

FULL RESERVE STUDY

3300 Park Avenue Condominium Association, Inc.



Bridgeport, Connecticut

June 7, 2016



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Long-term thinking. Everyday commitment.



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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: 3300 Park Avenue Condominium Association, Inc. (3300 Park Avenue)

Location: Bridgeport, Connecticut

Reference: 101439

Property Basics: 3300 Park Avenue Condominium Association, Inc. is a townhome style development of 26 units in three buildings. The exteriors of the buildings comprise brick masonry, wood siding and asphalt shingle roofs. Buildings 1, 2, and 3 were built in 1982, 1984, and 1987, respectively. The development contains 13 detached garages with EPDM roofs, asphalt pavement, concrete flatwork, pavers, a pool and a pool house.

Reserve Components Identified: 33 Reserve Components.

Inspection Date: June 7, 2016. We conducted the original inspection on March 24, 2011.

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 multiple threshold funding years due to replacement of wood siding and Building 3 roof, balcony and bridge restoration and partial paver repairs, and replacement of garage roofs and subsequent Building 3 roof, respectively.

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

- current and future local costs of replacement
- 1.35% annual rate of return on invested reserves
- 1.9% future Inflation Rate for estimating Future Replacement Costs

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

Cash Status of Reserve Fund: \$44,441 as of September 28, 2016.

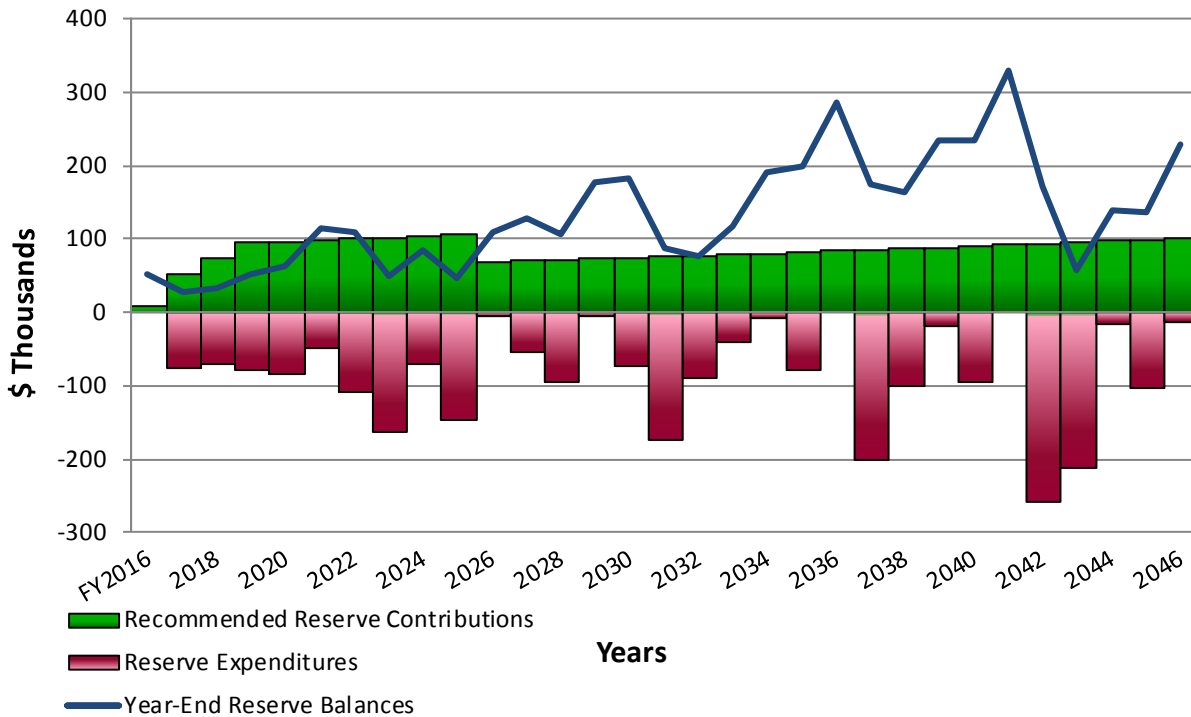
Recommended Reserve Funding: The Association budgeted \$31,000 for Reserve Contributions in 2016. We recommend the Association budget annual phased increases in Reserve Contributions of \$21,400 from 2017 through 2019. Afterwards, the Association should budget gradual annual increases in reserve funding that in part consider the effects of inflation through 2025. By 2026, the Association will have fully funded for restoration of the balconies and bridges, and partial paver repairs. Therefore, the Association may anticipate a decrease in the annual Reserve Contribution to \$69,500. Afterwards, the Association should budget gradual annual increases in reserve funding that in part consider the effects of inflation through 2046, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of \$21,400 represents a fourteen percent (14.0%) adjustment in the 2016 total Operating Budget of \$153,114. This initial adjustment of \$21,400 is equivalent to an increase of \$68.59 in the monthly contributions per homeowner. The Association may ascribe the actual contributions and assessments per unit owner based upon percent ownership, as defined by the Association's governing documents.



Certification: This *Full Reserve Study* exceeds the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a “Level I Full Reserve Study.”

3300 Park Avenue
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2017	52,400	28,488	2027	70,800	129,046	2037	85,400	174,160
2018	73,800	32,971	2028	72,100	107,499	2038	87,000	163,302
2019	95,200	50,930	2029	73,500	177,803	2039	88,700	235,808
2020	97,000	63,960	2030	74,900	182,103	2040	90,400	235,342
2021	98,800	115,685	2031	76,300	86,933	2041	92,100	331,241
2022	100,700	109,315	2032	77,700	75,516	2042	93,800	171,238
2023	102,600	50,798	2033	79,200	116,412	2043	95,600	56,988
2024	104,500	85,297	2034	80,700	191,882	2044	97,400	139,274
2025	106,500	45,628	2035	82,200	198,713	2045	99,300	137,732
2026	69,500	110,088	2036	83,800	285,761	2046	101,200	228,725



Respectfully submitted on September 29, 2016 by
RESERVE ADVISORS, INC.



Alan M. Ebert, PRA¹, RS², Director of Quality Assurance
Visual Inspection and Report by: Stephanie A. Mueller, RS



¹PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at <http://www.apra-usa.com>.

² 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. RESERVE STUDY REPORT

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

3300 Park Avenue Condominium Association, Inc.

Bridgeport, Connecticut

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, June 7, 2016. We conducted the original inspection on March 24, 2011.

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
- **Condition Assessment** - 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, financial information relied upon for the Financial Analysis of 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



3300 Park Avenue Condominium Association, Inc. is a townhome style development of 26 units in three buildings. The exteriors of the buildings comprise brick masonry, wood siding and asphalt shingle roofs. Buildings 1, 2, and 3 were built in 1982, 1984, and 1987, respectively. The development contains 13 detached garages with EPDM roofs, asphalt pavement, concrete flatwork, pavers, a pool and a pool house. We identify 33 major reserve components that are likely to require capital repair or replacement during the next 30 years.

Our investigation includes Reserve Components or property elements as set forth in your Declaration. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement. Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or Homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements

- Property Maintained by Homeowners

We advise the Board conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget.

The Reserve Study identifies Reserve Components as set forth in your Declaration or which were identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:

- 3300 Park Avenue responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements do not have predictable Remaining Useful Lives. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan. We identify the following Long-Lived Property Elements as excluded from reserve funding at this time.

- Electrical Systems, Common
- Foundations
- Pipes, Subsurface Utilities
- Structural Frames

The operating budget provides money for the repair and replacement of certain Reserve Components. Operating Budget Funded Repairs and Replacements relate to:

- General Maintenance to the Common Elements
- Expenditures less than \$3,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Catch Basins, Landscape
- Chimney Cap, One Remaining Original
- Concrete Stairs, Coating Applications
- Fences and Handrails, Metal, Paint Finishes
- Fences, Wood

- Landscape, Annual Maintenance
- Paint Finishes, Touch Up
- Pipes, Interior Building, Water and Sewer, Pool House
- Pool, Cover
- Pool, Paint Finish
- Pool House, Water Heater
- Pool House, Windows and Doors
- Retaining Walls, Concrete and Stone, Inspections and Repairs
- Other Repairs normally funded through the Operating Budget

Certain items have been designated as the responsibility of the homeowners to repair or replace at their cost. Property Maintained by Homeowners, including items billed back to Homeowners, relates to unit:

- Balconies and Bridges, Metal, Paint Finishes and Repairs (At the request of Management, we include reserve funds for paint finishes and repairs at the balconies and bridges. However, the Association may bill these expenses back to the associated homeowner. For the purposes of this reserve study and at the request of Management, we include reserve funds related to these expenses. Updates to the reserve study will revisit the need to allocate these expenses completely to homeowners.)
- Electrical Systems
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Patios
- Pipes, Interior Building, Water and Sewer
- Skylights
- Windows and All Doors



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
- Unit cost of replacement
- 2016 local cost of replacement
- Total future costs of replacement anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

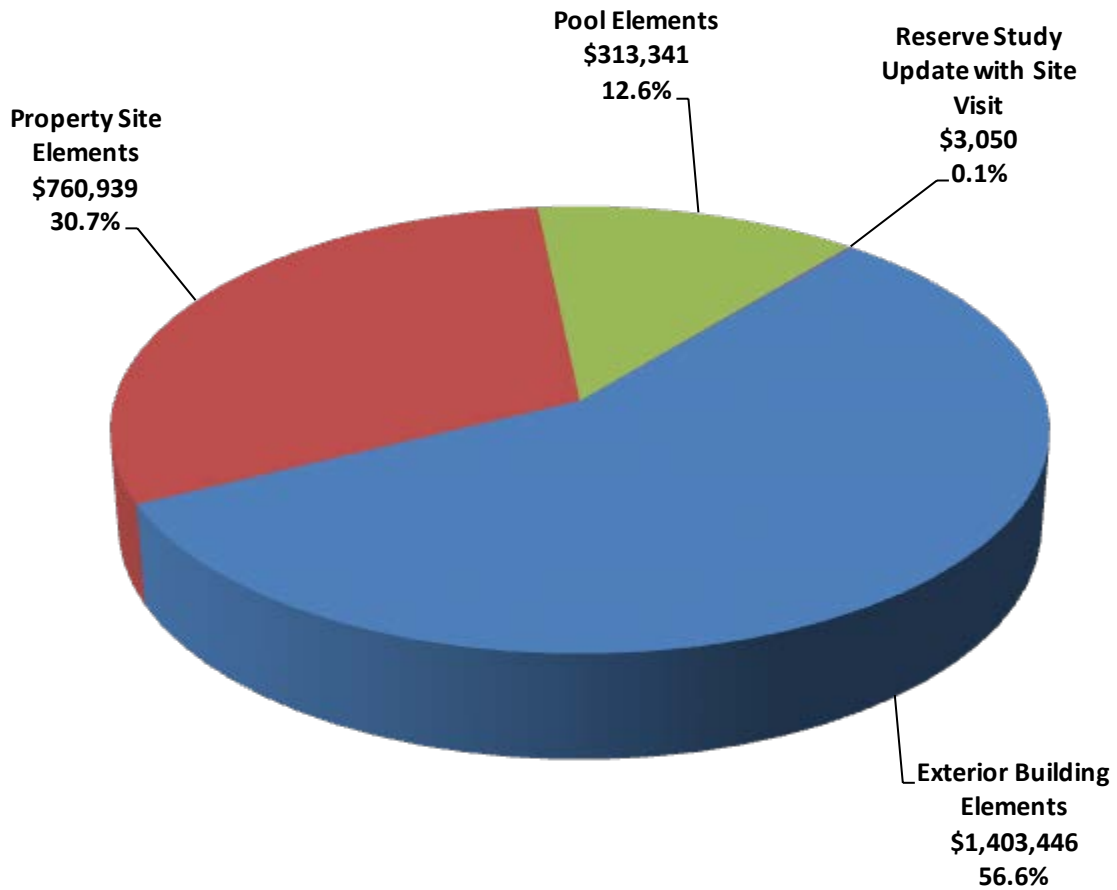
Reserve Funding Plan

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

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*.

The following chart illustrates the relative importance of the categories noted in *Reserve Expenditures* and relative funding during the next 30 years.

3300 Park Avenue
Future Expenditures Relative Cost Illustration



RESERVE EXPENDITURES

3300 Park Avenue
Condominium Association, Inc.
Bridgeport, Connecticut

Explanatory Notes:

- 1) **1.9%** is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2016** is Fiscal Year beginning January 1, 2016 and ending December 31, 2016.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				RUL = 0 FY2016	1 2017	2 2018	3 2019	4 2020	5 2021	6 2022	7 2023	8 2024	9 2025	10 2026	11 2027	12 2028	13 2029	14 2030	15 2031								
						Useful	Remaining	Unit (2016)	Per Phase (2016)	Total (2016)	30-Year Total (Inflated)																								
Exterior Building Elements																																			
1.100	12	12	Each	Balconies and Bridges, Metal, Paint Finishes and Capital Repairs	2017	6 to 8	1	600.00	7,200	7,200	40,831		7,337																						
1.105	12	12	Each	Balconies and Bridges, Metal, Restoration, Buildings 1 & 2 (decks, railings)	2025	to 45	9	3,500.00	42,000	42,000	49,753									49,753															
1.140	9	9	Each	Chimney Caps, Aluminum, Buildings 1 and 2	2040	to 25	24	1,150.00	10,350	10,350	16,260																								
1.240	2,050	1,025	Linear Feet	Gutters and Downspouts, Aluminum, Buildings 1 and 3, Phased	2017	15 to 25	1 to 2	11.00	11,275	22,550	56,997		11,489	11,708																					
1.241	1,250	1,250	Linear Feet	Gutters and Downspouts, Aluminum, Building 2	2028	15 to 25	12	11.00	13,750	13,750	17,234														17,234										
1.260	80	40	Each	Light Fixtures, Phased	2019	to 25	3 to 18	130.00	5,200	10,400	21,607				5,502																				
1.280	140	70	Squares	Roofs, Asphalt Shingles, Older Roofs at Buildings 1 and 2, Phased	2017	15 to 20	1 to 2	620.00	43,400	86,800	219,392		44,225	45,065																					
1.281	91	91	Squares	Roofs, Asphalt Shingles, Building 3 and Pool House	2023	15 to 20	7	620.00	56,420	56,420	158,151							64,365																	
1.282	54	54	Squares	Roofs, Asphalt Shingles, Five Units at Building 1	2028	15 to 20	12	620.00	33,480	33,480	41,964														41,964										
1.380	69	23	Squares	Roofs, EPDM, Garages, Phased	2023	15 to 20	7 to 17	1,250.00	28,750	86,250	156,215							32,799							36,035										
1.540	7,600	2,533	Linear Feet	Sealants, Windows and Doors, Phased	2019	to 20	3 to 15	4.00	10,133	30,400	68,055				10,722						12,004						13,439								
1.820	37,500	37,500	Square Feet	Walls, Masonry, Inspections and Repairs	2019	6 to 8	3	0.60	22,500	22,500	151,108										26,653						29,840								
1.940	26	26	Units	Walls, Wood Siding, Paint Finishes	2019	4 to 6	3	1,200.00	31,200	31,200	210,774				33,012									38,377											
1.945	17,100	5,700	Square Feet	Walls, Wood Siding, Replacement, Phased	2022	to 40	6 to 8	10.00	57,000	171,000	195,105							63,815	65,027	66,263															
Property Site Elements																																			
4.020	2,800	2,800	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2018	3 to 5	2	1.80	5,040	5,040	40,315			5,233				5,643						6,084											
4.045	2,800	2,800	Square Yards	Asphalt Pavement, Total Replacement	2031	15 to 20	15	31.00	86,800	86,800	115,115																115,115								
4.100	6	6	Each	Catch Basins, Inspections and Capital Repairs	2031	15 to 20	15	1,150.00	6,900	6,900	9,151																9,151								
4.110	1,400	180	Linear Feet	Concrete Curbs, Partial	2031	to 65	15 to 30+	24.00	4,320	33,600	12,910																5,729								
4.120	3,250	250	Square Feet	Concrete Driveways, Partial	2022	to 65	6 to 30+	13.00	3,250	42,250	22,156							3,639						3,998											
4.160	12	1	Allowance	Concrete Stairs, Stoops and Landings, Partial	2017	to 65	1 to 30+	9,000.00	9,000	108,000	70,525		9,171					10,076						11,070											
4.245	520	173	Linear Feet	Fences and Handrails, Steel, Phased	2020	to 35	4 to 6	64.00	11,093	33,280	36,568					11,961	12,188	12,419																	
4.500	1	1	Allowance	Landscape, Partial Replacements, Near Term Only	2017	N/A	1 to 3	4,500.00	4,500	4,500	14,020		4,586	4,673	4,761																				
4.560	1	1	Allowance	Light Poles and Fixtures	2038	20 to 25	22	11,500.00	11,500	11,500	17,399																								
4.600	1	1	Allowance	Mailbox Stations and Shelter Renovation	2030	to 25	14	6,600.00	6,600	6,600	8,590															8,590									
4.620	16,500	4,125	Square Feet	Pavers, Masonry, Resetting and Partial Replacements, Phased	2020	15 to 20	4 to 19	12.00	49,500	198,000	410,416					53,371					58,637						64,423								
4.810	1	1	Allowance	Signage, Entrance	2020	20 to 30	4	3,500.00	3,500	3,500	3,774					3,774																			
Pool Elements																																			
6.200	1,650	1,650	Square Feet	Deck, Pavers	2021	25 to 30	5	15.00	24,750	24,750	27,192																27,192								
6.400	150	150	Linear Feet	Fence, Steel	2021	to 35	5	54.00	8,100	8,100	8,899																8,899								
6.500	1	1	Allowance	Furniture	2020	to 12	4	4,500.00	4,500	4,500	18,555					4,852																			
6.600	2	1	Allowance	Mechanical Equipment, Phased	2024	to 15	8 to 13	4,000.00	4,000	8,000	22,223									4,650				5,109											
6.800	580	580	Square Feet	Pool Finish, Plaster	2022	8 to 12	6	20.00	11,600	11,600	28,663								12,987																
6.811	2	2	Each	Pool House, Rest Rooms, Renovations	2020	to 25	4	5,000.00	10,000	10,000	28,042					10,782																			
6.900	580	580	Square Feet	Structure and Deck, Total Replacement	2042	to 60	26	190.00	110,200	110,200	179,767																								
		1	Allowance	Reserve Study Update with Site Visit	2018	2	2	3,050.00	3,050	3,050	3,050			3,050																					
Anticipated Expenditures, By Year																																			
											\$2,480,776	0	76,808	69,729	77,804	84,740	48,279	108,579	162,191	70,913	147,047	6,084	53,445	95,233	5,109	73,013	173,274								

RESERVE EXPENDITURES

3300 Park Avenue
Condominium Association, Inc.
Bridgeport, Connecticut

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$				16 2032	17 2033	18 2034	19 2035	20 2036	21 2037	22 2038	23 2039	24 2040	25 2041	26 2042	27 2043	28 2044	29 2045	30 2046		
						Useful	Remaining	Unit (2016)	Per Phase (2016)	Total (2016)	30-Year Total (Inflated)																	
<u>Exterior Building Elements</u>																												
1.100	12	12	Each	Balconies and Bridges, Metal, Paint Finishes and Capital Repairs	2017	6 to 8	1	600.00	7,200	7,200	40,831	9,730							11,100							12,664		
1.105	12	12	Each	Balconies and Bridges, Metal, Restoration, Buildings 1 & 2 (decks, railings)	2025	to 45	9	3,500.00	42,000	42,000	49,753																	
1.140	9	9	Each	Chimney Caps, Aluminum, Buildings 1 and 2	2040	to 25	24	1,150.00	10,350	10,350	16,260									16,260								
1.240	2,050	1,025	Linear Feet	Gutters and Downspouts, Aluminum, Buildings 1 and 3, Phased	2017	15 to 25	1 to 2	11.00	11,275	22,550	56,997					16,741	17,059											
1.241	1,250	1,250	Linear Feet	Gutters and Downspouts, Aluminum, Building 2	2028	15 to 25	12	11.00	13,750	13,750	17,234																	
1.260	80	40	Each	Light Fixtures, Phased	2019	to 25	3 to 18	130.00	5,200	10,400	21,607		7,297										8,808					
1.280	140	70	Squares	Roofs, Asphalt Shingles, Older Roofs at Buildings 1 and 2, Phased	2017	15 to 20	1 to 2	620.00	43,400	86,800	219,392					64,439	65,663											
1.281	91	91	Squares	Roofs, Asphalt Shingles, Building 3 and Pool House	2023	15 to 20	7	620.00	56,420	56,420	158,151												93,786					
1.282	54	54	Squares	Roofs, Asphalt Shingles, Five Units at Building 1	2028	15 to 20	12	620.00	33,480	33,480	41,964																	
1.380	69	23	Squares	Roofs, EPDM, Garages, Phased	2023	15 to 20	7 to 17	1,250.00	28,750	86,250	156,215		39,591											47,790				
1.540	7,600	2,533	Linear Feet	Sealants, Windows and Doors, Phased	2019	to 20	3 to 15	4.00	10,133	30,400	68,055					15,046							16,844					
1.820	37,500	37,500	Square Feet	Walls, Masonry, Inspections and Repairs	2019	6 to 8	3	0.60	22,500	22,500	151,108					33,407							37,401					
1.940	26	26	Units	Walls, Wood Siding, Paint Finishes	2019	4 to 6	3	1,200.00	31,200	31,200	210,774	42,164				46,325						50,896						
1.945	17,100	5,700	Square Feet	Walls, Wood Siding, Replacement, Phased	2022	to 40	6 to 8	10.00	57,000	171,000	195,105																	
<u>Property Site Elements</u>																												
4.020	2,800	2,800	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2018	3 to 5	2	1.80	5,040	5,040	40,315				7,207			7,770				8,378						
4.045	2,800	2,800	Square Yards	Asphalt Pavement, Total Replacement	2031	15 to 20	15	31.00	86,800	86,800	115,115																	
4.100	6	6	Each	Catch Basins, Inspections and Capital Repairs	2031	15 to 20	15	1,150.00	6,900	6,900	9,151																	
4.110	1,400	180	Linear Feet	Concrete Curbs, Partial	2031	to 65	15 to 30+	24.00	4,320	33,600	12,910											7,181						
4.120	3,250	250	Square Feet	Concrete Driveways, Partial	2022	to 65	6 to 30+	13.00	3,250	42,250	22,156	4,392				4,825						5,302						
4.160	12	1	Allowance	Concrete Stairs, Stoops and Landings, Partial	2017	to 65	1 to 30+	9,000.00	9,000	108,000	70,525	12,163				13,363						14,682						
4.245	520	173	Linear Feet	Fences and Handrails, Steel, Phased	2020	to 35	4 to 6	64.00	11,093	33,280	36,568																	
4.500	1	1	Allowance	Landscape, Partial Replacements, Near Term Only	2017	N/A	1 to 3	4,500.00	4,500	4,500	14,020																	
4.560	1	1	Allowance	Light Poles and Fixtures	2038	20 to 25	22	11,500.00	11,500	11,500	17,399						17,399											
4.600	1	1	Allowance	Mailbox Stations and Shelter Renovation	2030	to 25	14	6,600.00	6,600	6,600	8,590																	
4.620	16,500	4,125	Square Feet	Pavers, Masonry, Resetting and Partial Replacements, Phased	2020	15 to 20	4 to 19	12.00	49,500	198,000	410,416				70,781				77,765							85,439		
4.810	1	1	Allowance	Signage, Entrance	2020	20 to 30	4	3,500.00	3,500	3,500	3,774																	
<u>Pool Elements</u>																												
6.200	1,650	1,650	Square Feet	Deck, Pavers	2021	25 to 30	5	15.00	24,750	24,750	27,192																	
6.400	150	150	Linear Feet	Fence, Steel	2021	to 35	5	54.00	8,100	8,100	8,899																	
6.500	1	1	Allowance	Furniture	2020	to 12	4	4,500.00	4,500	4,500	18,555	6,081											7,622					
6.600	2	1	Allowance	Mechanical Equipment, Phased	2024	to 15	8 to 13	4,000.00	4,000	8,000	22,223					5,939						6,525						
6.800	580	580	Square Feet	Pool Finish, Plaster	2022	8 to 12	6	20.00	11,600	11,600	28,663	15,676																
6.811	2	2	Each	Pool House, Rest Rooms, Renovations	2020	to 25	4	5,000.00	10,000	10,000	28,042															17,260		
6.900	580	580	Square Feet	Structure and Deck, Total Replacement	2042	to 60	26	190.00	110,200	110,200	179,767											179,767						
		1	Allowance	Reserve Study Update with Site Visit	2018	2	2	3,050.00	3,050	3,050	3,050																	
Anticipated Expenditures, By Year											\$2,480,776	90,206	39,591	7,297	77,988	0	200,085	100,121	18,870	94,025	0	257,172	211,380	16,430	102,699	12,664		

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

3300 Park Avenue
Condominium Association, Inc.
Bridgeport, Connecticut

Individual Reserve Budgets & Cash Flows for the Next 30 Years

	FY2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Reserves at Beginning of Year (Note 1)	44,441	52,354	28,488	32,971	50,930	63,960	115,685	109,315	50,798	85,297	45,628	110,088	129,046	107,499	177,803	182,103
Total Recommended Reserve Contributions (Note 2)	7,750	52,400	73,800	95,200	97,000	98,800	100,700	102,600	104,500	106,500	69,500	70,800	72,100	73,500	74,900	76,300
Plus Estimated Interest Earned, During Year (Note 3)	163	542	412	563	770	1,204	1,509	1,074	912	878	1,044	1,603	1,586	1,913	2,413	1,804
Less Anticipated Expenditures, By Year	0	(76,808)	(69,729)	(77,804)	(84,740)	(48,279)	(108,579)	(162,191)	(70,913)	(147,047)	(6,084)	(53,445)	(95,233)	(5,109)	(73,013)	(173,274)
Anticipated Reserves at Year End	<u>\$52,354</u>	<u>\$28,488</u>	<u>\$32,971</u>	<u>\$50,930</u>	<u>\$63,960</u>	<u>\$115,685</u>	<u>\$109,315</u>	<u>\$50,798</u> (NOTE 5)	<u>\$85,297</u>	<u>\$45,628</u> (NOTE 5)	<u>\$110,088</u>	<u>\$129,046</u>	<u>\$107,499</u>	<u>\$177,803</u>	<u>\$182,103</u>	<u>\$86,933</u>

(continued)

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

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Reserves at Beginning of Year	86,933	75,516	116,412	191,882	198,713	285,761	174,160	163,302	235,808	235,342	331,241	171,238	56,988	139,274	137,732
Total Recommended Reserve Contributions	77,700	79,200	80,700	82,200	83,800	85,400	87,000	88,700	90,400	92,100	93,800	95,600	97,400	99,300	101,200
Plus Estimated Interest Earned, During Year	1,089	1,287	2,067	2,619	3,248	3,084	2,263	2,676	3,159	3,799	3,369	1,530	1,316	1,857	2,457
Less Anticipated Expenditures, By Year	(90,206)	(39,591)	(7,297)	(77,988)	0	(200,085)	(100,121)	(18,870)	(94,025)	0	(257,172)	(211,380)	(16,430)	(102,699)	(12,664)
Anticipated Reserves at Year End	<u>\$75,516</u>	<u>\$116,412</u>	<u>\$191,882</u>	<u>\$198,713</u>	<u>\$285,761</u>	<u>\$174,160</u>	<u>\$163,302</u>	<u>\$235,808</u>	<u>\$235,342</u>	<u>\$331,241</u>	<u>\$171,238</u>	<u>\$56,988</u> (NOTE 5)	<u>\$139,274</u>	<u>\$137,732</u>	<u>\$228,725</u> (NOTE 4)

Explanatory Notes:

- 1) Year 2016 starting reserves are as of September 28, 2016; FY2016 starts January 1, 2016 and ends December 31, 2016.
- 2) Reserve Contributions for 2016 are the remaining budgeted 3 months; 2017 is the first year of recommended contributions.
- 3) 1.35% is the estimated annual rate of return on invested reserves; 2016 is a partial year of interest earned.
- 4) Accumulated year 2046 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Years (reserve balance at critical point).

4. CONDITION ASSESSMENT

The Condition Assessment of this *Full Reserve Study* includes *Enhanced Solutions and Procedures* for select significant components. These narratives describe the Reserve Components, document specific problems and conditions, 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



Building front elevation and detached garages



Partial front elevation



Partial rear elevation

Balconies and Bridges, Metal - The Association is responsible for eight balconies at Building 1, two balconies at Building 2 and two bridges connecting Units 8 and 9 to the garage. The balconies and bridges comprise 510 square feet of decking and 190 linear feet of railings. The balconies and bridges are original and in fair condition. The finishes are in poor condition at an unknown age. We note rust throughout the balconies and isolated areas of significant corrosion.



Metal balconies



Balcony underside, note rust at ends



Typical rust



Corroded metal at Building 2

Balconies and bridges of this type have an indeterminate useful life with the benefit of protective paint finishes and partial replacements of deteriorated metal every six- to eight-years. The Association should also anticipate the need for a more extensive restoration to include replacement of the metal decking and railings up to every 45 years. As mentioned previously, homeowners are responsible for paint finishes and repairs to the balconies and bridges. However at the request of Management, we include reserve expenditures for these activities.

Periodic applications of paint to the metal will maximize the useful life. Preparation of the metal before application of the paint finish is important. The painting contractor should remove all soil, dirt, oil, grease and other foreign materials before application of the paint finish to maximize its useful life. The contractor should also remove paint blisters and rust prior to the paint finish application. We recommend the use of a power wire brush, scraper and/or sander as effective means of removal. The Association should require the application of a primer on bare metal. The primer for metal surfaces should include a rust inhibitor for added protection. We recommend the Association budget for paint applications to the metal in 2017 and every seven years thereafter with a timing adjustment when restoration occurs. We anticipate restoration, or

replacement of the decks and railings and capital repairs to the structures, by 2025. We depict this information on Line Items 1.100 and 1.105 of *Reserve Expenditures*.

Chimney Caps, Aluminum - 3300 Park Avenue maintains nine aluminum chimney caps. The chimney caps were replaced in 2015 and 2016 and are in good overall condition based on our visual inspection from the ground. The exception is one chimney cap at Building 1 which is original and in poor condition.



Typical newer chimney cap



Loose chimney cap and significant rust at Building 1

Chimney caps of this type have useful lives of up to 25 years. We recommend the Association anticipate replacement of the chimney caps and related flashing by 2040. We depict this information based on a historical cost provided by Management on Line Item 1.140 of *Reserve Expenditures*. The Association should budget for near term interim replacement of the remaining one chimney cap through the operating budget. We recommend the Association inspect the condition of the chimney caps concurrent with replacement of the roof systems.

Gutters and Downspouts, Aluminum - Approximately 3,300 linear feet of aluminum small and large capacity gutters and downspouts drain storm water from the roofs of 3300 Park Avenue. The gutters and downspouts at Buildings 1 and 3 comprise 2,050 linear feet, are likely

original and in fair to poor overall condition. The gutters and downspouts at Building 2 were replaced in 2008 and are in good to fair condition. The gutters and downspouts exhibit deflection and many locations of dented sections.



Dented aluminum gutter at Building 1



Deflected gutter at Building 3



Dented gutter at Building 3

These gutters and downspouts have a useful life of 15- to 25-years. We include the following solutions and procedures for gutter and downspout maintenance and replacements for present and future board members.

The most common and economical type of gutter profile is the metal roll-formed seamless K-style. The five-inch wide K-style gutter is standard but six-inch wide K-style gutters



should be used on larger roofs. The size of the gutter is determined by the roof's watershed area, a roof pitch factor and the rainfall intensity number of the Association's region. We recommend sloping gutters 1/16 inch per linear foot and providing fasteners a maximum of every three feet.

Downspouts can drain 100 square feet of roof area per one square inch of downspout cross sectional area. Downspouts should be of the same material as the gutters. We recommend the use of downspout extensions and splash blocks at the downspout discharge to direct storm water away from the foundations. Downspouts that discharge directly onto roofs cause premature deterioration of the roofs due to the high concentration of storm water. We recommend either routing these downspouts directly to the ground, connecting the downspouts to the gutters of the lower roof or distributing the storm water discharge over a large area.

Maintenance of the gutters and downspouts should include semiannual inspections, repairs at seams and fastening points, verification that the downspouts discharge away from foundations and cleaning. More frequent maintenance may be required for gutters and downspouts in areas of concentrated landscape growth. The Association should fund these expenses through the operating budget. A lack of maintenance resulting in misdirected storm water will result in deterioration of soffits, fascia, siding, foundations, and the gutters and downspouts themselves.

We recommend the Association budget for the phased replacement of the gutters and downspouts at Buildings 1 and 3 beginning in 2017 and concluding by 2018. A subsequent phased replacement is likely beginning by 2037 and concluding by 2038. In addition, we recommend the Association budget for replacement of the gutters and downspouts at Building 2

by 2028. We depict this information on Line Items 1.240 and 1.241 of *Reserve Expenditures*. We base our cost on replacement with .027-inch thick aluminum.

Light Fixtures - 3300 Park Avenue maintains approximately 80 exterior wall mounted aluminum light fixtures with incandescent bulbs to accent the garages, and the front and rear entries. Many light fixtures are original and in fair overall condition. However, the Association recently replaced a portion of the light fixtures. We note finish deterioration and loose components.



Finish deterioration

The useful life of exterior light fixtures of this type and quality is up to 25 years. We recommend the Association plan for a phased replacement of the light fixtures beginning by 2019 and concluding by 2034. A subsequent phased replacement is likely beginning by 2044. The Association should aggregate the replacement of the light fixtures to ensure their availability and to maintain aesthetic continuity throughout the community. We include this information on Line Item 1.260 of *Reserve Expenditures*. Our cost does not include an allowance for replacement of electrical wiring.

Roofs, Asphalt Shingles - Approximately 285 *squares*¹ of asphalt shingles comprise the roofs of 3300 Park Avenue. This quantity also includes the pool house. The roofs vary in age and condition. Management does not report any active leaks. We summarize the roof locations, quantities, ages and conditions below.

Location	Quantity (SQ)	Year(s) of Construction	Condition
Building 1, Five Units	54	2010 and 2011	Good
Building 1, Three Units	32	Unknown/Possibly Original	Poor
Building 2	108	Unknown/Possibly Original	Poor
Building 3	87	2005	Good to Fair
Pool House	4	2003	Fair

Our visual inspection from the ground notes granular loss at shingles, and lifted and weathered shingles.



Replaced roofs at Building 1



Weathered shingles at older roofs at Building 1

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



Cupped and weathered shingles at Building 1



Granular loss and cracked shingles at Unit 2 at Building 1



Partial shingle replacements and lifted shingles at Building 2



Sheathing deflection evident at Building 2



Laminate shingles at Building 3



Weathering evident at shingles at Building 3

The existing roof assembly comprises the following:

- Three tab shingles at Buildings 1 and 2
- Laminate shingles at Building 3
- Boston style ridge caps
- Rubber seal with metal base boot flashing at waste pipes
- Soffit, gable and ridge vents
- Metal drip edge
- Enclosed half weaved valleys

The useful life of asphalt shingle roofs in Bridgeport is from 15- to 20-years. We include the following solutions and procedures pertaining to the components of an asphalt shingle roof system, times of replacement, recommended method of replacement, and coordination of other related work for the benefit of present and future board members.

Insulation and ventilation are two major components of a sloped roof system. Together, proper insulation and ventilation help to control attic moisture and maintain an energy efficient building. Both insulation and ventilation prevent moisture buildup which can cause wood rot, mold and mildew growth, warp sheathing, deteriorate shingles, and eventually damage building interiors. Sufficient insulation helps to minimize the quantity of moisture that enters the attic spaces and adequate ventilation helps to remove any moisture that enters the attic spaces. These two roof system components also help to reduce the amount of energy that is required to heat and cool a building. Proper attic insulation minimizes heat gain and heat loss between the residential living spaces and attic spaces. This reduces energy consumption year-round. Proper attic ventilation removes excessive heat from attic spaces that can radiate into residential living spaces and cause air conditioners to work harder. Properly installed attic insulation and ventilation work together to maximize the useful life of sloped roof systems.

In addition to moisture control and energy conservation, proper attic insulation and ventilation are essential components to prevent the formation of ice dams. Ice dams occur when



warm air accumulates at the peak of an attic while the roof eaves remain cold. Warm air from the attic melts the snow at the ridge of the roof and the water runs down the slope of the roof. At the cold roof eaves, the water refreezes and forms a buildup of snow and ice. This buildup often traps water that can prematurely deteriorate asphalt shingles and ultimately seep under the shingles and cause water damage to the roof deck and building interiors. Proper insulation minimizes the amount of heat that enters attic spaces in the winter and adequate ventilation helps to remove any heat that enters the attic spaces. Together, these components prevent ice dams with a cold roof deck that melts snow and ice evenly.

The Association should periodically ensure that the vents are clear of debris and are not blocked from above by attic insulation. If the soffit vents are blocked from above, the Association should install polystyrene vent spaces or baffles between the roof joists at these locations to ensure proper ventilation. 3300 Park Avenue should fund this ongoing maintenance through the operating budget.

Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of its useful life. Even if the shingles are largely watertight, the infiltration of water in one area can lead to permanent damage to the underlying roof sheathing. This type of deterioration requires replacement of saturated sections of sheathing and greatly increases the cost of roof replacement. Roof leaks may occur from interrelated roof system components, i.e., flashings. Therefore, the warranty period, if any, on the asphalt shingles, may exceed the useful life of the roof system.



Warranties are an indication of product quality and are not a product guarantee. Asphalt shingle product warranties vary from 20- to 50-years and beyond. However, the scope is usually limited to only the material cost of the shingles as caused by manufacturing defects. Warranties may cover defects such as thermal splitting, granule loss, cupping, and curling. Labor cost is rarely included in the remedy so if roof materials fail, the labor to tear off and install new shingles is extra. Other limitations of warranties are exclusions for "incidental and consequential" damages resulting from age, hurricanes, hail storms, ice dams, severe winds, tornadoes, earthquakes, etc. There are some warranties which offer no dollar limit for replacement at an additional cost (effectively an insurance policy) but again these warranties also have limits and may not cover all damages other than a product defect. We recommend a review of the manufacturers' warranties as part of the evaluation of competing proposals to replace a roof system. This evaluation should identify the current costs of remedy if the roof were to fail in the near term future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

Our estimate of remaining useful life considers this possibility and the Association should anticipate the need for capital repairs to the shingles and other roof system components to achieve or maximize the remaining useful life of the roofs. The Association should fund ongoing roof repairs as normal maintenance from the operating budget.

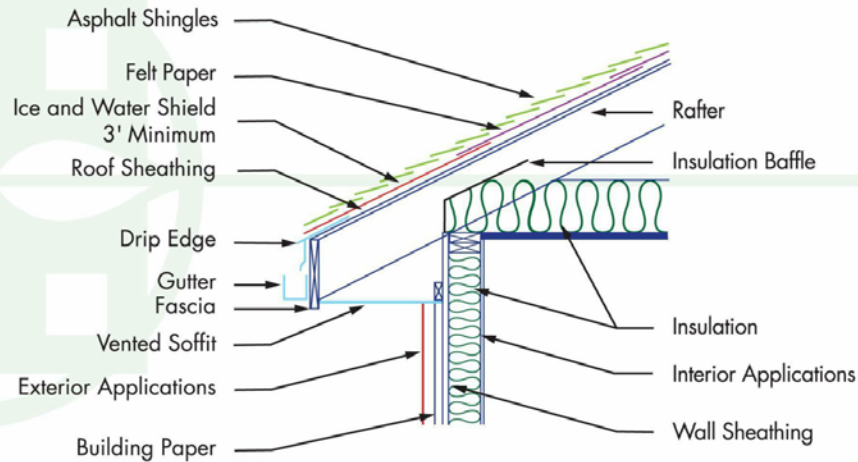
Contractors use one of two methods of replacement for sloped roofs, either an overlayment or a tear-off. Overlayment is the application of new shingles over an existing roof. Although this method is initially more economical, the following disadvantages exist for this type of replacement:

1. Overlaid shingles hide condition defects of the roof system and do not allow for replacement of critical flashings, underlayments and ventilation.
2. Additional layers of shingles absorb and store more heat resulting in premature deterioration of the new shingles and continued deterioration of the underlying shingles and other roof system components.
3. New shingles installed over deteriorated shingles may result in an uneven appearance.

The disadvantages above result in a shorter useful life of 10- to 15-years for overlaid roofs. This shortened useful life and the inevitable eventual replacement of both shingle layers will actually result in increased long-term replacement costs. The costs of an eventual total replacement are deferred onto future homeowners thereby conflicting with the purpose of a reserve study to ensure homeowners pay their “fair share” of the weathering and aging of this commonly owned property. Therefore, we recommend only the tear-off method of replacement. The advantages of the tear-off method include the correction of hidden or latent defects and extend the useful life of the new roof.

The tear-off method of replacement includes removal of the existing shingles, flashings if required and underlayments. The contractor should then inspect the roof sheathing for areas of water damage and partially replace the sheathing as needed. Once the roof sheathing is repaired, the contractor can begin installation of the new underlayments, flashings and shingles. The following cross-sectional schematic illustrates an asphalt shingle roof system:

ROOF SCHEMATIC



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The two types of underlayment most often used in an asphalt shingle roof system are ice and water shield membrane, and organic felt paper of varying weights depending on local building codes. Both types of underlayment protect the roof sheathing from moisture damage and wind-driven ice and snow. They have a low vapor resistance that impedes the accumulation of moisture between the underlayment and the roof sheathing. Ice and water shield membrane is thicker than organic paper and is used in areas that are subject to ice dams and standing water. The contractor should install ice and water shield membranes (often a modified bitumen product) at the outer 36 inches of the gutter and rake edge roof eaves, and in the roof valleys. Standard 15-pound organic felt paper should provide sufficient protection over the remaining portions of the roof. Underlayments work in conjunction with flashings to form a watertight roof system.

The function of flashing is to provide a watertight junction between the roofing material and the other parts of the structure and between roof sections. Flashing material is usually galvanized metal, although some roofs use copper or synthetic rubber. The Association should require the contractor to augment existing flashings or replace deteriorated flashings at the time of roof replacement at the following locations:

- Changes in the slope
- Valleys
- Roof intersections with a wall, vertical structure, roof penetration, i.e., vent stacks
- Rakes (sloped edges of the roof) and soffits (lower roof edges)

Another critical type of flashing is drip edge flashing. This important flashing sheds water off the edges of the roofs. The drip edge flashing allows storm water to run off the roof into the gutters without coming into contact with the underlayment and eave board. The special profile of a metal drip edge also prevents or minimizes the possibility of rain water blowing back under the shingles. The contractor should install this flashing at the gutter edge before the installation of underlayment and at the rake edge *after* the installation of underlayment.

Asphalt shingles include both fiberglass shingles and organic mat shingles. Both shingle types are made with asphalt. Fiberglass shingles use a fiberglass reinforcing mat while organic shingles use a wood based cellulose fiber mat. Fiberglass shingles are thinner, lighter and carry a better fire rating than organic shingles. Organic mat shingles are more durable and stay more flexible in cold weather. The contractor should install the shingles atop the underlayment and in conjunction with flashing. Based on a better fire rating, we suggest 3300 Park Avenue use a standard strip, fiberglass, Class A, minimum weight class of 210 pounds per square self-sealing shingle at the time of replacement. The self-sealing strip affixes to the lower exposed edges of the shingles. Heat from ambient weather and sunlight activates the shingle adhesive material and



seals the two adjacent courses of shingles together. Contractor proposals should specify the types of proposed materials and types of proposed fasteners. The Association should require the use of nail fasteners, not staples, at the time of replacement. Nail guns are acceptable. Staples are of lesser quality and might not withstand wind forces as well as nails.

The Association should plan to coordinate the replacement of gutters and downspouts with the adjacent roofs at Building 1. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements.

Based on the age and condition of the roofs, we recommend 3300 Park Avenue budget for the following replacements.

Location	Recommended Year(s)
Older Roofs at Buildings 1 and 2	2017 and 2018, again by 2037 and 2038
Building 3 and Pool House	2023 and again by 2043
Building 1, Five Units	2028

We note this information on Line Items 1.280 through 1.282 of *Reserve Expenditures*. We base our cost on replacement with standard laminate Class A 240-260-pounds per square shingles. The Association should fund any repairs prior to the complete replacement of the roofs through the operating budget.

Roofs, EPDM - The 13 garage roofs at 3300 Park Avenue consist of 69 squares of ethylene propylene diene monomer (EPDM) roofing. The roofs were replaced from approximately 2003 to 2015, and vary from good to fair condition. Management does not report

a history of leaks. Our visual inspection notes evidence of standing water. However, we were unable to visually inspect each roof at the time of our inspection.



EPDM roof at garage



Standing water evident at garage for Units 27 and 28

The useful life of EPDM roofs in Bridgeport is from 15- to 20-years. We include the following solutions and procedures pertaining to replacement of EPDM roofs for the benefit of present and future board members.

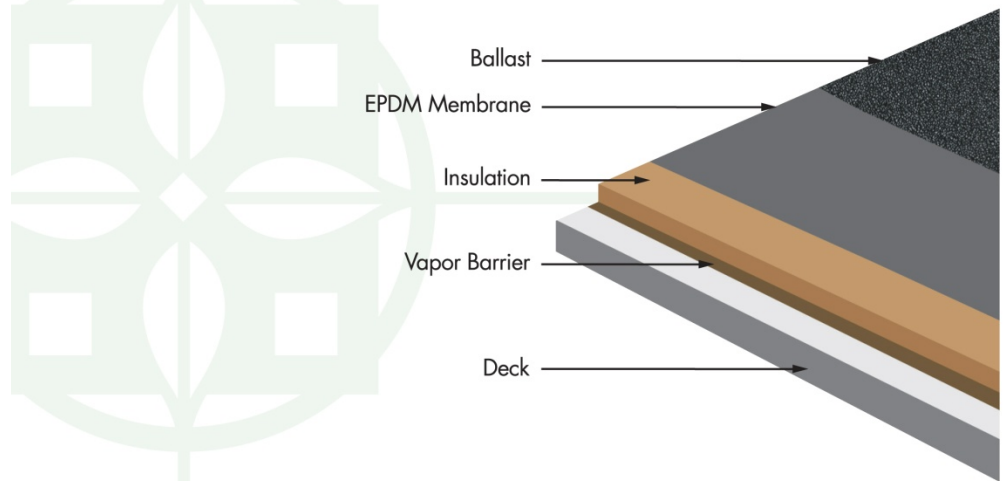
Reroofing is always more labor intensive than an original installation. Removal and disposal are a problem in multistory buildings because of problems conveying the materials off and onto the roof. To maximize the remaining useful life of the roof, the Association should conduct periodic repairs as necessary and fund these expenses through the operating budget. The Association should retain a maintenance company for inspections of the roofs semiannually and fund these inspections through the operating budget.

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.

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 contractor should follow the manufacturer's directions and specifications upon installation of the roof. The contractor should remove the original insulation if saturated or compacted and apply a new layer of insulation from ½ inch to one inch thick per the manufacturer's instructions. The insulation should fit loosely with gaps no greater than ¼ inch. Gaps will cause failure of the membrane later. Mechanical fastening of the insulation is the best manner of installation. The contractor should start the installation of a roof membrane from the lowest points of the roof. The exposed top of an EPDM membrane (synthetic rubber) roof system ranges in thickness from 45- to 120-mils but 60 mils is most common. Seams overlap one another with a chemical or thermoset heat weld. The EPDM membrane attaches to the underlying roof system with a combination of mechanical fasteners, adhesives or stone ballast.² The following detail depicts a typical EPDM roof:

² Learn more about single-ply membrane roofs at <http://www.spri.org>. SPRI is the association representing sheet membrane and component suppliers to the commercial roofing industry.

EPDM ROOF DETAIL



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The time or need to replace the roofs becomes apparent with multiple or recurring leaks. The Association should determine whether the origin of the leaks is from the membrane or flashings. Repairs of the flashings may be more cost-effective than replacement of the entire roof. However, because of the difficulty in finding several or many breaks in a roof, replacement eventually becomes the more economical option rather than repair. We recommend 3300 Park Avenue prepare for a complete tear-off at the time of a phased replacement beginning by 2023 and concluding by 2033. A subsequent phased replacement is likely beginning by 2043. We depict this information on Line Item 1.380 of *Reserve Expenditures*. The Association should monitor outside vendors when they service any elements on the roofs to minimize unreported roof damage.

Sealants, Windows and Doors - The perimeters of the window and door frames use approximately 7,600 linear feet of exterior sealants or *caulk*.³ Sealants are flexible, allow for differential movement between dissimilar materials and prevent water infiltration into the building. The sealants vary in age and condition. We note sealant cracks and adhesion failure.



Adhesion failure at sealant



Sealant cracks

The periodic inspection and replacement of deteriorated sealants is essential to maximize the useful life of the window and door systems and prevent water infiltration. The Association should anticipate a useful life of up to 20 years for exterior caulk used for this application. However, 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. We discuss solutions and procedures related to replacement of sealants in the following narrative.

Sealant failure allows for the infiltration of water into the building. There are three types of joint sealant failure. Adhesion failure occurs when sealant pulls away from the sides of the joint due to improper surface preparation or too much joint movement. Cohesive failure occurs

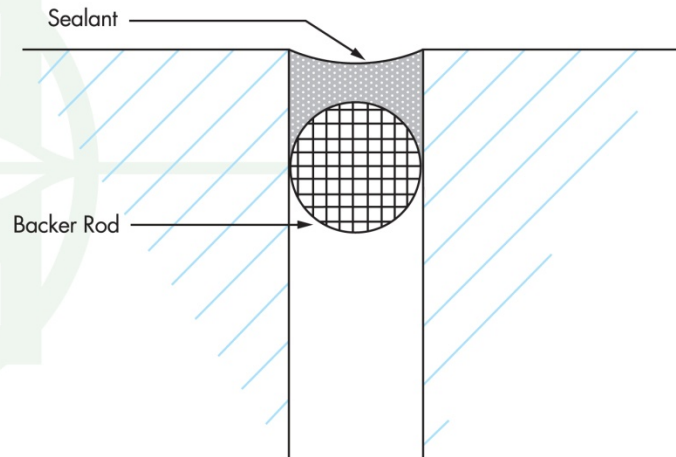
³ The terms sealant and caulk are used interchangeably throughout this text and throughout the industry.

when sealant tears down the center of the joint due to inadequate sealant thickness or too much joint movement. Finally, reversion occurs when sealant traps water behind the joint and is identified by dark and dirty sealant, typically on a horizontal joint.

Correct preparation of the joint surfaces before re-application of a sealant is important to ensure proper adhesion. The surfaces must be removed of all contaminants, including the previous sealant material, paint, rust and other corrosion, water, grease, etc. The surfaces should also be dry and free from dust and grit, which can be removed using dry compressed air or brushes. The Association should ensure the manufacturer's instructions are followed in determining if the substrate is compatible with the sealant and that the chemical cleaners and solvents used to prepare the surfaces are also compatible with the sealant.

The contractor's bid should note the type of caulk proposed and indicate that installation will follow the manufacturer's specifications. The manufacturer of the joint sealant usually has specifications that govern the use or application of flexible backer rods to seal wide gaps in the joint before caulk is applied. The contractor's bid or proposal should address this possible application noting the adherence to the sealant manufacturer's specification for the proposed sealant product. Backer rods reduce the volume of caulk required and minimize the chance of cohesion failure. The following detail depicts a control joint with sealant and a flexible backer rod. Sealant installation at window perimeters comprises a similar detail:

SEALANT AT CONTROL JOINT DETAIL



© Reserve Advisors, Inc.

Several types of caulk are available with significantly different weathering and elongation properties. We recommend a silicone-based or polyurethane-based caulk. The major advantage of polyurethane-based caulks is their ability to bond to most construction surfaces without special preparation, such as primer application, as is required for alternate materials like silicone caulk. With proper surface preparation, i.e., removing surface contaminants, silicone-based caulks perform better than most other caulk materials. The weathering and elongation properties of silicone-based caulk give it a much longer useful life than other caulk materials.

We recommend 3300 Park Avenue replace up to thirty-three percent (33.3%), or 2,533 linear feet of joint sealant, by 2019 and every six years thereafter in conjunction with façade repairs. We note this information on Line Item 1.540 of *Reserve Expenditures*.

Walls, Masonry - Masonry comprises approximately 37,500 square feet of the exterior walls. This quantity includes the pool house. The overall condition of the masonry is good with

few locations in fair condition. We note the following components and conditions of the masonry:

- Moderate amount of previous repairs evident
- Efflorescence is visible
- Lintels exhibit rust
- Masonry exhibits cracks
- No spalled masonry is evident
- Mortar deterioration is evident



Recent mortar repairs at garage



Recent mortar repairs at garage



Efflorescence



Lintel detail



Masonry crack at Unit 1



Mortar deterioration



Mortar deterioration



Mortar cracks

We advise a complete inspection of the masonry, and partial repointing with related masonry repairs every six- to eight-years to forestall deterioration. We elaborate on solutions and procedures necessary for the optimal maintenance of masonry walls in the following discussion.

Masonry generally requires less maintenance than other types of exteriors. However, masonry is not maintenance free. Masonry exteriors should last the life of the building with proper maintenance. 3300 Park Avenue should plan for the periodic inspection of the masonry

to identify and repair areas of deterioration. Common types of masonry deterioration include efflorescence, spalling and cracking.

The primary cause of efflorescence, cracks and face spall is water infiltration, therefore prevention of water infiltration is the principal concern for the maintenance of masonry applications. Masonry walls normally shed storm water and condensate from behind the wall through weep holes. However, trapped water within masonry walls can cause corrosion of metal masonry ties, studs, structural members and potentially damage building interiors. The first sign of water infiltration is usually a water stain. Eventually, water infiltration can lead to deterioration of the masonry. If left unrepaired, water infiltration can lead to efflorescence, cracks and face spall as described below.

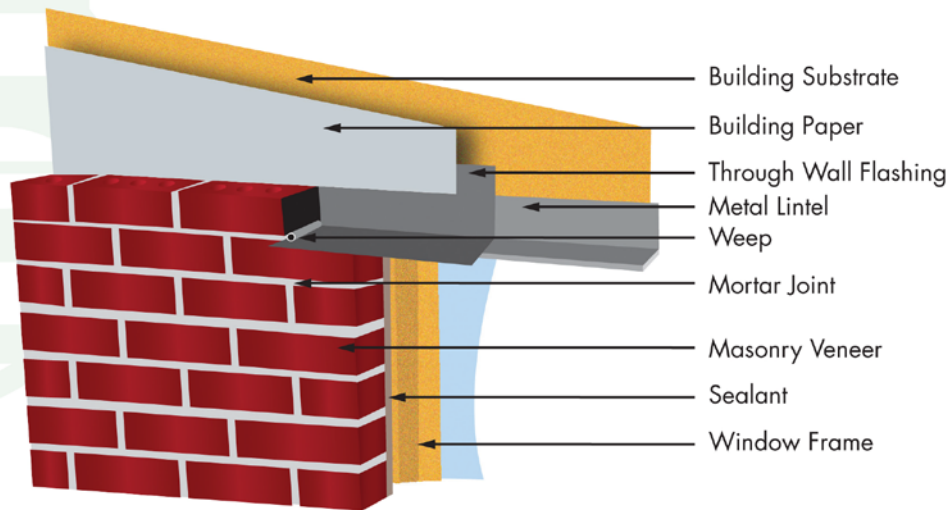
Trapped water can also migrate through areas of cracked mortar or other points within the cavity of a masonry wall. This moisture then typically migrates to the exterior face of the masonry where it evaporates. As the moisture evaporates, it deposits soluble white salts either on the surface as efflorescence or below the surface as subflorescence. Efflorescence mars the appearance of the masonry, is typically harmless but can also indicate a harmful condition known as subflorescence. Subflorescence within a masonry unit can create pressure that will eventually spall the masonry face. In addition, accumulated (trapped) storm water within or behind mortar joints in conjunction with inclement weather can also gradually spall masonry, create mold or damage adjacent components, i.e., windows or interior finishes. Spalling is a form of deterioration where small fragments of masonry break away from the wall system. Spalls can also occur as a result of a chemical reaction or from movement of a building structure. Spalled masonry may eventually dislodge individual masonry units.

Repointing is a process of raking and cutting out defective mortar to a depth of not less than ½ inch nor more than ¾ inch and replacing it with new mortar. Face grouting is the process of placing mortar over top of the existing mortar. We advise against face grouting because the existing, often deteriorated mortar does not provide a solid base for the new mortar. New mortar spalls at face grouted areas will likely occur. One purpose of a mortar joint is to protect the masonry by relieving stresses within the wall caused by expansion, contraction, moisture migration and settlement. Repointed mortar joints are more effective if the mortar is softer and more permeable than the masonry units, and no harder or less permeable than the existing mortar. The masonry contractor should address these issues within the proposed scope of work.

The contract for repairs should also include attention to other related activities such as repair and partial replacement of window sills, lintel beams and deteriorated masonry. We recommend the contract for masonry repairs include a thorough inspection of horizontal masonry such as copings or sills as these areas are prone to accelerated deterioration. Together, these aggregated capital repairs maximize the useful life of a masonry wall system.

We also recommend inspection, repair and replacement of the steel lintels. Lintels are structural supports or beams above windows and doors. Fatigued lintels also allow the direct penetration of storm water into the wall assembly. These inspections should locate areas of rust on the lintels and cracks or other structural damage to the walls around lintels. The contractor should remove any areas of rust, prime and paint these lintels. Paint protects and maximizes the remaining useful life of the lintels and therefore the exterior wall systems. Structural damage can eventually lead to costly replacements of lintels and surrounding wall systems. The following diagram details a metal lintel and weep system:

MASONRY WALL, METAL LINTEL AND WEEP SYSTEM DETAIL



© Reserve Advisors, Inc.

With the onset of rust and deflection, a portion of the metal lintels will also require replacement during the next 30 years. Replacement of lintels includes the following activities:

- Removal of deteriorated lintels and surrounding masonry
- Installation of new pre-primed and painted metal lintels
- Installation of asphaltic flashing above the lintels
- Reinstallation of the masonry with new mortar and weeps

A complete inspection of the exterior walls can only identify the exact scope of masonry repairs and replacements. Based on the age and condition of the masonry, we recommend the Association budget for the following activities:

- Complete inspection of the masonry
- Repointing of up to three percent (3%) of the masonry
- Replacement of a limited amount of the masonry
- Replacement of up to one percent (1%) of the metal lintels
- Paint applications to the metal lintels

We recommend the Association anticipate this work by 2019 and every six years thereafter. The times and extent of the masonry repointing and related work may vary.

However, we judge at this time the estimated amounts noted on Line Item 1.820 of *Reserve Expenditures* appropriate to estimate sufficient reserves.

Walls, Wood Siding, Paint Finishes - The buildings include paint finish applications on the 17,100 square feet of wood siding, trim, soffit and fascia. Periodic application of a protective finish of paint or stain is an essential maintenance activity to maintain the physical appearance and integrity of these elements. The Association finish is in fair condition at an unknown age. We note peeling and faded paint finish, especially at south facing elevations.



Chipped paint at wood trim



Faded paint finish at south facing elevation

The Board is likely familiar with many of the requirements for the periodic application of paint⁴ products. We include the following solutions and procedures as a summary of the minimum requirements for a successful paint finish application for present and future board members.

Correct and complete preparation of the surface before application of the paint finish maximizes the useful life of the paint finish and surface. The contractor should remove all loose,

⁴The term *paint* is a generic reference to a specialized mixture of solid pigment in a liquid solution that results in a clear, opaque or solid color protective finish. Product types are too numerous to list but include latex, oil, acrylic and elastomeric based products.



peeled or blistered paint before application of the new paint finish. The contractor should then power wash the surface to remove all dirt or chalking of the prior paint finish.

Summarizing the minimum requirements of the proposed scope of work, all bids should include the following:

1. Name of paint finish product
2. The contractor will involve manufacturer representatives to ensure specifications and warranty
3. The contractor will apply the paint to clean and dry surfaces at the manufacturer's recommended spreading rates
4. The contractor will apply successive coats of the paint finish, with sufficient time elapse between coats, as necessary to ensure uniform appearance
5. The contractor will replace deteriorated or damaged materials prior to the application of the paint finish
6. The contractor will replace deteriorated sealants or caulk prior to the application of the paint finish

The useful life of protective paint finishes in Bridgeport is from four- to six-years. Based on the condition of the paint finishes, we recommend the Association budget for the following activities by 2019:

- Paint finish applications
- Replacement of 700 square feet, or up to four percent (4%), of the siding, trim, soffit and fascia (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

3300 Park Avenue should budget subsequent applications and associated replacements every five years thereafter with a timing adjustment when replacement occurs. We depict this information on Line Item 1.940 of *Reserve Expenditures*.

Walls, Wood Siding, Replacement - Natural cedar wood siding comprises approximately 17,100 square feet of the exterior walls. This quantity includes the wood trim,

soffit and fascia. The siding is primarily original and in fair overall condition. The siding exhibits loose pieces, wood rot, and warped and weathered siding.



Wood siding



Wood rot



Wood rot at soffit and fascia



Warped wood siding



Split wood siding



Loose siding

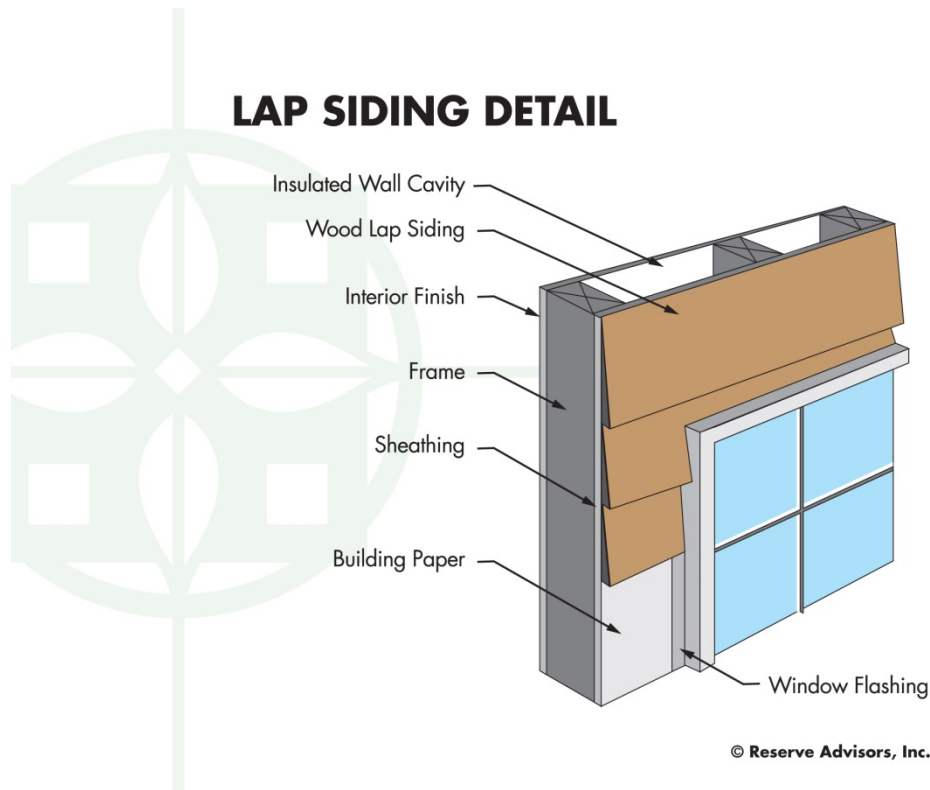


Weathering near joints/fasteners

The Association utilizes lap solid wood siding. Lap siding boards are installed horizontally or diagonally and boards have a beveled profile. This siding has the most stability, primarily with an exposure of six inches or less. Lap siding tends to have the longest useful life of wood siding profiles due to its beveled profile to shed water and its stability.

Wood siding is not watertight and is especially prone to water penetration at joints and knots. Therefore, wood siding should be installed over a continuous weather resistant barrier. The weather resistant barrier should include water-vapor permeable building paper and properly

integrated flashing around all penetrations. The following graphic details the typical components of a wood siding system.



The quality of wood siding is determined based on the grade and type of lumber. The grade of lumber (best is "A") describes the occurrence of natural defects, i.e., knots and checks. We base our cost on grade A lumber.

Naturally occurring defects in lumber as a result of growth patterns or lumber cut include the following:

- **Bow** - ends of board move towards each other and form a “rocking chair”
- **Case Harden Crack** - lumber is dried too fast creating internal stresses noted by cracks in the surface
- **Crook** - board warps from side to side, or “sags”
- **Cup** - parallel edges of the board move towards each other, or forms the letter "C"
- **Heart Pith** - soft, spongy tissue at the center of a tree



- **Knot** - location of branch growth
- **Twist** - ends of board rotate in opposite directions
- **Wane** - absence of material at board edge due to lumber cut

Isolated occurrences of these defects are normal in lumber. However, an inordinate occurrence of these defects indicates a low lumber grade. Low lumber grades have a shorter useful life than high lumber grades. Deterioration of the siding as a result of weathering and aging includes cracks, warp and rot. We base the remaining useful life of the siding on the amount of *existing* deterioration.

Lumber is either air-dried or kiln-dried. The moisture content of lumber used for siding should be less than eighteen percent (18%) of the total board weight. If primer and paint is applied to siding that exceeds this percentage, the paint will trap moisture inside the board and it may rot from the inside out or the paint finish may not properly adhere to the wood.

We recommend that 3300 Park Avenue consider fiber cement siding as a replacement material. Fiber cement siding is made from a combination of cement, sand and cellulose fiber. A wood grain imprint is typically applied to the exposed surface. This type of siding requires less frequent paint applications and has a longer useful life. We include a cost analysis comparing replacement and maintenance of wood siding versus fiber cement siding.

Siding Material	Wood	Fiber Cement
Cost in 2016 Dollars	\$171,000	\$136,800
Divided by its Useful Life (Years)	40	50
Equals Cost of Ownership ¹ Relating to Eventual Replacement, in 2016 Dollars	\$4,275	\$2,736
Total Life-Cycle Maintenance Costs, in 2016 Dollars	\$31,200	\$31,200
Divided by Life-Cycle of Each Maintenance Event (Years)	5	10
Cost of Ownership for Maintenance During Remaining Useful Life, in 2016 Dollars	\$6,240	\$3,120
Total Annual Cost of Ownership (2016 dollars)	\$10,515	\$5,856

¹ Cost of Ownership is a method to describe the direct and indirect costs to purchase and maintain an element through its entire useful life.

As seen above, fiber cement siding is also a cheaper replacement material. The Association could potentially save \$4,659 annually with replacement of fiber cement siding based on an annual cost of ownership. For purposes of this Reserve Study, we assume replacement of the wood siding in like kind. Updates to the reserve study will revisit replacement materials and costs.

Vinyl siding products are also acceptable alternatives. Replacement with vinyl siding eliminates the need for paint applications.

Based on the condition, type, occurrence of defects and history of maintenance, 3300 Park Avenue should anticipate a useful life of up to 40 years. This useful life is dependent upon paint applications and partial replacements of deteriorated siding every four- to six-years. See "**Walls, Wood Siding, Paint Finishes**" for our recommendations on these applications. We include an allowance for a phased replacement of the siding beginning by 2022 and concluding by 2024. We depict this information on Line Item 1.945 of *Reserve Expenditures*.

Property Site Elements

Asphalt Pavement, Crack Repair, Patch and Seal Coat - Asphalt pavement comprises 2,800 square yards of one street and parking area throughout the community. The street was milled and overlaid and a parking area at the east end was installed in approximately 2012 or 2013, and they area in good overall condition. To maximize the life of the pavement, the Association should plan for seal coat applications and repairs every three- to five-years. These activities reduce water infiltration and the effects of inclement weather. We elaborate on solutions and procedures necessary for the optimal maintenance of asphalt pavement in the following discussion.

We recommend periodic seal coat applications, crack repairs and patching to maintain the pavement. These activities minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement. Asphalt pavement is susceptible to isolated areas of accelerated deterioration in areas that experience freeze-thaw cycles, at the centerlines of streets and at high traffic areas such as intersections. Depressions often appear at areas where vehicles park such as driveways and parking areas. Isolated areas of depressions, cracks and deterioration indicate the need for crack repairs and patching. The contractor should patch areas that exhibit potholes, alligator or spider web pattern cracks, and areas of pavement that are severely deteriorated from oil and gasoline deposits from parking vehicles. Area patching requires total replacement of isolated areas of pavement. The contractor should mechanically rout and fill all cracks with hot emulsion. Crack repair minimizes the chance of the cracks transmitting through the pavement.

There are four main types of seal coats available: fog coat, acrylic sealer, chip seals and asphaltic emulsion. A fog coat is a simple mixture of water and asphalt. Acrylic sealers include

an acrylic additive to the water and asphalt mixture for greater resistance to abrasion. Fog coats and acrylic sealers are typically spray applied and are only for aesthetic purposes. Chip seal is the most substantial type of seal coat which involves placement of oil and aggregate on the driving surface. Either a roller or normal vehicular traffic works the gravel into the oil. Asphaltic emulsions combine a sharp sand mixture or mineral fibers, and an emulsifying agent with the water and asphalt mixture. Asphaltic emulsions are typically hand applied with squeegees to ensure that the sealer fills surface abrasions and minor cracks. This prevents the infiltration of water through cracks into the underlying pavement base. Seal coats therefore minimize the damaging effects of water from expansion and contraction. We regard asphaltic emulsions as the most effective and economical type of seal coat.

3300 Park Avenue should repair any isolated areas of deteriorated pavement prior to seal coat applications. Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless. Our future estimates of cost include an allowance for repair activities.

We recommend 3300 Park Avenue plan the next application of seal coat by 2018 and subsequent applications every four years thereafter with a timing adjustment when repaving occurs. Line Item 4.020 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of these activities.

Asphalt Pavement, Repaving - Asphalt pavement comprises 2,800 square yards of one street and parking area throughout the community. The street was milled and overlaid and a parking area at the east end was installed in approximately 2012 or 2013, and they are in good

overall condition. We note isolated cracks and deterioration adjacent to catch basins and manholes.



Asphalt pavement street



Asphalt pavement street



Asphalt pavement parking area



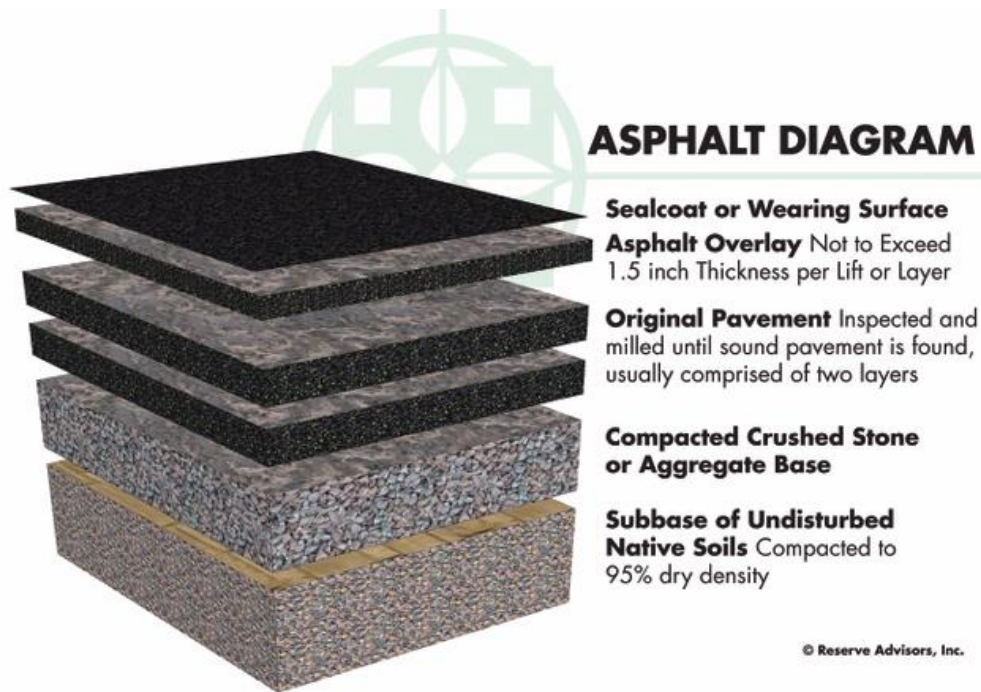
Minor crack



Alligator cracks adjacent to catch basin

The useful life of pavement in Bridgeport is from 15- to 20-years. We include the following repaving solutions and procedures for the benefit of the present and future board members.

Components of asphalt pavement include native soil, aggregate and asphalt. First the contractor creates a base course of aggregate or crushed stone and native soil. The base course is individually compacted to ninety-five percent (95%) dry density prior to the application of the asphalt. Compaction assures a stable base for the asphalt that reduces the possibility of settlement. For street systems, the initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts these components:



The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the total replacement method of repaving at 3300 Park Avenue.



Total replacement requires the removal of all existing asphalt. For area patching, we recommend the contractor use a rectangular saw cut to remove the deteriorated pavement. For larger areas such as entire parking areas or driveways, we recommend the contractor grind, mill or pulverize the existing pavement to remove it. The contractor should then augment and compact the existing aggregate and native soil to create a stable base. Finally the contractor should install the new asphalt in at least two lifts.

The time of replacement is dependent on the useful life, age and condition of the pavement. The useful life is dependent in part on the maintenance applied to the pavement, the amounts and concentration of auto solvents that penetrate the pavement, the exposure to sunlight and detrimental effects of inclement weather. 3300 Park Avenue should repair any isolated areas of deteriorated pavement concurrent with periodic seal coat applications. We recommend the Association plan for total replacement by 2031. We depict this information on Line Item 4.045 of *Reserve Expenditures*. The Association should coordinate asphalt repaving with related activities such as partial replacement of concrete curbs, and capital repairs to catch basins.

Catch Basins - The six catch basins collect storm water from the pavement and conduct it into the storm water system. The overall condition of the catch basins is good to fair with settlement visually apparent.



Settlement at catch basin

The useful life of catch basins is up to 65 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

The Association should anticipate the occasional displacement or failure of a catch basin and the surrounding pavement from erosion. Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement. 3300 Park Avenue should plan to repair or replace any displaced or failed catch basins concurrently with the surrounding pavement and curbs. The exact times and amount of capital repairs or replacements are dependent upon variable natural forces. Based on the age and condition of the catch basins, we recommend the Association anticipate the inspection, capital repair or partial replacement of the six catch basins in conjunction with repaving. We include this information on Line Item 4.100 of *Reserve Expenditures*.

Concrete, Flatwork - The Association maintains various applications of concrete flatwork. These applications of concrete have useful lives of up to 65 years although isolated deterioration of limited areas of concrete is common. Inclement weather, inadequate subsurface preparation and improper concrete mixtures or finishing techniques can result in premature

deterioration such as settlement, chips, cracks and spalls. Variable conditions like these result in the need to plan for periodic partial replacements of the concrete flatwork throughout the next 30 years. We comment on the respective quantities, conditions and times of partial replacements of concrete flatwork in the following sections of this narrative.

Concrete Curbs - Concrete curbs line the pavement of 3300 Park Avenue. These curbs comprise 1,400 linear feet and are in good condition overall. A majority of the curbs were replaced in conjunction with the asphalt pavement in approximately 2012 or 2013. We note isolated spalled concrete and damage.



Spalled concrete curb

We estimate that up to 360 linear feet of curbs, or approximately twenty-six percent (25.7%) of the total, will require replacement during the next 30 years. We estimate that up to 180 linear feet of curbs, or approximately thirteen percent (12.9%) of the total, will require replacement in conjunction with repaving and by 2043. We depict this information on Line Item 4.110 of **Reserve Expenditures**. We assume the use of 3,500 pounds per square inch (PSI) concrete.

Concrete Driveways - Concrete driveways of varying sizes and configurations allow for access to the individual residences throughout the Association. The driveways were all replaced in approximately 2012 or 2013, are in good overall condition and comprise approximately 3,250 square feet. We note isolated cracks and spalled concrete.



Concrete driveway



Concrete spalls at Units 1 and 2



Cracks and spalls at Units 3 and 4

We estimate that up to 1,250 square feet of concrete driveways, or thirty-nine percent (38.5%) of the total, will require replacement during the next 30 years. We advise the Association budget for the replacement of 250 square feet, or an average of one shared driveway, every five years beginning by 2022. Line Item 4.120 of *Reserve*

Expenditures notes our estimate of future costs and anticipated times of replacements. We base our estimate of replacement on five-inch thick, 3,000 PSI concrete with 6x6 - W1.4xW1.4 steel reinforcing mesh.

Concrete Stairs and Stoops - The units at the property are accessed either by cast on ground concrete stairs or concrete stoops. The 250 stairs comprise 1,500 linear feet of nose, and stoops and landings comprise 1,100 square feet. The stairs and stoops vary significantly from good to poor condition. We note significant concrete spalls and deterioration at a limited number of units.



Newer concrete stairs



Spalled concrete stairs at Unit 36

We estimate that up fifty percent (50%) of the stairs, stoops and landings will require replacement during the next 30 years. Based on their age and condition, we include an allowance of \$9,000 plus inflation for partial replacement of stairs, stoops and landings in 2017 and every five years thereafter. We include this information on Line Item 4.160 of *Reserve Expenditures*.

The Association should coordinate the concrete flatwork partial replacements on Line Items 4.120 and 4.160 of *Reserve Expenditures* to maximize the given amount of concrete in a

single event. This will permit the use of a single contractor and likely achieve the most economical unit price for the work. The Association should also coordinate partial replacements of concrete curbs with asphalt pavement, due to the interrelated nature of these items. The times and costs of these replacements may vary. However, the estimated expenditures detailed in *Reserve Expenditures* are sufficient to budget appropriate reserves.

Fences and Handrails, Steel - Approximately 240 linear feet of steel fences and 280 linear feet of steels handrails are found at the front of the units. The fences and handrails are original and in fair condition. We note rust and corrosion, and loose connections.



Steel fence



Rust



Rust at post and hinge

Fences and handrails of this type have a long useful life but are not maintenance free. Periodic maintenance should include periodic applications of protective paint finish to the steel surfaces and partial replacement of deteriorated sections as needed. Steel components at grade and key structural connections are especially prone to failure if not thoroughly maintained. Secure and rust free fasteners and connections will prevent premature deterioration. We recommend paint applications periodically funded through the operating budget and we anticipate a useful life of up to 35 years for the fences and handrails. We anticipate a phased replacement beginning by 2020 and concluding by 2022. We depict this information on Line Item 4.245 of *Reserve Expenditures*.

Landscape, Partial Replacements - The Association contains a large quantity of trees, shrubbery and other landscape elements. Replacement of these elements is an ongoing need. Many associations budget for these replacements as normal maintenance. Other associations fund ongoing replacements from reserves. Large amounts of landscape may need replacement due to disease, drought or other forces of nature. If the cost of removal and replacement is substantial, funding from reserves is logical. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape. 3300

Park Avenue removed eight trees and completed other landscape improvements in 2016. Management informs us the Association will fund near term landscape replacements through reserves. In consideration of these factors and at the request of Management, we include a landscape allowance of \$4,500 plus inflation in 2017, 2018 and 2019 to ensure the accumulation of sufficient reserves for near term partial replacements of the landscape. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 4.500 of *Reserve Expenditures* sufficient to budget appropriate reserves.

Light Poles and Fixtures - The Association uses three metal light fixtures atop metal poles and four bollard light fixtures to illuminate the property. These elements were replaced in 2015, are in good condition and have useful lives of 20- to 25-years.



Light pole and fixture



Bollard light fixtures

The Association should anticipate the need for replacement by 2038. We note this information on Line Item 4.560 of *Reserve Expenditures*.

Mailbox Stations and Shelter Renovation - The Association maintains two metal mailbox stations at one shelter that contain the 26 individual mailboxes. The mailbox stations and shelter were replaced in 2008, are in good condition and have a useful life of up to 25 years.



Mailbox shelter

The Association should anticipate renovations of the shelter in conjunction with replacement of the mailbox stations. These renovations may include replacement of the asphalt shingle roof, and partial replacement of the wood siding and deck. 3300 Park Avenue should also budget for replacement of the mailbox stations by 2030. We depict this information on Line Item 4.600 of *Reserve Expenditures*. The Association should verify the new mailboxes meet the specifications of the *United States Postal Service*. The Association should budget for interim repairs and paint finishes through the operating budget.

Pavers, Masonry - The front entrance walkways and parking areas utilize approximately 16,500 square feet of interlocking herringbone pattern masonry pavers. This quantity excludes the pool deck which is included on a separate line item. This quantity also excludes the rear patios which are maintained by homeowners. The pavers vary significant in age and condition. The Association historically completes partial resetting and replacements on an as needed basis, and recently completed partial resetting in 2015. We note several areas of settlement and organic growth.



Masonry pavers



Settlement evident and organic growth at Unit 34

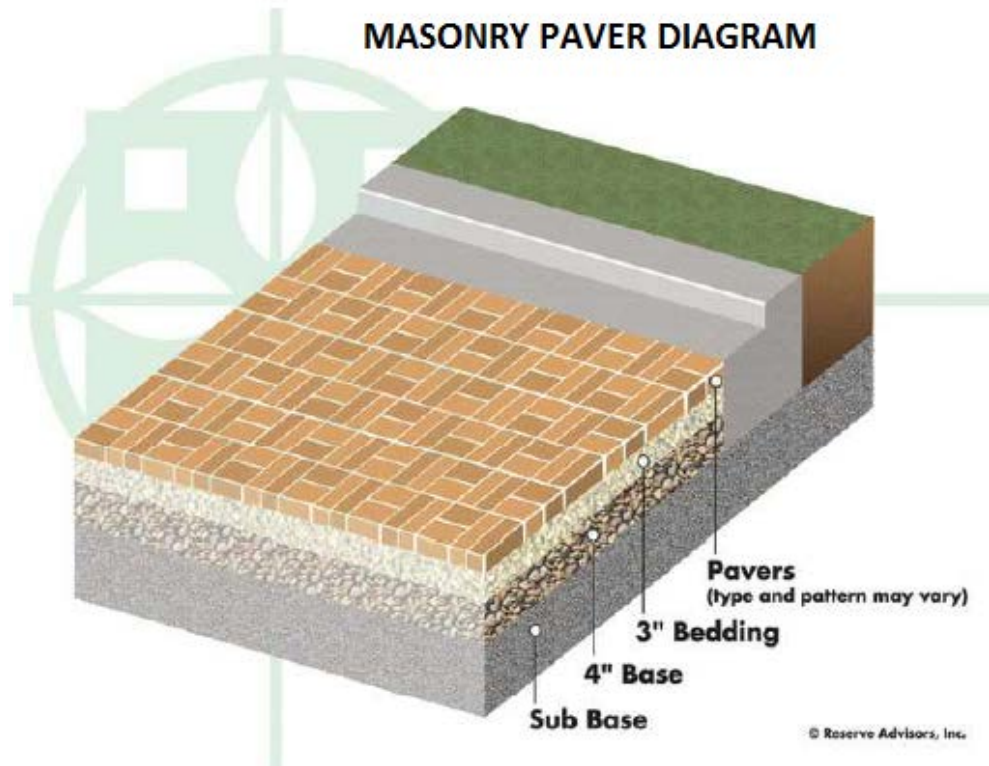


Settlement at walkway

Manufacturers construct masonry pavers as a traffic surface for installation without mortar. Pavers comprise special types of clays that are baked at higher temperatures and for a longer time than other masonry types. Thus, masonry pavers have greater strength and durability than common masonry.

The masonry pavers receive direct traffic wear and transfer loads to the base layers. Pavers at high traffic areas such as at property entrances will experience accelerated deterioration. The base layers comprise well graded aggregate to transfer loads to the sub base and prevent upward migration of water. The sub base carries the entire pavement load and

should comprise undisturbed native soil or compacted fill, sloped at a minimum one percent (1%) grade to adequately drain infiltrated moisture. The following diagram depicts the components of a masonry paver system:



Masonry pavers have a long functional useful life. However, over time, the negative effects of inclement weather, erosion, snow removal equipment and vehicle traffic will create isolated areas of deterioration. We advise the Association budget for complete resetting of the pavers with partial replacement of up to eighty percent (80%) every 15- to 20-years. We include a phased allowance for this work beginning by 2020 and concluding by 2035. A subsequent phased activity is likely beginning by 2040. We depict this information on Line Item 4.620 of *Reserve Expenditures*. We suggest the Association conduct interim resetting and replacement of minor areas of pavers as normal maintenance, funded from the operating budget.

Signage - The Association maintains one property identification sign at the community entrance. This sign is possibly original and in good to fair condition. The exception is the recently replaced LED (light emitting diode) light fixtures. The functional useful life of the sign is from 20- to 30-years. The community signs contribute to the overall aesthetic appearance of the property to owners and potential buyers. Replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific time for replacement of the sign is discretionary. We recommend the Association plan to replace the entrance signage by 2020. We note this information on Line Item 4.810 of *Reserve Expenditures*.

Pool Elements



Pool overview



Pool overview



Pool house

Deck, Pavers - Brick pavers surround the pool and comprise approximately 1,650 square feet. The deck is likely original and in fair condition. The Association completes partial resetting and replacements as needed, and most recently completed partial resetting of the pavers in 2015. We note organic growth and settlement.



Brick pavers



Newer coping



Settlement evident

The useful life of deck pavers is 25- to 30-years with the benefit of interim resetting and repairs funded through the operating budget. Inadequate subsurface preparation, poor finishing techniques, soil movement and water infiltration underneath the deck can cause significant settlement and cracks in the pavers. The pool deck should also be free of trip hazards for the safety of residents and their guests. We recommend the Association budget for replacement of the deck pavers by 2021. However, the time and cost may vary. We include this information on Line Item 6.200 of *Reserve Expenditures*.

Fence, Steel - The Association maintains approximately 150 linear feet of steel fence at the pool deck. The fence is original and in fair overall condition. We note rust and isolated bent pickets.



Minor bend at picket



Rust at bottom fastener

Fences of this type have a long useful life but are not maintenance free. Periodic maintenance should include periodic applications of protective paint finish to the steel surfaces and partial replacement of deteriorated sections as needed. Steel components at grade and key structural connections are especially prone to failure if not thoroughly maintained. Secure and rust free fasteners and connections will prevent premature deterioration. We recommend paint applications periodically funded through the operating budget and we anticipate a useful life of up to 35 years for the fence. We anticipate replacement by 2021 in conjunction with the deck. We include this information on Line Item 6.400 of *Reserve Expenditures*.

Furniture - Associated furniture and fixtures around the pool include the following:

- Chairs (4)
- Lounges (7)
- Tables (1)

These items were replaced in 2008 and are in good condition. Pool furniture has a useful life of up to 12 years. We recommend the Association budget an allowance for replacement of the pool furniture and fixtures by 2020 and every 12 years thereafter. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 6.500 of *Reserve Expenditures* sufficient to budget appropriate reserves. We recommend interim re-

strapping, refinishing, cushion replacements, reupholstering and other repairs to the furniture as normal maintenance to maximize its useful life.

Mechanical Equipment - The pool mechanical equipment comprises the following:

- Automatic chlorinator
- Controls
- Filter
- Heater
- Interconnected pipe, fittings and valves
- Pump

The pool mechanical equipment was replaced in 2016 with the exception of the pool heater replaced in 2011 and they are reported in satisfactory operational condition.



Pool mechanical equipment



Pool heater

Pool mechanical equipment has a useful life of up to 15 years. Failure of the pool mechanical equipment as a single event is unlikely. We recommend the Association anticipate replacement of up to fifty percent (50%) of the pool mechanical equipment by 2024 and by 2029, and every 13 years thereafter. We consider interim replacement of motors and minor repairs as normal maintenance. We note this information on Line Item 6.600 of *Reserve Expenditures*.

Pool Finish, Plaster - The pool wall and floor surfaces have a plaster finish of 580 square feet based on the horizontal surface area. The Association sand blasted and applied two coats of epoxy paint over the existing plaster finish in 2016. The age of the plaster is unknown.



Pool finish in good condition

This type of pool finish deteriorates with time and requires periodic maintenance and replacement. We recommend the Association anticipate the need to replace the finish and conduct related repairs every 8- to 12-years to maintain the integrity of the pool structure. Removal and replacement provides the opportunity to inspect the pool structure and to allow for partial repairs of the underlying concrete surfaces as needed. We recommend the Association budget for the following by 2022 and every 10 years thereafter except when structure replacement occurs:

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

We include this information on Line Item 6.800 of *Reserve Expenditures*.

Rest Rooms - The pool house includes two rest rooms. Components of the rest rooms include:

- Tile floor coverings
- Paint finishes on the walls
- Acoustical ceiling tile finishes
- Light fixtures
- Plumbing fixtures

The components vary in age and are in fair overall condition. We note missing tiles.



Rest room

The useful life of rest room components varies up to 25 years. Periodic renovations are an astute practice to maintain a positive overall appearance of the Association. We recommend the Association budget for a renovation by 2020 and again by 2045. We note this information on Line Item 6.811 of *Reserve Expenditures*. The Association should verify the rest room renovations comply with the Americans with Disabilities Act.

Structure and Deck - The concrete pool structure comprises approximately 580 square feet of horizontal surface area. The structure is original and visually appears in good to fair condition. The concrete floor and walls have a plaster finish. This finish makes it difficult to thoroughly inspect the concrete structure during a noninvasive visual inspection.

We anticipate a total useful life of up to 60 years for the pool structure. The need to replace a pool structure depends on the condition of the concrete structure, the condition of the



embedded or concealed water circulation piping, possible long term uneven settlement of the structure, and the increasing cost of repair and maintenance. Deterioration of any one of these component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend 3300 Park Avenue plan to replace the following components by 2042.

- Deck pavers
- Pool structure
- Subsurface piping

The time and cost of this project may vary. However, we judge the amount shown on Line Item 6.900 of *Reserve Expenditures* sufficient to budget appropriate reserves.

Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study in two- to three-years 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.



The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. 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.

3300 Park Avenue can fund capital repairs and replacements in any combination of the following:

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

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

This Reserve Study is in compliance with and exceeds the National standards¹ set forth by the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Full Reserve Study." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

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



Information Furnished by the Association	
2016 unaudited Cash Status of the Reserve Fund	44,441
2016 Remaining Budgeted Reserve Contribution	7,750
Anticipated Interest on Reserve Fund	163
Less Anticipated Reserve Expenditures	0
Projected 2016 Year-End Reserve Balance	\$52,354

The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan

Local² costs of material, equipment and labor

Current and future costs of replacement for the Reserve Components

Costs of demolition as part of the cost of replacement

Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for construction costs in Bridgeport, Connecticut at an annual inflation rate of 1.9%. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

The past and current maintenance practices of 3300 Park Avenue and their effects on remaining useful lives

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.

The anticipated effects of appreciation of the reserves over time in accord with an anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.35% (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).

Interest rates on reserves are steady or increasing in concert with the certificates of deposit and money market rates. Slight increases exist in the savings rates of one, two or three-year CDs. Without significant differences in these savings rates, shorter term investments are the choice of many investors. We recommend consultation with a professional investment adviser before investing reserves to determine an appropriate investment strategy to maximize a safe return on reserve savings. The following

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



table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

Interest Rate and Inflation Data	2015				2016			
	<u>2015:1 (A)</u>	<u>2015:2 (A)</u>	<u>2015:3 (A)</u>	<u>2015:4 (A)</u>	<u>2016:1 (A)</u>	<u>2016:2 (E)</u>	<u>2016:3 (E)</u>	<u>2016:4 (E)</u>
Average or Last Actual = (A)								
1-Year Treasury Bill	0.25%	0.27%	0.30%	0.65%	0.60%	0.55%	0.60%	0.65%
10-Year Treasury Note	1.90%	2.50%	2.70%	2.25%	1.80%	1.80%	1.85%	1.90%
30-Year Treasury Bond	2.55%	3.20%	3.40%	3.00%	2.65%	2.60%	2.60%	2.65%
Consumer Price Index (annualized rate)	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%
Although past indicators are not predictive of future inflation in "building" construction, minimal inflation exists for past 2 years April, 2014 to April 2016 of 1% to 2.5%.								
Savings Rates Results RANGE as found in http://www.bankrate.com	0.02 to 1.11%		Money Market Savings		0.15 to 1.45%		for 2-Year Certificate of Deposit	
	0.1 to 1.25%		1-Year Certificate of Deposit		0.15 to 1.50%		for 3-Year Certificate of Deposit	
Estimated Near Term Yield Rate for Reserve Savings					1.35%			
Est. Near Term Local Inflation Rate for Future Capital Expenditures					1.9%			
								05/05/2016

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



6. 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 3300 Park Avenue 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) 3300 Park Avenue 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.



7. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, Inc. will perform its services as an independent contractor in accordance with our professional practice standards. Our compensation is not contingent upon our conclusions.

Our inspection and analysis of the subject property is limited to visual observations and is noninvasive. We will inspect sloped roofs from the ground. We will inspect flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. The report is based upon a “snapshot in time” at the moment of our observation. Conditions can change between the time of inspection and the issuance of the report. Reserve Advisors does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, structural, latent or hidden defects which may or may not be present on or within the property. Our opinions of estimated costs and remaining useful lives are not a guarantee of the actual costs of replacement, a warranty of the common elements or other property elements, or a guarantee of remaining useful lives.

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

Report - Reserve Advisors, Inc. will complete the services in accordance with the Proposal. The Report represents a valid opinion of our findings and recommendations and is deemed complete. However, we will consider any additional information made available to us in the interest of promptly issuing a Revised Report if changes are requested within six months of receiving the Report. We retain the right to withhold a Revised Report if payment for services is not rendered in a timely manner. All files, work papers or documents developed by us during the course of the engagement remains our property.

Your Obligations - You agree to provide us access to the subject property during our on-site visual inspection and tour. You will provide to us to the best of your ability and if reasonably available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete our Study. You agree to pay our actual attorneys' fees and any other costs incurred in the event we have to initiate litigation to collect on any unpaid balance for our services.

Use of Our Report and Your Name - Use of this Report is limited to only the purpose stated herein. Any use or reliance for any other purpose, by you or third parties, is invalid. Our Reserve Study Report in whole or part is not and cannot be used as a design specification, design engineering services or an appraisal. You may show our report in its entirety to those third parties who need to review the information contained herein. The Client and other third parties viewing this report should not reference our name or our report, in whole or in part, in any document prepared and/or distributed to third parties without our written consent. *This report contains intellectual property developed by Reserve Advisors, Inc. specific to this engagement and cannot be reproduced or distributed to those who conduct reserve studies without the written consent of Reserve Advisors, Inc.*



We reserve the right to include our client's name in our client lists, but we will maintain the confidentiality of all conversations, documents provided to us, and the contents of our reports, subject to legal or administrative process or proceedings. These conditions can only be modified by written documents executed by both parties.

Payment Terms, Due Dates and Interest Charges - The retainer payment is due upon authorization and prior to shipment of the report. The final payment of the fee is due immediately upon receipt of the Report. Subsequent changes to the report can be made for up to six months from the initial report date. Any outstanding balance after 30 days of the invoice date is subject to an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court in the State of Wisconsin.

CONDITIONS OF OUR SERVICE ASSUMPTIONS

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, we make no guarantee nor assume liability for the accuracy of any data, opinions, or estimates identified as furnished by others that we used in formulating this analysis.

We did not make any soil analysis or geological study with this report; nor were any water, oil, gas, coal, or other subsurface mineral and use rights or conditions investigated.

Substances such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials could, if present, adversely affect the validity of this study. Unless otherwise stated in this report, the existence of hazardous substance, that may or may not be present on or in the property, was not considered. Our opinions are predicated on the assumption that there are no hazardous materials on or in the property. We assume no responsibility for any such conditions. We are not qualified to detect such substances, quantify the impact, or develop the remedial cost.

We have made a visual inspection of the property and noted visible physical defects, if any, in our report. Our inspection and analysis was made by employees generally familiar with real estate and building construction; however, we did not do any invasive testing. Accordingly, we do not opine on, nor are we responsible for, the structural integrity of the property including its conformity to specific governmental code requirements, such as fire, building and safety, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

Our opinions of the remaining useful lives of the property elements do not represent a guarantee or warranty of performance of the products, materials and workmanship.



8. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

Founded in 1991, Reserve Advisors, Inc. 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 principals are founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our principals is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and historical analyses are keys to determining accurate remaining useful life estimates of building components.

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

TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, and by utilizing the experience of other staff members, each of whom has served hundreds of clients. We conduct Team Reviews, an internal quality assurance review of each assignment, including: the inspection; building component costing; lifing; and technical report phases of the assignment. Each Team Review requires the attendance of several engineers, a Review Coordinator, Director of Quality Assurance and other participatory peers. 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 the 2,600,000-square foot 98-story Trump International Hotel and Tower in Chicago. 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.

**QUALIFICATIONS
THEODORE J. SALGADO
Principal Owner**

CURRENT CLIENT SERVICES

Theodore J. Salgado is a co-founder of Reserve Advisors, Inc., which is dedicated to serving community associations, city and country clubs, religious organizations, educational facilities, and public and private entities throughout the United States. He is responsible for the production, management, review, and quality assurance of all reserve studies, property inspection services and consulting services for a nationwide portfolio of more than 6,000 clients. Under his direction, the firm conducts reserve study services for community associations, apartment complexes, churches, hotels, resorts, office towers and vintage architecturally ornate buildings.



PRIOR RELEVANT EXPERIENCE

Before founding Reserve Advisors, Inc. with John P. Poehlmann in 1991, Mr. Salgado, a professional engineer registered in the State of Wisconsin, served clients for over 15 years through American Appraisal Associates, the world's largest full service valuation firm. Mr. Salgado conducted facilities analyses of hospitals, steel mills and various other large manufacturing and petrochemical facilities and casinos.

He has served clients throughout the United States and in foreign countries, and frequently acted as project manager on complex valuation, and federal and state tax planning assignments. His valuation studies led to negotiated settlements on property tax disputes between municipalities and property owners.

Mr. Salgado has authored articles on the topic of reserve studies and facilities maintenance. He also co-authored *Reserves*, an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and maintaining appropriate reserves. Mr. Salgado has also written in-house computer applications manuals and taught techniques relating to valuation studies.

EXPERT WITNESS

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

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

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

American Association of Cost Engineers - Past President, Wisconsin Section
Association of Construction Inspectors - Certified Construction Inspector
Association of Professional Reserve Analysts - Past President & Professional Reserve Analyst (PRA)
Community Associations Institute - Member and Volunteer Leader of multiple chapters
Concordia Seminary, St. Louis - Member, National Steering Committee
Milwaukee School of Engineering - Member, Corporation Board
Professional Engineer, Wisconsin (1982) and North Carolina (2014)

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



JOHN P. POEHLMANN, RS
Principal

John P. Poehlmann is a co-founder of Reserve Advisors, Inc. He is responsible for the finance, accounting, marketing, and overall administration of Reserve Advisors, Inc. He also regularly participates in internal Quality Control Team Reviews of Reserve Study reports.



Mr. Poehlmann directs corporate marketing, including business development, advertising, press releases, conference and trade show exhibiting, and electronic marketing campaigns. He frequently speaks throughout the country at seminars and workshops on the benefits of future planning and budgeting for capital repairs and replacements of building components and other assets.

PRIOR RELEVANT EXPERIENCE

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. An international organization, Community Associations Institute (CAI) is a nonprofit 501(c)(3) trade association created in 1973 to provide education and resources to America's 335,000 residential condominium, cooperative and homeowner associations and related professionals and service providers.

He is a founding member of the Institute's Reserve Committee. The Reserve Committee developed national standards and the Reserve Specialist (RS) Designation Program for Reserve Study providers. Mr. Poehlmann has authored numerous articles on the topic of Reserve Studies, including Reserve Studies for the First Time Buyer, Minimizing Board Liability, Sound Association Planning Parallels Business Concepts, and Why Have a Professional Reserve Study. He is also a contributing author in Condo/HOA Primer, a book published for the purpose of sharing a wide background of industry knowledge to help boards in making informed decisions about their communities.

INDUSTRY SERVICE AWARDS

- CAI Wisconsin Chapter Award
- CAI National Rising Star Award
- CAI Michigan Chapter Award

EDUCATION

- University of Wisconsin-Milwaukee - Master of Science Management
- University of Wisconsin - Bachelor of Business Administration

PROFESSIONAL AFFILIATIONS

- Community Associations Institute (CAI)** - Founding member of Reserve Committee; former member of National Board of Trustees; Reserve Specialist (RS) designation; Member of multiple chapters
- Association of Condominium, Townhouse, & Homeowners Associations (ACTHA)** – member



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

CURRENT CLIENT SERVICES

Alan M. Ebert, a Professional Engineer, is 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 hundreds 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

Reserve Specialist (RS) - Community Associations Institute

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



STEPHANIE A. MUELLER, P.E., RS
Responsible Advisor

CURRENT CLIENT SERVICES

Stephanie A. Mueller, a Civil Engineer, is an Advisor for Reserve Advisors. Ms. Mueller is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services on townhomes and planned unit developments.

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

Caswell Lofts Situated in lively Austin, Texas, five loft-style buildings comprise 42 condominiums. The buildings comprise brick masonry, fiber cement siding and flat roof assemblies. Homeowners can enjoy the fresh air on the extended open balconies.

Palazzo Tornabuoni Associazione Located in the heart of Florence, Italy, this 15th century palace includes 38 luxury residences. The ground floor includes upscale retail spaces and a restaurant. The building features many historic details such as the tile roofs and original fresco paintings. Members enjoy the private lounge, sauna and steam room.

Village at Washington's Landing This picturesque community on Herra Island overlooks downtown Pittsburgh. The 85 townhomes and 3 single family homes feature asphalt shingle and metal roofs, brick masonry and wood composite siding.

Carriage Manor RV Resort This attractive resort in Mesa, Arizona offers 911 recreational vehicle lots. The clubhouse and crafts building feature a banquet hall, billiards room, commercial kitchen and various club rooms. The buildings' exteriors comprise stucco walls, modified bitumen roofs and concrete tile roofs. Located throughout the resort are tennis courts, a pool, golf driving cages, putting greens and a dog park.

Beechnut Woods Located in Grafton, Wisconsin, this quaint community comprises 68 townhomes. The buildings feature brick masonry, vinyl siding and asphalt shingle roofs. The development contains a gazebo, pond, retaining walls and concrete flatwork.

Sonoma Homeowners Association This expansive community of 1,000 homeowners is located in Round Rock, Texas. Homeowners enjoy the use of two pools, splash area, water slide, playgrounds and a pavilion. Located throughout the property are perimeter fences, ponds and an irrigation system.

Holly Creek Located in Plymouth, Minnesota, this inviting community comprises 108 townhomes in 21 buildings. The buildings feature vinyl siding and asphalt shingle roofs. The development includes asphalt driveways and concrete sidewalks.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Mueller attended the University of Wisconsin in Madison, Wisconsin where she attained her Bachelor of Science degree in Civil Engineering. Her studies focused on structural engineering. At the University of Wisconsin, she managed a team responsible for the design of a new drinking water facility for a rural Wisconsin town.

EDUCATION

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

PROFESSIONAL AFFILIATIONS

Engineer In Training (E.I.T.) Registration - Wisconsin 2009

Reserve Specialist (RS) - Community Associations Institute

Professional Engineer (P.E.) - Wisconsin 2015



ANDREW J. FOSTER, PE, RS
Review Coordinator

CURRENT CLIENT SERVICES

Andrew J. Foster, a Civil Engineer, is an Advisor for Reserve Advisors. Mr. Foster is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

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

Ouray Ranch Homeowners Association is a homeowners association found near the headwaters of the Colorado River and within close proximity to Lake Granby, Colorado. This sprawling Association is responsible for the maintenance of the community historic lodge, site amenities, and water treatment and water distribution facilities. The Association also maintains the river banks of the Colorado River that pass through the community and several ponds.

Port Herman Beach Condominium is located within the northern portion of the Chesapeake Bay, Maryland. The community is comprised of 38 waterfront units overlooking the bay. The Association maintains the building exteriors comprising asphalt shingle roofs, fiber cement siding, and wood balconies, decks and staircases. In addition, the Association is responsible for the sewage treatment and septic field systems, water treatment and distribution system, asphalt pavement streets and an extensive wood pier.

Silver Strike Lodge Owners Association is a ski-in/ski-out lodge located in the ski resort area of Park City, Utah. This seven story building features rustic interior designs and stylish floor plans. Amenities at the resort include heated underground parking garages, outdoor spa area and an exercise facility.

Shadow Creek Ranch Master Association is a sprawling planned unit development located in Pearland, Texas. The Master Association comprises four Homeowner Associations which include pool and waterpark areas, extensive networks of masonry perimeter walls, gated entrances, concrete bridges and irrigation systems.

Lone Peak Center Condominium Association is a resort located at the base of the Big Sky Resort in Big Sky, Montana. This mid-rise development comprises 60 residential units and six commercial units in one four-story building. The building exterior comprises cedar shake siding, wood timbers, stone masonry and concrete balconies. The Association also includes a pool and spa area with heated decks, and heated patios.

Four Seasons Residence Club Scottsdale at Troon North This Four Seasons resort is located within Arizona's Sonoran Desert and north of Scottsdale, Arizona. The resort boasts elegant villas with spectacular views of the surrounding desert and foothills. The Association is also responsible for a luxurious clubhouse, uniquely designed pools and recreational facilities.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Foster was a Staff Geotechnical Engineer for Terracon Consultants, Inc. Mr. Foster supervised soil profile explorations in a range of northwestern states, performed preliminary foundation designs for a variety of commercial buildings and provided pipeline drilling design recommendations for ConocoPhillips.

EDUCATION

Montana State University - M.S. Civil Engineering
Montana State University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS

Reserve Specialist (RS) - Community Associations Institute
Professional Engineering License - Wisconsin 2015



RESOURCES

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

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

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