluminum frame system, reported satisfactory condition, areas of sealant deterioration are evident, the Building Engineer does not report a recent history of leaks

The Association constructed an enclosure at the north lobby door in 2016. We do not anticipate subsequent replacement of this interior door system during the next 30 years.

Walkway window system at joint sealant deterioration

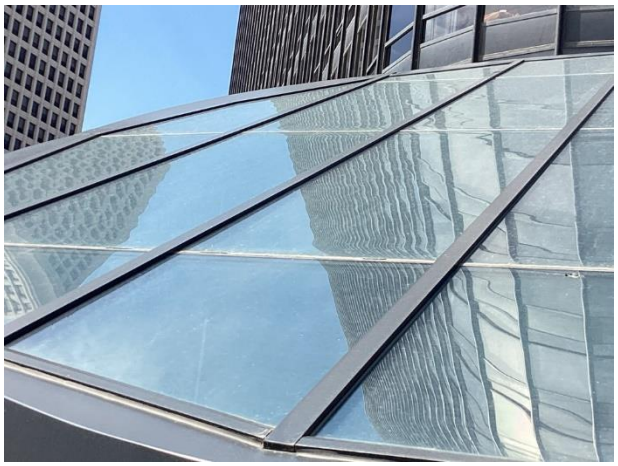
Walkway window system

2nd floor common window system

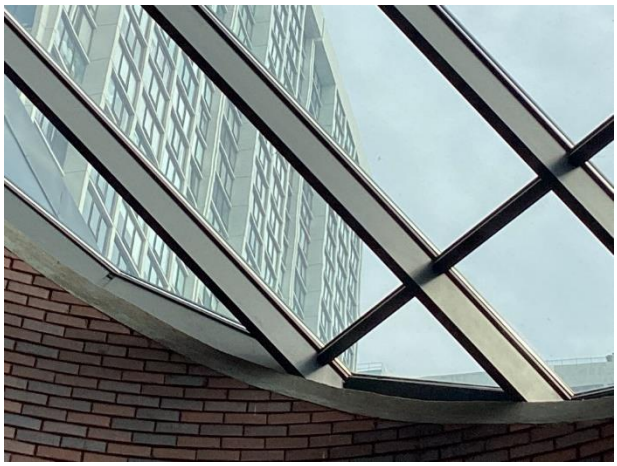
Lobby window system

Window and door system at entrance at mall

Skylight at joint sealant deterioration



Skylight at joint sealant deterioration



Skylight

Pool sliding door system

Pool window system

Recently replaced revolving door

Useful Life:

- Lobby, Revolving Doors – up to 45 years (We do not recommend that the Association budget for subsequent replacement during the next 30 years.)
- Lobby, Party Room and Weight Exercise Room - up to 60 years

- 2nd Floor Walkway and Aerobic Exercise Room - up to 45 years
- Pool - up to 45 years
- Mall - up to 60 years
- Mall, Skylight - up to 40 years

Priority/Criticality: Per Board discretion

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

Interior Building Elements

Hallway Renovation Project, Near Term

Line Item: 2.011

Component Detail Notes: The Association began renovation of the residential hallways in 2023 and will complete the project in 2024. We include a Management provided remaining cost for the project in the near term. The project primarily includes:

- Replacement of the carpet
- Paint application
- Replacement of the wall coverings at the elevator foyers
- Replacement of the light fixtures
- Replacement of the service elevator foyer/trash area flooring
- Replacement of the trim

Priority/Criticality: Per Board discretion

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

Elevator Cab Finishes

Line Items: 2.100 through 2.102

Quantity, History and Condition: The building includes the following elevator cab finishes:

- **Traction, Passenger** – four elevators, Association refinished the walls in 2014, poor overall, we include a Management provide cost to replace these finishes in the near term
- **Traction, Service** – two elevators, Association staff removed the #6 cab recently, the near-term elevator cab finishes project includes code upgrades and replacement of the #5 ceiling, we assume interim limited subsequent renovations as needed through the operating budget
- **Hydraulic, Garage/Mall** – two elevators, fair overall, we defer systematic renovation at the direction of Management

Elevator 6 cab finishes

Elevator cab finishes for passenger elevator

Hydraulic elevator cab finishes

Useful Life: Up to 20 years

Component Detail Notes: The passenger traction elevator cab finishes consist of:

- Carpet floor coverings
- Laminate wall coverings with wood trim and metal railings
- Metal ceiling with light fixtures

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 that the Association fund interim replacement of the carpet floor coverings through the operating budget.

Exercise Equipment

Line Items: 2.155 and 2.165

Quantity: The aerobic exercise room contains the following types of cardiovascular aerobic training equipment:

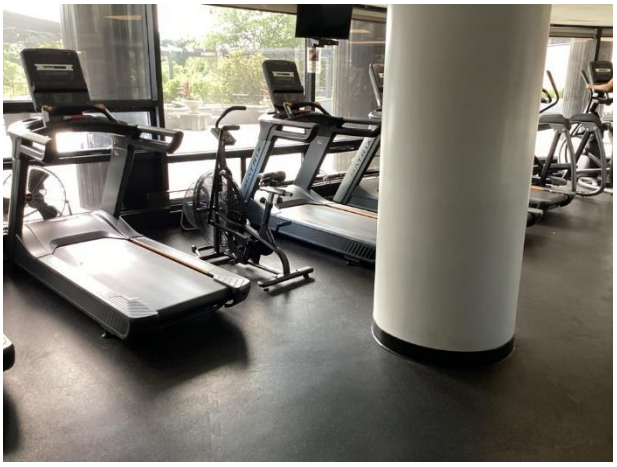
- Ellipticals
- Stationary cycles
- Stepper
- Rowing machine
- Treadmills

The weight exercise room contains the following types of strength training equipment:

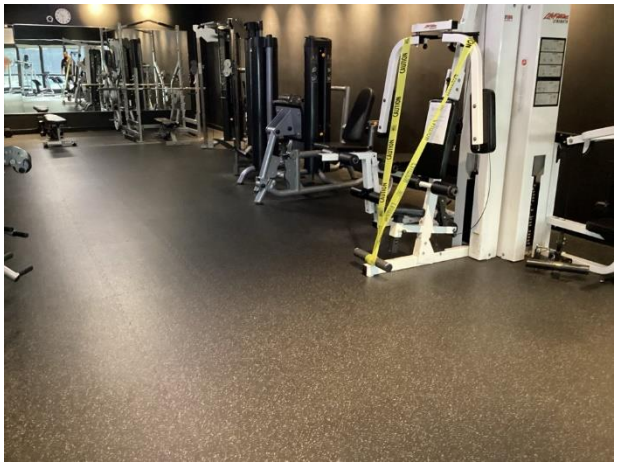
- Benches
- Dumbbells
- Weight training machines

History: The cardiovascular equipment was replaced in 2022. The strength training equipment was primarily replaced in 2016 with a varied history of interim repairs and replacements.

Conditions: The cardiovascular equipment is reported in satisfactory condition. The strength training equipment varies in condition.



Exercise equipment at cardio room



Exercise equipment at strength room

Useful Life: The useful life of cardiovascular equipment is up to five years. The useful life of strength training equipment is up 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.

Exercise Rooms

Line Item: 2.180

History: The Association completed an extensive renovation of the aerobic and weight exercise rooms in 2016, including expansion of the weight area.

Condition: Fair overall with ceiling and flooring system damage evident

Cardio room finishes

Weight room finishes

Useful Life: Renovations up to every 15 years

Component Detail Notes: The exercise room components include:

- Rubber floor covering
- Ceiling tile system at the aerobic room
- Mirrors
- Paint finishes
- Light fixtures

Priority/Criticality: Per Board discretion

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

Floor Coverings, Carpet, Hallways

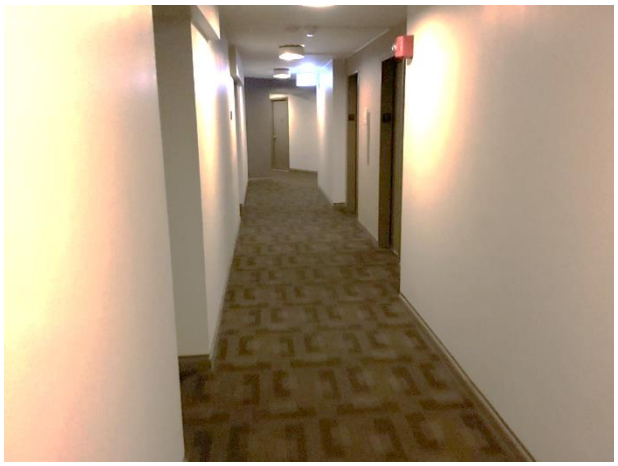
Line Item: 2.200

Quantity: Approximately 6,200 square yards at the residential hallways (Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.)

History: Replacement began in 2023 with completion scheduled for 2024

Condition: The replaced carpet is in good overall condition.

Dated carpet



Dated hallway

Recently installed carpet

Renovated hallway

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.

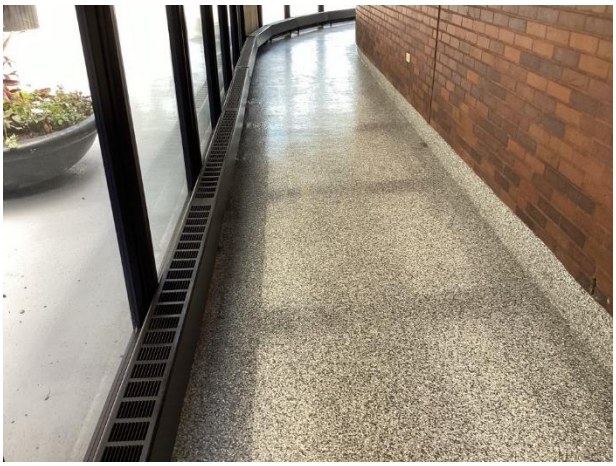
Floor Coatings, 2nd Floor Walkway and Pool Area

Line Item: 2.300

Quantity: 2,800 square feet at the 2nd floor walkway and pool area (epoxy surface coating)

History: Surface coating installed in 2023

Condition: Good overall



Coating at floor at walkway

Pool deck coating

Useful Life: Up to 15 years for the coating applications

Priority/Criticality: Per Board discretion

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

Floor Coverings, Vinyl, Service Elevator Foyers/Trash Areas

Line Item: 2.301

Quantity: Vinyl flooring at the 52 residential floor service elevator foyers/trash areas

History: Replacement began in 2023 with completion scheduled for 2024

Condition: The replaced flooring is in good overall condition.

Service area flooring

Useful Life: Up to 25 years (The adjacent storage room flooring has an indeterminate remaining useful life.)

Priority/Criticality: Per Board discretion

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

Light Fixtures, Hallways

Line Item: 2.560

Quantity: Approximately 620 interior ceiling mounted light fixtures located throughout the hallways

History: Replacement began in 2023 with completion scheduled for 2024

Dated fixtures

Recently replaced light fixtures

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.

Lobby

Line Item: 2.600

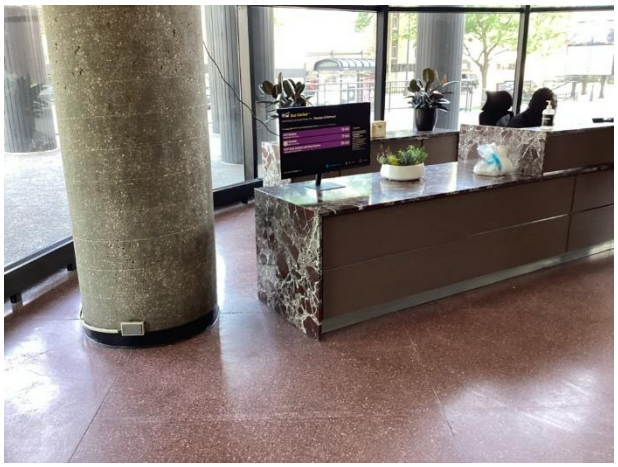
History: The lobby components vary in age and condition. These components comprise the following:

- Terrazzo floors
- Paint finishes

- Doorman's station
- Furnishings and rugs
- Light fixtures
- Wall coverings at the mailbox area

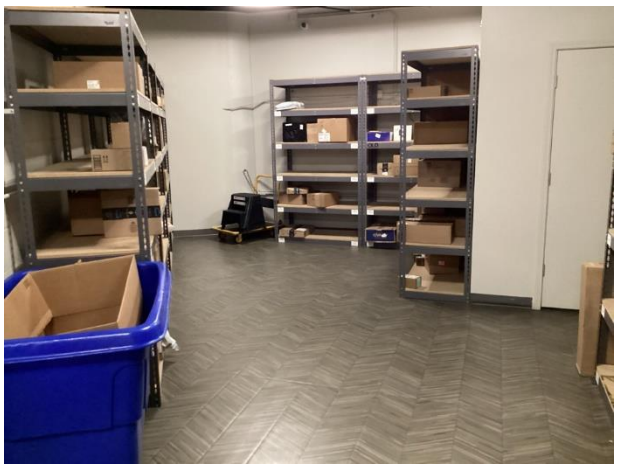
The Association replaced the doorman's station in 2011. The Association installed wall coverings at the mailbox area and renovated the package room in 2022.

Condition: Reported satisfactory overall



Lobby at doorman's station

Lobby overview



Package room

Useful Life: Systematic renovations up to every 20 years (including honing of the terrazzo floors). The scope and thus costs of renovations may vary greatly. We assume interim limited repairs and renovations as needed 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.

Mailboxes

Line Item: 2.700

Quantity: 728 residential unit mailboxes

History: Original

Condition: The mailboxes have limited capacities. The Building Engineer informs us of a limited recent history of issues.

Mailboxes

Useful Life: Up to 35 years

Priority/Criticality: Per Board discretion

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

Mall

Line Items: 2.711 through 2.714

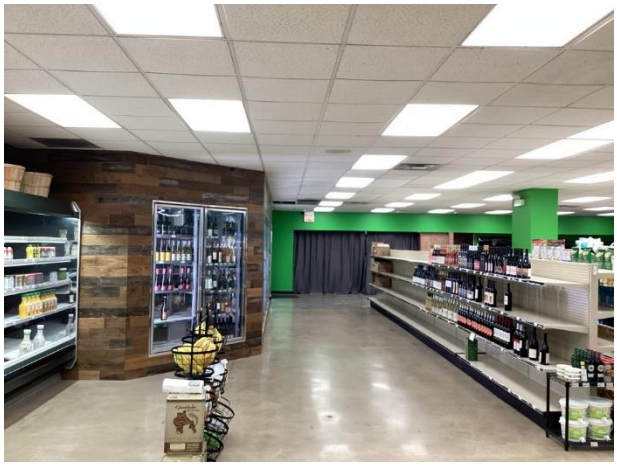
Quantity, History and Condition: The Association maintains the following at the mall:

- **Corridors** – 5,500 square feet of terrazzo floor and ceiling tile system with light fixtures, the ceiling tile system exhibits areas of stains/damage, the Association replaced the runners in 2023, we continue to include an allowance in the near term to replace the furnishings
- **Market (Store)** – concrete floor, ceiling tile system, light fixtures and paint finishes, the Association removed the floor coverings in 2016, the ceiling tile system exhibits areas of stains/damage
- **Office** – systematic renovation in 2012, carpet replacement and paint application completed in 2022

- **Rest Rooms** – two total, renovated in 2019 (including replacement of the flooring)

Mall ceiling tile stains

Mall corridor



Market

Office

Mall rest room

Useful Lives:

- Corridors – renovations up to every 25 years
- Market (Store) – renovations up to every 15 years
- Office – systematic renovations up to every 10 years
- Rest Rooms – renovations up to every 25 years

Priority/Criticality: Per Board discretion

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

Paint Finishes, Hallways (Including Wall Coverings)

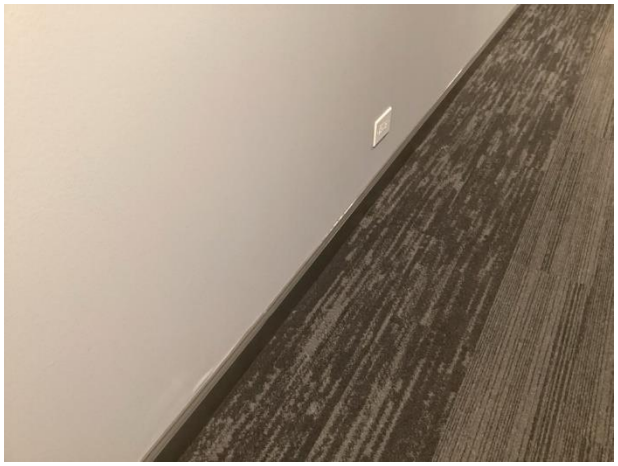
Line Item: 2.800

Quantity and History: The residential hallways have approximately 220,000 square feet of paint finishes on the walls, trim and ceilings. The hallways also include vinyl wall coverings at the elevator foyers.

The Association began a systematic paint application, wall covering replacement and trim replacement program in 2023 and will complete the program in 2024.

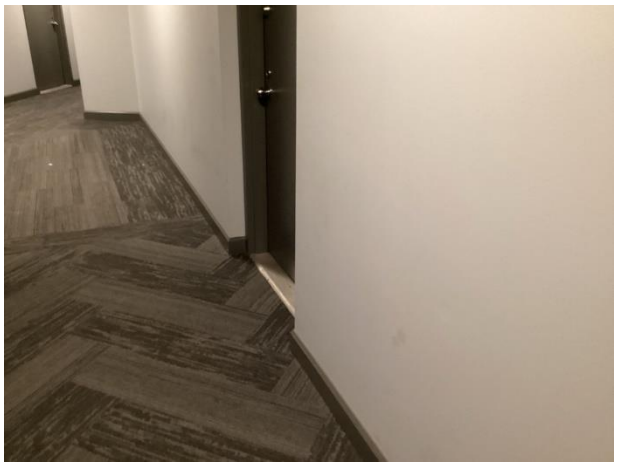
Condition: The renovated hallways are in good overall condition.

Dated wall covering



Recently installed trim

Recently installed wall coverings



Wall scuffs

Useful Life: 8- to 12-years

Priority/Criticality: Per Board discretion

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

Party Room

Line Item: 2.840

History: The common area amenities include a party room on the 2nd floor. The party room components vary in age and include:

- Tile and wood laminate floor coverings (installed 2013)
- Paint finishes
- Light fixtures
- Furnishings
- Kitchen

Condition: We continue to include a Management provide expenditure in the near term for a partial renovation of the party room, including the purchase of furniture.

The Building Engineer also informs us that the Association is considering replacement of the flooring. The exact renovation costs will vary based on the desired scope.

Party room kitchen

Party room

Useful Life: Renovations up to every 20 years (We assume interim renovations as needed 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.

Rest/Locker Rooms, 2nd Floor

Line Item: 2.900

Quantity, History and Condition: The Association maintains two common area rest/locker rooms located at the 2nd floor. The rest/locker rooms include the following:

- Tile floor and wall coverings
- Paint finishes
- Light fixtures
- Plumbing fixtures
- Partitions
- Lockers

The Association renovated these rest rooms in 2019. The restrooms are in good overall condition.

2nd floor rest room

Useful Life: Systematic renovation up to every 25 years

Priority/Criticality: Per Board discretion

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

Signage

Line Item: 2.911

Component Detail Notes: The Association began replacement of the signage as part of the extensive renovation project in 2023 and will complete the project in 2024.

We include an allowance in the near term as provided by Management for signage at the lower levels.

Signage

Useful Life: We assume a useful life of 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.

Wall Repairs, Fiber Line Installation

Line Item: 2.991

Component Detail Notes: A vendor is replacing the co-ax cable network with fiber backbone and new points of entry. We include a Management provided cost to paint the walls upon completion.

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

Building Services Elements

Air Handling Systems

Line Items: 3.020 through 3.026

Quantity, Condition and History: The Association utilizes the following major air handling units:

- **Residential Corridors** - two units, 37,800-CFM (Cubic Feet per Minute) each, S1 coils replaced in approximately 2019, the Association replaced the S2 coils and the system circulating pump in 2024, reported in satisfactory overall condition (Based on the history of varied repairs and the overall age of the units, we include total replacement of the corridor and lobby air handling units during the next 30 years. However, we recognize that the Association may continue to replace components as needed.)
- **Lobby** - one unit, 18,950-CFM, original coils, system includes a return air fan, the Association will replace the dampers at the lobby unit and other air handling units in the near term, the lobby coils are in reported satisfactory condition
- **Mall Corridors** - one unit, 9,215-CFM, original coils, reported satisfactory
- **Party Room, Basement and Laundry** - three units, 2,900- to 4,245-CFM each, laundry room unit coils replaced in 2014, remaining coils are original and in reported satisfactory condition, the Association will replace select dampers in the near term
- **Pool** - one unit, includes a return air fan, 9,370-CFM, coils replaced 2012, the Association will likely replace the motor in the near term
- **Racquetball Courts** - one *American Standard* packaged rooftop unit for the racquetball court and strength training exercise room, replaced 2024,

we include the remaining cost for this project, 7.5-tons cooling and 200-MBH heating

Air handling unit serving hallways (S2)

Lobby air handling unit

Mall air handling unit

Pool air handling unit

Racquetball court air handling unit

Basement air handling system fans

Laundry room air handling unit

Party room air handling unit

Air handling unit for low rise passenger elevator room

Useful Life:

- Residential Corridors – For purposes of this Reserve Study, we include total replacement of the units up to every 60 years. Future updates of this Reserve Study will again consider the need for interim capital intensive component replacements.
- Lobby - For purposes of this Reserve Study, we include total replacement of the unit up to every 60 years.
- Mall Corridors - up to 35 years
- Party Room, Basement and Laundry - up to 35 years
- Pool - up to 30 years
- Racquetball Courts – up to 25 years

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

- Monthly:
  - Change or clean air filters as needed
- Semi-annually:
  - Lubricate motors and bearings
  - Inspect base pan, cabinet and clear obstructions as necessary
  - Check belt tension and alignment
- Annually:
  - Clean drain pans, clean fan assembly, inspect fan drive system and controls
  - Inspect and clean accessible ductwork as needed
  - Replace belts
  - Clear burners of debris 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.

Boilers, Building Heat

Line Items: 3.105 and 3.106

Quantity: Two *Cleaver Brooks* gas-fired steam boilers (The system also includes a feed water tank and pumps.)

History: The boilers are original. The Association replaced the burners and controls in 2013. The Association replaced the front and back refractory and tubes as needed in 2021 at both boilers. The Association recently replaced approximately 20 tubes.

The boiler feed water system tank is possibly original. The Association replaced the feed water system controls and pumps in 2015.

The boilers are maintained under a service contract by *Hayes*.

Condition: Reported satisfactory without operational deficiencies

For purposes of this Reserve Study, we defer total replacement and partially reduce the unit cost based on information provided to Management by a contractor familiar with the boiler system at Park Tower. *However, we opine that the cost to design and replace the boiler system is low*.

Replacement of the boilers may allow for energy efficiency improvements through the following:

- Installation of lessor capacity boilers (The boilers were originally installed to provide building heat and domestic hot water.)
- Installation of high efficiency boilers

Building heat boiler at shell

Building heat boiler

Feed water system

Useful Life: Up to 60 years for the boilers and up to 35 years for complete replacement of the feed water tank/pumps.

In our experience, the majority of Associations replace their dated boiler systems prior to 60 years of age, primarily in consideration of improved energy efficiencies. The system was likely original designed to provide domestic water and building heat. *Complete replacement may allow for replacement with energy efficient and lessor capacity systems*.

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

- Weekly:
  - Inspect for leaking water around boilers
  - Check temperature readings
  - Verify vent is unobstructed

- Conduct boiler blowdown to minimize corrosion and remove suspended solids in system
- Clean pilot and burner assemblies

- Monthly:
  - Check water and pressure levels
  - Check controls and switches for proper operating
  - Check and inspect condensate drain
  - Check all gaskets for tight sealing
- Annually:
  - Conduct full inspection of burners and flues
  - Clean and inspect tubes to reduce scaling
  - Inspect any pressure relief valves
  - Clean and recondition feed water pumps
  - Inspect electrical terminals and controls
  - Seal doors/access panels
  - Adjust air/fuel ratios 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.

Boilers, Domestic Hot Water

Line Items: 3.160 through 3.162

Quantity and History:

- **Residential High Zone** – four *Lochinvar* boilers, 800-MBH each, replaced 2016
- **Residential Low Zone** – three *Lochinvar* boilers with a capacity of 1,255-MBH each, replaced from 2019 to 2021
- **Commercial** – two *A.O. Smith* boilers with capacities of 660-MBH, replaced 2005

Condition: Reported satisfactory without operational deficiencies for the residential systems. The Building Engineer informs us of the potential need to replace the commercial systems.

High zone domestic water boilers

Commercial domestic water boilers

Low zone domestic water boilers

Useful Life: Up to 15 years

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

- Weekly:
  - Inspect for leaking water around boilers
  - Check temperature readings
  - Verify vent is unobstructed
  - Conduct boiler blowdown to minimize corrosion and remove suspended solids in system
  - Clean pilot and burner assemblies
- Monthly:
  - Check water and pressure levels
  - Check controls and switches for proper operating

- Check and inspect condensate drain
- Check all gaskets for tight sealing

- Annually:
  - Conduct full inspection of burners and flues
  - Clean and inspect tubes to reduce scaling
  - Inspect any pressure relief valves
  - Inspect electrical terminals and controls

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

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

Building Automation System

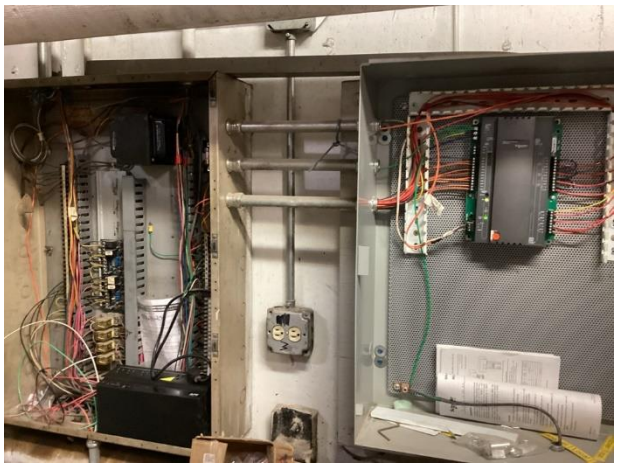
Line Item: 3.170

History: *Andover* system installed in 2011

Condition: Reported satisfactory overall. The Association conducts partial improvements to the system concurrent with replacement of equipment.

The Building Engineer informs us that system will be discontinued in the near term and thus, replacement of control panels and the central system is a potential need in the near term.

Building automation system panel



Building automation system panels

Main panel for heating system

Useful Life: Up to 15 years

Component Detail Notes: The building automation system (or energy management system) monitors and controls the mechanical systems.

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan and maintain a maintenance contract with a qualified professional. We recommend the Association periodically inspect for loose wiring and verify controls and sensors are operational to maximize the remaining useful life.

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.

Chillers

Line Items: 3.200 and 3.205

Quantity: Two *York* 600-ton capacity chillers

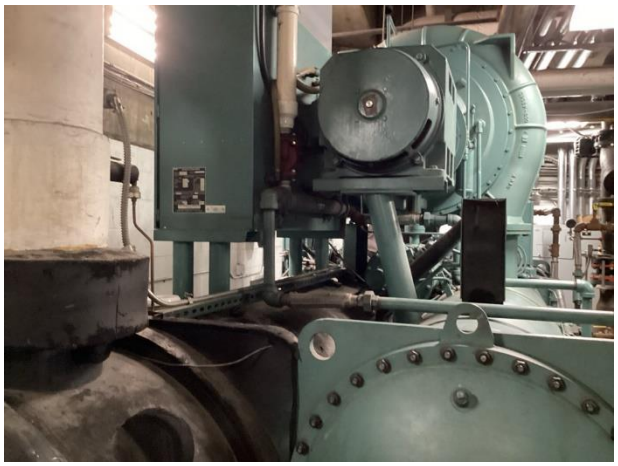
History: Replaced in 2000

The chillers are maintained under a service contract.

Condition: Reported satisfactory without operational deficiencies

We include near term Management provided expenditures for chiller tear down inspections. We slightly increase the unit cost to include an allowance for limited repairs identified during the inspection.

Chiller



Chiller

Useful Life: Replacement up to every 35 years with capital repairs up to every 10 years

Component Detail Notes: The centrifugal chillers provides chilled water for air conditioning the building and use R-123 refrigerant. Per the EPA, production of new equipment utilizing R-123 will cease as of January 1, 2020, and no production or importing of any HCFC refrigerants for equipment servicing will be allowed after January 1, 2030. While R-123 is still available, the cost will likely increase as phase-out begins. Since chillers have a useful life of 25 to 35 years, the Association should consider replacement with equipment that does not utilize the refrigerants mentioned above.

Proper maintenance includes the following:

- Eddy current tests. The eddy current test compares known discontinuities in the magnetic fields between a known calibration tube and the actual tube being tested. The test probes create the two necessary magnetic fields in each tube for the comparison.
- Capital repairs or partial machine disassembly (invasive inspection of interior machine components or tear down inspections) to evaluate the condition of the chiller tubes for defects such as permeability and cracks.

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

- Daily
  - Check pressure at evaporator, condenser, oil tank and oil discharge
  - Check oil level and compile logs
  - Check motor operating temperatures
  - Routine visual and audial assessments to determine if any unusual noises or vibrations are coming from the unit
- Weekly:
  - Check water quality and chemical levels

- Inspect for refrigerant leaks and adjust levels accordingly
- Quarterly:
  - Clean all water strainers in the water piping system
- Semi-Annually:
  - Lubricate bearings, balls joints, pivot points and valve O-rings
  - Drain contents of rupture disk and purge discharge
  - Apply oil to exposed metal to prevent corrosion
- Annually:
  - Test compressor and motor
  - Check oil and replace if needed (oil useful life of one- to five-years)
  - Inspect starter contracts
  - Inspect for scaling in the condenser and evaporator
  - Brush tubes with machine (condenser side annually, evaporator side every three years)
  - Check for refrigerant or oil leaks
  - Purge the unit
  - Clean and repair exterior painted surfaces
  - Conduct vibration analysis test
- Three-Year Cycles:
  - Clean all water strainers in the water piping system
  - Conduct eddy current test

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

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

Cooling Towers

Line Items: 3.260, 3.265 and 3.266

Quantity: One *Evapco* cooling tower with multiple cells for the residential unit system and one *CTS* cooling tower for the commercial system

History: The residential unit system cooling tower was replaced in 2008. The Association replaced the commercial unit system cooling tower in 2018.

The Association replaced the fill and baffles and installed a liner in the residential cooling tower in 2023.

Condition: Reported satisfactory overall

Cooling tower at previous seepage

Cooling towers

Commercial cooling tower

Useful Life: Replacement up to every 35 years with capital repairs every 10- to 15-years (We assume capital repairs to the commercial cooling tower through the operating budget.)

Component Detail Notes: The residential unit cooling tower has a capacity of 1,051-tons. Proper maintenance includes the following:

- Keeping all areas free of debris and build-up
- Effective water treatment program
- Seasonal testing of valves and controls for proper operation
- Inspection, adjustment and repairs of mechanical components as recommended by the manufacturer
- Annual inspection of components for corrosion or decay
- Capital repairs every 10- to 15-years

Capital repairs include a complete inspection of the cooling tower, pumps, motor drives and controls, replacement of the fill media, spray nozzles and any corroded areas, application of an internal protective coating and structural repairs. In addition, capital

repairs may include partial or complete replacement of the baffles, motors, pumps, controls and valves.

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

- Daily:
  - Routine visual and audial assessments to determine if any unusual noises or vibrations are coming from the unit
  - Check basin water and operating oil levels and adjust as needed
  - Check surroundings and ensure paths to the cooling tower are clear of obstructions and trip hazards
- Weekly:
  - Inspect air inlet louvers/shields for blockages
  - Check for water leakage
- Monthly:
  - Inspect for fill media for displacement, damage, dry spots and obstructions. Dry spots may indicate cracks or clogs with the spray nozzles.
  - Check oil seals and oil static levels
  - Check make-up valve, bleed rate and belt condition
  - Conduct water treatment analysis
- Quarterly:
  - Inspect cold water basin and spray nozzles
  - Inspect the fill media for scale buildups. Descaling will increase energy conservations.
  - Flush water distribution system, drain basin and piping
  - Adjust belt tension
  - Lubricate fan shaft bearings and motor base
  - Check motor voltage and current
  - Clean fan motor exterior
  - Check fan drain holes for obstructions
  - Check fan clearance and balance
- Annually:
  - Complete inspection of components for corrosion or decay
  - Check drive alignment
  - Coat steel shafts with corrosion inhibitor as needed
  - Pressure wash components including fill and basin
- Seasonal
  - Drain and sanitize

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.

Electrical System

Line Item: 3.300

History: The main distribution panels are primarily original to construction. The Building Engineer informs us of a varied history of partial component replacements including circuit protection panels and transformers.

The Association recently installed infrastructure for electric vehicle charging stations. The Association replaced the lobby circuit protection panels in 2023 and the fuse type garage circuit protection panels in 2024.

The Association conducts annual thermoscans.

Condition: Reported satisfactory overall

Bus bars

Electrical system main panels

Motor control center

Replaced circuit protection panel for garage

Transformers

Useful Life: Up to and sometimes beyond 70 years

Component Detail Notes: The system includes:

- Breaker type circuit protection panels for low ampacity circuits (except fuse type for emergency systems)
- Copper wires
- 70-Amps on average to the units
- 4,000-Amp main distribution panels

We give a brief overview of electrical system components in the following sections of this narrative.

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

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

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

Bus Bar - A bus bar is an electric conductor that serves as a common connection for two or more circuits and carries a large current. The metal enclosure contains factory assembled conductors, usually copper or aluminum bars or tubes. Bus bars typically convey electricity in a vertical riser to the multiple stories in the building. This component has an indefinite useful life and would rarely require replacement in total unless an upgrade of the capacity of the electrical system is desired.

Circuit Protection - Once electricity is distributed throughout the building and is at a usable voltage level, the electricity is divided into circuits. Each circuit requires circuit protection. Circuit protection is necessary to prevent injury and fires, and minimize damage to electrical components and disturbances to the electrical system. Abnormalities in the circuit can include overloads, short circuits and surges. Circuit protection devices are commonly referred to as circuit breakers and fuses. For the protection of the circuits in the units and common areas, we recommend the use of only circuit breakers as they are safer than fuses. However, the use of fuses is common for equipment like emergency systems and individual items of equipment. Fuses with a low-capacity rating can easily be replaced with fuses of a higher rating resulting in an unprotected, overloaded and unsafe circuit. The circuit protection panels have a useful life of up to and sometimes beyond 70 years.

Conductors - Conductors are the electrical wires that convey electricity to the units, light fixtures, receptacles and appliances. Conductors in typical high and low-capacity circuits are copper, as is reported the case at Park Tower. Copper conductors have an indefinite useful life.

Conductor Insulation and Conduit - Conductor insulation provides protection against the transfer of electricity. Conductor insulation can eventually become brittle and damaged from rodents or heat from many years of service. Conductor conduit is a pipe or tube used to enclose insulated electric wires to protect them

from damage. Steel conductor conduit, although galvanized, will eventually rust if used in damp conditions. The useful life of conductor insulation and conduit is indeterminate.

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

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

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

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

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

Elevators, Hydraulic

Line Items: 3.320 through 3.323

Quantity and History: Park Tower utilizes two hydraulic passenger elevators for the garage/mall (#7 and #8). The garage/mall hydraulic elevator system components were replaced from 2006 to 2007, including the pumps, controls and cylinders.

Park Tower also utilizes a hydraulic elevator to transport refuse containers (#9). The pump and cylinder were replaced in 2015. The Association replaced the main control systems for the refuse elevator in 2021.

The elevators are maintained under a service contract by *Otis*.

Condition: Reported satisfactory and service interruptions are reportedly infrequent.

Refuse elevator power unit casing

Hydraulic elevator equipment for mall and garage

Useful Life: Pumps and controls have a useful life of up to 30 years. Cylinders have a useful life of up to 45 years.

Component Detail Notes: Major components in a hydraulic elevator system include the pump, controls, cylinder, fluid reservoir and a valve between the cylinder and reservoir. Once activated by the elevator controls, the pump forces hydraulic fluid from the reservoir into the cylinder. The piston within the cylinder rises lifting the elevator cab. The elevator cab lowers at a controlled rate when the controls open the valve.

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

- Ongoing:

- Maintain a maintenance contract with a qualified professional for the elevator(s) and follow the manufacturer's specific recommended maintenance plan adhering to local, state, and/or federal inspection guidelines

- As-needed:
  - Keep an accurate log of all repairs and inspection dates
  - Inspect and adjust misaligned door operators
  - Check for oil leaks or stains near the pump housing and confirm oil levels are adequate
  - Clear and remove any items located in the elevator machine room(s) not associated with the elevator components (These rooms should never be used for storage)
  - Lubricate the hydraulic cylinders
  - Inspect electrical components for signs of overheating or failure
  - Inspect spring buffers in elevator pit for signs of corrosion or loose attachments
  - Ensure air temperature and humidity of machine/pump housing room meets the designated specified range for proper operation
  - Ensure all call buttons are in working condition
  - Check elevator cabs for leveling accuracy to prevent tripping hazards

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. We anticipate the following hydraulic elevator system components will require replacement:

- Cab control panels
- Door operators
- Hallway panels/buttons
- Microprocessor based controllers
- Pumps (Power Unit) (15-HP at the refuse elevator)

These costs may vary based on the desired scope of the actual replacements, changes in technology and requirements of local codes or ordinances at the actual times of replacements. However, we judge our estimated costs sufficient to budget appropriate reserves at this time. The Association should require the contractor to verify that elevator component replacements include all of the necessary features for the latest in elevator code compliance.

Elevators, Traction

Line Items: 3.360 and 3.361

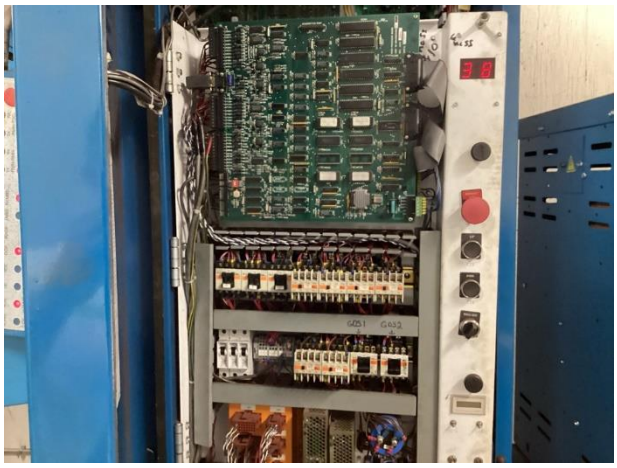
Quantity: The building utilizes four *Otis* traction passenger elevators (#1 through #4) and two traction service elevators (#5 and #6).

History: The Association replaced the controls and restored the machines from 2003 to 2007.

The elevators are maintained under a service contract by *Otis*.

Condition: Reported satisfactory and service interruptions are reportedly infrequent.

Low rise elevator controls



Traction elevator controls for high rise

Traction elevator hoists and motors

Useful Life: Up to 30 years however, the scarcity of parts, and the potential frequency and duration of service interruption makes controls replacement more desirable as the components age.

Component Detail Notes: The elevators utilize programmable logic computer controls.

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

- Ongoing:
  - Maintain a maintenance contract with a qualified professional for the elevator(s) and follow the manufacturer's specific recommended maintenance plan adhering to local, state, and/or federal inspection guidelines
- As-needed:
  - Keep an accurate log of all repairs and inspection dates
  - Inspect and adjust misaligned door operators
  - Clear and remove any items located in the elevator machine room(s) not associated with the elevator components (These rooms should never be used for storage)
  - Inspect electrical components for signs of overheating or failure
  - Inspect controls
  - Lubricate the hoist cables
  - Inspect hoist cables and motors for signs of wear or deterioration
  - Ensure air temperature and humidity of machine/pump housing room meets the designated specified range for proper operation
  - Ensure all call buttons are in working condition

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. We anticipate replacement of the following traction elevator system components:

- Cab control panels
- Door operators
- Hallway panels/buttons
- Hoists and motors
- Microprocessor based controllers

Exhaust Fans

Line Item: 3.380

Quantity: The Association maintains two in line exhaust fans to remove exhaust from the residential kitchens and restrooms. The exhaust fans have capacities of 57,980- to 66,980-CFM each.

History: The fans are original with a varied history of repairs and component replacements. The Association completed component replacements and modifications to the rest room fan in 2015. The Association replaced the motor, shaft and bearings at the kitchen fan in 2023.

We include a Management provided expenditure to conduct component replacements at the rest room fan in the near term, including replacement of the shaft and bearings.

Condition: Reported satisfactory overall without operational deficiencies

Recently replaced motor at exhaust fan

Rest room exhaust fan

Useful Life: Up to 45 years (We defer total replacement of the fans in consideration of the recent repair and component replacement projects.)

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

- Monthly:
  - Check unit for unusual noises and vibrations
- Quarterly:
  - Inspect belts for wear, adjust tension and replace as needed
  - Inspect/clean fan blades
  - Inspect/replace anti-vibration mounts as needed
  - Check motors for proper operation
  - Replace filters as applicable
- Semi-annually:
  - Lubricate fan and motor bearings if bearings are not sealed according to manufacturer's recommendation
  - Inspect/clean inlets, shafts and outlets
  - Ensure louvers and dampers are unclogged and operable

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 Association should fund interim replacements of belts, motors and other components through the operating budget as needed.

Expansion Tanks

Line Item: 3.393

Quantity, History and Condition: The building includes seven large capacity expansion tanks for the high- and low-level building heating system, and the fin tube loop system. The expansion tanks are original and have capacities of primarily 317- to 564-gallons each.

The tanks are reported overall satisfactory condition.

Expansion tanks

Expansion tanks

Useful Life: Highly variable useful life of up to 60 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.

Heat Exchangers

Line Items: 3.460 and 3.461

Quantity: The building utilizes five shell and tube heat exchangers for the residential building heating systems, pool air handling unit and low level/commercial heating system.

The two heat exchanges for the residential fan coil loop heating system have a capacity of 2,500-GPM (gallons per minute) each. The pool air handling unit, fin tube loop and low level/commercial heating system heat exchangers have capacities of 297- to 625-GPM each.

History: The shells are original. The Association replaced the bundles in the main building-heat heat exchangers in 2016 and adjacent valves in 2021. The Association replaced the bundles at the remaining heat exchangers in 2023.

Condition: Reported satisfactory overall (*We recommend that the Association budget to coordinate replacement of the heat exchangers with replacement of the boilers as a complete system redesign is likely*.)

Commercial heat exchanger

Perimeter heat exchanger

Pool heat exchanger

Main building heat exchanger

Useful Life: Up to 35 years

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

- Remove and inspect tube bundles if possible
- Clean and inspect tubes for leaks or splits
- If sacrificial anodes are used, inspect and replace as needed
- Inspect and replace any damaged or worn gaskets

Component Detail Notes: The Association may choose to rebuild the heat exchangers prior to complete replacement. However, this activity becomes less desirable as heat exchangers age due to the scarcity of parts. We regard interim replacements of

exchanger tubes as normal maintenance and base our estimates on complete replacements.

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.

Life Safety System (Including Fire Standpipe Valves)

Line Items: 3.555, 3.560 and 3.561

Quantity: The life safety system at Park Tower includes the following components:

- Audio/visual fixtures
- *Honeywell* control panels
- Detectors
- Voice communication system at the stairwells
- Wiring

History: The system was installed in 2007. The Association replaced the main control panel system and detectors in 2023, and will mount a monitoring panel in the party room in the near term.

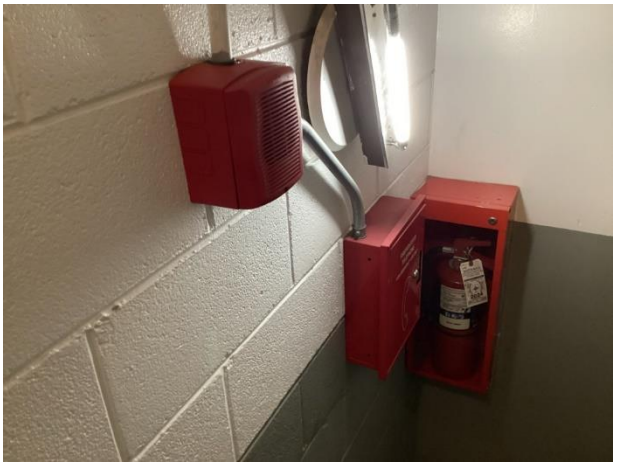
Conditions: The voice communication panels at the stairwells and audio fixtures at all common areas are reported in satisfactory condition. The Association conducts repairs and partial replacement of system components as needed through the operating budget.

The Building Engineer informs us of the need to replace the 104 valves for the fire standpipes. We include a cost provided by the Building Engineer in the near term.

The tower also includes a smoke damper system. The need for systematic smoke damper system component replacements varies greatly. Management informs us that the Association conducts inspections and repairs as needed through the operating budget. We classify the smoke damper system as operating budget funded per Management.

Audio visual fixture

Control panels



Fixtures at stairwell

Valve for standpipe

Useful Life: Up to 25 years for the devices and up to 15 years for the control panels and detectors

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

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

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

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

Light Fixtures, Exit and Emergency

Line Item: 3.580

Quantity: Approximately 470 exit and emergency fixtures (including the remote emergency light fixtures)

History: The Association will replace the majority of the exit fixtures concurrent with renovation of the hallways. The exit fixtures were previously replaced in aggregate in 2001.

The emergency fixtures vary in age.

The Association replaces a significant amount of exit and emergency fixtures through Association staff on an as needed basis. We therefore reduce the cost of the initial systematic replacement event at the direction of Management in consideration of the annual as needed replacements.

Condition: Reported satisfactory overall (Management informs us that the Association will likely replace the remaining dated fixtures upon completion of the hallway renovation project.)

Emergency battery pack fixture

Fixtures at hallway

Useful Life: Up to 25 years

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

- Monthly:
  - Inspect and repair broken or dislodged fixtures
  - Replace non-functional bulbs
  - In accordance with *NFPA 101* and local guidelines, conduct a 30-second functional test. For Self-Testing or Self-Diagnostic emergency and exit fixtures, ensure the indicator reads normal working condition
  - Keep written records of visual inspections, replacements and tests on file for the Authority Having Jurisdiction
- Annually:
  - In accordance with *NFPA 101* and local guidelines, conduct a 90-minute functional test. This may be conducted with the use of clamps, during extended outages or by temporary disruption of electrical power if feasible. For Self-Testing or Self-Diagnostic emergency and exit fixtures, activate a 90-minute self-test by manufacturer procedures
  - Keep written records of visual inspections, replacements and tests on file for the Authority Having Jurisdiction

Priority/Criticality: Per Board discretion

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

Pipes

Line Items: 3.598, 3.599, 3.600, 3.604 and 3.605

Quantity: Based on our review of the building plans and conversation with a previous Building Engineer, we estimate the following quantity of riser sections and types of pipe materials within Park Tower:

Type	Material	Risers	Floors	Riser Sections
Building heating, cooling and condensate (Fan Coil Tiers)	Black steel	45	54	**2,430**
Building heating (supply & return) (Fin Tubes)	Black steel	6	54	**324**
Domestic cold water	Galvanized steel	17	54	**918**
Domestic hot water (supply & return)	Copper or galvanized steel	34	54	**1,836**

Sanitary waste disposal	Cast iron	17	54	**918**
Vent	Cast iron	17	54	**918**
			Total:	**7,344**

History and Conditions:

- **Building Heating, Cooling and Condensate** – The black steel building heating, cooling and condensate riser sections are original. The building includes building heating supply and return pipes the corner fin tube radiators. The building also includes building heating, cooling and condensate system pipes for the fan coil tiers (two pipe system).

  The Building Engineer informs us of a recent history of issues, primarily at the following locations:
  - T-connections at the vertical riser/horizontal pipes
  - Expansion joints

  The Association will complete replacement of the supply, return and condensate pipes for the 01/03 fan coil unit tier in 2024 with copper pipes. Failure of an expansion joint and the resulting tier damage is prompting the project. We include the remaining project cost per Management. The systematic phased HVAC riser replacement events excludes the 01/03 fan coil tier.

  We continue to include a Management provided cost in the near term to conduct an invasive analysis of these pipes to determine their condition and the timing of systematic replacement.

  The Association replaced the insulation at the building heating and cooling risers at the 11 and 01 tiers in approximately 2015. We exclude expenditures for subsequent replacements of insulation at the direction of Management in part as the systematic pipe replacement program includes installation of new insulation.

- **Domestic Water, Supply and Return** –The Association began replacement of the galvanized domestic hot water risers with copper in 2010 due to leaks and occlusions. The domestic hot water riser replacement program includes the following:
  - Replacement of the supply and return domestic hot water risers
  - Replacement of the horizontal branch piping for the domestic hot water system
  - Replacement of the horizontal branch piping for the domestic cold water system
  - Insulation installation

- Replacement of damaged finishes and cabinets in the units

We include Management provided costs in the near term to replace the remaining original domestic hot water risers, including two tiers in 2024.

The domestic cold water risers are primarily original and comprise galvanized steel. The Building Engineer informs us that the domestic cold water pipe risers are in satisfactory condition. The Building Engineer does not report a recent history of domestic cold water pipe failures.

- **Sanitary Waste Disposal and Vent** – The cast iron sanitary waste disposal and vent riser sections are original. The Building Engineer informs us of a limited recent history of issues, including pipe deterioration and cracks. The Building Engineer informs us of a consistent rate of development of waste and vent pipe issues as compared to our previous Reserve Study.

Component Detail Notes:

Building Heating, Cooling and Condensate - The black steel pipes have a useful life of up to and sometimes beyond 80 years.

Domestic Water - The useful life of galvanized domestic supply and return pipes is up to and sometimes beyond 70 years. The first piping system usually to experience problems is domestic hot water. The rate of build-up varies based on flow rates, minerals in the water and temperature. Occlusions from deposits eventually develop, reduce water pressure and clog pipes. Galvanized pipe is zinc coated steel which slows oxidation or rusting. The galvanized pipe provides a surface texture for minerals such as calcium and magnesium (water hardness minerals) to adhere. These minerals build-up at a faster rate on galvanized piping when compared to copper piping. Also, corrosion of these pipes will eventually result in pitting of the interior surface and pinhole leaks. We recommend the Association budget funds to replace the galvanized water piping with copper piping. Copper piping is the predominant type of pipe used in new construction for domestic water piping.

Sanitary Waste Disposal and Vent - The cast iron pipes typically deteriorate from the inside out as a result of sewer gases, condensation and rust.

Valves - The piping systems include various valves. Identification of a typical useful life and remaining useful life for individual valves is difficult. Associations typically replace valves on an as needed basis in our experience.

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

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

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

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. Our cost for a single riser section assumes replacement of all pipes located within each wall opening, associated branch piping, fittings and minimal interior finishes. However, the cost does not include temporary housing for affected residents, pipes within the units or significant interior finishes.

An invasive analysis of the piping systems will provide various replacement options. Replacement of the systems as an aggregate event will likely require the use of special assessments or loans to fund the replacements.

Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Park Tower could budget sufficient reserves for the beginning of these pipe replacements and have the opportunity to adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual pipe replacements to budget sufficient reserves.

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

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

Pumps

Line Items: 3.700 through 3.708

Quantity, History and Conditions: Park Tower utilizes the following major pumps:

- **Building Cooling, Commercial** – 7.5-HP, two each located near the cooling tower, replaced 2018, reported satisfactory
- **Building Cooling, Residential, Cooling Tower** - 75-HP, one each, replaced 2008, reported satisfactory
- **Building Heating, Commercial** - 10-HP, two each, motors replaced, age of the pumps not available at the time of our inspection, reported satisfactory
- **HVAC, Residential, Fan Coil Loop/Dual Temperature** - 100-HP, three each, the two main pumps were replaced in 2023 and include variable frequency drives, the 3rd pump has an indeterminate remaining useful life as it is used as a backup and receives minimal use
- **Building Heating, Residential, Fin Tubes** - 10-HP, two each, the Association replaced one pump in 2023 and will replace the remaining pump in 2024, the Building Engineer provided the unit cost
- **Domestic Cold Water** - two 60-HP each, one 30-HP, three total, pumps replaced from 2017 to 2021, the Association added variable frequency drives in 2024, reported satisfactory
- **Fire Suppression** - one 100-HP, one 40-HP, two total, original, controls replaced in the 1990s, the systems include jockey pumps, the Association tests the pumps weekly
- **Gas Booster** - 10-HP, two each, one pump replaced in 2021 and one pump replaced in 2024, include variable frequency drives, reported satisfactory
- **Sewage Ejection** - 10-HP, two each, replaced 2018, reported satisfactory

Cooling tower pump

Commercial heat pumps

Fin tube pumps

Domestic cold water pumps

Fire suppression pumps

Gas booster pump

Dual temperature pumps

Sewage ejection pumps

Cooling pumps for commercial

Useful Lives:

- Building Cooling, Commercial – up to 25 years
- Building Cooling, Residential, Cooling Tower - up to 30 years
- Building Heating, Commercial - up to 30 years
- Building Heating, Residential, Fan Coil Loop - up to 35 years
- Building Heating, Residential, Fin Tubes - up to 30 years
- Domestic Cold Water - up to 25 years
- Fire Suppression - up to 60 years
- Gas Booster - up to 25 years
- Sewage Ejection - up to 25 years

Component Detail Notes: Major pumps included in this Reserve Study are those with a motor drive of at least five-HP. The Association should replace or repair all pumps with motor drives less than five-HP as needed and fund this ongoing maintenance activity through the operating budget. The Association may choose to rebuild pumps prior to complete replacement. However, this activity becomes less desirable as pumps age due to the scarcity of parts. We regard interim replacements of motors and component parts as normal maintenance and base our estimates on complete replacements. An exact replacement time for each individual pump is difficult, if not impossible, to estimate.

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. We also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. Valuable motor information to note in a preventative maintenance plan or schedule includes age of unit and last time of repair, horsepower and rpm (revolutions per minute), bearing type and conditions surrounding motor/pump. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Weekly:
  - Check/adjust controls
  - Check/adjust pressure levels

- Check for leaks
- Conduct churn tests

- Quarterly:
  - Inspect/clean motors
  - Inspect mountings and connections for proper alignment, torque and condition
  - Inspect/replace pump packing as needed, consider replacement with mechanical seals
  - Check for appropriate oil levels
- Semi-annually:
  - Lubricate pumps, motors and motor bearings
- Annually:
  - Assess proper internal component performance and replace damaged or malfunction components as necessary, and tighten fittings
  - Access temperature and vibration performance of motors in accordance with the intended design

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.

Security System

Line Items: 3.820 and 3.821

Quantity: Park Tower utilizes the following security system components:

- Automated fob reading system (17 access points)
- Cameras (52)
- Monitors
- Recording systems

History: The Association completed significant security system upgrades in 2017, including replacement of the fob system. The camera system components vary in age.

Condition: Reported satisfactory overall

Fob system control panels

Useful Life: Up to 15 years (We assume replacement of components in a phased manner in lieu of in aggregate.)

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

- Monthly:
  - Check cameras for proper focus, fields of view are unobstructed and camera and lenses are clean and dust-free
  - Check recording equipment for proper operation
  - Verify monitors are free from distortion with correct brightness and contrast
- Annually:
  - Check exposed wiring and cables for wear, proper connections and signal transmission
  - Check power connections, and if applicable, functionality of battery power supply systems

Priority/Criticality: Per Board discretion

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

Storage Tanks, Domestic Hot Water

Line Item: 3.861

Quantity: Three insulated domestic hot water storage tanks

History: The Association replaced the commercial storage tank at the main boiler room in 2018 and the low zone residential storage tank in 2024.

The high zone residential tank is original.

Condition: Reported satisfactory overall

Commercial domestic water storage tank

Low rise residential domestic water storage tank

Penthouse domestic water storage tank

Useful Life: Up to 45 years

Preventative Maintenance Notes: The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to conduct on an annual basis to maximize the remaining useful life:

- Inspect for leakage and corrosion
- Inspect and repair/replace valves including any pressure relief valves

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.

Trash Compactor

Line Item: 3.900

Quantity: One each

History: Replaced 2019

Condition: Reported satisfactory without operational deficiencies

Trash compactor

Useful Life: Up to 25 years

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

- Weekly:
  - Check hydraulic oil level with cylinder fully retracted to make sure oil is at appropriate level
  - Check hydraulic hoses for kinks, leaks or other damage
  - Check to make sure all safety guards and access covers are secure and in place
- Monthly:
  - Make sure lower door hinges and lock assembly are properly greased
  - Check all nut and bolt connections to make sure they are tight and secure

- Clean the power unit and keep unit clear of debris
- Annually:
  - Have all electrical connections inspected by a licensed electrician to ensure proper connectivity and safe connections. The motor draw should be checked and recorded to help prevent failure.
  - The hydraulic system should be inspected and repaired, including draining and refilling the hydraulic fluid reservoir.
  - The oil filter should be changed after a maximum of 250 hours of operation. The oil filter should be changed more frequently for compactors located in hotter environments with more dust present.

Priority/Criticality: Per Board discretion

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

Valves, Large Diameter

Line Item: 3.920

Quantity: The building utilizes approximately 30 large diameter valves at the main water connection, fire pumps, chiller room and boiler room.

History: Primarily original with a varied history of partial replacements

Condition: Reported satisfactory overall. Exceptions include three main water connection valves that the Building Engineer informs us will be replaced in the near term. We include a Building Engineer provided cost for this project.

We recognize that the Association may defer large diameter valve replacement to coordinate with replacement of the fire suppression pumps and boilers as a redesign of the system is likely.

Chiller room large diameter valves

Main water connection large diameter valves

Useful Life: Up to 50 years

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Monthly:
  - Inspect the valves (if valve is readily accessible)
    - Confirm tightness of connections/fasteners
    - Confirm lack of leaks
- Semi-annually:
  - Clean the valves (including the valve stem) (if valve is readily accessible)
  - Open/close the valves to ensure operation (if valve is readily accessible)
- Annually:
  - Remove, clean and repair select valves as needed (including replacement of components as needed) (frequency and feasibility of rebuilds will vary greatly) (if valve is readily accessible)

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.

Property Site Elements

Asphalt Pavement, East and North

Line Item: 4.045

Quantity, History and Condition: The development includes approximately 1,750 square yards of asphalt pavement at the east and north perimeters. The Association shares responsibility of the north pavement with the adjacent building. The pavement was replaced in 2022. We assume that the 2022 project included repairs at catch basin collars.

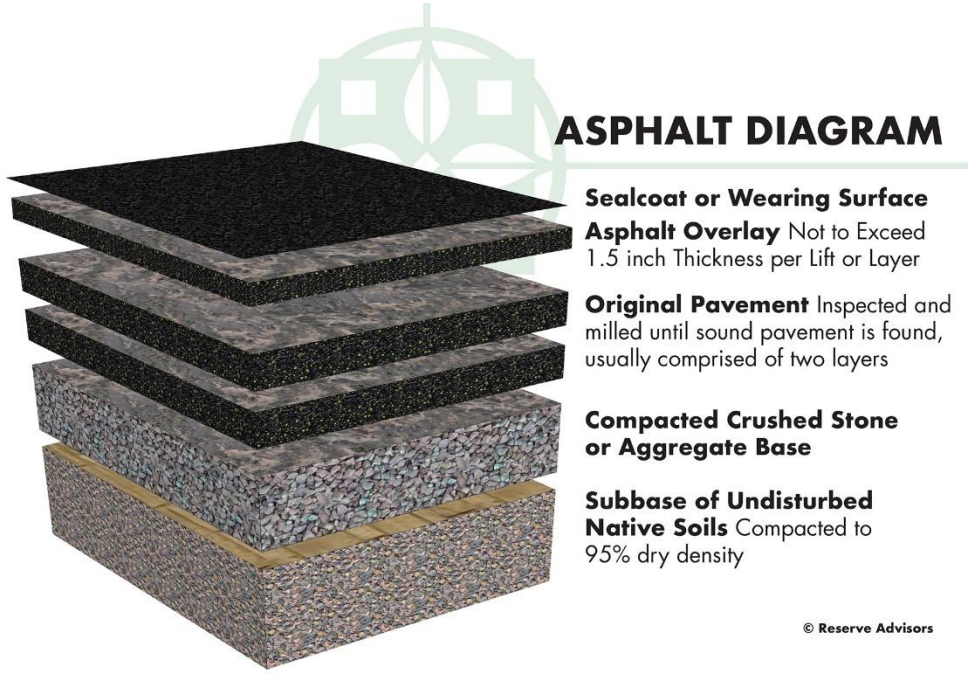
The pavement is in good overall condition with isolated cracks evident. We opine that the type and amount of traffic will likely result in a diminished useful life.

East perimeter pavement

North perimeter pavement

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

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 Park Tower:



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

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

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 that the costs include partial replacement of concrete curbs and gutters, and repairs to catch basins as needed.

Concrete, On-grade at Site

Line Item: 4.140

Component Detail Notes: The development includes various on-grade concrete at the site, including sidewalks, pavement and curbs/gutters. The Association replaced the concrete at the northeast perimeter in 2023.

The concrete varies greatly in condition. Areas of cracks are evident, primarily at the service dock areas. We include periodic allowances for partial replacements of site concrete as the development ages.

Crack at sidewalk

Service area pavement cracks

Service dock pavement cracks

Varied sidewalk replacements

Useful Life: Up to 50 years

Priority/Criticality: Per Board discretion

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

Fence, Steel, East Perimeter

Line Item: 4.300

Quantity and Condition: The east perimeter includes a steel fence. We include a Management provided expenditure to replace this fence in the near term based on its condition.

East perimeter fence

Useful Life: Up to 35 years with the benefit of timely paint applications and repairs 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.

Plaza

Line Items: 4.959 through 4.961

Quantity: The plaza at Park Tower is pedestrian and vehicular areas atop an underlying concrete structure. The plaza includes approximately 11,000 square feet of concrete areas, including the circle drive and the planter at the lobby entrance, and 1,500 square feet of landscape at the two main planters.

Due to the non-invasive nature of our inspection, we are unable to determine the exact composition of the plaza. Based on our visual inspection, experience with similar construction and knowledge of replacement/capital repair projects of this type, we surmise the plaza comprises the following elements:

- Concrete pavement
- Concrete sidewalks with a standard finish
- Concrete sidewalks with an exposed aggregate finish
- Landscape planter at the lobby entrance and two main planters
- Sealants
- Perimeter flashing
- Underlying waterproof membrane atop the structure
- Elevated structural concrete

History: The Association replaced the plaza primarily from 2014 to 2016. The Association replaced the membrane at the two main planters in 2007.

Condition: The concrete toppings exhibit areas of cracks and joint sealant deterioration. The concrete walls at the planters exhibit cracks. The ceiling beneath the plaza exhibits isolated evidence of water infiltration and a significant amount of previous repairs.

The Association recently completed joint sealants and application of a sealer to the concrete.

The steel railings exhibit areas of corrosion at mounts.

We include a Management provided expenditure for planter wall repairs in the near term.

Concrete joints

Crack at perimeter at plaza

Crack at planter wall

Cracks at concrete

Cracks at concrete

Driveway joint deterioration

Evidence of past water infiltration beneath the plaza

Joint deterioration at driveway

Joint deterioration at plaza

Joint deterioration at plaza

Joint sealant at plaza wall

Lobby entrance planter

Planter joint deterioration

Planter wall cracks

Repairs beneath plaza

Repairs beneath plaza

Rust at mounts at railing

Typical repairs beneath plaza

Useful Life: Waterproof membranes serving these types of areas generally have useful lives of up to 30 years with the benefit of interim repairs and sealant replacements up to every six years. We recognize that the Association historically conducts annual repairs, cleaning and seal applications. We assume that the Association will fund these annual

limited repairs and seal applications subsequent to the near-term event through the operating budget.

The interim repairs will likely include:

- Replacement of sealants
- Crack repairs as needed
- Replacement of a limited amount of concrete topping
- Replacement of a limited amount of membrane (leak remediation)

Component Detail Notes: As the membrane ages and deteriorates, water infiltration through the structure and leaks into the space beneath will become more frequent and widespread. Deterioration of the concrete structure beneath the membrane is also probable due to membrane leaks and normal aging of the concrete.

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 a limited amount for capital repairs to the underlying concrete structure. The exact amount of concrete structure repairs and thus the exact cost will vary based on the engineering analysis at the time of the project.

Tractor

Line Item: 4.971

Quantity: The Association owns a tractor with snow removal equipment.

History: We continue to include a cost to replace the tractor in the near term. The exact cost will vary based on the model of tractor purchased.

Tractor

Useful Life: Up 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.

Pool Elements

Hot Tub (Jacuzzi)

Line Item: 6.553

Quantity: The main pool area includes a hot tub, Jacuzzi or spa.

History: The insert was replaced in 2007. The Association rebuilt the surrounding platform in 2021.

Condition: The hot tub insert is in reported satisfactory condition.

Hot tub

Useful Life: Up to 20 years for the hot tub insert

Priority/Criticality: Per Board discretion

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

Mechanical Equipment

Line Item: 6.600

Quantity: Pool and hot tub mechanical equipment includes:

- Automatic chlorinators
- Controls
- Filters

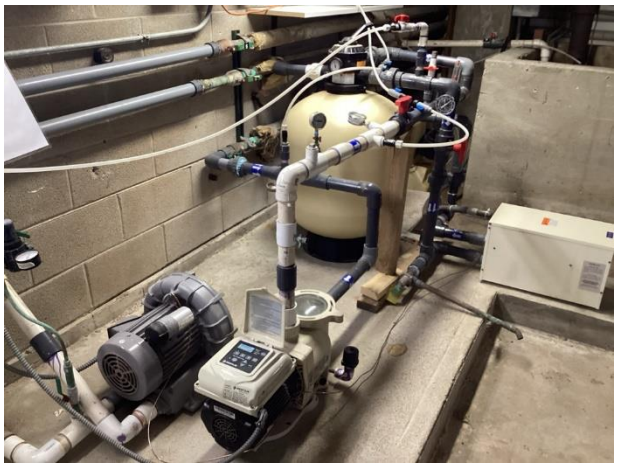
- Heaters
- Interconnected pipe, fittings and valves
- Pumps

History: Ages vary (The Association recently replaced a significant amount of piping.)

Condition: Conditions vary. The equipment is in reported overall satisfactory condition with the exception of leakage at the drainage basin. The Building Engineer informs us that the Association will likely install a liner in the basin.

Pool filters

Pool heaters



Spa mechanical equipment

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. Failure of the pool mechanical equipment as a single event is unlikely. Therefore, we assume replacement in a phased manner. We consider interim replacement of motors and minor repairs as normal maintenance.

Pools

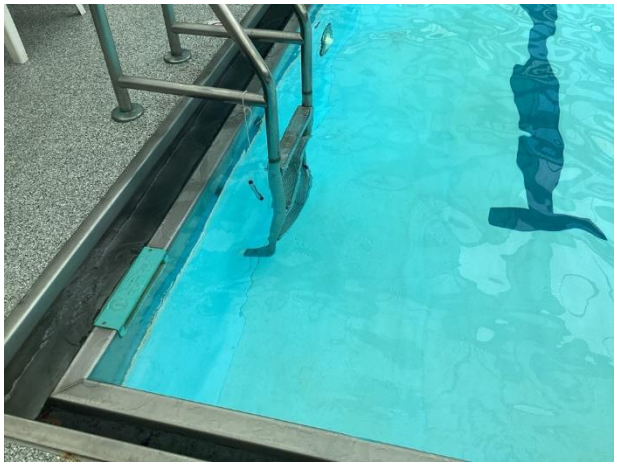
Line Items: 6.800 and 6.801

Quantity and History: The main (or indoor) pool comprises a concrete structure of approximately 2,100 square feet based on the horizontal surface area. The Association replaced the gutter system in the main pool in 2006 and installed a vinyl liner in 2017. The Association also completed limited liner repairs recently due to damage during the roof replacement project.

The outdoor, or kiddie, pool includes a plaster finish. The tile was replaced in 2016. The Association replaced the plaster finish and lights, and completed coping repairs in 2022.

Condition: The pools are in reported satisfactory condition.

Outdoor pool plaster finish



Pool at liner

Pool at liner

Useful Life: Up to 15 years for the main pool liner and 8- to 12-years for the outdoor pool plaster finish (The structures have an indeterminate remaining useful life.)

Component Detail Notes: Removal and replacement of the plaster/liner provides the opportunity to inspect the structures and to allow for partial repairs of the underlying surfaces 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.

Garage Elements

Concrete, Elevated Floor (1P Level)

Line Item: 7.300

Quantity: The 1P, or upper, garage floor comprises approximately 63,000 square feet of elevated cast in place concrete floor structure.

Condition and History: The Association completed significant concrete repairs and replacement of the traffic coating in 2021. The project primarily included:

- Repairs to the 1P elevated garage floor top and underside concrete
- Replacement of the traffic coating at the 1P garage floor
- Cracks repairs and patching at the 2P garage floor
- Drain repairs

The traffic coating exhibits isolated areas of deterioration/damage, primarily at ramps and drive lanes. The Association will conduct limited traffic coating repairs through the warranty in 2024.

The ceiling beneath the elevated floor exhibits a significant amount of concrete repairs and isolated repair material cracks.

Crack at repair beneath elevated floor

Repairs beneath elevated floor

Repairs beneath traffic coating

Traffic coating damage

Traffic coating damage

Traffic coating damage

Traffic coating wear

Typical repairs beneath elevated floor

Useful Life: Repairs to the various concrete surfaces 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 includes:

- Complete inspection of the garage concrete
- Partial depth concrete replacement of a limited amount of the surface area of the concrete floor
- Partial depth concrete replacement of a limited amount of the surface area of the elevated structural concrete ceiling
- Remediation of structural concrete columns and beams as needed
- Crack repairs on all surfaces as needed

Concrete, On-grade (2P Level)

Line Item: 7.360

Quantity: Park Tower maintains approximately 63,000 square feet of on-grade concrete at the 2P, or lower, garage level.

Condition: Conditions vary with areas of cracks, deterioration of original and repaired concrete, and surface spall evident.

Concrete cracks

Concrete spall

Concrete spall

Useful Life: Up to 90 years (The need for total replacement of the on-grade garage floor is indeterminate. For purposes of this Reserve Study, we assume replacement of areas that exhibit extensive deterioration.)

Priority/Criticality: Per Board discretion

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

- Complete inspection of the floor
- Selective cut out and replacement of up to six percent (6%), or 3,780 square feet, of the on-grade concrete
- Crack repairs as needed
- Drain repairs as needed

Doors and Operators (Vehicular and Fire)

Line Items: 7.400 and 7.401

Quantity: The garage includes two vehicular doors and six rolling fire doors.

History: The Association replaced the vehicular doors with high-speed rolling doors in 2022. The fire doors are likely original. The Association installed an enclosure around the fire doors in 2009.

Condition: The vehicular and fire doors are in reported satisfactory condition.

Fire door

Vehicular doors

Useful Life: Up to 50 years for the fire doors and every 10- to 15-years for the vehicular doors

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. The Association should fund interim replacements of components through the operating budget.

Exhaust System

Line Item: 7.460

Quantity: System includes:

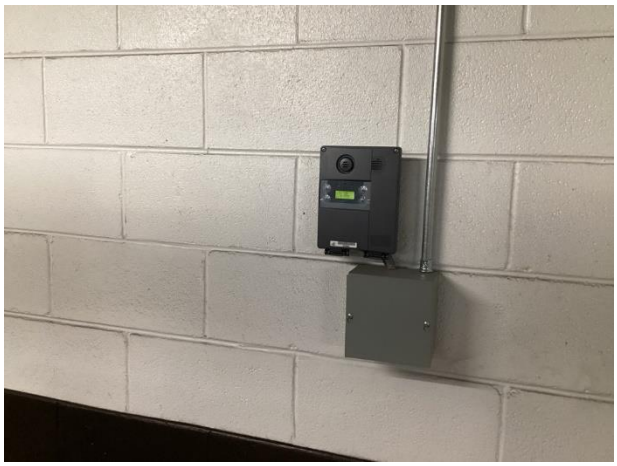
- Carbon monoxide detectors
- Exhaust fans (two, 55,500-CFM each, propeller type)
- Louvers

History: The Association replaced the fan motors and the carbon monoxide system in 2019. The Association conducts interim replacement of carbon monoxide detectors as needed.

The remaining fan components are likely original.

Condition: The fans are in reported satisfactory condition.

Carbon monoxide detector



Carbon monoxide detector

Exhaust fan

Useful Life: Up to 30 years for the fans

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

- Monthly:
  - Check unit for unusual noises and vibrations
- Quarterly:
  - Test carbon monoxide detectors for proper operation
  - Inspect belts for wear, adjust tension and replace as needed
  - Inspect/clean fan blades
  - Inspect/replace anti-vibration mounts as needed
  - Check motors for proper operation
  - Replace filters as applicable
- Semi-annually:
  - Lubricate fan and motor bearings if bearings are not sealed according to manufacturer's recommendation

- Inspect/clean inlets, shafts and outlets
- Ensure louvers and dampers are unclogged and operable

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 regard interim repairs or partial replacements of components, including CO detectors, as normal maintenance.

Fire Suppression System

Line Items: 7.499 and 7.500

Quantity: Approximately 126,000 square feet of garage area (wet system)

History: Original

Condition: The piping systems are reported to be in satisfactory condition.

The Building Engineer informs us of the need to replace the heads in the near term. We therefore continue to include an allowance in the near term to replace the heads.

Fire suppression system at head

Fire suppression system at head

Fire suppression system at main and branch pipes

Useful Life: Up to 60 years for the piping

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. In accordance with *NFPA 25* and local guidelines, we also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the age of the components, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
  - Complete full inspection of valves, hangers, pipes, fittings and heads
  - Ensure sprinkler heads and pipes are free of ornamentations and coverings
  - Check for pipe corrosion
  - Test system operation
  - Conduct paint finish applications to the pipes as needed as these protective finishes may extend the overall useful life in highly corrosive environments

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 Fixtures

Line Item: 7.600

Quantity and History: Approximately 200 light fixtures illuminate the parking garage. The Association retrofitted the fixtures to primarily utilize LED (Light Emitting Diode) lamps in 2010.

Condition: Reported satisfactory

Garage light fixtures

Useful Life: Up to 30 years

Priority/Criticality: Per Board discretion

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

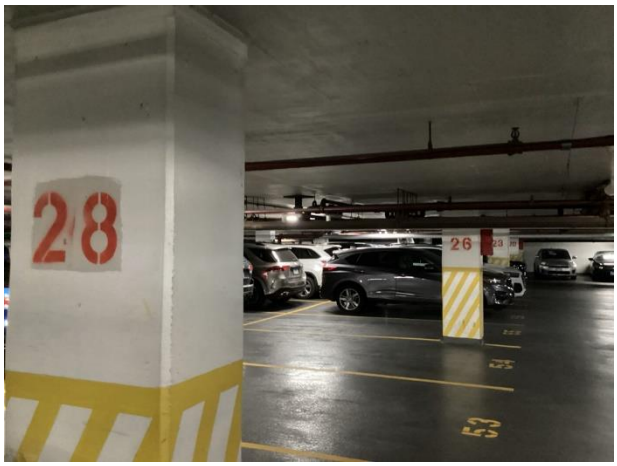
Paint Finishes

Line Item: 7.660

Quantity: Approximately 150,000 square feet on the walls, columns and ceilings

History: Systematic application dates to 2008

Condition: Conditions vary with areas of scuffs and stains evident



Garage paint finishes overview

Useful Life: Up to 20 years

Priority/Criticality: Per Board discretion

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

Traffic Coating

Line Items: 7.799 and 7.800

Quantity: The 1P, or upper, garage floor comprises approximately 63,000 square feet of elevated cast in place concrete floor structure.

Condition and History: As noted in the narrative "**Concrete, Elevated Floor (1P)**" Association completed significant concrete repairs and replacement of the traffic coating in 2021. The project primarily included:

- Repairs to the 1P elevated garage floor top and underside concrete
- Replacement of the traffic coating at the 1P garage floor
- Cracks repairs and patching at the 2P garage floor
- Drain repairs

The traffic coating exhibits isolated areas of deterioration/damage, primarily at ramps and drive lanes. The Association will conduct limited traffic coating repairs through the warranty in 2024.

The ceiling beneath the elevated floor exhibits a significant amount of concrete repairs and isolated repair material cracks.

Useful Life: Total replacement up to every 20 years with the benefit of interim overlayment at the drive lanes up to every 10 years

Component Detail Notes: In our experience, active periodic maintenance and protection with a traffic coating on elevated concrete structures results in a longer useful

life, safer operation and lower overall life cycle costs. Failure to maintain a traffic coating on elevated floors will result in accelerated concrete deterioration at concrete ceilings below the elevated floors and a higher overall capital investment in the parking structure over time.

Salts and moisture-driven chemical reactions are detrimental to the integrity of an elevated structural concrete garage floor. Road salts deposited as snow melts from vehicles or chlorides and moisture contained in ambient air penetrate the concrete surface. The dissolved chlorides and moisture then migrate to the imbedded reinforcing steel through pores in the concrete or directly through cracks. Once they reach the steel, salts and moisture cause expansive corrosion, ultimately causing the concrete to expand and "pop" or spall. Left unrepaired, additional chlorides and moisture will continue to infiltrate the concrete, eventually causing structural failure. This type of deterioration is progressive and costly to repair. The utilization of a traffic coating atop the concrete minimizes the infiltration of salts and moisture into the concrete thereby minimizing future capital repairs.

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. Expenditures assume:

- Complete inspection of the garage concrete and concrete repairs as described in the previous narratives "Concrete, On-grade" and "Concrete, Elevated Floor"
- Preparation of the concrete surface
- Application of a urethane base coat, intermediate aggregate coating and topcoat to the elevated floors
- Parking and directional line striping as needed

Unit Heaters (or Air Handling Units)

Line Item: 7.900

Quantity and History: The garage includes approximately 22 original *McQuay* hot water sourced unit heaters (or air handling units) and recently installed *Modine* unit heaters. The Association installed the *Modine* unit heaters and repaired the original unit heaters/air handling units in 2019. The majority of the unit heaters/air handling units comprise the original style.

Condition: Reported satisfactory overall. The Building Engineer informs us of a history of use of parts from air handling units to repair other units.

We continue to include an allowance in the near term to replace the original units. We also include a subsequent expenditure to replace the units installed in 2019.

Garage air handling unit

Garage unit heater

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.

Reserve Study Update

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

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

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

5. METHODOLOGY

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

Park Tower can fund capital repairs and replacements in any combination of the following:

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

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

This Reserve Study is in compliance with and exceeds the National standards[1] 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[2] 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 Chicago, Illinois at an annual inflation rate[3]. Isolated or regional markets of greater

[1] Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".
[2] See Credentials for additional information on our use of published sources of cost data.
[3] Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.

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

- The past and current maintenance practices of Park Tower 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.

TODD M. WALTER, P.E., RS, PRA
Regional Executive Director

CURRENT CLIENT SERVICES

Todd M. Walter, a Professional Engineer (P.E.), is the Great Lakes Regional Executive Director for Reserve Advisors, which is dedicated to serving community associations, religious organizations, educational facilities, and public and private entities throughout the United States.

Todd Walter has conducted nearly 2,300 Reserve Studies since starting with Reserve Advisors in 1999, primarily in the Chicago area. The following is a partial list of clients served by Mr. Walter demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

Lake Point Tower – Prominent lakefront tower that features an extensive green roof (Skyline Park), curtain wall system and expansive lobby areas.

Edgewater Beach Apartment Corporation - Iconic vintage hotel/resort conversion at the far-north Edgewater community in Chicago. The Development includes extensive historic features and amenities including the garden south of the building.

Commodore Green Brier Landmark - Elegant, historic condominiums with original face brick, terra cotta and stone architecture that are located in Chicago.

Montgomery on Superior - Conversion of the former Montgomery Ward headquarters in Chicago into upscale residences. The tower includes travertine stone cladding and curtain wall systems.

The Carlyle - Vintage, prime real estate on Chicago's Lake Shore Drive at the north end of the Magnificent Mile, an elegant tower with expansive balconies that overlook Lake Michigan.

Optima Old Orchard Woods Development - Landmark development off I-94 at the Old Orchard exit in Skokie with three towers that include curtain wall systems and extensive landscaped roof terraces.

3550 Association - Twin 28-story towers with over 700 units on Lake Shore Drive in Chicago. Extensive lobbies and garage structure at the base of the towers.

Loring Green East and West - These two towers are two of the most recognized residential high rises in Minneapolis. The towers comprise entirely brick masonry facades with extensive amenities. The development includes a landscaped plaza roof system.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Walter was a design engineer and on-site project manager for Owens-Illinois. He was responsible for the construction inspection of structural projects throughout the United States. He has designed structural components and prepared construction specifications for national and international engineering projects.

EDUCATION

Ohio University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS

Professional Engineering License - Wisconsin 2003, Illinois 2003, Ohio 2009, Michigan 2009, Indiana 2009, Minnesota 2009, North Carolina 2019
LEED (Leadership in Energy and Environmental Design) Green Associate
American Society of Civil Engineers
Reserve Specialist (RS) - Community Associations Institute
Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts

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

CURRENT CLIENT SERVICES

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

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

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

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

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

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

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

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

PRIOR RELEVANT EXPERIENCE

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

EDUCATION

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

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Professional Engineering License – Wisconsin, North Carolina, Illinois, Colorado
Reserve Specialist (RS) **-** Community Associations Institute
Professional Reserve Analyst (PRA) **-** Association of Professional Reserve Analysts

RESOURCES

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

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

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

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

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

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

Reserve Advisors' library of numerous periodicals relating to reserve studies, condition analyses, chapter community associations, and historical costs from thousands of capital repair and replacement projects, and product literature from manufacturers of building products and building systems.

7. DEFINITIONS

Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 305,000 condominium and homeowners associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners.

Cash Flow Method - A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

Component Method - A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components.

Current Cost of Replacement - That amount required today derived from the quantity of a *Reserve Component* and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current *local* market prices for *materials*, *labor* and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.

Fully Funded Balance - The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation.

Funding Goal (Threshold) - The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.

Future Cost of Replacement - *Reserve Expenditure* derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.

Long-Lived Property Component - Property component of Park Tower 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) Park Tower responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

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

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

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

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

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

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

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

8. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, LLC ("RA") performs its services as an independent contractor in accordance with our professional practice standards and its compensation is not contingent upon our conclusions. The purpose of our reserve study is to provide a budget planning tool that identifies the current status of the reserve fund, and an opinion recommending an annual funding plan, to create reserves for anticipated future replacement expenditures of the subject property. The purpose of our energy benchmarking services is to track, collect and summarize the subject property's energy consumption over time for your use in comparison with other buildings of similar size and establishing a performance baseline for your planning of long-term energy efficiency goals.

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. Our energy benchmarking services with respect to the subject property is limited to collecting energy and utility data and summarizing such data in the form of an Energy Star Portfolio Manager Report or any other similar report, and hereby expressly excludes any recommendations with respect to the results of such energy benchmarking services or the accuracy of the energy information obtained from utility companies and other third-party sources with respect to the subject property. The reserve report and any energy benchmarking report (i.e., any Energy Star Portfolio Manager Report) (including any subsequent revisions thereto pursuant to the terms hereof, collectively, the "Report") are based upon a "snapshot in time" at the moment of inspection. RA may note visible physical defects in the Report. The inspection is made by employees generally familiar with real estate and building construction. Except to the extent readily apparent to RA, RA cannot and shall not opine on the structural integrity of or other physical defects in the property under any circumstances. Without limitation to the foregoing, RA cannot and shall not opine on, nor is RA responsible for, the property's conformity to specific governmental code requirements for fire, building, earthquake, occupancy or otherwise.

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

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

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

RA and may be used for whatever purpose it sees fit. RA reserves the right to, and you acknowledge and agree that RA may, use any data provided by you in connection with the services, or gathered as a result of providing such services, including in connection with creating and issuing any Report, in a de-identified and aggregated form for RA's business purposes.

Your Obligations - You agree to provide us access to the subject property for an inspection. You agree to provide RA all available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete the Report. Additionally, you agree to provide historical replacement schedules, utility bills and historical energy usage files that RA requests and deems necessary to complete the energy benchmarking services, and you agree to provide any utility release(s) reasonably requested by RA permitting RA to obtain any such data and/or information from any utility representative or other third party. You agree to pay actual attorneys' fees and any other costs incurred to collect on any unpaid balance for RA's services.

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

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

Payment Terms, Due Dates and Interest Charges - If reserve study and energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and prior to the inspection by RA, and any balance is due net 30 days from the Report shipment date. If only energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and any balance is due net 30 days from the Report shipment date. In any case, any balance remaining 30 days after delivery of the Report shall accrue an interest charge of 1.5% per month. Unless this agreement is earlier terminated by RA in the event you breach or otherwise fail to comply with your obligations under this agreement, RA's obligations under this agreement shall commence on the date you execute and deliver this agreement and terminate on the date that is 6 months from the date of delivery of the Report by RA. Notwithstanding anything herein to the contrary, each provision that by its context and nature should survive the expiration or early termination of this agreement shall so survive, including, without limitation, any provisions with respect to payment, intellectual property rights, limitations of liability and governing law. We reserve the right to limit or decline refunds in our sole discretion. Refunds vary based on the applicable facts and circumstances.

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