RESERVE STUDY

Breakwater Condominium Association, Inc.

Inspected: September 17, 2024 • Revised on: December 5, 2024

Milwaukee, WI



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Corporate Office
Reserve Advisors, LLC
735 N. Water Street, Suite 175
Milwaukee, WI 53202

Breakwater Condominium Association, Inc.
Milwaukee, Wisconsin

Dear Board of Directors of Breakwater Condominium Association, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Breakwater Condominium Association, Inc. in Milwaukee, Wisconsin and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 17, 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 Breakwater Condominium Association, Inc. plan for a successful future.

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

Respectfully submitted on December 5, 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: Breakwater Condominium Association, Inc. (Breakwater)
Location: Milwaukee, Wisconsin
Reference: 120667

Property Basics: Breakwater Condominium Association, Inc. is a condominium style development consisting of 101 units in a 20-story building. The building was built in 2009.

Reserve Components Identified: 68 Reserve Components.

Inspection Date: September 17, 2024. We conducted previous inspections in 2014, 2017 and 2021.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2041 due to the replacement of the balcony wood decking.

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
- 1.82% annual rate of return on invested reserves per the Board
- 2.32% future Inflation Rate for estimating Future Replacement Costs per the Board

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:

- $1,113,628 as of August 31, 2024
- 2024 budgeted Reserve Contributions of $329,000

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:

- Systematic preventative maintenance repairs to the façade (including replacement of sealants) to minimize the potential for water infiltration
- Replacement of dated roof systems to minimize the potential for water infiltration
- Remediation of the traffic coating conditions to minimize water infiltration

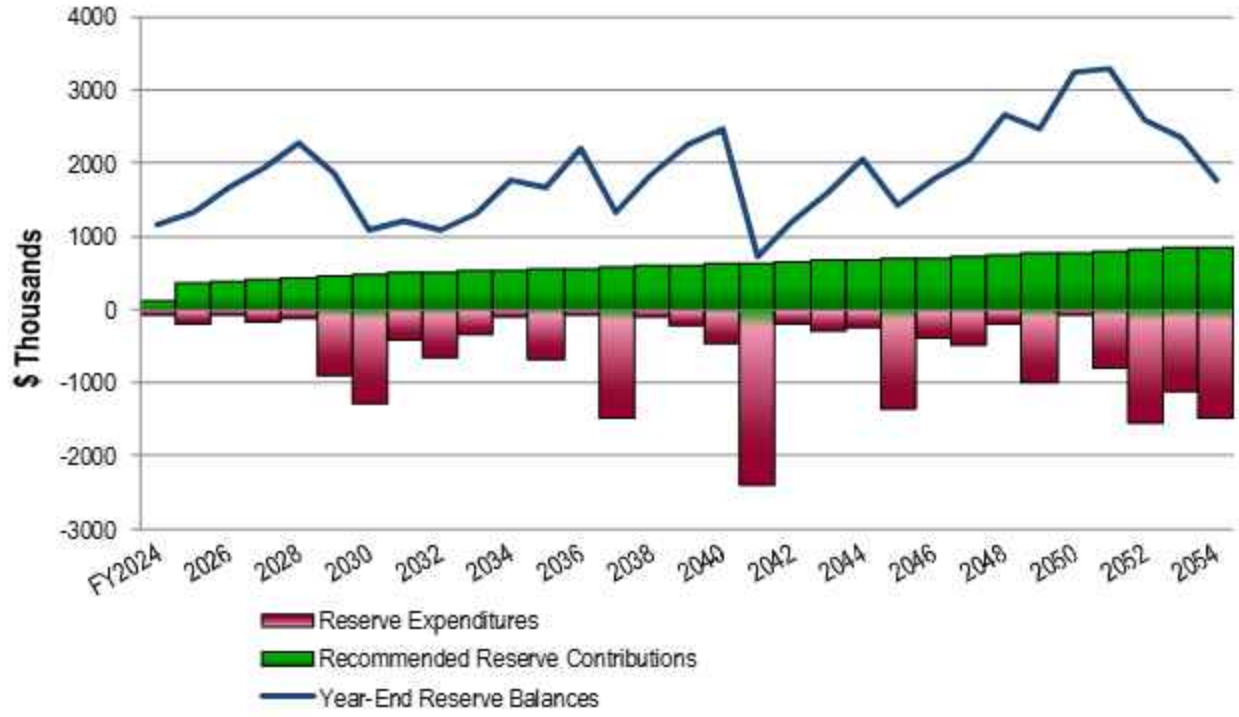
Recommended Reserve Funding: We recommend the following in order to achieve a stable and equitable Cash Flow Methodology Funding Plan:

- Phased increases of $25,000 from 2025 through 2031
- Inflationary increases thereafter through 2054, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of $25,000 represents an average monthly increase of $20.63 per owner and about a two percent (2.4%) adjustment in the 2024 total Operating Budget of $1,039,448.

RESERVE ADVISORS

Breakwater
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2025	354,000	1,331,333	2035	552,400	1,670,916	2045	694,700	1,433,715
2026	379,000	1,666,894	2036	565,200	2,197,257	2046	710,800	1,786,121
2027	404,000	1,935,933	2037	578,300	1,326,086	2047	727,300	2,063,937
2028	429,000	2,282,055	2038	591,700	1,842,966	2048	744,200	2,665,041
2029	454,000	1,868,000	2039	605,400	2,255,537	2049	761,500	2,475,207
2030	479,000	1,097,905	2040	619,400	2,459,923	2050	779,200	3,231,438
2031	504,000	1,212,353	2041	633,800	729,139	2051	797,300	3,284,678
2032	515,700	1,083,669	2042	648,500	1,198,353	2052	815,800	2,596,144
2033	527,700	1,297,251	2043	663,500	1,599,345	2053	834,700	2,348,749
2034	539,900	1,772,131	2044	678,900	2,057,024	2054	854,100	1,763,680



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

Breakwater Condominium Association, Inc.

Milwaukee, Wisconsin

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 17, 2024. We conducted previous inspections in 2014, 2017 and 2021.

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 and the Board. 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 to 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:

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

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

Excluded Components

for

Breakwater

Condominium Association, Inc.

Milwaukee, Wisconsin

Operating Budget Components

Repairs normally funded through the Operating Budget and Expenditures less than $8,000 (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 Unit, Elevator Room
- Artwork and Decorations, Hallways (Including Ledges and Mirrors) (The need aggregate replacement is indeterminate at this time.)
- Chemical Treatment Systems
- Concrete Driveway Pavement, South Elevation
- Doors, Automatic Operators
- Doors, Interior and Miscellaneous Exterior
- Duct Cleaning
- Expansion Tanks, Interim
- Fire Extinguishers
- Floor Coating, Mechanical Penthouse (We recommend the Association consider installation of a coating to prevent water infiltration into the units below in the event of a leak.)
- Irrigation System, Controller
- Landscape
- Light Fixtures, Building Exterior (Except Balconies)
- Light Fixtures, Recessed
- Light Fixtures, Stairwells
- Lightning Detection System
- Motors
- Paint Finishes, Touch Up
- Pipes, Interim Repairs and Waste Rodding
- Planters, East Elevation
- Pumps Less Than Five-HP (horsepower)
- Service Areas
- Signage, Interior and Miscellaneous Exterior
- Stairwells, Paint Finishes
- Storage Areas
- Valves, Small Diameter (We assume replacement as needed in lieu of an aggregate replacement of all small diameter valves as a single event.)
- Variable Frequency Drives, Interim
- Water Heaters, Domestic, Common

Excluded Components

for

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Milwaukee, Wisconsin

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
• Balconies, Railings, Glass and Metal Components (Need for total replacement is indeterminate)	Indeterminate	N/A
• Canopy, Lobby Entrance (Glass and Metal) (Need for total replacement is indeterminate)	Indeterminate	N/A
• Electrical Systems, Common (The Association installed infrastructure for EV charging stations in [illegible])	Indeterminate	N/A
• Foundation	Indeterminate	N/A
• Pipes, Interior Building, Domestic Water, Sanitary Waste, Vent, Sprinkler, Fire Standpipes, Gas Supply, Building Heating and Cooling, Common (The Building Engineer does not inform us of a history of leaks or pipe failures.)	Indeterminate	N/A
• Pipes, Subsurface Utilities	Indeterminate	N/A
• Roof Anchors/Davits (Façade Access Systems) (We assume timely testing, repairs and partial replacements through the operating budget.)	Indeterminate	N/A
• Signage, Property Identification Letters at East Elevation	Indeterminate	N/A
• Structural Frame	Indeterminate	N/A
• Trash Chute and Doors	to 65	N/A
• Wall Coverings, Tile (Including Hallways) (Indeterminate Remaining Useful Life)	Indeterminate	N/A
• Walls, Metal Panels, Bay Windows, South Elevation	Indeterminate	N/A

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.
• Electric Vehicle Charging Stations
• Electrical Systems (Including Circuit Protection Panels)
• Heating, Ventilating and Air Conditioning (HVAC) Units (Heat Pumps)
• Interiors
• Pipes (Within Units)
• Skylights, Main Roof Level
• Walls, Condensation/Water Infiltration Remediation (Interior of Units)
• Water Heaters, Domestic
• Windows and Doors

Excluded Components

for

Breakwater

Condominium Association, Inc.

Milwaukee, Wisconsin

Others Responsibility Components

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

- Sidewalks, Public at East and South Perimeters (Municipality) (We assume that the Association will fund any shared expenses as needed through the operating budget.)

Excluded Component Images



Mechanical room floor



Variable frequency drives



Roof anchor



Stairwell

Excluded Components

for

Breakwater

Condominium Association, Inc.

Milwaukee, Wisconsin

Excluded Component Images (Continued)



Elevator foyer accents



Trash chute at door



Main electrical distribution panels



Fire suppression piping at garage



EV charging station infrastructure



Canopy system



Canopy system

3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
  - useful life
  - remaining useful life
- 2024 local cost of replacement
  - Per unit
  - Per phase
  - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

Reserve Funding Plan

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

Five-Year Outlook

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

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

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

Years 2024 to 2039

RESERVE EXPENDITURES

Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Explanatory Notes:
1) 2.32% is the estimated Inflation Rate for estimating Future Replacement Costs.
2) FY2024 is Fiscal Year beginning January 1, 2024 and ending December 31, 2024.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit Cost (2024)	Per Phase Cost (2024)	Total Cost (2024)	Percentage of Future Expenditures	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029	6 2030	7 2031	8 2032	9 2033	10 2034	11 2035	12 2036	13 2037	14 2038	15 2039
				Exterior Building Elements																						
1.060	21,200	21,200	Square Feet	Balconies, Concrete Repairs and Waterproof Coating (Cost is Bid)	2030	to 25	6	20.50	434,600	434,600	7.0%							498,716								
1.061	21,200	21,200	Square Feet	Balconies, Wood Decking (Cost is Bid)	2041	to 30	17	41.00	869,200	869,200	6.8%															
1.062	1,400	1,400	Square Feet	Balconies, Terrace Type, 3rd Floor East, Roof System and Wood	2030	to 25	6	83.00	116,200	116,200	1.9%							133,343								
1.100	4,200	4,200	Linear Feet	Balconies, Railings, Wood Replacement and System Repairs	2041	to 30	17	28.00	117,600	117,600	0.9%															
1.260	1	1	Allowance	Light Fixtures, Balconies	2025	to 25	1	90,000.00	90,000	90,000	1.3%		92,088													
1.280	1	1	Allowance	Railings and Exhaust Enclosures, Main Roof Level	2047	to 40	23	140,000.00	140,000	140,000	1.3%															
1.380	14,800	14,800	Square Feet	Roof, Main, EPDM	2035	15 to 20	11	30.00	444,000	444,000	7.7%												571,411			
1.381	1,200	1,200	Square Feet	Roof, Mechanical Penthouse, EPDM	2029	15 to 20	5	39.00	46,800	46,800	0.7%						52,487									
1.382	15,000	15,000	Square Feet	Roofs, Garage, South and Center Sections, EPDM (Incl. Planters)	2030	15 to 20	6	24.00	360,000	360,000	5.6%							413,110								
1.383	4,500	4,500	Square Feet	Roofs, Garage, North Converted Structure, EPDM	2030	15 to 20	6	22.00	99,000	99,000	1.5%							113,605								
1.540	2	1	Allowance	Sealants, Windows and Doors (Excludes Precast Joints), Phased	2029	to 20	5 to 13	150,000.00	150,000	300,000	4.8%						168,226							202,106		
1.580	11	11	Each	Skylights, Common, Garage Roof	2030	to 25	6	2,100.00	23,100	23,100	0.4%							26,508								
1.660	64,800	64,800	Square Feet	Walls, Tower, Precast Concrete, Systematic Repairs and Sealants	2029	to 8	5	5.70	369,360	369,360	11.8%						414,240							497,665		
1.720	1	1	Allowance	Walls, Critical Examinations	2029	to 5	5	12,000.00	12,000	12,000	0.6%						13,458				15,093					16,927
1.765	1,600	1,600	Square Feet	Walls, Fiber Cement Siding, Mechanical Penthouse	2030	to 35	6	26.00	41,600	41,600	0.3%							47,737								
1.820	19,000	19,000	Square Feet	Walls, Base Structure, Masonry, Inspections and Repairs	2025	to 5	1	2.10	39,900	39,900	2.1%		29,800				44,748				50,185					56,283
1.821	1	1	Allowance	Walls, North Annex/Converted Garage Structure, Masonry, Repairs	2024	to 6	0	20,000.00	20,000	20,000	0.9%	25,000		20,939						24,028						27,573
1.980	1,200	1,200	Square Feet	Windows and Doors, Common	2046	to 40	22	98.00	117,600	117,600	1.0%															
				Interior Building Elements																						
2.072	1	1	Allowance	Club Room, Renovations, Partial	2042	to 10	18	46,000.00	46,000	46,000	0.4%															
2.073	1	1	Allowance	Club Room, Renovations, Complete (Incl. Bar/Kitchen, Flooring)	2032	to 20	8	100,000.00	100,000	100,000	1.6%									120,139						
2.100	2	2	Each	Elevator Cab Finishes	2029	to 20	5	22,000.00	44,000	44,000	0.7%						49,346									
2.160	2	1	Allowance	Exercise Equipment, Phased	2025	5 to 15	1 to 6	21,000.00	21,000	42,000	1.0%		35,000					24,098					27,026			
2.180	1	1	Allowance	Exercise Room, Renovations (Incl. Flooring)	2031	to 10	7	17,000.00	17,000	17,000	0.4%								19,961							
2.200	550	550	Square Yards	Floor Coverings, Carpet, Elevator Foyers/Hallways	2032	8 to 12	8	96.00	52,800	52,800	1.3%									63,433						
2.239	1	1	Allowance	Floor Coverings, Tile, Elevator Foyers/Hallways, Near Term Repairs	2025	n/a	1	30,000.00	30,000	30,000	0.2%		30,000													
2.240	400	400	Square Yards	Floor Coverings, Tile, Elevator Foyers/Hallways (Incl. Trash Rooms)	2032	to 25	8	360.00	144,000	144,000	0.9%									173,000						
2.560	1	1	Allowance	Light Fixtures, Elevator Foyers/Hallways (Excludes Recessed)	2032	to 20	8	32,000.00	32,000	32,000	0.5%									38,445						
2.599	1	1	Allowance	Lobby, Renovation, Partial (Incl. 2nd and Lower Level Elevator Foyers)	2045	to 12	21	44,000.00	44,000	44,000	0.4%															
2.600	1	1	Allowance	Lobby, Renovation, Complete (Incl. 2nd and Lower Level Elevator Foyers)	2033	to 25	9	180,000.00	180,000	180,000	1.2%										221,267					
2.700	101	101	Units	Mailboxes	2044	to 35	20	160.00	16,160	16,160	0.1%															
2.800	22,000	22,000	Square Feet	Paint Finishes, Elevator Foyers/Hallways (Incl. Trash Rooms)	2029	8 to 12	5	1.50	33,000	33,000	0.8%						37,010									
2.900	2	2	Each	Rest Rooms, Club Room, Renovation	2032	to 25	8	9,500.00	19,000	19,000	0.3%									22,826						
				Building Services Elements																						
3.020	2	2	Each	Air Handling Units, Heat Pumps, Lobby and Club Room	2028	to 20	4	19,000.00	38,000	38,000	0.6%					41,651										
3.021	2	2	Each	Air Handling Units, Heat Pumps, Remaining Common, Replaced 2017	2034	to 20	10	4,900.00	9,800	9,800	0.2%											12,326				
3.022	20	3	Each	Air Handling Units, Heat Pumps, Remaining Common, Remaining Original, Phased	2026	to 20	2 to 7	4,900.00	16,317	98,000	1.4%			17,083	17,479	17,885	18,300	18,724	19,159									
3.105	4	4	Each	Boilers, Building Heat, 800-MBH	2045	to 25	21	43,000.00	172,000	172,000	1.5%															

RESERVE EXPENDITURES

Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit (2024)	Costs, $ Per Phase (2024)	Total (2024)	Percentage of Future Expenditures	16 2040	17 2041	18 2042	19 2043	20 2044	21 2045	22 2046	23 2047	24 2048	25 2049	26 2050	27 2051	28 2052	29 2053	30 2054
				Exterior Building Elements																						
1.060	21,200	21,200	Square Feet	Balconies, Concrete Repairs and Waterproof Coating (Cost is Bid)	2030	to 25	6	20.50	434,600	434,600	7.0%													826,009		
1.061	21,200	21,200	Square Feet	Balconies, Wood Decking (Cost is Bid)	2041	to 30	17	41.00	869,200	869,200	6.8%		1,283,656													
1.062	1,400	1,400	Square Feet	Balconies, Terrace Type, 3rd Floor East, Roof System and Wood	2030	to 25	6	83.00	116,200	116,200	1.9%													220,852		
1.100	4,200	4,200	Linear Feet	Balconies, Railings, Wood Replacement and System Repairs	2041	to 30	17	28.00	117,600	117,600	0.9%		173,675													
1.260	1	1	Allowance	Light Fixtures, Balconies	2025	to 25	1	90,000.00	90,000	90,000	1.3%							149,064								
1.280	1	1	Allowance	Railings and Exhaust Enclosures, Main Roof Level	2047	to 40	23	140,000.00	140,000	140,000	1.3%								237,258							
1.380	14,800	14,800	Square Feet	Roof, Main, EPDM	2035	15 to 20	11	30.00	444,000	444,000	7.7%															883,484
1.381	1,200	1,200	Square Feet	Roof, Mechanical Penthouse, EPDM	2029	15 to 20	5	39.00	46,800	46,800	0.7%									81,152						
1.382	15,000	15,000	Square Feet	Roofs, Garage, South and Center Sections, EPDM (Incl. Planters)	2030	15 to 20	6	24.00	360,000	360,000	5.6%										638,728					
1.383	4,500	4,500	Square Feet	Roofs, Garage, North Converted Structure, EPDM	2030	15 to 20	6	22.00	99,000	99,000	1.5%										175,650					
1.540	2	1	Allowance	Sealants, Windows and Doors (Excludes Precast Joints), Phased	2029	to 20	5 to 13	150,000.00	150,000	300,000	4.8%						242,808								291,707	
1.580	11	11	Each	Skylights, Common, Garage Roof	2030	to 25	6	2,100.00	23,100	23,100	0.4%										40,985					
1.660	64,800	64,800	Square Feet	Walls, Tower, Precast Concrete, Systematic Repairs and Sealants	2029	to 8	5	5.70	369,360	369,360	11.8%						597,890							718,299		
1.720	1	1	Allowance	Walls, Critical Examinations	2029	to 5	5	12,000.00	12,000	12,000	0.6%					18,984					21,291					23,878
1.765	1,600	1,600	Square Feet	Walls, Fiber Cement Siding, Mechanical Penthouse	2030	to 35	6	26.00	41,600	41,600	0.3%															
1.820	19,000	19,000	Square Feet	Walls, Base Structure, Masonry, Inspections and Repairs	2025	to 5	1	2.10	39,900	39,900	2.1%					63,122					70,792					79,394
1.821	1	1	Allowance	Walls, North Annex/Converted Garage Structure, Masonry, Repairs	2024	to 6	0	20,000.00	20,000	20,000	0.9%					31,640						36,308				
1.980	1,200	1,200	Square Feet	Windows and Doors, Common	2046	to 40	22	98.00	117,600	117,600	1.0%							194,778								
				Interior Building Elements																						
2.072	1	1	Allowance	Club Room, Renovations, Partial	2042	to 10	18	46,000.00	46,000	46,000	0.4%			69,510												
2.073	1	1	Allowance	Club Room, Renovations, Complete (Incl. Bar/Kitchen, Flooring)	2032	to 20	8	100,000.00	100,000	100,000	1.6%													190,062		
2.100	2	2	Each	Elevator Cab Finishes	2029	to 20	5	22,000.00	44,000	44,000	0.7%									76,297						
2.160	2	1	Allowance	Exercise Equipment, Phased	2025	5 to 15	1 to 6	21,000.00	21,000	42,000	1.0%	30,310					33,993					38,124				
2.180	1	1	Allowance	Exercise Room, Renovations (Incl. Flooring)	2031	to 10	7	17,000.00	17,000	17,000	0.4%		25,106										31,578			
2.200	550	550	Square Yards	Floor Coverings, Carpet, Elevator Foyers/Hallways	2032	8 to 12	8	96.00	52,800	52,800	1.3%			79,785										100,353		
2.239	1	1	Allowance	Floor Coverings, Tile, Elevator Foyers/Hallways, Near Term Repairs	2025	n/a	1	30,000.00	30,000	30,000	0.2%															
2.240	400	400	Square Yards	Floor Coverings, Tile, Elevator Foyers/Hallways (Incl. Trash Rooms)	2032	to 25	8	360.00	144,000	144,000	0.9%															
2.560	1	1	Allowance	Light Fixtures, Elevator Foyers/Hallways (Excludes Recessed)	2032	to 20	8	32,000.00	32,000	32,000	0.5%													60,820		
2.599	1	1	Allowance	Lobby, Renovation, Partial (Incl. 2nd and Lower Level Elevator Foyers)	2045	to 12	21	44,000.00	44,000	44,000	0.4%						71,224									
2.600	1	1	Allowance	Lobby, Renovation, Complete (Incl. 2nd and Lower Level Elevator Foyers)	2033	to 25	9	180,000.00	180,000	180,000	1.2%															
2.700	101	101	Units	Mailboxes	2044	to 35	20	160.00	16,160	16,160	0.1%					25,565										
2.800	22,000	22,000	Square Feet	Paint Finishes, Elevator Foyers/Hallways (Incl. Trash Rooms)	2029	8 to 12	5	1.50	33,000	33,000	0.8%		48,735													64,176
2.900	2	2	Each	Rest Rooms, Club Room, Renovation	2032	to 25	8	9,500.00	19,000	19,000	0.3%													36,112		
				Building Services Elements																						
3.020	2	2	Each	Air Handling Units, Heat Pumps, Lobby and Club Room	2028	to 20	4	19,000.00	38,000	38,000	0.6%								64,399							
3.021	2	2	Each	Air Handling Units, Heat Pumps, Remaining Common, Replaced 2017	2034	to 20	10	4,900.00	9,800	9,800	0.2%													18,626		
3.022	20	3	Each	Air Handling Units, Heat Pumps, Remaining Common, Remaining Original, Phased	2026	to 20	2 to 7	4,900.00	16,317	98,000	1.4%					25,814	26,413	27,025	27,652	28,294	28,950					
3.105	4	4	Each	Boilers, Building Heat, 800-MBH	2045	to 25	21	43,000.00	172,000	172,000	1.5%						278,419									

Years 2024 to 2039

RESERVE EXPENDITURES

Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Explanatory Notes:
1) 2.32% is the estimated Inflation Rate for estimating Future Replacement Costs.
2) FY2024 is Fiscal Year beginning January 1, 2024 and ending December 31, 2024.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit Cost (2024)	Per Phase Cost, $ (2024)	Total Cost (2024)	Percentage of Future Expenditures	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029	6 2030	7 2031	8 2032	9 2033	10 2034	11 2035	12 2036	13 2037	14 2038	15 2039
3.170	1	1	Allowance	Building Automation System	2038	to 15	14	55,000.00	55,000	55,000	1.0%															75,825	
3.260	1	1	Each	Cooling Tower, Capital Repairs	2027	to 20	3	41,000.00	41,000	41,000	0.2%				43,920												
3.265	1	1	Each	Cooling Tower, Replacement	2040	to 35	16	265,000.00	265,000	265,000	2.0%																
3.360	2	2	Each	Elevators, Traction, Controls and Equipment	2037	to 30	13	290,000.00	580,000	580,000	4.1%														781,475		
3.380	2	2	Each	Fans, Stairwell Pressurization	2044	to 35	20	12,000.00	24,000	24,000	0.2%																
3.440	1	1	Each	Generator, Emergency, 250-kW (Includes Transfer Switch, Storage Tank)	2043	to 35	19	170,000.00	170,000	170,000	1.4%																
3.555	1	1	Each	Life Safety System, Control Panel	2026	to 15	2	31,000.00	31,000	31,000	0.7%			32,455													
3.560	1	1	Allowance	Life Safety System, Emergency Devices	2032	to 25	8	151,000.00	151,000	151,000	1.0%									181,410							
3.561	1	1	Allowance	Life Safety System, Fire Sprinkler System Inspection	2029	to 5	5	12,000.00	12,000	12,000	0.6%						13,458					15,093					16,927
3.580	80	80	Each	Light Fixtures, Exit	2032	to 25	8	310.00	24,800	24,800	0.2%									29,794							
3.600	1	1	Allowance	Pipes, Waste Risers, Jetting	2027	to 6	3	43,000.00	43,000	43,000	1.6%				46,063						52,858						60,656
3.601	1	1	Allowance	Pipes, Actuators/Shut Off System, Domestic Water	2044	to 20	20	20,300.00	20,300	20,300	0.2%																
3.700	2	2	Each	Pumps, Building Heating and Cooling, 25-HP (Incl. Controls, VFDs)	2033	to 25	9	25,000.00	50,000	50,000	0.3%										61,463						
3.701	2	2	Each	Pumps, Domestic Cold Water, 30-HP (Incl. Controls)	2028	to 20	4	28,000.00	56,000	56,000	0.8%					61,380											
3.770	1	1	Each	Pump, Fire Suppression (Incl. Controls and Jockey Pump)	2054	to 45	30	203,000.00	203,000	203,000	2.1%																
3.820	1	1	Allowance	Security System, Camera System	2029	to 15	5	27,000.00	27,000	27,000	0.6%						30,281										
3.821	1	1	Allowance	Security System, Fob Reader System	2027	to 15	3	24,000.00	24,000	24,000	0.6%				25,709												33,855
3.822	1	1	Each	Security System, Intercom Panel	2032	to 15	8	10,000.00	10,000	10,000	0.2%									12,014							
3.920	6	6	Each	Valves, Large Diameter (Main Water and Fire Pump)	2047	to 40	23	5,900.00	35,400	35,400	0.3%																
				Property Site Elements																							
4.140	600	600	Square Feet	Concrete Sidewalks, Colored, East Perimeter	2029	to 30	5	35.00	21,000	21,000	0.1%						23,552										
4.141	1	1	Allowance	Concrete Steps/Sidewalk and Railings, Lobby Entrance Area	2029	to 30	5	36,000.00	36,000	36,000	0.2%						40,374										
4.420	7	7	Zones	Irrigation System	2043	to 35	19	2,300.00	16,100	16,100	0.1%																
				Garage Elements																							
7.299	1	1	Allowance	Concrete and Traffic Coating, Near Term Traffic Coating Repairs	2024	n/a	0	45,000.00	45,000	45,000	0.2%	45,000															
7.300	69,600	69,600	Square Feet	Concrete, Elevated and On-grade Floors, Inspections and Capital Repairs	2031	to 10	7	1.00	69,600	69,600	1.7%								81,721							
7.400	2	2	Each	Doors and Operators, South Elevation, Common	2027	to 20	3	16,000.00	32,000	32,000	0.7%				34,279												45,140
7.460	1	1	Allowance	Exhaust System (Fans, Louvers and Carbon Monoxide Detectors)	2036	to 30	12	56,000.00	56,000	56,000	0.4%													73,742			
7.600	95	95	Each	Light Fixtures	2042	to 30	18	330.00	31,350	31,350	0.3%																
7.660	64,600	64,600	Square Feet	Paint Finishes	2031	to 20	7	1.00	64,600	64,600	1.0%								75,850								
7.798	1	1	Allowance	Traffic Coating, Ramps	2025	to 10	1	18,000.00	18,000	18,000	0.4%		18,418									23,165					
7.799	28,000	28,000	Square Feet	Traffic Coating, Elevated and On-grade Floors, Interim Overlay at Drive Lanes	2031	to 10	7	6.50	182,000	182,000	2.9%								213,695							
7.800	69,600	69,600	Square Feet	Traffic Coating, Elevated and On-grade Floors, Total Replacement	2041	to 20	17	7.00	487,200	487,200	3.8%																
7.900	1	1	Allowance	Unit Heaters	2035	to 30	11	49,000.00	49,000	49,000	0.3%											63,061					
				Anticipated Expenditures, By Year ($18,923,666 over 30 years)								70,000	205,306	70,477	167,451	120,916	905,480	1,275,841	410,386	665,090	335,589	92,699	684,664	73,742	1,481,245	103,397	229,789

RESERVE EXPENDITURES

Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit (2024)	Costs, $ Per Phase (2024)	Total (2024)	Percentage of Future Expenditures	16 2040	17 2041	18 2042	19 2043	20 2044	21 2045	22 2046	23 2047	24 2048	25 2049	26 2050	27 2051	28 2052	29 2053	30 2054
3.170	1	1	Allowance	Building Automation System	2038	to 15	14	55,000.00	55,000	55,000	1.0%													104,534		
3.260	1	1	Each	Cooling Tower, Capital Repairs	2027	to 20	3	41,000.00	41,000	41,000	0.2%															
3.265	1	1	Each	Cooling Tower, Replacement	2040	to 35	16	265,000.00	265,000	265,000	2.0%	382,485														
3.360	2	2	Each	Elevators, Traction, Controls and Equipment	2037	to 30	13	290,000.00	580,000	580,000	4.1%															
3.380	2	2	Each	Fans, Stairwell Pressurization	2044	to 35	20	12,000.00	24,000	24,000	0.2%					37,968										
3.440	1	1	Each	Generator, Emergency, 250-kW (Includes Transfer Switch, Storage Tank)	2043	to 35	19	170,000.00	170,000	170,000	1.4%				262,845											
3.555	1	1	Each	Life Safety System, Control Panel	2026	to 15	2	31,000.00	31,000	31,000	0.7%	44,744														61,685
3.560	1	1	Allowance	Life Safety System, Emergency Devices	2032	to 25	8	151,000.00	151,000	151,000	1.0%															
3.561	1	1	Allowance	Life Safety System, Fire Sprinkler System Inspection	2029	to 5	5	12,000.00	12,000	12,000	0.6%					18,984					21,291					23,878
3.580	80	80	Each	Light Fixtures, Exit	2032	to 25	8	310.00	24,800	24,800	0.2%															
3.600	1	1	Allowance	Pipes, Waste Risers, Jetting	2027	to 6	3	43,000.00	43,000	43,000	1.6%						69,605						79,874			
3.601	1	1	Allowance	Pipes, Actuators/Shut Off System, Domestic Water	2044	to 20	20	20,300.00	20,300	20,300	0.2%					32,115										
3.700	2	2	Each	Pumps, Building Heating and Cooling, 25-HP (Incl. Controls, VFDs)	2033	to 25	9	25,000.00	50,000	50,000	0.3%															
3.701	2	2	Each	Pumps, Domestic Cold Water, 30-HP (Incl. Controls)	2028	to 20	4	28,000.00	56,000	56,000	0.8%								94,903							
3.770	1	1	Each	Pump, Fire Suppression (Incl. Controls and Jockey Pump)	2054	to 45	30	203,000.00	203,000	203,000	2.1%															403,935
3.820	1	1	Allowance	Security System, Camera System	2029	to 15	5	27,000.00	27,000	27,000	0.6%		39,874												52,507	
3.821	1	1	Allowance	Security System, Fob Reader System	2027	to 15	3	24,000.00	24,000	24,000	0.6%												44,581			
3.822	1	1	Each	Security System, Intercom Panel	2032	to 15	8	10,000.00	10,000	10,000	0.2%							16,563								
3.920	6	6	Each	Valves, Large Diameter (Main Water and Fire Pump)	2047	to 40	23	5,900.00	35,400	35,400	0.3%								59,992							
				Property Site Elements																						
4.140	600	600	Square Feet	Concrete Sidewalks, Colored, East Perimeter	2029	to 30	5	35.00	21,000	21,000	0.1%															
4.141	1	1	Allowance	Concrete Steps/Sidewalk and Railings, Lobby Entrance Area	2029	to 30	5	36,000.00	36,000	36,000	0.2%															
4.420	7	7	Zones	Irrigation System	2043	to 35	19	2,300.00	16,100	16,100	0.1%				24,893											
				Garage Elements																						
7.299	1	1	Allowance	Concrete and Traffic Coating, Near Term Traffic Coating Repairs	2024	n/a	0	45,000.00	45,000	45,000	0.2%															
7.300	69,600	69,600	Square Feet	Concrete, Elevated and On-grade Floors, Inspections and Capital Repairs	2031	to 10	7	1.00	69,600	69,600	1.7%		102,787										129,284			
7.400	2	2	Each	Doors and Operators, South Elevation, Common	2027	to 20	3	16,000.00	32,000	32,000	0.7%												59,441			
7.460	1	1	Allowance	Exhaust System (Fans, Louvers and Carbon Monoxide Detectors)	2036	to 30	12	56,000.00	56,000	56,000	0.4%															
7.600	95	95	Each	Light Fixtures	2042	to 30	18	330.00	31,350	31,350	0.3%			47,373												
7.660	64,600	64,600	Square Feet	Paint Finishes	2031	to 20	7	1.00	64,600	64,600	1.0%												119,996			
7.798	1	1	Allowance	Traffic Coating, Ramps	2025	to 10	1	18,000.00	18,000	18,000	0.4%						29,137									
7.799	28,000	28,000	Square Feet	Traffic Coating, Elevated and On-grade Floors, Interim Overlay at Drive Lanes	2031	to 10	7	6.50	182,000	182,000	2.9%												338,069			
7.800	69,600	69,600	Square Feet	Traffic Coating, Elevated and On-grade Floors, Total Replacement	2041	to 20	17	7.00	487,200	487,200	3.8%		719,509													
7.900	1	1	Allowance	Unit Heaters	2035	to 30	11	49,000.00	49,000	49,000	0.3%															
				Anticipated Expenditures, By Year ($18,923,666 over 30 years)								457,539	2,393,343	196,668	287,738	254,193	1,349,488	387,430	484,204	185,742	997,687	74,432	802,822	1,557,367	1,126,689	1,476,255

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS
Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Individual Reserve Budgets & Cash Flows for the Next 30 Years

		FY2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Reserves at Beginning of Year	*(Note 1)*	1,113,628	1,160,171	1,331,333	1,666,894	1,935,933	2,282,055	1,868,000	1,097,905	1,212,353	1,083,669	1,297,251	1,772,131	1,670,916	2,197,257	1,326,086	1,842,966
Total Recommended Reserve Contributions	*(Note 2)*	**109,667**	**354,000**	**379,000**	**404,000**	**429,000**	**454,000**	**479,000**	**504,000**	**515,700**	**527,700**	**539,900**	**552,400**	**565,200**	**578,300**	**591,700**	**605,400**
Estimated Interest Earned, During Year	*(Note 3)*	6,876	22,468	27,038	32,490	38,038	37,425	26,746	20,834	20,705	21,471	27,679	31,049	34,883	31,773	28,578	36,960
Anticipated Expenditures, By Year		(70,000)	(205,306)	(70,477)	(167,451)	(120,916)	(905,480)	(1,275,841)	(410,386)	(665,090)	(335,589)	(92,699)	(684,664)	(73,742)	(1,481,245)	(103,397)	(229,789)
Anticipated Reserves at Year End		$1,160,171	$1,331,333	$1,666,894	$1,935,933	$2,282,055	$1,868,000	$1,097,905	$1,212,353	$1,083,669	$1,297,251	$1,772,131	$1,670,916	$2,197,257	$1,326,086	$1,842,966	$2,255,537

(continued)

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

	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Reserves at Beginning of Year	2,255,537	2,459,923	729,139	1,198,353	1,599,345	2,057,024	1,433,715	1,786,121	2,063,937	2,665,041	2,475,207	3,231,438	3,284,678	2,596,144	2,348,749
Total Recommended Reserve Contributions	**619,400**	**633,800**	**648,500**	**663,500**	**678,900**	**694,700**	**710,800**	**727,300**	**744,200**	**761,500**	**779,200**	**797,300**	**815,800**	**834,700**	**854,100**
Estimated Interest Earned, During Year	42,524	28,759	17,382	25,229	32,973	31,479	29,036	34,720	42,646	46,354	51,462	58,762	53,033	44,593	37,086
Anticipated Expenditures, By Year	(457,539)	(2,393,343)	(196,668)	(287,738)	(254,193)	(1,349,488)	(387,430)	(484,204)	(185,742)	(997,687)	(74,432)	(802,822)	(1,557,367)	(1,126,689)	(1,476,255)
Anticipated Reserves at Year End	$2,459,923	$729,139 *(NOTE 5)*	$1,198,353	$1,599,345	$2,057,024	$1,433,715	$1,786,121	$2,063,937	$2,665,041	$2,475,207	$3,231,438	$3,284,678	$2,596,144	$2,348,749	$1,763,680 *(NOTE 4)*

Explanatory Notes:

1) Year 2024 starting reserves are as of August 31, 2024; FY2024 starts January 1, 2024 and ends December 31, 2024.
2) Reserve Contributions for 2024 are the remaining budgeted 4 months; 2025 is the first year of recommended contributions.
3) **1.82%** is the estimated annual rate of return on invested reserves; 2024 is a partial year of interest earned.
4) Accumulated year 2054 ending reserves consider the age, size, overall condition and complexity of the property.
5) Threshold Funding Year (reserve balance at critical point).

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

FIVE-YEAR OUTLOOK

Breakwater
Condominium Association, Inc.
Milwaukee, Wisconsin

Line Item	Reserve Component Inventory	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029
	Exterior Building Elements						
1.260	Light Fixtures, Balconies		92,088				
1.381	Roof, Mechanical Penthouse, EPDM						52,487
1.540	Sealants, Windows and Doors (Excludes Precast Joints), Phased						168,226
1.660	Walls, Tower, Precast Concrete, Systematic Repairs and Sealants						414,240
1.720	Walls, Critical Examinations						13,458
1.820	Walls, Base Structure, Masonry, Inspections and Repairs		29,800				44,748
1.821	Walls, North Annex/Converted Garage Structure, Masonry, Repairs	25,000		20,939			
	Interior Building Elements						
2.100	Elevator Cab Finishes						49,346
2.160	Exercise Equipment, Phased		35,000				
2.239	Floor Coverings, Tile, Elevator Foyers/Hallways, Near Term Repairs		30,000				
2.800	Paint Finishes, Elevator Foyers/Hallways (Incl. Trash Rooms)						37,010
	Building Services Elements						
3.020	Air Handling Units, Heat Pumps, Lobby and Club Room					41,651	
3.022	Air Handling Units, Heat Pumps, Remaining Common, Remaining Original, Phased			17,083	17,479	17,885	18,300
3.260	Cooling Tower, Capital Repairs				43,920		
3.555	Life Safety System, Control Panel			32,455			
3.561	Life Safety System, Fire Sprinkler System Inspection						13,458
3.600	Pipes, Waste Risers, Jetting				46,063		
3.701	Pumps, Domestic Cold Water, 30-HP (Incl. Controls)					61,380	
3.820	Security System, Camera System						30,281
3.821	Security System, Fob Reader System				25,709		
	Property Site Elements						
4.140	Concrete Sidewalks, Colored, East Perimeter						23,552
4.141	Concrete Steps/Sidewalk and Railings, Lobby Entrance Area						40,374
	Garage Elements						
7.299	Concrete and Traffic Coating, Near Term Traffic Coating Repairs	45,000					
7.400	Doors and Operators, South Elevation, Common				34,279		
7.798	Traffic Coating, Ramps		18,418				
	Anticipated Expenditures, By Year ($18,923,666 over 30 years)	70,000	205,306	70,477	167,451	120,916	905,480

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



West and south elevations



East and south elevations



East and north elevations



North and west elevations

Balconies, Concrete Structure and Decking

Line Items: 1.060 through 1.062

Quantity: The building includes 98 balconies that comprise approximately 21,200 square feet of horizontal surface area and 1,400 square feet of terraced balcony (or roof) at the 3rd floor east elevation.

The balconies comprise *Ipe*, or similar, wood decking, precast concrete structure, galvanized steel columns and a liquid applied waterproofing system on the concrete. The Building Engineer informs us that the 3rd floor terrace system comprises *Ipe* wood decking, joists and an inverted roofing system.

History: The wood and waterproof coating are original. The Association secured the column connections in 2017. The Association also removed the wood decking to install weep holes in the railing and column systems in 2019.

Based on the ability to observe the coating during limited wood removal in 2024, the Building Engineer informs us that the waterproof coating exhibits isolated areas of wear or deterioration.

Condition: The wood decking exhibits isolated and minor cracks, warp and weathered areas.

The concrete exhibits cracks, primarily adjacent to the columns. A representative of ZS informed the Association in 2024 that the cracks do not require near term remediation. However, we opine that the amount and type of cracks are abnormal, and that the cracks adjacent to the columns are concerning. We strongly recommend that a structural engineer conduct a thorough inspection of the balconies and monitor the cracks regularly. We also recommend that the structural engineer conduct an engineering analysis to determine the merits of near-term remediation.

The Association provided an email chain and dated letter from *Spancrete* noting the balcony cracks.

The exact material utilized to replace the existing wood decking will impact the project cost. We recommend the Association consider installation of alternate materials based on cost and useful life variations.



Balcony at minor deck board weathering



Balcony at building interface



Crack at balcony concrete adjacent to column



Crack at balcony concrete adjacent to column



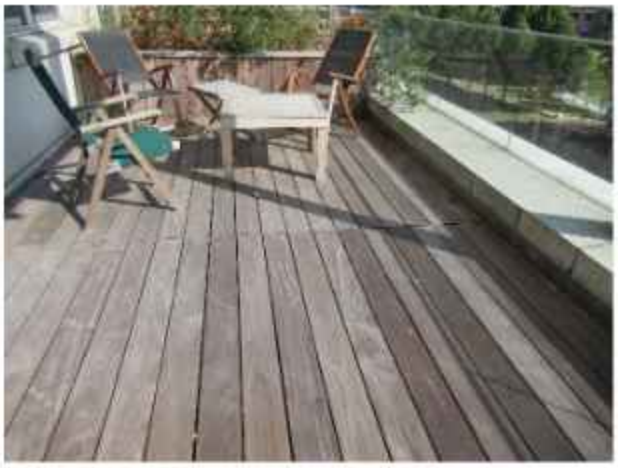
Crack at balcony concrete adjacent to column



Balcony at building interface



Crack at balcony concrete adjacent to column



3rd floor east elevation terrace system



3rd floor east elevation terrace system

Useful Life: In consideration of the deck system covering the waterproof coating, we assume an increased useful life of the waterproof coating of up to 25 years.

We recommend the Association monitor the concrete for accelerated cracks and water infiltration which would result in a decrease in the remaining useful life of the coating. We assume removal and reinstallation of the decking at the time of waterproof coating replacement at the direction of the Board. *We continue to base the unit cost on information provided by the Board. However, we opine that this cost is likely very low.*

The wood decking has a useful life of up to 30 years with proper maintenance. *We defer replacement of the wood components at the direction of the Board. We also base the unit cost on information provided by the Board. We opine that this cost is likely very low.*

We recognize that the Association may reinstall the wood decking on the 3rd floor east elevation terrace at the time of roof replacement in lieu of total replacement of the wood. The roof system at the 3rd floor has a useful life of up to 25 years.

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. The balcony concrete restoration projects include:

- Concrete repairs as needed
- Removal and reinstallation of the deck system
- Repairs to the railings as necessary
- Replacement of perimeter sealants as needed
- Application of a waterproof coating (Urethane based elastomeric)

Balconies, Railings

Line Item: 1.100

Quantity: 4,200 linear feet of metal frames, glass panels and *Ipe* wood stops or trim

History: Original. The Association installed weep holes in the railing and column systems in approximately 2019.

Condition: Good to fair overall with areas of split and weathered wood, primarily at stop connections



Railing at wood trim



Railing at trim



Railing at trim



Weep drilled into railing



Railing at concrete connection

Useful Life: The wood components have a useful life of up to 30 years. The need to replace the metal components is indeterminate at this time. We assume system repairs at the time of wood replacement.

We defer replacement of the wood components at the direction of the Board. We also base the unit cost on information provided by the Board. However, we opine that the cost is likely low.

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, Balconies

Line Item: 1.260

Quantity: The balconies include light fixtures mounted to the undersides of the balcony above.

History: Original

Condition: Management informs us that the Association is considering replacement of the light fixtures with LED systems in the near term. We include a Management provided cost for this project.



Balcony lighting system

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.

Railings and Exhaust Enclosures, Main Roof Level

Line Item: 1.280

Quantity: The main roof level includes 510 linear feet of galvanized steel railing at the perimeter and six galvanized steel exhaust duct enclosures. The railings are attached to a perimeter steel cap.

History: Original

Condition: The railings are in good to fair overall condition. The enclosures are in good condition except for significant rust at doors.

We assume interim repairs and component replacements, including the doors, as needed through the operating budget.



Roof perimeter railing



Railing at connection



Rust at enclosure door



Enclosure system



Rust at enclosure door

Useful Life: Up to 40 years

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

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

Roofs, EPDM

Line Items: 1.380 through 1.383

Quantity:

- **Main** – 14,800 square feet of ethylene propylene diene monomer (EPDM) roofing
- **Mechanical Penthouse** – 1,200 square feet of EPDM roofing
- **Garage, South and Center Sections** – 15,000 square feet of EPDM roofing (south section includes five planters) with stone ballast
- **Garage, North Converted Structure** – 4,500 square feet of EPDM roofing

History: Original except for the main roof level which was replaced in 2016

Condition: The main roof is in good to fair overall condition with isolated areas that lack drainage, depressions, membrane bulge and gaps at repair material seams evident.

The mechanical penthouse roof is in fair overall condition.

The Building Engineer does not report a recent history of leaks, with the exception of one leak at the garage structure.



Penthouse roof system



North annex evidence of leakage from roof



Repairs at main roof system



Perimeter at main roof



Penthouse roof system at perimeter sealant



Ceiling damage at north annex



Garage roof at perimeter



Garage roof at planters



Depressions in main roof



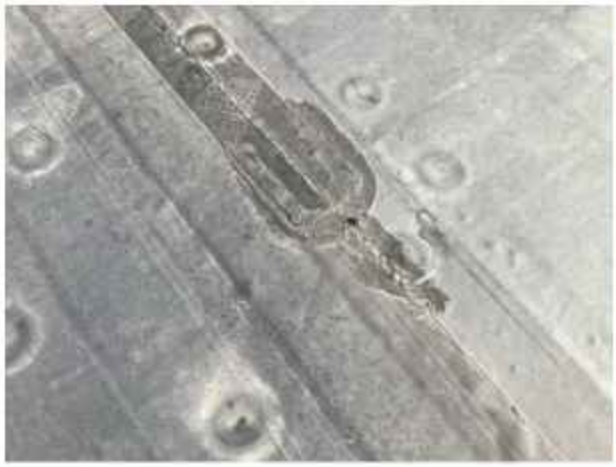
Repairs at main roof



Depressions at main roof



Ridge that prevents water migration to drain



Repair material cracks



North annex roof systems



Repair at garage roof

Useful Life: 15- to 20-years

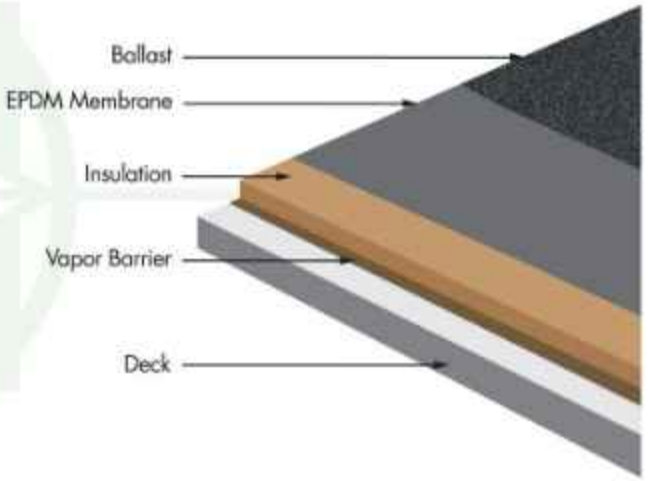
Component Detail Notes: EPDM membrane roofing is a synthetic-rubber compound that provides outstanding physical performance properties and weathering characteristics. EPDM is a single-ply roof membrane which is used on flat and low-pitch roofs. Unlike built-up roofing systems, EPDM roofs require a less labor-intensive installation.

Over time, exposure to ultraviolet light, heat and weather degrade the membrane. This degradation results in membrane damage from thermal expansion and contraction, adverse weather and pedestrian traffic. The aging process makes the membrane less pliable and more difficult to maintain. Ponding water on the roof can increase the effects of ultraviolet light on the membrane and contaminants in ponded water can cause the membrane to deteriorate prematurely.

Contractors can install a new EPDM roof in one of two ways: *tear-off* or an *overlay*. An *overlay* is the application of a new roof membrane over an existing roof. This method, although initially more economical, often covers up problems with the deck, flashing and saturated insulation. The *tear-off* method of replacement includes removal of the existing roofing, flashings and insulation, and installation of a new roofing system.

The following detail depicts a typical EPDM roof although it may not reflect the actual configuration at Breakwater:

EPDM ROOF DETAIL



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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 increases 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. We continue to partially base the main roof unit cost on the historic cost provided by previous Management.

Sealants, Windows and Doors

Line Item: 1.540

Quantity: 19,900 linear feet of exterior sealants or *caulk*[1] at window and door perimeters (this quantity excludes the precast concrete joint sealants)

History: The sealants are primarily original. The Association completed limited sealant replacements in response to water infiltration.

Condition: Conditions vary with areas of deterioration evident

The Building Engineer reports a limited recent history of water infiltration from the façade, primarily at the east elevation.

[1] The terms sealant and caulk are used interchangeably throughout this text and throughout the industry.



Sealant at concrete/frame interface



Sealant at concrete/frame interface



Sealant at concrete/frame interface



Sealant at concrete/frame interface

Useful Life: Up to 20 years

Component Detail Notes: The rate of deterioration of the sealants is not uniform due to the different exposures to sunlight and weather. The Association should anticipate gradual dispersed deterioration as the sealants age.

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. For purposes of this Reserve Study, we assume replacement as needed concurrent with tower concrete repair and precast joint sealant replacement events. We assume replacement of approximately 50% of the sealants per event.

Skylights, Common, Garage Roof

Line Item: 1.580

Quantity: 11 each

History: Original

Condition: Reported satisfactory



Garage roof skylight

Useful Life: Up to 25 years

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

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

Walls, Tower, Precast Concrete

Line Item: 1.660

Quantity: Approximately 64,800 square feet of precast concrete at the tower with sealants at vertical and horizontal joints between panels

History: The precast concrete joint sealants are original. The Association completed a façade critical examination per the City of Milwaukee in 2024 by *ZS LLC*. ZS identified limited issues that require repair including:

- Minor cracks at mortar joints
- Cracks at precast concrete
- Sealant deterioration
- Exposed embedded metal

The critical examination report does not address the balcony concrete cracks adjacent to the columns as discussed in the narrative "**Balconies, Concrete Structure and Decking**".

The Association remediated water infiltration/condensation at the interiors of select units in approximately 2018. The owners funded this remediation individually. Remediation primarily comprised filling a void above window/door systems with spray insulation.

The Building Engineer reports a limited recent history of water infiltration from the façade, primarily at the east elevation.

Conditions: The precast concrete exhibits isolated cracks, previous repairs and spall. The precast concrete joint sealants exhibit areas of deterioration.

We opine that the need to replace joint sealants will likely govern the timing of precast concrete systematic preventative maintenance repairs.



Minor precast concrete crack



Precast concrete joint sealant



Repairs at precast concrete



Repairs at precast concrete spall



Precast concrete joint sealant



Repairs at precast concrete spall

Useful Life: We recommend concrete facade systematic preventative maintenance, replacement of sealants as needed and repairs up to every eight years. We recommend a systematic inspection and repair program to minimize the amount of required repairs over time and potential for water infiltration.

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
- Concrete patching and crack repairs (We assume the need for limited repairs.)
- Replacement of fifty percent (50%) of the sealants at precast joints
- Replacements/repairs to the vent covers as needed
- Repairs and coating applications to the main roof level perimeter soffit
- Engineering fees
- Scaffolding
- Sidewalk protection

The exact costs will vary based on the conditions at the time of the project and the results of the physical inspection prior to the repairs.

Walls, Critical Examinations

Line Item: 1.720

Component Detail Notes: The Association completed a façade critical examination per the City of Milwaukee in 2024 by *ZS LLC*. We discuss the results in the narrative "**Walls, Tower, Precast Concrete**".

We include expenditures based on the recent cost for subsequent critical examinations every five years thereafter.

Priority/Criticality: Not recommended to defer

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

Walls, Fiber Cement Siding, Mechanical Penthouse

Line Item: 1.765

Quantity: 1,600 square feet of fiber cement (or similar composite) siding

History: Original

Condition: The siding is in poor condition with finish deterioration, cracks and material deterioration evident. We strongly recommend that the Association conduct repairs and finish application in the near term to defer the need for premature replacement of the siding. However, based on the conditions we accelerate replacement of the siding.



Siding cracks



Siding finish in poor condition



Siding cracks



Siding cracks

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

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, Base Structure, Masonry (Including Garage Annex Structures)

Line Items: 1.820 and 1.821

Quantity: Approximately 22,000 square feet at the base structure elevations (floors one and two) and garage annex structures

History: The Association completed repairs and water repellent application at the garage elevations in 2020.

The Association completed additional repairs at the garage south and east elevations in 2021, as well as repairs at the north annex structure north elevation at a steel beam.

We include a Management provided cost to conduct additional masonry repairs at the garage west and north elevations in the near term. This project includes excavation and water infiltration remediation at the garage west elevation.

We also include Board provided expenditures in the near term for the following:

- 3rd Floor East Elevation Terrace – joint sealant replacement/repair and waterproofing application
- South Elevation Garage Door Area – sealant replacement and repairs

We slightly defer the subsequent repair event based on these near term repairs.

Condition:

- Cast stone, granite cladding and concrete masonry units
- Steel lintels exhibit weep/flashing systems
- The base structure south elevation exhibits a significant amount of joint deterioration.
- The garage concrete masonry unit elevations exhibit areas of joint cracks.
- The wall cap at the 3rd floor east elevation exhibits cracks and spall at the railing attachments.
- Converted structure at north exhibits masonry deterioration at the east elevation (garage extension) and a significant amount of previous repairs
- Converted structure at the north exhibits areas of ceiling system damage
- Converted structure at the north elevation (north annex) includes a stucco (or similar) finish
- Sealant deterioration is evident at control joints and window/door perimeters

We recommend the Association monitor the north annex structure ceiling system for continued deterioration. The need for extensive renovation of the ceiling system is indeterminate at this time.



Masonry spall at 3rd floor east elevation



Masonry crack at 3rd floor east elevation



Recent masonry repairs at north annex structure



Location of water infiltration at west perimeter of garage



Location of water infiltration at west perimeter of garage



Joint sealant at garage wall



Sealants at garage wall



Granite cladding joint sealant



Masonry joint deterioration at south elevation



Masonry joint deterioration at south elevation



Masonry joint deterioration at south elevation



Recent masonry repairs at north annex



Masonry joint deterioration at north annex



North elevation of the north annex at stucco finish

Useful Life: We advise a complete inspection of the masonry and related masonry repairs up to every five 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 five percent (5%) of the masonry (We opine that the north annex structure will likely include an increased amount of repairs.)
- Replacement of a limited amount of the masonry
- Replacement of sealants as needed
- Repairs to the cap at the 3rd floor east elevation

Windows and Doors, Common

Line Item: 1.980

Quantity: 1,200 square feet at the lobby, club room and garage

History: Original

Condition: Good overall (The Building Engineer does not report a history of seal failures.)



Garage window system



Lobby entrance window and door system



Club room window system

Useful Life: Up to 40 years

Component Detail Notes: Construction includes the following:

- Aluminum frames
- Dual pane glass
- Vision glass with the exception of select garage window systems

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.

Interior Building Elements

Club Room

Line Items: 2.072 and 2.073

History: The club room, or clubhouse, components vary in age. The sound system and appliances were installed in 2012. The Association replaced the furnishings and lighting systems, and completed a paint application in 2021.

The flooring is original.

Condition: The club room is in good overall condition. The flooring is in fair condition.



Club room



Club room

Useful Life: Complete renovations up to every 20 years with partial component replacements/interim renovations up to every 10 years

Component Detail Notes: Components include:

- Tile floor coverings
- Paint finishes
- Ceiling tile system
- Light fixtures
- Furnishings
- Sound system
- Bar/kitchen

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 Item: 2.100

Quantity: Two elevators

History: Original finishes

Condition: Good to fair overall with areas of wall damage/scuffs evident



Elevator cab finishes



Wall scuff

Useful Life: Up to 20 years

Component Detail Notes: The elevator cab finishes consist of:

- Tile floor coverings
- Laminate wall coverings
- 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.

Exercise Equipment

Line Items: 2.160

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

- Ellipticals
- Stationary cycles
- Treadmills

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

- Benches
- Dumbbells
- Weight training machine

History: The equipment varies in age in consideration of limited as needed partial replacements. We include a Board provided cost to replace a significant amount of equipment in the near term.

Conditions: Conditions vary



Exercise equipment

Useful Life: 5- 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. We assume replacement as needed in a phased manner based on varied use of the equipment.

Exercise Room

Line Item: 2.180

History: The Association replaced the flooring in 2021.

Condition: Good to fair overall



Exercise room flooring

Useful Life: Renovations every up to every 10 years

Component Detail Notes: The exercise room components include:

- Rubber flooring
- Ceiling tile system
- 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, Elevator Foyers/Hallways

Line Item: 2.200

Quantity: 550 square yards at the residential elevator foyers/hallways (Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.)

History: Replaced in 2021

Condition: Good overall with isolated stains evident



Residential floor elevator foyer



Carpet at foyer



Carpet at foyer

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 Coverings, Tile, Elevator Foyers/Hallways

Line Items: 2.239 and 2.240

Quantity: 400 square yards at the residential elevator foyer/hallway floors (This quantity excludes the tile at the hallway walls.)

History: Original

Condition: Good to fair overall with areas of cracks and joint deterioration evident

We include a Board provided expenditure in the near term for joint repairs and stone repairs/resetting, including at the unit entrance thresholds.



Joint damage at tile



Cracks at tile



Cracks at tile

Useful Life: Up to 25 years

Component Detail Notes: Replacement of tile is often based on discretionary redecorating prior to the tile reaching the end of its useful life. The Association should fund regrouting of the tiles through the operating budget if necessary

Priority/Criticality: Per Board discretion

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

Light Fixtures, Elevator Foyers/Hallways

Line Item: 2.560

Quantity: Hanging, or ceiling mounted, at the residential elevator foyers/hallways (We consider the recessed light fixtures as operating budget maintained.)

History: Original

Condition: Reported satisfactory overall



Foyer light fixtures

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.

Lobby

Line Items: 2.599 and 2.600

History: The Association replaced the furnishings and lighting systems, constructed a custom desk and completed a paint application in 2021.

The remaining major lobby and elevator foyer components, including the flooring, are original.

Condition: The lobby is in good overall condition. The flooring is in reported satisfactory condition, with the exception of isolated damage at the elevator foyer/step area.



Lobby overview



Isolated tile damage

Useful Life: Complete renovations up to every 25 years with interim partial component replacements/interim renovations up to every 12 years

Component Detail Notes: Components comprise the following (including the 2nd floor and lower level elevator foyers):

- Tile floor covering
- Paint finishes
- Doorman station
- Furnishings
- Decorations
- 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 primarily assume replacement of furnishings, decorations and paint applications during the interim events.

Mailboxes

Line Item: 2.700

Quantity: Mailboxes for the 101 residential units

History: Original

Condition: Good overall



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.

Paint Finishes, Elevator Foyers/Hallways

Line Item: 2.800

Quantity: Approximately 22,000 square feet on the walls and ceilings at the residential elevator foyers/hallways and trash rooms

History: Original with a varied history of touch up and partial applications

Condition: Conditions vary with areas of scuffs and damage evident



Wall scuffs



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.

Rest Rooms, Club Room

Line Item: 2.900

Quantity: Two common located at the club room

History: Components are primarily original (The Association replaced the wall coverings in 2021.)

Condition: Good overall



Common rest room

Useful Life: Renovations up to every 25 years

Component Detail Notes: Components include:

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

Priority/Criticality: Per Board discretion

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

Building Services Elements

Air Handling Units, Heat Pumps

Line Items: 3.020 through 3.022

Quantity: Two large capacity heat pumps for the lobby and club room (2,000- to 2,400-CFM) and 22 for the residential elevator foyers/hallways, 2nd floor elevator foyer, 1st floor elevator lobby and lower-level elevator foyer (primarily 360-CFM)

History: Original. Exceptions include two hallway heat pumps which were replaced in 2017.

Condition: Reported satisfactory overall. The systems utilize R-22 refrigerant which may prompt the need for replacement.



Club room heat pump



Elevator foyer original heat pump



Lobby heat pump



Replaced heat pump at elevator foyer

Useful Life: Up to 20 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:

- Semi-annually:
  - Change or clean air filters as needed
  - Inspect base pan, cabinet and clear obstructions as necessary
- Annually:
  - Clean fan assembly, inspect fan drive system and controls
  - Inspect and clean accessible ductwork, pilot assembly and burners as needed
  - Check fan belt alignment and tension

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 Item: 3.105

Quantity: Four HTP high efficiency boilers

History: Installed in 2023

The boilers are maintained under a service contract.

Condition: Reported satisfactory overall



Building heat boilers

Useful Life: Up to 25 years

Component Detail Notes: The boilers have an input capacity of 800-MBH (thousand British Thermal Units per hour) each for the building heat system. The boilers have an efficiency of ninety-seven percent (97%).

The lack of replacement parts, increased maintenance costs and corrosion of components will eventually justify complete replacement.

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. Our estimate of cost includes an allowance for replacement of the controls.

Building Automation System

Line Item: 3.170

History: The Association upgraded the Honeywell building automation system in 2024. The system includes all major HVAC system components.

Condition: Reported satisfactory overall



Building automation system panel

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.

Cooling Tower

Line Items: 3.260 and 3.265

Quantity: One *BAC* cooling tower

History: Original

Condition: Reported satisfactory overall (The cooling tower exhibits evidence of leakage.)



Cooling tower



Cooling tower at base



Cooling tower at underside

Useful Life: Replacement up to every 35 years with capital repairs up to every 20 years

Component Detail Notes: The cooling tower has a capacity of 267-tons (per available drawings). 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 up to 20 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 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.

Elevators, Traction

Line Item: 3.360

Quantity: Two *Otis* (*GEN2*) traction elevators

History: The majority of the elevator system components are original.

The elevators are maintained under a service contract by Otis.

Condition: Reported satisfactory overall with reportedly infrequent service interruptions



Traction elevator controls



Controls casings

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. 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

Fans, Stairwell Pressurization

Line Item: 3.380

Quantity: Two inline fans for stairwell pressurization (7,500-CFM each)

History: Original

Condition: Reported satisfactory



Stairwell pressurization fan

Useful Life: Up to 35 years

Component Detail Notes: The Association should fund interim replacements of belts, motors and other components through the operating budget as needed.

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, local fire codes, 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 pressure relief 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.

Generator, Emergency

Line Item: 3.440

Quantity: One *Cummins* 250-kW (kilowatt) diesel generator (one automatic transfer switch)

History: Original

The Association tests the generator weekly.

Condition: Reported satisfactory



Emergency generator



Transfer switch

Useful Life: Up to 35 years (We recognize that the transfer switch may achieve a shorter useful life.)

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. As a reference, the Association may consult the following document: *NFPA 110, Standard for Emergency and Standby Power Systems*. 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 fuel and oil levels
  - Inspect cooling and exhaust systems
  - Check battery, electrical components and transfer switches
  - Run generator without load and look for unusual conditions such as leaks
- Monthly:
  - Exercise generator under load test for minimum of 30 minutes
  - Check oil levels before running and after 10 minutes of run time
- Annually:
  - Complete full inspection and necessary repairs
  - Change fuel and air filters
  - Change oil and replace oil filter
  - Change spark plugs
  - Flush cooling 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. Our estimate of cost includes replacement of the transfer switch and fuel storage tank.

Life Safety System

Line Items: 3.555, 3.560 and 3.561

Quantity: The life safety system at Breakwater includes the following components:

- Audio/visual fixtures
- *Siemens* control panel
- Detectors
- Magnetic door holders
- Pull stations
- Voice communication system at the stairwells
- Wiring

History: Original

The Association completed the five-year fire sprinkler system inspection in 2024. We include subsequent five year inspection expenditures at the direction of the Board.

Conditions: Reported satisfactory overall



Communication panel at stairwell



Control panel

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

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

Line Item: 3.580

Quantity: Approximately 80 exit fixtures

History: Original

Condition: Reported satisfactory



Fixtures at hallway

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.

Pipes

Line Items: 3.600 and 3.601

Component Detail Notes: The building includes various piping systems including but not limited to:

- Domestic cold water
- Sanitary waste and vent
- Building heating and cooling system to the heat pumps
- Gas supply
- Garage drain pipes
- Fire sprinkler system and standpipes
- Roof drain pipes

The Building Engineer does not report a recent history of pipe riser failures. We do not recommend that the Association budget for systematic replacement of the piping systems during the next 30 years as the majority of the piping systems have a useful life in excess of 60 years.

The Association jetted the sanitary waste risers in 2021. The project was in response to an increased amount of clogs in the waste risers. The building includes a single stack system, or *Sovent* stack system. The Building Engineer does not report a recent history of waste riser issues. We include expenditures for subsequent jetting up to every six years. However, future updates of this Reserve Study will adjust the times of jetting based on the conditions.

The Association installed three sets of actuators as part of an emergency domestic water shut off system in 2024. We assume a useful life of the system of up to 20 years.



Domestic water shut off system



Actuators for domestic water shut off 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.

Pumps

Line Items: 3.700 and 3.701

Quantity, History and Conditions:

- **Building Heating and Cooling** - 25-HP, two each, include variable frequency drives, original, motors vary in age, reported satisfactory
- **Domestic Cold Water** - 30-HP, two each, original, rebuilt 2014-2017 including partial replacement of controls, reported satisfactory



Domestic cold water pumps



Building heating and cooling system pumps

Useful Lives:

- Building Heating and Cooling, useful life of up to 25 years
- Domestic Cold Water, useful life of up to 20 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. Our costs include an allowance for replacement of the variable frequency drives (VFD) and controls.

Pump, Fire Suppression

Line Item: 3.770

Quantity: One 150-HP electric fire suppression pump (system includes a jockey pump)

History: Original

Condition: Reported satisfactory without operational deficiencies



Fire suppression pump



Fire suppression pump controls

Useful Life: Up to 50 years

Component Detail Notes: Prior to replacement, the Association should schedule periodic inspections to maintain its correct operation in the event of an emergency. Breakwater should also anticipate, as normal maintenance, interim repairs and component replacements to maximize its remaining useful life.

Preventative Maintenance Notes: The Association conducts timely preventative maintenance. 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:
  - Clean filters if present
  - 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. Our estimate of cost includes replacement of the pump, motor, and motor controller.

Security System

Line Items: 3.820 through 3.822

Quantity: Breakwater utilizes the following security system components:

- Automated fob reading system (14 access points)
- Cameras (20)
- Monitors
- Recording system
- Intercom panel (1) (including a monitor)

History: The fob reader system was installed in 2015. The camera system components vary in age and were replaced in aggregate in 2018.

The intercom panel was recently upgraded.

Condition: Reported satisfactory



Security system components



Intercom system

Useful Life: Up to 15 years

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

- Monthly:
  - 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.

Valves, Large Diameter

Line Item: 3.920

Quantity: Six large diameter valves at the main water connection and fire pump

History: Original

Condition: Reported satisfactory



Main water connection large diameter valves

Useful Life: Up to 40 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

Concrete Sidewalks, Colored, East Perimeter

Line Item: 4.140

Quantity: 600 square feet of colored concrete adjacent to the public sidewalk at the east perimeter

History: Original

Condition: Good overall with isolated cracks



Crack at sidewalk



Colored sidewalk

Useful Life: Up to 30 years (We assume interim repairs and color applications 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.

Concrete Steps/Sidewalk and Railings, Lobby Entrance Area

Line Item: 4.141

Quantity: The lobby entrance area includes standard finish concrete sidewalk and steps, and steel railings.

History: Original

Condition: Fair overall with areas of concrete cracks evident.

The railings include inset posts. This construction may result in accelerated concrete damage.



Crack at entrance sidewalk



Crack at entrance steps

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.

Irrigation System

Line Item: 4.420

Quantity: One controller with seven zones

History: Original

Condition: Reported satisfactory overall



Irrigation system at head

Useful Life: Up to 35 years

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

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

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

Priority/Criticality: Per Board discretion

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

Garage Elements

Concrete, Elevated and On-grade Floors

Line Items: 7.299 and 7.300

Quantity: The garage includes 41,000 square feet of elevated precast concrete floor structures at the 1st and 2nd floors, and 28,600 square feet of on-grade cast concrete at the lower level/basement

Condition and History: The Association completed concrete repairs and application of a traffic coating on all levels (except for the ramps) in 2019.

We include a Management provided Association portion of the cost in the near term to conduct traffic coating repairs in part due to adhesion failure. The warranty will fund the remaining portion of the cost. The repairs will also remediate traffic coating cracks at joints. We opine that the failures and conditions are premature and abnormal. The system includes a five-year warranty. We recommend that the Association confirm that the traffic coating system installed was a three-part urethane based system.

The concrete exhibits isolated cracks at locations where the traffic coating was removed. The ramps exhibit areas of cracks and spall. We include a Management provided cost to install a traffic coating at the ramps in the near term.

The ceilings beneath the elevated floors exhibit isolated areas of water infiltration.

Future updates of this Reserve Study will consider acceleration of concrete and traffic coating expenditures based on any history of continued premature issues. We slightly defer the subsequent restoration event at the direction of the Board.



Cracks at coating at joint



Traffic coating partial removal in preparation for repairs



Traffic coating wear at on-grade concrete



Evidence of water infiltration beneath elevated garage floor



Traffic coating partial removal in preparation for repairs



Traffic coating partial removal in preparation for repairs



Traffic coating partial removal in preparation for repairs



Crack at concrete



Traffic coating partial removal in preparation for repairs



Evidence of water infiltration beneath elevated garage floor



Evidence of water infiltration beneath elevated garage floor



Concrete spall at ramp

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 floors
- Partial depth concrete replacement of a limited amount of the surface area of the elevated structural concrete ceilings
- Remediation of structural concrete columns and beams as needed
- Crack repairs on all surfaces as needed
- Replacement of a limited amount of on-grade concrete
- Drain repairs as needed

Doors and Operators, South Elevation

Line Item: 7.400

Quantity: Two metal overhead sectional garage doors with operators at the common entrance/exit

History: The doors are original with a varied history of partial panel replacements and operator repairs/replacements.

Condition: Reported satisfactory overall



Vehicular doors and operators

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. 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 (five inline fans)
- Louvers

History: The fans and louvers are original. The Association replaced the carbon monoxide detectors in 2019 through the operating budget.

Condition: Reported satisfactory overall



Carbon monoxide detectors



Mechanical louver



Exhaust fans

Useful Life: Up to 30 years for the fans

Component Detail Notes: We regard interim repairs or partial replacements of components, including the CO detectors, as normal maintenance.

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.

Light Fixtures

Line Item: 7.600

Quantity: Approximately 95 light fixtures with LED lamps

History: The Association replaced the fixtures in 2018.

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: 64,600 square feet on the ceilings (excludes 2nd floor north annex section)

History: Original

Condition: Good to fair overall



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: 7.798 through 7.800

Quantity: The garage includes 41,000 square feet of elevated precast concrete floor structures at the 1st and 2nd floors, and 28,600 square feet of on-grade cast concrete at the lower level/basement

Condition and History: As stated in the previous narrative "**Concrete, Elevated and On-grade Floors**", the Association completed concrete repairs and application of a traffic coating on all levels (except for the ramps) in 2019.

We include a Management provided Association portion of the cost in the near term to conduct traffic coating repairs in part due to adhesion failure. The warranty will fund the remaining portion of the cost. The repairs will also remediate traffic coating cracks at joints. We opine that the failures and conditions are premature and abnormal. The

system includes a five-year warranty. We recommend that the Association confirm that the traffic coating system installed was a three-part urethane-based system.

The concrete exhibits isolated cracks at locations where the traffic coating was removed. The ramps exhibit areas of cracks and spall. We include a Management provided cost to install a traffic coating at the ramps in the near term.

The ceilings beneath the elevated floors exhibit isolated areas of water infiltration.

Future updates of this Reserve Study will consider acceleration of concrete and traffic coating expenditures based on any history of continued premature issues. We slightly defer the subsequent restoration event at the direction of the Board.

Useful Life: Up to 20 years with the benefit of interim overlayment at drive lanes up to every 10 years. The ramp traffic coatings have a useful life of up to 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 a 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 narrative "Concrete, Elevated Floors"
- Preparation of the concrete surface
- Application of a urethane base coat, intermediate aggregate coating and top coat to the elevated floors
- Parking and directional line striping as needed

Unit Heaters

Line Item: 7.900

Quantity: Primarily *Modine* gas-fired unit heaters

History: Primarily original. The garage also includes two radiant heaters installed at the entrances that were installed in 2014.

Condition: Reported satisfactory



Garage unit heaters



Garage unit heaters

Useful Life: Up to 30 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 annual preventative maintenance activities to maximize the remaining useful life:

- Check fans, wiring, pipes, and venting for any damage that may have occurred since last use
- Make sure all supply connections are fitted properly
- Check thermostats for connectivity and cleanliness, and ensure the temperature settings are correct
- Ensure that venting is free from obstruction
- Check for any sign of condensate leakage as this could indicate improper venting or unit operation

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

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

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.

Breakwater 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 Milwaukee, Wisconsin at an annual inflation rate[3]. Isolated or regional markets of

[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.

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

- The past and current maintenance practices of Breakwater 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 Breakwater 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) Breakwater 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.