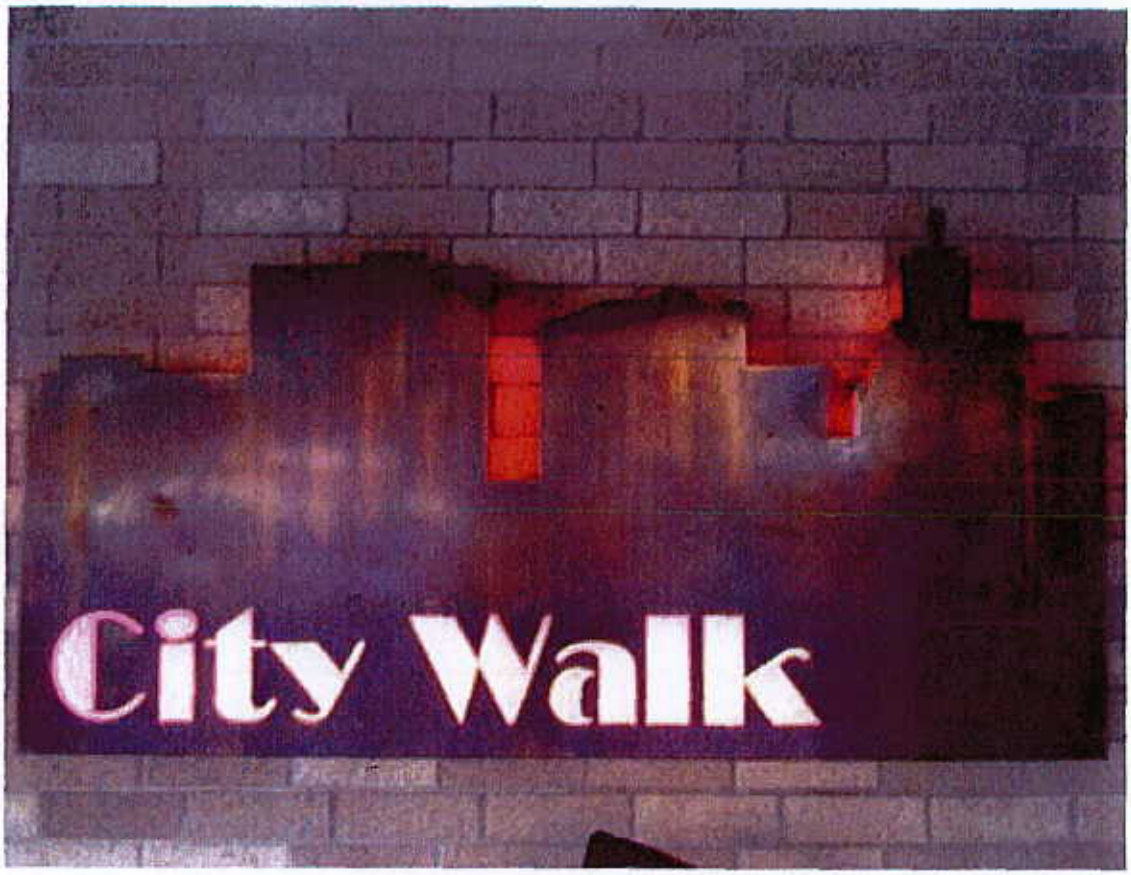
FULL RESERVE STUDY

City Walk,
A Condominium



St. Paul, Minnesota

August 13, 2014

RESERVE™ ADVISORS

Long-term thinking. Everyday commitment.


RESERVE
ADVISORS
Long-term thinking. Everyday commitment.

RESERVE ADVISORS

TABLE OF CONTENTS

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

1. RESERVE STUDY EXECUTIVE SUMMARY

Client: City Walk, A Condominium (City Walk)
Location: St. Paul, Minnesota
Reference: 100939

Property Basics: City Walk, A Condominium is a high-rise apartment style development of 228 units in one building. The exterior of the building comprises brick veneer, concrete balconies and flat roofs. The building was built in 1982. The development contains parking areas on floors P8 through P11, and a pool on the 12th floor.

Reserve Components Identified: 63 Reserve Components.

Inspection Date: August 13, 2014. We conducted the original Reserve Study on December 14, 2010.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes these threshold funding years in 2023 and 2043 due to replacement of the garage traffic membrane and balcony railings, 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
- 1.1% annual rate of return on invested reserves
- 2.3% 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: $571,549 as of July 31, 2014.

Recommended Reserve Funding: The Association budgeted $200,000 for Reserve Contributions in 2014. We include annual phased increases in Reserve Contributions of $58,500 from 2015 through 2023. By 2024, the Association will have fully funded for replacement of the garage traffic membrane and may anticipate a *decrease* in Reserve Contributions to $505,000. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation through 2044, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of $58,500 represents about a six percent (5.6%) adjustment in the 2014 total Operating Budget of $1,045,748. This initial adjustment of $58,500 is equivalent to an average monthly increase of $21.38 per homeowner.

The above funding plan defers costs onto future homeowners. We recommend the Association budget annual phased increases in Reserve Contributions of approximately $71,000 from 2015 through 2019. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation, through 2023. By 2024, the Association will have fully funded for replacement of the garage traffic membrane and may anticipate a *decrease* in Reserve Contributions to $505,000. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation through 2044, the limit of this study's Cash Flow Analysis. Our

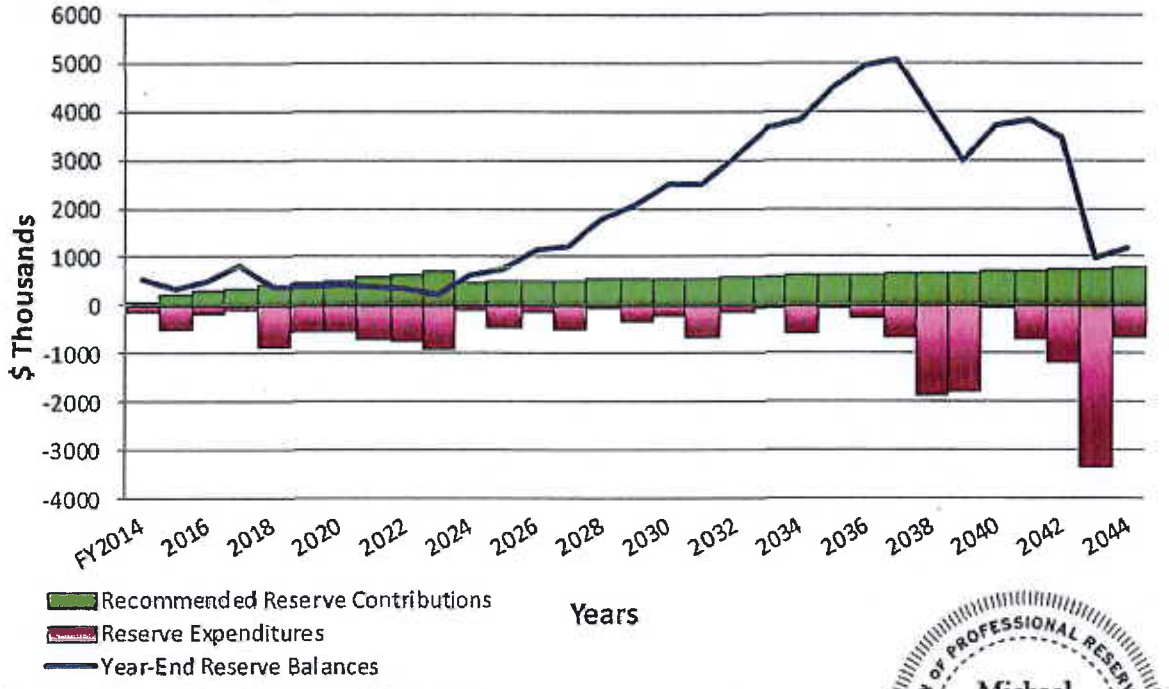
recommended funding contributions more equitably spread the burden of funding reserves between current and future homeowners. The adjustment in Reserve Contributions of $71,000 represents about a seven percent (6.8%) adjustment in the 2014 total Operating Budget of $1,045,748. This initial adjustment of $71,000 is equivalent to an average monthly increase of $25.95 per homeowner.

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."

RESERVE ADVISORS

City Walk
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2015	258,500	341,233	2025	516,600	747,112	2035	648,500	4,488,807
2016	317,000	496,311	2026	528,500	1,158,604	2036	663,400	4,956,432
2017	375,500	803,660	2027	540,700	1,230,568	2037	678,700	5,048,924
2018	434,000	397,420	2028	553,100	1,784,625	2038	694,300	3,968,434
2019	492,500	366,878	2029	565,800	2,076,725	2039	710,300	2,983,521
2020	551,000	408,515	2030	578,800	2,501,868	2040	726,600	3,716,698
2021	609,500	365,507	2031	592,100	2,505,830	2041	743,300	3,817,359
2022	668,000	334,854	2032	605,700	3,050,522	2042	760,400	3,471,194
2023	726,500	210,988	2033	619,600	3,680,909	2043	777,900	967,137
2024	505,000	635,760	2034	633,900	3,813,594	2044	795,800	1,162,383



Respectfully submitted on August 27, 2014 by
RESERVE ADVISORS, INC.

Alan M. Ebert, PRA[1], RS[2], Associate Director of Quality Assurance
Visual Inspection and Report by: Michael S. Bentley, PRA, RS and Keary Wass

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

RESERVE ADVISORS

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

City Walk, A Condominium

St. Paul, Minnesota

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 13, 2014. We conducted the original Reserve Study on December 14, 2010.

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, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Photographs** - Documentation of Condition of various property elements
- **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**

RESERVE ADVISORS

IDENTIFICATION OF PROPERTY

City Walk, A Condominium is a high-rise apartment style development of 228 units in one building. The exterior of the building comprises brick veneer, concrete balconies and flat roofs. The building was built in 1982. The development contains parking areas on floors P8 through P11, and a pool on the 12th floor. We identify 63 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
- Property Maintained by Others

We advise that 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:

- City Walk 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.

- Fire Protection, Automatic Sprinkler System Piping
- Fire Protection, Sprinkler Heads (Replaced in 2009)
- Foundations
- Pipes, Subsurface Utilities
- Skyway Bridge, Terrazzo Floor Coverings (Shared with Minnesota Public Radio)
- Structural Frames
- Windows Serving Units (Replaced in 2003)

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 $6,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Carctaker's Unit, 2502
- Chiller, Cooling Tower and Compressors, Abandoned
- Door Operators
- Doors, Garage and Stairwell, Pedestrian
- Exhaust Fans, Rooftop
- Fire Extinguishers
- Landscape
- Laundry Room Finishes
- Light Fixtures, Fluorescent and Stairwells
- Management Office
- Mechanical Equipment, Pool and Hot Tub
- Paint Finishes, Garage
- Paint Finishes, Touch Up
- Patio Doors, Party and Fitness Rooms
- Pool Cover
- Pumps Less Than Five-HP (horsepower)

- Sidewalks, Concrete
- Storage Rooms
- Trash Room Finishes
- Unit Heaters, Common Areas
- Valves, Small Diameter (we assume replacement as needed in lieu of an aggregate replacement of all the small diameter valves as a single event)
- Other Repairs normally funded through the Operating Budget

Property Maintained by Homeowners relates to unit:

- Electrical Systems
- Fan Coil Units
- Interiors
- Patio Doors, Balconies (Incl. Painting Frames)
- Pipes, Interior Building, Water and Sewer

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

Property Maintained by Others relates to:

- Automatic Door, South End of South Skyway (Town Square)
- Corridor, Skyways (Shared with Minnesota Public Radio)
- Garage Floors P7 and Below, Including Façade (Interstate Parking)
- Skyway, South, Interior Finishes (Shared with Minnesota Public Radio)
- Skyway, West (Minnesota Public Radio)

RESERVE ADVISORS

3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities replaced during the next 30 years
- 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
- 2014 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

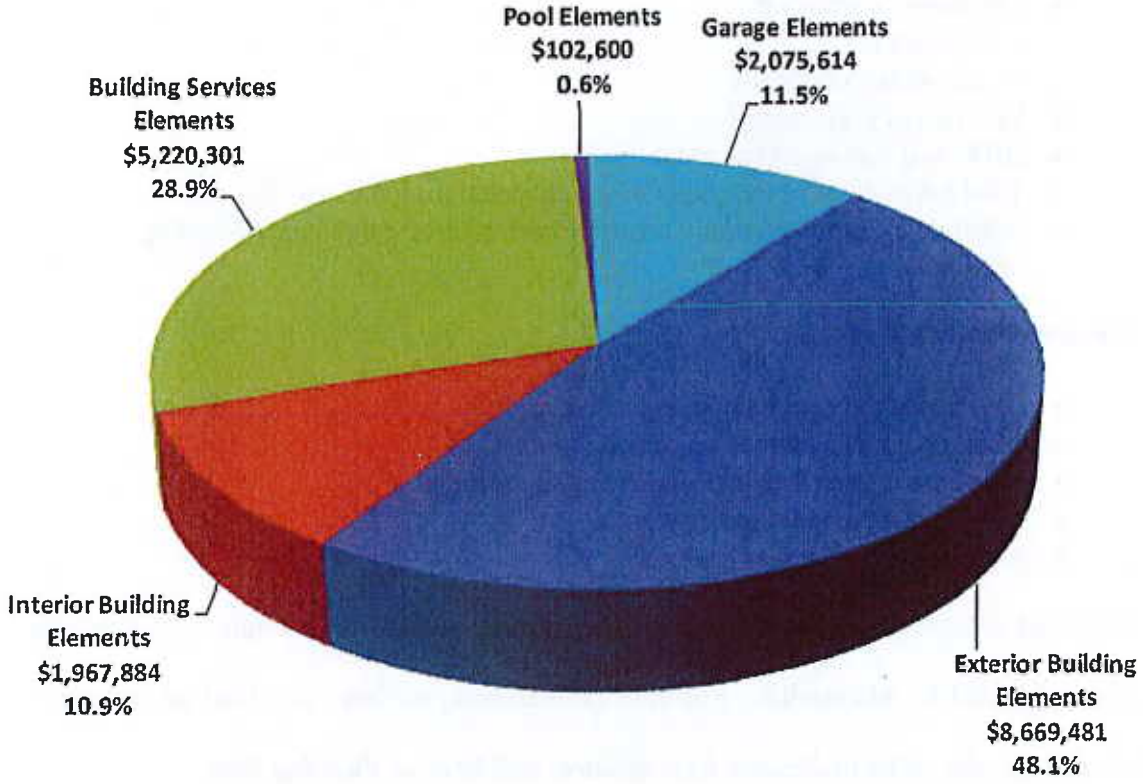
Reserve Funding Plan

- 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 most important category of Reserve Components noted in ***Reserve Expenditures*** is the Exterior Building Elements. The following chart illustrates the relative importance of the Reserve Expenditures and relative funding during the next 30 years.

City Walk
Future Expenditures Relative Cost Illustration



Reserve Advisors, Inc.

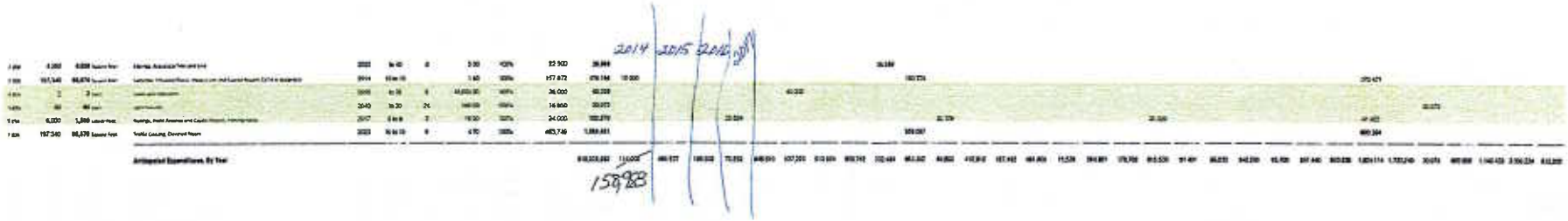
RESERVE EXPENDITURES

City Walk,
A Condominium

Explanatory Notes:
1) 3.3% is the estimated future Inflation Rate for estimating Future Replacement Costs.
2) FY2014 is Fiscal Year beginning January 1, 2014 and ending December 31, 2014.

Years 2014 to 2028 | Years 2029 to 2044

Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years: Useful	Life Analysis, Years: Remaining	Unit Cost, $	Percentage Ownership	2014 Cost per Phase, $	Total Future Costs, $
Exterior Building Elements							
[illegible]	2021	to 20	7	13,500.00	100%	54,000	163,086
[illegible]	2015	10 to 15	1	22.40	100%	290,000	1,167,112
[illegible]	2015	N/A	1	18.30	100%	75,000	74,794
[illegible]	2015	6 to 8	1	24.40	100%	100,040	634,407
[illegible]	2043	to 60	[illegible]	130.00	100%	533,000	1,636,672
[illegible]	2022	to 40	[illegible]	43.00	100%	6,500	7,297
[illegible]	2024	to 20	[illegible]	18.00	100%	20,600	94,946
[illegible]	2020	6 to 8	[illegible]	11,000.00	100%	11,000	63,050
[illegible]	2021	15 to 20	7	3,100.00	100%	480,500	1,411,774
[illegible]	2025	15 to 30	[illegible]	1,400.00	50%	7,700	24,779
[illegible]	2020	15 to 25	[illegible]	4,700.00	100%	437,100	1,346,228
[illegible]	2018	to 20	5	8.50	100%	57,375	269,683
[illegible]	2018	to 20	[illegible]	7.50	100%	42,750	163,483
[illegible]	2014	6 to 6		3.50	100%	272,055	2,142,642
[illegible]	2027	43 to 53	[illegible]	55.00	50%	98,250	142,380
Interior Building Elements							
[illegible]	2027	to 20	[illegible]	11,000.00	100%	22,000	29,547
[illegible]	2018	6 to 15	[illegible]	11,200.00	100%	11,200	100,579
[illegible]	2018	to 20	[illegible]	45,000.00	100%	45,000	126,850
[illegible]	2022	8 to 12	[illegible]	56.00	100%	154,000	427,403
[illegible]	2031	to 20	17	22,000.00	100%	27,000	32,382
[illegible]	2022	to 20	[illegible]	120.00	100%	33,600	46,204
[illegible]	2030	to 20	[illegible]	40,800.00	100%	48,600	87,533
[illegible]	2016	to 10	[illegible]	8,500.00	100%	32,500	130,306
[illegible]	2049	to 35	[illegible]	75.00	100%	19,380	21,714
[illegible]	2018	15 to 20	[illegible]	0.05	100%	29,736	83,686
[illegible]	2021	15 to 20	7	12,800.00	100%	25,600	77,318
[illegible]	2019	to 20	[illegible]	43,000.00	100%	43,000	121,099
[illegible]	2046	to 25	[illegible]	3.50	100%	253,750	718,840
Building Services Elements							
[illegible]	2027	to 30	[illegible]	1,500.00	100%	10,500	14,111
[illegible]	2027	to 50	[illegible]	35,000.00	100%	35,000	47,038
[illegible]	2025	15 to 20	[illegible]	28,000.00	50%	14,000	45,674
[illegible]	2025	15 to 20	[illegible]	14,000.00	100%	14,000	45,674
[illegible]	2024	15 to 20	[illegible]	13,000.00	100%	13,000	41,487
[illegible]	2029	15 to 20	[illegible]	6,500.00	100%	6,000	8,393
[illegible]	2023	to 15	[illegible]	62,500.00	100%	62,500	184,583
[illegible]	2042	to 60+	[illegible]	36,500.00	100%	65,500	164,808
[illegible]	2042	to 35	[illegible]	214,000.00	100%	428,000	498,924
[illegible]	2018	25 to 35	[illegible]	103,500.00	100%	103,500	198,318
[illegible]	2022	15 to 20	[illegible]	40,000.00	100%	128,000	386,671
[illegible]	2022	15 to 20	[illegible]	40,000.00	100%	80,000	243,781
[illegible]	2022	15 to 20	[illegible]	20,000.00	100%	60,000	182,806
[illegible]	2026	to 25	[illegible]	7,000.00	100%	7,000	8,198
[illegible]	2018	10 to 18	[illegible]	800.00	100%	75,200	332,707
[illegible]	2018	to 25	[illegible]	335,500.00	100%	335,500	1,016,270
[illegible]	2025	to 15	[illegible]	12,000.00	100%	12,000	37,934
[illegible]	2034	to 60+	[illegible]	1,725.00	100%	69,000	367,864
[illegible]	2026	to 60+	[illegible]	1,425.00	100%	95,475	842,178
[illegible]	2017	to 25	[illegible]	11,600.00	100%	11,600	72,816
[illegible]	2017	to 25	[illegible]	13,600.00	100%	27,200	60,675
[illegible]	2032	to 50	[illegible]	47,000.00	100%	47,000	70,772
[illegible]	2018	to 15	[illegible]	13,700.00	100%	13,700	77,417
[illegible]	2016	to 30	[illegible]	5,400.00	100%	5,000	23,272
[illegible]	2044	to 60	[illegible]	3,200.00	100%	86,400	179,916
[illegible]	2026	to 25	[illegible]	19,000.00	100%	19,000	24,847
[illegible]	2018	to 60+	[illegible]	4,500.00	100%	9,000	82,154
Pool Elements							
[illegible]	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]
Reserve Elements							


2014
2015
2016
2017

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS
City Walk,
A Condominium
St. Paul, Minnesota

Individual Reserve Budgets & Cash Flows for the Next 30 Years

		FY2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Reserves at Beginning of Year (Note 1)	571,649	543,431	341,233	496,311	803,660	397,420	366,878	408,515	365,507	334,854	210,988	635,780	747,112	1,158,604	1,230,568	1,784,625
	Total Recommended Reserve Contributions (Note 2)	83,333	258,100	317,000	375,500	434,000	492,500	551,000	609,500	668,000	726,500	605,000	516,600	528,500	540,700	553,100	565,800
Plus	Estimated Interest Earned, During Year (Note 3)	2,548	4,839	4,581	7,111	6,570	4,181	4,241	4,234	3,831	2,986	4,932	7,564	10,424	13,069	16,493	21,121
Less	Anticipated Expenditures, By Year	(114,000)	(465,537)	(166,503)	(75,262)	(846,810)	(527,223)	(513,604)	(656,742)	(702,484)	(833,352)	(84,560)	(412,812)	(127,432)	(481,805)	(16,536)	(294,821)
	Anticipated Reserves at Year End	$543,431	$341,233	$496,311	$803,660	$397,420	$366,878	$408,515	$365,507	$334,854	$210,986 (NOTE 5)	$635,780	$747,112	$1,158,604	$1,230,568	$1,784,625	$2,076,725

(continued)

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

		2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
	Reserves at Beginning of Year	2,076,725	2,501,868	2,505,830	3,050,522	3,680,909	3,813,594	4,466,807	4,956,432	5,048,924	3,968,434	2,983,521	3,716,898	3,817,359	3,471,194	967,137
	Total Recommended Reserve Contributions	578,800	592,100	605,700	619,600	633,900	648,500	663,400	678,700	694,300	710,300	726,600	743,300	760,400	777,900	795,800
Plus	Estimated Interest Earned, During Year	25,045	27,392	30,393	36,820	40,994	45,413	51,665	54,728	49,324	38,027	36,650	41,211	39,868	24,277	11,648
Less	Anticipated Expenditures, By Year	(178,702)	(615,530)	(91,401)	(26,033)	(542,209)	(18,700)	(247,440)	(640,936)	(1,824,114)	(1,733,240)	(30,073)	(683,850)	(1,146,433)	(3,306,234)	(612,202)
	Anticipated Reserves at Year End	$2,501,868	$2,505,830	$3,050,522	$3,680,909	$3,813,594	$4,466,807	$4,956,432	$5,048,924	$3,968,434	$2,983,521	$3,716,898	$3,817,359	$3,471,194	$967,137 (NOTE 5)	$1,182,383 (NOTE 4)

Explanatory Notes:

1) Year 2014 starting reserves are as of July 31, 2014; FY2014 starts January 1, 2014 and ends December 31, 2014.
2) Reserve Contributions for 2014 are the remaining budgeted 5 months; 2015 is the first year of recommended contributions.
3) 1.1% is the estimated annual rate of return on invested reserves; 2014 is a partial year of interest earned.
4) Accumulated year 2044 ending reserves consider the need to fund for replacement of the windows and pipes shortly after 2044, and the age, size, overall condition and complexity of the property.
5) Threshold Funding Years (reserve balance at critical point).

RESERVE ADVISORS

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

Awnings - The exterior facade of the buildings utilize four canvas awnings with metal frames to protect the front entries from weather. The awnings are 13 years of age and in good condition. These types of awnings have a useful life of up to 20 years. We recommend City Walk budget for replacement of the awnings by 2021 and again by 2041. Our cost on Line Item 1.020 of ***Reserve Expenditures*** includes an allowance for replacement of the metal frames.

Balconies, Concrete - The building provides structural support for 214 concrete balconies and nine concrete overhangs that comprise approximately 12,500 square feet of horizontal surface area. The balconies comprise reinforced concrete. The balconies at City Walk lack a waterproof coating. We note isolated spalls and cracks, as depicted on Pages 5.4 and 5.4 of ***Photographs***. A waterproof coating application minimizes storm water penetration into the concrete and therefore minimizes future concrete deterioration. *Failure to maintain a waterproof coating on the balconies will result in increased concrete repairs and replacements as the balconies age*. The balconies exhibit some deterioration. We opine that the balconies do

not require immediate repairs. However, in order to coordinate balcony railing repairs and painting with balcony coatings, and at the direction of Management and the Board, we recommend the Association install a waterproof coating on the balconies in 2015.

With the benefit of a waterproof coating, balconies of this type have an indeterminately long useful life with proper maintenance and periodic capital repairs. Proper maintenance should include waterproof coating applications every 10- to 15-years. Capital repairs should include a close-up visual inspection, patching of delaminated concrete and the routing and filling of cracked concrete. Capital repairs may also include replacement of the caulked joint between the balcony and the building, and repair or replacement of the metal railings and railing fastener attachments as needed.

We recommend the Association budget for the following periodic repairs:

- Partial depth replacement of up to two percent (1.5%) of the concrete topsides, edges and undersides
- Crack repairs as necessary
- Repairs to the railings as necessary
- Replacement of perimeter sealants as needed
- Application of a waterproof coating (Urethane based elastomeric)

We recommend the Association budget for this work in 2015 and every 12 years thereafter. We depict this information on Line Item 1.060 of ***Reserve Expenditures***. Association should coordinate balcony and railing repairs and maintenance to allow for the possible use of a single contractor and combine any applicable staging or mobilization costs. Also, coordinated repairs will reduce disruption to homeowners.

Balconies, Railings - The Association maintains approximately 4,100 linear feet of metal railings at the balconies. This quantity includes the metal privacy panels. The railings are

original and in fair condition. Management informs us that the spacing between the metal railings is greater than allowable per municipal building codes. Management informs us the Association will modify the railings to become code compliant in 2015 for an estimated cost of $75,000, plus inflation. At the same time, the Association will also apply a paint finish application to the railings and privacy panels. Periodic maintenance should include applications of a protective paint finish and partial replacement of deteriorated metal every six- to eight-years. The railings have a useful life of up to 60 years.

Periodic applications of paint to the metal will maximize their 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 subsequent paint applications to the metal by 2022 and every seven years thereafter except when replacement occurs, by 2043. We depict this information on Line Items 1.097 through 1.105 of ***Reserve Expenditures***. The metal railings use horizontal pickets. This configuration promotes climbing and is potentially dangerous.

Doors and Windows, Front Entrance and Management Office - City Walk maintains approximately 100 square feet of windows and doors at the front entrance and management office. The windows and doors are original, are in fair condition and have useful lives of up to

40 years. Based on their age, we recommend the Association budget for replacement by 2022. We note this information on Line Item 1.160 of ***Reserve Expenditures***.

Entrance Drive - The entrance drive includes approximately 1,700 square feet of concrete driveway, 1,700 square feet of drywall at the soffit with a paint finish and 11 light fixtures. These exterior elements are in good condition at an age of 10 years. We recommend the Association budget for renovations to this area every 20 years. We recommend the Association budget for concrete and drywall repairs, a paint application and replacement of the light fixtures by 2024 and again by 2044. We depict this information on Line Item 1.206 of ***Reserve Expenditures***.

Paint Finishes, Skyway - The building includes a skyway at the south elevation of the building. The skyway metal frame requires paint finishes every six- to eight-years. The Association painted the skyway in 2013. We note peeling paint finishes, as depicted on Page 5.6 of ***Photographs***. Management informs us the responsible contractor will repair the deterioration in 2014. Periodic application of a protective finish of paint is an essential maintenance activity to maintain the physical appearance and integrity of the bridge structure. We recommend the Association budget for subsequent paint finish applications by 2020 and every seven years thereafter. We include this information on Line Item 1.277 of ***Reserve Expenditures***. Management informs us that MPR (Minnesota Public Radio) funded half of the 2013 painting expense. However, Management requests we assume that future painting events will be funded solely by the Association.

Roofs, Built-up - The main roof at City Walk consists of 155 *squares*[1] of built-up roofing. The roof is 11 years of age and is in good overall condition. Management does not report history of leaks. We note no visible deterioration. The south skyway roof comprises 11 squares of built-up roof, is seven years of age and in reported in good condition. The useful life of built-up roofs in St. Paul is from 15- to 20-years. We include the following solutions and procedures pertaining to replacement of built-up 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 roof semiannually and fund these inspections through the operating budget.

Built-up roofing provides a durable system due to its multi-layer protection. Built-up roofs are composed of asphalt coated roofing sheets installed in layers to add strength to the roofing system. Built-up roofs are an economical option for flat and low-sloped roofs.

Contractors can install a new built-up 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

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

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 applies the base sheet of roofing over the insulation board. This sheet is normally 30-pound material. The contractor should start the installation of a roof membrane from the lowest points of the roof. Mechanical fastening and embedding the base sheet in a flood coat of hot asphalt is the best manner of installation. Felt or glass fiber plies saturated with asphalt are usually used for level or low-pitch roofs because of their greater resistance to standing water. A membrane of three- or four-plies is common, the more plies used, the more durable a roof.

The time or need to replace the roof becomes apparent with multiple or recurring leaks. The Association should determine whether the origin of the leaks is from the membranes 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 City Walk prepare for a complete tear-off at the time of replacement for the main roof by 2021 and again by 2039. Our cost on Line Item 1.300 of ***Reserve Expenditures*** includes an allowance for replacement of the south stairwell skylight in coordination with the roof replacements.

Based on age, we recommend the Association budget for replacement of the skyway roof by 2025 and again by 2043. MPR is responsible for up to fifty percent (50%) of the cost of the roof. We note this information on Line Item 1.301 of ***Reserve Expenditures.*** The Association

should monitor outside vendors when they service any elements on the roofs to minimize unreported roof damage.

Roofs, Pool Deck and West Patios - The pool deck and west patios are pedestrian areas atop the parking garage. These elevated areas comprise approximately 90 squares. Due to the noninvasive nature of our inspection, we are unable to determine the exact composition of the roofs. Based on our visual inspection, experience with similar construction and knowledge of replacement/capital repair projects of this type, we surmise the roofs comprise the following elements:

- Wood decking and privacy fences
- Concrete topping
- Planters
- Perimeter flashing
- Underlying waterproof membrane atop the structure
- Elevated structural concrete

The roofs are reported in good to fair overall condition. We note evidence of water infiltration at the pool deck roof into the underlying garage, as depicted on Page 5.9 of ***Photographs.*** Additionally, we note evidence of poor drainage at the west patios and deck board deterioration. Management informs us the Association periodically replaces deck boards and funds this activity through the operating budget. The age of the underlying membrane was not available at the time of inspection. The roofing system, including underlying membrane has a useful life of 15- to 25-years.

Wood deck boards and a concrete topping protect the subsurface structure from the infiltration of storm water. We surmise a waterproof membrane separates and protects the structure from the migration of storm water through surface cracks in the concrete topping and water infiltration between the deck boards. These processes allow storm water to come in

contact with and wear the underlying waterproof membrane. As the membrane ages and deteriorates, water infiltration through the structure and leaks into the space beneath will become more frequent and widespread. Deterioration of the concrete structure beneath the membrane is also probable due to membrane leaks and normal aging of the concrete.

We recommend that the Association plan to repair the concrete structure as necessary, and replace the membrane and all previously listed elements by 2020 and again by 2043. The time and cost of this replacement may vary. However, we judge the amount shown on Line Item 1.503 of ***Reserve Expenditures*** sufficient to budget appropriate reserves.

Sealants, Windows, Doors and Control Joints - The perimeters of the window and door frames us approximately 11,400 linear feet of exterior sealants or *caulk.*[2] An additional 13,500 linear feet of control joints[3] are located at the horizontal and vertical joints in the façade. Sealants are flexible, allow for differential movement between dissimilar materials and prevent water infiltration into the building. The sealants vary in age and condition. The Association conducted partial sealant replacements in 2003.

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

[2] The terms sealant and caulk are used interchangeably throughout this text and throughout the industry.
[3] A control joint is a formed or sawed groove in a wall system that allows for thermal expansion and contraction of the building materials without damage.

sealants age. We discuss solutions and procedures related to replacement of sealants in the following narrative.

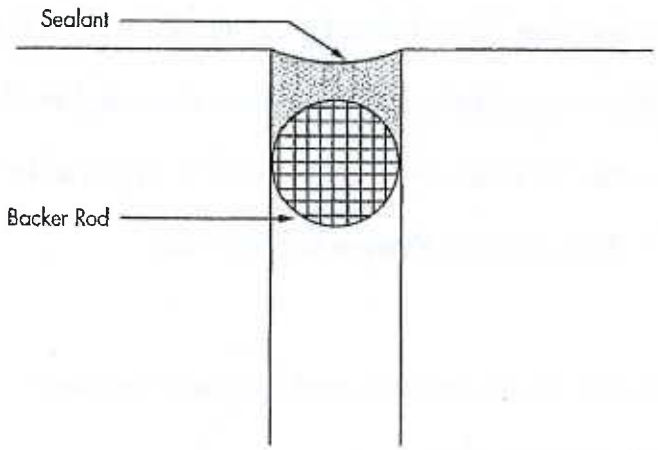
Sealant failure allows for the infiltration of water into the building. There are three types of joint sealant failure. *Adhesion failure* occurs when sealant pulls away from the sides of the joint due to improper surface preparation or too much joint movement. *Cohesive failure* occurs when sealant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



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 City Walk replace up to fifty percent (50%), or 12,450 linear feet of joint sealant, by 2019 and every 12 years thereafter in conjunction with brick repairs. We note this information on Line Item 1.540 of ***Reserve Expenditures***.

Walls, Masonry - Masonry comprises approximately 77,730 square feet of the exterior walls. The overall condition of the masonry is fair. However, Management informs us the Association recently experiences water infiltration at the 02 and 15 tiers. At the time of inspection, the Association was replacing flashing over windows and shelf angles at the 02 tier. Management informs us the Association will conduct similar repairs at the 15 tier in 2014. We include an allowance for these repairs in ***Reserve Expenditures.***

We note the following components and conditions of the masonry:

- Rust stains at shelf angles
- Weeps added at some lintels and shelf angles
- Isolated mortar cracks and efflorescence

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. City Walk 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.

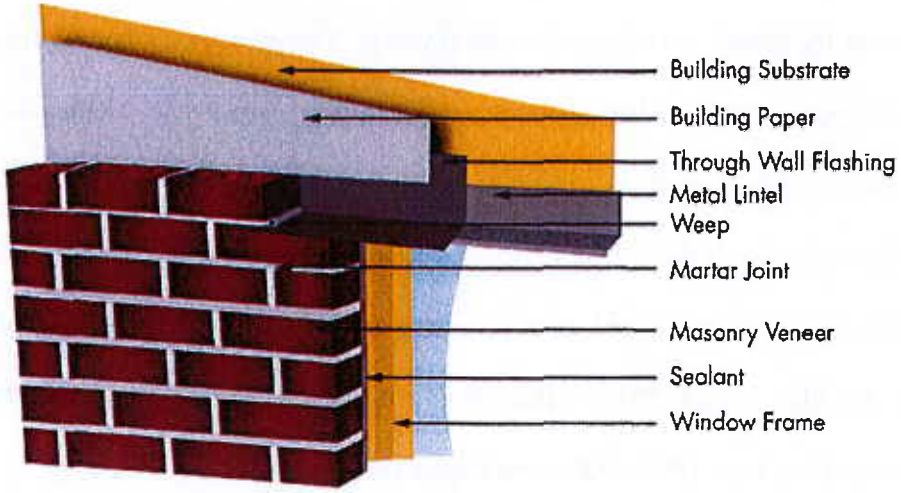
Repointing is a process of raking and cutting out defective mortar to a depth of not less than ½ inch nor more than ¾ inch and replacing it with new mortar. *Face grouting* is the process

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 and repairs of the steel shelf angles. Shelf angles are steel angles which support the weight of masonry veneer between floors and transfers that weight onto the main structural system. Shelf angles require through the wall flashing and weeps to ensure proper elimination of water from the masonry system. The contractor should remove any areas of rust, prime and paint exposed shelf angles at windows. The following diagram details a metal lintel and weep system. However, this detail is similar to construction at shelf angles:

MASONRY WALL, METAL LINTEL AND WEEP SYSTEM DETAIL



In consideration of the conditions, a portion of the shelf angles will require flashing installation during the next 30 years. This project includes the following activities:

- Removal of the surrounding masonry
- Installation of asphaltic flashing above the steel
- 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 two percent (2%) of the masonry
- Replacement of a limited amount of the masonry
- Paint applications to the exposed shelf angles
- Flashing and weep installation at five percent 5% of the shelf angles

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.

Windows, Garage and Skyway - City Walk maintains approximately 3,500 square feet of windows at the garage corridor and south skyway. These components are primarily original, in good condition, comprise aluminum frames with single pane glass. Management informs us the Association replaces glass as needed or when the City of St. Paul requires them to do so. These windows have a useful life of 45- to 55-years. We recommend the Association budget for replacement of the corridor and skyway windows by 2037. Minnesota Public Radio is responsible for fifty percent (50%) of the cost of replacement of these windows. We include this information on Line Item 1.980 of ***Reserve Expenditures.***

The Association heats and cools the corridor and skyway. At the time of replacement, the Association may consider installing dual pane glass, or glass treated with special coatings to prevent heat transfer. These improvements may reduce the need for heating and cooling and reduce the Association's utility expenses.

Interior Building Elements

Elevator Cab Finishes - Two elevators serve the building. The elevator cab finishes consist of:

- Carpet floor coverings
- Mirrored wall coverings
- Metal ceilings

The finishes are seven years of age and in good to fair overall condition. The useful life of the elevator cab finishes is up to 20 years. We recommend the Association budget for renovation of the cab finishes by 2027. We include this information on Line Item 2.100 of

Reserve Expenditures. City Walk should fund interim elevator cab floor covering replacements through the operating budget.

Exercise Equipment - The exercise room contains the following types of training equipment:

- Ellipticals
- Stationary cycle
- Television
- Treadmills
- Bench
- Dumbbells
- Weight training

The equipment varies in age and condition. The useful life of equipment of this type is from 5- to 15-years. We recommend the Association anticipate periodic phased replacement of the exercise equipment from continued but naturally varied use and advances in technology. We recommend that City Walk anticipate phased replacement of up to fifty percent (50%) of exercise equipment every five years beginning by 2018. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 2.160 of ***Reserve Expenditures*** sufficient to budget appropriate reserves.

Exercise Room - The exercise room components are in fair overall condition. The ages of the elements were not available at the time of inspection. The exercise room components include:

- Carpet and tile floor covering
- Wood wall and ceiling coverings
- Paint finishes
- Light fixtures
- Furnishings
- A hot tub
- A sauna
- Two rest rooms

Management informs us the Association recently replaced the sauna heater. The exercise room finishes appear dated. Renovation of this space is important to maintain the attractive appearance for potential homeowners. We recommend the Association renovate the exercise room components every 20 years. We include an allowance for the renovation of the exercise room by 2018 and every 20 years thereafter on Line Item 2.180 of ***Reserve Expenditures***.

Floor Coverings, Carpet, Hallways - Carpet comprises 2,800 square yards of the common area hallway floor coverings. Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste. The loop pile carpet is four years of age and in good condition. We note isolated stains, as depicted on Page 5.12 of ***Photographs***. We suggest that the Association budget to replace the carpet every 8- to 12-years to maintain a positive appearance of the common areas. We include the following solutions and procedures pertaining to replacement of the carpet for the benefit of present and future board members.

The appearance, texture and longevity of carpet are determined by the type of fiber, pile and color. There are many types of fibers available. Due to the high volume of traffic in the common areas, we suggest the use of a nylon fiber as it is durable, resilient and stain resistant. There are also multiple types of carpet piles available. Loop piles, such as berber, or angle cut piles with woven patterns are ideal for high traffic areas. We suggest the use of mid-tone colors to mask traffic patterns and stains. The contractor should follow the manufacturer's installation guidelines and the Standard for Installation of Commercial Carpet as provided by the Carpet and Rug Institute.

We advise that the Association anticipate replacement of the carpet by 2022 and every 12 years thereafter. We include this information on Line Item 2.200 of ***Reserve Expenditures***. City Walk should continue to fund vacuuming, spot removal and schedule periodic cleanings through the operating budget to maximize the life of the carpet.

Furnishings and Decorations, Hallways - The Association maintains the hallway decorations and furnishings. These elements are in good condition at an age of three years. Replacement of these elements is discretionary. However, we anticipate a useful life of up to 20 years and recommend City Walk budget for subsequent replacement by 2031. We base our cost on Line Item 2.228 of ***Reserve Expenditures*** on the Association's historic cost of replacement.

Light Fixtures, Hallways - There are approximately 280 interior ceiling mounted light fixtures located throughout the common areas. The light fixtures utilize compact fluorescent lamps. The interior light fixtures are 20 years of age, are in good condition and have useful lives of up to 30 years. City Walk may desire replacement for aesthetic reasons or to coordinate their replacement with more significant renovations or paint applications. We consider the times of such replacements discretionary. For the purposes of this study, we recommend a total replacement of the light fixtures by 2022 in coordination with carpet replacements. We include this information on Line Item 2.560 of ***Reserve Expenditures***.

Lobbies - The main lobby components are four years of age and are in good overall condition. These components comprise the following:

- Tile and rug floor covering
- Tile and laminate wall coverings
- Paint finishes
- Management office
- Furnishings

- Light fixtures

We recommend the Association anticipate a lobby renovation every up to 20 years. The lobby provides a first impression for guests and prospective buyers of condominiums. Discretionary redecorating and refurbishing are a common practice in apartment style associations with a single main entrance to provide a good "first impression." Periodic redecorating and refurbishing of the lobby is therefore a prudent practice. We suggest the Association budget an allowance to renovate the lobby by 2030. We note this information on Line Item 2.600 of ***Reserve Expenditures***.

The Association also maintains four garage lobbies, and a lobby at the skyway level that includes a library and the skyway corridor. The carpet and paint finishes in these areas are in good to fair condition at an age of up to eight years. We recommend the Association anticipate a useful life of up to 10 years in these lobbies and budget for renovations of these areas by 2016 and every 10 years thereafter. We note this information on Line Item 2.601 of ***Reserve Expenditures***. The Association should fund interim replacements through the operating budget.

Mailboxes - The unit mailboxes are located in the lobby at City Walk. The mailboxes are original and in good overall condition. Mailboxes of this type have useful lives of up to 35 years. Based on their condition and age, we recommend the Association defer replacement of the mailboxes until 2019. We include this information on Line Item 2.700 of ***Reserve Expenditures***. The Association should verify the new mailboxes meet the specifications of the United States Postal Service. Replacement could potentially require a wall renovation to allow for larger mailboxes.

Paint Finishes, Hallways - The common area hallways have approximately 31,300 square feet of paint finishes on the ceilings. These finishes are in good to fair condition. The ages of the finishes were not available at the time of inspection. The useful life of a paint finish on interior ceilings is from 15- to 20-years. However, the actual *times* of paint applications are discretionary based on desired appearance and varied rates of use. We recommend the Association continue to maintain a uniformly clean and consistent appearance of interior paint finishes throughout the common areas. Due to the high volume of traffic in the common entry areas, City Walk may anticipate a diminished useful life of the paint finishes in these isolated areas. Normal maintenance should include interim partial or touchup paint applications as needed.

A successful application of paint requires complete *preparation* of the surface through removal of all loose, peeled or blistered paint before application of the new paint finish. The contractor should then wet wipe the surface to remove all dust and dirt. The contractor should follow the manufacturer's directions for paint application and protect other surrounding elements from paint spatter. The contractor should specify the name of the paint, proposed method and steps of paint application in their bid. Based on the age and condition of the paint, we recommend the application of a paint finish by 2018 and every 20 years thereafter. We depict this information on Line Item 2.800 of ***Reserve Expenditures***.

Paint Finishes, Stairwells - In addition to the hallway paint finishes, the Association maintains the paint finishes in the two stairwells. The paint finish in these areas is approximately 14 years of age and in fair overall condition. We estimate a useful life for the paint finishes of 15- to 20-years in these areas with interim partial or touchup paint applications as normal

maintenance. Based on their condition, we recommend the Association budget for the next paint finish application in the stairwells by 2021 and again by 2041. We include this information on Line Item 2.820 of ***Reserve Expenditures***.

Party Room - The common area amenities include a party room on the 12th floor adjacent to the pool and exercise room. The party room components include:

- Carpet and tile floor coverings
- Vinyl wall coverings
- Paint finishes
- Light fixtures
- Furnishings
- Appliances
- A rest room
- A kitchen

The components are in fair condition at ages of up to 17 years. We recommend renovations of the party room every up to 20 years. The periodic comprehensive renovation of the party room will maintain an attractive appearance of this amenity. The specific time of any interior renovation is somewhat discretionary and may be implemented by the Board prior to the end of its useful life. We recommend City Walk anticipate a party room renovation by 2019 and again by 2039. We note this information on Line Item 2.840 of ***Reserve Expenditures***.

Wall Coverings, Hallways - Wall coverings comprise approximately 72,500 square feet of the common walls. The vinyl wall coverings are 20 years of age, in fair overall condition and have a useful life of up to 20 years. We note several locations of damaged coverings or deteriorated seams, as depicted on Page 5.15 of ***Photographs***. The times of replacement for wall coverings are discretionary based upon the need or desire to coordinate the replacement of other adjacent elements, i.e., carpet. The Association should require contractor bids to include removal of existing wall coverings, protection of adjacent areas, daily clean up and repair of the

underlying wall board prior to application of any new wall coverings. Contractor measurements will vary from the actual area due to standard roll lengths, patterns and installation waste. For purposes of estimating appropriate reserves, we recommend replacement of all wall coverings by 2018 and again by 2038, in coordination with ceiling paint finish applications. We include this information on Line Item 2.980 of ***Reserve Expenditures***.

Building Services Elements

Air Handling Units, Fan Coil Units - The seven forced-air fan coil units provide heating and cooling to the common areas, including the stairs, party room, exercise room, lobby, office and pool hallway. The fan coil units are original and reported in fair operational condition. We anticipate a useful life of up to 30 years for the fan coil units with the benefit of periodic capital repairs. Capital repairs include replacement of the heating and cooling coils, fan or fan motor and the drain pan. The Association should fund these maintenance expenses through the operating budget. We recommend the Association budget for replacement of the fan coil units by 2027 in coordination with the hallway make-up air unit. We include this information on Line Item 3.030 of ***Reserve Expenditures***.

Air Handling Unit, Make-up Air - The Association utilizes one make-up air unit to provide outdoor air to the hallways. The unit is mounted to the ceiling in the mechanical penthouse and works in conjunction with the heat exchangers to provide heated or cooled air. The unit is original, reported in fair operational condition and has a useful life of up to 50 years. We recommend the Association budget for replacement by 2027. We note this information on Line Item 3.050 of ***Reserve Expenditures***. The Association should fund interim repairs and replacements of the motors, belts and filters through the operating budget as needed.

Air Handling Unit, Packaged Heating and Cooling Unit - The Association utilizes three packaged heating and cooling units to serve the common areas. We list the locations and information about each unit below:

- Skyway: 18-tons of cooling, eight years of age, good condition and considered a shared responsibility with Minnesota Public Radio
- Library and Corridor: eight years of age, good operational condition, heating or cooling capacity of the unit not available
- Main Lobby: Eight- to nine-years of age, good operational condition, heating or cooling capacity of the unit not available

The useful life of units of these types is 15- to 20-years with proper maintenance. Packaged heating and cooling units consist of various combinations of heating, ventilating and air conditioning components enclosed in a sheet metal cabinet. Typical units in this application contain various combinations of the following elements: filters, heating coils, cooling coils and fans. Based on the age and condition, we recommend the Association budget for replacement of the skyway, and library and corridor units by 2025 and again by 2044. We include replacement of the main lobby unit by 2024 and again by 2043. We depict this information on Line Items 3.060 through 3.067 of ***Reserve Expenditures***.

Air Handling and Condensing Unit, Split System - The Association maintains one *Goodman* split system air conditioner to provide cooled air to the elevator equipment room. A split system air conditioner consists of an outside condensing unit, an interior evaporator coil, refrigerant lines and an interior air handling unit. The condensing unit has a cooling capacity of four-tons. The split system is four years of age and is reported in good condition.

With periodic maintenance, the useful life of these units is from 15- to 20-years. We base the time of replacement of a split system on its anticipated useful life and frequency of service interruptions. The condensing unit may require replacement prior to replacement of the related

interior forced air unit. However, City Walk should coordinate the replacement of the interior forced air unit, evaporator coil, refrigerant lines and exterior condensing unit. We recommend the Association anticipate replacement of the system by 2029. We include this information on Line Item 3.070 of ***Reserve Expenditures***.

Building Automation System - The building includes a building automation system to monitor and control the mechanical systems. Building automation systems are also often referred to as energy management systems. The system is six years of age and reported in good to fair condition. We estimated the system includes 21 control points and/or sensors. We anticipate a useful life of up to 15 years for this system and recommend the Association budget for replacement by 2023 and again by 2038. We depict this information on Line Item 3.170 of ***Reserve Expenditures***. The Association should fund upgrades to the system software and interim replacement of sensors through the operating budget.

Electrical System - The electrical system at City Walk is primarily original to construction. Based on our conversations with the building engineer, the system is in reported satisfactory condition. A portion of the lower bus bar and select transformers have been replaced in the past due to water infiltration. The system includes:

- Breaker type circuit protection panels for low ampacity circuits
- Copper wires
- Homeowners are responsible for the electrical system from the meter to the unit

The exact locations and conditions of all the electrical system components were not ascertained due to the nature of their location and the non-invasive nature of our inspection. For purposes of this Reserve Study, we exclude the electrical systems within the units based upon

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

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

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

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

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

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

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

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

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

Changes in service loads over time can cause arcing conductor connection points and line overloads within a system. Periodic thermoscans of primary switchgear and distribution panels are advisable and can detect defective or prematurely aging electrical system components. We recommend the Association conduct thermoscans of the distribution panels and circuit protection panels, and inspections of the transformers for any indications of arcing, burning or overheating on a regular basis, and fund these activities through the operating budget. Verification of the integrity of all connection points minimizes the potential for arcing and fires. The Association should repair or replace all loose and corroded parts at that time.

Due to the limited amount of mechanical components and minimal exposure to weather, if any, electrical system components within a building have a long, often indeterminate, useful life. The Association may find it necessary to replace individual components of the electrical system due to service load changes and changes in building code requirements. However, future changes in service loads and the requirements of future building code changes are indeterminate.

We recommend the Association budget for replacement of the main electrical panels and disconnects by 2042. Updates of this Reserve Study will consider possible changes in the scope and times of component replacements based on the conditions, including the need for replacement of the wires. We note this information on Line Item 3.300 of ***Reserve Expenditures***.

Elevators, Traction - The building utilizes two *Kone* traction elevators. The major elevator system components are seven years of age and in reported good condition. Management

inform us that service interruptions are infrequent. The elevators utilize programmable logic computer controls. We were unable to located information posted related to the required annual inspections by the City of St. Paul. The Association should post elevator inspection information in the cabs or in the elevator equipment room.

Elevator system components that utilize programmable logic computer controls provide many years of service and when cared for by a maintenance contract, can have useful lives of up to 35 years. However, the scarcity of parts, and the potential frequency and duration of service interruption makes controls replacement more desirable as the components age. We include the following solutions and procedures for traction elevator component modernization for present and future board members.

Traction elevators are raised and lowered by woven steel cables, or hoisting ropes. The ropes are attached to the elevator car and wound around a sheave. The sheave is connected to an electrie motor. As the motor turns one way or the other, the sheave either raises or lowers the elevator car. The ropes that lift the car are also connected to a counterweight to ease the load on the motor.

Three basic types of traction elevators include gearless, geared and MRL (machine-roomless). In gearless elevators, the motor rotates the sheaves directly while in geared elevators, the motor turns a gear train that rotates the sheave. For gearless and geared elevators, the sheave, motor and controls are located in a machine room above the elevator shaft. MRL elevators are relatively new elevator systems that use smaller sheaves than conventional traction elevators. The smaller sheave size allows the lifting components to be mounted within the hoistway itself, eliminating the need for a machine room.

We anticipate replacement of the following traction elevator system components:

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

Based on the age and condition of the elevators, we recommend the Association budget for replacement of the above noted elements by 2042. We depict this information on Line Item 3.360 of ***Reserve Expenditures***.

The elevator cabs and shafts have an indefinite useful life and therefore we do not include their replacement during the next 30 years. The Association should fund all other elevator component replacements through the operating budget as normal maintenance.

These costs may vary based on the desired scope of the actual replacements, changes in technology and requirements of local codes or ordinances at the actual times of replacements. However, we judge our estimated costs sufficient to budget appropriate reserves at this time. The Association should require the contractor to verify that elevator component replacement includes all of the necessary features for the latest in elevator code compliance. In addition, the design should meet or exceed accessibility standards as defined by the ADA (Americans with Disabilities Act).

Generator, Emergency - A *Cummins* 350-kW (kilowatt) diesel generator provides power to the critical electrical systems during power supply interruptions or outages. The generator is original and reported in good condition. A 550-gallon storage tank serves the generator. The generator has a useful life of 25- to 35-years. City Walk should continue to test the emergency generator periodically and conduct repairs as needed. We suggest the Association

fund these periodic tests and repairs from the operating budget. We recommend the Association anticipate replacement of the generator and storage tank by 2016. We include this information on Line Item 3.440 of ***Reserve Expenditures***.

Heat Exchangers - The building utilizes the following heat exchangers:

- Building cooling: three each, plate and frame, 11 years of age and reported in good operational condition
- Building heating: two each, plate and frame, 11 years of age and reported in good operational condition
- Domestic water: three each, plate and frame, 11 years of age and reported in good operational condition.

These systems work in conjunction with chilled or heated water provided by the utility company. The useful life of heat exchangers of these sizes is 15- to 20-years. A heat exchanger transfers heat from one fluid to another, in this case water to water, without direct contact between the fluids. Plate heat exchangers comprise pairs of metal plates that provide separate flow paths for the two water sources, allowing heat transfer across the plates. The heat transfer occurs due to a temperature differential between the two fluids. We recommend the Association plan to replace the heat exchangers in a coordinated manner by 2022 and again by 2041. We note this information on Line Items 3.460 through 3.465 of ***Reserve Expenditures***. We recommend the Association periodically inspect the heat exchangers and conduct repairs as needed from the operating budget.

Intercom Panel - The Association utilizes one intercom panel for communication between the units and guests at City Walk. Management inform us that the panel is 13 years of age and in good operational condition. Intercom panels of this type have useful lives of up to 25

years. We recommend the Association anticipate replacement by. We depict this information on Line Item 3.470 of ***Reserve Expenditures***.

Laundry Equipment - The Association maintains 94 pieces of clothes washers and dryers located in the laundry rooms on the residential floors. This equipment varies in age and condition. Management informs us the Association has replaced only seven washers and one dryer in the past 10 years. We recommend the Association anticipate a useful life of 10- to 15-years for this equipment and budget for coordinated replacement by 2018 and every 12 years thereafter. We include this information on Line Item 3.500 of ***Reserve Expenditures***. City Walk should fund replacement of component parts, i.e., belts, motors, bearings through the operating budget.

Life Safety System - The life safety system at City Walk includes the following components:

- Audio/visual fixtures
- Control panels
- Detectors
- Exit light fixtures
- Pull stations
- Wiring

The system is original and in fair operational condition. The building engineer informs us that finding replacement parts for the control panel is becoming increasingly difficult. Life safety systems have useful lives of up to 25 years with proper maintenance. Changes in technology or building codes may make a replacement desirable prior to the end of the functional life. With consideration of the operational condition and age, we recommend the Association budget for replacement by 2018 and again by 2043. Local codes or ordinances at the actual time of replacement may require a betterment as compared to the existing system. Our estimate of

future cost considers the need to replace the existing elements and add additional annunciators and detectors within the units. Further betterments could result in a higher but at this time unknown greater cost of replacement than the future amount shown on Line Item 3.560 of ***Reserve Expenditures***.

Maintenance Equipment, ATV - The Association uses an ATV (all-terrain vehicle) to move the dumpster and for snow removal purposes. The ATV is three years of age, reported in good operational condition and has a useful life of up to 15 years. We recommend the Association budget for its replacement by 2026 and again by 2041. We note this information on Line Item 3.572 of ***Reserve Expenditures***.

Pipes - The Association is responsible for maintenance and replacement of the piping system sections arranged in vertical and horizontal segments. We regard each segment of pipe rising one story or floor a "riser section." The majority of these pipes are located in vertical chases and lesser quantities above or within walls and ceilings in the building. A riser comprises a complete set of riser sections of vertical pipe within a chase. The vertical pipe risers connect to usually shorter segments of horizontal branch pipes. The exact locations and conditions of the pipes were not ascertained due to the nature of their location and the non-invasive nature of our inspection. The building engineer informs us that at the P11 level, all of the risers above consolidate into single risers to run down the height of the parking garage to ground or below-grade level. Based on conversations with the building engineer we estimate the following quantity of riser sections and types of pipe materials within City Walk:

Type	Material	Risers	Floors	Riser Sections
Building heating, cooling and condensate	**Copper**	**48**	**16**	**801**
Domestic cold water	**Copper**	**16**	**16**	**267**
Domestic hot water (supply & return)	**Copper**	**32**	**16**	**534**
Sanitary waste disposal	**Cast iron**	**16**	**16**	**267**
Vent	**Cast iron**	**16**	**16**	**267**
			Total:	2,136

We comment on the respective quantities and conditions of the ***riser sections*** in the following sections of this narrative.

Building Heating, Cooling and Condensate - The copper building heating, cooling and condensate riser sections are reported in good overall condition. The building engineer informs us that the heating, cooling and condensate pipes were replaced in the late 1980's due to a construction defect. The building heating, cooling and condensate system at City Walk utilizes a two-pipe system. The useful life of these building pipes is up to and sometimes beyond 80 years.

Domestic Water - The supply and return copper domestic water risers are original. The building engineer does not report any deficiencies. Copper piping is the predominant type of pipe used in new construction for domestic water piping. With low mineral content in the water, the useful life of copper domestic water pipes is up to and sometimes beyond 80 years. However, there is recent evidence that copper piping prematurely develops pinhole leaks. Studies have shown that changes in water treatment

practices, recently required in response to EPA (U.S. Environmental Protection Agency) regulations, are dramatically increasing the risk of pitting corrosion in many geographic locations. Utility companies are implementing higher chloride levels to prevent outbreaks of waterborne disease. These higher chloride levels can accelerate corrosion of copper pipes and indeterminately reduce their useful life.

In the event that numerous pinhole leaks develop or occur throughout the system of pipes, City Walk should also consider "in-place" pipe restoration technology. This process includes drying, sandblasting away interior pipe occlusions and applying an epoxy lining to the interior surfaces of the pipes. Restoration technology can extend the useful life of a pipe system thus avoiding a system pipe replacement.

Sanitary Waste Disposal and Vent - The cast iron sanitary waste disposal and vent riser sections are original. The building engineer reports isolated leaks, particularly in locations damaged by previous drain snaking, which can wear the pipes thin at angles in the pipe runs. The useful life of these vent and sanitary waste disposal pipes is up to and sometimes beyond 80 years. These pipes typically deteriorate from the inside out as a result of sewer gases, condensation and rust.

We base our cost to replace a single building heating, cooling and condensate riser section, and a single domestic water, vent and waste riser section on the following factors:

- Our cost assumes replacement of all the pipes located within each wall opening
- Our cost includes the replacement of associated branch piping, fittings and minimal interior finishes
- Our cost excludes replacement of expansion joints, significant interior finishes and temporary housing for affected residents if required
- Our cost excludes replacement of the pipes within the units

The Association budgets an amount in the annual operating budget for minor pipe repairs and replacements. We recommend that the Association continue to fund interim pipe replacements, prior to more aggregate replacements identified in the following paragraphs, from the operating budget. We also recommend the Association contract for an invasive investigation of the condition of the piping system prior to beginning more aggregate replacements, funded through the operating budget.

We recommend the Association budget the following expenditures:

- Building heating, cooling and condensate - We include expenditures to replace 40 riser sections by 2034 and every five years thereafter. Our estimate provides funds to replace approximately fifteen percent (15.0%) of the riser sections during the next 30 years.
- Domestic water, waste and vent - We include expenditures to replace 67 riser sections by 2029 and every five years thereafter. Our estimate provides funds to replace approximately twenty percent (20%) of the riser sections during the next 30 years.

An invasive analysis of the piping systems will provide various replacement options. Replacement of the systems as an aggregate event will likely require the use of special assessments or loans to fund the replacements. We depict this information on Line Items 3.600 and 3.605 of ***Reserve Expenditures***.

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

Pumps - City Walk utilizes five major pumps for the building heat, air conditioning and domestic water. The following list depicts the use, capacity, quantity, age, useful life, condition and history of each pump.

- Building Heating and Cooling, Three each. One is original. The remaining two were replaced in 2010 and 2012. They have useful lives of up to 25 years and are reported in good operational condition.
- Cold water, 20-HP. Two each, original, useful life of up to 25 years, good condition.

Major pumps included in this Reserve Study are those with a motor drive of at least five-HP. The Association should replace or repair all pumps with motor drives less than five-HP as needed and fund this ongoing maintenance activity through the operating budget.

The Association may choose to rebuild pumps prior to complete replacement.. However, this activity becomes less desirable as pumps age due to the scarcity of parts. We regard *interim* replacements of motors and component parts as normal maintenance and base our estimates on *complete* replacements. An exact replacement time for each individual pump is difficult, if not impossible, to estimate. We recommend the following replacement schedules for the pumps:

- Building Heating and Cooling: replacement of the remaining original pump by 2017 and again by 2042. Phased replacement of the newer pumps beginning by 2035 and concluding by 2037.
- Cold water: replacement of the pumps and controls by 2017 and again by 2042.

We note this information on Line Items 3.703 and 3.705 of ***Reserve Expenditures***.

Pump, Fire Suppression - The fire protection system includes a 75-HP fire suppression pump. The pump is original and reported in good condition. The pump passed all points of inspection by the governing authority on October 25, 2013. Fire suppression pumps have useful lives of up to 50 years. Prior to replacement, the Association should schedule periodic inspections to maintain its correct operation in the event of an emergency. City Walk should

also anticipate, as normal maintenance, interim repairs and component replacements to maximize its remaining useful life. We recommend the Association budget to replace the fire suppression pump, motor and motor controller by 2032. We include this information on Line Item 3.770 of ***Reserve Expenditures***.

Security System - City Walk utilizes the following security system components for added security within the building and outside grounds:

- Automated card reading system (20 access points)
- Cameras (5)
- Multiplexer (1)
- Recorder (1)

The security system is reported in good operational condition. The cameras are up to eight years of age. The card reader system was upgraded in 2013. As the system ages, service interruptions will increase in frequency. We anticipate a useful life of up to 15 years for the system. The Association should anticipate replacement of up to fifty percent (50%) of the security system by 2018 and every seven years thereafter. We include this information on Line Item 3.820 of ***Reserve Expenditures***. The Association should anticipate interim replacements of a limited quantity of components as normal maintenance to achieve a uniform useful life for the entire system.

Storage Tanks, Domestic Hot Water - City Walk maintains three storage tanks with capacities of 250-gallons each for the storage of domestic hot water. One tank is original while the remaining two are 11 years of age. All of the tanks are reported in good condition. the tanks have a useful life of up to 30 years. Based on their age and condition, we recommend the

Association budget for replacement of the original storage tank by 2016 and the two other tanks by 2033 and 2034. We note this information on Line Item 3.860 ***Reserve Expenditures***.

Trash Chute and Doors - The Association maintains one trash chute. The chute and doors are original and reported in good condition. The useful life of trash chutes and doors is up to 65 years. However, this useful life is dependent upon the condition of the doors. Damaged doors or poor door operation will result in a decreased useful life. The Association should fund interim repairs and partial replacements of the doors through the operating budget. Deterioration of the chute stems from corrosion and isolated tears or rips from large items of trash. It is difficult to predict the actual time of replacement in consideration of the variable and unpredictable wear and tear over many years. We recommend the Association prepare for replacement by 2044. Line Item 3.880 of ***Reserve Expenditures*** notes our estimate of future cost and anticipated time of replacement. Updates of this reserve study will review the condition of the doors and chute, and adjust the useful life if necessary.

Trash Compactor - One trash compactor aids in refuse removal from the building. The compactor is 11 years of age, reported in good condition and has a useful life of up to 25 years. We recommend the Association plan for replacement by 2026. We note this information on Line Item 3.900 of ***Reserve Expenditures***.

Valves - The building utilizes large valves for the mechanical and plumbing systems. Large valves included in this Reserve Study are those with a diameter of at least four-inches. The valves are original and the building engineer informs us that they are in good operational condition. As the valves age, seals will deteriorate and mineral deposits will limit their

operation. Large valves have a useful life of up to and sometimes beyond 50 years. We recommend the Association anticipate replacement of up to two valves every four years beginning by 2018. We include this information on Line Item 3.920 of ***Reserve Expenditures***. The Association should replace or repair all valves with diameters less than four-inches as needed and fund this ongoing maintenance activity through the operating budget.

Pool Elements

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

- Chairs (12)
- Lounges (10)
- Tables (3)
- Small tables (4)
- Umbrellas (3)

These items are in fair condition and are older than 10 years of age . Pool furniture has a useful life of up to 12 years. Based on condition, we recommend the Association budget an allowance for replacement of the pool furniture and fixtures by 2017 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.

Pool Finish, Fiberglass - The pool wall and floor surfaces have a fiberglass finish of 500 square feet based on the horizontal surface area. The finish is three years of age and in good visual condition. The building engineer reports a history of leaks into the garage that prompted the replacement of the finish. Since the replacement, the building engineer notes significantly fewer leaks. However, we still note active leaks and evidence of significant water infiltration

through the pool structure and into the garage below. The majority of the leaks appear to originate near the pool scuppers. See Pages 5.23 and 5.24 of ***Photographs*** for examples of these conditions.

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. Based on the number of leaks noted, we recommend the Association budget for the following by 2016 and every 10 years thereafter:

- 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***.

Garage Elements

Ceilings, Acoustical Tiles and Grid - The upper garage level uses a suspended metal grid and decorative acoustical tile assembly that comprises approximately 4,500 square feet of ceiling finish. The assembly is in good overall condition without any significant areas of warped or stained tile. Management informs us the ceilings are primarily original. This ceiling finish assembly in this isolated area has a useful life of up to 40 years. However, damaged and soiled tiles due to leaks from plumbing pipes and at air supply grills may result in a shortened useful life. The Association should coordinate the replacement of this assembly with a major

renovation of the interiors to help achieve a consistent appearance. We recommend that City Walk plan for the aggregate replacement of the assembly by 2022. We depict this information on Line Item 7.288 of ***Reserve Expenditures***. The Association should fund interim replacements of the tiles through the operating budget.

Concrete, Elevated Floors - The development includes four floors of elevated garage parking at floors P8 through P11. These elevated cast in place concrete floor structures comprise approximately 98,670 square feet.

The concrete floors and ceilings at the undersides of each level are in good overall condition. Our visual inspection identifies isolated cracks and delaminated concrete, as depicted on Page 5.25 of ***Photographs***. The elevated structural concrete does utilize a protective traffic coating. The Association spent approximately $10,000 in 2014 to repair about 10 locations of delaminated concrete. The Association should conduct annual inspections of the elevated garage concrete as normal maintenance. Timely repairs of concrete cracks and spalls are necessary to maintain the safe and cost-effective operation of the garage.

Concrete capital repairs should coincide with replacements or installation of the traffic coating. See the narrative "**Traffic Coating**" for our recommendations on protective surface applications. Concrete capital repairs and partial replacements prior to replacement or repair of the traffic coating are critical to protect the integrity of the system.

Concrete structures like these have indeterminately long useful lives with proper periodic maintenance, use of a protective coating on top of the elevated structural concrete floors and periodic capital repairs. We recommend the Association budget for the following repairs to the various concrete surfaces every 10- to 15-years:

- Complete inspection of the garage concrete
- Partial depth concrete replacement of less than one percent (0.2%) of the surface area of the concrete floors
- Partial depth concrete replacement of less than one percent (0.2%) of the surface area of the elevated structural concrete ceilings
- Remediation of structural concrete columns and beams as needed
- Crack repairs on all surfaces as needed

We anticipate the need to conduct this work by 2023 and every 15 years thereafter. Line Item 7.300 of ***Reserve Expenditures*** notes our estimate of future costs and anticipated times of garage concrete repairs. In addition to the periodic repairs detailed above, we recommend the Association clean the garage floors annually or seasonally as needed to prevent the buildup of salts, sand, vehicle fluids and other damaging chemicals. The Association should fund these ongoing maintenance activities through the operating budget.

Gates and Operators - Two pairs of gates limit entry onto floors P8 through P11. The gates and operators are in satisfactory condition. At least one operator has been replaced. The gates and operators have a useful life of up to 35 years. We recommend the Association plan for replacement of the gates and operators in a coordinated manner by 2019. We note this information on Line Item 7.400 of ***Reserve Expenditures***. The Association should fund interim repairs, painting and partial replacements through the operating budget.

Light Fixtures - Approximately 90 light fixtures illuminate the parking garage. The light fixtures utilize T-8 fluorescent lamps. The light fixtures are four years of age, in good condition and have a useful life of up to 30 years. We regard replacement of fixture components as normal maintenance. We recommend the Association budget for their replacement by 2040. Line Item 7.600 of ***Reserve Expenditures*** notes our estimate of future cost and anticipated time of replacement.

Railings - City Walk maintains approximately 1,500 linear feet of metal railings at the four garage levels. The Association applied a paint finish approximately in 2009. The paint finishes on the railings have a useful life of six- to eight-years. We recommend paint applications by 2017 and every seven years thereafter. We depict this information on Line Item 7.698 of ***Reserve Expenditures***. We were unaware of the need to modify the garage railings to conform to local codes, as is the case at the balcony railings. We do not anticipate the need for total replacement of these garage railings during the next 30 years.

Traffic Coating - The Association utilizes 98,670 square feet of traffic coating atop the elevated portions of the concrete garage floor. The coating is six years of age and in good condition. We note isolated delamination. We anticipate a useful life of 10- to 15-years for the coating. Salts and moisture-driven chemical reactions are detrimental to the integrity of an elevated structural concrete garage floor. Road salts deposited as snow melts from vehicles or chlorides and moisture contained in ambient air penetrate the concrete surface. The dissolved chlorides and moisture then migrate to the imbedded reinforcing steel through pores in the concrete or directly through cracks. Once they reach the steel, salts and moisture cause expansive corrosion, ultimately causing the concrete to expand and "pop" or spall. Left unrepaired, additional chlorides and moisture will continue to infiltrate the concrete, eventually causing structural failure. This type of deterioration is progressive and costly to repair. The utilization of a traffic coating atop the concrete minimizes the infiltration of salts and moisture into the concrete thereby minimizing future capital repairs.

Traffic coating replacement methods are dependent on the type of existing and proposed coating. While the traffic coating industry is constantly developing new materials, we identify three common types of traffic coatings for application to existing structures:

Penetrating Sealers - These liquid applied treatments penetrate the concrete to limit the amount of chlorides that reach the reinforcing steel. These coatings are vapor permeable which makes them a popular choice for concrete slabs on grade. Penetrating sealers are relatively inexpensive and quickly applied. Unfortunately, these sealers do not bridge cracks and have a limited useful life.

Acrylic and Epoxy Sealers - These sealers bridge passive cracks and seal pores in the concrete to minimize chloride intrusion. They limit vapor transmission so they should not be applied to concrete on grade or in other areas that could be susceptible to trapped moisture. These rigid sealers do not work well on active cracks or on surfaces that experience moderate or high thermal or mechanical expansive or contractive forces. Epoxies degrade quickly under ultraviolet (UV) radiation which makes them undesirable for exposed upper decks. Conversely, acrylics should not be applied in enclosed areas due to noxious fumes released during installation. Regardless of these factors, their moderate cost makes them an attractive option in many cases.

Elastomeric and Urethane Coatings - These coatings do not penetrate the surface of the concrete but remain on the surface to create a barrier that locks out moisture and chlorides. Most of these coatings have two or more layers that bridge cracks and provide a safe non-skid surface. These coatings tend to be more expensive and labor intensive to install, requiring a significant amount of down time. Once one of these coatings has been installed, the coating must be maintained or replaced as failure can trap moisture and chlorides in the concrete, having a negative effect on the useful life of the structure. Replacement of elastomeric and urethane coatings requires the removal of the existing coating (where applicable) through mechanical abrading, and then the installation of a new base coat, aggregate intermediate coat and top coat.

Failure to maintain a traffic coating on elevated floors will result in acceleration of concrete deterioration at concrete ceilings below the elevated floors and a higher overall capital investment in the parking structure over time. Therefore, we recommend City Walk budget for the following activities by 2023 and every 15 years thereafter:

- Complete inspection of the garage concrete and concrete repairs as described in the previous narrative "**Concrete, Elevated Floors**"
- Removal of the existing membrane and preparation of the concrete surface
- Application of a urethane base coat, intermediate aggregate membrane and top coat to the elevated floors
- Parking and directional line striping as needed

We depict this information on Line Item 7.800 of ***Reserve Expenditures***. The Association should allow ample time to conduct a phased membrane installation over a few weeks, during which, parking in the affected areas will not be permitted. City Walk should fund interim applications in high traffic areas through the operating budget.

Again, maintenance of the coating is critical to maximize its useful life and to minimize future capital repairs to the concrete. Our costs and times of coating replacements assume the Association will maintain the membrane according to the manufactures recommendations. The Association should conduct partial, interim coating applications or patching as needed, especially at high traffic areas, garage entrances and ramps. City Walk should fund these interim repairs as normal operating maintenance.

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.

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.

RESERVE ADVISORS

6. 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.

City Walk 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 standards[1] 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	
2014 unaudited Cash Status of the Reserve Fund	$571,549
2014 Remaining Budgeted Reserve Contribution	$83,333
Anticipated Interest on Reserve Fund	$2,549
Less Anticipated Reserve Expenditures	$(114,000)
Projected 2014 Year-End Reserve Balance	$543,431

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

Local[2] costs of material, equipment and labor

Current and future costs of replacement for the Reserve Components

Costs of demolition as part of the cost of replacement

Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for construction costs in St. Paul, Minnesota at an annual inflation rate of 2.3%. 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 City Walk 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 1.1% (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	2013				2014			
Average or Last Actual = (A)	2013:1 (A)	2013:2 (A)	2013:3 (A)	2013:4 (A)	2014:1 (A)	2014:2 (E)	2014:3 (E)	2014:4 (E)
1-Year Treasury Bill	0.15%	0.13%	0.13%	0.12%	0.13%	0.15%	0.15%	0.15%
10-Year Treasury Note	1.86	1.86	2.65	2.70%	2.80%	2.90%	3.00%	3.10%
30-Year Treasury Bond	3.10	3.08	3.70	3.85%	4.00%	4.15%	4.30%	4.50%
Consumer Price Index (annualized rate)	3.21%	-1.68%	1.30%	1.50%	1.50%	2.00%	2.40%	2.60%
Residential Construction* Producer Price Index-Inflation Rate, Bureau of Labor Statistics (Year over Year to April 2014)								1.8%
National Market Savings Rates as found in	0.12%	for Money Market Savings			1.20%	for 2-Year Certificate of Deposit		
http://www.bankrate.com	1.00%	for 1-Year Certificate of Deposit			1.30%	for 3-Year Certificate of Deposit		
Estimated Near Term Yield Rate for Reserve Savings.....				1.1%				
Est. Near Term Local Inflation Rate for Future Capital Expenditures.....				2.3%				06/02/2014

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

RESERVE ADVISORS

7. DEFINITIONS

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

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

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

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

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

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

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

Long-Lived Property Component - Property component of City Walk 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) City Walk 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.

RESERVE ADVISORS

8. 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. We will consider any additional information made available to us in the interest of promptly issuing a Final Report (if requested). However, the Report represents a valid opinion of our findings and recommendations and is deemed complete and final if no Final Report or changes are requested within six months of our inspection. We retain the right to withhold the Report or Final 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.

RESERVE ADVISORS

9. 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 a 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, Inc., 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, Inc. 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 100-story John Hancock Center 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 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.

RESERVE ADVISORS

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, Registered in 1982

RESERVE ADVISORS

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 exhibiting, and direct mail promotions. 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.

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. Community Associations Institute (CAI) is a national, nonprofit 501(c)(6) trade association created in 1973 to provide education and resources to America's 305,000 residential condominium, cooperative and homeowner associations and related professionals and service providers. The Institute is dedicated to fostering vibrant, responsive, competent community associations that promote harmony, community, and responsible leadership.

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 Planning for Replacement of Property Doesn't Have to Be Like a Trip to the Dentist, Reserve Studies for the First Time Buyer, Sound Association Planning Parallels Business Concepts, and Reserve Studies Minimize Liability. He has worked with a variety of publications, including the Chicago Tribune, The Milwaukee Journal/Sentinel, Common Ground, Common Interest, and Condo Management. He also co-authored "Reserves", an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and the benefits of maintaining appropriate reserves. The videotape is available through Reserve Advisors or CAI's website, www.caionline.org and libraries in the State of Virginia.

INDUSTRY SERVICE AWARDS

CAI National Rising Star Award - To an individual whose leadership abilities and professional contributions have earmarked them for even greater accomplishments in the future.

CAI Michigan Chapter Award - "Given to the individual who contributed their time, expertise, and resources toward improving the quality of services offered by the chapter. Mr. Poehlmann was unanimously selected as the winner of the 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

RESERVE ADVISORS

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

CURRENT CLIENT SERVICES

Alan M. Ebert, a Geological Engineer, is an Advisor for Reserve Advisors, Inc. Mr. Ebert is responsible for the inspection and analysis of the condition of clients' properties, 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 Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

The following is a partial list of clients served by 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, Inc., 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

Reserve Specialist (RS) - Community Associations Institute
Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts
Professional Engineering License - Wisconsin 2012

RESERVE ADVISORS

MIKE S. BENTLEY, PRA, RS
Responsible Advisor

CURRENT CLIENT SERVICES

Mike S. Bentley, a Civil Engineer, is an Advisor for ***Reserve Advisors, Inc.*** Mr. Bentley 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, high rise condominium towers, homeowner associations, and religious and educational facilities. Mr. Bentley frequently serves as the ***Quality Assurance Review Coordinator*** for all types of developments.

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

Summit Hotel Condominium Owner's Association At the base of the Big Sky Mountain in Montana, this 11-story high, 221 room condominium hotel serves vacationers year round. The Association maintains a stucco and masonry exterior, interior finishes, furnishings and appliances as well as the full range of mechanical equipment including three elevators, two chillers, two cooling towers and three boilers. The Summit also includes two restaurants, a full service kitchen, a pool, steam room and fitness room.

Emerald Chase Homeowners Association This planned unit development lays nestled within the wooded suburbs of Raleigh, North Carolina. Built in 1986, Emerald Chase maintains over two miles of asphalt pavement roads as well as an irrigation system.

Riverbridge Condominium Association Situated on the bank of the Milwaukee River, these three newly developed mid-rise buildings contain 117 units as well as an underground parking garage. In addition to the building's interior amenities, a security system and mechanical systems, Riverbridge also maintains a cantilevered concrete plaza giving pedestrians breathtaking views of the river below.

Patuxent Point Community Association A quaint community located in Patuxent, Maryland comprises 106 units in 18 buildings. Amenities at this coastal community include a clubhouse, tennis courts, pool, playground and asphalt walking paths. The painted wood siding on the exterior walls of the three-story townhomes give Patuxent Point a sense of charm and warmth.

Clubs at Bradford Place Community Association Seventy-nine units housed in 31 duplexes and triplexes comprise this retirement community on the outskirts of Chicago. The Association maintains the asphalt pavement driveways and concrete sidewalks throughout the community in addition to the vinyl siding and brick exteriors.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Inc., Mr. Bentley attended Columbia University in New York, New York where he attained his Bachelor of Science degree in Civil Engineering. His studies focused on structural engineering as well as construction management.

EDUCATION

Columbia University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Engineer In Training (E.I.T.) Registration – New York 2005
Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts
Reserve Specialist (RS) - Community Associations Institute

RESERVE ADVISORS

TODD M. WALTER, P.E., RS, PRA
Review Coordinator

CURRENT CLIENT SERVICES

Todd M. Walter, a Professional Engineer (P.E.) in Civil Engineering, is a Director for ***Reserve Advisors, Inc.***, which is dedicated to serving community associations, religious organizations, educational facilities, and public and private entities throughout the United States. Mr. Walter is responsible for the inspection and analysis of the property's current condition, recommending engineering solutions to prolong the lives of building components, forecasting capital expenditures for the repair and/or replacement of the property components, and technical report preparation on assignments. Todd Walter frequently serves as the ***Quality Assurance Review Coordinator*** for all types of developments.

Todd Walter has conducted nearly 1,300 Reserve Studies, primarily in the Chicago area. The following is a partial list of clients served by Mr. Walter demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

The Elysian Private Residences Upscale 52-story development near Chicago's Magnificent Mile.

One Museum Park East Modern 64-story curtain wall tower with numerous amenities overlooking the museum campus in Chicago.

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

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

The Carlyle Vintage, prime real estate on Chicago's Lake Shore Drive at the north end of the Magnificent Mile.

Clinton Complex This development includes several former manufacturing structures built in the 1800's and converted to condominiums in Chicago

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

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

Galleria Residences High rise luxury condominiums constructed above a Westin Hotel near Minneapolis.

PRIOR RELEVANT EXPERIENCE

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

EDUCATION

Ohio University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS

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

RESERVE ADVISORS

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 http://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 http://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 http://www.msbinfo.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 http://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.